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ESG and Financial Performance in the Healthcare Industry: A Theory-Based Systematic Literature Review

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ABSTRACT

This study aims to examine the theoretical mechanisms underlying the relationship between Environmental, Social, and Governance (ESG) and financial performance in the healthcare industry and to identify the dominant financial proxies and sustainability pillars discussed in the literature. The study employs a Systematic Literature Review (SLR) method following the PRISMA guidelines and combines content analysis with thematic analysis. The literature search was conducted in the Scopus database using keywords related to ESG, financial performance, and the healthcare sector. From an initial dataset of 60,929 records, 17 articles met the inclusion criteria for further analysis. The findings reveal that the ESG-financial performance relationship in the healthcare industry can be explained through five major thematic clusters: capital cost efficiency through transparency signaling, institutional compliance and social legitimacy, value dynamics in stakeholder management, ESG transformation into intangible assets, and cost trade-offs with supply chain coordination. The review also indicates that the financial impact of ESG is heterogeneous and influenced by industry context, market competition, and the characteristics of each ESG pillar. ESG practices may enhance investor confidence, legitimacy, and competitive advantage, but they may also impose initial costs that reduce short-term profitability.

INTRODUCTION

The concept of Environmental, Social, and Governance (ESG) has evolved from an initially voluntary ethical consideration into strategic pillars that shape corporate financial performance and investor confidence in capital markets within the contemporary economy. This shift reflects a structural transformation in which business organizations are no longer viewed merely as profit-seeking entities, but rather as entities with responsibilities toward the

broader social and environmental ecosystem. According to Aspal et al. (2023) This move marks a shift from voluntary guidelines toward formal legal and strategic obligations.

Several organizations around the world have issued regulations that incorporate this concept of sustainability into the rules governing corporate reporting in their respective regions. The European Union has published Corporate Sustainability Reporting Directive (CSRD) which requires large companies to report on their environmental, social, and governance impacts in a comprehensive and verified manner, including Scope 1, 2, and 3 greenhouse gas emissions (European Parliament & Council of the EU, 2022).

Furthermore, the International Sustainability Standards Board (ISSB) has issued IFRS S1 and IFRS S2, which have been adopted by more than 30 jurisdictions that collectively account for over 60% of global gross domestic product, making sustainability reporting an integral part of formal financial reporting (ISSB, 2023). Indonesia has also created a similar regulation through the Financial Services Authority (OJK), which mandates the preparation and submission of sustainability reports by all financial services institutions, issuers, and public companies under OJK Regulation No. 51/POJK.03/2017, along with administrative sanctions for non-compliance (Otoritas Jasa Keuangan, 2017). As the relationship between business and society continues to evolve, companies are now required to integrate sustainability into the core of their operations as a key prerequisite for ensuring the sustainability of long-term investments and mitigating corporate risks in the eyes of global stakeholders (Aspal et al., 2023).

The healthcare and pharmaceutical industries are also not exempt from the obligation to incorporate ESG principles into their business reports. These industries operate in a highly unique context, which fundamentally distinguishes them from other industrial sectors such as manufacturing or banking. Hospitals and pharmaceutical companies often find themselves in a dilemma because, on the one hand, they bear a moral responsibility to provide optimal social services for the sake of public health, yet on the other hand, they are required to remain managerially efficient in order to survive as business entities (Pascuci et al., 2017).

This complexity is further exacerbated by the advent of the “Health 4.0” era, in which digital technologies are integrated into healthcare services to improve efficiency and service quality. However, according to Ciasullo et al. (2022) Health 4.0 is not just about technology; it is about a cultural shift in value creation that involves the active participation of institutions, patients, and the community as equal partners. Therefore, the healthcare sector cannot be analyzed using standard industrial frameworks because its performance depends heavily on the complex interplay between social legitimacy and operational efficiency (Ciasullo et al., 2022; Pascuci et al., 2017).

The implementation of ESG initiatives in the healthcare sector highlights the inherent tension between the noble mission of healing and the reality of the costs involved. Although sustainable practices are crucial, investments in green certifications, eco-friendly infrastructure, and social responsibility programs are often viewed as a significant financial

burden for hospitals and pharmaceutical companies (Yang et al., 2022). The main dilemma is whether those costs are truly worth the value they generate.

