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Does CSR Performance Impact a Firms' Engagement in Earnings Management?

A study on the relationship between Corporate Social Responsibility and Earnings Management for EU firms

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Abstract

This study examines the relationship between corporate social responsibility (CSR) and earnings management (EM). Specifically, we question whether firms investing in CSR also behave in an ethical manner to constrain EM, or if they engage in CSR as a way to hide corporate misconduct. We study a large sample of publicly listed firms in the European Union (EU) and by employing well-established models for discretionary accruals (DA) we identify EM. Our findings reveal no significant relationship between CSR and EM, suggesting that higher CSR performance does not impact the extent to which earnings are managed. Our robust findings persist even upon excluding the country with the highest number of observations in our sample, reinforcing the notion that ethical considerations do not significantly impact EM practices. Our findings benefit investors and other stakeholders by providing contemporary insights into the CSR and EM relationship.

Tutor: Irina Gazizova

Keywords: *corporate social responsibility, earnings management, discretionary accruals, opportunistic perspective, integrative theory, instrumental theory*

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1. Introduction

Corporate social responsibility (CSR) is an issue of growing interest, and the engagement in socially responsible activities is becoming more prevalent as investors, customers, and other stakeholders urge firms to adopt more ethical business practices (Raleigh, 2014). Ethical theories reinforce the importance of taking all stakeholder demands into consideration as doing this is interconnected with adhering to socially responsible activities (Carroll, 1979; Jones, 1991; Donaldson & Preston, 1995). Furthermore, Atkins (2006) clarifies that the term "social responsibility" signifies meeting the expectations of investors desiring transparency in financial statements.

The accuracy and credibility of financial statements is partially based on managers' utilization of accrual estimations. This accuracy diminishes as managers exploit the flexibility granted by the realization and matching principles to mislead stakeholders, presenting the company as more profitable than it is through managing earnings (Schipper, 1989; Healy & Wahlen, 1999; Beneish, 2001). Moreover, managers are incentivized to resort to earnings management (EM) as a better depiction of a company's financial health aligns with managerial objectives, which includes securing private benefits and increasing firm value.

In line with the integrative theory, Atkins (2006) argues that firms investing in CSR practices are inclined to constrain EM to align with ethical expectations set by stakeholders. In contrast, the instrumental theory suggests that managers invest in CSR to exploit the benefits associated with being a CSR-oriented firm, such as reduced scrutiny, heightened trust, and augmented legitimacy. Paradoxically, strategic integration of CSR may serve as a facade, enabling managers to discreetly engage in EM and mislead users of financial statements, contradicting the genuine objectives of incorporating CSR (Hemingway & MacLagan, 2004).

Conflicting findings on the relationship between CSR and EM prompt questions about whether higher CSR performance genuinely benefits stakeholders or if firms pursue CSR primarily for strategic advantages. Due to these inconsistencies, we aim to answer the following research question:

Is EU publicly listed firms' CSR engagement associated with earnings management?

This study will analyze publicly listed firms within the European Union (EU) that have been actively operating from 2014 to 2022. The selected timeframe aligns with the introduction of

the NFRD directive (European Commission, 2021), which aims to improve CSR disclosure and performance. Moreover, the shared regulatory framework adopted by EU member states reduces the probability of encountering conflicting results, thereby increasing the reliability of our results. Moreover, focusing on firms operating under civil law can provide unique insights in understanding the relationship between CSR and EM. Additionally, we utilize accrual-based models to calculate discretionary accruals (DA), which is used as a proxy for identifying EM (Prior et al., 2008; P. Dechow et al., 2010; Yongtae Kim et al., 2012; Gaio et al., 2022). Furthermore, given the broad implication of CSR, we use ESG scores as a proxy for CSR performance.

We find no significant relationship between CSR and EM for EU publicly listed firms. This lack of significance may be due to the perceived normative nature of CSR in civil law systems. Furthermore, the introduction of new EU directives may have led firms to prioritize CSR for regulatory compliance, rather than aligning with the integrative or instrumental theory. The co-existence of conflicting incentives may have cancelled out any discernible effect between CSR and EM.

Our results provide valuable insights to investors, analysts, and regulators. Investors can find assurance that firms engaged in CSR are not necessarily resorting to deceptive financial practices. Regulators can utilize our findings to shape policies on financial transparency and CSR participation, potentially removing any significant relationship between CSR and EM.

1.1 Contribution

Existing literature reveals certain inconsistencies, emphasizing the necessity for further research with more recent data. Therefore, our study contributes to previous literature, reflecting the growing integration of CSR factors into business practices. In addition, due to higher emphasis on CSR, prior studies may render less relevant in today's context due to potential shifts in stakeholder demand.

Additionally, the majority of studies are predominantly centered around US-based companies (Prior et al., 2008; Yip et al., 2011; Yongtae Kim et al., 2012; Bozzolan et al., 2015). By studying firms within the EU, an area relatively less explored compared to others, we aim to close this gap. Our study not only enriches current literature but also ensures that our findings hold particular relevance for stakeholders and regulators within the EU. This contributes to

the deeper understanding of the business landscape for this region, providing relevant information for investors and other stakeholders.

1.2 Delimitation

Conducting our study, we acknowledge certain limitations. Our methodology is confined to accrual-based methods for calculating DA, excluding the assessment of real activity manipulation. This limitation could result in underestimating the extent of EM. Nevertheless, due to data constraints, addressing this issue is beyond the scope of our study.

Solely focusing on active firms within our timeframe may introduce a potential survivorship bias. However, this ensures that our findings remain relevant to understand the current business dynamics. Additionally, our study is limited to identifying the extent of EM, while it fails to provide insight into the direction of manipulation.

We have excluded financial institutions, such as banks, mutual funds, and insurance companies, as well as “sin firms” from our sample due to their distinct characteristics and adherence to strict regulatory frameworks compared to other industries (I. Kim & Venkatachalam, 2011). This implies that our findings cannot be universally applied to all types of firms. However, given the purpose of our research, this exclusion is more suitable to ensure that our results accurately represent the majority of firms.

1.3 Disposition

Section 2 provides an overall review of prior literature and a theoretical background related to CSR and EM. In section 3, the methodology is outlined and in section 4 information on the data collection process is provided. Section 5 and 6 presents our results and analysis. Finally, recommendations for future research are presented in section 7 and conclusions are presented in section 8.

2. Theory and Literature Review

2.1 Earnings Management

Healy and Wahlen (1999) established the most widely recognized definition of earnings management: “Earnings management occurs when managers use judgment in financial

reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.”. Hence, EM includes actions such as avoiding to report reductions in earnings and financial losses (Burgstahler & Dichev, 1997).

The incentives for managers to engage in EM could be viewed from an opportunistic perspective, suggesting that managers manipulate earnings with the underlying motive to mislead users of financial reports (Schipper, 1989; P. M. Healy & Wahlen, 1999; Beneish, 2001). In a business setting, the practices of EM can occur when managers face challenges in meeting specific benchmarks, leading them to report higher earnings than actually realized through managing accruals (Kasznik, 1999; Alsharairi et al., 2017). Additionally, managers may be motivated to engage in EM to enhance the market value of the firm in order to attract potential investors (Kellogg, 1991; P. M. Dechow & Skinner, 2000). Furthermore, when firms are perceived more valuable it facilitates their access to credit, emphasizing managers' incentives to employ EM as a strategic tool to present the company as more profitable than it actually is (P. M. Dechow et al., 1995; P. M. Healy & Wahlen, 1999; Gonçalves et al., 2019). In other instances, earnings can be managed in the opposite direction by reporting lower earnings to maintain stability (P. Dechow et al., 2010). Hence, the opportunistic perspective suggests that earnings can be managed in either direction, and still mislead users of financial statements.

Moreover, managers in publicly traded companies, whose remuneration are tied to company's stock performance, may be incentivized to engage in strategies like income smoothing. Income smoothing is a type of EM that refers to the shifting of revenues and expenses to create consistent earnings across various accounting periods (Gaio et al., 2022). This approach aims to minimize the company's perceived volatility as well as maintain higher stock prices. In the short-term this may benefit managers. However, in the long-term, income smoothing may be value-destructing as it decreases earnings quality (P. Dechow et al., 2010), resulting in increased cost of capital (Hribar & Jenkins, 2004) and cost of debt (Francis et al., 2005). Therefore, while some managers resort to EM to enhance firm value, others may engage in such practices out of self-interest, diverging from what is in the best interest of the firm.

2.1.1 Accruals

The initial objective of accruals is to offer a more accurate depiction of a company's performance over a specific period, aligning with the realization and matching principles (P. M. Dechow, 1994). These principles assert that expenses and related revenues should be recorded in the same accounting period, preventing discrepancies arising from cash flows occurring in periods different from when expenses and revenues are realized. Therefore, accruals are subject to managerial judgment which offers flexibility in the reporting of financial statements. The conflict arises as managers exploit these methods to potentially mislead users of financial reports (P. Dechow et al., 2010). Ideally, financial reporting enables stakeholders to distinguish best-performing firms from poor-performing firms, in addition to assisting them in making informed decisions (P. M. Healy & Wahlen, 1999). If firms lose credibility, it gives rise to skepticism among users of financial information, thereby reinforcing the negative impacts of EM (P. M. Healy & Wahlen, 1999; Rezaee & Tuo, 2019; Fan et al., 2023).

2.2 Corporate Social Responsibility

Carroll (1979) provides one of the most widely accepted definitions of CSR, explaining it as a set of societal expectations imposed on organizations. These expectations encompass firms' responsibilities across economic, legal, ethical, and discretionary realms. The latter encompasses actions that go beyond society's ethical expectations. Therefore, CSR obliges a company to address the concerns of all stakeholders. This involves actions based on the belief in “doing the right thing” or the “need to contribute to the well-being of society by adhering to ethical correctness.” (Yongtae Kim et al., 2012).

As CSR gains prominence, companies are increasingly participating in CSR activities (Kotzian, 2023). Moreover, managers' incentives for engaging in CSR could adequately be understood through two theories: the integrative theory and the instrumental theory. The integrative theory advocates that managers' ethical commitment is strengthened by engaging in socially responsible activities (Carroll, 1979; Yongtae Kim et al., 2012; Almahrog et al., 2018). In contrast, the instrumental theory takes a more pragmatic approach, suggesting that companies primarily adopt CSR initiatives for strategic benefits (Petrovits, 2006; Prior et al., 2008; Gallego-Álvarez et al., 2010).

2.3 Corporate Social Responsibility and Earnings Management

2.3.1 The Integrative Theory and Earnings Management

Incorporating CSR in alignment with the integrative theory enhances firms' reputation, adherence to social norms, and commitment to transparency¹ (Porter & Kramer, 2006; Gaio et al., 2022). This is evident as companies investing in CSR (e.g. CSR-oriented firms) tend to make ethically sound decisions, reducing the likelihood of engaging in actions detrimental to stakeholders, further increasing the firms legitimacy (Bansal and Kandola, 2004; Branco and Rodrigues, 2006; Grougiou et al., 2014; Shi et al., 2022; Khatri and Kjærland, 2023). These benefits serve as additional motivations for firms to provide more precise and comprehensive financial statements by restricting EM.

