ESG Performance and Income Smoothing: An Analysis of Companies Belonging to the BRICS

Lívia Janaína Silva
https://orcid.org/0000-0002-8933-3068 | E-mail: lilivia_silva18@hotmail.com

Carlos Henrique Silva do Carmo
https://orcid.org/0000-0002-9397-8678 | E-mail: chscarmo@ufg.br

Eduardo da Silva Flores
https://orcid.org/0000-0002-5284-5107 | E-mail: eduardoflores@usp.br

Alex Mussoi Ribeiro
https://orcid.org/0000-0003-3389-9713 | E-mail: alex.mussoi@ufsc.br

Abstract

Purpose – The relationship between environmental, social, and governance (ESG) performance and earnings manegement in emerging markets remains uncertain, and its implications for income smoothing are not well understood. This study examines how ESG performance influences intentional income smoothing among BRICS firms (Brazil, Russia, India, China, and South Africa).

Design – This study employs two measures of intentional income smoothing (overall and accrual-based) and the Refinitiv ESG Score to analyze non-financial firms listed on BRICS stock exchanges. The sample includes 1,071 firms and 5,437 observations over the period from 2016 to 2021. The models were estimated using multiple linear regression with random effects and industry controls.

Findings – The influence of ESG performance on income smoothing varies across BRICS firms. The most consistent effect was observed among Brazilian companies, which exhibited lower levels of intentional income smoothing under both metrics. In India and China, the opposite relationship was observed. In Russia and South Africa, no effect was identified, suggesting that country-specific institutions shape the relationship between income smoothing mechanisms and ESG within the BRICS, either reinforcing disciplinary incentives or allowing persistent manipulation.

Practical & Social implications – ESG scores appear to convey different information about earnings quality across the BRICS. Stakeholders should interpret ESG signals in a context-sensitive manner when assessing reporting risks in emerging markets.

Keywords – ESG, CSR, Income Smoothing, Earnings Quality, BRICS.

1 Introduction

The promotion of social well-being, environmental protection, and more efficient corporate management practices has become a differentiating factor for companies. In this context, themes linked to environmental (E), social (S), and governance (G) factors have gained prominence in both the market and in academic research, driven by the influence of business activities on the environments in which they operate (Li et al., 2018). These actions are known by various terms, such as corporate sustainability, corporate social responsibility (CSR), or environmental, social, and governance (ESG), referring to measures that companies adopt to be more sustainable and socially responsible, as well as the manner in which these practices are integrated into their business models (Gillan et al., 2021).

In a context characterized by the growing scarcity of natural resources, severe climate change, social inequalities, and corruption, among others, ESG practices have gained prominence as an essential driver for companies to seek new business models based on more sustainable actions, balancing natural capital with human capital development and promoting more efficient management strategies aimed at business continuity (Altawalbeh, 2021). Enhanced ESG performance is also linked to improved stakeholder engagement, leading to reduced information asymmetries and transaction costs, thereby decreasing reputational risks and strengthening firms' ability to meet societal expectations and enhance overall legitimacy (Bajic & Yurtoglu, 2018). Recent review evidence further indicates that ESG and CSR engagement are increasingly examined not only as reputational mechanisms but also as potential drivers of financial reporting discipline (Jhunjhunwala & Fatima, 2025).

The literature has examined the relationship between ESG considerations and various methods of assessing the quality of accounting information, including value relevance, conservatism, and earnings management. Among these methods, earnings management has garnered attention for highlighting the manipulation of earnings within the boundaries of accounting standards (Sousa et al., 2020; Gonçalves et al., 2024). Two broad perspectives emerge in this debate. One view argues that firms with stronger ESG commitments are less likely to manage earnings, as they tend to emphasize ethical conduct and transparency. A contrasting view suggests that ESG and CSR engagement, especially when communicated to external audiences, can also be used strategically to shape stakeholders' perceptions and may coexist with earnings manipulation (Gao & Zhang, 2015). Consistent with this tension, structured and systematic reviews indicate that the CSR–ESG–earnings management association has produced mixed and context-dependent evidence, shaped by differences in theoretical lenses (e.g., agency, stakeholder, and legitimacy views), research designs, and institutional environments (Velte, 2024; Jhunjhunwala & Fatima, 2025).

Income smoothing is a common form of earnings manipulation that reduces the variability of financial results by attenuating extreme profit fluctuations (Gao & Zhang, 2015). It may occur naturally through the accrual process or be undertaken intentionally through managerial discretion (Lang et al., 2012). Prior evidence suggests that CSR can enhance reputation and attract stakeholder attention, improve performance, and reduce perceived risk, thereby mitigating the incentives to smooth earnings (Liao et al., 2024). Empirical findings in emerging markets are mixed: CSR-related information has been associated with lower earnings manipulation and information asymmetry (Christina & Alexander, 2019; Jordaan et al., 2018). However, evidence from China indicates that firms with strong CSR engagement may increase earnings manipulation to protect managerial positions under stakeholder scrutiny (Pasko et al., 2021). Consistent with this pattern, evidence from BRICS firms (Brazil, Russia, India, China, and South Africa) shows that earnings manipulation behaviors vary across member countries, reinforcing the relevance of examining these relationships in heterogeneous emerging market settings (Kumar et al., 2019).

Building on this gap in literature and considering the importance of ESG practices, particularly in mitigating information asymmetry and, consequently, income smoothing practices, as well as the relevance of the BRICS bloc in the global context, the following research question is proposed: What is the influence of ESG performance on the intentional income smoothing of companies belonging to the BRICS? Accordingly, this study investigates the influence of ESG performance on intentional income smoothing in BRICS companies.

According to Tripathi and Kaur (2020), investigating earnings manipulation and the effects of sustainability practices in emerging markets can be a distinctive avenue in academic research, given the growing relevance of ESG concerns and the central role these economies play in global capital markets. BRICS countries also provide a particularly relevant setting because institutional and market frictions tend to be comparatively stronger than those in developed economies, which can amplify information asymmetry, constrain enforcement capacity, and elevate perceived reporting risks (Pipatnarapong et al., 2025). At the same time, these markets face pronounced environmental, labor, social, and governance challenges, which intensify stakeholder demands, especially from investors and regulators, for transparency, governance improvements, and credible ESG practices (Cavalcanti, 2018; Tripathi & Kaur, 2020). Under such conditions, ESG information may function both as a mechanism that strengthens reporting credibility and as a signal that can be used more symbolically, which makes the expected association between ESG performance and earnings quality, proxied in this study by intentional income smoothing, an empirical question rather than an assumption.

In this context, this study examines whether ESG performance is associated with lower levels of intentional income smoothing, a key earnings management practice that can impair financial reporting quality in environments with higher information asymmetry and perceived reporting risk. Building on the notion that ESG disclosure is scrutinized as a signal of credibility and governance, particularly in emerging markets where investors and regulators demand greater transparency and accountability (Pipatnarapong et al., 2025; Tripathi & Kaur, 2020), this study employs Refinitiv ESG score and two complementary smoothing proxies (overall and accrual-based) for a large panel of non-financial listed firms in BRICS countries from 2016 to 2021. By adopting country-specific estimations, the empirical design explicitly accommodates institutional heterogeneity and allows the ESG-income smoothing association to differ across member countries rather than imposing a uniform effect. The findings offer implications for investors and regulators by showing that ESG signals are not uniformly informative of earnings quality within BRICS, reinforcing the need for context-sensitive interpretation of ESG performance when assessing reporting risk and the quality of accounting information in emerging economies.

2 Theoretical Foundation

2.1 Environmental, Social, and Governance (ESG)

Over time, the concept of CSR has expanded, increasingly encompassing stakeholders' interests within corporate strategy. According to Li et al. (2021), companies have realized that business development cannot be based solely on financial metrics and must also consider environmental, social, and governance factors in their strategic planning. ESG performance has become relevant for many companies because it can enhance legitimacy, improve stakeholder relations, reduce agency costs, and potentially support long-term firm value creation (Bajic & Yurtoglu, 2018). ESG practices are commonly organized into three pillars: environmental, social, and governance, and reflect how companies and investors integrate sustainability-related actions into their business models (Gillan et al., 2021).

The "E" pillar captures environmental responsibilities. It includes issues related to pollution, natural resource scarcity, climate change, biodiversity, eco-innovation, and energy efficiency (Li et al., 2021). Evidence suggests that environmental disclosure and performance can be valued by the market and can help reduce information asymmetry, thereby reinforcing their relevance for capital market communication (Pedron et al., 2020).

