



# Does the moderating effect of ESG on earnings management increase value relevance in Latin American countries?

*¿El efecto moderador del ESG sobre la gestión de ganancias aumenta la relevancia del valor en los países de América Latina?*

Geovane Camilo dos Santos<sup>1\*</sup>, Marcelo Tavares<sup>2</sup>

<sup>1</sup>State University of Maringá, Brazil

<sup>2</sup>Federal University of Uberlândia, Brazil

Received July 26, 2024; accepted June 24, 2025

Available online June 25, 2026

## Abstract

The objective of this study is to analyze the moderating effect of ESG on earnings management in explaining the stock prices (value relevance) of companies from Latin American countries. The study yet compares this moderation before, during, and after the pandemic. The panel data was analyzed using the Generalized Least Squares (GLS) and Panel Corrected Standard Errors (PCSE) model. The final sample consisted of 2,078 observations from 291 companies from 2010 to 2023. The Ohlson (1995) model was employed to measure the value relevance, while the Kothari et al. (2005) model measured discretionary accruals. The findings of the study indicate: i) ESG and share price were positively and significantly related before the pandemic, and negatively and significantly after the pandemic; ii) discretionary accruals and share price were positively and significantly related, except after the pandemic, and iii) interaction between ESG and earnings management reveals a positive moderating relationship with value relevance in the post-pandemic period. This study contributes to investors by providing insights into how ESG moderates earnings management in stock price pricing, helping to identify more transparent and sustainable companies. It provides managers promote viewpoint on how ESG affects the production of financial value and promotes actions consistent with responsible governance. For society, it highlights the role of ESG in building more trustworthy and resilient markets. Understanding how crises impact the

---

\* Corresponding author.

E-mail address: geovane\_camilo@yahoo.com.br (G. C. dos Santos).

Peer Review under the responsibility of Universidad Nacional Autónoma de México.

<https://doi.org/10.22201/fca.24488410e.2026.5676>

0186- 1042/©2019 Universidad Nacional Autónoma de México, Facultad de Contaduría y Administración. This is an open access article under the CC BY-NC-SA (<https://creativecommons.org/licenses/by-nc-sa/4.0/>)

applicability of these techniques is made easier by the comparative analysis conducted before, during, and following the pandemic. Thus, the study reinforces the importance of ESG in promoting trust and economic stability.

*JEL Code:* M14, M41, Q56

*Keywords:* value relevance; earnings management; ESG; corporate social responsibility; Latin America

## Resumen

El objetivo de este estudio es analizar el efecto moderador del ESG sobre la gestión de ganancias para explicar los precios de las acciones (relevancia del valor) de las empresas de países de América Latina. El estudio aún compara esta moderación antes, durante y después de la pandemia. Los datos de panel se analizaron utilizando el enfoque de Mínimos Cuadrados Generalizados (GLS) y Errores Estándar Corregidos para Paneles (PCSE). La muestra final consistió en 2.078 observaciones de 291 empresas durante el período de 2010 a 2021. La relevancia del valor de los datos se evaluó utilizando el modelo de Ohlson (1995) y los accruales discrecionales se examinaron utilizando el modelo de Kothari et al. (2005). Los hallazgos del estudio indican: i) los factores ESG y el precio de las acciones estaban relacionados de manera positiva y significativa antes de la pandemia, y de manera negativa y significativa después de la pandemia; ii) los accruales discrecionales y el precio de las acciones estaban relacionados de manera positiva y significativa, excepto después de la pandemia, y iii) la interacción entre los factores ESG y la gestión de las ganancias revela una relación moderadora positiva con la relevancia del valor en el período posterior a la pandemia. Investigaciones previas han analizado las siguientes relaciones: ESG y relevancia del valor; ESG y gestión de ganancias; y gestión de ganancias y relevancia del valor, pero no han analizado el efecto moderador del ESG sobre la gestión de ganancias para explicar los precios de las acciones. Además, no han analizado cómo la pandemia ha afectado esta relación.

*Código JEL:* M14, M41, Q56

*Palabras clave:* relevancia del valor; gestión de ganancias; ESG; responsabilidad social corporativa; América Latina

---

## Introduction

While keeping an eye on results, businesses hope to show the market that they care about the environment, social issues, and corporate governance by implementing more Environmental, Social, and Governance (ESG) practices (United Nations Industrial Development Organization [UNIDO], 2023; Yoon et al., 2018). In this sense, ESG can be related to accounting information, having two theoretical principles: transparency and opportunistic behavior. According to the first viewpoint, supported by the Stakeholder Theory (Freeman, 1984), ESG practices are meant to strengthen the company's dedication to ethics and transparency. This suggests that businesses with more extensive ESG policies offer higher-quality information (Kim et al., 2012). The second approach, supported by the Agency Theory (Jensen & Meckling, 1976), holds that managers may reveal more ESG practices to conceal opportunistic conduct in the accounting figures, lowering the quality of accounting information (Garfatta, 2021).

The quality of accounting information is assessed in this study using two metrics: value relevance and earnings management. According to earlier research, businesses with stronger ESG policies are more valuable (Cordazzo et al., 2020; Di Martino et al., 2024; E-Vahdati et al., 2023; Migliavacca, 2024; Miralles-Quirós et al., 2018, 2019; Zuraida et al., 2018). The reason for this association is that businesses communicate to the market that they prioritize transparency and have the potential to produce more value over time.

Studies examining the connection between ESG and earnings management show that managers' discretionary practices tend to decrease as more ESG practices are implemented (Gonçalves et al., 2021; Grimaldi et al., 2020; Ji et al., 2019; Sun et al., 2024; Xiao et al., 2024). The reason is that companies are more transparent and show more moral behavior, resulting in higher-quality accounting reports (Gonçalves et al., 2021; Kim et al., 2012; Xiao et al., 2024). Garfatta (2021) found a positive relationship between ESG and earnings management in Saudi companies and argues that this can be explained by the fact that managers seek to disguise their discretionary actions by disclosing greater ESG practices, thus creating a positive reputation in the market, should something happen in the future.

The ESG relationship, value relevance, and ESG and earnings management were examined separately in the previous research (Cordazzo et al., 2020; Di Martino et al., 2024; E-Vahdati et al., 2023; Garfatta, 2021; Gonçalves et al., 2021; Grimaldi et al., 2020; Ji et al., 2019; Migliavacca, 2024; Miralles-Quirós et al., 2018, 2019; Sun et al., 2024; Xiao et al., 2024; Zuraida et al., 2018). This research differs in two aspects: i) it considers the moderating effect of ESG on earnings management to explain value relevance since greater disclosure of ESG practices can reduce the level of earnings management, which can increase the share price; ii) it segregates the analysis in three periods: before, during, and after pandemic since during the pandemic. This analysis examines whether sustainable practices and enhanced managerial transparency function as resilience mechanisms that contribute to increased stock prices during periods of heightened turbulence.

Considering this gap, this study aims to analyze the moderating effect of ESG on earnings management to explain stock prices in companies from Latin American countries. The study yet compares this moderation before, during, and after the pandemic. With a sample size of 1,554 observations, the data were treated using a Generalized Least Squares (GLS) model and Panel Corrected Standard Errors (PCSE). The findings show that: i) ESG and share price were positively and significantly related before the pandemic, and negatively and significantly after the pandemic; ii) discretionary accruals and share price were positively and significantly related, except after the pandemic, and iii) the interaction between ESG and earnings management reveals a positive moderating relationship with value relevance in the post-pandemic period.

The United Nations has recommended that investors prioritize companies with sustainable practices in their investment strategies (United Nations Environment Programme Finance Initiative, 2005). In this regard, the study shows investors that ESG can moderate earnings management and increase stock prices. Understanding this interaction allows investors to identify and companies aligned with sustainable practices, contributing to reduced risks and increased long-term returns.