Academic focus on sustainability has grown significantly over the past decade, yet the literature on climate and sustainability issues in the health sector still shows a gap in attention compared to other sectors. Calciolari et al. (2024) found through a bibliometric study that while the chemical industry has long been subject to strict scrutiny regarding its environmental impact, the pharmaceutical industry still lags behind in terms of reporting transparency. This indicates a disparity in strategic priorities, as the healthcare sector has not yet fully adopted environmental reporting as an integral part of its financial reports (Calciolari et al., 2024). Cross-industry panel analysis also shows that the relationship between ESG and financial performance is often positive on an aggregate basis, but this effect becomes highly asymmetric when the data is broken down by specific industry, meaning that general findings from other sectors cannot always be applied to the healthcare sector (Agarwal et al., 2023).

This study is motivated by two major gaps in the current literature. First, there is an empirical gap regarding regional variations. A comparative study of pharmaceutical companies in Indonesia and Malaysia by Hermawan et al. (2023) shows that Corporate Social Responsibility (CSR) does not always have the same impact on a company's value, highlighting the importance of considering the context of emerging markets in ESG research. Second, there is a significant theoretical gap; research in India's health sector by Agarwal et al. (2023) found that the relationship between ESG and financial performance tends to be negative, unless moderating variables such as the level of market competition are incorporated into the model. This anomaly confirms that much of the prior literature has oversimplified the relationship between ESG and financial performance by failing to include competition theory or the role of stakeholders, which are in fact vital to the healthcare industry.

This study raises two main research questions: (RQ1) What theoretical mechanisms underlie the relationship between ESG performance and financial performance in the healthcare services industry? (RQ2) Which characteristics of financial proxies and sustainability pillars most strongly influence the relationship between ESG and financial performance in this sector?

This article contributes in four aspects: (1) Providing the first comprehensive synthesis that exclusively isolates the healthcare sector to understand its sustainability dynamics; (2) Shifting the literature's narrative from merely demonstrating statistical associations to a deeper theory-based explanation; (3) Uncovering the asymmetric effects of the E, S, and G pillars in creating economic value; and (4) Providing insights for hospital managers and pharmaceutical companies in strategically allocating sustainability investments in the future.

RESEARCH METHOD

A Systematic Literature Review (SLR) was chosen for this study because this method allows for a systematic, transparent, and reproducible synthesis of the existing literature. To

ensure comprehensive reporting and compliance with global methodological standards, this study adopted the reporting guidelines from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Furthermore, this study incorporates qualitative content analysis. The integration of these two methods is ideal because it provides a more comprehensive picture; not only does it reveal the intellectual structure and macro trends of the literature, but it also delves into the substance and specific findings at the micro level (Donthu et al., 2021).

To ensure methodological rigor, this study followed a strict three-stage protocol: planning, implementation, and reporting. In the first stage—planning—the topic was identified, research questions were clearly formulated, and the databases and relevant search keywords were determined. The second stage focused on implementation, during which the actual search was conducted in the selected databases, followed by screening based on specific inclusion and exclusion criteria, and data extraction from eligible articles. The third stage, reporting, involved content analysis, the findings of which were then used to construct a conceptual framework and outline a future research agenda. The literature search focused on two major academic databases, namely Scopus, to ensure the comprehensiveness and quality of the articles to be analyzed. The search strategy was designed using a combination of layered keywords, utilizing Boolean operators and truncation features to capture variations in terminology. The search strings used were:

((ESG OR "environmental social governance" OR "environmental, social and governance" OR "ESG score*" OR "ESG rating*" OR "ESG perform*" OR sustainab* OR "sustainability report*" OR "sustainability disclos*" OR CSR OR "corporate social responsibility") AND ("financial perform*" OR "firm perform*" OR profitab* OR "firm value" OR perform* OR ROA OR ROE OR Tobin*) AND (health* OR hospital* OR pharma* OR biotech* OR medic*))

The article selection process for this review was conducted in stages and thoroughly documented using a PRISMA guideline flowchart, as shown in Figure 1. In the initial stage, a screening was conducted to exclude articles that were not in the fields of business and accounting, were not in English, and were not open access. A further screening was then conducted; articles that did not contain keywords related to ESG, Financial Performance, and Healthcare were excluded from the pool of articles to be selected for further analysis. Subsequently, the eligibility of articles containing the relevant keywords was re-evaluated by selecting those based on the depth of their discussion of ESG topics and financial performance in the healthcare sector.