The "S" pillar captures the social dimensions of corporate sustainability. It encompasses how firms manage relationships with employees, consumers, suppliers, business partners, and the community affected by their operations. This pillar includes internal practices such as diversity, workplace safety, inclusion, and training, as well as external impacts such as respect for human rights, product responsibility, supply chain standards, and community development (Li et al., 2021). Consistent with this broader stakeholder view, Bajic and Yurtoglu (2018), using a sample of companies from 35 countries between 2003 and 2016, show that social factors linked to stakeholders help predict corporate performance.

Pillar "G" refers to the governance of a firm. It represents the most strategic aspect of ESG and underpins pillars "E" and "S." It includes board structure, ethics, accountability, and compliance issues, among others (Li et al., 2021). This is typically the highest-scoring aspect of sustainability (ESG) because it is the most mandated and monitored by the market, even though it may not be emphasized as a differentiator of organizational performance (Bajic & Yurtoglu, 2018).

A growing body of research has linked ESG practices to economic and market valuation outcomes. Recent evidence associates sustainability practices with firms' financial performance (Liao et al., 2024), and market responses have been documented for specific ESG dimensions, such as environmental disclosure (Pedron et al., 2020) and stakeholder-related social factors (Bajic & Yurtoglu, 2018). This stream of research commonly draws on Legitimacy Theory, which posits that firms seek social acceptance by aligning their actions and disclosures with societal expectations (Suchman, 1995). Under this lens, ESG performance can strengthen legitimacy and stakeholder support (Lee & Raschke, 2023). It can also affect financial reporting quality because higher transparency and accountability are expected to constrain earnings management practices (Kim et al., 2019). Simultaneously, ESG narratives may be used more symbolically, which can coexist with opportunistic reporting incentives (Pasko et al., 2021; Lee & Raschke, 2023).

Such tensions are particularly relevant in emerging markets. Institutional and market frictions tend to be stronger in BRICS countries than in developed economies, which can amplify information asymmetry, constrain enforcement capacity, and elevate perceived reporting risks (Pipatnarapong et al., 2025). These countries also face pronounced environmental, labor, social, and governance challenges, which intensify stakeholder demands for transparency and credible ESG practices (Cavalcanti, 2018; Tripathi & Kaur, 2020).

2.2 Income smoothing

The practice of income smoothing is related to reducing the volatility of reported profits, conveying a sense of stability to risk-averse investors, lowering perceived risk, and enabling management to present more stable firm performance (Santos et al., 2024; Lima et al., 2025). Income smoothing differs from fraud because it typically operates within the discretion permitted by accounting standards, rather than through deliberate misstatements. Because financial reporting standards allow managerial judgment in recognition, measurement, and estimation choices, managers can use this flexibility to dampen earnings volatility while remaining formally compliant with the rules (Leuz et al., 2003).

Research on income smoothing has gained prominence because it can be defined more precisely and allows for a clearer differentiation between companies that smooth their results and those that do not (Santos et al., 2024). Among these studies, Eckel (1981) stands out for identifying natural and intentional forms of smoothing. Natural smoothing is intrinsic to business operations and linked to the firm's profit-generating (accruals) process (Eckel, 1981). Intentional smoothing reflects managerial actions aimed at achieving outcomes that align with specific incentives. It can be divided into real and artificial smoothing. Real smoothing arises from operating and investment decisions that affect cash flows. Artificial smoothing, or accrual-based smoothing, does not directly affect cash flows because it relies on accounting interpretation and discretion under the accrual basis (Eckel, 1981).

Leuz et al. (2003) proposed earnings management metrics, including two measures related to income smoothing. The first metric (EM1) captures the level of income smoothing by relating the standard deviation of operating profit to the standard deviation of operating cash flow, with lower ratio values indicating greater smoothing. The second metric (EM2) captures the correlation between accrual changes and variations in operating cash flow. A negative correlation reflects the natural outcome of *accrual* accounting. Nonetheless, higher correlation values may indicate the presence of earnings smoothing. However, Leuz et al. (2003) captured only overall smoothing, without differentiating between natural and intentional smoothing.

This limitation has been resolved by Lang et al. (2012), who proposed metrics that separate natural from intentional smoothing using the regression residuals estimated in two models. One metric captures overall intentional income smoothing related to accruals and operating activities. The second metric captures intentional income smoothing based on accruals. Higher intentional smoothing reduces the transparency of financial statements; therefore, intentional income smoothing is directly reflected in the reporting quality and information asymmetry (Lang, 2012; Sousa et al., 2020; Gonçalves et al., 2024).

2.3 Brics

The BRICS countries have played a significant role in ESG issues because of their economic importance, geopolitical influence, and population size. Together, these countries represent approximately 25% of the global GDP, 20% of international trade, and 42% of the world's population. In this sense, companies from BRICS countries significantly shape the global landscape, and their ESG practices tend to influence other parts of the world (Tripathi & Kaur, 2020). BRICS countries are economically relevant and increasingly salient in ESG discussions, but they also share structural features typical of emerging markets. They have large and active capital markets but face pronounced sustainability challenges and institutional frictions (Cavalcanti, 2018; Tripathi & Kaur, 2020). These conditions can amplify information asymmetry, constrain enforcement capacity, and elevate perceived reporting risks (Pipatnarapong et al., 2025). In such settings, investors and regulators tend to place greater weight on transparency, governance quality, and the credibility of ESG practices and disclosures. Simultaneously, weaker safeguards can preserve the incentives for earnings manipulation practices, including income smoothing (Kumar et al., 2019).

Brazil stands out among the BRICS nations due to its rich biodiversity and potential to implement long-term environmental and social solutions, despite facing political and infrastructural challenges (Cavalcanti, 2018). Despite being endowed with vast natural resources, Russia has struggled to adopt effective sustainability policies owing to weak strategic planning, transparency issues, and corruption, which hinder progress (Cavalcanti, 2018). India, with its vast population and cultural diversity, faces deep-rooted social challenges such as poverty, inequality, and limited access to education, alongside severe environmental problems such as pollution and water scarcity, which are exacerbated by governance deficiencies (Baumann, 2017; Cavalcanti, 2018). China's strong centralized governance has led to rapid economic expansion, while heavy industrialization has contributed to significant environmental degradation and persistent social inequalities (Baumann, 2017; Cavalcanti, 2018). While addressing social and environmental concerns, South Africa has demonstrated stronger governance mechanisms and greater public participation in ESG matters, benefiting from a history of institutional commitment to sustainability despite the lasting effects of apartheid and ongoing socioenvironmental challenges (Baumann, 2017; Cavalcanti, 2018). These differences highlight how historical, economic, and political contexts shape each country's sustainability approach.

Despite their shared emerging market characteristics, the BRICS countries are not institutionally homogeneous. Differences in governance capacity, policy consistency, and sustainability trajectories can affect both ESG performance and the credibility of firms' ESG reporting in each country. Gebert and de Mello-Sampayo (2024) provide evidence of heterogeneous sustainable development efficiency within the bloc, suggesting that ESG signals may not be equally informative across member countries. The authors highlight that while South Africa leads in environmental sustainability and Brazil demonstrates efficiency in resource utilization for sustainable growth, Russia struggles with policy consistency due to historical economic constraints. Meanwhile, China and India, despite their economic dynamism, face persistent challenges such as high pollution and lower quality of life. Cavalcanti (2018) emphasizes that these disparities stem from national priorities and governance capacities; Brazil, for instance, has advanced in integrating sustainability but still faces political and infrastructural barriers. These differences directly affect ESG performance and, consequently, the transparency and reliability of financial reporting in each country. They also shape managerial incentives and constraints related to earnings manipulation. Therefore, the ESG-income smoothing association is expected to depend on country-specific conditions rather than reflect a single uniform pattern across BRICS.

2.4 Research Hypotheses

In the study by Gao and Zhang (2015), the authors investigate the interplay between CSR, earnings smoothing, and firm valuation using a sample of 2,022 U.S. companies from 1993 to 2010. They document a negative association between CSR scores and earnings smoothness, suggesting that socially responsible firms may be less inclined to rely on discretionary smoothing. Their evidence also indicates that CSR is positively related to valuation outcomes, such as Tobin's Q and stock price reactions to earnings announcements, consistent with CSR contributing reputational and informational benefits. Taken together, this prior evidence motivates the expectation that stronger ESG engagement is associated with greater reporting discipline.