Furthermore, CSR-oriented firms contribute to enhanced stakeholder satisfaction (Orlitzky et al., 2003; Porter & Kramer, 2006; Rahman et al., 2023), aligning with the principles of stakeholder theory, which advocate for businesses to consider the interests of all stakeholders affected by a company's actions and not solely shareholders (Donaldson & Preston, 1995; Birte et al., 2020). As CSR-oriented firms take on a stakeholder perspective, they foster greater employee dedication, improved customer loyalty, and enhanced collaboration with partners (Almahrog et al., 2018; Gaio et al., 2022; Hericher et al., 2023). Therefore, investing in CSR in good faith by meeting stakeholder demands and gaining stakeholder support is essential for firm reputation and attracting investors, creating a disincentive to engage in EM.

CSR-oriented firms' increased legitimacy and stakeholder support can act as a protective factor in the event of not meeting analyst forecasts or benchmarks. Gaining legitimacy can contribute to a more forgiving stance from stakeholders, hence, in situations where performance falls short of expectations, these firms may experience less severe consequences compared to their counterparts, as their established commitment to ethical and socially responsible practices fosters understanding and resilience (P. M. Dechow & Skinner, 2000; Joireman et al., 2015; D. Zhang & Liu, 2022). With reduced punishment from capital markets, managers may be less incentivized to resort to EM, which often stems from a desire to portray the firm as more favorably than it is.

¹ Throughout our study, CSR practices, integration, investments, activities and initiatives are assumed to be positively correlated with CSR performance.

Furthermore, investing in CSR has a positive impact on firm's long-term financial performance (Dilling & Harris, 2018; Arian et al., 2023). The survey conducted by Amel-Zadeh and Serafeim (2018) emphasizes the significance of CSR in investment decisions, especially for EU investors, who value a firm's CSR involvement more than others when making investment choices. Therefore, in order to attract investors, EU firms may heighten their commitment to ethical practices. Consequently, CSR-oriented firms might be less inclined to engage in EM as it reduces their CSR performance which is essential for attracting investors (Amel-Zadeh & Serafeim, 2018; Rojo-Suárez & Alonso-Conde, 2024). Furthermore, employing EM would erode the trust between stakeholders and the firm, potentially diminishing stakeholders' willingness to offer sustained support to the company over the long-term. Subsequently, a negative relationship between CSR and EM is anticipated, driven by firms' desire to maintain and prioritize stakeholder relationships (Yongtae Kim et al., 2012; Toukabri et al., 2014).

2.3.2 The Instrumental Theory and Earnings Management

Although CSR engagement was initially promoted to enhance the moral imperative of firms, there exists a contrasting perspective questioning the genuine intentions behind investing in CSR activities. Some studies suggest that investing in CSR may not have a discernible impact on the firm's value and may even be value destroying, unless explicitly demanded by investors (McWilliams & Siegel, 2001; Mackey et al., 2007; M. Kim & Kim, 2019). Friedman (1970) argues that a company's primary goal should be maximizing shareholder value through profit maximization, an ideology commonly referred to as the shareholder theory. Therefore, according to Friedman (1970), if investors do not require a firm to engage in CSR, allocating resources to ethical and social initiatives may be suboptimal.

In light of these perspectives, companies may adopt CSR activities primarily to improve their ethical image and gain instrumental benefits, prioritizing stakeholder relations solely to enhance financial performance (Prior et al., 2008; Dhaliwal et al., 2011; Cheng et al., 2014; Amel-Zadeh & Serafeim, 2018; K. Wang et al., 2023). This strategic choice is driven by the premium stakeholders place on CSR-oriented firms, especially non-shareholders (Prior et al., 2008; Amel-Zadeh & Serafeim, 2018). However, managing diverse stakeholder objectives is challenging, introducing complexity and significant costs to the decision-making process, including potential delays and mutual distrust (Tirole, 2001). Consequently, managers may be

incentivized to engage in EM as a strategic tool aimed at mitigating the costs and complexity. This suggests a positive relationship between CSR and EM.

Addressing various stakeholder demands has its advantages, as it may lead stakeholders to exert less pressure on managers, as they perceive their expectations to be met (Hemingway & MacLagan, 2004; Prior et al., 2008). Simultaneously, the integration of CSR initiatives is essential in building trust, enabling the firm to benefit from reduced scrutiny. However, given firms' overarching aim of profit maximization, the costs associated with the decision-making process could impede profits. In this context, firms may strategically use the benefits of reduced scrutiny and trust gained through CSR (Prior et al., 2008). This highlights a firm's use of CSR as a means of discreetly engaging in EM, in the pursuit of maximizing shareholder profit, making the relationship between CSR and EM positive.

Furthermore, the benefits associated with CSR practices provide an opportunity for managers—especially those whose remuneration are tied to company stocks—to exploit these advantages for personal gain through engaging in EM (Bergstresser & Philippon, 2006; Buerthey et al., 2020; García-Sánchez et al., 2020). Moreover, stabilizing earnings through income smoothing contributes to less volatile stock prices, conveying stability and attracting potential investors. This, in turn, benefits managers as their remuneration increases with stock performance (Li & Thibodeau, 2019; Gao et al., 2022). Hence, managers may invest in CSR, as a way to reduce the risk of detection and discreetly engage in EM to gain private benefits. The integration of CSR with such incentives anticipates a positive relationship with EM.

2.3.3 Other Motives

Regulatory requirements can serve as drivers for companies to engage in CSR activities. In contrast to prior studies conducted in the U.S. (Yongtae Kim et al., 2012; Khanchel & Lassoued, 2022; Toukabri & Kateb, 2023), where firms voluntarily disclose CSR reports, EU-based firms of substantial size have been mandated to release separate sustainability reports since 2018. This obligation was introduced by the non-financial reporting directive (NFRD) in 2014 and further expanded by the corporate sustainability reporting directive (CSRD) in 2021 (European Commission, 2021). These regulatory developments may compel companies to integrate CSR activities into their business practices (Liqi et al., 2023), transforming the involvement from voluntary to an obligation. If incentives are consistent with the integrative theory (instrumental theory), we expect a negative (positive) relationship between CSR and

EM. However, if firms integrate CSR practices as a response to regulatory compliance, rather than integrating CSR as a choice driven by incentives, we expect no direct relationship between CSR and EM.

The legal system distinction, particularly between civil law and common law, significantly influences the CSR and EM relationship. Civil law firms tend to have higher CSR ratings compared to common law firms (Liang & Renneboog, 2017; Chen et al., 2018; Goergen et al., 2019; Almubarak et al., 2023). This difference is attributed to common law firms' emphasis on maximizing shareholder value, while civil law firms prioritize stakeholder wealth (Chen et al., 2018). This indicates that CSR incorporation within civil law systems is motivated by legal origins and anticipated norms, suggesting that CSR may be more influenced by cultural and legal factors than incentives. Furthermore, Prior et al. (2008) discovers insignificant results between CSR and EM for non-Anglo-Saxon, emphasizing that legal distinction underscores that there is a significant correlation between CSR performance and legal origins (Prior et al., 2008; Liang & Renneboog, 2017). This indicates a higher commitment to CSR initiatives in civil law systems (non-Anglo-Saxon countries) compared to common law systems (Anglo-Saxon countries) (Prior et al., 2008; Yongtae Kim et al., 2012; Almahrog et al., 2018). Hence, the impact of legal and cultural distinctions may take precedence over one's incentives to engage in CSR, thereby undermining the extent to which EM is influenced by CSR, leading to an absence of a significant relationship between CSR and EM.

2.4 Research Question and Hypothesis Development

Aligning with the integrative theory, studies suggest that managers' willingness to act ethically is enhanced by committing to CSR activities (Carroll, 1979; Phillips et al., 2003; Dhaliwal et al., 2011; Zhang et al., 2023). Additionally, the integrative theory emphasizes CSR's positive association with transparency (Gelb & Strawser, 2001; Yongtae Kim et al., 2012), leaving less leeway for managers to engage in EM (Gonçalves et al., 2021; J. Zhang et al., 2023). The instrumental theory (Friedman, 1970), on the other hand, suggests that the primary motive for investing in CSR is to achieve strategic benefits (Prior et al., 2008). For example, managers whose remuneration are tied to company stocks, may engage in EM to increase the firms' perceived value and thereby attain private benefits. Through investing in CSR, managers divert attention away from unethical EM practices by taking advantage of the reduced scrutiny associated with CSR participation (Bergstresser & Philippon, 2006; Buerthey

et al., 2020; García-Sánchez et al., 2020). This, in contrast, suggests a positive relationship between CSR and EM.

Addressing various stakeholder demands is interconnected with CSR performance (Almubarak et al., 2023). However, when managers find it challenging to satisfy all these diverse stakeholder needs they might resort to EM as a strategy to meet all expectations (Carroll, 1979; Petrovits, 2006; Prior et al., 2008; Almubarak et al., 2023). This anticipates a positive relationship between CSR and EM. On the contrary, Carroll (1991) argues that CSR empowers companies to build trust with stakeholders. Instead of viewing this as an opportunity for exploitation, it underlines the moral imperative for ethical business conduct (Yongtae Kim et al., 2012), suggesting a negative relationship between CSR and EM.

Furthermore, studies argue that CSR-oriented firms, as a result of their commitment to CSR enjoy greater leniency when they fail to meet targets and benchmarks (Chakraborty et al., 2023). This leniency, in turn, reduces the need to manage earnings, proposing a negative relationship between CSR and EM. However, alternative studies present a different perspective arguing that, as CSR-oriented firms enjoy more favorable media coverage, increased legitimacy, and reduced scrutiny from investors (H. Wang & Qian, 2011; Zheng et al., 2015), managers with an opportunistic perspective may exploit these benefits by engaging in EM (Prior et al., 2008; Gonçalves et al., 2020), thereby suggesting a positive relationship between CSR and EM.

This dichotomy creates a noble tension in understanding the relationship between CSR and EM, prompting a debate over whether motives are primarily ethical or opportunistic. Since studies have shown inconclusive results, understanding the relationship between CSR and EM can be challenging (Gonçalves et al., 2021).

Therefore we aim to answer the following research question: *Is EU publicly listed firms' CSR engagement associated with earnings management?*

Several factors indicate an absence of a relationship between CSR and EM. The impact of regulatory requirements, especially in the EU, may take precedence over one's incentives to engage in CSR, thereby undermining the extent to which EM is influenced by CSR.

Furthermore, the distinction in legal systems between civil and common law, plays a significant role in shaping the relationship between CSR and EM. Chen et al. (2018) suggest that CSR integration in civil law systems aligns with legal origins, cultural expectations, and

anticipated norms. Consequently, as the majority of EU companies operate under civil law, their CSR adoption may primarily be influenced by legal and cultural factors than by integrative or instrumental theories, suggesting an insignificant relationship between CSR and EM.

Given the high significance of regulatory, normative and cultural factors within the EU, we anticipate these elements to dominate the outcome of the relationship between CSR and EM. This leads us to formulate the following hypothesis:

H1: There is no relationship between CSR and EM.

