



# The ESG Disclosure in Mitigating Information Asymmetry Risk: The Role of Corporate Governance

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**Abstract**—This research employs a Systematic Literature Review (SLR) to examine the relationship between Environmental, Social, and Governance (ESG) disclosure and the information asymmetry through corporate governance mechanisms in today’s dynamic business environment. Despite the growing adoption of ESG reporting to meet stakeholder demands, information asymmetry continues to impede efficient capital allocation and investor confidence. However, limited understanding remains on how corporate governance mechanisms shape ESG disclosure quality and its role in reducing information asymmetry. Several theories, including signaling, stakeholder, legitimacy, and agency theory, explain firms’ motivations for ESG reporting. While ESG disclosure is expected to reduce information asymmetry, its impact remains debated due to issues such as greenwashing, report credibility, and divergent investor perceptions. Prior studies reveal a generally negative association between ESG disclosure and information asymmetry, though findings are inconsistent. Ultimately, this review seeks to develop a conceptual framework that integrates the role of corporate governance in enhancing ESG disclosure as a mechanism to reduce information asymmetry, thereby contributing to existing literature and offering practical insights.

**Keywords:** ESG Disclosure; Information Asymmetry; Corporate Governance; Mitigation; Stakeholder

## 1. INTRODUCTION

In dynamic business landscape, corporate governance mechanisms and financial transparency exert influence on firm performance (Oncioiu et al., 2020). However, the persistent challenge of information asymmetry continues to impede efficient capital allocation and erode investor confidence (Yahaya, 2025). This inherent imbalance, wherein insiders possess informational advantages over external stakeholders, can engender market inefficiencies and hinder well-informed investment decisions (Nicolo et al., 2023). Concurrently, with the increasing salience of sustainability concerns for both society and capital markets, ESG reporting has evolved into a standardized practice aimed at meeting the rising informational demands of shareholders and other stakeholders concerning the economic, environmental, and social implications of corporate operation (Slacik & Greiling, 2020). Recognizing this, contemporary research emphasizes the crucial role of transparent and timely information disclosure in bridging this gap.

Within this evolving context, the disclosure of ESG information has gained prominence as a vital tool for mitigating information asymmetry (Sahin et al., 2022). Drawing from information asymmetry theory, the transparent reporting of a company’s ESG performance offers valuable insights into its sustainability practices and ethical conduct (Xu et al., 2022). By proactively communicating their efforts and achievements in these critical areas through regular ESG reports and related disclosures, companies can provide external investors with a clearer understanding of their long-term value creation potential and risk profiles (Choiriah et al., 2024). Addressing the informational asymmetries prevalent between corporations and their diverse stakeholders can cultivate a heightened sense of trust. This augmented confidence is posited to positively influence stakeholder behavior, notably incentivizing investors to increase capital allocation to the firm, thereby potentially leading to stock price appreciation and an enhancement of overall firm value (Makarim et al., 2024).

Although awareness of the significance of ESG disclosure continues to rise, a detailed understanding of how particular corporate governance mechanisms affect the breadth and quality of ESG disclosure and the outcomes that follow remains limited. how this disclosure contributes to the reduction of information asymmetry risks, still requires further elaboration. Previous research has separately examined the relationship between corporate governance and ESG disclosure (Dewi, 2020), (Bamahros et al., 2022), (Bamel et al., 2025), (Aly et al., 2024), or between ESG disclosure and information asymmetry (Berggren & Pettersson, 2023), (Yahaya, 2025), (Angir & Weli, 2024). However, a systematic review that explicitly integrates these three concepts within a single theoretical framework, with a focus on the mediating role of corporate governance in mitigating information asymmetry risks through ESG disclosure, remains limited.