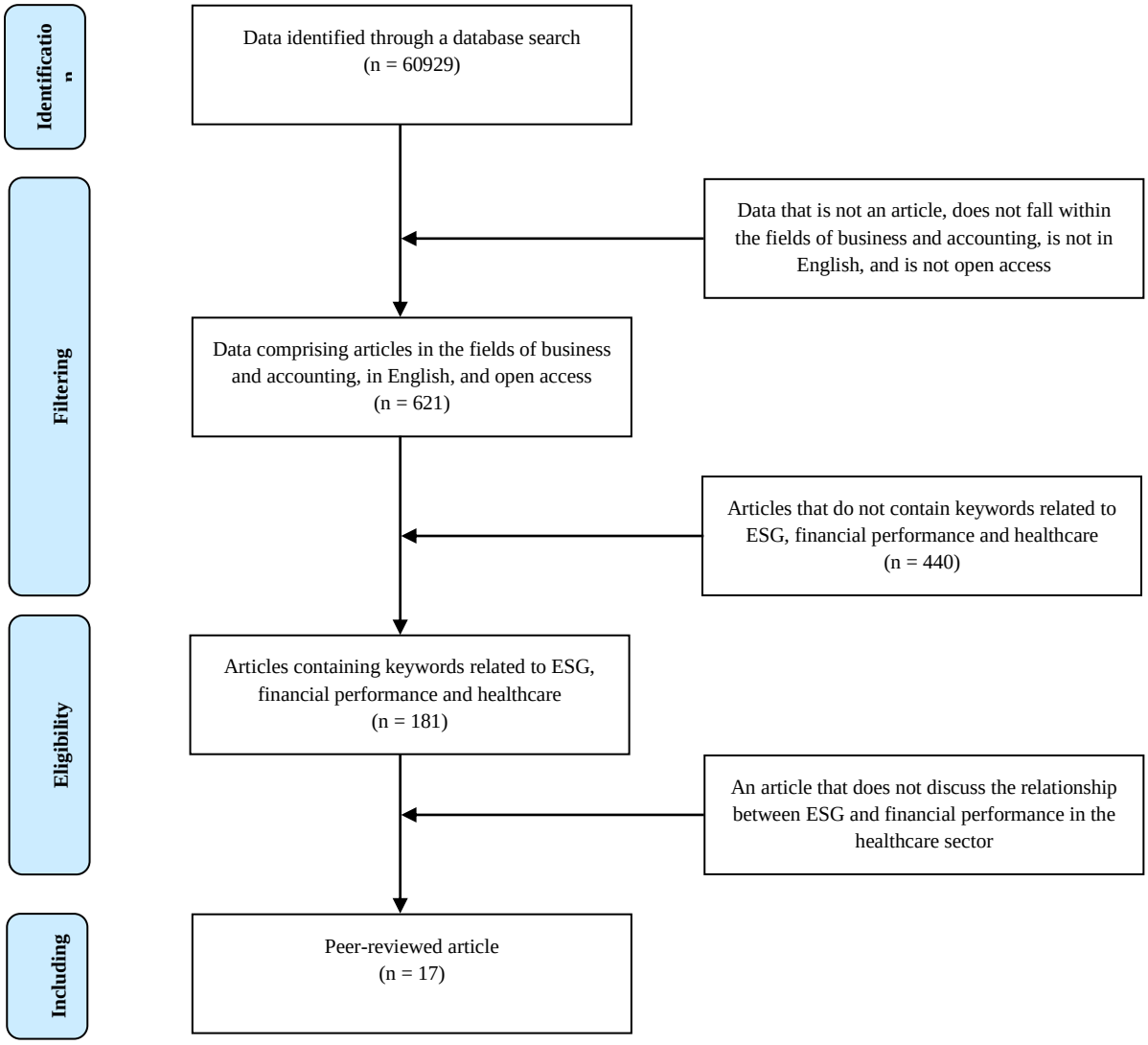

Figure 1. PRISMA Diagram

RESULT AND DISCUSSION

Result

Content analysis of 181 documents yielded 17 articles that met the criteria for further analysis through thematic analysis. This thematic analysis process resulted in five main thematic clusters that illustrate various theoretical perspectives on the relationship between Environmental, Social, and Governance (ESG) practices and financial performance in the healthcare industry. These five thematic clusters are presented as follows.

4.1 Cluster 1: Capital Cost Efficiency through Transparency Signals

The healthcare and pharmaceutical industries are capital-intensive sectors, primarily due to the high level of investment in research and development (Chen et al., 2026). In addition, the quality of a company's services and its prospects are often difficult for investors and

external stakeholders to assess directly, resulting in a relatively high degree of information asymmetry in the market (Candio, 2024; Chen et al., 2026). ESG and CSR disclosures serve as positive signals sent by management to external stakeholders to demonstrate the company's quality of governance, commitment to sustainability, and ability to manage long-term risks (Toumi, 2025; Candio, 2024). These signals have proven to play a strategic role in boosting investor and creditor confidence, which can ultimately lower financing costs and improve the company's market valuation and financial performance (Chen et al., 2026; Toumi, 2025).

4.2 Cluster 2: Institutional Compliance and the Maintenance of Social Legitimacy

Companies operating in the healthcare sector face a high level of regulatory oversight and must address various sensitive social and environmental issues, such as medical waste management, environmental pollution, and the risk of malpractice (Hermawan et al., 2023). From this perspective, the implementation of ESG is viewed as a company's effort to gain and maintain social legitimacy by aligning with societal norms and applicable regulations (Hermawan et al., 2023; Qomariah et al., 2021). Compliance with the expectations of external stakeholders is believed to reduce the risk of legal sanctions, fines, or social backlash that could disrupt the company's operations (Qomariah et al., 2021). Accordingly, the legitimacy gained through ESG practices contributes to business sustainability and the stability of a company's financial performance (Qomariah et al., 2021; Hermawan et al., 2023)