3. Methodology

3.1 Research Design

In this section, we will offer detailed insights into our research design, outlining the selected models used to test our hypothesis, as well as discussing their advantages and limitations. Furthermore, we provide a breakdown of both dependent and independent variables, outlining how our chosen control variables relate to EM.

3.1.1 Measuring Corporate Social Responsibility

ESG captures the three pillars of sustainability; Environmental, Social, and Governance and is commonly used to present similar objectives as CSR (Capelle-Blancard & Petit, 2015; Liang & Renneboog, 2021). Given their conceptual proximity, we will use ESG score as a proxy to estimate CSR performance and use them interchangeably.

The ESG score, obtained from Refinitiv Eikon, is formulated by integrating information from ten distinct categories. These categories consider a comprehensive array of factors, including; resource use, emissions, innovation, management, shareholders, CSR strategy, workforce, human rights, community and product responsibility. Refinitiv Eikon then evaluates each company individually based on their performance within each category relative to their peers. The final ESG score is then accumulated by assigning specific weights to each category, and subsequently ranking them on a scale from zero to 100, with 100 representing the highest performance. The ESG score is evaluated using publicly disclosed data, considering factors such as materiality, data accessibility, and sector-specific significance. Publicly disclosed data

includes annual reports, CSR reports, websites, codes of conduct, and other pertinent documents (Refinitiv, 2022).

3.1.2 Estimating Earnings Management

Detecting EM with absolute certainty is challenging due to its ambiguous nature (P. M. Healy & Wahlen, 1999; Yongtae Kim et al., 2012). Still, two primary methods are commonly used as proxies to estimate EM: the accruals-based method (Subramanyam, 1996; DeFond & Subramanyam, 1998; Kothari et al., 2005; Prior et al., 2008; Yongtae Kim et al., 2012) and real activity manipulation (Roychowdhury, 2006; Yongtae Kim et al., 2012; Gaio et al., 2022). Accrual-based methods involve managerial discretion to disguise corporation's actual financial performance in its reports by reallocating expenses and revenues across different financial reporting periods (Zahra, 2005). In contrast, real activity manipulation entails actions taken by managers to alter real operational activities or decisions (Burgstahler & Dichev, 1997; Zang, 2012). While real activity manipulation is also commonly used, the method jeopardizes actual company resources, thereby undermining the company's preference toward employing real activity manipulation (Graham et al., 2005; Bozzolan et al., 2015; Mutuc et al., 2019; Gaio et al., 2022). This, coupled with data limitations in evaluating real activity manipulation, has led us to exclusively employ accrual-based methods for our study.

3.1.2.1 Accrual-based Models

To measure DA and detect EM, two accrual-based models are utilized: the Modified Jones model and the Kothari model. It is acknowledged that a single universally applicable method is lacking, as underscored by Dechow et al. (2010). Therefore, employing different models contributes to the generalizability of our findings. Furthermore, employing multiple models helps mitigate potential biases stemming from limitations within a single model. Dechow et al. (1995) found that the Modified Jones model exhibited the highest explanatory power among five distinct models for estimating DA. Kothari et al. (2005) demonstrated the effectiveness of a performance-matched discretionary accrual approach for estimating DA, highlighting its accuracy in specific situations. In our study, we opted for both models due to their divergent accuracy in different settings, as well as their proven accuracy in detecting EM (DeFond & Jiambalvo, 1994; Gonçalves et al., 2021). Furthermore, these models have been widely employed in recent studies (Prior et al., 2008; Yongtae Kim et al., 2012).

3.1.2.2 Discretionary Accruals

To identify EM, a key focus is placed on DA. These are derived from total accruals which consist of two components, discretionary and non-discretionary accruals (for visualization, see Appendix 1). Non-discretionary accruals capture the economic fluctuations related to a company's business operations (P. Dechow et al., 2010), whereas, DA are attributable to management judgment and have thus become a widely used proxy in EM research (Jones, 1991; DeFond & Subramanyam, 1998; Prior et al., 2008; P. Dechow et al., 2010; Yongtae Kim et al., 2012). The intuition behind the use of DA relies on the assumption that lower DA implies less managed earnings (P. M. Healy & Wahlen, 1999).

The calculation of DA involves two fundamental equations (P. M. Dechow et al., 1995):

$$TA_{i,t} = NI_{i,t} - CFO_{i,t} \quad (1)$$

$$DA_{i,t} = TA_{i,t} - NDA_{i,t} \quad (2)$$

Equation (1) defines total accruals ($TA_{i,t}$) for a specific firm (i) during a specific year (t). It is computed by taking the difference between net income ($NI_{i,t}$) and cash flow from operations ($CFO_{i,t}$). Total accruals ($TA_{i,t}$) represents the non-cash components of a firm's earnings, indicating the extent to which revenue has been recognized but not yet received in cash.

The second equation (2) calculates DA ($DA_{i,t}$) by subtracting non-discretionary accruals ($NDA_{i,t}$) from total accruals ($TA_{i,t}$), calculated in equation (1). The objective of utilizing these equations is to systematically decompose total accruals into their discretionary and non-discretionary components for each firm-year observation (P. Dechow et al., 2010).

3.1.2.3 Absolute and Signed Values of Discretionary Accruals

When computing DA, two measures are considered: the absolute and signed value of DA. The absolute value aims to calculate the degree of EM, whilst the signed value refers to the direction of which earnings are managed, i.e whether they are income-increasing or income-decreasing accruals (Gaio et al., 2022). Relying solely on signed values for DA estimation can be misleading, as income-increasing and income-decreasing accruals may cancel each other out, potentially resulting in an inaccurate assessment of the actual level of EM (Nguyen et al., 2024). Although signed values might be suitable to examine the direction of EM (Warfield et

al., 1995; Klein, 2002; Nguyen et al., 2024), the purpose of our study is to examine the degree of EM, hence, our focus solely lies on capturing the absolute value of DA.

3.1.2.4 The Modified Jones Model

The original Jones model (1991) assumes that revenues are non-discretionary. This assumption, which implies that managerial judgment does not influence revenues, may result in an underestimation of the true extent of EM (P. M. Dechow et al., 1995).

The Modified Jones model (1995) was developed to enhance the original Jones model's capability to estimate DA, reducing biases inherent in the original Jones model. In the Modified Jones model, a distinction is made between cash sales and credit sales to better capture the dynamics of managerial influence. Cash sales are regarded as non-discretionary, reflecting that they are less likely to be influenced by managerial judgment. In contrast, the Modified Jones model considers all changes in credit sales to be the result of EM, hence, they are considered discretionary. The rationale behind this distinction lies in the assumption that it is easier to manipulate earnings by exercising discretion over revenue in credit sales rather than in cash sales (P. M. Dechow et al., 1995).

The following model (3) will be employed to estimate DA in accordance with the Modified Jones model:

$$\frac{\Delta A_{i,t-1}}{A_{i,t-1}} = \beta_0 \frac{1}{A_{i,t-1}} + \beta_1 \frac{(\Delta Rev_{i,t} - \Delta Rec_{i,t})}{A_{i,t-1}} + \beta_2 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t} \quad (3)$$

All variables are scaled by lagged total assets to ensure compatibility and account for potential size differences between companies that may affect the estimate of DA (Cohen et al., 2008; Prior et al., 2008). Additionally, the residual ($\varepsilon_{i,t}$) captures the DA for a specific firm, i , in a given year, t . For variable definitions, see Appendix 2.

3.1.2.5 The Kothari Model

The Kothari model builds upon the foundation of the Modified Jones model, with the intention of estimating DA. Unlike the Modified Jones model, the Kothari model is based on performance-matched DA. It introduces an important control variable, return on assets ($ROA_{i,t}$), accounting for the impact of firm performance on DA. Excluding ROA may lead to misspecification of DA when used as a proxy for EM, especially in cases where companies

achieve exceptional performance through significant growth (P. M. Dechow et al., 1995; P. Healy, 1996; P. M. Dechow et al., 1998; Kothari et al., 2005). This underscores a possible limitation of the Modified Jones model.

Moreover, the Kothari model includes a constant (β_0), allowing for additional control of cross-sectional heteroskedasticity (Kothari et al., 2005; Gonçalves et al., 2021), potentially reflecting another limitation of the Modified Jones model. Additionally, performance matching on ROA reduces type I errors (falsely rejecting the null hypothesis), but may increase type II errors (failing to detect a real effect or relationship, when it exists), in specific settings (Kothari et al., 2005).

The following model (4) will be employed to estimate DA in accordance with the Kothari model:

$$\frac{TA_{i,t-1}}{A_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{A_{i,t-1}} + \beta_2 \frac{\Delta Rev_{i,t}}{A_{i,t-1}} + \beta_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \beta_4 ROA_{i,t} + \varepsilon_{i,t} \quad (4)$$

All variables are scaled by lagged total assets to ensure compatibility and account for potential size differences between companies that may affect the estimate of DA (Cohen et al., 2008; Prior et al., 2008). Additionally, the residual ($\varepsilon_{i,t}$) captures the DA for a specific firm, i , in a given year, t . For variable definitions, see Appendix 2.

3.1.3 Cross-sectional or Time-series Analysis

Choosing between cross-sectional and time-series analysis is part of utilizing accrual-based models. Both approaches estimate total and non-discretionary accruals, but the difference lies in how they normalize total accruals for comparability among firms. Time-series analysis assesses changes in total accruals over time, normalizing current year's accruals based on prior years (McNichols, 2002). Conversely, cross-sectional analysis assesses multiple companies in the same industry at a specific point in time. Furthermore, to distinguish discretionary from non-discretionary accruals, total accruals are normalized using industry-specific parameters (P. M. Dechow et al., 1995). Moreover, while time-series analysis captures trends over time, cross-sectional analysis allows for a refined specification and is better suited for our panel data (DeFond & Subramanyam, 1998; Yongtae Kim et al., 2012; Gaio et al., 2022). Our choice of cross-sectional analysis is further driven by our anticipation

that normalizing non-discretionary accruals using industry-specific parameters may enhance the precision and reliability of our results.

3.1.4 Balance Sheet or Cash Flow Approach

Financial data for calculating total accruals could be retrieved either directly from the cash flow statement using the cash flow approach, or indirectly from the balance sheet following the balance sheet approach. Acar and Coskun (2020) compared the cash flow approach to the balance sheet approach for calculating total accruals using two distinct models with identical independent variables. The cash flow approach consistently yielded higher explanatory power and overall significance, suggesting its superior accuracy (Acar & Coskun, 2020).

Additionally, the balance sheet approach exhibits limitations, particularly in the presence of non-operating activities (Hribar & Collins, 2002). Based on these findings, we will exclusively use the cash flow approach for deriving financial data available in the cash flow statement.

3.2 Main Regression Models

To test our hypothesis and control for a potential issue of heteroscedasticity, we estimate the MJM regression and the KM regression using pooled OLS regression models with standard errors clustered at both firm and year levels, and we incorporate year, industry, and country fixed effects. This approach builds upon prior research (Petersen, 2009; Gow et al., 2010; Gaio et al., 2022). The dependent variable for each regression is the absolute value of DA, calculated based on the Modified Jones model ($MJM_DA_{i,t}$) and the Kothari model ($KM_DA_{i,t}$). The models employ distinct methodologies to calculate DA, potentially leading to variations in the observed relationship between CSR and EM.

