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Integrating ESG Factors into Investment Decisions: Impacts on Portfolio Performance

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Abstract

This study investigates the role of environmental, social, and governance (ESG) factors in shaping investment decisions and their subsequent impact on portfolio performance in an emerging market context. Using primary data collected through a structured questionnaire, the research captures the perceptions of institutional investors and financial analysts regarding ESG integration in investment evaluation and portfolio management. A stratified random sample of 350 professionals from the financial, industrial, and service sectors was surveyed. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the relationships between ESG dimensions and portfolio performance outcomes. The findings reveal that environmental and social factors exert a positive and significant influence on investment decisions, which in turn enhance perceived portfolio performance. In contrast, the governance dimension demonstrates a negative relationship, suggesting potential concerns related to governance transparency, compliance costs, or institutional effectiveness in emerging markets. Overall, the results highlight the heterogeneous effects of ESG dimensions on investment outcomes and emphasize that ESG integration is not uniformly beneficial across all components. This study contributes to the growing literature on sustainable finance by providing empirical evidence on how ESG considerations influence portfolio performance in emerging economies. The findings offer practical implications for investors, portfolio managers, and policymakers by underscoring the need for balanced, context-specific ESG strategies to optimize investment performance while supporting long-term sustainability objectives.

Keyword: Environmental; Social; Governance; Financial; Industrial; Emerging economies

1. Introduction

Over the past decade, environmental, social, and governance (ESG) considerations have become increasingly central to modern investment practices (Dmuchowski, Piotr, et al.,2023). Institutional investors, asset managers, and financial analysts now recognize that traditional financial indicators alone are insufficient to capture the long-term risks and value creation potential of firms (Rodrigues Coelho, Francisco I., et al.,2025). As a result, ESG factors are progressively integrated into investment decision-making frameworks to enhance portfolio resilience, improve risk management, and support sustainable value creation (Laokulrach, 2025). This shift reflects a broader transformation in capital markets, where sustainability considerations are no longer viewed as peripheral or purely ethical concerns but as material drivers of financial performance (Munteanu, Ionela, et al.,2025). The growing prominence of ESG investing is closely linked to heightened awareness of climate change, social inequality, and corporate governance failures (Zournatzidou, Georgia, et al.,2025). Environmental risks such as resource scarcity, carbon emissions, and regulatory pressure can directly affect firm profitability and long-term viability (Nehrebecka, 2025). Similarly, social factors including labor practices, human capital development, and community engagement influence organizational stability and reputation