4.3 Cluster 3: The Dynamics of Values in Stakeholder Management

This cluster emphasizes that the financial success of healthcare companies is determined not only by their ability to generate profits, but also by their ability to manage relationships with various stakeholder groups (Atmeh et al., 2020; Constantinescu, 2021). The literature in this area indicates that corporate value is created when an organization is able to balance the interests of various stakeholders, including patients, healthcare professionals, the public, suppliers, and regulators (Paridhi et al., 2024; Chakraborty et al., 2026). Practices such as providing quality healthcare services, implementing fair pricing policies, improving employee welfare, and contributing to the community are seen as ways to build stakeholder trust and support (Chakraborty et al., 2026). This trust can further strengthen the company's loyalty, reputation, and competitiveness, which has a positive impact on its financial performance (Atmeh et al., 2020; Agarwal et al., 2023; Chakraborty et al., 2026).

4.4 Cluster 4: Transforming ESG into Intangible Assets

As an industry that relies heavily on knowledge and innovation, the healthcare sector requires effective management of intangible assets to maintain its competitive edge (Sinthupundaja et al., 2020). The literature in this cluster views ESG initiatives, CSR, and various sustainability programs as strategic assets capable of strengthening a company's intellectual capital (Creixans & Arimany-Serrat, 2018; Ruberti & Calciolari, 2025). By implementing sustainable practices, organizations can gain new insights, improve operational efficiency, develop innovative services, and strengthen their institutional reputation

(Sinthupundaja et al., 2020; Ruberti & Calciolari, 2025). The accumulation of these resources and capabilities ultimately creates a competitive advantage that is difficult for competitors to replicate and contributes to improved long-term financial performance (Ruberti & Calciolari, 2025; Sinthupundaja et al., 2020)