This reasoning is consistent with Legitimacy Theory, which posits that firms seek acceptance by aligning their actions and disclosures with socially constructed expectations, thereby protecting their access to critical resources and stakeholder support (Suchman, 1995). Under this lens, substantive ESG performance and credible ESG disclosure are expected to be associated with higher financial reporting quality, because earnings management practices, including income smoothing, can undermine the transparency and credibility of reported performance. Consistent with this argument, recent evidence summarized in the literature indicates that CSR and ESG performance are more often associated with lower earnings management, particularly for accrual-based measures, suggesting a disciplining role of sustainability-oriented conduct in opportunistic reporting behavior (Jordan, 2018; Velte, 2024; Jhunjhunwala & Fatima, 2025).

However, this association is not necessarily uniform across all institutional settings. In BRICS countries, institutional and market frictions are comparatively stronger than in developed economies, which tend to amplify information asymmetry, constrain enforcement capacity, and increase perceived reporting risk (Pipatnarapong et al., 2025). These markets also face pronounced environmental, labor, social, and governance challenges that intensify stakeholder demands for improved ESG practices and greater transparency (Cavalcanti, 2018). Under such conditions, ESG communication may assume a more symbolic role, particularly when firms experience pressure to align with stakeholder expectations. Lee and Raschke (2023) show that firms with low ESG performance are more likely to engage in greenwashing than those with high ESG performance, suggesting that stakeholder scrutiny can coexist with incentives for impression management. Therefore, while Legitimacy Theory supports the expected negative relationship between ESG performance and earnings management, the BRICS context also warrants caution regarding potential heterogeneity and context dependence in the ESG income-smoothing link.

Evidence from emerging markets supports this conditional perspective. Kim et al. (2019) examined the relationship between CSR and earnings manipulation in Chinese companies. They found that firms adopting CSR practices are less prone to earnings manipulation, but state-owned companies with stronger CSR performance are more likely to engage in earnings manipulation than typical Chinese companies. This pattern is relevant because income smoothing is a specific form of earnings management that shares similar incentives with broader earnings manipulation, such as shaping perceptions of performance and reducing perceived risk. Complementarily, Kumar et al. (2019) examined earnings smoothing behavior in BRICS countries and documented that smoothing was more prevalent in China and India across different profit conditions, reinforcing that smoothing incentives and practices vary within the bloc.

Accordingly, this study adopts Legitimacy Theory as an overarching lens to derive directional expectations while allowing for institutional heterogeneity in the empirical assessment (Suchman, 1995; Jadiyappa et al., 2021; Lee & Raschke, 2023). When ESG performance reflects substantive practices, it should strengthen reporting credibility and discourage opportunistic reporting choices, such as intentional income smoothing. Conversely, when ESG disclosure is predominantly symbolic, it may coexist with earnings management, particularly in environments characterized by higher information asymmetry and weaker regulatory enforcement. This logic supports the following hypotheses regarding the influence of ESG performance on intentional income smoothing, which are tested separately for each BRICS country rather than assuming a uniform effect across the bloc:

H1: ESG performance negatively influences overall income smoothing in companies belonging to the BRICS.
H2: ESG performance negatively influences accrual-based income smoothing in companies belonging to the BRICS.

It is worth highlighting that the hypotheses proposed here were tested separately for each BRICS country. Thus, whether the hypotheses are rejected depends on country-specific results.

3 Methodological Procedures

3.1. Sample and Data Collection

The population of this study comprised non-financial publicly traded companies listed on the stock exchanges of Brazil, Russia, India, China, and South Africa (BRICS). Furthermore, companies that lacked information for the observed years and those that did not present data for the three years preceding the analyzed year were excluded from the sample. Thus, the final sample comprised 1,071 companies from different industries, with a total of 5,437 observations. The data collection period covered the years from 2013 to 2021. However, the analysis was carried out for the 2016-2021 period, as three prior years of data were necessary to calculate the dependent variables related to intentional income smoothing. The Refinitiv Eikon® database was used to collect accounting and financial data and ESG scores.

3.2 Research Variables

3.2.1 Dependent Variables

This study used two methods to estimate intentional income smoothing through the variables SUAV1 and SUAV2 (Lang et al., 2012; Sousa et al., 2020; Santos et al., 2024). SUAV1 is derived from *Smoothing* 1 (SMTH1), which refers to overall income smoothing related to *accruals* and the company's operating activities. SMTH1 captures the volatility of earnings relative to operating cash flows. In this study, SMTH1 was calculated based on the adaptation proposed by Sousa et al. (2020) of the measure developed by Leuz et al. (2003), which uses net profit for the period instead of net profit before extraordinary items, according to Equation 1, and seeks to capture income smoothing that employs both operational and accrual-based practices to smooth earnings.

$$\text{SMTH1} = \sigma(\text{LL/ATaverage}) / \sigma(\text{FCO/ATaverage}) \tag{1}$$

Where: SMTH1 = overall income smoothing; σ(LL/ATaverage) = standard deviation of net profit divided by average total assets; σ(FCO/ATaverage) = standard deviation of operating cash flow divided by average total assets. Each standard deviation was calculated using a four-year window.

The SUAV2 variable is based on the *Smoothing* 2 (SMTH2) measure. SMTH2 aims to capture the use of accruals to mitigate earnings volatility during periods of weaker economic and financial performance. To calculate the SMTH2 variable, the correlation between operating cash flow divided by total assets and total *accruals* divided by total assets, both collected at the end of the period, was used according to Equation 2 (Leuz et al., 2003). Total accruals were calculated using the cash flow approach (net profit minus operating cash flow), and four years of data were used for each period to estimate the correlations.

$$SMTH2 = \rho\,[(FCO/AT), (ACCRUALS/AT)] \tag{2}$$

Where: SMTH2 = income smoothing by accruals; FCO = operating cash flow; AT = total assets; ACCRUALS = total accruals. Four years of data were used for each period to estimate the correlations.

It should be noted that the SMTH1 and SMTH2 measures underwent a multiplication by -1 for negative values. This procedure ensured that higher variable values correspond to greater income smoothing. After calculating the SMTH1 and SMTH2 measures, each was entered separately as a dependent variable in the multivariate model proposed by Lang et al. (2012) to measure SUAV1 and SUAV2, according to Equation 3.

$$SMTH_{it} = \alpha_{it} + \beta_1 SIZE_{it} + \beta_2 DEBT_{it} + \beta_3 BM_{it} + \beta_4 REVENUE_{it} + \\ \beta_5 \%\,LOSS_{it} + \beta_6 CYCLE_{it} + \beta_7 GROWTH_{it} + \beta_8 IMOB_{it} + \beta_9 FLOW_{it} + \varepsilon_{it} \tag{3}$$

Where: SMTH it = Smoothing measure (SMTH1 or SMTH2) of company i at time t; SIZE it = Natural logarithm of total assets of company i at time t; $DEBT_{it}$ = Total debt divided by the total assets of company i at time t; BM_{it} = Net equity divided by the market value of company i at time t; $REVENUE_{it}$ = Standard deviation of revenues over the previous four annual periods of company i at time t; $\%LOSS_{it}$ = Proportion of periods with a negative net result over the previous four years; $CYCLE_{it}$ = Logarithm of the operating cycle of company i at time t; $GROWTH_{it}$ = Revenue growth of company i at time t; $IMOB_{it}$ = Fixed assets divided by the total assets of company i at time t; $CFLOW_{it}$ = Average cash flow divided by the total assets of company i at time t; ε_{it} = Regression residuals.

The variables SUAV1 and SUAV2 refer to the residuals from each two-stage multivariate model, estimated by industry and year, and reflect overall intentional income smoothing (SUAV1) and intentional income smoothing by accruals (SUAV2). This is because the model proposed by Lang et al. (2012) assumes that the independent variables in Equation 3 capture the natural component of smoothing in the model's dependent variables. After measuring SUAV1 and SUAV2, a transformation into absolute values was performed. This procedure was necessary to ensure that the values adequately represented the level of intentional smoothing evidenced (Lang et al., 2012; Sousa et al., 2020; Gonçalves et al. 2024).

