

Unraveling stock market drivers in Latin America: A structural equation modeling approach to Capital, Profitability, and ESG

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INTRODUCTION

This study investigates the key drivers of stock market valuation in Latin America by integrating traditional financial factors with corporate sustainability performance through a Structural Equation Modeling (SEM) approach. The analysis compares firms listed in emerging markets, Chile, Peru, and Colombia, with those in a developed European market, Spain. The research aims to uncover the direct, indirect, and mediating relationships between leverage, profitability, capital structure, and environmental, social, and governance (ESG) performance, providing insights into how these financial and non-financial variables influence firm valuation. In doing so, it contributes to the growing field of sustainable finance by exploring how ESG integration reshapes market dynamics in regions characterized by institutional heterogeneity and varying levels of market maturity.

Financial markets have undergone profound transformation in recent decades. Globalization, digitalization, and sustainability concerns have shifted the determinants of market value away from purely economic fundamentals toward broader multidimensional frameworks (Yiming et al., 2024). Traditional financial theories have long explained firm valuation through profitability, risk, and capital structure

decisions. However, the increasing relevance of ESG factors introduces new complexities, especially in regions like Latin America where financial integration, regulatory enforcement, and sustainability reporting remain uneven. Emerging evidence suggests that firms with strong ESG performance may enjoy lower cost of capital, greater investor loyalty, and enhanced long-term stability (Cardillo & Basso, 2025), but the magnitude and consistency of these effects are still debated, particularly in developing economies where markets are less efficient and shorter-term financial incentives often dominate.

Latin America provides a fertile context for this examination. Chile, Peru, and Colombia represent three of the region's most active and internationally integrated capital markets, participating in regional initiatives such as the Mercado Integrado Latinoamericano (MILA) and, more recently, the Nuam Exchange. These economies face the dual challenge of achieving sustainable development and strengthening financial resilience. Spain, in contrast, serves as a benchmark for developed market conditions, offering a model of institutional maturity, regulatory consistency, and a higher degree of investor confidence. Comparing these contexts allows for a nuanced understanding of how capital markets evolve along the sustainability-finance nexus.

The theoretical foundation of this study combines established financial theories with emerging perspectives on sustainability. Modigliani & Miller (1958) and Modigliani & Miller (1963) laid the groundwork for capital structure theory by emphasizing the neutrality of financing choices under perfect markets, later extended through agency, signaling, and information asymmetry frameworks (Jensen & Meckling, 1976; Myers & Majluf, 1984). Simultaneously, Freeman's (1984) Stakeholder Theory and the ESG paradigm underscore that firms operate within complex networks of economic and social interdependence, where value creation transcends financial returns. By integrating these frameworks, this research recognizes that firm valuation in modern markets depends not only on profitability and leverage but also on legitimacy, transparency, and long-term sustainability orientation.

DATA AND METHODS

The study employs a quantitative and explanatory research design to identify and test the relationships between financial and non-financial determinants of market valuation. Structural Equation Modeling (SEM) is selected as the main analytical technique because it enables the simultaneous estimation of direct and indirect relationships among latent and observed variables. This methodological approach allows for the decomposition of the total effect of sustainability and financial factors on market valuation into mediating and moderating pathways, capturing the interdependencies often overlooked by linear econometric models.

The empirical setting includes publicly listed firms from Chile, Peru, and Colombia, representing the Latin American bloc, and from Spain, providing a developed-market benchmark under European Union sustainability and disclosure regulations. Financial data, including leverage ratios, debt-to-equity, return on assets (ROA), return on equity (ROE), and stock returns, were collected from Refinitiv®, TradingView®, Yahoo Finance®, and Investing.com®. ESG data were sourced from Refinitiv® as well, ensuring methodological consistency across countries and sectors.

The sample selection prioritized firms with complete and comparable financial and ESG information between 2018 and 2023. This period captures post-crisis recovery dynamics, heightened investor awareness of sustainability, and the gradual institutionalization of ESG disclosure standards across regions. The data were analyzed using AMOS and RStudio packages (lavaan and semPlot), ensuring robust estimation, goodness-of-fit validation, and visual representation of causal linkages.

The conceptual model incorporates four main constructs: (1) Capital Structure, representing firms' financing mix; (2) Profitability, capturing financial efficiency and operational returns; (3) ESG Performance, reflecting sustainability commitment and risk management; and (4) Market Valuation, measured through stock returns and market-to-book ratios. Each construct is operationalized through multiple indicators to ensure construct validity. The model tests the following hypotheses: (H1) Capital structure positively influences profitability; (H2) Profitability mediates the relationship between leverage and market valuation; (H3) ESG performance positively affects market valuation, both directly and indirectly through profitability; and (H4) ESG moderates the effect of capital structure on firm value, amplifying or attenuating traditional financial relationships depending on the institutional context.