The following models (5) will be employed to analyze the relationship between CSR and EM, using the Modified Jones model, referred to as the MJM regression and the Kothari model, referred to as the KM regression:

$$MJM_DA_{i,t} \text{ or } KM_DA_{i,t} = \beta_0 + \beta_1 CSR_Score_{i,t} + \beta_2 Size_{i,t} + \beta_3 MB_{i,t} + \beta_4 ROA_{i,t} + \beta_5 Lev_{i,t} + \beta_6 Age_{i,t} + Year\ FE + Industry\ FE + Country\ FE + \varepsilon_{i,t} \quad (5)$$

$MJM_DA_{i,t}$ and $KM_DA_{i,t}$ represents the absolute value of DA for a specific firm (i) during a specific year (t) and is retrieved from the residual in the Modified Jones model and the

Kothari model, respectively. Our independent variable, $CSR_Score_{i,t}$, ranges from 0 to 100, where 100 signifies the highest score. For variable definitions, see Appendix 6.

The constant of the model, β_0 represents the estimated value of EM when all independent variables have zero effect. β_1 captures the relationship between CSR and EM, representing the estimated change in the dependent variable for a one-unit change in the independent variable, while holding all other variables constant. Consequently, a positive (negative) β_1 indicates that a higher CSR score is associated with a higher (lower) level of EM, holding all else equal. Furthermore, if this relationship is significant, it suggests a positive (negative) relation between CSR and EM.

By incorporating control variables, our intention is to isolate the effect CSR has on EM. By doing so, we aim for a more targeted investigation of the specific relationship of interest. In addition, we incorporate year, industry, and country fixed effects into our models, separately. These fixed effects control for variations specific to individual firms within a given year, across different categories. For instance, we anticipate that variations in the stringency of regulations across countries can influence the incentive to engage in EM. Therefore, we incorporate country fixed effects to account for such differences within our sample. Moreover, the overall aim is to mitigate the effect of systematic variations as assumed by the OLS assumptions (see Appendix 3).

The term $(\mathcal{E}_{i,t})$ represents the residuals in our regressions, accounting for the unexplained variations in the dependent variable that are not addressed by the independent variables. Furthermore, the residuals quantify the extent to which the model falls short in explaining the relationship between CSR and EM.

3.2.1 Control Variables

We conducted a comprehensive review of prior research investigating the relationship between CSR and EM to select control variables (Yongtae Kim et al., 2012; Almahrog et al., 2018; Gaio et al., 2022). This approach ensures the inclusion of relevant control variables while avoiding redundancy. However, due to data limitations, some variables were disregarded. The refined set of control variables is described in the following section.

Return on assets ($ROA_{i,t}$) is calculated by dividing net income by lagged total assets. ROA is a widely accepted measure used to measure profitability. Multiple studies suggest that firms

with slightly higher than industry-average profitability tend to have increased DA (Kothari et al., 2005; Yamaguchi, 2022). Hence, implying an expected positive correlation between ROA and EM.

Size ($Size_{i,t}$) is calculated as the natural logarithm of market value of equity, capturing the total market capitalization of a firm. In particular, larger firms tend to exhibit a lower degree of EM due to heightened scrutiny and associated political costs (Yongtae Kim et al., 2012; Baumann-Pauly et al., 2013; Al-Hajri & Al-Enezi, 2019). Therefore, we anticipate a negative correlation between Size and EM.

Market-to-book ratio ($MB_{i,t}$) is computed as MC/E , where MC is the market capitalization and E is the book value of equity (total equity). The aim of this ratio is to provide insights into how the market values a company in relation to its book value. Higher MB may suggest high expectations for the company's future growth and profitability, while a lower ratio may indicate undervaluation or expectations of lower future performance. Previous literature (Frankel et al., 2002; Alsharairi et al., 2017; Yamaguchi, 2022) has established that firms with greater growth potential are more incentivized to meet benchmarks, consequently exhibiting higher EM. Hence, we anticipate the MB to be positively correlated with EM.

Leverage ($Lev_{i,t}$) is quantified as the long-term debt scaled by total assets. Studies demonstrate that firms with higher leverage ratios are more prone to financial distress, hence suggesting increased incentives to resort to EM (Jaggi & Picheng Lee, 2002; Almubarak et al., 2023). Furthermore, according to Becker et al., (1998) managers might employ EM as a strategy to meet debt covenants, as an increase in debt ratios could potentially bring firms closer to breaching these contractual agreements. As a result, we anticipate a positive correlation between Lev and EM.

Age ($Age_{i,t}$) refers to the age of the firm and is measured through the natural logarithm of 1 plus the number of years the firm has been active. According to Chang et al. (2018) the level of a firm's maturity can influence their engagement in CSR and their financial reporting behavior. Therefore, we incorporate a control variable for firm age to account for the potential impacts driven by a company's maturity.

4. Empirical Data

This section will provide detailed insights into our data collection and sample construction. The section further includes an in-depth explanation of the databases used and the information it provides.

4.1 Data Collection

To test our hypothesis we employed a two-step process, retrieving data from two distinct databases, Standard & Poor's Capital IQ and Refinitiv Eikon. The predominant source of data was obtained from Capital IQ, including the year the company was founded, net income, cash flow from operations, total assets, revenue, account receivable, gross property plant and equipment, market capitalization, total equity and long-term debt, while Refinitiv Eikon provided ESG scores and industry classifications. Furthermore, to ensure uniformity and mitigate the potential influence of macroeconomic volatility, financial data was converted to the same currency, Euro (€), using historical exchange rates.

We utilized the Capital IQ database as it provides detailed financials for both active and inactive companies globally, exceeding 100 000 companies. Moreover, it offers insights into financial statements and financial information that can be directly derived from the cash flow statement. Eikon has been widely used in previous academic research as a means to put the ESG concept into practical use (Gonçalves et al., 2021; Gaio et al., 2022). The preference can be rationalized since Eikon offers one of the most comprehensive ESG databases, encompassing over 88% of the global world capitalization and comprises more than 700 different ESG metrics. Furthermore, this database offers data from 2002, and ensures data standardization, compatibility and reliability. Eikon provides information on over 6,000 publicly listed companies worldwide (Refinitiv, 2022).

4.2 Sample Construction

To test our hypothesis, we compiled a sample of EU firms with data spanning from 2014 to 2022, resulting in nine firm-year observations. Furthermore, as our regressions include lagged variables, we collected data from 2013 for the necessary variables.

The initial sample in Capital IQ consisted of 5976 firms, filtered by publicly listed companies currently operating within the EU. Applying the same filters gave a sample of 6229 firms in

Eikon. We then excluded companies from the financial sector, due to their distinct characteristics of accruals and specific regulatory frameworks, which could potentially influence our results (Prior et al., 2008; Y. Hong & Andersen, 2011; Yongtae Kim et al., 2012; Almahrog et al., 2018; Gonçalves et al., 2020). Additionally, “sin firms” from highly regulated industries such as alcoholic beverages, tobacco, casino and gaming sectors, were excluded from the sample due to their superior financial reporting quality, making them incomparable to the majority of firms (I. Kim & Venkatachalam, 2011; Yongtae Kim et al., 2012). These adjustments reduced our Capital IQ sample by 713 firms, resulting in 5263 firm observations, and our Eikon sample by 919 firms, resulting in 5310 firm observations.

Our final sample was constructed by merging data from Capital IQ and Eikon, linking them through each firm's unique identifier, namely the legal entity identifier (LEI). After applying additional filters and merging the two datasets, the final sample consisted of 3116 publicly listed firms from 27 EU member states (see Appendix 4 for country distribution) and 115 different sectors, totaling 27779 firm-year observations (Note, some variables include 10 firm-year observations).

Furthermore, all continuous variables were winsorized at both the 1st and 99th percentiles of their distributions to control for outliers in our data. However, an exception was made for property, plant, and equipment scaled by lagged total assets ($PPE/lagged\ total\ assets$) and inverse assets ($1/lagged\ total\ assets$), as these variables are bounded by zero and therefore only winsorized at the 99th percentile. During winsorization, values identified as outliers, i.e. those falling below the 1st percentile or surpassing the 99th percentile, are replaced with the respective percentile values.

5. Results

5.1 Descriptive Statistics

Table 1 presents the descriptive statistics for the final sample used to estimate our models.

<i>Table 1 - Descriptive Statistics</i>						
	N	Mean	Median	StD	Min	Max
Dependent Variables						
MJM_DA	5424	0.0546	0.0356	0.0664	0.0009	0.5959
KM_DA	5459	0.0503	0.0322	0.0595	0.0006	0.4995
Control Variables						
ROA	5835	0.0287	0.0425	0.1502	-1.7491	0.5077
Size	5785	6636.7240	2099.1000	10737.2500	1.3400	44873.6200
MB	5782	3.1956	1.9992	4.1642	-6.6096	34.4492
Lev	5281	0.1929	0.1666	0.1431	0.0004	0.8275
Age	5854	74.3129	59.0000	55.0003	1.0000	225.9200
Independent Variable						
CSR_Score	5854	55.2156	57.4345	20.7210	0.6267	95.0376

Upon analyzing the statistics for MJM_DA and KM_DA, both variables exhibit similar values with minimal differences. MJM_DA has a slightly higher maximum value, potentially due to their slightly different model inputs. In comparison to U.S. studies, our firms generally show lower mean and median values for absolute DA, consistent with prior EU research (Gaio et al., 2022). This suggests potentially higher EM in the U.S. (Yongtae Kim et al., 2012). The average CSR_Score is 55.2156, with a median of 57.4345 indicating moderate CSR engagement, falling within the upper 50s on the score scale, but with notable data variations as the standard deviation obtained is 20.7210. Furthermore, the MB and Lev values are consistent with prior literature (Prior et al., 2008; Yongtae Kim et al., 2012; Gaio et al., 2022), with a mean MB of 3.1956 and a mean Lev of 19.29%. The MB value suggest that, on average, markets tend to value the company higher than its book value, indicating growth potential. Additionally, our results indicate that firms maintain sufficient long-term debt scaled by total assets, thereby reducing the risk of them experiencing financial distress.

Compared to prior studies, our sample includes considerably larger firms, which could be due to our sample consisting of EU publicly listed firms, while other studies may encompass private firms or cover smaller geographical areas (Yongtae Kim et al., 2012; Almahrog et al., 2018; Gaio et al., 2022). Additionally, our sample includes a wide range of industries, potentially affecting the mean Size. The average ROA is 2.87%, slightly deviating from prior research, possibly due to our different timeframe (Prior et al., 2008; Yongtae Kim et al., 2012; Almahrog et al., 2018; Gaio et al., 2022). Lastly, the higher mean value of Age in our sample, indicates older firms with greater variation compared to previous studies (Yongtae Kim et al., 2012).