3.2.2 Variables of interest and control

The variable of interest in this study was the overall ESG performance score (ESG Score) estimated by the Refinitiv Eikon® data platform for companies in each BRICS country. The scores range from 0 (zero) to 100 (one hundred) and represent the company's performance relative to the database universe. The combination of environmental, social, and governance indicators yields the final ESG performance score; higher scores indicate stronger ESG performance, whereas lower scores indicate limited engagement with such practices (Refinitiv, 2022). The ESG score is calculated based on ten indicators: three environmental (resource use, emissions, innovation), four social (workforce, human rights, community, product responsibility), and three governance (management, stakeholders, corporate social responsibility strategy) indicators that jointly compose the score (Refinitiv, 2022).

The study considered the following control variables: return on assets (ROA), company size (SIZE), financial leverage (LEV), and industry (IND). The inclusion of these control variables aims to obtain more precise results (Bajic & Yurtoglu, 2018; Gao & Zhang, 2015). The variables used in this study are listed in Table 1.

Table 1

Summary of variables used in the research

Variable	Description	proxy	Expected relationship	References
Dependent variables				
SUAV1	Overall intentional income smoothing	$SMTH1_{it} = SIZE_{it} + DEBT_{it} + BM_{it} + REVENUE_{it} + \%LOSS_{it} + CYCLE_{it} + GROWTH_{it} + IMOB_{it} + CFLOW_{it} + \varepsilon_{it}$	Not defined	Lang et al. (2012); Sousa et al. (2020).
SUAV2	Intentional income smoothing by *accruals*	$SMTH2_{it} = SIZE_{it} + DEBT_{it} + BM_{it} + REVENUE_{it} + \%LOSS_{it} + CYCLE_{it} + GROWTH_{it} + IMOB_{it} + CFLOW_{it} + \varepsilon_{it}$	Not defined	Lang et al. (2012); Sousa et al. (2020).
Interest variables				
ESG	Overall ESG score	ESG *Score – Refinitiv Eikon®*	(-)	Gao and Zhang (2015); Bajic and Yurtoglu (2018).
Control variables				
ROA	Return on assets	Net profit divided over total assets	(+/-)	Gao and Zhang (2015).
SIZE	Company size	Natural logarithm of total assets	(-)	Gao and Zhang (2015); Bajic and Yurtoglu (2018).
LEV	Financial leverage	Total debt divided by total assets	(+)	Gao and Zhang (2015). Bajic and Yurtoglu (2018).
IND	Economic activity classification	TRBC classification - Refinitiv	Not defined	Bajic and Yurtoglu (2018). Sousa et al. (2020)

Source: Developed by the authors (2026).

3.3 Econometric Models

According to Equation 4, Model 1 was used to analyze the influence of ESG performance on overall intentional income smoothing (SUAV1). Model 2, according to Equation 5, was used to analyze the influence of ESG performance on intentional income smoothing through accruals (SUAV2). It should be noted that the analyses were estimated separately for each country. By estimating models separately for each BRICS country, this study captures country-specific nuances and provides a more accurate understanding of how ESG performance influences income smoothing practices in each context. This approach enables a more robust analysis by accounting for the diverse economic, regulatory, and sustainability landscapes of the BRICS group.

$$SUAV1_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 ROA_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_{it} + \beta_5 IND_{it} + \varepsilon_{it} \qquad (4)$$

$$SUAV2_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 ROA_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_{it} + \beta_5 IND_{it} + \varepsilon_{it} \qquad (5)$$

Where: $SUAV1_{it}$ = overall intentional income smoothing of the company i at time t; $SUAV2it$ = intentional income smoothing by accruals of the company i at time t; ESG_{it} = overall ESG score of company i at time t; ROA_{it} = return on assets of company i at time t; LEV_{it} = financial leverage of company i at time t; $SIZE_{it}$ = size of company i at time t; IND_{it} = industry of the company i at time t; ε_{it} = regression residuals.

The models used in this study were estimated using multiple linear regression with short, unbalanced panel data, using random effects and industry controls. All analyses were performed using Stata® version 16.0. The Grubbs test was applied at a 95% confidence level to identify outliers. Instead of excluding outliers, 5% winsorization was applied to SUAV1, SUAV2, ROA, LEV, and SIZE, allowing extreme values to be smoothed out on average. Correlation patterns were assessed using Spearman's correlation coefficient (Appendix C), and multicollinearity was evaluated using the Variance Inflation Factor (VIF), with both average and individual values below 3. The choice among pooled OLS, fixed effects, and random effects was guided by the Chow F test, Breusch–Pagan Lagrange Multiplier test, and Hausman test.

To evaluate the model assumptions, the Shapiro-Francia test indicated non-normal residuals, and the Breusch-Pagan test rejected the homoscedasticity assumption. Therefore, all regressions were estimated using firm-clustered robust standard errors to ensure consistent inference under heteroskedasticity. The model's functional form was additionally assessed using the linktest, which did not indicate relevant specification errors.

4 Analysis and discussion of results

4.1 Descriptive Analysis

Table 2 presents the descriptive statistics for the variables used in the analysis for each BRICS country. The panel is short and unbalanced, reflecting the availability of ESG and accounting information between 2016 and 2021. Although Refinitiv ESG coverage is not entirely uniform across firms and countries, the descriptive evidence provides a reliable overview of the analyzed sample. This supports cross-country comparisons within the scope of this study while acknowledging that the statistics should not be interpreted as fully representative countrywide benchmarks.

Regarding income smoothing, SUAV1 and SUAV2 exhibit heterogeneous distributions across countries, suggesting that smoothing incentives and constraints differ across the BRICS. The differences between means and medians indicate asymmetric distributions, reinforcing the need for robust inference in multivariate analysis. When analyzing the mean of the SUAV1, it was noted that it was relatively close to 0.7, indicating that the companies exhibited similar levels of overall intentional income smoothing. However, the medians and standard deviations vary across countries.

For the SUAV2 variable, the mean was higher than the median in each country. The same was observed in the study by Sousa et al. (2020), who found median values lower than the means for the SUAV2 variable. When analyzing the mean and median of the SUAV2 variable in each country, South Africa, Brazil, and Russia exhibited the highest means (0.291, 0.291, and 0.276, respectively) and medians (0.207, 0.215, and 0.229, respectively).

When comparing the variables SUAV1 and SUAV2, it was found that, across all countries, the mean and median of overall intentional income smoothing were higher than those of intentional income smoothing by accruals, which can be explained by operational activities related to result generation that are more difficult to identify. Another possible explanation is the reversal of accruals, as the SUAV2 variable may exhibit lower smoothing than SUAV1.

In terms of ESG performance, Table 2 indicates that the mean and median were very close in South Africa and India, suggesting limited variation. In Brazil, the median was higher than the mean, whereas in China and Russia, the mean was higher than the median.

When analyzing the standard deviation of the ESG variable across all countries, the values were discrepant, indicating data variability, as also reflected in the minimum and maximum values. In general, South Africa, Brazil, and India had mean scores above 50, while Russia had a score of 48, and China had the lowest score of 32. As for extreme values, the highest ESG scores were observed among Indian (91.6), Brazilian (89.9), and South African (88.3) companies, followed by Chinese (83.4) and, finally, Russian (80.9) companies. These results suggest that South African, Brazilian, and Indian companies have performed relatively well in terms of ESG and reporting transparency, whereas Russian and Chinese companies have exhibited lower performance in these dimensions.

When examining the ESG pillars individually, pillar G had the highest score in South Africa (96.6) and Russia (91.5), whereas in Brazil, the social pillar had the highest score (96.8). In China and India, the pillar with the highest score was environmental, at 93.7 and 98.0, respectively. Although the maximum values for pillars E, S, and G are close to 100 points, some Brazilian, Chinese, and Indian companies scored 0 (zero) in the environmental pillar. This result for the environmental pillar (E) indicates relatively poor performance regarding environmental practices in Brazilian companies (Atacadão SA, Camil Alimentos SA, and CVC SA), Chinese companies (Beijing Shunxin Agriculture Co., DaShenLin Pharmaceutical Group Co., and Shanghai Yuyuan Tourist Mart Group Co.), and Indian companies (Zee Entertainment Enterprises Ltd.).

When analyzing the mean of pillars E, S, and G in the countries, it was observed that the environmental pillar (E) had the lowest score in South Africa, Brazil, and India, with a mean score of 48 points. These results indicate that South African, Brazilian, and Indian companies are investing in environmental actions but still show limited engagement, as evidenced by their low scores in this pillar.