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(Faeni, Dewi Puspaningtyas, et al.,2025). Governance mechanisms, encompassing board structure, transparency, and accountability, play a critical role in aligning managerial decisions with shareholder interests and mitigating agency problems (Vickneswaran, 2025). Together, these ESG dimensions shape investors' perceptions of firm quality and influence capital allocation decisions (Moolkham, 2025). Integrating ESG factors into investment analysis has also reshaped portfolio construction and performance evaluation (Sajadi, Seyed Mehrzad Asaad, et al.,2025). Investors increasingly assess how ESG-oriented strategies affect risk-adjusted returns, volatility, and downside protection (Mallik, S. K, 2024). ESG integration is often associated with improved portfolio diversification, as sustainability-oriented investments may respond differently to economic shocks compared to conventional assets. Moreover, firms with strong ESG performance are frequently perceived as better positioned to adapt to regulatory changes, technological transitions, and evolving stakeholder expectations, which may contribute to superior long-term portfolio outcomes (Mallik, Shuvo Kumar, et al.,2025). Despite the rapid growth of ESG integration, its implications for portfolio performance remain complex and context dependent. While some investors view ESG as a source of competitive advantage and financial outperformance, others express concerns regarding potential trade-offs between sustainability objectives and short-term returns (Mallik, S. K, 2025). In particular, governance-related factors may introduce ambiguity, as stricter governance practices can increase compliance costs or constrain managerial flexibility (Mallik, S. K., 2024). These mixed perspectives highlight the need to examine ESG dimensions individually rather than relying on aggregated ESG scores when evaluating their influence on investment outcomes (Mallik, Shuvo Kumar, et al.,2025). Accounting and disclosure practices play a pivotal role in enabling ESG integration. Investors rely heavily on transparent, consistent, and comparable ESG information to assess firm performance and incorporate sustainability considerations into valuation models (Chowdhury, Kaushik, et al.,2025). As financial reporting evolves beyond traditional metrics, accounting systems increasingly incorporate non-financial indicators related to environmental impact, social responsibility, and governance quality. High-quality ESG disclosures reduce information asymmetry, enhance investor confidence, and facilitate more informed portfolio decisions. However, the lack of standardized ESG reporting frameworks continues to pose challenges, limiting comparability across firms and markets and potentially affecting investment efficiency. Within this evolving landscape, corporate social responsibility (CSR) remains a closely related but distinct concept that influences investor behavior. CSR reflects a firm's voluntary commitment to ethical conduct, social welfare, and environmental stewardship beyond regulatory requirements. CSR initiatives can strengthen corporate reputation, signal long-term strategic orientation, and reduce perceived non-financial risks. When aligned with ESG performance, CSR may reinforce investors' confidence in a firm's sustainability claims and strategic coherence. Conversely, misalignment between CSR initiatives and core ESG practices may raise concerns about credibility and authenticity, potentially weakening investor trust. Understanding how ESG factors collectively and individually affect investment decisions and portfolio performance is particularly important in emerging markets. These markets often face institutional constraints, governance challenges, and evolving regulatory environments that shape the effectiveness of ESG integration. Investors operating in such contexts may weigh ESG information differently compared to those in developed markets, placing varying emphasis on environmental resilience, social stability, or governance quality. Consequently, examining ESG integration within emerging economies provides valuable insights into how sustainability considerations interact with market structure, institutional quality, and investor behavior. Against this backdrop, the present study examines the integration of ESG factors into investment decision-making and their impacts on portfolio performance (Mallik, Shuvo Kumar, et al.,2025). It explores how environmental, social, and governance dimensions influence investors' evaluations of firms and shape portfolio outcomes. The study also considers the supporting role of accounting-based ESG disclosures in facilitating informed investment decisions. By focusing on ESG integration rather than ethical screening alone, the research emphasizes the financial relevance of sustainability information in portfolio management. This study contributes to the growing body of sustainable finance literature in several ways (Mallik, Shuvo Kumar, et al.,2025). First, it provides a multidimensional assessment of ESG factors, highlighting their heterogeneous effects on investment decisions and portfolio performance. Second, it underscores the importance of reliable ESG disclosures and accounting practices in translating sustainability information into actionable investment insights (Mallik, Shuvo Kumar, et al.,2025). Third, by concentrating on an emerging market context, the study offers evidence on how ESG integration operates under institutional and market conditions that differ from those typically examined in developed economies.