5.2 Pearson Correlation Matrix

MJM_DA	KM_DA	CSR_Score	ROA	Size	MB	Lev	Age
1.00							
0.90***	1.00						
-0.13***	-0.15***	1.00					
-0.25***	-0.19***	0.12***	1.00				
-0.23***	-0.22***	0.51***	0.29***	1.00			
0.04**	0.09***	-0.07***	0.13***	0.12***	1.00		
0.09***	0.06***	0.04*	-0.20***	0.07***	-0.02	1.00	
-0.12***	-0.14***	0.28***	0.15***	0.22***	-0.15***	-0.12***	1.00

Table 2 - Pearson Correlation Matrix

Note:

*, **, *** Indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

Variables are defined in Appendix 6.

The Pearson correlation matrix is a statistical tool designed to evaluate the linear correlation between two continuous variables. Its primary purpose is to quantify the strength and direction of a relationship, with values ranging from -1 (perfect negative correlation) to 1 (perfect positive correlation), while a value near 0 suggests little or no linear correlation. Values near -1 or 1 may indicate the presence of multicollinearity, which can potentially affect the accuracy and interpretation of our regression results.

Overall, our results show no strong correlations, except for our dependent variables, MJM_DA and KM_DA, which are highly correlated. This was expected due to their similar inputs in DA calculation. The remaining independent variables exhibit low correlations, all below 0.6, indicating absence of multicollinearity. This conclusion is supported by low variance inflation factor values ($VIF < 5$) (Gaio et al., 2022), as shown in Appendix 5.

Furthermore, our matrix reveals a negative and significant relationship between DA and CSR_Score. This implies that an increase in CSR performance is associated with a decrease in EM. Similarly, ROA, Size and Age exhibit negative correlations with DA, suggesting that higher financial performance, being larger in size, and older firms tend to reduce EM. Conversely, our results indicate that a higher MB and Lev increases the degree of EM.

The CSR_Score exhibits positive correlations with ROA, Size, Lev, and Age. This suggests that firms exhibiting improved performance, larger size, greater age, and higher long-term debt ratios are associated with higher CSR performance. However, worth noting is that correlation does not imply causation, and additional variables may be necessary to comprehensively explain the causation between variables.

5.3 Regression Results

The results from our pooled regression models, analyzing the relationship between CSR_Score and DA when the dependent variable is MJM_DA and KM_DA, respectively, are presented in Table 3.

Table 3 - Pooled OLS Regression Models

<i>Variable</i>	<i>Dependent Variable</i>	
	MJM_DA	KM_DA
Constant	0.071*** (0.010)	0.069*** (0.009)
CSR_Score	-0.0001 (0.0001)	-0.00001 (0.0001)
Size	-0.006*** (0.001)	-0.005*** (0.001)
MB	0.001*** (0.0004)	0.002*** (0.0004)
ROA	-0.095*** (0.028)	-0.058*** (0.023)
Lev	0.021* (0.011)	0.014 (0.011)
Age	-0.001 (0.001)	-0.0001 (0.001)
Year FE	YES	YES
Industry FE	YES	YES
Country FE	YES	YES
R ²	0.182	0.181
Adjusted R ²	0.159	0.158
F-Statistic	7.871***	7.830***

Note:

*, **, *** Indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

Variables are defined in Appendix 6.

All test statistics and significance levels are calculated based on the robust standard errors clustered at firm and year level and with year, industry and country fixed effects.

Our hypothesis suggests that there is no relationship between CSR and EM. Hence, we find support for our hypothesis, as the coefficient for our CSR_Score (β_1) lacks significance in both models. Despite the CSR_Score implying a negative relationship between CSR and EM, such a conclusion cannot be drawn due to insignificant results, rendering their interpretations unreliable.

Furthermore, the Size and ROA coefficients are negative and significant at the 0.01 level for both of our models, indicating that larger and more profitable companies are less likely to engage in EM. The MB is positive and significant at the 0.01 level, implying that an increase in a company's MB is positively associated with EM. This relationship stays true for both models. Lev shows positive coefficients for both models, with a significance level of 0.10 for the MJM regression, but an insignificant value for the KM regression. This implies that companies with higher long-term debt are more likely to engage in EM, according to the MJM regression. However, no such relationship can be established for the KM regression. Lastly, Age has a negative and insignificant coefficient for both of our models.

The MJM regression shows an adjusted R^2 of 15.9%, while the KM regression has an adjusted R^2 of 15.8%. This indicates that 15.9% and 15.8% of the variability in EM is explained by the independent variables in the respective regression models. Although both models demonstrate a similar level of explanatory power, the MJM regression is slightly better at explaining the relationship between CSR and EM.

6. Analysis

6.1 Analysis of Research Method

6.1.1 ESG as a Proxy for CSR

In our study, we have used ESG score as a proxy for CSR performance. Other studies, like Yongtae Kim et al. (2012) exclude the governance pillar, to focus solely on the environmental and social aspects of ESG. They argue that although CSR initiatives may be driven by managers' self-interest, superior governance acting as a disciplinary mechanism could turn the relationship between CSR and EM into a negative one (Yongtae Kim et al., 2012). Therefore, if opportunistic incentives prevail and strong governance practices exist, including governance may weaken the actual relationship in our results. However, corporate

governance, integral to ethical business practices, aligns with CSR's holistic approach. Neglecting governance may overlook how ethical behavior affects EM (Suyono & Farooque, 2018; Ruwanti et al., 2019; Dissanayake et al., 2023). We incorporate governance as it acknowledges the interplay and allows for a robust analysis of the collective influence of CSR on EM practices, consistent with prior research (Mohmed et al., 2020; Gaio et al., 2022).

Another limitation of the Eikon ESG score is its challenge in distinguishing genuine CSR commitment from greenwashing when assigning the ESG score to a company. Consequently, there is a risk that companies using CSR as a facade may obtain inflated CSR ratings, potentially introducing biases into our independent variable and affecting our results. By controlling for factors such as board gender diversity, ownership concentration, and affiliation with the BIG4 (Choi et al., 2013; Maglio et al., 2020; M. Bansal, 2023), one could better discern genuine CSR commitment from greenwashing, as these variables are often positively associated with CSR performance. Nevertheless, because of data limitations, we were unable to account for these factors.

Additionally, due to the composite nature of the ESG score, it introduces complexity in discerning the individual weights assigned to each ESG pillar. This becomes an issue when trying to understand the influence of each pillar, independently, on EM. The concern arises from the risk that certain components of ESG may not adequately capture the factors explaining EM. Consequently resulting in the overall impact of CSR on EM being diluted, potentially leading to an insignificant relationship. Furthermore, the use of ESG scores has been heavily criticized due to the difficulties in quantifying ESG practices. If these ESG scores fail to accurately represent ethical practices, it could result in a misrepresentation of ESG. Hence, using ESG score as a proxy for CSR performance, may potentially have contributed to our insignificant results. These issues could be mitigated by constructing a handpicked CSR score through aggregating variables representative of CSR factors that impacts EM. Such an approach would serve as a more targeted proxy for assessing the relationship between CSR and EM.

6.1.2 The Accrual-based Method

Measuring EM with absolute certainty is challenging due to its ambiguous nature. Although our study relies on accruals-based methods, acknowledged for their advantages, critics highlight the potential difficulty in calculating DA, as it may give rise to errors if DA are not

properly distinguished from non-discretionary accruals (Young, 1999). Additionally, despite accrual-based models' attempts to account for factors influencing non-discretionary accruals, there is a risk of overlooking certain variables. Young (1999) highlights that these models can introduce measurement errors due to factors such as asset structure, cash flow performance, and sales growth. Furthermore, Francis et al., (2008) stress the importance of including relevant control variables like ROA when measuring non-discretionary accruals. The challenges in accurately measuring DA may result in its misrepresentation of the extent of EM. Therefore, using DA as a proxy for EM may have contributed to our results being insignificant.

Another limitation associated with using DA as a proxy for EM stem from the considerable variability in the accounting standards adopted by firms, which leads to varying levels of flexibility when reporting accruals. The diversity in standards may result in comparability issues, as greater flexibility in accounting choices could potentially increase or decrease managerial discretion (Liu et al., 2014; L Caylor et al., 2022). Consequently, this makes it challenging to compare the financial reporting quality of firms adhering to distinct accounting standards. However, our study specifically examines publicly listed EU firms adhering to international financial reporting standards (IFRS) (IFRS, 2021), minimizing drawbacks related to distinct standards and ensuring more accurate results when employing DA as our EM proxy.

6.1.3 Proxies for Earnings Management

The Kothari model excels in assessing firms using ROA, but limitations emerge when alternative measures of firms' financial performance provide more accurate evaluations, potentially introducing biases into results (Kothari et al., 2005; John Hagel III, 2010). Moreover, ROA may be correlated with other variables in the model, posing a risk of biased results (Keung et al., 2014). As the Modified Jones model does not account for ROA, this issue is not present. However, the omission of the constant term (β_0) in the Modified Jones model could impose a limitation. According to statistical literature, the exclusion of the intercept should be theoretically justified as it is context-dependent (Costa & Velôso Soares, 2022). Consequently, this omission may introduce biases. Nevertheless, employing both models—with the Kothari model including the intercept—helps mitigate potential biases and provides a more comprehensive assessment of DA.

An additional, less controversial, proxy used to detect EM is Accounting and Auditing Enforcement Releases (AAERs), which reflects a more aggressive form of EM. Although this measure is commonly used for studies conducted in the U.S., the absence of viable alternatives to AAERs for EU firms is the primary reason for excluding this alternative measure. Furthermore, disregarding real activity manipulation as a proxy for estimating EM, can lead to an underestimation of EM, limiting the depth of understanding the relationship between CSR and EM. This could result in inaccurate findings if firms resort to EM in ways that are not reflected by the calculation of DA using accrual-based methods. However, due to data limitations, we are unable to capture such measurements in our study.

6.1.4 Incentives behind Earnings Management

In our study, we adopt an opportunistic viewpoint regarding the incentives to engage in EM. However, an opposing view exists, suggesting that EM could be used with good intentions providing more accurate financial statements (Arya et al., 2003; Jiraporn et al., 2008). This aligns with the core objective of using accounting accruals, in accordance with the realizations and matching principles (P. M. Dechow, 1994). Adopting an opportunistic viewpoint poses a challenge in distinguishing between firms that use DA with good intentions and firms that do not, as DA are captured within one variable. This limitation raises questions regarding the reliability of using DA as a proxy for EM. However, the opportunistic perspective aligns with the view of organizations setting accounting rules, operating under the assumption that managers possess opportunistic incentives when manipulating earnings (Bernard & Skinner, 1996). Taking this into account, we expect the issue to have minimal impact on our results as we adopt an opportunistic perspective.

6.1.5 Cross-sectionality and Normalization

In our study, we choose to normalize total accruals based on cross-sectional analysis. This approach raises concerns as it involves adjusting a firm's DA in comparison to other companies within the same industry-year regression. In certain industries, companies naturally exhibit variations influenced by different factors. Consequently, these variations among industries influences the calculation of DA, as certain accruals should not be classified as discretionary (McNichols, 2002). This, in turn, may have impacted our results.