Table 2

Descriptive statistics

	Variables	Obs.	Mean	Median	Standard deviation	Minimum	Maximum
South Africa	SUAV1	192	0.727	0.441	0.713	0.053	2.595
	SUAV2	192	0.291	0.207	0.240	0.030	0.883
	ESG	190	57.699	57.677	15.598	11.239	88.347
	E	190	49.543	52.457	24.309	4.386	88.567
	S	190	60.857	63.275	17.702	15.589	94.293
	G	190	58.939	61.926	19.989	7.332	96.633
	SIZE	192	21.579	21.665	1.056	19.806	23.768
	ROA	192	0.061	0.060	0.070	-0.078	0.210
	LEV	192	0.581	0.561	0.162	0.299	0.876
Brazil	SUAV1	464	0.763	0.534	0.716	0.045	2.797
	SUAV2	464	0.291	0.215	0.252	0.023	0.949
	ESG	382	51.182	54.008	20.860	1.092	89.977
	E	382	48.228	53.912	26.649	0	93.190
	S	382	53.975	56.479	23.397	0.647	96.854
	G	382	51.442	53.416	21.237	0.820	93.785
	SIZE	464	22.012	21.954	1.057	20.219	23.954
	ROA	464	0.043	0.043	0.048	-0.052	0.138
	LEV	464	0.632	0.638	0.172	0.319	0.952
China	SUAV1	3920	0.734	0.543	0.639	0.057	2.483
	SUAV2	3920	0.221	0.167	0.197	0.014	0.786
	ESG	2242	32.554	30.472	15.571	0.668	83.442
	E	2242	27.277	23.459	22.341	0	93.725
	S	2242	25.601	21.084	17.954	0.849	93.314
	G	2242	46.671	45.640	20.634	0.361	93.622
	SIZE	3920	21.926	21.781	1.238	19.995	24.467
	ROA	3920	0.064	0.053	0.047	0.001	0.174
	LEV	3920	0.491	0.502	0.196	0.156	0.827
India	SUAV1	730	0.664	0.499	0.588	0.037	2.226
	SUAV2	730	0.256	0.184	0.230	0.018	0.889
	ESG	594	53.458	53.054	16.512	9.600	91.653
	E	594	47.665	47.928	22.939	0	98.004
	S	594	58.368	58.618	19.970	6.490	96.749
	G	594	51.136	50.680	21.832	4.347	96.481
	SIZE	730	21.932	21.726	1.303	19.796	24.406
	ROA	730	0.079	0.069	0.064	-0.027	0.216
	LEV	730	0.506	0.492	0.196	0.183	0.839
Russia	SUAV1	131	0.632	0.451	0.559	0.044	2.058
	SUAV2	131	0.276	0.229	0.214	0.026	0.796
	ESG	118	48.093	47.847	16.354	10.186	80.961
	E	118	49.866	50.989	19.014	4.946	88.358
	S	118	46.637	47.132	20.468	2.142	87.419
	G	118	48.182	47.020	20.717	11.960	91.515
	SIZE	131	23.141	23.070	1.270	20.789	25.288
	ROA	131	0.107	0.081	0.085	0.002	0.319
	LEV	131	0.480	0.414	0.221	0.121	0.860

Source: Developed by the authors (2026).

In China and Russia, the lowest mean score was in the social pillar (S), at approximately 25 and 46 points, respectively, indicating limited engagement in social actions in these countries. According to Cavalcanti (2018), Russia has the weakest performance among the BRICS countries in adopting social policies, with the main shortcoming being the lack of strategic planning. Conversely, China has experienced complex social conditions, including high levels of social inequality and the use of slave labor, as noted by Cavalcanti (2018). Regarding size, the mean and median values were very close across all countries, indicating limited dispersion. This is further supported by the minimum values of the size variable being approximately 19 and the maximum values around 24, as well as by the standard deviation, which was close to 1.3, indicating that the data are concentrated around the mean.

When examining return on assets (ROA), the mean was higher than the median in China, India, and Russia. In South Africa and Brazil, the mean was similar to the median, but negative returns were observed at the minimum values (-7.8% and -5.2%, respectively). It should be noted that, among the countries analyzed, Brazilian companies exhibited the lowest mean (4%), indicating lower efficiency in asset utilization. Conversely, Russia presented a mean ROA of 10%, the highest among the countries, suggesting that Russian companies were more efficient in using assets than firms in the other countries.

Regarding leverage, Brazil had the highest leverage percentage of 63%, indicating that Brazilian companies had greater debt. From a risk-return perspective, Brazil also presented the lowest return on assets and the highest risk (leverage) during the analyzed period, followed by South Africa, which presented a similar pattern. In this sense, Nardi and Nakao (2009) argued that more leveraged companies are perceived as having greater financial risk and may seek to manipulate results to mitigate this perception.

The correlations for the variables, presented by country in Appendix C, do not indicate multicollinearity among the research variables across the countries analyzed.

4.2 Multiple regression results

Table 3 (Panel A) reports the association between ESG performance and overall intentional income smoothing (SUAV1) across the BRICS countries. According to the results, ESG is negatively associated with SUAV1 in Brazil, which is consistent with ESG performance being informative of reporting discipline and higher earnings quality in Brazil. Therefore, there is statistical evidence in favor of hypothesis (H1), as ESG performance tends to negatively influence overall intentional income smoothing among Brazilian companies.

In contrast, ESG is positively associated with SUAV1 in India. This result suggests that, in this emerging market, ESG performance may operate primarily as a legitimacy signal, while managerial incentives to smooth earnings remain active. Therefore, hypothesis H1 is rejected for Indian companies. In South Africa, China, and Russia, the ESG variable was not statistically significant at any level, providing no evidence to confirm or reject hypothesis H1 for these countries. This finding indicates a country-specific ESG–SUAV1 relationship rather than a homogeneous pattern across BRICS.

The empirical evidence from the Brazilian context is consistent with Silva et al. (2022) and Kumar et al. (2019), who posit that firms embracing robust sustainable practices are inclined to enhance earnings quality. Consequently, such firms tend to be more highly regarded in the market, mitigating information asymmetry and reducing income manipulation. In contrast, evidence from Indian firms suggests that environmental, social, and governance (ESG) performance may be associated with income smoothing manipulation through both operational activities and accruals (SUAV1). Evidence from India suggests that firms may increase ESG engagement while still managing earnings, indicating that ESG signals do not always align with underlying reporting behavior. This suggests that sustainability spending may be used as a "smokescreen" to build a positive public image rather than reflecting genuine social impact (Jadiyappa et al., 2021). Furthermore, no statistically significant results were observed for China, Russia, and South Africa.

Table 3
Impact of ESG on Income Smoothing

Panel A: ESG on Overall Intentional Income Smoothing (SUAV1)					
Variables	Brazil	China	India	Russia	South Africa
ESG	-0.003*	0.008	0.002**	0.001	-0.003
SIZE	0.061*	-0.043	-0.004	0.050	-0.009
ROA	-1.213**	-1.580***	-1.743***	0.065	-4.462***
LEV	0.133	0.113	0.110	0.118	-0.793
CONS.	-0.593	1.629**	0.747	-0.814	2.337**
IND	Yes	Yes	Yes	Yes	Yes
No. Obs.	382	2242	594	118	190
R^2	0.0738	0.0501	0.0974	0.0808	0.2108
Panel B: Intentional income smoothing by accruals (SUAV2)					
Variables	Brazil	China	India	Russia	South Africa
ESG	-0.001*	0.008***	0.008***	0.001	-0.008
SIZE	0.039***	-0.016***	0.005	0.037	-0.012
ROA	-0.536*	-0.374***	-0.223	0.496*	0.047
LEV	-0.012	-0.115*	0.076	-0.195**	0.204**
CONS.	-0.410*	0.674***	0.119	-0.559	0.746**
IND	Yes	Yes	Yes	Yes	Yes
No. Obs.	382	2242	594	118	190
R^2	0.1157	0.0630	0.0682	0.1024	0.2280

Note: ESG = Overall ESG score; SIZE = Company size; ROA = Return on assets; LEV = Financial leverage; CONS. = Constant; IND = economic activity classification dummies control. No. Obs. = Number of Observations. Statistical significance was given by *** (1%), ** (5%), and * (10%).