4.5 Cluster 5: Cost Trade-offs and Supply Chain Coordination

The final cluster examines the relationship between ESG and financial performance through the lens of cost trade-offs, situational factors, and supply chain management effectiveness (Donkor et al., 2021; Hosseini-Motlagh et al., 2020; Yang et al., 2022). In the healthcare sector, supply chain continuity plays a critical role because it is directly linked to the distribution of medicines, medical devices, and essential services (Donkor et al., 2021). The literature in this area indicates that the implementation of ESG and CSR often requires significant upfront investment, which can potentially reduce profitability in the short term (Yang et al., 2022). However, these negative impacts can be offset by improved operational efficiency, risk reduction, and more effective supply chain coordination (Hosseini-Motlagh et al., 2020; Yang et al., 2022). In other words, the economic benefits of ESG investments are heavily influenced by a company's ability to adapt to environmental uncertainties and optimally manage relationships among stakeholders in the supply chain (Donkor et al., 2021; Hosseini-Motlagh et al., 2020).

Discussion

5.1 Theoretical Mechanisms Underlying the ESG-FP Relationship

To address the first research question regarding the theoretical mechanisms underlying the relationship between ESG and financial performance in the healthcare industry, the literature review indicates that this relationship is driven by five key operational mechanisms, grouped into the following five clusters:

5.1.1. Cluster 1: Capital Cost Efficiency through Transparency Signals

The healthcare and pharmaceutical sectors are highly capital-intensive, primarily due to the significant investment required for research and development of new products (Chen et al., 2026). These characteristics, combined with the difficulty outsiders face in directly assessing the internal quality of medical operations and ethical compliance, create information asymmetry—or a very high degree of information asymmetry—between company management and investors in the market (Candio, 2024).

Given this high level of information asymmetry, Signal Theory explains that company management strategically uses ESG and CSR disclosures to send positive signals to external stakeholders. According to Toumi (2025), Healthcare companies that actively disclose their environmental and social initiatives send a signal to the market about their commitment to sustainability, sound risk management, and the company's future stability. However, Candio (2024) added that this disclosure also responds to institutional pressure, as transparent

governance (G) signals demonstrate that the company complies with strict industry regulations

These positive signals from transparent ESG scores effectively help alleviate market uncertainty. Chen et al. (2026) explains the theoretical mechanism by which the fulfillment of strategic social responsibilities signals to creditors and investors the presence of high-quality management. As a result, investor confidence increases and the perception of default risk decreases, thereby significantly reducing the cost of debt financing for pharmaceutical companies.

Lower capital costs and increased market confidence ultimately lead directly to improved financial performance for the company. According to Toumi (2025), Signals of a commitment to sustainability that are picked up by the market not only secure the legitimacy of a company's operations but also improve financial performance indicators such as Return on Assets (ROA), Return on Equity (ROE), and market valuation as measured by Tobin's Q ratio.

ESG disclosure serves as a strategic communication tool (signal) to break down barriers of information asymmetry. By communicating their commitment to ethical standards, climate risk management, and good governance to external stakeholders, healthcare companies can reduce debt financing costs and boost investor confidence, which ultimately translates into improved financial performance and market valuation.

5.1.2. Cluster 2: Institutional Compliance and the Maintenance of Social Legitimacy

In the context of the healthcare and pharmaceutical industries, the theoretical mechanisms explaining how environmental, social, and governance performance translates into financial performance are heavily influenced by companies' need to gain social acceptance.

The pharmaceutical industry's operations are closely tied to the environment because they process various types of chemicals (Hermawan et al., 2023). This activity has the potential to trigger the release of toxic substances that can harm the surrounding environment, making strict waste management absolutely essential (Hermawan et al., 2023). It is these operational characteristics that keep pharmaceutical companies under close scrutiny from the public and regulators.

Due to this high level of scrutiny, companies often face what is known as a legitimacy gap—that is, a discrepancy between the values upheld by the company and the expectations or values of society. This gap can be reduced and prevented through the implementation of corporate social responsibility (CSR), whereby companies align their values and operations with the needs of the community and environmental sustainability (Hermawan et al., 2023).

