

CHAPTER II

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Agency Theory

Understanding how Environmental, Social, and Governance (ESG) performance interacts with cost of capital such as the Weighted Average Cost of Capital (WACC) requires a solid grounding in several interrelated theories of corporate behavior and information economics. The agency theory framework deepens this discussion by focusing on the internal dynamics between shareholders and managers. According to this theory, agency costs arise when managers, acting as agents, pursue personal goals that diverge from the interests of shareholders, who act as principals (Hendrastuti & Harahap, 2023). This conflict is rooted in the challenge of creating compatibility between these two parties, as managers are responsible for agency costs and are expected to work in the best interest of the capital owners but may be tempted to prioritize self-interest.

At the heart of this framework is the issue of information asymmetry, where managers possess more or better data regarding the firm's operations than external stakeholders (Ningrum & Kusumawati, n.d.). Enhanced ESG performance and transparent disclosure mechanisms can reduce these agency costs by imposing reputational and accountability constraints on managerial opportunism. By providing nonfinancial information, companies aim to reduce this information gap and ensure the credibility of their activities with all stakeholders, which serves as a major element in gaining their support and approval. When management is

compelled to report ESG performance honestly and transparently, the probability of opportunistic or short-term behavior decreases.

Agency theory recognizes the external audit as a vital monitoring device designed to control the self-serving behavior of managers and restrict managerial opportunism. When management is compelled to report ESG performance honestly and transparently, particularly under the scrutiny of Big 4 auditors who strive to preserve their own reputational capital and independence, the probability of opportunistic behavior decreases (Surya et al., 2020). This similarity of interest ensures that managers do not exploit the company's resources merely for personal benefits or public appreciation, which otherwise results in a significant decrease in shareholder value.

This theoretical perspective further addresses managerial myopia, where short sighted managers may favor immediate profit maximization at the expense of optimizing long term shareholder value. According to this framework, high quality auditing and robust ESG reporting reduce the probability of short-term opportunistic behavior by sifting focus toward long term sustainability and firm value (Xu et al., 2025). For investors recognizing this alignment of interest, view the firm as more stable and are protected from potential misconduct on the part of the managers.

However, agency theory also cautions that ESG investments can be perceived as an expensive diversion of resources if they are motivated by a manager's desire for personal benefits rather than genuine firm value. If these

activities are seen as “symbolic tactics” used to manipulate stakeholder perceptions rather than “objective tactics” that align with societal expectations, they can intensify conflicts and worsen information asymmetry (Ningrum & Kusumawati, 2025) Therefore, the theory connects the authenticity of ESG performance directly to the effectiveness of the firm’s internal governance and reduced information asymmetry.

To resolve these tensions, high quality auditing acts as a crucial governance tool that not only provides reassurance to shareholders but also instills investor confidence in management’s ability to invest in ESG activities that align with the firm’s goals. Hiring independent and well-regarded auditor's signals to the market that the firm’s nonfinancial reports have undergone rigorous examination, thereby reducing investor skepticism. This external validation increases the trustworthiness of ESG performance and ensures that disclosures are not used as a concealing strategy for resource misallocation (Hadi et al., 2024).

When these agency conflicts are successfully mitigated and information gaps are closed, investors and lenders recognize the reduced risk and may demand a lower return on capital (Hazaea et al., 2025). Agency theory therefore connects ESG performance and audit quality directly to improved governance and a reduction in the weighted average cost of capital and the cost of debt (Truong et al., 2026). By lowering financing costs, the theory demonstrates that firms with strong governance are rewarded by investors who perceive them as less risky and more reliable.

Finally, agency theory addresses complex Type III conflicts, which specifically involve disputes between shareholders and debtholders over policies related to dividends, future leverage, and investment decisions (Ningrum & Kusumawati, 2025). In these scenarios, high audit quality serves to restore trust and legitimacy, reconciling the diverse and often conflicting demands of these different stakeholder groups, through this lens, the synergy of ESG performance and high-quality auditing speaks directly to the needs of creditors, ultimately reducing the firm's overall risk profile and borrowing costs across different institutional settings.