RESULTS

The results reveal significant differences between Latin American and Spanish markets in the strength and direction of financial and ESG relationships. In Spain, where ESG reporting is mandatory under the EU Non-Financial Reporting Directive, sustainability performance exerts a positive and statistically significant effect on both profitability and market valuation. Firms with higher ESG scores tend to achieve higher stock returns and lower perceived risk, consistent with the notion that sustainability enhances corporate reputation and investor confidence. Moreover, the SEM model confirms a mediating role of profitability, suggesting that ESG practices indirectly influence firm value through improved operational efficiency and cost management.

In contrast, the results from Latin America present a more complex and context-dependent picture. In Chile, ESG performance shows a weak but positive link to profitability, while its effect on market valuation is statistically insignificant. This indicates that Chilean firms may still face a gap between sustainability disclosure and financial impact, potentially due to the voluntary nature of ESG reporting and limited investor pressure. In Colombia, the relationship between leverage and valuation remains driven primarily by financial fundamentals, particularly return on assets and equity, with ESG variables showing no significant explanatory power. Peru exhibits the weakest ESG influence, highlighting structural and regulatory barriers to sustainability integration. Across the region, the evidence points to a persistent dominance of traditional financial indicators, profitability, leverage, and firm size—over sustainability in explaining market value.

The SEM fit indices indicate a satisfactory model performance (CFI and TLI above 0.90; RMSEA below 0.07), confirming the robustness of the theoretical structure. The comparative analysis underscores the structural gap between developed and emerging markets: in Spain, ESG acts as a driver of valuation; in Latin America, it remains a signaling mechanism with limited market translation. These outcomes echo findings from previous studies showing that sustainability's financial relevance depends heavily on institutional frameworks, transparency norms, and the maturity of investor demand for ethical investments (Chau et al., 2025; Cardillo & Basso, 2025).

DISCUSSION

The findings carry several implications for policymakers, regulators, and corporate managers. From a policy standpoint, the evidence calls for stronger ESG disclosure frameworks and the standardization of sustainability metrics across Latin America. Mandatory ESG reporting could reduce information asymmetry, enhance market transparency, and allow investors to better incorporate sustainability into pricing mechanisms. Governments should also promote financial instruments such as green bonds, sustainability-linked loans, and tax

incentives to encourage corporate commitment to sustainability goals. Strengthening regional cooperation through initiatives like Nuam could facilitate cross-border investment and knowledge transfer, accelerating convergence toward sustainable financial systems.

For corporate managers, the study highlights that sustainability practices are increasingly strategic rather than merely reputational. Integrating ESG principles into financial decision-making can improve risk management, attract long-term investors, and enhance firm resilience. However, the evidence suggests that in Latin America, internal alignment between sustainability and profitability remains incomplete. Companies should therefore focus on operationalizing sustainability, embedding it into core business models, production processes, and governance systems, rather than treating it as a parallel reporting exercise.

For investors, the results provide an important signal: ESG performance can serve as a valuable indicator of long-term corporate stability, but its interpretive power varies across markets. In developed contexts, ESG already carries financial weight; in emerging contexts, it remains an early warning system of managerial quality and future growth potential. Investors seeking diversification should account for this regional heterogeneity when evaluating ESG-linked assets.

This study contributes to the understanding of how financial and sustainability drivers interact to shape stock market valuation in Latin America and Europe. By applying Structural Equation Modeling, it provides a multidimensional framework capable of capturing complex relationships between profitability, capital structure, and sustainability. The evidence shows that while ESG performance significantly affects firm valuation in Spain, its financial impact in Latin America is still incipient, constrained by weak institutional frameworks and limited market incentives.

The findings reaffirm that profitability remains the strongest and most consistent determinant of valuation across contexts, mediating the effects of both leverage and ESG. They also reveal that, contrary to traditional expectations, leverage and sustainability do not yet play significant roles in explaining firm value in Latin American markets. This outcome

underscores the urgency of regulatory reforms and financial integration mechanisms that can align sustainability with profitability. Strengthening ESG disclosure, harmonizing sustainability standards, and fostering regional financial cooperation will be crucial to enhance market efficiency and investor confidence.

REFERENCES

- Cardillo, M. A. dos R., & Basso, L. F. C. (2025). Revisiting knowledge on ESG/CSR and financial performance: A bibliometric and systematic review of moderating variables. *Journal of Innovation & Knowledge*, 10(1), 100648. <https://doi.org/10.1016/j.jik.2024.100648>
- Chau, L., Anh, L., & Duc, V. (2025). Valuing ESG: How financial markets respond to corporate sustainability. *International Business Review*, 34(3), 102418. <https://doi.org/10.1016/j.ibusrev.2025.102418>
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Modigliani, F., & Miller, M. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *American Economic Review*, 48, 261–297. <https://www.jstor.org/stable/1809766>
- Modigliani, F., & Miller, M. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *American Economic Association*, 53(3), 433–443. <https://www.jstor.org/stable/1809167>
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Yiming, W., Xun, L., Umair, M., & Aizhan, A. (2024). COVID-19 and the transformation of emerging economies: Financialization, green bonds, and stock market volatility. *Resources Policy*, 92, 104963. <https://doi.org/10.1016/j.resourpol.2024.104963>