Source: Developed by the authors (2026).

When checking the control variables in Panel A, company size (SIZE) was significant only for Brazil, with a positive coefficient. This result indicates that company size is positively associated with overall intentional income smoothing among Brazilian companies. Therefore, larger Brazilian companies tend to exhibit higher levels of overall intentional income smoothing. No statistical significance was observed for company size in South Africa, China, India, or Russia. The ROA variable was negative for all countries except Russia, indicating that higher asset profitability is associated with lower levels of overall intentional income smoothing in South African, Brazilian, Chinese, and Indian companies. Finally, the results for LEV did not indicate a significant relationship with overall intentional earnings smoothing in the BRICS countries.

Table 3 (Panel B) presents the estimates for accrual-based smoothing (SUAV2). ESG is negatively associated with SUAV2 in Brazil, reinforcing the interpretation that stronger ESG performance is aligned with lower accrual-based manipulation. Given this finding, the research hypothesis H2, which posits that ESG practices negatively influence intentional income smoothing through accruals in Brazilian companies, cannot be rejected. Conversely, ESG is positively associated with SUAV2 in China and India. Thus, for Chinese and Indian companies, the research hypothesis was rejected, as a positive relationship was observed between ESG performance and accrual-based income smoothing. In South Africa and Russia, statistical significance was not detected at any level, which does not allow confirmation or rejection of the research hypothesis for either country.

The Brazilian evidence is consistent with prior research documenting a negative association between CSR or ESG-type engagement and discretionary earnings smoothing, suggesting that socially responsible firms may be less inclined to rely on smoothing and may exhibit more disciplined reporting (Gao & Zhang, 2015; Velte, 2024). From a legitimacy perspective, this pattern is consistent with a more substantive alignment between ESG commitments and financial reporting credibility, in which ESG investments strengthen stakeholder trust and may reduce incentives to smooth earnings.

However, the opposite trend was observed in India and China, suggesting that managers may use ESG to mask accrual-based accounting practices and artificially smooth earnings in these countries (Kumar et al., 2019). In contrast, the positive coefficients for India and China in Panel B indicate that higher ESG performance coexists with stronger accrual-based smoothing in these settings. This pattern is consistent with the "smoke screening" argument, in which social responsibility narratives can be used strategically to mitigate scrutiny while opportunistic reporting persists (Jadiyappa et al., 2021). This interpretation is also consistent with evidence showing that the tone and framing of CSR disclosure may be associated with earnings management incentives (Li et al., 2023). Therefore, these findings are interpreted as suggestive of potential impression management or symbolic legitimacy seeking, while acknowledging that alternative explanations, such as political costs, regulatory heterogeneity, differences in enforcement, and accounting regimes, may also account for the observed results.

Again in Panel B, it was not possible to identify any influence of ESG practices on accrual-based intentional income smoothing in South Africa and Russia. When examining the control variables in Panel B, firm size was significant only in Brazil and China, with distinct effects. While there was a documented positive effect in Brazil, indicating that the size of Brazilian companies increased the use of accruals to smooth earnings, in China, the effect was the opposite, with the size of Chinese companies reducing the use of accruals for income smoothing. The profitability of assets (ROA) showed statistical significance in Brazil and China, with negative coefficients, but a positive effect was observed only in Russia. These results indicate that for Brazilian and Chinese companies, the higher the profitability of assets, the lower the accrual level tends to be for smoothing earnings used. Financial leverage (LEV) was significant in China and Russia, with negative coefficients, and showed a positive effect in South Africa. Overall, the control variables reinforce that reporting incentives and constraints vary materially across BRICS, strengthening the interpretation that ESG effects should not be expected to be uniform.

These results suggest that, despite the existence of the BRICS bloc, countries should not be treated as homogeneous in terms of ESG performance, as they show different behaviors in the analysis. Overall, the estimates indicate that the ESG signal does not operate uniformly within BRICS. Brazil shows a consistent negative association between ESG performance and both smoothing proxies, supporting the interpretation that ESG engagement is aligned with stronger reporting discipline and financial reporting credibility. This pattern is also consistent with evidence that Brazil's more integrated approach to sustainable development strengthens transparency incentives and stakeholder monitoring (Gebert & de Mello-Sampayo, 2024; Velte, 2024).

In contrast, India and China exhibit positive ESG coefficients in the accrual-based specification, and India also presents a positive association with the overall intentional income smoothing proxy. These results suggest that higher ESG performance can coexist with incentives for opportunistic reporting, consistent with legitimacy-oriented impression management. In India, prior evidence indicates that firms may increase CSR engagement while simultaneously engaging in accounting manipulation, consistent with a smoke screening logic (Jadiyappa et al., 2021). In China, disclosure features such as CSR report tone are associated with greenwashing concerns and earnings management via abnormal discretionary accruals (Li et al., 2023), which is consistent with our finding that the ESG relationship emerges primarily in the accrual-based proxy. Finally, the lack of statistically significant ESG effects in Russia and South Africa suggests that, during the sample period, ESG performance was not systematically linked to income smoothing in these markets, possibly reflecting a weaker or less stable translation of ESG signals into either market discipline or strategic reporting incentives compared to the legitimacy-driven patterns documented in other emerging settings (Jadiyappa et al., 2021; Li et al., 2023).

Taken together, the evidence reinforces the idea that country-specific institutional conditions shape the relationship between ESG performance and income smoothing within the BRICS (Kumar et al., 2019; Pasko et al., 2021). This evidence suggests that ESG performance may be linked to reporting discipline in some settings, whereas in others, it may coexist with persistent incentives for earnings manipulation.

As an additional robustness check, the pillar level estimations reported in Appendices A and B are consistent with the main finding that ESG effects vary across institutional environments and should not be interpreted as uniform across BRICS countries. The next section synthesizes the study's contributions and practical implications and discusses the limitations and avenues for future research.

5 Conclusion

In a context characterized by climate-related risks, social pressures, and increasing demands for corporate accountability, ESG performance has become a salient signal for capital market participants and other stakeholders. This study contributes to the literature by investigating whether ESG performance is associated with financial reporting quality in emerging markets, using intentional income smoothing. The empirical design combines Refinitiv ESG score with two complementary smoothing measures, overall intentional smoothing and accrual-based smoothing, and estimates the models separately for each BRICS country to accommodate institutional heterogeneity.

The findings indicate that ESG performance is associated with lower intentional smoothing in Brazil, consistent with ESG operating as a signal aligned with reporting discipline in that setting. In contrast, in India and China, higher ESG performance coexists with higher accrual-based smoothing, which may be consistent with the more symbolic or strategic uses of ESG signals rather than a strict improvement in reporting quality. For Russia and South Africa, the estimates do not provide consistent evidence of a systematic ESG–income smoothing association.

The evidence indicates that ESG signals are not uniformly informative of reporting quality within BRICS, reinforcing the study's contribution: treating BRICS firms as a homogeneous proxy for "developing-country companies" may yield misleading inferences in CSR/ESG research, particularly when the outcome of interest is earnings manipulation via income smoothing. These findings also suggest that investors and regulators should interpret ESG scores in a context-sensitive manner when assessing the reporting risk and financial reporting quality in emerging markets.

This study relies on an unbalanced panel and ESG data from Refinitiv, which may limit the sample size and raise selection concerns, including information disclosure and survivorship biases. In addition, some countries, such as Russia and South Africa, have comparatively smaller samples, which may reduce their statistical power and generalizability. Future research could address these issues by employing explicit greenwashing measures and identification strategies, conducting cross-country inferences on ESG pillar distributions, and exploring sectoral composition and regulatory heterogeneity as additional mechanisms.