For managers, the study provides insights into how ESG can create financial value and enhance organizational transparency. Managers are becoming more competitive in the market by implementing ESG-focused strategies. Adopting ESG can improve a company's reputation and boost investor trust, lower the cost of capital and improving long-term financial success. The analysis of changes before, during, and after the pandemic allows for understanding how crises can affect the relevance of ESG practices, identifying how these can interact in reducing earnings management practices to enhance stock prices. Thus, comparative analysis helps to determine how ESG practices can reflect on the quality of financial reporting.

This study is justified by the notable rise in the issuance of sustainable stock exchange bonds and ESG-focused investments (Lucchesi, 2021), as well as the increasing adoption of ESG practices by Latin American companies (DatacenterDynamics, 2022). Additionally, this research contributes to the academic discourse perspective by exploring the interaction between ESG and earnings management, aligning with the core principles of Stakeholder Theory. This theory posits that managers can enhance organizational effectiveness and contribute to a fairer society by addressing the diverse interests of stakeholders (Freeman, 1984).

## **Literature review and hypothesis development**

Earnings management refers to the intentional manipulation of decisions that impact the financial results of a fiscal year (Scott, 2015). The manipulation of accounting information implies that the accounting system is incapable of accurately capturing the economic events of the entity (Sohn, 2016). Earnings management can be defined as the strategy employed by managers to distort the accounting information provided to stakeholders.

Agency Theory, whose central premise is that people are motivated by self-interest, provides a basis for considering earnings management and its motives, proposing that the motivations are to increase the wealth of opportunistic agents (Jensen & Meckling, 1976). Proponents of this theory argue that the agent prioritizes maximizing his welfare at the expense of the welfare of stakeholders (Jensen & Meckling, 1976; Scott, 2015).

Four primary motivations drive earnings management: i) external contract incentives; ii) contractual incentives related to management salaries; iii) regulatory incentives; and iv) capital market incentives (Healy & Wahlen, 1999). This study will focus on capital market incentives due to the use of value relevance.

According to Healy and Wahlen (1999), capital market incentives are stimulated at two points: (i) when actual business performance differs from analyst projections, and (ii) when the company is about to complete a capital market operation, such as a share buyback or subscription. In these two situations, managers are motivated by various factors: i) not to report unfavorable results; ii) not to report volatile results; iii) to achieve the result predicted by analysts; iv) not to report small losses; v) to maintain recent performance; vi) to reduce current results to reverse them in the future; and vii) to pay dividends (Scott, 2015).

Besides earnings management, this study considers value relevance as a proxy for accounting quality. Value relevance is defined by Francis and Schipper (1999) as the ability of accounting information to assist users in pricing assets and by Barth et al. (2001) as the ability of information to influence stock prices. The beginning of the theoretical construction was the proposal of Ohlson in 1995. According to Ohlson (1995), the company is determined by the net equity plus any remaining net income. According to this paradigm, the value of the company is determined by its net equity and profits (Collins et al., 1997).

Research on value relevance can be divided into three categories: (i) relative association studies, which compare market value to changes in accounting values and metrics (e.g., comparing different accounting standards); (ii) incremental association studies, which examine whether certain information of interest explains value or returns when other specified variables are included (e.g., this study examines the relationship between ESG and stock prices); (iii) information content studies, which examine whether disclosure of a particular accounting number significantly increases investor knowledge (typically using event studies) (Holthausen & Watts, 2001).

ESG has been linked to value relevance and earnings management. Companies that invest in ESG can reap several benefits, including i) attracting investors (Broadstock et al., 2021); ii) higher returns and lower share price declines (Albuquerque, 2021; Broadstock et al., 2021); iii) lower volatility (Albuquerque, 2021); iv) higher operating margins (Albuquerque, 2021); v) reduced financial risk (Broadstock et al., 2021); vi) improved reputation (Jang et al., 2020); and vii) lower cost of capital (Jang et al., 2020).

These findings suggest that ESG can build social capital and customer trust, gain customer loyalty, and help the company overcome obstacles (Demers et al., 2021). ESG also means that investors want to invest ethically, in companies that respect social, governance, and sustainability principles (Broadstock et al., 2021).

Studies on ESG, value relevance, and earnings management can consider both Agency Theory and Stakeholder Theory. Agency Theory states that managers can cover opportunistic activities with additional information about ESG practices to build a positive reputation in the marketplace (Garfatta, 2021). Therefore, the increase in ESG practices may come at the expense of shareholders seeking to achieve their own goals, such as reputation enhancement (Demers et al., 2021).

Stakeholder Theory assumes that the manager focuses on meeting the interests of the different groups of users of accounting information, not just prioritizing their interests (Freeman, 1984). Therefore, top management is expected to produce financial and environmental reports that are useful to users in making decisions and improving the quality of accounting information (Zuraida et al., 2018).

Proponents of stakeholder theory argue that managers who adopt more ESG practices tend to disclose more information voluntarily, thereby increasing accountability. Kim et al. (2012) mention that this can help reduce earnings management and, according to Miles (2019), suggests greater transparency to the market. Miles (2019, p. 10) states that this theory "minimizes information asymmetry, lowers transaction costs, and reduces unwanted stakeholder scrutiny to legitimize actions after reputational violations."

After the theoretical discussion of the topic, it is important to highlight some research on the subject. In this sense, Table I summarizes some previous research on the relationship between value relevance and ESG (Panel A), earnings management and ESG (Panel B), and earnings management and value relevance (Panel C).

Table 1  
 Previous Studies on ESG, Value Relevance, and Earnings Management

Author (Year)	Objective	Methodology	Results
Panel A — Relationship between ESG and earnings management			
Ji et al. (2019)	To evaluate the impact of sustainable management on earnings management based on accruals and real profits.	The sample consists of 1,418 observations of firms in South Korea over the period 2015-2017.	Social ESG was negatively related to discretionary accruals, while environmental ESG showed no significant relationship.
Grimaldi et al. (2020)	To analyze the competency-based earnings management practices of Italian companies in 2018 (after the implementation of Legislative Decree No. 254/2016 on the disclosure of non-financial information).	The sample consisted of 60 Italian firms.	The results showed a slightly negative relationship between ESG and earnings management.

Garfatta (2021)	To examine the relationship between ESG and earnings management in Saudi Arabia after the mandatory adoption of IFRS.	The sample consists of 277 observations of Saudi firms over the period 2017-2019.	There was a positive relationship between ESG and discretionary accruals. This suggests that managers should get involved in ESG activities early to avoid making mistakes and reassure stakeholders that the organization is transparent.
Gonçalves et al. (2021)	Analyze the relationship between earnings management and ESG.	The sample includes 3,444 observations from 2010 to 2018 from companies in 17 European countries.	There was a negative relationship between earnings management and ESG. In times of crisis or losses (unfavorable economic conditions), managers opportunistically use the status of a sustainable company to manage results.
Velte (2021)	To examine the relationship between environmental performance, carbon performance, and earnings management.	The sample comprises 1,509 companies from 17 European countries in the Stoxx Europe 600 index.	Environmental and carbon performance reduces accrual management but increases real earnings management.
Sun et al. (2024)	Investigate whether and how ESG can limit Chinese companies' earnings management practices.	The final sample comprises 22,088 firm-year observations of 3096 firms from 2009 to 2022.	There is a negative relationship between ESG and earnings management, with the interaction between ESG and the number of analysts reducing the level of earnings management.
Xiao et al. (2024)	Investigate how changes in ESG ratings affect Chinese companies' earnings management.	A total of 3,133 observations of Chinese companies from 2015 to 2022 were analyzed.	The results indicate that changes in ESG ratings can limit earnings management by attracting more attention from institutional investors and analysts. This effect is stronger in mature companies, those in highly polluting industries, and companies in regions with higher marketization.
Panel B — Relationship between ESG and Value Relevance			
Miralles-Quirós et al. (2018)	Analyze whether ESG has a significant impact on stock prices.	The sample consists of 276 observations of Brazilian non-financial companies over the period 2010-2015.	ESG increases share price, with divergence between ESG components. There is a positive relationship between environmental practices (companies in non-sensitive industries) and social and corporate governance practices (companies belonging to these sensitive sectors).