When companies successfully align their operations with public expectations, they will receive positive feedback from the public. This social legitimacy serves as a protective shield for the company's operations. Specifically, improving environmental performance can reduce the company's operational risks related to environmental pollution and prevent boycotts by

stakeholders. Furthermore, proactive environmental practices have been shown to reduce costs associated with compliance with environmental regulations, such as fines or legal penalties (Qomariah et al., 2021).

Ultimately, the company's ability to avoid boycott-related disruptions, low regulatory penalty costs, and positive public perception will have a positive impact on the company's viability, which in turn will enable the company to increase its profits and financial performance (Qomariah et al., 2021). These sustainability practices, which generate strong profitability, will ultimately strengthen the role of CSR in boosting a company's value in the eyes of investors (Hermawan et al., 2023).

5.1.3. Cluster 3: The Dynamics of Values in Stakeholder Management

Companies can no longer operate solely in the interests of shareholders. Based on Constantinescu (2021), The rise of non-financial (ESG) reporting has shifted the focus of corporate operations from merely maximizing short-term profits to creating medium- and long-term value for society at large. This practice requires healthcare companies to consider not only economic motives but also moral and altruistic considerations, which ultimately drive greater ESG engagement and lead to better actual financial performance (Atmeh et al., 2020).

In the pharmaceutical and healthcare sectors, a company's operations have a direct impact on people's lives and health. Chakraborty et al. (2026) explains that sustainable competitive advantage is created when a company is able to satisfy the interests of diverse stakeholders (such as investors, regulators, employees, customers, and the community). This mechanism works most effectively through the 'Social' pillar. By practicing fair drug pricing, patient safety standards, ethical clinical trials, and open stakeholder engagement, companies will massively enhance their social trust and legitimacy. It is this social trust that is subsequently converted into customer loyalty and valuation stability in the market.

The implementation of ESG entails significant costs, which can initially place a burden on companies and have a negative impact on their financial performance (Agarwal et al., 2023). However, theoretical mechanisms suggest that market competition acts as a moderating variable that reverses this situation. This is supported by Agarwal et al. (2023), in the face of intense competition in the healthcare industry, managers recognize that investing in ESG initiatives is the most effective way to differentiate their companies from competitors. It is this enhanced market competitiveness that ultimately offsets the costs of ESG investments and drives the company's financial performance into positive territory.

This theoretical mechanism does not always yield immediate results in practice. Paridhi et al. (2024) It has been found that massive investments in sustainability practices may reduce accounting profitability (Return on Assets / ROA) in the current year because companies must spend significant capital, and the positive impact will only become apparent as a lag effect in the future. Conversely, however, ESG communication mechanisms have a direct effect on a company's market value, as stock market investors will immediately respond positively to

signals that the company is low-risk and managed responsibly. ESG practices in the healthcare industry balance the interests of patients, the public, and investors to build trust. Amid intense competition, this public trust becomes a powerful competitive advantage to enhance the company's market valuation and long-term operational profitability.

5.1.4. Cluster 4: Transforming ESG into Intangible Assets

The healthcare and hospital sector is an industry that relies heavily on knowledge-intensive practices (Sinthupundaja et al., 2020). Different from traditional manufacturing, hospital operations and performance are primarily determined by complex technical expertise, which is a dynamic combination of experience, values, relevant knowledge, and clinical insight (Sinthupundaja et al., 2020). Therefore, knowledge and intangible assets are the primary resources that support the development of healthcare institutions (Sinthupundaja et al., 2020; Creixans-Tenas & Arimany-Serrat, 2018).

In line with the Resource-Based View (RBV), for a company to achieve superior financial performance, it must develop and leverage resources that are valuable, rare, inimitable, and irreplaceable (Ruberti & Calciolari, 2025). In this context, ESG disclosure practices and the attainment of environmental certifications (such as ISO 14001) are viewed not merely as compliance with standards, but as a unique strategic asset (Ruberti & Calciolari, 2025). The combination of CSR indicators and sustainability reports provides critical added value in assessing the overall profitability of hospital companies (Creixans-Tenas & Arimany-Serrat, 2018).

