ISSN(O): 2456-6683
[Impact Factor: 9.241]

DOIs:10.2017/IJRCS/202604013 --:-- Research Paper / Article / Review

From Disclosure to Value Creation: ESG Integration, Financial Materiality, and Sustainable Corporate Performance - A Review

[1] Tayade Sandeep T, [2] Deshmukh Sanjay
[1]PhD student, Environmental Science Department, Charitrakar Padmabhushan Dr. Dhananjay Keer Ratnagiri Sub-Campus University of Mumbai, P-61, MIDC, Mirjole, Ratnagiri - 415639
[2]Sr. Professor of Life Sciences, University of Mumbai, Mumbai. Adjunct Professor, ICT, Matunga, Mumbai.
Email - [1]sandeeptayade@gmail.com [2]docsvd@yahoo.com

Abstract: *Environmental, Social, and Governance (ESG) considerations have moved from optional corporate activities to core elements of business strategy, investment decisions and regulatory compliance. This review provides an extensive synthesis of academic and institutional literature examining how ESG frameworks have developed, how financially significant ESG issues impact firm-level financial performance and how ESG integration promotes broader sustainable development outcomes. Using PRISMA 2020 guidelines, the review analyses 120 peer-reviewed journal articles and 30 authoritative institutional and regulatory reports published between 2009 and 2025. The study shows the evolution and convergence of major ESG frameworks, including the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), Task Force on Climate-related Financial Disclosures (TCFD), Integrated Reporting (IR), and the European Sustainability Reporting Standards (ESRS).*

The findings show that ESG integration, when strategically embedded in governance structures and aligned with financially significant issues, is linked to lower capital costs, improved operational efficiency, better innovation outcomes and increased resilience to environmental, social and governance risks. However, the review also highlights ongoing challenges, including fragmented standards, limited data comparability, assurance gaps and capacity constraints, especially for small and medium-sized enterprises. The emerging convergence of sustainability and financial reporting along with advances in digital reporting and assurance technologies, is recognized as a key enabler of ESG's shift from mere disclosure compliance to providing useful information for investors and regulators. Overall, the review presents ESG integration as a governance framework that can align long-term corporate value creation with societal and sustainable development goals.

Key Words*:* *ESG integration, financial materiality, corporate governance, sustainability reporting.*

1. INTRODUCTION:

1.1 The Rise of ESG in Global Corporate Governance

Over the past two decades, the global corporate sector has experienced a significant structural change driven by environmental damage, social inequality, governance issues and systemic financial instability (Eccles et al., 2014; United Nations, 2015). Companies, investors and regulators now use Environmental, Social, and Governance (ESG) factors as the main approach to handle such problems. (Busch, et al., 2015).

ESG is now considered as heart of corporate strategy, serving as a crucial element for companies to generate value, mitigate risks and sustain their long-term competitive edge. This shift recognizes the importance of aligning business practices with broader societal and environmental values, acknowledging the growing concerns of both stakeholders and consumers (Khan et al., 2016).

Climate change has intensified both physical risks such as extreme weather events, supply chain disruptions and asset impairments with transition risks stemming from decarbonization policies, technological advances and shifting consumer preferences (Benedetti et al., 2023). Social aspects including labour rights, workplace safety, diversity and inclusion, data privacy with community engagement have become increasingly important as globalisation and digitalisation increase corporate visibility and accountability (Convene ESG, 2025). Failures in governance, revealed during corporate scandals and financial crises, have further emphasised the vital role of board oversight, executive responsibility and ethical leadership (Jagrič et al., 2025).

Institutional investors have played a vital role in integrating ESG into mainstream capital markets (OECD, 2022). Pension funds, insurance companies, sovereign wealth funds, and asset managers increasingly recognise that ESG related risks and opportunities can significantly affect portfolio performance (Bassen & Kovács, 2020). As a result, ESG considerations are now included in investment mandates, stewardship standards, voting guidelines and engagement practices (European Commission, 2023). This investor driven shift has transformed ESG from a normative goal into a financially grounded governance tool.

1.2 ESG as a Capital Markets Phenomenon

The growth of ESG should also be viewed as a capital market phenomenon. Financial markets are increasingly assessing sustainability related risks and opportunities, reflecting a growing understanding that traditional financial statements alone do not give a full picture of a company's performance (Christensen et al., 2022). Climate exposure, human capital management, cybersecurity readiness and governance quality are now widely recognized as significant factors influencing long term cash flows and risk adjusted returns (IFRS Foundation, 2024).

Consequently, ESG information has become essential in equity valuation models, credit risk assessments and portfolio construction processes. Asset pricing research indicates that firms with strong ESG performance often enjoy lower capital costs, less volatility and better access to finance. On the other hand, companies with weak ESG practices may face higher financing costs, regulatory penalties, reputational harm and the risk of stranded assets (Berg et al., 2022).