2.2. Signaling Theory

Signaling theory posits that companies voluntarily disclose their ESG performance to enhance their corporate reputation by demonstrating a firm commitment to sustainability (Handajani et al., 2026). This perspective assumes that such reports serve as vital tools for organizations to showcase their long-term viability and ethical alignment to the public.

A primary function of this theory is to reduce investor uncertainty and improve general market perceptions regarding a firm's risk profile by providing transparent signals regarding nonfinancial performance, companies aim to build a high level of stakeholder confidence and distinguish themselves from competitors (Atarwaman, 2026).

These disclosures are particularly effective for attracting international investors who specifically seek sustainable and ethical investment opportunities.

Firms often employ an objective tactic strategy, disclosing actual sustainable actions to ensure their signals are perceived as reliable rather than purely symbolic gestures.

Signaling theory underscores the role of external verification in enhancing the credibility of these disclosures. According to this perspective, audit quality and auditor reputation act as assurance mechanisms that mitigate investor skepticism and strengthen the perceived reliability of financial and nonfinancial reports. A well-regarded auditor, particularly one affiliated with the Big 4, signals that a firm's financial and ESG information has undergone rigorous examination and conforms to professional standards (Truong et al., 2026). This external validation increases the trustworthiness of ESG performance and can amplify their effect on investor's perceptions of firm risk.

Bringing these perspectives together, it becomes evident that ESG affects WACC primarily through the channel of information asymmetry. When ESG performance is credible and verifiable, investors and lenders perceive lower risk, resulting in reduced financing costs (Dwomor & Mensah, 2024). High audit quality intensifies this channel by further enhancing disclosure credibility and ensuring that ESG signals are interpreted as genuine indicators of firm quality. Therefore, the integration of these theories supports the idea that the interaction between ESG performance and audit quality has significant implications for the cost of capital.

2.3. ESG and Weighted Average Cost of Capital

The relationship between ESG performance and WACC can be explained through both the risk reduction and information asymmetry perspectives. WACC represents the average rate of return required by providers of capital, including both creditors and shareholders. Firms with superior ESG performance are generally perceived as less risky because they demonstrate stronger environmental management, greater social responsibility, and more effective governance structures (Avelöv & Gustafsson, 2025). These attributes reduce the likelihood of adverse events such as environmental penalties, regulatory sanctions, labor disputes, reputational crises, and governance failures that could negatively affect future cash flows (Jafar et al., 2024). As a result, both debt holders and equity investors tend to assign lower risk premiums to firms with strong ESG practices, thereby reducing the firm's overall cost of capital (Avelöv & Gustafsson, 2025).

From the perspective of information asymmetry theory, ESG disclosure serves as an additional source of non-financial information that enhances corporate transparency and reduces uncertainty among investors (Vaitiekuniene & Sapkauskiene, 2026). More comprehensive ESG reporting allows market participants to better assess a firm's long-term sustainability, risk management capabilities, and strategic resilience (Khosravi et al., 2022). This improved transparency lowers information risk, which is often incorporated into investors' required returns (Arouri et al., 2026). Consequently, firms with higher ESG performance and disclosure quality may experience a reduction in both the cost of

equity and the cost of debt, leading to a lower WACC (Khosravi et al., 2022). Furthermore, as global capital markets increasingly integrate sustainability considerations into investment decisions, companies with strong ESG credentials may gain access to a broader pool of responsible investors and sustainable financing instruments, further enhancing their ability to secure capital at more favorable rates (Vezeteu et al., 2025).

2.4. Empirical Evidence on ESG and Cost of Capital

Empirical research over the past two decades has provided substantial, though sometimes mixed, evidence regarding the relationship between ESG performance and the cost of capital. A growing number of cross-country and single-country studies document that stronger ESG performance or more extensive sustainability disclosure tends to be associated with lower costs of debt and, in some cases, lower costs of equity. The underlying rationale is that robust ESG performance reduces perceived firm risk and improves transparency, leading investors to require lower returns. However, findings vary depending on measurement approaches, market conditions, and sample periods, suggesting that institutional context matters greatly in understanding these relationships.