2. Literature Review and Hypothesis Development

This study is grounded in stakeholder theory, signaling theory, and legitimacy theory to explain how environmental, social, and governance (ESG) factors influence investment decisions and, ultimately, portfolio performance. These theoretical perspectives jointly clarify why ESG integration has become a financially relevant strategy rather than a purely ethical consideration. Stakeholder theory suggests that firms addressing the interests of multiple stakeholder groups are better positioned to achieve long-term stability and value creation. Signaling theory explains how ESG disclosures reduce information asymmetry between firms and investors by conveying signals of managerial quality and risk management capabilities. Legitimacy theory emphasizes that firms aligning their practices with societal expectations gain acceptance and reduce exposure to reputational and regulatory risks (Mallik, & Rahman, 2024). Together, these theories provide a robust framework for understanding how ESG integration affects investment behavior and portfolio outcomes, particularly in emerging market contexts. The integration of ESG factors into investment analysis has become a defining feature of contemporary portfolio management. Investors increasingly recognize that ESG-related risks and opportunities can materially affect firm performance, cash flow stability, and long-term growth prospects. Environmental performance reflects a firm's exposure to climate-related risks, resource efficiency, and regulatory compliance, all of which can influence operational costs and long-term sustainability (Mallik, S. K., 2024). Firms with strong environmental practices are often perceived as more resilient to regulatory shocks and environmental disruptions, which may contribute to lower portfolio risk and enhanced risk-adjusted returns. Social performance captures how firms manage relationships with employees, customers, and communities. Effective social practices can improve workforce productivity, reduce turnover, and strengthen brand loyalty, thereby enhancing financial performance and stability (Mallik & Rahman,2024). From an investment perspective, firms with strong social engagement are often viewed as less vulnerable to labor disputes, reputational damage, and social unrest, which supports portfolio diversification and downside risk protection. Governance performance plays a critical role in shaping investor confidence and capital allocation. Strong governance structures promote transparency, accountability, and alignment between management and shareholders. Effective governance reduces agency conflicts and enhances decision-making efficiency, which can improve firm valuation and portfolio performance (Mahim, Mallik, & Mahadi, 2025). However, governance practices may also introduce short-term costs related to compliance and monitoring, suggesting that their impact on portfolio performance may vary depending on market conditions and institutional quality. While existing literature generally supports a positive association between ESG integration and investment outcomes, findings remain mixed. Some studies suggest that ESG-oriented portfolios outperform conventional portfolios, while others indicate neutral or context-dependent effects. These inconsistencies highlight the importance of examining ESG dimensions individually rather than as a composite score when evaluating their impact on portfolio performance. Corporate social responsibility (CSR) represents firms' voluntary efforts to contribute to social welfare and environmental protection beyond regulatory requirements. CSR initiatives include community development, employee welfare, ethical business conduct, and environmental stewardship. Over time, CSR has evolved from a peripheral philanthropic activity into a strategic tool that supports long-term competitiveness and investor confidence. From a stakeholder perspective, CSR strengthens relationships with key stakeholder groups and enhances organizational legitimacy. Firms that actively engage in CSR are often perceived as more trustworthy and resilient, which can positively influence investor sentiment and portfolio allocation decisions. CSR activities may also reduce non-financial risks, such as reputational damage or social backlash, thereby improving portfolio stability. CSR also functions as an important signal to investors (Arhinful, Richard, et al.,2025). Transparent and consistent CSR initiatives communicate managerial commitment to sustainability and ethical conduct. Investors may interpret strong CSR engagement as an indicator of sound risk management and long-term strategic orientation, which supports favorable investment decisions and portfolio performance. Beyond its direct influence, CSR is expected to moderate the relationship between ESG performance and portfolio outcomes. CSR can enhance the credibility and perceived authenticity of ESG practices, thereby strengthening their influence on investment decisions. When ESG initiatives are supported by consistent CSR engagement, investors are more likely to view sustainability efforts as genuine and strategically embedded rather than symbolic. In the environmental dimension, CSR initiatives such as emissions reduction, energy efficiency, and sustainable resource use reinforce environmental performance signals. This alignment increases investor confidence in firms' ability to manage environmental risks, thereby amplifying the positive impact of environmental performance on portfolio outcomes. In the social dimension, CSR activities related to employee welfare, community engagement, and social inclusion strengthen the relationship between social performance and investment decisions. Investors may perceive such firms as better positioned to maintain social capital and long-term operational stability, enhancing portfolio resilience. In the governance dimension, CSR initiatives that emphasize transparency, ethical leadership, and stakeholder engagement may reinforce governance mechanisms. However, the moderating effect of CSR on governance may be complex, as excessive or symbolic CSR activities could raise concerns regarding managerial opportunism or misallocation of resources. Therefore, the moderating role of CSR in governance-related investment decisions warrants empirical examination. The effectiveness of ESG and CSR integration depends heavily on the quality of ESG disclosures and accounting practices. Reliable, standardized ESG reporting enhances comparability, reduces information asymmetry, and strengthens investor trust. In emerging markets, where transparency and institutional frameworks are still developing, high-quality ESG disclosure is particularly important in translating sustainability performance into investment value. Accounting systems thus play a foundational role in enabling ESG integration to influence portfolio performance effectively.