Miralles-Quirós et al. (2019)	To examine whether the ESG performance of commercial banks provides relevant information and its impact on share prices from 2002 to 2015.	The sample consists of fifty-one banks from twenty countries from 2002 to 2015.	Investors assess the three ESG pillars in distinct ways. They view the environment and corporate governance as having a favorable and substantial relationship, while the social pillar is considered to have an unfavorable relationship.
Zuraida et al. (2018)	Analyze the relationship between ESG factors and stock prices.	The sample comprises 11,455 observations of non-financial companies from 38 countries from 2008 to 2012.	The overall ESG score and each of its components demonstrated a significant and positive relationship with the share price.
Di Martino et al. (2024)	Investigate the impact of ESG scores on the value-relevance of financial instruments' fair value hierarchy (FVH).	The sample includes 154 European Commercial Banks that were listed on the stock markets of the European Union between 2010 and 2018.	The interaction between ESG scores and level 1 of fair value reduces value relevance, while the interaction with levels 2 and 3 increases value relevance.
Migliavacca (2024)	Examines whether accounting numbers have lost explanatory power and whether sustainability information has become value relevance.	The sample comprises 3,025 nonfinancial companies operating in the eurozone from 2005 to 2020.	The analysis shows a general decline in the value relevance of financial accounting numbers, especially for ESG-rated companies. However, ESG ratings themselves have not gained value relevance over time.
Panel B — Relationship between earnings management and value relevance			
Durán-Vázquez et al. (2012)	Analyze the relationship between discretionary accruals and value relevance.	The sample included 19 Mexican companies, which were analyzed quarterly from 2000 to 2011.	A negative relationship was identified between discretionary accruals and share price. This suggests that earnings management may compromise the quality of accounting information, which in turn affects the share price.
Shan (2015)	To investigate whether earnings management reduces the level of value relevance and whether robust corporate governance restricts earnings management.	The sample consisted of 1,012 observations of non-financial companies listed on the Shanghai Stock Exchange.	A negative relationship was identified between earnings management and share price performance. It was also found that companies with robust corporate governance practices are more likely to limit earnings management.
Oliveira e Cavalcante (2018)	To verify the impact of discretionary accruals on	The sample included 1,170 observations	The OLS model demonstrated a positive relationship between discretionary accruals and

---

the valuation of Brazilian listed companies.	from Brazilian non-financial companies.	share price. This relationship was observed for both the accruals generated by the quantile regression and those of the OLS model.
--	---	--

---

It is crucial to remember that all previous research has analyzed only a few variables: earnings management and value relevance, ESG and earnings management, and ESG and value relevance. This research differs from previous studies in that it considers the moderating effect of ESG on earnings management to explain value relevance. From the perspective of Stakeholder Theory, ESG reduces earnings management (Ji et al., 2019; Sun et al., 2024; Velte, 2021; Xiao et al., 2024). Furthermore, higher discretionary accrual values reduce the quality of information, as per the Agency Theory (Durán-Vázquez et al., 2012; Shan, 2015). Based on these theories, the following hypotheses are formulated:

H1: There is a positive relationship between ESG and value relevance.

H2: There is a negative relationship between earnings management and value relevance.

H3: There is a positive relationship between the interaction of ESG and earnings management and value relevance.

This study also examines the interaction between earnings management and ESG during the pandemic to explain the value relevance. While there was an increase in earnings management during this period (Lassoued & Khanchel, 2021; Liu & Sun, 2022), there was also an increase in the average of ESG practices (Santos & Tavares, 2023). The fourth hypothesis can be stated as follows:

H4: The interaction between ESG and earnings management increased value relevance during the pandemic period.

Post-pandemic, with economic recovery, the pressure for emergency accounting adjustments may decrease, potentially reducing the level of earnings management due to a stabilization trend, as results may become more predictable than during the pandemic period (Kim et al., 2024). Regarding ESG practices, it is expected that companies will maintain or even increase their focus on sustainability and social responsibility, especially in a context where investors and consumers show greater interest in companies with strong ESG practices. In this regard, it is anticipated that the interaction between ESG and earnings management will increase stock prices, as companies that balance robust ESG practices with responsible earnings management may be seen as more reliable, leading to stock price appreciation. The fifth hypothesis can be stated as follows:

H5: The interaction between ESG and earnings management increased value relevance after the pandemic period.

## Methodological aspects

### *Data collection*

The initial sample consisted of 16,128 observations from 28 Latin American countries. The data was collected on the Refinitiv Eikon® platform and covered the period from 2010 to 2023. The final sample consisted of 2,078 observations, as detailed in Table 2.

Table 2  
 Research sample by country

Country	Initial sample	Non-ESG country	Financial sector	Missing data	Final sample
Anguilla	14	14	-	-	-
Antigua and Barbuda	14	14	-	-	-
Argentina	1,050	-	140	741	169
Bahamas	42	-	-	38	4
Barbados	28	-	14	14	-
Brazil	4,858	-	518	3,455	885
Cayman Islands	980	-	112	792	76
Chile	2,408	-	448	1,668	292
Colombia	714	-	224	402	88
Costa Rica	14	-	-	10	4
Curacao	14	14	-	-	-
Ecuador	140	140	-	-	-
French Guiana	14	14	-	-	-
Jamaica	1,050	1,050	-	-	-
Martinique	14	14	-	-	-
Mexico	2,016	-	322	1,282	412
Nicaragua	14	14	-	-	-
Panama	56	-	14	29	13
Peru	1,428	-	322	993	113
Puerto Rico	154	-	42	105	7
Saint Kitts and Nevis	14	14	-	-	-
Saint Lucia	56	56	-	-	-
Trinidad and Tobago	294	294	-	-	-
Turks and Caicos Islands	14	14	-	-	-
Uruguay	56	-	-	41	15
Venezuela	378	378	-	-	-
Virgin Islands; British	280	280	-	-	-
Virgin Islands; USA	14	14	-	-	-
Total	16,128	2,324	2,156	9,570	2,078

Initially, countries that did not provide ESG data were excluded from the analysis. Consequently, companies from the following countries were removed: Anguilla, Antigua and Barbuda, Curacao, Ecuador, French Guiana, Jamaica, Martinique, Nicaragua, Saint Kitts and Nevis, Saint Lucia, Trinidad and Tobago, Turks and Caicos Islands, Venezuela, Virgin Islands, British Virgin Islands, and the United States. Subsequently, we excluded the financial sector, comprising 2,324 observations, due to the standard practice of calculating earnings management through the provision for bad debts. After a thorough examination, 9,570 observations were excluded due to missing data on one or more variables.

Table III shows that Consumer Non-Cyclicals, Basic Materials, and Utilities are the sectors with the largest shares.

Table 3  
 Research sample by country

Country	Absolute frequency	Relative frequency
Academic & Educational Services	31	1.49%
Basic Materials	355	17.08%
Consumer Cyclicals	204	9.82%
Consumer non-cyclicals	414	19.92%
Energy	110	5.29%
Healthcare	70	3.37%
Industrials	268	12.90%
Real Estate	117	5.63%
Technology	163	7.84%
Utilities	346	16.65%
Total	2,078	100%

### *Data processing*

The data was analyzed using descriptive statistics, the Wilcoxon test, and short unbalanced panel regression. A Wilcoxon test was conducted on 284 observations before, during, and after the onset of the pandemic. To apply regression models to a short, unbalanced panel, several tests were conducted to determine the appropriate effects model: fixed, random, or ordinary least squares (OLS). The tests included the F-Chow (POLS versus fixed), Breusch-Pagan Lagrangian Multiplier (Pooled versus random), and Hausman (fixed versus random) tests. The results indicated that all the models included fixed effects.

There were no issues with multicollinearity, as the Variance Inflation Factor (VIF) was below 5.0. However, the Wooldridge test results indicated the presence of autocorrelation problems, while the Breusch-Pagan/Cook-Weisberg test revealed heterogeneity issues. To address the presence of heterogeneity and autocorrelation, we utilized Generalized Least Squares (GLS) and Panel Corrected

Standard Errors (PCSE), which provide superior adaptations. Outliers were subjected to the Winsorization technique, with a 95% confidence level.