Regulatory interventions have strengthened this market-based logic. Jurisdictions across Europe, North America and Asia-Pacific have implemented mandatory sustainability reporting requirements, climate-related financial disclosure rules, and supply chain due diligence obligations (ERM & Sustainability, 2025). These regulatory changes indicate a clear shift from voluntary ESG disclosure to regulated sustainability governance, integrating ESG considerations into the institutional framework of financial markets.

1.3 From Corporate Social Responsibility to Financial Materiality

A significant feature of modern ESG is its focus on financial materiality. Previous models of corporate social responsibility (CSR) often emphasised ethical duties, philanthropy or reputational benefits without directly linking to financial outcomes (Porter & Kramer, 2011). Although CSR efforts built stakeholder goodwill, they were often secondary to core business strategies.

In contrast, ESG integration emphasises sustainability issues that are likely to impact a company's financial condition, operational performance or prospects. Financial materiality requires companies to identify, measure, and manage ESG factors that influence cash flows, cost of capital and overall enterprise value (Khan et al., 2016). This change has significantly shifted how organisations view sustainability from merely a cost centre to a source of competitive advantage and risk mitigation (Landi & Sciarelli, 2023).

The idea of materiality has also transformed sustainability reporting. Investors increasingly seek decision useful ESG information that is comparable, reliable and aligned with financial reporting. This demand has accelerated the development of industry specific standards, climate risk disclosure frameworks and integrated reporting models that link sustainability performance to financial results (Eriandani & Winarno, 2024; IFRS Foundation, 2023; CSR Training Institute, 2024; Wan, 2025).

1.4 ESG, Fiduciary Duty and Long-Term Value Creation

The incorporation of Environmental, Social, and Governance (ESG) aspects into asset decision-making has reignited discussions concerning fiduciary duty and the primacy of shareholder interests. Traditional views of fiduciary duty focused on short-term financial returns, often ignoring non-financial factors. However, changes in legal interpretations and regulatory guidance increasingly acknowledge that ESG aspects can be financially material and thus relevant to fiduciary responsibilities (OECD, 2022).

Long-term value creation has become a core principle connecting ESG integration with regulatory obligation duty. By embedding ESG factors into governance, risk management and capital allocation, firms can improve resilience, promote innovation and align their strategies with long-term societal trends (Eccles et al., 2015). This approach redefines ESG not as a limit on profitability but as a strategic perspective that helps firms manage uncertainty and complexity.

1.5 Research Gap and Objectives

Despite the rapid spread of ESG practices and frameworks, significant conceptual, empirical, and practical challenges still exist. Academic research shows mixed results regarding the relation between ESG performance and financial results, due to changes in ESG measurement, methods, industry contexts, and locations (Velte, 2022). Reporting frameworks differ in scope, terminology and target audience, making comparison and assurance more difficult (GRI, 2021; SASB, 2021). Concerns about data quality, greenwashing and selective disclosure remain significant, particularly in the absence of universal standards and robust assurance mechanisms.

Furthermore, although ESG is often associated with the United Nations Sustainable Development Goals (SDGs), the pathways by which firm-level ESG adoption leads to tangible development outcomes remain poorly understood (United Nations, 2015; World Bank, 2020). There is a need for an integrated approach that links ESG frameworks, financial materiality, corporate governance, and sustainable development within a clear analytical framework.

Against this backdrop, the present review aims to address three interconnected objectives. First, it synthesises the development and convergence of main universal ESG frameworks, emphasising their conceptual foundations and implications for corporate governance and capital markets. Second, it assesses the evidence on the connection between ESG combination and corporate financial performance, risk management and innovation. Third, it explores how ESG integration supports broader sustainable development goals, especially alignment with the SDGs.

By addressing these objectives, the review aims to clarify the situations under which ESG integration serves as a mechanism for long-term value formation rather than just symbolic compliance, thereby contributing to both academic scholarship and policy discourse.

2. METHODOLOGY:

2.1 Research Design and Rationale (PRISMA for ESG)

The objective of the research is to provide a thorough, transparent and comprehensive synthesis of the rapidly growing body of literature on Environmental, Social, and Governance (ESG) integration. ESG research spans multiple disciplines including finance, accounting, management, environmental studies and public strategy alongwith characterised by diverse concepts, varied methodologies and diverse data sources. In such contexts, a systematic literature review provides a robust methodological foundation by enabling thorough coverage, reducing selection bias, and ensuring reproducibility.

Accordingly, this study adheres to the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews & Meta Analyses) procedures. PRISMA is especially suitable for ESG research because it enforces methodological rigour in fields where evidence is fragmented and evolving (Page et al., 2021). By requiring clear documentation of identification, screening, eligibility and inclusion stages, PRISMA improves transparency and enables readers and assessors to evaluate the credibility of the review process. The framework also facilitates integrative synthesis, which is vital for ESG research that combines empirical, conceptual and policy-oriented insights.