- H1a: Environmental performance positively influences investment decisions that enhance portfolio performance.
- H1b: Social performance positively influences investment decisions that enhance portfolio performance.
- H1c: Governance performance positively influences investment decisions that enhance portfolio performance.

- H2a: CSR moderates the relationship between environmental performance and portfolio performance through investment decisions.
- H2b: CSR moderates the relationship between social performance and portfolio performance through investment decisions.
- H2c: CSR moderates the relationship between governance performance and portfolio performance through investment decisions.

3. Methodology

3.1. Research Design

This study employs a quantitative research design to examine how the integration of environmental, social, and governance (ESG) factors into investment decision-making influences portfolio performance. A survey-based approach was adopted to capture investors' perceptions of ESG integration, corporate social responsibility (CSR), and investment behavior. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to test the proposed relationships due to its suitability for predictive analysis and its ability to model complex relationships among latent constructs, including moderation effects.

3.2. Population and Sample

The target population consists of institutional investors, financial analysts, portfolio managers, sustainability officers, and senior decision-makers operating in Jordan's financial, industrial, and service sectors. These respondents are directly involved in evaluating ESG information and incorporating sustainability considerations into investment and portfolio decisions. A stratified sampling approach was applied to ensure sectoral representation. A total of 350 valid responses were collected, which is adequate for PLS-SEM analysis and provides sufficient statistical power for hypothesis testing.

3.3. Measurement of Variables

All constructs were measured using a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." Investment decision-making captures the extent to which investors systematically use ESG information, emphasize long-term value creation, and align investment choices with ethical and sustainability considerations. Portfolio performance reflects investors' perceptions of risk-adjusted returns, portfolio stability, and long-term resilience resulting from ESG-informed decisions. ESG dimensions were measured through perceived environmental performance, social responsibility, and governance quality of firms. CSR was operationalized through leadership-oriented indicators reflecting the integration of CSR principles into strategic planning, decision-making, and organizational culture.

3.4. Data Analysis

Data analysis was conducted using SmartPLS 4. The measurement model was assessed for reliability and validity, followed by structural model evaluation. Bootstrapping with 5,000 resamples was applied to test direct and moderating effects. Model fit and explanatory power were examined to validate the robustness of the proposed framework.

4. Data Analysis and Results

The measurement model was evaluated to ensure the reliability and validity of the constructs related to ESG integration, investment decision-making, and portfolio performance. Internal consistency reliability was assessed using Cronbach's alpha and composite reliability. As shown in Table 1, all constructs exhibit values above the recommended threshold of 0.70, indicating strong internal consistency. Convergent validity was examined through the Average Variance Extracted (AVE), with all values exceeding 0.50, confirming that each construct adequately explains the variance of its indicators. All indicator loadings surpassed the minimum acceptable value of 0.60, demonstrating satisfactory indicator reliability. These results confirm that the measurement items effectively represent their respective latent constructs. Discriminant validity was assessed using the Heterotrait–Monotrait (HTMT) ratio, and all values were below the conservative threshold of 0.90, indicating that the constructs are empirically distinct. Although the HTMT value between environmental and social performance was relatively high, it remained within acceptable limits and reflects their conceptual proximity. The structural model analysis reveals that environmental performance has the strongest positive influence on investment decision-making ($\beta = 0.233$), followed by social performance ($\beta = 0.182$). Governance performance shows a negative relationship with investment decision-making ($\beta = -0.121$), suggesting that governance-related concerns may discourage investors in the examined context. Investment decision-making, in turn, has a significant positive effect on portfolio performance, highlighting the importance of ESG-informed investment strategies. The coefficient of determination (R^2 = 0.877) indicates that the model explains a substantial proportion of variance in investment decision-making, confirming the robustness of the proposed framework.