### *Calculation of earnings management*

The total accruals were calculated using the cash flow methodology, according to Equation 1.

$$Accruals_{i,t} = \frac{(NL_{i,t} - OCF_{i,t})}{A_{i,t-1}} \quad (1)$$

Where: Accruals: Total Accruals of company *i* in year *t*, calculated using the cash flow method; NL: Net profit of company *i* in period *t*; OCF: Operating cash flow of company *i* in period *t*; A: Total assets of company *i* in period *t-1*.

The discretionary accruals (residuals of the regression) of the Kothari et al (2005) model according to Equation 2.

$$Accruals_{i,t} = \alpha + \beta_1 \left( \frac{1}{A_{i,t-1}} \right) + \beta_2 \left( \frac{\Delta Salles_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left( \frac{PPE_{i,t}}{A_{i,t-1}} \right) + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where: Accruals: Total accruals of the company *i* in year *t*, calculated using the cash flow method;  $\Delta$  Salles: Variation in the revenue of company *i* in year *t* about *t-1*, divided by total assets in year *t-1*;  $\Delta$  REC: Annual variation in the receivables of the company *i* in year *t* about *t-1*; PPE: Sum of fixed assets, intangible assets and deferred assets of the company *i* in year *t*, divided by total assets in year *t-1*; ROA: Profit on assets of the company *i* in year *t*, calculated by dividing operating profit by total assets; A: Total assets of the company *i* in period *t-1*.

It is crucial to highlight that the primary analysis focused on discretionary accruals in module values, while the supplementary analysis delved into positive and negative accruals separately.

### *Value relevance calculation*

The Ohlson valuation model (1995) was employed to calculate the value relevance. Equation 3 illustrates the concept that information about Net Equity (also known as Book Value per Share [BVPS]) and Net Income (also known as Earnings per Share [EPS]) can affect a company's market value.

$$P_{i,t+1} = \beta_0 + \beta_1 EPS_{i,t} + \beta_2 BVPS_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where: P: Share price of the company i in the period t+1; EPS: Net income per share of the company i in period t; BVPS: equity value per share of the company i in period t.

This study analyzed financial and non-financial data from December 31 and the share price on April 30 of the following year to determine whether disclosure had an impact on the share price.

### *Econometric model*

According to Equations 4 (testing H1), 5 (testing H2), and 6 (testing H3, H4, and H5 [segregating into before and after the pandemic]), three models were used to address the study hypotheses.

$$P_{i,t+1} = \alpha_{i,t} + \beta_1 EPS_{i,t} + \beta_2 BVPS_{i,t} + \beta_3 ESG_{i,t} + \beta_4 LA_{i,t} + \varepsilon_{i,t} \quad (4)$$

$$P_{i,t+1} = \alpha_{i,t} + \beta_1 EPS_{i,t} + \beta_2 BVPS_{i,t} + \beta_3 DA_{i,t} + \beta_4 LA_{i,t} + \varepsilon_{i,t} \quad (5)$$

$$P_{i,t+1} = \alpha_{i,t} + \beta_1 EPS_{i,t} + \beta_2 BVPS_{i,t} + \beta_3 ESG_{i,t} + \beta_4 DA_{i,t} + \beta_5 ESG * DA_{i,t} + \beta_6 LA_{i,t} + \varepsilon_{i,t} \quad (6)$$

Where: P: Share price of company i in the period t+1; EPS: Net income per share of company i in period t; BVPS: equity value per share of company i in period t; ESG: environmental, social and governance of company i in period t; DA: discretionary accruals of company i in period t; ESG\*DA: Interaction of the ESG and DA variables of company i in period t; LA: Logarithm of total assets of company i in period t.

Table IV illustrates the relationship between the explanatory and control variables and the dependent variable (share price).

Table 4  
 Theoretical Relationship between the dependent variable and the explanatory variables

Variables	Relation	Justification of the theoretical relationship	Authors
EPS	+	Companies with higher profitability may distribute more dividends, suggesting greater financial sustainability.	(Ohlson, 1995)
BVPS	+	Larger companies are more likely to be able to generate positive results.	(Ohlson, 1995)

ESG.	+	Companies with a higher level of ESG are likely to add more value to their stakeholders in the long term.	(Freeman, 1984; Zuraida et al., 2018)
DA	-	Accruals can negatively impact the quality of accounting information, thereby influencing decision-making, and leading to negative pricing of companies with higher discretionary practices.	(Scott, 2015)
ESG*DA	+	As ESG improves the quality of information and creates long-term value, discretionary accruals are expected to be reduced. Reducing discretionary accruals enhances accounting information quality and value relevance.	(Freeman, 1984; Zuraida et al., 2018)
LA	+	Larger companies have a longer history in the market, which increases the likelihood of paying dividends and reduces the risk.	(Liao et al., 2015)

Notes: EPS = earnings per share; BVPS: book value per share; ESG = environmental, social and governance; DA = discretionary accruals; ESG\*DA = interaction between ESG and DA, LA = logarithm of total assets

Following this discussion, the results of this research will be presented in the next section.

## Results

### *Descriptive analysis*

The analysis results (Table V) indicate that total accruals are positive, which implies that the companies have the potential to generate profits exceeding their cash flow.

Table 5  
Descriptive analysis

Variables	Average	CV	Minimum	Maximum
Total accruals	0.033	229.600	-0.104	0.195
DA module	0.052	91.350	0.003	0.182
DA	0.005	11,906.363	-21.914	11.078
ESG	48.235	42.648	11.960	80.560
E	42.803	61.290	0.000	84.500
S	50.545	49.240	5.390	88.030
G	51.028	43.227	13.550	85.930
Price stock	5.256	130.927	0.210	28.030
EPS	0.315	173.208	-0.490	2.030
BVPS	3.175	116.666	0.080	14.500
LA	22.154	5.106	20.069	24.091

Notes: Total Accruals: Total accruals of the company *i* in period *t*, calculated by subtracting the operating cash flow from the net profit divided by the lagged assets; DA Module: Residuals in regression module of the Kothari et al. model (2005); DA: Regression residuals from the Kothari et al. model (2005); ESG: Environmental, social, and corporate governance of company *i* in year *t*; E: Environmental aspect of the

company *i* in year *t*; S: Social aspect of the company *i* in year *t*; G: Corporate governance of company *i* in year *t*; Share Price: Share price of the company *i* in April (*t*+1); EPS: Earnings per share of the company *i* in period *t*; BVPS: Book value of company *i* share in period *t*; LA: Natural logarithm of company *i*'s assets in period *t*; CV: Coefficient of variation.

The discretionary accruals (in the module) of the Kothari et al. (2005) model demonstrate a variability of 91.350 and a mean average of 0.052. Regarding discretionary accruals (without module), it is evident that Latin American companies have increased their profits, with a high degree of variability around the average. Upward discretionary earnings management occurs when managers modify reported earnings through subjective assessments, such as early revenue recognition or provision manipulation, aiming to present higher-than-actual profitability (Scott, 2015). This practice is driven by the need to meet market expectations, enhance managerial compensation, or avoid breaching contractual terms. Additionally, it seeks to convey financial stability to attract investors and reduce capital costs (Scott, 2015). Despite the immediate benefits, it undermines accounting transparency, concealing internal issues, and creating long-term risks for reputation and regulatory compliance.

The overall mean ESG value is 48.235, with Colombia exhibiting the highest rating of 58.938 and the Bahamas the lowest at 32.648. The data indicates that, among the components, the environmental component exhibits the highest coefficient of variation and the lowest average value, suggesting more dispersion among the organizations. The governance component exhibited the lowest coefficient of variation and the highest average. This outcome can be attributed to the increasing demand from the Securities and Exchange Commission for enhanced corporate governance procedures.