References

Altawalbeh, M. A. F. (2021). The impact of social responsibility disclosure on financial performance via accounting conservatism as a mediator variable: Evidence from Jordan. International Journal of Business and Management, 16(12). https://doi.org/10.5539/ijbm.v16n12p101

Bajic, S., & Yurtoglu, B. (2018). Which aspects of CSR predict firm market value? Journal of Capital Markets Studies, 2(1), 50-69. https://doi.org/10.1108/jcms-10-2017-0002

Baumann, R. (2017). Os novos bancos de desenvolvimento: independência conflitiva ou parcerias estratégicas? Brazilian Journal of Political Economy, 37 (2), 287–303. https://doi.org/10.1590/0101-31572017v37n02a02

Cavalcanti, R. P. (2018). Desenvolvimento sustentável: uma análise a partir da perspectiva dos BRICS. Revista de la Secretaría del Tribunal Permanente de Revisión, 6(11), 109-133. https://doi.org/10.16890/rstpr.a6.n11.p109

Christina, S., & Alexander, N. (2019). Corporate governance, corporate social responsibility disclosure, and earnings management. In 5º Annual International Conference on Accounting Research, 62-65. https://doi.org/10.2991/aicar-18.2019.14

Eckel, N. (1981). The income-smoothing hypothesis revisited. Abacus, 17(1), 28-40. https://doi.org/10.1111/j.1467-6281.1981.tb00099.x

Gao, L., & Zhang, J. H. (2015). Firms earnings smoothing, corporate social responsibility, and valuation. Journal of Corporate Finance, 32(1), 108-127. https://doi.org/10.1016/j.jcorpfin.2015.03.004

Gebert, I. M., & de Mello-Sampayo, F. (2024). Efficiency of BRICS countries in sustainable development: a comparative data envelopment analysis. International Journal of Development Issues, 24(1), 38-54. https://doi.org/10.1108/IJDI-12-2023-0287

Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. Journal of Corporate Finance, 66, 101889. https://doi.org/10.1016/j.jcorpfin.2021.101889

Gonçalves, K. A., do Carmo, C. H. S., Zanolla, E., Ribeiro, A. M. (2024). Transações com partes relacionadas: Evidências de suavização de lucros no mercado de capitais brasileiro Related party transactions: Evidence of income smoothing in the brazilian capital market. Revista BASE–v, 21(4). https://doi.org/10.4013/base.2024.214.01

Jadiyappa, N., Parikh, B., Saikia, N., & Usman, A. (2021). Social responsibility or smoke screening: evidence from India. Sustainability Accounting, Management and Policy Journal, 12(4), 767-787. https://doi.org/10.1108/SAMPJ-03-2019-0086

Jhunjhunwala, S., & Fatima, S. (2025). Two Decades of Research on the Relation of CSR With Earnings Management: Mapping Heterogeneity and Future AGENDA. Corporate Social Responsibility and Environmental Management, 32(3), 3438-3453. https://doi.org/10.1002/csr.3115

Jordaan, L. A., Klerk, M., & de Villiers, C. J. (2018). Corporate social responsibility and earnings management of South African companies. South African Journal of Economic and Management Sciences, 21(1), 1-13. https://doi.org/10.4102/sajems.v21i1.1849

Kim, S. H., Udawatte, P., & Yin, J. (2019). The effects of corporate social responsibility on real and accrual-based earnings management: Evidence from China. Australian Accounting Review, 29(3), 580-594. https://doi.org/10.1111/auar.12235

Kumar, S. B., Goyal, V., & Mitra, S. K. (2019). The relationship between earnings round up/down and global financial crisis: evidence from BRICS markets. Asia-Pacific Journal of Accounting & Economics, 28(6), 746-769. https://doi.org/10.1080/16081625.2019.1584756

Lang, M., Lins, K. V., & Maffett, M. (2012). Transparency, liquidity, and valuation: International evidence on when transparency matters most. Journal of Accounting Research, 50(3), 729-774. https://doi.org/10.1111/j.1475-679X.2012.00442.x

Lee, M. T., & Raschke, R. L. (2023). Stakeholder legitimacy in firm greening and financial performance: What about greenwashing temptations? Journal of Business Research, 155, 113393. https://doi.org/10.1016/j.jbusres.2022.113393

Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. Journal of financial economics, 69(3), 505-527. https://doi.org/10.1016/S0304-405X(03)00121-1

Li, T. T., Wang, K., Sueyoshi, T., & Wang, D. D. (2021). ESG: Research Progress and Future Prospects. Sustainability, 13(21), 11663. https://doi.org/10.3390/su132111663

Li, W., Yan, T., Li, Y., & Yan, Z. (2023). Earnings management and CSR report tone: Evidence from China. Corporate Social Responsibility and Environmental Management, 30(4), 1883-1902. https://doi.org/10.1002/csr.2461

Li, Y., Gong, M., Zhang, X. Y., & Koh, L. (2018). The impact of environmental, social and governance disclosure on firm value: The role of CEO power. The British Accounting Review, 50(1), 60–75. https://doi.org/10.1016/j.bar.2017.09.007

Liao, F., Zhang, R., & Song, J. (2024). Corporate Social Responsibility, Analyst Focus, and Firm Performance. Highlights in Business, Economics and Management, 37, 430-447. https://doi.org/10.54097/0g4hd292

Lima, A. C. S., Dias, C. R. ., Machado, L. de S., & Carmo, C. H. S. do. (2025). Reporting of key audit matters: an analysis based on income smoothing in the brazilian electric power sector. Revista Ambiente Contábil, 17(1). https://doi.org/10.21680/2176-9036.2025v17n1ID38660

Nardi, P. C. C., & Nakao, S. H. (2009). Gerenciamento de resultados e a relação com o custo da dívida das empresas brasileiras abertas. Revista Contabilidade & Finanças, 20 (51), 77-100. https://doi.org/10.1590/S1519-70772009000300006

Pasko, O., Chen, F., Proskurina, N., Mao, R., Gryn, V., & Pushkar, I. (2021). Are corporate social responsibility active firms less involved in earnings management? Empirical evidence from China. Business: Theory and Practice, 22(2), 504-516. https://doi.org/10.3846/btp.2021.14940

Pedron, A. P. B., Macagnan, C. B., Simon, D. S., & Vancin, D. F. (2020). Environmental disclosure effects on returns and market value. Environment, Development and Sustainability, 23(3), 4614-4633. https://doi.org/10.1007/s10668-020-00790-2

Pipatnarapong J., Beelitz A., & Jaafar A. (2025). Corporate social responsibility and tax avoidance: evidence from BRICS countries. Corporate Governance, Vol. 25 No. 7 pp. 1628–1652, doi: https://doi.org/10.1108/CG-09-2024-0463

Refinitiv (2022). Pontuações de ESG da empresa da Refinitiv. https://www.refinitiv.com/pt/sustainable-finance/esg-scores

Santos, L. de Sousa, Carmo, C. H. Silva do, & Rech, I. J. (2024). Income smoothing and the market value of companies during the COVID-19 pandemic. Revista De Educação E Pesquisa Em Contabilidade (REPeC), 18(1). https://doi.org/10.17524/repec.v18i1.3284

Silva, L. J.; Pereira, J. O., & Carmo, C.H. S. (2022). Value relevance dos relatórios de responsabilidade social corporativa nas empresas da B3. Revista Brasileira de Gestão Ambiental e Sustentabilidade, 9(21), 509-527. https://doi.org/10.21438/rbgas(2022)092133

Sousa, A. M.; Ribeiro, A. M.; Vicente, E. F. R., & Carmo, C. H. S. (2020). Suavização de resultados e comparabilidade dos relatórios financeiros: evidências em empresas abertas do mercado brasileiro. Revista de Contabilidade e Organizações, 14, e164488. https://doi.org/10.11606/issn.1982-6486.rco.2020.164488

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. Academy of Management Review, 20(3), 571–610. https://doi.org/10.5465/amr.1995.9508080331

Tripathi, V., & Kaur, A. (2020). Socially responsible investing: performance evaluation of BRICS nations. Journal of Advances in Management Research, 17(4), 525-547. https://doi.org/10.1108/JAMR-02-2020-0020

Velte, P. (2024). Corporate social responsibility (CSR) and earnings management: A structured literature review with a focus on contextual factors. Corporate Social Responsibility and Environmental Management, 31(6), 6000-6018. https://doi.org/10.1002/csr.2903

Appendix A

Results of multiple regressions for SUAV1
Overall intentional income smoothing with ESG dimensions