Table 1 Reliability and Validity of Constructs

Construct	Cronbach's Alpha	Composite Reliability	AVE
Environmental Performance	0.81	0.86	0.56
Social Performance	0.79	0.84	0.53
Governance Performance	0.76	0.82	0.51
CSR	0.83	0.88	0.60
Investment Decision-Making	0.85	0.89	0.62
Portfolio Performance	0.87	0.91	0.65

Source: Authors owns analysis.

Table 2 Convergent validity and internal consistency reliability.

Construct	Cronbach's Alpha	Composite Reliability (ρa)	Composite Reliability (ρc)	Average Variance Extracted (AVE)
Corporate Social	0.780	0.801	0.871	0.693
Environmental	0.814	0.837	0.877	0.642
Governance	0.818	0.829	0.881	0.650
Investors	0.777	0.812	0.854	0.595
Social	0.802	0.802	0.863	0.559

Source: Authors owns analysis.

The Fornell–Larcker criterion was used to evaluate discriminant validity among the constructs, ensuring that each construct is empirically distinct from the others. Table 3 presents the results, where the diagonal values represent the square root of the Average Variance Extracted (AVE) for each construct. For discriminant validity to hold, these diagonal values must exceed the correlations between the constructs. The findings indicate that all constructs meet this requirement, confirming that each construct maintains a distinct identity. This result validates the measurement model and provides confidence in the reliability of the relationships tested in the subsequent structural model analysis. Ensuring discriminant validity is crucial, as it establishes that the constructs measuring ESG factors, corporate social responsibility, investor decision-making, and portfolio performance are not conflated, thereby supporting the integrity of the structural evaluation.

Table 3 Heterotrait–Monotrait Correlation (HTMT).

Construct	1	2	3	4	5
1. Corporate Social Responsibility (CSR)	0.831				
2. Environmental	0.774	0.809			
3. Governance	0.717	0.802	0.833		
4. Investors' Decision-Making	0.733	0.888	0.727	0.762	
5. Social	0.722	0.596	0.601	0.690	0.663

Source: Authors owns analysis.

The R-squared and adjusted R-squared values presented in Table 4 indicate very strong explanatory power of the model in investor decision-making assessment. Specifically, the R-square of 0.877 indicates that the independent variables encompassed in the model, i.e., ESG performance and CSR moderating effect, explain 87.7% of the variance in investor decision-making. The adjusted R-squared value of 0.873, which adjusts for the number of predictors included in the model, also confirms the model's strength and reduces the risk of overfitting.

Table 4 Fornell and Larcker correlation.

Construct	1	2	3	4	5
1. Corporate Social Responsibility (CSR)	0.843				
2. Environmental	0.744	0.820			
3. Governance	0.779	0.717	0.810		
4. Investors' Decision-Making	0.722	0.736	0.762	0.771	
5. Social	0.737	0.719	0.703	0.760	0.765

Source: Authors owns analysis.