This literature review aims to critically examine the recent scholarly work exploring the nexus between ESG disclosure, corporate governance structures, and the reduction of information asymmetry risk, synthesizing the latest theoretical perspectives and empirical findings that illuminate this important relationship. Specifically, corporate governance plays a central and fundamental role in driving the quality and extent of ESG disclosure (Yan Wang & Wang, 2024). Companies underpinned by sound corporate governance practices will strive to implement governance principles such as transparency, accountability, responsibility, independence, and fairness throughout their business activities. The application of these principles inherently encourages companies to be more open about their practices



and performance concerning environmental, social, and governance issues (Peng & Isa, 2020). A robust governance structure creates oversight mechanisms and incentives that ensure management focuses not only on short-term financial performance but also on long-term sustainable value creation, where ESG disclosure becomes a key element in building trust with stakeholders and reducing information asymmetry (Angir & Weli, 2024).

Consistent with this perspective, recent research has further examined the significant impact of various factors including board size, board meeting frequency, auditor credibility, gender diversity, board independence the presence of non-executive directors, as well as government, institutional ownership and foreign on ESG disclosure (Jafar et al., 2024), (Chebbi & Ammer, 2022). Recent findings suggest the notion that bigger and more diverse boards provide enhanced access to resources, expertise, and networks assets that are especially beneficial in tackling complex challenges like ESG matters. Diverse boards, for instance, bring varied perspectives that can enhance awareness and consideration of ESG issues in the decision-making and reporting processes (Nicolo et al., 2023). Furthermore, independent boards overseen by credible auditors are more likely to emphasize accountability and transparency in information disclosure, including non-financial information like ESG, to meet stakeholder expectations and mitigate the risks of asymmetric information (Rohendi et al., 2024). Through this comprehensive literature review, it is expected to provide a greater insight of the crucial role of corporate governance in promoting transparent ESG disclosure and its effect on the reduction of information asymmetry risks, thereby contributing to the existing literature and providing practical implications for companies and regulators. From this discussion, the following research questions are proposed: 1) RQ1: How has the research publication approach related to ESG disclosure in mitigating information asymmetry and corporate governance integration in mediating this relationship evolved over time? 2) RQ2: What theories are used regarding ESG disclosure in mitigating information asymmetry and corporate governance integration in mediating this relationship?

## 2. RESEACH METHODS

This research employs the Systematic Literature Review (SLR) method to identify pertinent articles that discuss the evolution of research publication methods and examine the various definitions and metrics of ESG disclosure, information asymmetry risk, and corporate governance practices. The selected articles were reviewed and analyzed to extract key insights regarding ESG disclosure. A SLR involves examining an existing body of research using a transparent and reproducible approach. Because the process is transparent, enabling a reproducible methodology and comprehensive integration of relevant literature, it provides a strong foundation for drawing conclusions and generating evidence (Kraus et al., 2020).