2.2 Data Sources and Search Approach (Databases and Grey Literature)

A comprehensive literature search was performed across three major academic databases: Scopus, Science Web (Core Collection) and Google Scholar. These databases were chosen to ensure extensive disciplinary coverage and inclusion of high quality peer-reviewed journals relevant to ESG, sustainability, corporate governance and financial markets with sustainability. The search covered the period from January 2009 to January 2025, capturing the time when ESG move from a niche research topic to a central paradigm in commercial and asset practice.

Search strings combined ESG-related keywords with terms associated with corporate performance, governance, and sustainable development. Representative combinations included “ESG integration AND financial performance,” “sustainability reporting AND materiality,” “ESG AND corporate governance,” and “ESG AND sustainable development goals." Boolean operators and truncation were used to capture variations in terminology. Backward and forward citation tracking of highly cited studies was also conducted to ensure comprehensive coverage.

To reflect the institutional and regulatory progress of ESG, the academic database search was supplemented with grey literature from authoritative international organizations, standard-setting bodies, and regulatory institutions. These included publications from the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), the Task Force on Climate related Financial Disclosures (TCFD), the International Integrated Reporting Council (IIRC), the European Commission, the OECD, the World Bank and United Nations agencies (GRI, 2021; TCFD, 2017; IIRC, 2021). Including grey literature is important in ESG investigate, as many frameworks and regulatory developments often precede formal academic analysis.

2.3 Inclusion and Exclusion Criteria
Explicit enclosure and elimination criteria were established before screening to ensure consistency and objectivity. Studies were selected if they met four conditions: (i) available in English; (ii) appeared in peer-reviewed academic journals or reputable institutional and regulatory reports; (iii) explicitly focused on ESG integration, ESG performance, or financially material sustainability issues rather than just descriptive disclosure; and (iv) analyzed outcomes related to financial performance, risk management, governance quality, innovation or sustainable development.

Studies were excepted if they consisted solely of conference abstracts, editorials, opinion pieces, book chapters, or practitioner commentary lacking analytical or empirical depth. Highly technical finance studies referencing ESG variables without substantial engagement with sustainability concepts were also excluded. These criteria ensured that the final corpus reflected both working accuracy and substantive relevance to the study objectives.

2.4 Screening and PRISMA Flow Logic
The screening method followed a multi-stage procedure consistent with PRISMA 2020 guidelines. First, duplicate records were removed using reference managing software. Second, titles and abstracts were screened to assess relevance to ESG integration and the stated research objectives. Third, full-text screening was shown to determine eligibility in line with the predefined inclusion criteria. Any disagreements during screening were resolved through discussion and consensus, thereby minimising subjective bias.

The primary examination yielded numerous records across academic databases and grey literature sources. After removing duplicates and screening, a final set of 150 sources was selected, including 120 peer-reviewed academic studies and 30 institutional and regulatory reports. The PRISMA flow drawing ensures transparency about how the final sample was obtained and allows others to replicate the review process.

2.5 Data Extraction and Coding Framework
A standardised data extraction template was created to ensure systematic and consistent collection of relevant information from each source. Extracted variables included publication year, geographic focus, industry context, ESG framework used, ESG measurement approach, methodological design, financial presentation indicators, governance variables and SDG alignment where applicable.

To manage the diversity of the ESG literature, an iterative coding framework was employed. Initial codes were based on the review objectives, while new themes appeared during analysis. This combined deductive and inductive approach helped identify patterns and relationships across studies and supported an integrative synthesis rather than just combining results.

2.6 ESG Measurement Heterogeneity
A key methodological challenge in ESG research is the variability of ESG measurement. ESG ratings and scores vary widely across data vendors due to differences in indicator selection, weighting methods, data sources and methodological assumptions. This variation significantly affects empirical outcomes and often leads to inconsistent results across studies.

This review explicitly addresses ESG measurement diversity by categorising studies based on the type of ESG metrics used, such as composite ratings, pillar-level scores and issue-specific or financially material indicators. By highlighting these differences, the review distinguishes between studies that emphasise overall ESG performance and those that focus on economically important ESG issues. This is important for understanding varied results and for evaluating when and how ESG integration affects corporate outcomes.

2.7 Treatment of Causality and Endogeneity

Causality and endogeneity pose continuing challenges in ESG research. Companies with strong financial performance may be better prepared to capitalize in ESG initiatives, potentially leading to reverse causality, whereas unobserved company's characteristics may concurrently influence both ESG performance and financial performance.

To address these concerns, the review differentiates between correlational studies and those using more rigorous identification strategies. Studies are categorized based on how they handle endogeneity, including the use of active variables, difference-in-differences designs, panel fixed-effects models and natural experiments. This categorization allows for a nuanced clarification of the ESG financial performance association, avoiding overstating causal claims while acknowledging advances in empirical methods.