The analysis indicates a strong and meaningful relationship between ESG factors and investor decision-making, highlighting the relevance of corporate social responsibility (CSR) as a mediator in this relationship. The high R-squared value demonstrates that investors increasingly consider non-financial information, including ESG performance, when making investment choices, particularly when ESG practices are complemented by robust CSR initiatives. This reflects the growing trend in sustainable finance, where ethical, social, and environmental considerations shape investment decisions. The results underscore the importance for firms to adopt and disclose comprehensive CSR activities not merely as ethical obligations but as strategic instruments that enhance ESG transparency, legitimacy, and investor confidence. Table 5 presents the path coefficients and their statistical significance for the structural model. Corporate social responsibility (CSR) exhibits the strongest direct positive effect on investor decision-making ($\beta = 0.674$, $p < 0.001$), followed by environmental and social dimensions. Interestingly, governance shows a negative effect on investment decisions ($\beta = -0.125$, $p < 0.05$), indicating that governance concerns in this context may reduce investor confidence. Among the moderation effects, only the CSR × governance interaction is statistically significant and negative, suggesting that CSR may diminish the perceived impact of governance on investment decisions. No significant moderating effects were observed for CSR × environmental or CSR × social interactions, indicating that CSR's influence as a moderator is limited to governance factors in this study. Table 6 summarizes the hypothesis testing outcomes. The findings support the direct effects of ESG and CSR on investment decision-making while highlighting the complex role of governance and the selective moderating effect of CSR. Overall, the results validate the importance of integrating ESG factors into investment strategies, emphasizing that firms combining ESG performance with credible CSR practices are more likely to influence investor preferences and enhance portfolio performance.

Table 5 R-Squared and Adjusted R-Squared for Investor Decision-Making

Dependent Variable	R-Square	R-Square Adjusted
Investors' Decision-Making	0.877	0.873

Source: Authors owns analysis.

Table 6 Result of hypotheses testing (path coefficients-β).

Hypothesis	Path Coefficient (β)	Sample Mean (M)	Standard Deviation	T-Statistics	p-Value
Environmental → Investors' Decision-Making	0.233	0.228	0.077	3.010	0.003
Social → Investors' Decision-Making	0.182	0.178	0.053	3.419	0.001
Governance → Investors' Decision-Making	−0.121	−0.116	0.060	2.031	0.042
CSR × Environmental → Investors' Decision-Making	0.083	0.082	0.053	1.556	0.120

CSR × Social → Investors' Decision-Making	0.024	0.019	0.039	0.620	0.536
CSR × Governance → Investors' Decision-Making	−0.125	−0.126	0.057	2.214	0.027

Source: Authors owns analysis.