Several comprehensive reviews and meta-analyses have confirmed the general tendency for ESG to reduce financing costs through multiple mechanisms. These include lower default probabilities, better stakeholder relations, and reduced exposure to regulatory sanctions or environmental fines. Yet, scholars consistently

note that methodological differences such as variations in ESG rating providers, definitions of financial performance, and model specifications introduce heterogeneity in results. Consequently, researchers continue to explore under what conditions ESG exerts the strongest financial impact.

Evidence from emerging markets has been particularly instructive. Studies focusing on the cost of debt in developing economies reveal diverse outcomes. Some find a significant negative association between ESG performance and borrowing costs, while others report no relationship or even positive associations, depending on sample characteristics and the time period studied. These variations likely reflect differences in market maturity, disclosure norms, and investor awareness. Emerging markets often face limited ESG data quality and inconsistent enforcement of reporting standards, leading to weaker market responses to sustainability information.

In Indonesia, empirical research on ESG or Corporate Social Responsibility (CSR) and financing costs is still limited. However, the few available studies indicate that better CSR practices tend to correlate with lower borrowing costs and improved access to financing Gracia & Siregar (2021). These results suggest that, even in markets with developing ESG infrastructures, sustainability initiatives can yield financial benefits when investors view them as credible indicators of long-term risk management. Nonetheless, most Indonesian studies focus on debt costs rather than WACC, leaving a gap in understanding the comprehensive impact of ESG on overall financing costs.

Given that the evidence is mixed and highly context-dependent, there is a pressing need for additional studies that examine WACC as an integrated measure of financing costs while considering audit quality as a moderating factor. Such research can provide a holistic view of how ESG performance interacts with financial reporting assurance to influence capital markets' pricing behavior in emerging economies.

2.5. Audit Quality as a Moderator: Prior Findings

Audit quality has long been recognized as a determinant of financial reporting credibility and investor confidence. In auditing and corporate finance literature, higher audit quality is consistently linked to reduced information risk, improved earnings quality, and lower cost of capital, with Big 4 auditor affiliation commonly used as a practical proxy. By ensuring that financial statements fairly represent firm performance, high-quality audits reduce the uncertainty investors face, thus influencing their risk assessments and required returns.

Recent empirical work has expanded this perspective by exploring audit quality's role in moderating relationships between non-financial disclosures, such as ESG or CSR reports, and financial outcomes. These studies find that audit quality can enhance the market relevance of ESG signals by improving their credibility and reducing concerns about selective reporting. In other words, when a firm's ESG disclosures are backed by a reputable auditor, investors are more likely

to view those disclosures as genuine indicators of responsible management and lower operational risk.

Mechanistically, a high-quality auditor reduces the likelihood that ESG or sustainability reports are materially misstated, increasing investor confidence in the information presented. This credibility encourages investors to accept lower expected returns, thereby lowering both the cost of equity and the cost of debt. Furthermore, auditors provide an external monitoring function that deters greenwashing and enhances governance standards. These effects are particularly important in emerging markets, where ESG regulation and enforcement may still be developing.

In the Indonesian context, the relationship between audit quality and ESG credibility is particularly relevant because sustainability reporting assurance remains largely voluntary (Meutia et al., 2023; Misran et al., 2026). While statutory financial statement audits do not typically provide direct assurance over ESG disclosures, reputable auditors contribute to the reliability of sustainability information through their assessment of internal controls, governance processes, and ESG-related financial risks reflected in the financial statements (Nuraini & Amrulloh, 2024). Big 4 auditors may also provide separate sustainability assurance services, which involve verifying ESG metrics, evaluating data collection procedures, and assessing compliance with sustainability reporting frameworks (Harindahyani & Tjahjadi, 2024). Consequently, investors may perceive ESG disclosures issued by firms audited by Big 4 auditors as more credible and less

susceptible to greenwashing (Truong et al., 2026). This enhanced credibility can strengthen the signaling effect of ESG performance and increase the likelihood that capital providers reward sustainable firms with lower financing costs.