The lowest share price was observed in Chile (US\$ 2.539), while the highest was in Panama (US\$ 29.380), with an average of US\$ 5.256 among all companies in the sample. Latin American companies' average earnings per share (EPS) were US\$ 0.315, indicating a capacity to generate profit. The lowest EPS was observed in Costa Rica (US\$ -0.490), while the highest was in Puerto Rico (US\$ 1.913). The average BVPS value was US\$ 3.175, with Costa Rica having the lowest value (US\$ 1.533) and Panama having the highest (US\$ 14.500). The corporations in these two countries exhibit the highest and lowest share prices relative to their highest and lowest EPS and BVPS values. This is consistent with the valuation model proposed by Ohlson (1995).

After the descriptive analysis, the Wilcoxon test (Table VI) was applied to evaluate the medians of the variables across the pre-pandemic, during-pandemic, and post-pandemic periods. The results indicate an increase in median total accruals when comparing the pre-pandemic and during-pandemic periods, followed by a decrease when comparing the during-pandemic and post-pandemic periods. A larger difference between accounting profit and operating cash flow may suggest a higher level of earnings management adopted by companies.

Table 6  
 Z Test Comparing Variables Before and After the Start of the Pandemic

Variables	Median before	Median during	Median after	Z
Total accruals	0.0303	0.0407	0.0181	15.501***
DA module	51.1303	59.0531	55.9314	13.537***
DA	45.6143	55.4572	50.9791	6.040*
ESG	53.7299	63.7406	60.2597	24.641***
E	53.8963	57.6456	56.1539	21.063***
S	5.0290	5.3370	5.3596	27.969***
G	0.2896	0.3892	0.3163	4.4610
Price stock	3.0132	3.3444	3.0108	1.7300
EPS	0.0303	0.0407	0.0181	1.8100
BVPS	0.0432	0.0579	0.0508	3.4590

Notes: As defined in Table IV; \*, \*\*, \*\*\* Significant at 1%, 5%, and 10%, respectively

The findings reveal an increase in earnings management during the pandemic, as demonstrated by the module values derived from the Kothari et al. (2005) model. However, the comparative analysis of the pandemic and post-pandemic periods shows a reduction in earnings management.

The comparative analysis between the pre-pandemic and pandemic periods revealed a significant increase in the overall ESG score and its individual components, except for corporate governance. The comparison between the pandemic and post-pandemic periods showed a reduction in the average ESG practices, except for the social component, which exhibited an increase. The results reflect the differentiated impact of the pandemic on corporate priorities (Dai, 2022). During the pandemic, the increase in ESG practices, particularly in the environmental and social components, was driven by social pressure and the need to address emergent demands and the effort to prevent a decline in stock prices (Albuquerque, 2021; Broadstock et al., 2021). Following the onset of the pandemic, the overall reduction in ESG efforts may indicate a strategic realignment, with the social component remaining prominent due to its direct contribution to organizational resilience.

### *The moderating effect of ESG on earnings management to explain value relevance*

The findings (Table VII) reveal a positive and significant relationship between BVPS and share price. The results are economically significant, indicating a potential increase in share price for every additional one million dollars in net equity. EPS also shows a positive and significant relationship, the economic significance of which suggests that an increase of one million dollars in net profit per share increases the share price. The positive and significant relationship observed between these two variables is in line with what is expected in the literature, corroborating the results of previous studies (Collins et al., 1997;

Cordazzo et al., 2020; Di Martino et al., 2024; E-Vahdati et al., 2023; Migliavacca, 2024; Miralles-Quirós et al., 2018, 2019; Zuraida et al., 2018), consistent with the theoretical model proposed by Ohlson (1995).

The ESG variable showed a statistically significant positive correlation with stock prices in both the whole period and the pandemic period in the GLS model. The results suggest that investors are directing their resources to companies that exhibit more sustainable practices. This result was anticipated and aligns with the findings of Cordazzo et al. (2020), E-Vahdati et al. (2023), Miralles-Quirós et al. (2018, 2019), Migliavacca (2024), Di Martino et al. (2024), and Zuraida et al. (2018). It is thus possible to confirm H1, which states that companies with higher ESG practices have higher share prices.

Table 7  
 Coefficient estimates and respective regression significance.

	GLS	PCSE	GLS	PCSE	GLS	PCSE	GLS	PCSE
	Period complete		Before pandemic		During pandemic		Period post-pandemic	
_cons	1.0175 (0.9455)	1.3286 (3.7562)	6.2248*** (1.2862)	2.7529 (4.9552)	-5.0377*** (0.8241)	-6.3927 (6.9738)	-3.5693*** (0.5808)	-2.7392 (2.9120)
BVPS	0.6778** (0.0235)	0.4364** (0.0853)	0.6986*** (0.0293)	0.3706** (0.0957)	0.8644*** (0.0355)	0.6189** (0.2087)	0.5830*** (0.0191)	0.6927*** (0.0677)
EPS	3.2040** (0.1739)	1.6470** (0.2934)	3.2406*** (0.2802)	1.8537** (0.4339)	2.5480*** (0.3259)	1.8396** (0.6647)	3.6726*** (0.2134)	0.6031 (0.4695)
ESG	0.0126** (0.0026)	0.0119 (0.0067)	0.0211*** (0.0039)	0.0122 (0.0091)	0.0044 (0.0027)	-0.0033 (0.0133)	-0.0037* (0.0019)	0.0012 (0.0065)
DA	8.0872** (2.4845)	0.5212 (3.8005)	10.6644** (3.4654)	1.8354 (5.9009)	10.1382** (2.4914)	9.0451 (12.0465)	-1.4631 (1.5312)	1.6530 (3.0667)
ESG*DA	-0.0630 (0.0467)	-0.0116 (0.0703)	-0.0791 (0.0709)	0.0285 (0.1106)	-0.0416 (0.0601)	-0.0481 (0.2033)	0.0809** (0.0267)	-0.0177 (0.0499)
LA	-0.0421 (0.0408)	0.0964 (0.1808)	-0.2596*** (0.6986***)	0.0671 (0.3706**)	0.1215** (0.0371)	0.3270 (0.3484)	0.1187*** (0.0270)	0.0785 (0.1386)
Year control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,053	2,078	1,106	1,133	408	449	376	421
Groups	266	291	178	205	204	245	188	233
r <sup>2</sup>		0.3921		0.4550		0.5143		0.5183
χ <sup>2</sup>	9,179.81***	2,032.47***	12,690.36***	2,501.07***	45,718.87***	2,142.80***	403,897.49***	324.6544***

Legend: as defined in Table V

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The observed outcomes can be attributed to the heightened awareness and concern among investors regarding sustainable and socially responsible practices. At the same time, government and regulatory policies in Latin America are increasingly focused on promoting sustainability and social responsibility. This encourages companies to improve their ESG practices to align with these requirements. To illustrate, Brazil, the country with the largest stock exchange in the sample, has approved a resolution requiring the disclosure of ESG risk reports (Comissão de Valores Mobiliários, 2023). Consequently, the alignment of government and regulatory policies not only attract institutional investors seeking to mitigate the risks associated with environmental and social issues but also enhances the reputation of companies, thereby increasing consumer confidence and, in turn, demand for their shares.

It is also important to recognize that adopting ESG practices is not solely driven by the desire to achieve future results. It is also about maintaining the sustainability of life on earth, given the significant impact that corporate activities have on the environment and society. Implementing ESG practices, such as reducing greenhouse gas emissions, the sustainable management of natural resources, and the minimization of waste, enables companies to contribute to mitigating climate change and preserving biodiversity. In addition, implementing effective social and governance practices can promote equity, social justice, and transparency, thereby strengthen the social fabric and fostering trust in institutions. Therefore, the implementation of ESG criteria protects the planetary ecosystem and ensures companies' resilience and long-term viability.

However, the results showed a negative significance in the post-pandemic period. This outcome can be explained by the changes in economic conditions and market expectations following the peak of the pandemic. During the pandemic, the emphasis on ESG practices may have been perceived as an indicator of corporate resilience and responsibility, leading to a positive relationship with stock prices. In the post-pandemic period, economic recovery and the normalization of market conditions may have reduced the relative importance of ESG practices for investors, resulting in a negative relationship with stock prices. This suggests that, in a post-pandemic environment, investors may have prioritized other financial factors over non-financial ones, such as ESG.