2.8 Quality Assessment of Studies

To enhance analytical rigour, a qualitative assessment of study quality was conducted. Empirical studies were evaluated founded on the clarity of research design, the appropriateness of ESG measurement, the robustness of statistical methods, the transparency of data sources, and the credibility of causal inferences. Conceptual studies were evaluated for their theoretical coherence, clarity of argumentation, and contribution to the growth of the ESG framework.

Institutional and regulatory reports were evaluated for their authoritativeness, scope and relevance to the development of ESG governance and reporting. While no studies were excepted solely based on quality, this assessment influenced the weighting of evidence during synthesis, with greater emphasis on methodologically sound contributions.

2.9 Geographic and Sectoral Classification

To capture contextual diversity, studies were grouped by geographic region and industry sector. Regional categories included North America, Europe, Asia-Pacific and emerging markets. Sector classification followed standard industry groupings, enabling comparison across sectors with differing ESG risk profiles, including energy, manufacturing, finance, technology and consumer services.

This classification helps analyse how regulatory environments, market maturity and sector-specific risks affect ESG integration and outcomes. It also aids in identifying industry-specific patterns of financial materiality, which are key to investor relevance.

2.10 Synthesis Strategy

The final stage of the methodology involved the integrative synthesis of extracted evidence. Instead of mechanically aggregating findings, the review employs a narrative synthesis approach that situates empirical results within broader theoretical, institutional and regulatory contexts. Quantitative findings are analysed alongside qualitative insights to uncover the mechanisms by which ESG integration affects corporate performance and sustainable development outcomes.

This approach allows the review to connect companies behaviour with capital market dynamics and policy frameworks, aligning with the study's goal of framing ESG as a governance structure rather than just a reporting activity.

2.11 Ethical Considerations

As a secondary research study relying solely on published sources, this review does not involve human subjects or primary data collection and therefore does not require formal ethical approval. Nevertheless, ethical research practices are observed through accurate citation, transparent reporting of methods and faithful representation of original findings. The structured PRISMA-based approach further enhances transparency and reproducibility.

2.12 Methodological Summary

In summary, this PRISMA-based systematic review procedure offers a rigorous and transparent foundation for synthesising the ESG literature. By explicitly addressing ESG measurement heterogeneity, causality and endogeneity concerns, study quality and contextual variation, the methodological approach anticipates common reviewer objections and enhances the credibility of the findings.

3. RESULTS AND DISCUSSION:

3.1 Evolution and Convergence of ESG Frameworks

The study of the reviewed literature shows a clear and organised development of ESG frameworks over the previous sixteen years. Early sustainability and corporate social responsibility (CSR) efforts were primarily voluntary, narrative-based and stakeholder-focused. These initial frameworks highlighted ethical behaviour, environmental care and social obligation, but lacked standardised metrics, thereby limiting their comparability and usefulness for financial decision-making. As a result, ESG information during this period was primarily intended to enhance reputation and legitimacy rather than to guide capital allocation.

Table 1 shows a phase marked by a shift toward formalized ESG disclosure. During this time, companies increasingly adopted indicator-based reporting systems and data providers started producing ESG ratings and scores. While this transition improved transparency, it also led to significant variation in measurement. Different methods used by ESG rating agencies resulted in inconsistent assessments of company performance, which limited investor confidence and hindered empirical analysis.

A clear move toward financial materiality and incorporation with mainstream financial reporting characterises the current phase. Industry-specific standards, climate-related disclosure frameworks and integrated reporting models collectively emphasise that ESG issues are financially significant and must be incorporated into corporate strategy, governance and risk managing. The literature consistently shows a trend toward harmonisation among leading ESG frameworks, driven by regulatory measures and investor demand for decision-useful information. This harmonisation indicates a fundamental shift of ESG from a peripheral disclosure to a central element of corporate governance and financial analysis.

Table 1. Evolution and Convergence of Major ESG Frameworks

Phase	Dominant Focus	Core Characteristics	Capital Market Implications
Early phase	Voluntary CSR	Narrative, principles-based	Reputational signalling
Transitional phase	ESG disclosure	Metrics and ratings	Improved transparency
Current phase	Financial materiality	Industry-specific, investor-oriented	Risk pricing and valuation
Emerging phase	Regulatory convergence	Mandatory, assured ESG data	Governance integration

3.2 ESG Integration and Financial Performance

A finding across the reviewed empirical studies is that ESG integration is associated with positive or at least neutral financial outcomes. A significant body of evidence indicates that firms with stronger ESG performance have lower costs of equity and debt, reflecting reduced perceived risk and increased stakeholder confidence. These effects are particularly evident in capital-intensive industries and in jurisdictions with robust regulatory frameworks.

Profitability related outcomes, such as return on assets and operating margins, also demonstrate positive links with ESG integration, although the strength of these effects varies. Studies that focus on long-term horizons report stronger connections, indicating that ESG investments create value over time rather than providing immediate financial gains. Market-based measures, including firm valuation and stock price resilience, further support the knowledge that ESG incorporation boosts investor confidence and promotes sustainable value creation.