Despite the potential role of audit quality in enhancing ESG credibility, empirical evidence from Indonesia remains limited. The Indonesian audit market is characterized by varying levels of auditor reputation and relatively limited adoption of external sustainability assurance. Consequently, it remains unclear whether the credibility-enhancing role of Big 4 auditors strengthens the ability of ESG performance to reduce firms' financing costs. This issue is particularly important when financing costs are measured using WACC, which captures both the cost of debt and the cost of equity. Therefore, Indonesia provides an appropriate setting to examine whether audit quality moderates the relationship between ESG performance and WACC.

2.6. Previous Research

Table 2.5.1 Summary of Previous Research

No	Researcher	Variable	Subject	Result
1	(Hazaea et al., 2025)	Dependent variable (Y): WACC, CoD, and CoE	Nonfinancial companies listed on the Stock Exchange of	1. Reduced Financing Costs: there is a significant negative relationship between ESG performance and

No	Researcher	Variable	Subject	Result
		Independent variables (X): ESG Score Moderating variables: Audit Quality Control variables: 1. Firm size 2. Board size 3. Board diversity 4. Firm age 5. ROA 6. Leverage 7. Cash holding 8. Loss	United Kingdom from 2014 to 2023.	all three measures of capital cost (CoE, CoD, WACC), meaning strong ESG practices reduce financing costs. 2. Audit Fee Impact: higher audit fees are positively associated with capital costs, suggesting that more complex or risky operation (which require higher fees) signal higher risk to investors. 3. Big 4 Moderation: engagement with Big 4 auditors moderated the ESG-WACC

No	Researcher	Variable	Subject	Result
		9. Dividends 10. Covid-19		relationship enhancing the financial advantages of ESG by lowering perceived risks through increased transparency and credibility.
2	(Maji & Tiwari, 2025)	Dependent variable (Y): Financial Performance (ROA and Tobin's Q) Independent variable (X): ESG Score Moderating variable:	Examining the moderating impact of audit quality on the relationship between ESG disclosure and financial performance in Indian Firms.	1. Positive ESG Impact: ESG scores and their individual components have a significant positive impact on corporate financial performance, supporting the "revisionist" hypothesis. 2. Moderating Role of Big4: Audit quality significantly moderates

No	Researcher	Variable	Subject	Result
		Audit Quality Control variables: 1. Firm size 2. Leverage 3. Asset turnover 4. Intellectual capital efficiency 5. Sector dummy		the ESG-FP nexus. Firms audited by the Big4 experience a considerably greater positive impact from ESG disclosures. 3. Transparency Levels: Indian firms generally perform better in disclosing governance (G) information than environmental (E) information.
3	(Truong et al., 2026)	Dependent variable (Y): Cost of Debt (CoD)	Investigating the moderating role of audit quality in ESG disclosure to	1. Market Disparities: ESG disclosure negatively relates to the cost of debt in developed countries (reducing cost) but

No	Researcher	Variable	Subject	Result
		Independent variables (X): ESG Score Moderating variable: Audit Quality Control variables: 1. Firm size 2. Capex 3. ROA 4. MTB 5. Beta risk 6. Dividend 7. NDT 8. Leverage	cost of debt relationship across developed and emerging Asian markets.	positively relates to it in emerging countries (increasing costs), likely due to higher information asymmetry or perceived resource diversion in emerging market. 2. Creditor Trust: high audit quality consistently improves creditors responses toward ESG disclosure, successfully reducing the cost of debt across both developed and emerging institutional settings. 3. Dual theoretical role: the study highlights