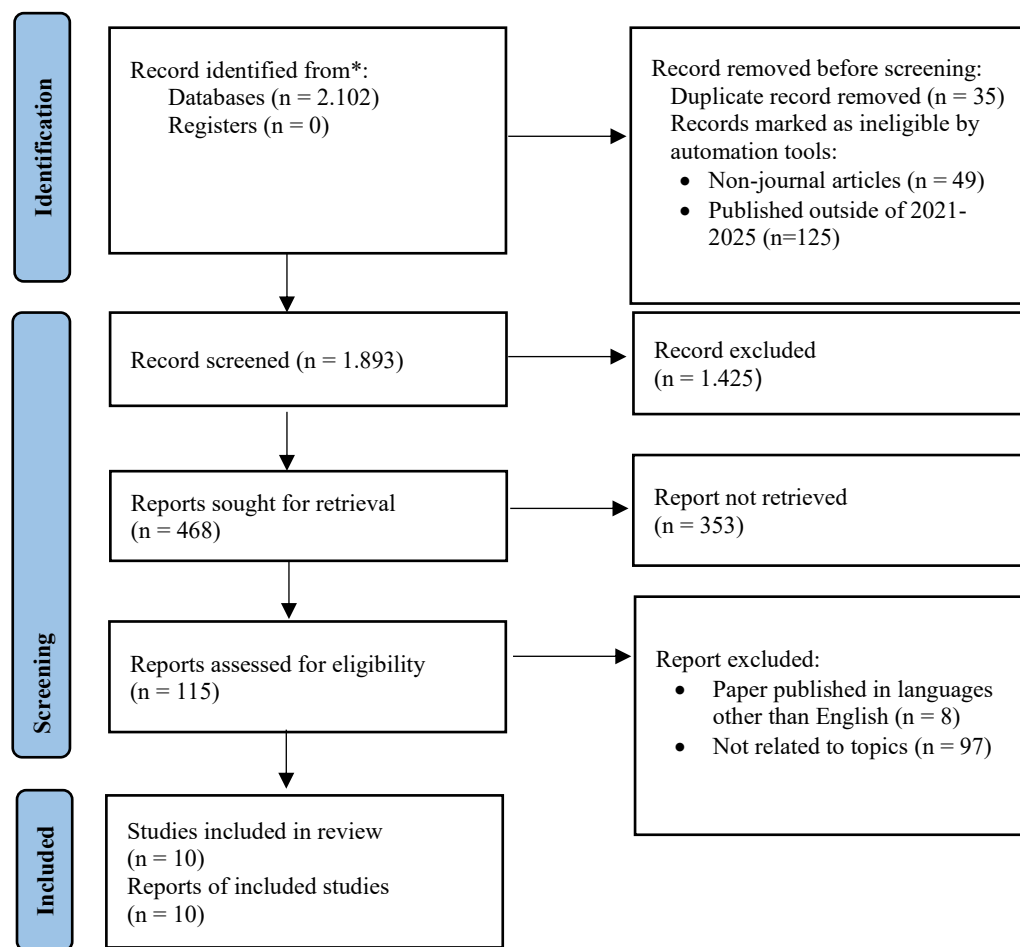
The research method for this literature review involves a systematic search across academic databases such as Emerald, Elsevier and Wiley Online Library using keywords related to ESG disclosure, information asymmetry, and corporate governance. This approach ensures that the review captures a comprehensive and representative sample of the most relevant studies within the scope of the research topic. The keyword strategy was designed to combine key terms and synonyms, thereby maximizing coverage while maintaining specificity. The selected studies will be analyzed to understand the various definitions and measurements of ESG disclosure, information asymmetry risk, and corporate governance mechanisms. This process is essential for mapping variations in terminology and operationalization across the literature. The collected data will subsequently be analyzed through thematic analysis to uncover recurring patterns and themes, content analysis to examine the scope and methodologies of the studies, and narrative synthesis to provide a coherent overview of the findings. This combined approach aims to address the research questions, clarify conceptual ambiguities, and suggest future directions for studies on corporate governance mechanisms, ESG disclosure and the mitigation of information asymmetry risk. The search for articles in the database was refined using the following inclusion and exclusion criteria:

Inclusion criteria:

- a. Articles and journals on Emerald, Elsevier and Wiley Online Library.
- b. The articles must be published in English.
- c. The entire text of the article must be accessible.
- d. The focus of the research should be on ESG disclosure, information asymmetry risk, and corporate governance mechanisms
- e. Articles must be published from 2021 to 2025.

Exclusion criteria:

- a. Studies that are not relevant to the context of ESG disclosure, information asymmetry risk, and corporate governance mechanisms
- b. Documents in the form of books or journal reviews that contain non-academic research.
- c. Studies in a language other than English.
- d. Studies that do not provide sufficient or complete information related to ESG disclosure, information asymmetry risk, and corporate governance mechanisms.
- e. Published before 2021.



**Figure 1.** PRISMA Flow: Data Process (2025)

The search for articles related to this topic was conducted in July 2025, focusing on the titles, keyword and abstracts of each study. The search results showed several articles that met the exclusion criteria. These articles provided relevant information on ESG disclosure in the context of ESG disclosure, information asymmetry risk, and corporate governance practices and were written in English. However, some articles were published before 2021, were not fully accessible, did not provide sufficient or comprehensive information on the topic, or were not academic in nature. Therefore, only articles that met the defined quality criteria were selected for further analysis.