Especially, the review highlights that inconsistent findings in the references mainly arise from differences in ESG measurement and research strategy. Studies using aggregate ESG scores often produce weaker or unclear results, while those focusing on financially material ESG issues report stronger, economically significant effects (Khan et al., 2016; Berg et al., 2022; Landi & Sciarelli, 2023). Table 2 shows the Summary of Evidence for ESG Integration and Financial Performance.

Table 2. Summary of Evidence for ESG Integration and Financial Performance

Financial Outcome	Direction of Effect	Interpretive Mechanism
Cost of equity	Negative	Reduced information asymmetry
Cost of debt	Negative	Lower credit risk
Profitability	Positive	Operational efficiency
Market valuation	Positive	Long-term growth expectations

ISSN(O): 2456-6683
[Impact Factor: 9.241]

3.3 Financial Materiality as a Mediating Mechanism

Financial materiality plays as the key mechanism linking ESG integration to corporate financial outcomes. Material ESG issues are those that are reasonably likely to affect a company's cash flows, cost of capital or risk profile. The literature demonstrates that materiality is inherently industry-specific, shaped by business models, regulatory exposure and stakeholder pressures.

Companies that systematically identify and manage material ESG risks and opportunities outperform those that adopt broad, undifferentiated ESG strategies. By focusing managerial attention and capital allocation on financially relevant sustainability issues, materiality-driven ESG integration enhances strategic clarity and resource efficiency (Khan et al., 2016). This mechanism explains why ESG integration yields value in some contexts but not others and underscores the boundaries of generic ESG disclosure.

3.4 ESG, Risk Management and Corporate Resilience

Beyond financial performance metrics, ESG integration functions as a sophisticated risk management framework. Environmental practices reduce exposure to climate transition and physical risks; social practices lower the chance of labour disputes, supply-chain disruptions, and reputational crises; and governance mechanisms enhance oversight, accountability, and proper behavior.

The reviewed studies consistently show that ESG-integrated companies have lower downside risk, less earnings volatility and greater resilience during market stress. During economic downturns and systemic shocks, companies with strong ESG profiles tend to experience smaller valuation losses and recover more quickly (Christensen et al., 2022). These findings indicate that ESG integration enhances corporate resilience by improving anticipation, absorption and adaptation to adverse events.

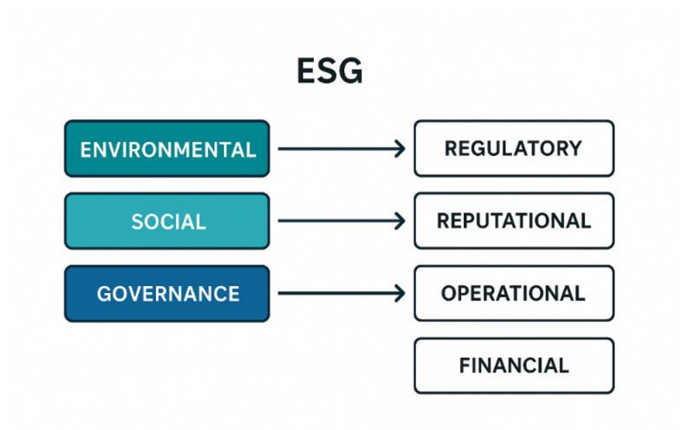

Figure 1: ESG Integration and Risk Mitigation Pathways

The Figure 1 shows how integrating Environmental, Social, and Governance (ESG) performs across business operations helps in proactively reducing various types of risks. ESG initiatives- such as sustainable resource management, employee welfare programs, ethical governance, and compliance mechanisms serve as foundational elements that mitigate:

- **Regulatory Risks:** Ensuring adherence to laws, policies, and industry standards, thereby avoiding fines, sanctions, or legal liabilities.
- **Operational Risks:** Streamlining processes, improving supply chain sustainability, and enhancing resource efficiency to minimise disruptions and inefficiencies.
- **Reputational Risks:** Strengthening stakeholder trust through transparency, social responsibility, and ethical performs, reducing the likelihood of negative public perception or brand damage.

The Figure 1 typically shows a flow from ESG adoption at the organisational level through targeted interventions and practices, culminating in risk-reduction outcomes. Arrows or connectors often highlight the interlinkages between ESG pillars and the consistent risk domains, emphasising a holistic, proactive approach. ESG integration goes beyond compliance and ethical accountability, it is a strategic mechanism for strengthening long-term organisational resilience, sustainability, and stakeholder confidence.

ISSN(O): 2456-6683
[Impact Factor: 9.241]

3.5 ESG Integration, Innovation and Competitive Advantage

The literature also highlights ESG integration as a vital driver of innovation and ongoing competitive advantage. Environmental efforts enhance resource efficiency, the adoption of emission-reduction technologies, and sustainable product development. Social practices bolster human capital, employee appointment and organizational learning, while governance mechanisms promote a long-term strategic focus (Porter & Kramer, 2011; Velte, 2022).