A positive and significant relationship between stock prices and accruals was observed throughout the entire period and during the pandemic, as evidenced by columns 1 and 3 of Table VII. This does not corroborate the H2, which postulates that implementing discretionary practices is associated with declining share prices. This positive correlation can be attributed to several factors. i) investors tend to respond positively to inflated financial results in the short term, leading them to believe that the company is performing well (Cupertino et al., 2015); ii) in emerging markets, where efficiency is constrained and corporate governance may be weak, the identification of poor-quality accounting information may be more challenging (Flores et al., 2020), this results in an initial rise in share prices following the

dissemination of positive news. However, this is subsequently reversed when the veracity and quality of the information are revealed; iii) managers can use discretionary accruals to smooth results and reduce the perception of risk, attracting investors in search of stability (Scott, 2015), which can also raise share prices in the short term; iv) it is challenging for investors to identify discretionary practices due to the complexity of the models typically used in the market (Jackson, 2018). This complexity causes share prices to be inflated even in the face of low-quality accounting information.

The interaction between ESG practices and earnings management did not show a significant relationship with stock prices throughout the entire period. This relationship leads to rejecting H3, which posits that the interaction between ESG and earnings management increases stock prices. Several factors can explain this outcome: i) Companies that are leaders in ESG practices may incur significant costs to maintain these high standards, which can temporarily affect their profitability and, consequently, their stock prices; ii) In environments with a higher prevalence of earnings management, the introduction of stringent ESG practices may be seen as an attempt to mask or offset questionable accounting practices. This could raise suspicions among investors that managers are attempting to divert attention from aggressive accounting practices.

During the pandemic period, the results demonstrated a statistically significant negative relationship. This outcome can be explained by the economic impact of the pandemic, which created an environment of uncertainty where companies faced more urgent financial challenges. As a result, ESG practices, which are typically associated with costs and long-term investments, may have been perceived as less of a priority or even as an attempt to divert attention from immediate financial difficulties. Furthermore, investors may have been more cautious regarding companies that, although disclosing ESG practices, were visibly struggling with intense financial pressures, leading to a negative relationship between ESG, earnings management, and stock prices. Therefore, hypothesis H4 was not confirmed, as, during times of crisis, the emphasis on sustainability may have been viewed with skepticism, especially when combined with earnings management practices, thus negatively impacting stock price appreciation.

In the post-pandemic period, the results revealed a positive and significant relationship between the interaction of ESG practices and earnings management with stock prices. This finding confirms hypothesis H5, which posits that the interaction between ESG and earnings management increases stock prices. The positive relationship between the interaction of ESG practices and earnings management with stock prices in the post-pandemic period can be attributed to economic and behavioral factors. With economic recovery, investors began to increasingly value corporate practices that not only ensure profitability but also demonstrate social and environmental responsibility. In this context, integrating sound ESG practices with a perception of lower risk in earnings management may have been interpreted as a signal of robustness and confidence, enhancing the positive perception of these companies.

Furthermore, after the disruptive impact of the pandemic, companies began to adopt a more balanced approach, where transparency in ESG practices helped mitigate the risks associated with earnings management. The fact that companies managed their results responsibly, without sacrificing ESG principles, may have positively affected stock prices, as investors came to perceive these companies as better prepared to face future challenges. This reflects the growing importance of strong corporate governance, which focuses on financial performance and its social and environmental impact, resulting in long-term stock price appreciation.

The firm size variable showed a positive relationship with stock price only in the GLS model for the post-pandemic period. This suggests that larger companies tend to have higher share prices, which is consistent with the positive association previously reported in the study by Liao et al. (2019). Several factors can explain this result. During the economic recovery, larger companies often benefit from greater adaptability and resilience, more capable of handling economic uncertainties and market demands. Additionally, larger firms tend to have easier access to financial resources, allowing them to maintain more stable operations and continue investing in innovation and robust business practices, which can generate investor confidence. The higher visibility and reputation of larger companies may also contribute to a positive perception from investors, leading to an appreciation of their stock prices.

### *Robustness analysis*

Two robustness analyses were conducted. The first analysis considered each ESG component, as shown in Table VIII. The results indicate a significant and positive relationship between all the components and the share price in all the periods analyzed, except for the corporate governance component during the pandemic period. This study's results indicate that investors value all ESG components, even in different macroeconomic scenarios. This finding contrasts with the study by Miralles-Quirós et al. (2019), which found no significant relationship between the social component and investment decisions. Consequently, investors assign value to each element of ESG practices, as these companies suggest greater transparency, which can reduce the risks for investors when allocating their capital.

Table 8  
 Summary of the relationships by ESG components

	GLS	PCSE	GLS	PCSE	GLS	PCSE	GLS	PCSE
	Period complete		Before pandemic		During pandemic		Period post pandemic	
E	+	NS	+	NS	+	NS	+	NS
E*DA	-	NS	NS	NS	-	NS	NS	NS
S	+	NS	+	NS	+	NS	+	+

S*DA	NS	NS	NS	NS	NS	NS	NS	NS
G	+	NS	+	NS	-	NS	+	+
G*DA	NS	NS	NS	NS	+	NS	NS	NS

Notes: E = environmental score; S = social score; G = corporate governance score; DA: Residuals in regression module of the Kothari et al. model (2005).

The interaction analysis revealed a negative relationship with the environmental component in both the whole period and the pandemic period. This suggests that the environmental component is not sufficiently effective in reducing earnings management to increase share prices. The observed negative relationship may be attributed to investor perceptions that the long-term benefits of this component have not yet been fully reflected in immediate financial results. Alternatively, these practices may be perceived as attempts to mask underlying issues, leading to a negative reaction in share prices. In turn, the corporate governance component during the pandemic exhibited a positive relationship, suggesting that, in times of greater turmoil, investors place a higher value on companies with stronger governance practices, as these can reduce earnings management levels and increase investor confidence, thus driving up share prices.

The second robustness analysis considered discretionary accruals, which were segregated into positive and negative. Table IX presents the relationship identified for positive and negative accruals.

Table 9  
 Summary of the relationships based on Positive and Negative Accruals

	GLS	PCSE	GLS	PCSE	GLS	PCSE	GLS	PCSE
	Period complete		Before pandemic		During pandemic		Period post pandemic	
Panel A – Positive Accruals								
ESG	+	NS	NS	NS	NS	NS	+	NS
DA	NS	NS	NS	NS	NS	NS	NS	NS
ESG*DA	+	NS	+	NS	-	NS	+	NS
E	+	NS	+	NS	NS	NS	NS	NS
DA	+	NS	+	NS	+	NS	+	NS
E* DA	NS	NS	NS	NS	NS	NS	NS	NS
S	+	NS	+	NS	NS	NS	NS	NS
DA	+	NS	+	NS	NS	NS	+	NS
S*DA	NS	NS	NS	NS	NS	NS	NS	NS
G	+	NS	+	NS	+	NS	+	NS
DA	+	NS	+	NS	+	NS	+	NS
G* DA	NS	NS	NS	NS	NS	NS	NS	NS
Panel B – Negative Accruals								
ESG	+	+	+	+	+	+	+	+
DA	+	+	+	+	+	+	+	+
ESG*DA	-	NS	-	NS	NS	NS	NS	NS
E	+	NS	+	NS	+	NS	+	NS
DA	+	+	+	+	+	+	+	+

E* DA	-	NS	-	NS	NS	NS	-	NS
S	+	+	+	+	+	+	+	+
DA	+	+	+	+	+	+	+	+
S*DA	NS	-	NS	-	NS	-	NS	-
G	+	NS	+	NS	NS	NS	NS	NS
DA	+	NS	+	NS	NS	NS	NS	NS
G* DA	-	NS	-	NS	-	NS	-	NS

Notes: ESG denotes the environmental, social, and corporate governance score; DA = Residuals in the regression module of the Kothari et al. model (2005); ESG\*AD signifies the interaction between the ESG variable and DA.