Another limitation of cross-sectional analysis is the somewhat oversimplified assumption of homogenous characteristics among firms within a specific industry, in terms of how DA are treated. Although the narrow industry classification of our study enhances the reliability of industry-specific accrual treatment assumptions, broader classifications offer statistical advantages by including more firms for normalization accuracy. However, the latter may lead to heterogeneity within industries, if firms adopt different business models, resulting in a different treatment of DA. This violates the assumption of homogeneous characteristics. Both methods would present distinct impacts on our results and therefore represent trade-offs.

6.1.6 Sample Selection

Our final sample is constructed by excluding firms operating within the financial sector due to their distinct characteristics of accruals and specific regulatory frameworks. We also excluded all “sin firms”, due to their superior financial reporting quality, making them incomparable to the majority of our firms. Furthermore, we merged all necessary data from Capital IQ and Refinitiv Eikon through LEI. The sample selection process, resulting in a reduction of several firm observations, may have unintentionally excluded relevant firms from our sample, potentially influencing our results.

6.1.7 Explanatory Power

Our regression models demonstrate similar levels of explanatory power, as reflected by adjusted R^2 values of 15.9% and 15.8% for the MJM regression and KM regression, respectively. While making direct comparisons with previous research can be challenging due to variations in model specifications, it is worth noting that studies with similar objectives have reported adjusted R^2 values ranging from 9.86% (Gaio et al., 2022) to 18.5% (Yongtae Kim et al., 2012). This comparison highlights the potential for improving explanatory power by considering additional variables and alternative model specifications. Nevertheless, it should be noted that the inclusion of control variables might not lead to a significant increase in the adjusted R^2 , as our current levels of explanatory power closely align with previous research. Additionally, the exclusion of certain control variables in our study is due to data limitations.

6.1.8 Validity, Reliability and Comparability

The validity of a study is contingent on its ability to accurately present findings that are applicable in similar contexts. By choosing to focus on publicly listed firms, we aim to enhance data quality and quantity, considering that listed firms often report on more financial data. Moreover, their adherence to the same reporting requirements, including standards such as IFRS (IFRS, 2021), and similar legal systems contribute to the overall validity and reliability of our study. Hence, mitigating biases stemming from large deviations in both accounting practices and legal systems.

Our choice of control variables aligns with prior research, minimizing the risk of including irrelevant factors and addressing omitted variable biases. Additionally, using two widely recognized models to calculate DA enhances both the validity and comparability of our study. However, it is important to acknowledge the limitations of relying solely on accrual-based methods to identify EM.

Reliability refers to the credibility and trustworthiness of research outcomes. Our study's reliability is enhanced by sourcing data from reputable databases, as well as referencing recent, accurate, and relevant studies. The reliability of our CSR score is solely based on Eikon. However, as many studies use Eikon for CSR scores, we presume any potential biases to be minimal (Gaio et al., 2022). Additionally, we control for issues like multicollinearity and homoscedasticity.

Furthermore, comparing our study to non-EU or international studies, particularly in Anglo-Saxon or common law jurisdictions, may pose limitations due to cultural differences (Liang & Renneboog, 2017; Chen et al., 2018; Goergen et al., 2019; Almubarak et al., 2023). On the other hand, our selection of publicly listed firms following standardized reporting practices, offers a more consistent foundation for comparison (Liu et al., 2014; L Caylor et al., 2022). In addition, our firms bear characteristics that are similar to other listed firms regardless of their geographical presence, thereby increasing the comparability of our study.

6.2 Main Regression Analysis

The results of our regressions indicate an insignificant relationship between CSR and EM, suggesting that CSR performance does not relate to a firm's engagement in EM. While the results are marginally negative, potentially indicating that higher CSR performance reduce

engagement in EM, this cannot be conclusively stated as the results are insignificant. Nevertheless, there are a variety of plausible explanations behind our insignificant results.

6.2.1 Different Legal Systems

Conducting our study within the EU reveals distinct results when compared to prior research conducted in other regions. Studies conducted on countries operating under common law, in the U.S. and UK, have shown both positive and negative significant relationships between CSR and EM (Prior et al., 2008; Yongtae Kim et al., 2012; Almahrog et al., 2018). However, our findings align with an international study that found insignificant negative results for non-Anglo-Saxon countries, but significant results for Anglo-Saxon countries (Prior et al., 2008). This legal distinction is relevant to our study as there is a strong correlation between CSR performance and legal origins (Liang & Renneboog, 2017), indicating a higher commitment to CSR initiatives within civil law systems (non-Anglo-Saxon countries) compared to common law systems (Anglo-Saxon countries) (Prior et al., 2008; Yongtae Kim et al., 2012; Almahrog et al., 2018). Consequently, since the majority of firms in our study operate under civil law systems, this may have affected our results.

Delving deeper into the role of legal systems, the participation of EU firms in CSR activities may be influenced by directives and policies within the EU, which actively encourage and mandate CSR involvement (European Commission, 2021). This suggests that, unlike in other regions, the incorporation of CSR is more of an anticipated norm rather than a strategic move driven solely by incentives (Liang & Renneboog, 2017; Chen et al., 2018; Goergen et al., 2019). Consequently, the relationship between CSR and EM may be diluted by the normative nature of CSR incorporation, further explaining the insignificant relationship in our results.

Furthermore, CSR commitment may be voluntary in other regions in contrast to many EU firms (Yongtae Kim et al., 2012). Hence, CSR participation in the EU can be understood as an ingrained practice to gain operational license rather than investing in CSR with either an integrative or instrumental perspective. In contrast, voluntary incorporation of CSR, as seen in the U.S., could amplify the relationship between CSR and EM. In the absence of mandatory requirements, the firm's internal motivations for engaging in CSR activities may affect the significance of the relationship between CSR and EM. Results consistent with the integrative theory (instrumental theory), have shown a significant negative (positive) relationship between CSR and EM. This underscores the importance of considering underlying incentives

for firms to invest in CSR. However, in our case, these incentives may have been absent, resulting in an insignificant relationship between CSR and EM.

6.2.2 Cancel-out Effect

Deviating from regulatory requirements and distinct legal frameworks, our insignificant relationship may stem from another factor. The opposing incentives for engaging in CSR may contribute to a potential cancel-out effect when attempting to explain its impact on EM. This implies that if some firms show a negative relation between CSR and EM, while others show the opposite trend, the conflicting results could cancel out a potential effect between CSR and EM. However, this only holds if the conflicting relations exhibit the same magnitude and occur during the same year in our sample. Furthermore, there may exist additional incentives for firms to engage in CSR, however, as they may be unidentified or challenging to measure, we focus exclusively on evaluating the integrative and instrumental theories, in line with prior literature.

Some firms within our sample may be experiencing financial distress, while others may not. Studies have found that there is a higher risk of firms resorting to EM during financial distress (Jaggi & Picheng Lee, 2002; Almubarak et al., 2023). Our descriptive statistics indicate a marginally lower mean for ROA, compared to previous studies. This lower ROA suggests that, on average, the firms in our sample experience reduced profitability, which could be indicative of financial distress. As a result, they may have stronger incentives to engage in EM during challenging periods. Gonçalves (2021), along with other researchers, argue that in times of financial losses, managers may act opportunistically by using their sustainable company's reputation to manipulate earnings. On the contrary, in non-crisis periods, a reverse trend emerges, indicating that firms experiencing higher profitability are less inclined to resort to EM (Gonçalves et al., 2021; El-Feel et al., 2023). This suggests that during more profitable (challenging) periods, firms tend to align their behaviors with ethical (unethical) standards in accordance with the integrative (instrumental) theory. Therefore, the coexistence of varying financial conditions during a specific year—emphasized by our large (15.02%) standard deviation of ROA, compared to other studies—among firms within our sample may have given rise to a potential cancel-out effect. This effect could have neutralized any discernible impact between CSR and EM within our study.

An alternative perspective on the cancel-out effect takes into account the mandatory reporting requirements within the EU. Some firms might perceive these regulations as insufficient and, as a result, employ CSR as a facade while engaging in behaviors detrimental to stakeholders. This scenario suggests a positive relationship between CSR and EM. Conversely, there might be firms genuinely investing in CSR to satisfy stakeholder demands and contribute positively to society, thus limiting EM and suggesting a negative relation between CSR and EM. The coexistence of both types of firms may have created a cancel-out effect, explaining the absence of a relationship between CSR and EM in our results.

6.2.3 Analysis of Control Variables

The coefficients of our control variables suggest both anticipated and unexpected results. Therefore, in this section, we will delve into the results of these control variables, providing explanations and implications behind the observed outcomes.

Size reveals a significant negative relationship with DA in line with existing research, supporting the notion that as firms increase in size, they are less prone to engage in EM. An explanation being that larger firms are subject to heightened scrutiny and therefore is incentivized to disclose more accurate information (Yongtae Kim et al., 2012; Baumann-Pauly et al., 2013; Al-Hajri & Al-Enezi, 2019). Consequently, resorting to EM may carry more severe consequences for larger firms compared to their smaller counterparts.

MB reveals a statistically significant and positive relationship with DA. This outcome aligns with existing research, indicating that firms with higher growth potential face increased pressure to meet targets and benchmarks (Frankel et al., 2002; Yamaguchi, 2022). In response to these pressures, such companies are more inclined to resort to EM practices in order to appear more profitable. In addition, companies exhibiting high MB might resort to EM because growth stocks are particularly responsive to stock price fluctuations, and heightened stock price volatility is generally perceived negatively by the financial market (Chih et al., 2008). Consequently, managers of growth firms may be incentivized to enhance stability in stock prices through engaging in activities like income smoothing. This dynamic contributes to the observed significant and positive relationship between EM and MB.

ROA reveal a negative and significant relationship with EM. This contradicts earlier studies that frequently suggest a positive relation between ROA and EM for companies with slightly above-average profitability compared to their industry peers. One possible explanation for our

results is that as firms experience increased profitability, their incentives to engage in EM may decrease. Moreover, firms with increased profitability may possess the resources to invest in CSR activities (H. Hong et al., 2012; Liang & Renneboog, 2017). Such investments may enhance the moral imperative of managers, constraining EM.

Lev shows significance only in the MJM regression, while the KM regression shows insignificant results. Despite this disparity, both models indicate a positive relationship between DA and the long-term debt ratio, suggesting that higher levels of debt may prompt firms to engage in EM. This aligns with prior research, which suggests that firms with higher debt may be more inclined to strategically manipulate earnings to present a more favorable and stable financial image. While this conclusion can be drawn for the MJM regression, it cannot be drawn for the KM regression as it poses an insignificant relationship. The relatively low significance of the MJM regression may be attributed to several factors. For example, the complexity involved in understanding how leverage may impact different industries in diverse ways could make it challenging to accurately capture the intricate relationship between *Lev* and EM.