Observed evidence shows that companies with ESG integration exhibit higher levels of eco-innovation and are better equipped to adapt to regulatory changes and shifting consumer preferences. These dynamic capabilities lead to continued competitive advantage, supporting the idea that ESG integration (Table 3) is a strategic investment relatively than a cost burden.

Table 3: ESG Integration and Innovation Outcomes

ESG Dimension	Innovation Channel	Strategic Outcome
Environmental	Eco-innovation	Cost and resource efficiency
Social	Human capital development	Productivity and retention
Governance	Strategic oversight	Long-term value orientation

3.6 Regional and Sectoral Heterogeneity

The impact of ESG incorporation varies across regions and sectors. Studies of European firms typically show stronger links between ESG performance and firm performance, due to stricter guidelines and greater investor alertness (European Commission, 2023). Meanwhile, evidence from emerging markets highlights challenges with data availability, enforcement and institutional capacity.

Sectoral differences are equally significant. ESG issues linked to environmental impact are particularly critical in the energy and manufacturing sectors, whereas social and governance aspects are more relevant in the services and technology industries. These findings emphasise the need to tailor ESG integration to specific institutional and industry contexts.

3.7 ESG Integration and the Sustainable Development Goals

An emerging trend in the literature links firm-level ESG integration to progress toward the United Nations Sustainable Development Goals (SDGs). Environmental efforts advance climate action, promote clean energy and encourage responsible consumption, while social practices support decent work, health and equity. Governance mechanisms maintain institutional integrity and foster partnerships.

Quantitative analyses indicate that improvements in ESG performance are associated with measurable gains in SDG related indicators, suggesting that corporate ESG integration can support public policy efforts and contribute to global sustainability goals as shown in Table 4 (United Nations, 2015; World Bank, 2020).

Table 4. Alignment between ESG Dimensions and SDGs

ESG Dimension	Relevant SDGs	Representative Contributions
Environmental	6, 12, 13, 15	Emissions reduction, efficiency
Social	3, 5, 8, 10	Labour standards, inclusion
Governance	16, 17	Institutional strength

3.8 Persistent Challenges and Limitations

Although, there has been significant progress, the review highlights ongoing challenges that limit the effectiveness of ESG integration. These include fragmented standards, inconsistent ESG ratings, limited assurance mechanisms and high implementation costs, especially for smaller firms. Data quality and comparability remain major concerns, affecting the reliability of ESG information for investors and policymakers (Berg et al., 2022; Velte, 2022).

Addressing these limitations requires ongoing alignment of ESG standards, broader independent assurance and the creation of scalable reporting and measurement tools. Without this progress, the full potential of ESG integration to improve capital allocation and support sustainable development may stay unrealized.

4. CONCLUSIONS, IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

4.1 Synthesis of Core Findings

The review aims to synthesise and critically evaluate by many literatures on ESG integration, with a specific focus on financial materiality, capital market relevance and governance implications. The evidence reviewed shows that ESG integration has effectively shifted from a voluntary, reputational activity to a financially significant governance structure embedded within corporate strategy and investment decisions (Eccles et al., 2014; Friede et al., 2015). Across empirical, conceptual and institutional research, ESG integration is most effective when driven by materiality, industry-specific factors and aligned with long-term value creation rather than merely fulfilling generic disclosure requirements (Khan et al., 2016; Berg et al., 2022).

The review finds widespread sustenance for a positive or neutral link between ESG integration and financial performance, particularly in lowering capital costs, managing risks and increasing long-term value (Giese et al., 2019; Clark et al., 2015). Especially, inconsistent results in earlier studies are mainly due to differences in ESG measurement and weak identification methods, not a lack of economic effects. When ESG is measured and implemented in a financially meaningful way, its importance for corporate success and investor decisions becomes much clearer (Chatterji et al. 2016; Kotsantonis et al., 2016).

4.2 Implications for Capital Markets and Investors

From a capital markets perspective, the findings emphasize ESG integration as a way to improve information and reduce asymmetries between firms and investors (Dhaliwal et al., 2011; Bernardi et al., 2018). Material ESG disclosures enhance price discovery by enabling markets to better assess long-term risks and opportunities connected to the climate transition, human capital management and governance quality. As a result, ESG integration increasingly influences asset pricing, portfolio development and risk evaluation in both equity and debt markets (Pastor et al., 2022).

For institutional investors, the review emphasises the importance of moving beyond aggregate ESG scores to focus on issue-specific and materiality-aligned analysis. Relying on generic ESG ratings can obscure economically relevant signals and result in suboptimal capital allocation (Berg et al., 2022; Chatterji et al., 2016). Instead, investors should incorporate ESG considerations directly into valuation models, engagement approaches, and stewardship activities (Kotsantonis et al., 2016). The increasing alignment of ESG reporting standards further supports this approach by improving data consistency and credibility (IFRS Foundation, 2023).