A well-designed CSR initiative will open up new competitive opportunities where hospitals can collaborate and create shared value with their various stakeholders (Sinthupundaja et al., 2020). Through the Knowledge-Based View (KBV) and the Relational View (RV), CSR engagement is viewed as a mechanism for hospitals to absorb external knowledge from the community, partners, and customers, while simultaneously transferring internal knowledge from employees (Sinthupundaja et al., 2020). This social initiative creates social capital that strengthens the organization's advantages (Lee et al.; Sinthupundaja et al., 2020).

Resulting from this mechanism, the accumulation of new knowledge and social capital serves as a driver of innovation and the company's unique capabilities (Sinthupundaja et al., 2020). Sustainability certifications and CSR practices directly enhance both internal capabilities and external legitimacy (Ruberti & Calciolari, 2025). It is these intangible capabilities that ultimately create a sustainable competitive advantage, which is empirically linked to improved financial performance, such as profitability, in healthcare companies (Ruberti & Calciolari, 2025; Creixans-Tenas & Arimany-Serrat, 2018).

ESG/CSR practices in the healthcare sector transform social and environmental initiatives into intangible assets (Creixans-Tenas & Arimany-Serrat, 2018). Through the relationships built through CSR activities, the company gains vital insights that optimize operational efficiency and create a competitive advantage that is difficult to replicate,

ultimately leading to superior long-term financial performance (Sinthupundaja et al., 2020; Ruberti & Calciolari, 2025).

5.1.5. Cluster 5: Cost Trade-offs and Supply Chain Coordination

In the healthcare and pharmaceutical industries, the literature in Cluster 5 does not view the relationship between ESG and financial performance as a linear cause-and-effect relationship (Yang et al., 2022; Donkor et al., 2021; Hosseini-Motlagh et al., 2020). Conversely, the theoretical mechanisms underlying this relationship depend heavily on the calculation of cost trade-offs, the ability to adapt to situational conditions, and the efficiency of coordination within the supply chain (Yang et al., 2022; Donkor et al., 2021; Hosseini-Motlagh et al., 2020).

The implementation of ESG and CSR initiatives in the pharmaceutical industry—ranging from legal compliance and environmental expenditures to ethical and philanthropic responsibilities—requires substantial financial investment. Theoretical models suggest that, in the short term, capital expenditures on CSR will act as a burden that erodes corporate profitability (such as a decline in Return on Assets/ROA). However, these initial losses are not the final outcome. Through quadratic model analysis and the consideration of time lags, it has been demonstrated that there is a tipping point at which these CSR investments will ultimately be offset in the future. In other words, ESG mechanisms function as long-term capital investments that, over time, will enhance efficiency and stakeholder support, thereby leading to positive financial performance. (Yang et al., 2022).

The pharmaceutical sector provides essential products and faces a highly uncertain operating environment. According to Contingency Theory, the success of sustainability initiatives depends on how well a company's strategy adapts to these external uncertainties. This mechanism operates through "Supply Chain Integration." When pharmaceutical companies achieve strong internal integration and collaborate closely with suppliers and customers, they build adaptive capabilities. It is this comprehensive integration that serves as the driving force for companies to simultaneously improve sustainability performance (social and environmental) while boosting economic performance (such as ROI and market share) (Donkor et al., 2021).

Environmental responsibility in the healthcare sector does not end when a product is sold; it also includes the management of product waste or leftover medications through a closed-loop supply chain. The game theory approach explains that investments in this kind of social responsibility are prone to triggering cost conflicts between entities—for example, between manufacturers and retailers—if addressed individually. The mechanism for turning this obligation into a financial advantage is through the implementation of a coordination contract model. Through appropriate negotiations and coordination agreements, manufacturers and retailers can balance the sharing of social investment costs, collectively address disruptions, and ultimately improve the profitability of the entire supply chain together (Hosseini-Motlagh et al., 2020).

ESG spending is a strategic investment that initially reduces profits but will pay off in the future if the company is able to manage environmental uncertainties through supply chain integration and align the balance of benefits among its stakeholders (Yang et al., 2022; Donkor et al., 2021; Hosseini-Motlagh et al., 2020).