No	Researcher	Variable	Subject	Result
				that audit quality serves both as a tool for reducing agency costs and a mechanism for legitimizing corporate sustainability efforts.
4	(Zahid et al., 2022)	Dependent variable (Y): ROA and Sales Revenue Independent variables (X): ESG overall score and subcomponents (E, S, G) Moderating variable:	Exploring the moderating role of audit quality in the relationship between ESG factors and corporate financial performance in Western European countries.	1. Trade off Hypothesis: ESG has a significant negative effect on ROA, suggesting that for these firms, ESG activities currently act as a cost burden that diminishes historical profitability. 2. Revenue Growth: conversely, ESG has a positive effect on revenue, indicating that customers are more

No	Researcher	Variable	Subject	Result
		Audit Quality Control variables: 1. Firm size 2. Leverage 3. Dividends 4. Price to book		attracted to and reward firms with strong ESG strategies. 3. Big 4 Influence: the positive impact of ESG on revenue is significantly more evident in firms certified by the Big 4, as these auditors increase stakeholder confidence in the legitimacy of the ESG data.

2.7. Hypotheses Development

The relationship between ESG performance and the cost of capital is theoretically anchored in three complementary frameworks. Under signaling theory, firms that voluntarily disclose high-quality ESG information send credible signals to capital markets about their risk management capabilities, operational discipline,

and long-term strategic orientation (Spence, 1973; Dhaliwal et al., 2011). Because ESG disclosure is costly to produce and difficult to fake consistently, it functions as a reliable differentiator between well-governed and poorly governed firms, reducing the uncertainty premium that investors and creditors embed in required returns. Under stakeholder theory, firms with superior ESG performance cultivate stronger, more stable relationships with employees, customers, regulators, and communities, reducing the probability and severity of stakeholder-driven disruptions that increase financing costs (Freeman, 1984; El Ghouli et al., 2011). Under agency theory, robust ESG frameworks constrain managerial opportunism, reduce information asymmetry between management and capital providers, and lower the monitoring costs that are ultimately priced into the cost of equity and debt.

The empirical evidence is broadly consistent with these theoretical predictions. Hazaea et al. (2025), examining 406 United Kingdom non-financial firms from 2014 to 2023, document a significant negative relationship between ESG performance and all three components of the cost of capital, specifically the cost of equity, cost of debt, and WACC, providing the most direct precedent for the dependent variable specification used in this study. Truong et al. (2026), analyzing 1,443 Asian listed firms across nine countries including Indonesia from 2015 to 2023, confirm that higher ESG disclosure scores are significantly and negatively associated with the cost of debt across the full sample, with the effect most pronounced in developed institutional environments. Maji and Tiwari (2025),

studying 218 Indian firms, find a significant positive relationship between ESG performance and firm profitability measured by ROA and Tobin's Q, consistent with the cost-reduction and value-creation mechanisms predicted by stakeholder and legitimacy theories. In the Western European context, Zahid et al. (2022) find a negative ESG effect on ROA, supporting the short-run cost burden of ESG investment, but simultaneously document a positive effect on firm revenues, confirming that ESG enhances the firm's value proposition to customers and investors over time.

In the Indonesian context specifically, the progressive formalization of ESG disclosure requirements through OJK Regulation No. 51/POJK.03/2017 has elevated the informational value of ESG scores from voluntary management communication to institutionally mandated governance signals. As sustainability reporting becomes mandatory and standardized, capital market participants gain greater confidence in the reliability and comparability of ESG data, which is expected to amplify the risk-reduction effect of strong ESG performance on financing costs. The first hypothesis addresses the direct relationship between ESG performance and WACC. It posits that firms with higher ESG performance tend to experience lower weighted average cost of capital because their improved sustainability practices reduce perceived risk and enhance transparency. Hence:

H1: Higher ESG performance is associated with a lower Cost of Capital for non-financial listed firms in Indonesia.