Age yields insignificant results for both models. However, considering that a firm's maturity level can impact its involvement in CSR and EM (Chang et al., 2018), it may be valuable to incorporate this variable in our model. Upon closer examination, the lack of significance in the results could stem from various factors. For instance, older firms may exhibit lower growth potential, and since our model indicates a positive relationship between growth ($MB_{i,t}$) and EM, older firms may engage less in EM. In contrast, newer firms may be more incentivized to engage in EM to meet targets, creating a dynamic that potentially leads to a cancel-out effect and yields insignificant results. Additionally, assuming that older firms are also larger firms, they may face increased scrutiny from auditors (Baumann-Pauly et al., 2013; Al-Hajri & Al-Enezi, 2019), while smaller firms may have more leeway to manage earnings. These discrepancies may contribute to the lack of significance between *Age* and EM.

6.3 Multicollinearity, Heteroscedasticity and Robustness Test

6.3.1 Multicollinearity

Multicollinearity occurs when independent variables in a regression model are highly correlated, making it challenging to separately assess their individual effects on the dependent variable. This could potentially lead to unreliable coefficients and results (Farrar & Glauber, 1967), violating the assumption of homoscedasticity in an OLS regression (see Appendix 3). Our results, based on both Pearson correlation matrix and Variance Inflation Factors (VIF), indicate the absence of significant multicollinearity concerns. Specifically, all correlation coefficients in the Pearson correlation matrix remain below 0.6 (an exemption being our dependent variables), which is considered low, and all VIF values are below the benchmark of 5, leading us to reject the risk of multicollinearity.

However, it is important to note that there is no consensus on the exact VIF threshold for multicollinearity, as different research papers suggest varying cut-off points. One commonly used threshold is a VIF value of 10 (Yongtae Kim et al., 2012), while others recommend a more conservative threshold of 4 (O'Brien, 2007). Regardless of the chosen threshold, all of our VIF values range between one to three, underscoring the robustness of our regression models.

6.3.2 Heteroscedasticity

Heteroscedasticity represents the unequal variance of residuals in a regression model, violating one of the assumptions of OLS regression models (see Appendix 3), further reducing the model's effectiveness. To test our hypothesis and mitigate the potential impact of heteroscedasticity, we estimate our regression models with standard errors clustered at both firm and year levels. Furthermore, we incorporate fixed effects for year, industry, and country, as these parameters are non-random, in line with prior research (Gaio et al., 2022).

6.3.3 Robustness Test

To assess the reliability of our findings, we conducted two additional analyses: the Hausman test and excluding the most represented country from our sample. The null hypothesis of the Hausman test, states that there is no significant difference between applying either random or fixed effects models. After conducting this test, we cannot reject the null hypothesis for either

of our regressions, indicating that there is no significant distinction between the random and fixed effects models (see Appendix 7). Even if the null hypothesis cannot be rejected, fixed effects may still be appropriate for our models. Hence, we control for year, industry and country fixed effects, in line with prior studies (Gaio et al., 2022).

Sweden represents the most substantial portion of our sample. Therefore, to assess the robustness of our findings, we omitted Sweden from the dataset and reperformed the same regressions. The outcomes of this test closely resemble our primary regression findings (see Appendix 8). Nevertheless, we observe reduced levels of statistical significance and decreased explanatory power, signifying that Sweden plays a substantial role in our dataset. The most notable divergence is in the Age variable, which exhibits positive but statistically insignificant results for the MJM regression. In all other aspects, our findings remain highly consistent, underscoring the reliability of our results.

7. Suggestions for Future Research

Given that our study focused on publicly listed firms, an avenue for future research lies in exploring the dynamics of the relationship between CSR and EM within private firms. This observation is especially significant as private firms constitute a substantial portion of the market and contribute to societal impact (Dekker & Hasso, 2016). Therefore, an examination of potential variations in the CSR and EM relationship based on firm status—whether private or public—could yield valuable insights. We encourage further exploration into the impact CSR may have on the business partners of a firm.

By limiting our study to accrual-based methods, the evaluation of real activity manipulation is beyond the scope of our investigation. Furthermore, as we estimated absolute DA, it lacks the capability to discern the direction of these manipulations. Therefore, incorporating signed values in future studies can provide an understanding of the direction of EM. Additionally, we propose that future research explore alternative accruals-based models, as it may impact the conclusion drawn from our study.

Moreover, a notable challenge highlighted in our study, as well as in prior research is the difference in CSR measures, which hinders the comparability of results. Therefore, one prospective avenue for future research involves the pursuit of using a standardized measure for CSR, thereby fostering a more robust comparative framework with other studies. Consequently, future studies can contribute to a more cohesive understanding of the relationship between CSR and EM, overcoming the challenges associated with different measurement methodologies.

8. Conclusion

The increased demand of CSR reflects broader societal expectations of ethical business conduct, impacting the quality of financial reports. Financial reporting, an important communication channel, conveys a company's performance and adheres to regulatory guidelines. However, the flexibility in financial reporting, especially in accrual management, requires a nuanced examination of how firms navigate these standards. If misused, this flexibility can compromise earnings quality through resorting to EM practices. Therefore, understanding how companies navigate these standards is essential, considering the potential role of CSR in influencing such actions.

Our study explored the intricate relationship between CSR practices and EM among publicly listed firms in the EU from 2014 to 2022. We specifically focused on examining the presence and nature of the relationship between CSR and EM by utilizing two accrual-based models to estimate EM. We report statistics and significance levels using standard errors adjusted by a two-dimensional clustering at the firm and year levels to account for potential residual correlations. We control for year, industry, and country fixed effects, and address heterogeneity and multicollinearity concerns before presenting our results.

Our findings reveal no significant relationship between CSR engagement and EM for EU publicly listed firms. Contextual factors, including legal origin, may have affected our results, suggesting CSR is more of an inherent norm rather than a strategic decision driven solely by incentives, in civil law systems. Furthermore, the cancel-out effect suggests an alternative explanation for our insignificant results, indicating that ethical practices induced by CSR may neutralize the relationship with firms resorting to EM during financial distress. Firms' regulatory adherence could also explain this insignificance. Furthermore, our findings pose a challenge in ascertaining whether the integrative or instrumental theory prevails in shaping incentives for EM among EU firms.

To test the robustness of our findings, we exclude the most prevalent country from our sample, namely Sweden. Our results remain consistent, indicating that ethical concerns do not significantly influence EM practices. This has practical implications for regulators and investors, highlighting the potential influence of regulatory and societal factors on EM. Additionally, it sets the stage for future research, encouraging a deeper exploration of the interplay between CSR and EM in an EU setting.

References

- Acar, G., & Coskun, A. (2020). A comparison of models for predicting discretionary accruals: A cross-country analysis. *Journal of Asian Finance, Economics and Business*, 7(9), 315–328.
- Al-Hajri, M., & Al-Enezi, F. (2019). The association between corporate social responsibility disclosure and accounting-based financial performance: A Kuwaiti evidence. *Investment Management and Financial Innovations*, 16(1), 1–13.
- Almahrog, Y., Ali Aribi, Z., & Arun, T. (2018). Earnings management and corporate social responsibility: UK evidence. *Journal of Financial Reporting and Accounting*, 16(2), 311–332.
- Almubarak, W. I., Chebbi, K., & Ammer, M. A. (2023). Unveiling the Connection among ESG, Earnings Management, and Financial Distress: Insights from an Emerging Market. *Sustainability*, 15(16), Article 16.
- Alniacik, U., Alniacik, E., & Genc, N. (2011). How corporate social responsibility information influences stakeholders' intentions. *Corporate Social Responsibility and Environmental Management*, 18(4), 234–245.
- Alsharairi, M., Dixon, R., & Al-Hamadeen, R. (2017). Event-specific earnings management: Additional evidence from US M&A pre-and post-SOX. *Journal of Financial Reporting and Accounting*, 15(1), 78–98.
- Amel-Zadeh, A., & Serafeim, G. (2018). Why and How Investors Use ESG Information: Evidence from a Global Survey. *Financial Analysts Journal*, 74(3), 87–103.
- Arendt, S., & Brettel, M. (2010). Understanding the influence of corporate social responsibility on corporate identity, image, and firm performance. *Management Decision*, 48(10), 1469–1492.
- Arian, A., Sands, J., & Tooley, S. (2023). Industry and Stakeholder Impacts on Corporate Social Responsibility (CSR) and Financial Performance: Consumer vs. Industrial Sectors. *Sustainability (Switzerland)*, 15(16).
- Arya, A., Glover, J. C., & Sunder, S. (2003). Are Unmanaged Earnings Always Better for Shareholders? *Accounting Horizons*, 17, 111–116.
- Atkins, B. (2006). *Is Corporate Social Responsibility Responsible?* *Forbes.com* (November 28).
- Bansal, M. (2023). Corporate Social Responsibility and Revenue Misclassification: Evidence from India. *Asian Academy of Management Journal of Accounting & Finance*, 19(1), 227–251.
- Bansal, P., & Kandola, S. (2004). Corporate Social Responsibility: Why good people behave badly in organizations. *Ivey Business Journal (Online)*, 1.
- Baumann-Pauly, D., Wickert, C., Spence, L. J., & Scherer, A. G. (2013). Organizing Corporate Social Responsibility in Small and Large Firms: Size Matters. *Journal of Business Ethics*, 115(4), 693–705.
- Becker, C. L., Defond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, 15(1), 1–24.
- Beneish, M. D. (2001). Earnings management: A perspective. *Managerial Finance*, 27(12), 3–17.
- Bergstresser, D., & Philippon, T. (2006). CEO incentives and earnings management. *Journal of Financial Economics*, 80(3), 511–529.
- Bernard, V. L., & Skinner, D. J. (1996). What motivates managers' choice of discretionary accruals? *Journal of Accounting and Economics*, 22(1–3), 313–325.

- Birte, F., Florian, L.-F., & Stefan, S. (2020). A Stakeholder Theory Perspective on Business Models: Value Creation for Sustainability. *Journal of Business Ethics: JBE*, 166(1), 3–18.
- Bozzolan, S., Fabrizi, M., Mallin, C. A., & Michelon, G. (2015). Corporate Social Responsibility and Earnings Quality: International Evidence. *The International Journal of Accounting*, 50(4), 361–396.
- Branco, M., & Rodrigues, L. (2006). Corporate Social Responsibility and Resource-Based Perspectives. *Journal of Business Ethics*, 69(2), 111–132.
- Buertey, S., Sun, E.-J., Lee, J. S., & Hwang, J. (2020). Corporate social responsibility and earnings management: The moderating effect of corporate governance mechanisms. *Corporate Social Responsibility and Environmental Management*, 27(1), 256–271.
- Burgstahler, D., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics*, 24(1), 99–126.
- Capelle-Blancard, G., & Petit, A. (2015). The Weighting of CSR Dimensions: One Size Does Not Fit All. *Business & Society*, 56(6), 919–943.
- Carroll, A. B. (1979). A Three-Dimensional Conceptual Model of Corporate Performance. *The Academy of Management Review*, 4(4), 497–505.
- Carroll, A. B. (1991). The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders. *Business Horizons*, 34(4), 39–48.
- Chakraborty, A., Gao, L. S., & Musa, P. (2023). Corporate social responsibility and litigation risk: Evidence from securities class action lawsuits. *Accounting & Finance*, 63(2), 1785–1819.
- Chang, Y., Chen, T.-H., & Shu, M.-C. (2018). Corporate Social Responsibility, Corporate Performance, and Pay-Performance Sensitivity—Evidence from Shanghai Stock Exchange Social Responsibility Index. *Emerging Markets Finance and Trade*, 54(5), 1183–1203.
- Chen, C., Gotti, G., Kang, T., & Wolfe, M. C. (2018). Corporate Codes of Ethics, National Culture, and Earnings Discretion: International Evidence. *Journal of Business Ethics*, 151(1), 141–163.
- Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal (John Wiley & Sons, Inc.)*, 35(1), 1–23.
- Chih, H.-L., Shen, C.-H., & Kang, F.-C. (2008). Corporate Social Responsibility, Investor Protection, and Earnings Management: Some International Evidence. *Journal of Business Ethics*, 79(1/2), 179–198.
- Choi, B. B., Lee, D., & Park, Y. (2013). Corporate Social Responsibility, Corporate Governance and Earnings Quality: Evidence from Korea. *Corporate Governance: An International Review*, 21(5), 447–467.
- Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and Accrual-Based Earnings Management in the Pre- and Post-Sarbanes-Oxley Periods. *Accounting Review*, 83(3), 757–787.
- Costa, C. M., & Velôso Soares, J. M. M. (2022). Standard Jones and Modified Jones: An Earnings Management Tutorial. *Revista de Administração Contemporânea*, 26(2), 1–13.
- Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, 50(2), 344–401.
- Dechow, P. M. (1994). Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of Accounting and Economics*, 18(1), 3–42.
- Dechow, P. M., Kothari, S. P., & L. Watts, R. (1998). The relation between earnings and cash flows. *Journal of Accounting and Economics*, 25(2), 133–168.