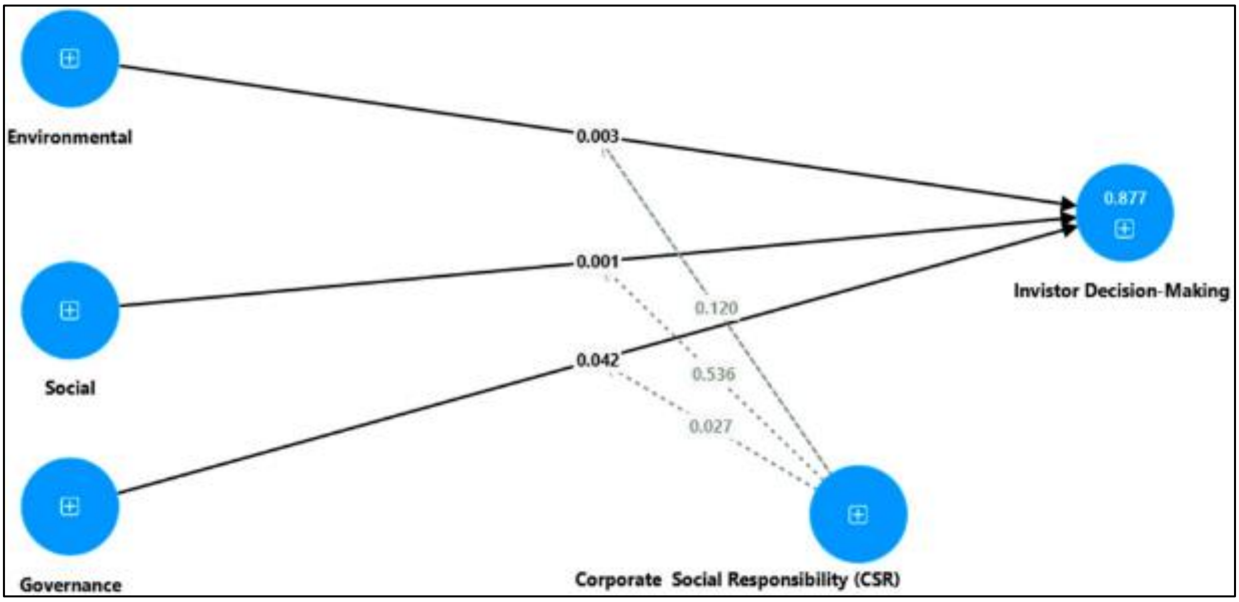

Figure 1 Result of structural model.

5. Discussion

The findings from this study emphasize the growing significance of environmental, social, and governance (ESG) factors and corporate social responsibility (CSR) in shaping investor decision-making and portfolio performance. Social and environmental performance were found to positively influence investor choices, highlighting that investors increasingly consider long-term sustainability, climate impact, and community welfare when evaluating investment opportunities. Conversely, governance performance exhibited a negative relationship with investor decision-making, suggesting that in emerging markets, such as Jordan, governance disclosures may be interpreted with caution or skepticism, particularly when they appear inconsistent or reactive rather than proactive. CSR emerged as a strong direct determinant of investor preferences, reflecting the increasing investor demand for transparency, ethical practices, and sustainable corporate behavior. Firms demonstrating authentic CSR efforts are perceived as stable, credible, and aligned with broader stakeholder interests, enhancing investor confidence in long-term portfolio outcomes. The moderation analysis revealed that CSR only significantly interacted with governance, and the negative effect suggests that CSR may inadvertently diminish investor confidence when governance practices are perceived as misaligned or superficial. This highlights the critical need for coherent and credible CSR strategies that reinforce rather than undermine ESG performance. The results underscore the contextual nature of ESG integration in investment decisions. Investors value authenticity, consistency, and alignment between ESG disclosures, CSR practices, and corporate actions. Tokenism or misaligned sustainability initiatives may reduce perceived firm credibility and increase perceived investment risk. The high explanatory power of the model (R^2 = 0.877) indicates that ESG and CSR variables collectively account for a substantial portion of variance in investor decision-making. This demonstrates the increasing reliance on non-financial information in portfolio management and supports the notion that accounting practices, including standardized ESG reporting, play a crucial role in enhancing transparency, reducing information asymmetry, and guiding sustainable investment strategies. Accounting is thus evolving beyond traditional financial metrics to become an essential mechanism for evaluating sustainability performance and managing risk in ESG-focused investment portfolios. These insights suggest that investors and fund managers aiming to optimize portfolio performance should prioritize firms with credible, consistent ESG and CSR practices, ensuring that sustainability commitments translate into meaningful long-term value.

6. Conclusions

This study highlights the critical influence of environmental, social, and governance (ESG) factors, alongside corporate social responsibility (CSR), on investment decisions and portfolio performance. Social and environmental considerations were found to positively shape investor behavior, emphasizing the growing importance of long-term sustainability, climate action, and stakeholder welfare in investment evaluation. In contrast, governance factors exhibited a negative relationship, suggesting that in emerging markets, governance disclosures may be interpreted with caution or perceived as potential risk indicators, particularly when reporting practices are inconsistent. CSR emerged as a primary driver of investor confidence, reinforcing the notion that ethical leadership, transparency, and strategic CSR integration enhance the perceived credibility of ESG disclosures. The study also revealed that CSR's moderating effect was significant only with governance and negative, indicating that misaligned or superficial CSR initiatives can undermine investor trust rather than strengthen ESG signals. These findings underscore the importance of coherent and credible sustainability practices, where CSR and ESG strategies are aligned and authentically implemented.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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