The findings presented in Panel A (positive accruals) suggest that ESG practices exhibited a positive and significant relationship with share value in the GLS model, both during the complete period and after the pandemic. This indicates that investors appreciated ESG practices as an indication of corporate transparency and sustainability, which may have facilitated the perception of reduced risks and strengthened investor confidence. However, during and before the pandemic, ESG practices did not show a statistically significant relationship with share value. This may have occurred because, during those times, other information was considered more relevant by investors.

No significant relationship was observed between the level of earnings management and share price in any of the periods examined. This result suggests that earnings management practices do not affect share prices, either because users do not perceive them or because investors disregard them.

A positive and significant relationship between ESG and earnings management was observed during the complete period, before the pandemic, and in the post-pandemic period in the GLS model. This indicates that, in these scenarios, the combination of strong ESG practices with more moderate earnings management was perceived by investors as a balanced strategy capable of enhancing share value. However, during the pandemic, a negative relationship between ESG and earnings management was observed in the GLS model, which may reflect investor skepticism regarding the use of ESG practices as a tactic to mask underlying financial issues.

The results presented in Panel B – Negative Accruals reveal a significant and positive relationship between ESG practices and share prices across all periods analyzed, in both the GLS and PCSE models. This finding underscores that investors value ESG practices as indicators of corporate responsibility and stability, regardless of the economic context. Regarding the individual components, the results were mixed: the social component showed a relationship in all periods, whereas the corporate governance component was positive only during the complete period and before the pandemic in the GLS model.

The level of earnings management also exhibited a significant and positive relationship with share prices. An explanation for this finding is that investors may interpret downward earnings

management as a sign of prudence or view such adjustments as legitimate and necessary to better reflect the company's economic performance, rather than associating them with opportunistic practices.

The interaction between ESG and earnings management showed a significant and negative relationship during the complete period and the pandemic. Regarding the components, the findings indicate that for the environmental component, there was no significant relationship during the pandemic. The social component exhibited a negative relationship across all periods in the PCSE model, while the corporate governance component demonstrated a negative relationship in the GLS model. These results suggest that the combination of ESG practices with earnings management might be viewed skeptically by investors, raising concerns about corporate transparency. During the pandemic, in particular, this skepticism may reflect distrust in the use of ESG as a strategy to mask opportunistic accounting practices, negatively impacting investor perception.

## **Conclusions**

To comprehend the relationship between ESG aspects and stock prices, this study will analyze the moderating effect of ESG on earnings management, to explain the stock prices (value relevance) in companies from Latin American countries. As a secondary objective, the research compares this moderating effect before, during, and after the start of the pandemic. To achieve this objective, the earnings management measurement model proposed by Kothari et al. (2005) was utilized on 2,078 observations.

The findings reveal a variation in the direction of relationships across different periods, highlighting how macroeconomic contexts and investor perceptions influence the valuation of ESG practices. For instance, prior to the pandemic, ESG practices were associated with an increase in share value, whereas after the pandemic, these practices were linked to a decrease in share value. This outcome may reflect a shift in investor perspectives, wherein, during a period of economic recovery and emerging challenges, investors might have become more skeptical or concerned about the costs associated with implementing ESG practices, perceiving them as secondary to other immediate financial priorities.

Additionally, a positive and significant relationship was observed between discretionary accruals and share prices, except for the post-pandemic period. This relationship suggests that investors may respond positively to inflated financial results in the short term. This phenomenon can be attributed to two primary causes: (i) the inability to identify earnings management practices due to the complexity of the models, and (ii) investors accepting greater risks in their capital allocation. In this case, the primary implication of these results is for researchers who can develop alternative models that are more

straightforward and less complex to employ, with enhanced accuracy in identifying discretionary practices by stakeholders.

The relationship between the interaction of ESG and earnings management was positive and significant only in the post-pandemic period. With the economic recovery, investors began to value non-financial practices as well, whereas during the pandemic, marked by financial challenges and uncertainties, the focus was more on financial results. In the post-pandemic period, with a more solid economic recovery, investors likely started to view the combination of strong ESG practices and responsible earnings management as an indicator of more robust companies, better equipped to face future challenges. Therefore, this shift in perspective may have led to an increase in stock prices, as investors began to associate sustainable practices and transparency in management with greater resilience and confidence in companies' long-term performance.

The findings have potential implications for managers, as the results indicate that the adoption of discretionary practices is associated with higher share prices. Furthermore, the implementation of ESG practices was insufficient to reduce earnings management, which in turn did not drive an increase in share prices, except in the post-pandemic period. The study suggests to investors that their investment decisions should be made with caution, even when dealing with companies with stronger ESG practices, as managers may still be acting opportunistically.

Regarding the pandemic period, the results indicate that in Latin American countries, investors place greater emphasis on financial information than on ESG information. This is evidenced by the positive and significant results obtained for EPS and BVPS in all models, while ESG and its components showed divergent results. However, when companies with stronger ESG practices interact with companies that engage in more earnings management, there is no reduction in discretionary practices to increase share prices.

Future research could examine the moderating effect of ESG on earnings management as a means of elucidating the indebtedness level of a company. This is relevant because research indicates that companies can employ earnings management strategies to enhance their capital structure.

## References

- Albuquerque, N. (2021, novembro 25). Green Bonds passam por “boom” na América Latina e no Caribe, sinaliza CBI. <https://bit.ly/3MABGA6>
- Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001). The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics*, 31(1–3), 77–104. [https://doi.org/10.1016/S0165-4101\(01\)00019-2](https://doi.org/10.1016/S0165-4101(01)00019-2)

- Broadstock, D. C., Chan, K., Cheng, L. T. W., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Finance Research Letters*, 38, 101716. <https://doi.org/10.1016/j.frl.2020.101716>
- Collins, D. W., Maydew, E. L., & Weiss, I. S. (1997). Changes in the value-relevance of earnings and book values over the past forty years. *Journal of Accounting and Economics*, 24, 39–67. <https://doi.org/10.1145/1147282.1147308>
- Cordazzo, M., Bini, L., & Marzo, G. (2020). Does the EU Directive on non-financial information influence the value relevance of ESG disclosure? Italian evidence. *Business Strategy and the Environment*, 29(8), 3470–3483. <https://doi.org/10.1002/bse.2589>
- Comissão de Valores Mobiliários. (2023). *Resolução CVM no 193, de 20 de outubro de 2023*.
- Cupertino, C. M., Martinez, A. L., & da Costa, N. C. A. (2015). Earnings manipulations by real activities management and investors' perceptions. *Research in International Business and Finance*, 34, 309–323. <https://doi.org/10.1016/j.ribaf.2015.02.015>
- Dai, Y. (2022). Is ESG investing an 'equity vaccine' in times of crisis? Evidence from the 2020 Wuhan Lockdown and the 2022 Shanghai Lockdown. *Borsa Istanbul Review*, 22(5), 992–1004. <https://doi.org/10.1016/j.bir.2022.07.003>
- DatacenterDynamics. (2022). Estudo da SAP aponta crescimento acelerado da adoção de estratégias ESG por empresas da América Latina. <https://bit.ly/38iV8TU>
- Demers, E., Hendrikse, J., Joos, P., & Lev, B. (2021). ESG did not immunize stocks during the COVID-19 crisis, but investments in intangible assets did. *Journal of Business Finance and Accounting*, 48(3–4), 433–462. <https://doi.org/10.1111/jbfa.12523>
- Di Martino, G., Miglietta, F., & Potì, V. (2024). The impact of ESG scores on the value relevance of fair value hierarchy of financial instruments: Evidence from European Banks. *Research in International Business and Finance*, 71, 102451. <https://doi.org/10.1016/j.ribaf.2024.102451>
- Durán-Vázquez, R., Lorenzo-Valdés, A., & SanMartín-Reyna, J. M. (2012). Relevance of Discretionary Accruals in Ohlson Model: The Case of Mexico. *Journal of Entrepreneurship, Management and Innovation*, 8(3), 21–34. <https://doi.org/10.7341/2012832>
- E-Vahdati, S., Wan-Hussin, W. N., & Mohd Ariffin, M. S. (2023). The Value Relevance of ESG Practices in Japan and Malaysia: Moderating Roles of CSR Award, and Former CEO as a Board Chair. *Sustainability*, 15(3), 2728. <https://doi.org/10.3390/su15032728>
- Florencio, W., Batista, F. F., & Reis, C. Q. (2020). Governança Corporativa e desempenhos das ações de empresas do setor comercial em ambiente de crise econômica. *Revista Catarinense da Ciência Contábil*, 19. <https://doi.org/10.16930/2237-766220202977>