The authors carried out a three-stage review process of the publications using the PRISMA flow diagram (Figure 1). The first stage was identification, which involved an initial literature search using appropriate keywords. The search was limited to academic journals published by Emerald, Elsevier and Wiley Online Library. In the next phase, screening was conducted by reviewing article titles, keyword and abstracts to remove those that did not satisfy the inclusion requirement. The goal of this stage was to select the most potentially relevant articles for full-text assessment. In the final stage, known as included, the selected articles were thoroughly evaluated for their suitability to be included in the paper and analyzed in more depth. As a result of this process, ten articles were selected and became the subject of a systematic review or meta-analysis in this study.

### 3. RESULTS AND DISCUSSION

The primary theoretical lens through which the literature has examined ESG (Environmental, Social, and Governance) disclosure encompasses four core perspectives.

#### 3.1 Agency Theory

According to agency theory, a principal-agent relationship exists between principals (such as shareholders) and agents (like the BoD or management). As the owners of the firm, principals delegate authority to agents to act on their behalf. Conversely, agents, in their capacity as company management, are entrusted with this mandate. Within this relationship, however, conflicts of interest, referred to as agency conflicts, may arise when the interests of the agent diverge from those of the principal (Bamahros et al., 2022). Investments in ESG initiatives can be a source of such conflict, particularly when these investments reduce short-term profits for shareholders. Agency conflicts may occur



if agents pursue personal goals, such as improving their own image or reputation among stakeholders. Additionally, ESG initiatives might lead to the rejection of projects that are profitable but misaligned with ESG standards. In some cases, companies may even use ESG disclosures to mask weak financial performance, a practice known as window dressing (Peng & Isa, 2020).

### 3.2 Stakeholder theory

Stakeholder theory explains that a company's success relies on its ability to satisfy the needs and expectations of diverse stakeholders. The theory was first introduced in the 1960s by Stanford Research Institute, highlighting that for an organization to exist and thrive, it needs support not only from shareholders but also from other stakeholders (Mahajan et al., 2023). Theory highlights that addressing stakeholders' needs and expectations effectively can help companies minimize conflicts, build a stronger reputation, and improve their overall competitiveness (Li et al., 2024). As a result, organizations must balance the goal of maximizing shareholder profits with the responsibility of attending to stakeholder interests. Building good relationships with other stakeholders can be achieved by publication ESG report (Li et al., 2024). Periodic publication of ESG reports is a Company's Effort to provide information on their achievements in environmental, social, and governance aspects. Reporting good ESG results through official web pages and various media platforms, aims to increase corporate transparency regarding non-financial performance, which can ultimately enhance the company's reputation and strengthen the trust and confidence of both stakeholders and shareholders.

### 3.3 Legitimacy theory

ESG issues were once viewed as non-essential for maximizing shareholder profits. However, today, ESG has become a key priority for companies aiming to generate long-term value for all stakeholders. The connection between corporate governance and ESG disclosure can be understood through the theory of legitimacy. According to this theory, there exists a "social contract" between organizations and society, which asserts that the purpose of an organization not only maximizes profit but also social responsibility. This helps that the organization aligns with the values, principles, and expectations of its stakeholders' social systems (Nicolo et al., 2023). By being rewarded for higher social responsibility than competitors, a company can reduce the legitimacy gap with society. (Bamahros et al., 2022). This perspective suggests that ESG is a core strategy that companies can adopt. Decisions incorporating ESG considerations are influenced by corporate governance, leading to the concept of sustainable corporate governance. Based on the theory of legitimacy, the role of leadership is not only to maximize profits through financial performance but also to take responsibility for the social and environmental impacts of the company's operations. Therefore, the composition and role of leadership are crucial in enhancing corporate accountability and transparency, particularly in non-financial matters.

### 3.4 The signaling theory

According to signaling theory, companies can communicate positive signals to investors and stakeholders by publicly disclosing evidence of effective performance. Through this approach, firms can demonstrate their active engagement in ESG practices as a means of creating long-term value (Bamahros et al., 2022). The disclosure of ESG-related information can help reduce the risks associated with information asymmetry and provide insights into the effectiveness of ESG governance, thereby attracting greater interest from investors (Yan Wang & Wang, 2024).