5.2 The Dominance of Financial Proxy Characteristics and ESG Pillars (Answering RQ2)

The second research question focuses on which financial proxies and sustainability pillars most strongly influence the ESG-FP relationship. The literature confirms the existence of asymmetric effects specific to the healthcare sector:

5.2.1 Dominance of the Governance (G) and Environment (E) Pillars

Among the three pillars of sustainability, the Governance (G) pillar consistently emerges as the most significant predictor of positive financial performance and lower debt financing costs (Candio, 2024; Chen et al., 2026). Meanwhile, the Environmental (E) pillar has a particularly strong correlation with the market valuations of healthcare companies (Toumi, 2025). The Social Pillar (S), while important, often leads to anomalies; in emerging markets such as India, this pillar is a major driver of corporate value (Chakraborty et al., 2026). However, on the other hand, it often leads to a decline in short-term liquidity due to the operational costs associated with donations or philanthropy (Qomariah et al., 2021).

5.2.2 Characteristics of Financial Proxies (Market vs. Accounting)

The literature shows differences in the responses of market-based and accounting-based proxies. Market-based proxies (such as Tobin's Q and the price-earnings ratio) respond to ESG signals—particularly those related to the Environmental pillar—more quickly and directly (Candio, 2024; Paridhi et al., 2024). Conversely, accounting-based proxies (such as ROA and the *Current Ratio*) tend to show a negative effect in the early periods (Paridhi et al., 2024). Accounting indicators have a time lag before reaching an "inflection point," at which point ESG operational expenses eventually translate into actual profitability (Yang et al., 2022).

5.3 Managerial Implications and Future Research Agenda

In response to the findings regarding RQ1 and RQ2, hospital managers and pharmacy executives must recognize that ESG investments require a long-term time horizon to optimize accounting profitability proxies, and transparency efforts should prioritize the governance pillar to reduce capital costs. Based on the identified gaps, future literature should focus on agendas such as: Given that accounting proxies take time to respond to ESG investments, future research should adopt longer time-lag models to precisely map the inflection points of sustainability profitability (Yang et al., 2022). Furthermore, there is an urgent need to distinguish between sub-sector analyses (e.g., hospital service providers vs. pharmaceutical manufacturers) because they are subject to different institutional pressures (Ruberti & Calciolari, 2025). In addition, the research should include moderating variables such as

market competition to avoid oversimplifying the linear model (Agarwal et al., 2023). Finally, given the asymmetric effects of the sustainability pillars, research in emerging markets should avoid the use of composite ESG scores. Individual assessment of the E, S, and G pillars is crucial for understanding the specific dynamics of value creation in markets where regulation and social awareness are still evolving (Chakraborty et al., 2026; Candio, 2024).

CONCLUSION

Based on the results of a systematic literature review of 17 articles, the relationship between Environmental, Social, and Governance (ESG) and financial performance in the healthcare industry is explained through five main theoretical mechanisms, namely: (1) capital cost efficiency through transparency signals, (2) institutional compliance and the maintenance of social legitimacy, (3) value dynamics in stakeholder management, (4) the transformation of ESG into intangible assets, and (5) cost trade-offs and supply chain coordination. The synthesis results indicate that ESG practices in the healthcare sector do not always yield uniform financial impacts. Under certain conditions, ESG implementation can enhance investor confidence, reduce financing costs, strengthen social legitimacy, and build competitive advantages that positively impact financial performance. However, several studies also indicate that ESG investments can incur high upfront costs, thereby squeezing short-term profitability, while their economic benefits may only become apparent in the long term or depend on contextual factors such as the level of competition and the effectiveness of supply chain management. Furthermore, the literature suggests that the influence of each ESG pillar is asymmetric. The governance and social pillars often emerge as more dominant factors in creating corporate value, whereas the impact of the environmental pillar tends to vary depending on industry characteristics and the financial performance indicators used. Thus, the relationship between ESG and financial performance in the healthcare sector is better understood as a process influenced by theoretical mechanisms and institutional conditions, rather than as a universally applicable linear relationship.

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