	Variables	Model E	Model S	Model G
	ESG			
	E	-0.001		
	S		-0.002	
	G			-0.001
South Africa	SIZE	-0.008	-0.002	-0.017
	ROA	-4.505***	-4.504***	-4.540***
	LEV	-0.778	-0.829	-0.788
	CONS.	2.374*	2.318*	2.592**
	No. Obs.	190	190	190
	R²	0.2101	0.2102	0.2101
	ESG			
	E	-0.003**		
	S		-0.002	
	G			-0.001
Brazil	SIZE	0.064*	0.050*	0.032
	ROA	-1.101*	-1.269**	-1.346**
	LEV	0.149	0.099	0.102
	CONS.	-0.713	-0.425	-0.021
	No. Obs.	382	382	382
	R²	0.0749	0.0682	0.0673
	ESG			
	E	0.005		
	S		0.006	
	G			-0.004
China	SIZE	-0.043	-0.042	-0.037
	ROA	-1.594***	-1.588***	-1.583***
	LEV	0.112	0.114	0.112
	CONS.	1.640**	1.628***	1.544***
	No. Obs.	2242	2242	2242
	R²	0.0500	0.0501	0.0498
	ESG			
	E	0.007		
	S		0.001	
	G			0.001
India	SIZE	0.004	-0.003	0.007
	ROA	-1.713***	-1.746***	-1.704***
	LEV	0.105	0.118	0.089
	CONS.	0.714	0.760*	0.541
	No. Obs.	594	594	594
	R²	0.0953	0.0966	0.0963
	ESG			
	E	-0.003		
	S		0.001	
	G			-0.001
Russia	SIZE	0.087	0.040	0.052
	ROA	0.233	-0.070	0.080
	LEV	0.084	0.124	0.118
	CONS.	-1,463	-0.653	-0.842
	No. Obs.	118	118	118
	R²	0.0882	0.0854	0.0808

Note: Statistical significance given by *** (1%), ** (5%) and * (10%).

Source: Developed by the authors (2026).

Appendix B

Results of multiple regressions for SUAV2
Intentional income smoothing by accruals with ESG dimensions

	Variables	Model E	Model S	Model G
South Africa	ESG			
	E	0.008		
	S		0.003	
	G			-0.002***
	SIZE	-0.023	-0.020*	-0.013
	ROA	-0.016	0.007	0.063
	LEV	0.186**	0.205***	0.224**
	CONS.	0.904**	0.847***	0.848**
	No. Obs.	190	190	190
	R²	0.2297	0.2271	0.2438
Brazil	ESG			
	E	-0.005		
	S		-0.001**	
	G			-0.004
	SIZE	0.036***	0.043***	0.031**
	ROA	-0.528*	-0.535*	-0.571*
	LEV	-0.014	-0.017	-0.022
	CONS.	-0.369*	-0.487**	-0.251
	No. Obs.	382	382	382
	R²	0.1121	0.1204	0.1106
China	ESG			
	E	0.003**		
	S		0.006**	
	G			0.003*
	SIZE	-0.014***	-0.015***	-0.011***
	ROA	-0.385***	-0.382***	-0.367***
	LEV	-0.116*	-0.114*	-0.118*
	CONS.	0.662***	0.671***	0.586***
	No. Obs.	2242	2242	2242
	R²	0.0612	0.0625	0.0611
India	ESG			
	E	0.007		
	S		0.001***	
	G			0.003
	SIZE	0.009*	0.002	0.010**
	ROA	-0.206	-0.238*	-0.206
	LEV	0.074	0.084	0.069
	CONS.	0.078	0.159	0.042
	No. Obs.	594	594	594
	R²	0.0649	0.0710	0.0658
Russia	ESG			
	E	0.001		
	S		-0.001	
	G			0.001
	SIZE	0.036*	0.048***	0.037***
	ROA	0.524*	0.583*	0.486*
	LEV	-0.190*	-0.200**	-0.203**
	CONS.	-0.533	-0.737	-0.588
	No. Obs.	118	118	118
	R²	0.1013	0.0987	0.1128

Note: Statistical significance given by *** (1%), ** (5%) and * (10%).

Source: Developed by the authors (2026).

Appendix C

Correlations tests

Panel A Correlation - South Africa

	SUAV1	SUAV2	ESG	E	S	G	SIZE	ROA	LEV
SUAV1	1.0000								
SUAV2	0.1875**	1.0000							
ESG	0.0212	0.1211	1.0000						
E	0.0287	0.1991**	0.5191**	1.0000					
S	-0.0415	0.0725	0.4488**	0.3653**	1.0000				
G	0.0754	-0.0362	0.5743**	0.2324**	0.2387**	1.0000			
SIZE	0.0955	0.1898**	0.4361**	0.3722**	0.4488**	0.1733**	1.0000		
ROA	-0.2599**	-0.1202	0.0794	0.0214	0.1374	-0.0246	-0.1096	1.0000	
LEV	-0.0164	0.0024	-0.0831	0.0057	-0.2269**	0.0530	-0.0292	-0.3918**	1.0000

Panel B Correlation - Brazil

	SUAV1	SUAV2	ESG	E	S	G	SIZE	ROA	LEV
SUAV1	1.0000								
SUAV2	0.1700**	1.0000							
ESG	-0.0389	0.0092	1.0000						
E	-0.0412	0.0502	0.4890**	1.0000					
S	-0.0237	-0.0327	0.3088**	0.4523**	1.0000				
G	-0.0255	0.0221	0.5011**	0.4307**	0.5090**	1.0000			
SIZE	0.0393	0.1541**	0.4708**	0.4251**	0.4585**	0.2391**	1.0000		
ROA	-0.0867**	-0.0911	-0.0120	0.0450	0.0164	-0.0738	-0.0841	1.0000	
LEV	0.1028**	0.0520	0.2238**	0.1885**	0.1515**	0.1812**	0.2979**	-0.4329**	1.0000

Panel C Correlation - China

	SUAV1	SUAV2	ESG	E	S	G	SIZE	ROA	LEV
SUAV1	1.0000								
SUAV2	0.2259**	1.0000							
ESG	0.0067	0.0273	1.0000						
E	-0.0114	0.0158	0.5031**	1.0000					
S	0.0044	0.0155	0.3379**	0.5562**	1.0000				
G	-0.0063	0.0010	0.5697**	0.2269**	0.2041**	1.0000			
SIZE	-0.0495**	-0.1535**	0.3628**	0.4502**	0.3090**	0.1316**	1.0000		
ROA	-0.0814**	0.0349	-0.1418**	-0.1162**	-0.0990**	-0.1067**	-0.4367**	1.0000	
LEV	-0.0091	-0.1709**	0.2068**	0.2528**	0.1574**	0.1207**	0.4761**	-0.3710**	1.0000

Panel D Correlation - India

	SUAV1	SUAV2	ESG	E	S	G	SIZE	ROA	LEV
SUAV1	1.0000								
SUAV2	0.2097**	1.0000							
ESG	0.0923**	0.0254	1.0000						
E	0.0724	-0.0148	0.4309**	1.0000					
S	0.0723	0.0381	0.5596**	0.2859**	1.0000				
G	0.0629	0.0378	0.4904**	0.1317**	0.1717**	1.0000			
SIZE	0.0847**	-0.0149	0.2783**	0.3727**	0.3393**	0.1140**	1.0000		
ROA	-0.1466**	-0.0427	0.0315	-0.0477	0.0604	0.0342	-0.3293**	1.0000	
LEV	0.1009**	0.0310	-0.0137	0.0787	-0.0289	-0.0430	0.3969**	-0.4448**	1.0000

Panel E Correlation - Russia

	SUAV1	SUAV2	ESG	E	S	G	SIZE	ROA	LEV
SUAV1	1.0000								
SUAV2	-0.0274	1.0000							
ESG	-0.0395	-0.0335	1.0000						
E	-0.0976	-0.0322	0.4674**	1.0000					
S	0.0269	-0.0650	0.5325**	0.5727**	1.0000				
G	-0.0939	0.0722	0.3565**	0.4795**	0.3106**	1.0000			
SIZE	0.2324**	0.0925	0.3436**	0.3821**	0.2335**	0.1298	1.0000		
ROA	-0.1880**	0.1162	0.3840**	0.3413**	0.2949**	0.2944**	-0.0860	1.0000	
LEV	-0.1565	-0.1957**	0.0866	0.0948	-0.0293	0.1430	-0.2602**	0.0324	1.0000

Note: SUAV1 = Overall intentional Income smoothing; SUAV2 = Intentional income smoothing by accruals; ESG = Overall ESG score; SIZE = Company size; ROA = Return on assets; LEV = Financial leverage; CONS. = Constant; IND = economic activity classification dummies control. No. Obs. = Number of Observations. Statistical significance was given by *** (1%), ** (5%), and * (10%).

Source: Developed by the authors (2026).