### 3.5 Corporate Governance

Corporate governance structure can affect the acquisition and effective allocation of corporate resources (Chen, 2024). Effective corporate governance significantly contributes to the enhancement of corporate performance by supporting strategic decision-making and ensuring the efficient use of resources, ultimately boosting competitiveness. It helps to clearly separate principal (ownership) and agent (control), thereby minimizing conflicts of interest between managers and shareholders. Managers may sometimes act based on personal interests, which do not always align with the goals and expectations of the company's owners.

Today, companies are much bigger, more complex and more powerful than they were in 1932 or 1970. At the same time, investor preferences have evolved, with a growing emphasis on sustainability. This shift has made many investors, particularly from younger generations more sensitive to social concerns. For this reason, a well-structured governance framework and mechanism are essential to safeguard the company's sustainable and healthy growth over the long term.

### 3.6 ESG Disclosure

Sustainability issues are becoming increasingly prominent in both the business sector and daily activities, driven by growing public awareness of environmental concerns. In response to these challenges, the United Nations introduced the Sustainable Development Goals, comprising 17 goals and 169 targets to be achieved by 2030. One way to support the realization of the SDGs is through the implementation of ESG practices. ESG reflects the advancement and expansion of green and responsible investment principles, and functions as a key global standard for evaluating a



company's sustainability performance (Li et al., 2024). ESG allows companies to balance business goals with social responsibilities, while optimizing resource utilization. (Bamahros et al., 2022).

The disclosure of ESG information to stakeholders is crucial, as it significantly influences a company's operations. In the business context, ESG is not merely a reflection of a company's goodwill or its commitment to environmental responsibility, but also serves as a key driver for enhancing market value. This is evident from the exponential growth in sustainable investment, indicating that investors increasingly prioritize sustainability in their decision-making processes (Berggren & Pettersson, 2023). Moreover, ESG disclosure enables companies to identify potential future risks and opportunities, while also enhancing their reputation beyond financial performance. Transparency and accountability in ESG reporting contribute to improved greater resource efficiency, company performance, better risk mitigation, cost reduction, stronger investor confidence in long-term prospects, and a sustained competitive advantage (Angir & Weli, 2024). ESG disclosure serve as highly effective tools for communication, offering external investors essential insights into a company's commitment to social responsibility. This impact stems from both internal and external factors. Internally, strong ESG performance promotes greater transparency and accountability in corporate governance and investment decisions. Externally, robust ESG performance sends a positive signal regarding the company's commitment to sustainable and responsible growth.

**3.7 Information Asymmetry**

Based on to the theory of information asymmetry, certain parties, such as company managers, possess more internal information than external parties. This disparity in information creates potential issues, as it hinders external investors from accurately evaluating the company's performance, which in turn influences their investment decisions. Therefore, information asymmetry can be understood as a situation in which market participants do not have equal access to relevant information, thereby impacting investment decisions (Angir & Weli, 2024). In a market economy, information asymmetry is prevalent, where the party with superior information holds more internal insights, putting the less informed party at a disadvantage (Yan Wang & Wang, 2024).

The risk of information asymmetry can be reduced by ensuring that information is valid, timely, and transparent. Transparency in information helps set clearer expectations about the company's performance, which can build greater trust among investors. However, based on the information asymmetry theory, transparency can sometimes increase information asymmetry. This occurs when the information provided is incomplete, selectively benefiting certain aspects while concealing negative aspect. While such transparent decisions may improve the reputation in the short term, but they can lead to a decline in investor confidence in the long term (Li et al., 2024). Therefore, effective corporate governance is essential to ensure the completeness and authenticity of the information shared.

**3.18 Discussion**

Good corporate governance can significantly influence corporate decision-making regarding ESG (Environmental, Social, and Governance) disclosure practices. Through effective governance, companies are expected to create greater value for all stakeholders. This shows the company's responsibility in managing itself well. As sustainability becomes more important, stakeholders are increasingly demanding clear information about the positive and negative impacts of a company's environmental and social actions, as well as the effectiveness of their sustainability governance.