4.3 Corporate Governance and Managerial Implications

At company level, ESG integration acts as a governance tool that aligns managerial decision-making with long-term value formation. Effective ESG integration involves board oversight, clear accountability and the incorporation of sustainability into enterprise risk management and capital budgeting processes (Eccles et al., 2014; Aguilera et al., 2015). Companies that embed ESG within governance systems are better equipped to anticipate regulatory changes, manage stakeholder expectations and allocate resources efficiently (Lins et al., 2017; Friede et al., 2015).

The review also indicates that ESG integration boosts corporate resilience and innovation. By actively managing environmental and social risks, firms reduce their vulnerability to shocks and enhance their capacity to adapt. Simultaneously, ESG-driven innovation enables firms to access new market opportunities and stay competitive. These governance and strategic benefits support the knowledge that ESG incorporation is not a trade-off with financial performance but a complementary approach that promotes long-term organisational success.

4.4 Policy and Regulatory Implications

The findings have important implications for policymakers and regulators who aim to promote sustainable finance and responsible corporate behaviour. The observed convergence of ESG frameworks shows that regulatory alignment can improve comparability, reduce reporting burdens and strengthen market discipline (Christensen et al., 2021). Mandatory, materiality-based ESG disclosure regimes supported by assurance and enforcement can improve the quality and usefulness of sustainability information (Khan et al., 2016; Simnett et al., 2009). Furthermore, the demonstrated link between firm-level ESG integration and progress toward the Sustainable Development Goals indicates that private-sector efforts can effectively support public policy (United Nations, 2015; OECD,2020). Policymakers can use ESG disclosure and integration as tools to attract private investment toward societal goals, provided that standards remain focused on financial significance and governance relevance.

4.5 Limitations of the Review

While this review provides a comprehensive overview of the ESG integration literature, certain limitations must be acknowledged. First, despite thorough screening and quality assessment, the review still relies on the methodologies and data quality of the included studies. Variations in measurement and regional biases within the literature may influence the overall conclusions. Second, reliance on published academic and institutional sources may introduce publication bias, as studies with substantial outcomes are more likely to be published.

Furthermore, the fast-changing landscape of ESG regulation and reporting means that some recent developments may not yet be fully reflected in academic research. These limitations highlight the importance of ongoing empirical studies as ESG frameworks and market practices continue to evolve.

4.6 Directions for Future Research

The review highlights several promising directions for future research. First, it emphasizes the need for more causal studies that utilize regulatory changes, natural experiments and detailed ESG data to improve understanding of the financial impacts of ESG integration. Second, it suggests that future work should break down ESG dimensions further and focus on issue level materiality to increase accuracy and relevance. Third, comparative cross country and cross-sector studies can deepen understanding of how institutional environments influence ESG effectiveness. Finally, greater integration of ESG research with innovation studies, risk management and sustainable development scholarship can promote a more complete understanding of ESG as a governance framework that connects companies, markets and society.

4.7 Conclusion

In conclusion, this review shows that ESG integration has matured to a point where its importance to corporate performance, capital markets and sustainable development can no longer be dismissed as merely symbolic or secondary. The analysis reveals that ESG integration has evolved from voluntary disclosure to a governance imperative, with framework convergence (GRI, SASB, TCFD) enhancing comparability. Financial materiality emerges as the critical success factor, distinguishing value creating ESG strategies from symbolic compliance. However, persistent challenges with data inconsistencies, assurance gaps and disproportionate implementation costs for SMEs, require targeted solutions. Forthcoming research should prioritize causal analysis of ESG-performance relationships and develop scalable frameworks for resource-constrained organizations, ensuring inclusive sustainable finance transformation across diverse market contexts.

REFERENCES:

1. Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science, 60*(11), 2835–2857. https://doi.org/10.1287/mnsc.2014.1984
2. United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development.*
3. Busch, T., Friede, G., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment, 5*(4), 210–233. https://doi.org/10.1080/20430795.2015.1110911
4. 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
5. Benedetti, A., Semieniuk, G., et al. (2023). Climate change, ESG criteria and recent regulation: Challenges and opportunities. *Eurasian Economic Review.* https://doi.org/10.1007/s40822-023-00251-x
6. Convene ESG. (2025). *What are the things you should know about ESG risks?* https://www.azeusconvene.com/esg/articles/understanding-esg-risks-and-how-to-manage-them
7. Jagrič, T., Mumel, D., & Skaza, A. (2025). Evaluation of environmental, social, and governance risks: A critical literature review with practical implications. *Sustainability, 17*(18), 8451. https://doi.org/10.3390/su17188451
8. OECD. (2022). *ESG investing and climate transition: Policies and market practices.* OECD.
9. Bassen, A., & Kovács, A. M. (2020). Environmental, social and governance key performance indicators from a capital market perspective. *Journal of Sustainable Finance & Investment, 10*(4), 348–366. https://doi.org/10.1080/20430795.2020.1774327
10. European Commission. (2023). *Corporate Sustainability Reporting Directive (CSRD): Final text and implementation guidance.* European Union.
11. Christensen, H. B., Floyd, E., Maffett, M., & Maffett, G. (2022). The real effects of mandated information on social responsibility in financial reporting. *Journal of Accounting Research, 60*(1), 1–40. https://doi.org/10.1111/1475-679X.12425
12. IFRS Foundation. (2024). *IFRS S1 and S2: General requirements for disclosure of sustainability-related and climate-related financial information.*