- Francis, J., & Schipper, K. (1999). Have Financial Statements Lost Their Relevance? *Journal of Accounting Research*, 37(2), 319–352. <https://doi.org/10.2469/dig.v30.n3.703>
- Freeman, R. E. (1984). *Strategic management*. Pitman Publishing Ins.
- Garfatta, R. (2021). Corporate Social Responsibility and Earnings Management: Evidence from Saudi Arabia after Mandatory IFRS Adoption. *Journal of Asian Finance Economics and Business*, 8(9), 189–199. <https://doi.org/10.13106/jafeb.2021.vol8.no9.0189>
- Gonçalves, T., Gaio, C., & Ferro, A. (2021). Corporate social responsibility and earnings management: Moderating impact of economic cycles and financial performance. *Sustainability*, 13(17). <https://doi.org/10.3390/su13179969>
- Grimaldi, F., Caragnano, A., Zito, M., & Mariani, M. (2020). Sustainability engagement and earnings management: The Italian context. *Sustainability*, 12(12), 1–16. <https://doi.org/10.3390/SU12124881>
- Healy, P. M., & Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its. *Accounting Horizons*, 13(4), 365–383. <https://doi.org/10.2308/acch.1999.13.4.365>
- Holthausen, R. W., & Watts, R. L. (2001). The relevance of the value-relevance literature for financial accounting standard setting. *Journal of Accounting and Economics*, 31(1–3), 3–75. [https://doi.org/10.1016/S0165-4101\(01\)00029-5](https://doi.org/10.1016/S0165-4101(01)00029-5)
- Jackson, A. B. (2018). Discretionary Accruals: Earnings Management.. Or Not? *Abacus*, 54(2), 136–153. <https://doi.org/10.1111/abac.12117>
- Jang, G. Y., Kang, H. G., Lee, J. Y., & Bae, K. (2020). ESG scores and the credit market. *Sustainability (Switzerland)*, 12(8). <https://doi.org/10.3390/SU12083456>
- 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)
- Ji, S. H., Oh, H. M., Yoon, K. C., & An, S. B. (2019). A study on earnings management in companies achieving sustainability: Accruals-based and real earnings management. *Journal of Distribution Science*, 17(9), 103–115. <https://doi.org/10.15722/jds.17.09.201909.103>
- Kim, W., Moon, B., & Jung, D. (2024). The Effect of COVID-19 on Public and Private Sector Earnings Management: Evidence from Korea. *International Journal of Financial Studies*, 12(2), Artigo 2. <https://doi.org/10.3390/ijfs12020054>
- Kim, Y., Park, M. S., & Wier, B. (2012). Is earnings quality associated with corporate social responsibility? *Accounting Review*, 87(3), 761–796. <https://doi.org/10.2308/accr-10209>

- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163–197. <https://doi.org/10.1016/j.jacceco.2004.11.002>
- Lassoued, N., & Khanchel, I. (2021). Impact of COVID-19 Pandemic on Earnings Management: An Evidence from Financial Reporting in European Firms. *Global Business Review*. <https://doi.org/10.1177/0972150921105349>
- Liao, L., Luo, L., & Tang, Q. (2015). Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *British Accounting Review*, 47(4), 409–424. <https://doi.org/10.1016/j.bar.2014.01.002>
- Liu, G., & Sun, J. (2022). The impact of COVID-19 pandemic on earnings management and the value relevance of earnings: US evidence. *Managerial Auditing Journal*, 37(7), 850–868. <https://doi.org/10.1108/MAJ-05-2021-3149>
- Lucchesi, P. C. (2021). Empresas da América Latina emitem 4 vezes mais títulos ESG , diz BofA. Em Exame. <https://bit.ly/398pRCZ>
- Migliavacca, A. (2024). Value relevance of accounting numbers and sustainability information in Europe: Empirical evidence from nonfinancial companies. *Journal of International Accounting, Auditing and Taxation*, 55, 100620. <https://doi.org/10.1016/j.intaccudtax.2024.100620>
- Miles, S. (2019). Stakeholder theory and accounting. Em *The Cambridge Handbook of Stakeholder Theory* (p. 173–188). Oxford Brookes University.
- Miralles-Quirós, M. M., Miralles-Quirós, J. L., & Gonçalves, L. M. V. (2018). The value relevance of environmental, social, and governance performance: The Brazilian case. *Sustainability (Switzerland)*, 10(3). <https://doi.org/10.3390/su10030574>
- Miralles-Quirós, M. M., Miralles-Quirós, J. L., & Redondo-Hernández, J. (2019). The impact of environmental, social, and governance performance on stock prices: Evidence from the banking industry. *Corporate Social Responsibility and Environmental Management*, 26(6), 1446–1456. <https://doi.org/10.1002/csr.1759>
- Ohlson, J. A. (1995). Earnings, Book Values, and Dividends in Equity Valuation. *Contemporary Accounting Research*, 11(2), 661–687.
- Oliveira, K. P. S. de, & Cavalcante, P. R. N. (2018). Gerenciamento de resultados e avaliação de empresas: Uma análise da relevância dos accruals discricionários no Modelo de Ohlson. *REUNIR Revista de Administração Contabilidade e Sustentabilidade*, 8(2), 56–64. <https://doi.org/10.18696/reunir.v8i2.826>

- Santos, G. C. D., & Tavares, M. (2023). Qual o papel do ESG no value relevance? Um comparativo das evidências na América Latina antes e durante a pandemia da COVID-19. *Advances in Scientific and Applied Accounting*, 16(2), 121–133. <https://doi.org/10.14392/asaa.2023160206>
- Scott, W. R. (2015). *Financial Accounting Theory*. Pearson.
- Shan, Y. G. (2015). Value relevance, earnings management and corporate governance in China. *Emerging Markets Review*, 23, 186–207. <https://doi.org/10.1016/j.ememar.2015.04.009>
- Sohn, B. C. (2016). The effect of accounting comparability on the accrual-based and real earnings management. *Journal of Accounting and Public Policy*, 35(5), 513–539. <https://doi.org/10.1016/j.jaccpubpol.2016.06.003>
- Sun, W., Chen, S., Jiao, Y., & Feng, X. (2024). How does ESG constrain corporate earnings management? Evidence from China. *Finance Research Letters*, 61, 104983. <https://doi.org/10.1016/j.frl.2024.104983>
- United Nations Environment Programme Finance Initiative. (2005). A legal framework for the integration of environmental, social and governance issues into institutional investment. October.
- United Nations Industrial Development Organization. (2023). What Is CSR? Em What is CSR? UNIDO. <https://bit.ly/2qOQkg2>
- Velte, P. (2021). Environmental performance, carbon performance and earnings management: Empirical evidence for the European capital market. *Corporate Social Responsibility and Environmental Management*, 28(1), 42–53. <https://doi.org/10.1002/csr.2030>
- Xiao, X., Ge, G., & Yu, Z. (2024). Inhibition or inducement: ESG rating changes and earnings management – Based on the perspective of external supervision. *Finance Research Letters*, 64, 105428. <https://doi.org/10.1016/j.frl.2024.105428>
- Yoon, B., Lee, J. H., & Byun, R. (2018). Does ESG performance enhance firm value? Evidence from Korea. *Sustainability*, 10(10). <https://doi.org/10.3390/su10103635>
- Zuraida, Z., Houqe, M. N., & Zijl, T. van. (2018). Value relevance of environmental, social and governance disclosure. Em *Research handbook of finance and Sustainability* (p. 458–483). Edward Elgar.