The findings from the literature review led to the identification of several previous studies rekated ESG disclosure, which are summarized in the table below:

**Table 1.** Synthesis Table of Previous Studies on ESG Disclosure

No	Author	Title	Theory	Result
1	(Agapova et al., 2025)	Navigating transparency; The interplay of ESG disclosure and voluntary earning guidance	Stakeholder Theory	Companies provide voluntary earnings guidance as a way to offset the negative effects of ESG disclosures on overall transparency. Since ESG reports can be complex and difficult to interpret, it often takes more time to assess whether a company's ESG performance is positive or negative. This complexity can create challenges for investors and contribute to greater information asymmetry.
2	(Donkor et al., 2025)(Donkor et al., 2025)	Corporate Governance and ESG Disclosure in Fintech Firm: Does Culture Matter?	1. Agency Theory 2. Resource Dependence Theory 3. Social Identity Theory	The influence of board size, independence, and gender diversity on ESG disclosures in Fintech firms is stronger in cultures that are more collectivist and less indulgent.



No	Author	Title	Theory	Result
3	(Liu et al., 2025)	Corporate Governance and Cost of Debt: Mediating Role of Environmental, Sosial and Governance Disclosure	1. Agency Theory 2. Stakeholder Theory 3. Signaling Theory	ESG disclosure has been shown to significantly lower the cost of debt and acts as a mediating factor in the relationship between corporate governance and debt financing costs.
4	(Aly et al., 2024)	Corporate governance and environmental disclosure: a comparative analysis	1. Agency Theory 2. Legitimacy Theory 3. Stakeholder Theory	In UK firms, environmental disclosure is significantly influenced by board independence and how often the board meets. In contrast, for US firms, both board independence and the independence of the audit committee are key factors driving environmental disclosure.
5	(Ardianto et al., 2024)	CEOs family on the boardroom and environmental, social and governance disclosure: Exploring from economic crisis during COVID-19	Didn't mention	Family-owned firms tend to demonstrate better quality in ESG disclosures than companies whose boards lack family representation.
6	(Boulton, 2024)	Mandatory ESG disclosure, information asymmetry and litigation risk: Evidence from initial public offerings	Didn't mention	In environments with high-quality disclosure practices, the negative relationship between ESG disclosure mandates and underpricing becomes stronger, indicating that such mandates help decrease information asymmetry and the risk of litigation. The effect of ESG disclosure mandates on reducing underpricing is more significant in countries where environmental, social, and governance issues are more prominent.
7	(Yadong Wang et al., 2024)	Connecting the dots: A systematic review of CSR, information asymmetry and economic implications	1. Agency Theory 2. Stakeholder Theory	CSR can help mitigate information asymmetry problems, resulting in favorable economic outcomes such as improved stock liquidity, greater investment efficiency, and lower capital costs.
8	(Tsang et al., 2023)	ESG disclosure: A literature review	Stakeholder Theory	The literature is structured into four main themes: the drivers and outcomes of ESG information, as well as characteristics related to disclosure and users that may influence the effects of ESG reporting. Nonfinancial rating agencies also play a crucial role as intermediaries of ESG information within capital markets.
9	(Kumari et al., 2022)	Board characteristics and environmental disclosures: evidence from sensitive and non-sensitive industries of India	1. Agency Theory 2. Stakeholder Theory	The presence of a sustainability committee, larger board size, and more frequent board meetings are positively and significantly linked to environmental disclosure across both sensitive and non-sensitive industries. In contrast, board independence, gender diversity on the board, and CEO duality do not show a significant effect on environmental disclosure.
10	(C.-Y. Wang et al., 2021)	Effect of air quality in corporate environmental disclosure: the moderating role of institutional investors	Legitimacy Theory	Voluntary disclosure and ongoing environmental degradation drive companies to proactively communicate their environmental initiatives and practices.

The Table 1 above presents a synthesis of previous studies that examine topics related to ESG disclosure. Research specifically exploring the role of ESG disclosure in mitigating information asymmetry risk and the



integration of corporate governance as a mediating factor in this relationship remains limited. Therefore, the selected studies are considered representative of the correlation between these variables and will be discussed in greater detail in the following sections.