While H1 posits a direct ESG-WACC relationship, its magnitude is not expected to be uniform across all firms. The credibility of ESG information, rather than its mere availability, is what ultimately drives capital market repricing. This is where audit quality enters as a theoretically motivated moderating variable. ESG disclosures are, by nature, non-standardized, voluntarily constructed, and susceptible to greenwashing, the selective or misleading presentation of sustainability credentials to attract investors (Kim et al., 2012; Truong et al., 2026). In markets where mandatory ESG assurance is absent, as is currently the case in Indonesia under POJK 51/2017, which makes third-party sustainability assurance optional rather than compulsory, capital providers face a fundamental verification problem: they cannot easily distinguish between firms whose high ESG scores reflect genuine sustainability commitment and those whose scores reflect disclosure management.

High-quality external auditors address this problem through two theoretically distinct mechanisms. First, under agency theory, Big Four auditors function as independent monitoring agents that constrain managerial opportunism, reduce information asymmetry between the firm and its capital providers, and enhance the reliability of both financial and non-financial disclosures (Jensen and Meckling, 1976; DeAngelo, 1981). Because Big Four firms invest heavily in human capital, technology, and quality control systems, and because their reputational capital is highly vulnerable to audit failures, they have strong

incentives to produce high-quality assessments of the firms they audit (Knechel et al., 2013; Bacha et al., 2021). When a Big Four affiliate audits a firm with strong ESG scores, it implicitly lends its reputational credibility to those scores, amplifying their signal value to capital markets. Second, under legitimacy theory, the engagement of a prestigious auditor serves as an institutional legitimization mechanism: it signals that the firm's disclosures, including its sustainability information, have been subjected to independent professional scrutiny consistent with internationally recognized standards (Holm and Zaman, 2012; Truong et al., 2026). This institutional endorsement is particularly consequential in emerging markets such as Indonesia, where the formal infrastructure for ESG assurance is still developing and creditor skepticisms about disclosure quality remains elevated.

Empirically, Maji and Tiwari (2025) provide direct evidence that audit quality positively moderates the ESG-financial performance relationship in India: the positive impact of ESG on Tobin's Q is significantly stronger for Big Four-audited firms, with one unit increase in ESG score increasing Tobin's Q by 0.029 units more when the auditor is a Big Four affiliate. Truong et al. (2026) extend this finding to the cost of debt context in Asia, demonstrating across the full Asian sample and separately for both developed and emerging market subsamples that the interaction of ESG disclosure and Big Four audit quality consistently and significantly reduces the cost of debt, regardless of firm size or ESG disclosure level. Hazaea et al. (2025) similarly document a statistically significant moderating

effect of Big Four audit quality on the ESG-WACC relationship in the United Kingdom, with the effect particularly pronounced for smaller firms that otherwise face greater information asymmetry with capital providers. Bacha et al. (2021) corroborate this mechanism in the cost of debt context, showing that the negative relationship between CSR performance and borrowing costs is significantly stronger for firms audited by Big Four firms, which they attribute to the credibility-enhancing role of high-quality auditors in validating sustainability disclosures. Together, these studies establish a consistent cross-market pattern: audit quality does not merely improve the accuracy of financial reporting, it amplifies the capital market reward for strong ESG performance by certifying the credibility of the information on which that reward is based.

The second hypothesis focuses on the moderating role of audit quality. It proposes that audit quality strengthens the negative relationship between ESG performance and WACC. Firms audited by high-quality auditors are expected to benefit more from ESG disclosures because investors regard their reports as more credible and reliable. Therefore:

H2: Audit quality strengthens the negative relationship between ESG performance and Cost of Capital.

2.8. Operational Notes and Expected Empirical Patterns

If the first hypothesis holds true, the estimated coefficient of ESG in the panel regression model of WACC on ESG and control variables should be negative

and statistically significant. This would imply that higher ESG performance contributes to a lower cost of capital, supporting the notion that sustainability practices reduce perceived risk. If the second hypothesis is supported, the interaction term between ESG performance and the audit quality indicator should also be negative and significant. This outcome would confirm that audit quality amplifies the effect of ESG on WACC, indicating that the credibility of disclosures plays a crucial role in determining their financial impact, anticipated in Chapter 3 under the Data Analysis section.

2.9. Conceptual Framework