13. Berg, F., Koelbel, 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
14. ERM & Sustainability. (2025). *The global regulations radar* (3rd ed.). https://www.sustainability.com/
15. Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review, 89*(1–2), 62–77.
16. Landi, G., & Sciarelli, M. (2023). ESG integration and financial performance: A systematic review and meta-analysis. *Journal of Sustainable Finance & Investment, 13*(2), 213–239. https://doi.org/10.1080/20430795.2022.2043721
17. Eriandani, R., & Winarno, W. A. (2024). ESG risk and firm value: The role of materiality in sustainability reporting. *Quality Innovation Prosperity, 28*(2). https://doi.org/10.12776/qip.v28i2.2019
18. IFRS Foundation. (2023). *IFRS Sustainability Disclosure Standard S1: General requirements for disclosure of sustainability-related financial information.*
19. CSR Training Institute. (2024). *ESG reporting standards and frameworks: A detailed guide.* https://www.csrtraininginstitute.com/
20. Wan, Y. (2025). Integrating stakeholder oriented reporting and double materiality in CSR accounting: A critical evaluation of GRI standards in corporate sustainability disclosures. *Journal of Applied Economics and Policy Studies, 18*(5).
21. OECD. (2020). *Sustainable finance and investment: Policy challenges.* OECD Publishing.
22. Eccles, R. G., Krzus, M. P., & Ribot, S. (2015). *The integrated reporting movement: Meaning, momentum, motives, and materiality.* Wiley.
23. Velte, P. (2022). Does ESG performance have an impact on financial performance? Evidence from Germany. *Journal of Global Responsibility, 13*(1), 112–130. https://doi.org/10.1108/JGR-11-2021-0123
24. Global Reporting Initiative. (2021). *GRI universal standards 2021.*
25. Sustainability Accounting Standards Board. (2021). *Conceptual framework and industry standards.*
26. World Bank. (2020). *The changing wealth of nations 2020: Managing assets for the future.* World Bank.
27. Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., & Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71
28. Task Force on Climate-related Financial Disclosures. (2017). *Final report: Recommendations of the Task Force on Climate-related Financial Disclosures.* Financial Stability Board.
29. International Integrated Reporting Council. (2021). *International framework.* IFRS Foundation.
30. 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
31. Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment, 5*(4), 210–233. https://doi.org/10.1080/20430795.2015.1118917
32. 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
33. Bernardi, C., & Stark, A. W. (2018). Environmental, social and governance disclosure, integrated reporting, and the cost of capital. *Accounting & Finance, 58*(2), 433–474. https://doi.org/10.1111/acfi.12215
34. Pastor, Ľ., Stambaugh, R. F., & Taylor, L. A. (2022). Sustainable investing in equilibrium. *Journal of Financial Economics, 142*(2), 550–571. https://doi.org/10.1016/j.jfineco.2021.07.011
35. Giese, G., Lee, L. E., Melas, D., Nagy, Z., & Nishikawa, L. (2019). Foundations of ESG investing: How ESG affects equity valuation, risk, and performance. *Journal of Portfolio Management, 45*(5), 69–83. https://doi.org/10.3905/jpm.2019.1.092
36. Clark, G. L., Feiner, A., & Viehs, M. (2015). *From the stockholder to the stakeholder: How sustainability can drive financial outperformance.* Oxford University Smith School of Enterprise and the Environment.
37. Chatterji, A. K., Durand, R., Levine, D. I., & Touboul, S. (2016). Do ratings of firms converge? Implications for managers, investors, and strategy researchers. *Strategic Management Journal, 37*(8), 1597–1614. https://doi.org/10.1002/smj.2407
38. Kotsantonis, S., Pinney, C., & Serafeim, G. (2016). ESG integration in investment management: Myths and realities. *Journal of Applied Corporate Finance, 28*(2), 10–16. https://doi.org/10.1111/jacf.12169
39. Aguilera, R. V., Desender, K., Bednar, M. K., & Lee, J. H. (2015). Connecting the dots: Bringing external corporate governance into the corporate governance puzzle. *Academy of Management Annals, 9*, 483–573.
40. Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *The Journal of Finance, 72*, 1785–1824. https://doi.org/10.1111/jofi.12505
41. Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review, 84*(3), 937–967. https://doi.org/10.2308/accr.2009.84.3.937