Boards, as part of the CG structure, is responsible for monitoring the company and making decisions that benefit and respond to the needs of all stakeholders, both directly and indirectly (Chebbi & Ammer, 2022). Boards must act consistently with the interests of other stakeholders such as providing relevant reports and information to stakeholders beyond the interests of maximizing shareholder investment value (Berggren & Pettersson, 2023). Based on the previous research, size of the board and its degree of independence have a positive and significant influence on ESG disclosure. This finding supports the view that a greater number of board members leads to increased ESG disclosure. Companies with larger boards have the potential to include directors who are more likely to encourage voluntary disclosures and strengthen oversight of management, thereby enhancing the company's legitimacy. By bringing diverse perspectives into board discussions, a larger board can improve decision-making processes related to ESG strategies, policies, and actions. In particular, board independence plays a crucial role in encouraging the disclosure of more ESG information, as they tend to be more aware of the company's social impact (Chebbi & Ammer, 2022). The results of this study are supported by the results of other studies which state that board independence and the frequency of board meetings as significant determinants of ED for UK firms (Aly et al., 2024). Kumari et al. (2022) also investigated the link between corporate governance and ESG disclosure, finding that the presence of a sustainability committee, larger board size, and more frequent board meetings are positively and significantly associated with environmental disclosure across both sensitive and non-sensitive industries. Conversely, factors such as board independence, gender diversity, and CEO duality were found to have no significant influence on environmental disclosure (Kumari et al., 2022).

As ESG becomes more important in business, companies are expected to share more information about their ESG practices. This helps investors make better decisions (Berggren & Pettersson, 2023). When companies don't provide ESG information, it creates a gap between what board know and what investors know, this is called information asymmetry. However, the extent to which ESG disclosure influences information asymmetry remains an area of ongoing debate.

Firms disclose environmental information for a variety of reasons, which can be understood through several theoretical perspectives, including the voluntary disclosure hypothesis and the risk avoidance hypothesis. The voluntary disclosure hypothesis suggests that ongoing environmental degradation encourages companies to proactively communicate their environmental efforts. In contrast, the risk avoidance hypothesis argues that firms might be reluctant to provide extensive environmental disclosure due to concerns over security and privacy risks that may arise from revealing more than what is typical in their industry (C.-Y. Wang et al., 2021). As a result, firms tend to be cautious in deciding how much and what quality of environmental information to disclose, carefully balancing the potential advantages and disadvantages.

Several theories explain why ESG disclosure matters. According to signaling theory, sharing ESG information sends a message to investors about the company's values and performance. In this case, less information can lead to more uncertainty and affect the company's value (Angir & Weli, 2024). Stakeholder theory suggests that managers engage with various stakeholders to build a reputation for transparency and trust. Showing that a company is socially responsible helps reduce doubts and builds trust. Legitimacy theory explains that companies with weaker ESG performance may still disclose sustainability information, though often of lower quality, in an attempt to appear legitimate and protect their public image (Berggren & Pettersson, 2023). On the other hand, based on the agency theory, companies with strong ESG performance can lower information gaps and reduce conflicts between managers and stakeholders. When managers choose to share information about environmental performance, they show they have the same goals as investors, which helps improving corporate governance and reducing information asymmetry (Yahaya, 2025).

Several prior research have identified a link between ESG disclosure and information asymmetry. The findings indicate a significant negative correlation between environmental disclosure and corporate information asymmetry, implying that companies with greater environmental transparency tend to face lower levels of information asymmetry. Weak environmental performance may motivate firms to obscure key risks, increasing information asymmetry (Yahaya, 2025). Environments with strong disclosure quality and rigorous legal regulations intensify the inverse relationship between mandated ESG disclosures and underpricing. This indicates that ESG disclosure mandates can reduce information asymmetry and litigation risk (Boulton, 2024). This research also supported with previous research, indicating that ESG performance reduces information asymmetry, and assurance services influence the strength of this inverse relationship. (Kim & Park, 2023). However, ESG reports are not always easy to understand. Unlike financial reports, it takes longer for people to figure out if the company's ESG performance is good or bad. This makes it harder for investors and increases information asymmetry (Agapova et al., 2025). Some studies have found results that do not support Agency Theory, showing that ESG disclosure does not affect information asymmetry. One possible reason for the lack of a relationship is that the market needs more time to fully understand and absorb Corporate Social Responsibility (CSR) reports and ESG scores. Compared to financial data, this kind of information often takes longer to influence market perceptions. Another possible explanation is that some companies engage in ESG reporting mainly for image purposes, known as greenwashing, rather than providing meaningful information. When sustainability reports lack credibility, stakeholders may consider them unreliable or irrelevant, which can lead





management and shareholders, while Stakeholder Theory underscores the importance of addressing the expectations of a broader set of stakeholders. Legitimacy Theory also plays a critical role, particularly in topics related to environmental disclosure pressure and comparative disclosure analyses. This theory highlights the importance of organizations aligning their ESG strategies with societal norms and values to maintain legitimacy. Meanwhile, Resource Dependence Theory and Social Identity Theory are applied more selectively. These theories appear primarily in studies examining the cultural influence on ESG disclosure, suggesting that organizational behavior in ESG contexts is shaped by external resource needs and group identity dynamics. Signaling Theory is employed in research focusing on the link between ESG and the cost of debt, where firms use ESG disclosure as a tool to signal transparency and reduce perceived risk. Notably, for some topics such as family business ESG disclosure and mandatory disclosure and legal risk, the associated articles did not explicitly mention a theoretical foundation. This absence may indicate a more descriptive or regulatory focus, lacking deeper theoretical anchoring.

In summary, the heatmap highlights both the dominant theoretical perspectives that underpin ESG disclosure research primarily Agency and Stakeholder Theory as well as underexplored areas where theoretical integration could be strengthened. This insight can guide future researchers in selecting appropriate theoretical lenses and identifying gaps in the existing literature.

#### 4. CONCLUSION

In conclusion, the evidence presented strongly suggests that good corporate governance mechanisms significantly drive and shape a company's ESG disclosure practices in mitigating information asymmetry risk, ultimately aiming to enhance value for all stakeholders. Effective governance structures make greater transparency and accountability regarding environmental and social impacts. This aligns with the increasing stakeholder demand for clear and reliable sustainability information. Corporate governance encompasses various dimensions, among which managerial roles are critical. Managers are expected not only to enhance shareholder value but also to ensure oversight and decision-making that align with stakeholders' diverse expectations, such as through the provision of relevant and comprehensive ESG reporting. Prior research consistently indicates a positive relationship between board size and independence and the extent of ESG disclosure larger boards bring diverse perspectives and strengthen management oversight, while independent directors are more attuned to a company's social impact both contributing to increased and improved ESG reporting. Furthermore, the text explores the intricate relationship between ESG disclosure and information asymmetry. While theories like signaling, stakeholder, legitimacy and agency theory suggest that greater ESG disclosure should reduce information gaps, empirical findings present a more nuanced picture. Some studies confirm a negative relationship, indicating that higher quality ESG disclosure lowers information asymmetry and enhances market understanding. However, other research suggests that the market may still be in the process of fully integrating ESG information and issues like greenwashing and varying stakeholder interpretations can hinder the impact of ESG disclosure on information asymmetry. Ultimately, the evidence presented underscores the importance of robust corporate governance in promoting meaningful ESG disclosure. While the direct impact of this disclosure on information asymmetry remains a subject of ongoing investigation, the fundamental role of good governance in fostering corporate responsibility and transparency in the face of growing sustainability concerns is undeniable. Based on the findings of this study, there are several opportunities for future research. First, future studies may incorporate moderating and mediating variables, such as audit quality, institutional ownership, or ESG regulatory policies, to explore factors that strengthen or weaken the relationship between corporate governance mechanisms and ESG disclosure. Second, it is important to examine the impact of ESG disclosure on firm performance more comprehensively, including aspects such as firm value, cost of capital, and stakeholder trust. Third, given the mixed empirical evidence regarding the influence of ESG disclosure on information asymmetry, future research should investigate the roles of factors such as greenwashing, report credibility, and the market's level of understanding in this relationship. Finally, further analysis should consider alternative theoretical frameworks, such as Resource Dependence Theory and Social Identity Theory.

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