- Dechow, P. M., & Skinner, D. J. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons*, 14(2), 235–250.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting Earnings Management. *The Accounting Review*, 70(2), 193–225.
- DeFond, M. L., & Jiambalvo, J. (1994). Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics*, 17(1), 145–176.
- DeFond, M. L., & Subramanyam, K. R. (1998). Auditor changes and discretionary accruals. *Journal of Accounting and Economics*, 25(1), 35–67.
- Dekker, J., & Hasso, T. (2016). Environmental Performance Focus in Private Family Firms: The Role of Social Embeddedness. *Journal of Business Ethics*, 136(2), 293–309.
- Dhaliwal, D. S., Oliver Zhen Li, Tsang, A., & Yong George Yang. (2011). Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *Accounting Review*, 86(1), 59–100.
- Dilling, P. F. A., & Harris, P. (2018). Reporting on long-term value creation by Canadian companies: A longitudinal assessment. *Journal of Cleaner Production*, 191, 350–360.
- Dissanayake, S., Ajward, R., & Dissanayake, D. (2023). Whether corporate social responsibility is used to suppress earnings management practices and could corporate governance mechanisms prevent them? An empirical study. *Asian Journal of Accounting Research*, 8(4), 373–386.
- Donaldson, T., & Preston, L. E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management Review*, 20(1), 65–91.
- El-Feel, H. W. T., Mohamed, D. M., Amin, H. M., & Hussainey, K. (2023). Can CSR constrain accruals and real earnings management during the COVID-19 pandemic? An international analysis. *Journal of Financial Reporting and Accounting*.
- European Commission. (2021). *Non-Financial Reporting Directive (NFRD)—Directive 2014/95/EU and the proposal for a Corporate Sustainability Reporting Directive (CSRD)*. Available at: <https://www.greenfinanceplatform.org>
- Fan, Q., Chun, D., Ban, Q., Jiang, Y., Li, H., & Xu, L. (2023). Mandatory Disclosure of Corporate Social Responsibility and the Quality of Earnings Management. *Sustainability (Basel, Switzerland)*, 15(17), 13026.
- Farrar, D. E., & Glauber, R. R. (1967). Multicollinearity in Regression Analysis: The Problem Revisited. *The Review of Economics and Statistics*, 49(1), 92–107.
- Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of Accounting and Economics*, 39(2), 295–327.
- Francis, J., Nanda, D., & Olsson, P. (2008). Voluntary Disclosure, Earnings Quality, and Cost of Capital. *Journal of Accounting Research (Wiley-Blackwell)*, 46(1), 53–99.
- Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The Relation between Auditors' Fees for Nonaudit Services and Earnings Management. *The Accounting Review*, 77(s-1), 71–105.
- Friedman, M. (1970). A Friedman doctrine-- The Social Responsibility of Business Is to Increase Its Profits. *New York Times*.
- Gaio, C., Gonçalves, T., & Sousa, M. V. (2022). Does corporate social responsibility mitigate earnings management? *Management Decision*, 60(11), 2972–2989.
- Gallego-Álvarez, I., Prado-Lorenzo, J.-M., Rodríguez-Domínguez, L., & García-Sánchez, I.-M. (2010). Are social and environmental practices a marketing tool?: Empirical evidence for the biggest European companies. *Management Decision*, 48(10), 1440–1455.

- Gao, J., Chu, D., Zheng, J., & Ye, T. (2022). Environmental, social and governance performance: Can it be a stock price stabilizer? *Journal of Cleaner Production*, 379, 134705.
- García-Sánchez, I., Hussain, N., Khan, S. A., & Martínez-Ferrero, J. (2020). Managerial entrenchment, corporate social responsibility, and earnings management. *Corporate Social Responsibility & Environmental Management*, 27(4), 1818–1833.
- Gelb, D. S., & Strawser, J. A. (2001). Corporate Social Responsibility and Financial Disclosures: An Alternative Explanation for Increased Disclosure. *Journal of Business Ethics*, 33(1), 1–13.
- Goergen, M., Chahine, S., Wood, G., & Brewster, C. (2019). The relationship between public listing, context, multi-nationality and internal CSR. *Journal of Corporate Finance*, 57, 122–141.
- Gonçalves, T., Gaio, C., & Costa, E. (2020). Committed vs opportunistic corporate and social responsibility reporting. *Journal of Business Research*, 115, 417–427.
- Gonçalves, T., Gaio, C., & Ferro, A. (2021). Corporate Social Responsibility and Earnings Management: Moderating Impact of Economic Cycles and Financial Performance. *Sustainability*, 13(17), Article 17.
- Gonçalves, T., Gaio, C., & Santos, T. (2019). Women on the board: Do they manage earnings? Empirical evidence from european listed firms. *Review of Business Management*, 21(3), 582–597.
- Gow, I. D., Ormazabal, G., & Taylor, D. J. (2010). Correcting for Cross-Sectional and Time-Series Dependence in Accounting Research. *Accounting Review*, 85(2), 483–512.
- Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, 40(1), 3–73.
- Grougiou, V., Leventis, S., Dedoulis, E., & Owusu-Ansah, S. (2014). Corporate social responsibility and earnings management in U.S. banks. *Accounting Forum*, 38(3), 155–169.
- Healy, P. (1996). Discussion of A Market-Based Evaluation of Discretionary Accrual Models. *Journal of Accounting Research (Wiley-Blackwell)*, 34(3), 107–115.
- Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4), 365–383.
- Hemingway, C. A., & MacLagan, P. W. (2004). Managers' Personal Values as Drivers of Corporate Social Responsibility. *Journal of Business Ethics*, 50(1), 33–44.
- Hericher, C., Bridoux, F., & Raineri, N. (2023). I feel morally elevated by my organization's CSR, so I contribute to it. *Journal of Business Research*, 169.
- Hong, H., Kubik, J. D., & Scheinkman, J. A. (2012). *Financial Constraints on Corporate Goodness* (Working Paper 18476). National Bureau of Economic Research.
- Hong, Y., & Andersen, M. L. (2011). The Relationship Between Corporate Social Responsibility and Earnings Management: An Exploratory Study. *Journal of Business Ethics*, 104(4), 461–471.
- Hribar, P., & Collins, D. W. (2002). Errors in Estimating Accruals: Implications for Empirical Research. *Journal of Accounting Research*, 40(1), 105–134.
- Hribar, P., & Jenkins, N. T. (2004). The Effect of Accounting Restatements on Earnings Revisions and the Estimated Cost of Capital. *Review of Accounting Studies*, 9(2–3), 337–256.
- IFRS. (2021). *IFRS European Union*. Available at: <https://www.ifrs.org>
- Jaggi, B. & Picheng Lee. (2002). Earnings Management Response to Debt Covenant Violations and Debt Restructuring. *Journal of Accounting, Auditing & Finance*, 17(4), 295–324.

- Jiraporn, P., Miller, G. A., Yoon, S. S., & Kim, Y. S. (2008). Is earnings management opportunistic or beneficial? An agency theory perspective. *International Review of Financial Analysis*, 17(3), 622–634.
- John Hagel III, J. S. B. and L. D. (2010, March 4). The Best Way to Measure Company Performance. *Harvard Business Review*.
- Joireman, J., Smith, D., Liu, R. L., & Arthurs, J. (2015). It's all Good: Corporate social responsibility reduces negative and promotes positive responses to service failures among value-aligned customers. *Journal of Public Policy and Marketing*, 34(1), 32–49.
- Jones, J. J. (1991). Earnings Management During Import Relief Investigations. *Journal of Accounting Research (Wiley-Blackwell)*, 29(2), 193–228.
- Kaszniak, R. (1999). On the Association between Voluntary Disclosure and Earnings Management. *Journal of Accounting Research (Wiley-Blackwell)*, 37(1), 57–81.
- Kellogg, I. (1991). *Fraud, Window Dressing, and Negligence in Financial Statements*. Shepard's/McGraw-Hill.
- Keung, E., Shih, M. S., & H. (2014). Measuring discretionary accruals: Are ROA-matched models better than the original Jones-type models? *Review of Accounting Studies*, 19(2), 736–768.
- Khanchel, I., & Lassoued, N. (2022). Is it hard to be different during the COVID-19 crisis? Investigating the relationship between corporate social responsibility and earnings management. *International Journal of Ethics and Systems*.
- Kim, I., & Venkatachalam, M. (2011). Are Sin Stocks Paying the Price for Accounting Sins? *Journal of Accounting, Auditing & Finance*, 26(2), 415–442.
- Kim, M., & Kim, Y. (2019). CSR and Shareholder Value in the Restaurant Industry: The Roles of CSR Communication Through Annual Reports. *Cornell Hospitality Quarterly*, 60(1), 69–76.
- Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33(3), 375–400.
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163–197.
- Kotzian, P. (2023). Carrots or sticks? Inferring motives of corporate CSR Engagement from empirical data. *Review of Managerial Science*, 17(8), 2921–2943.
- L Caylor, M., J Chambers, D., & Mutlu, S. (2022). Financial reporting uniformity: Its relation to comparability and its impact on financial statement users. *Journal of Business Finance & Accounting*, 49(9–10), 1457–1488.
- Li, Z. (Frank), & Thibodeau, C. (2019). CSR-Contingent Executive Compensation Incentive and Earnings Management. *Sustainability*, 11(12), Article 12.
- Liang, H., & Renneboog, L. (2017). On the Foundations of Corporate Social Responsibility. *The Journal of Finance*, 72(2), 853–909.
- Liang, H., & Renneboog, L. (2021). Corporate Social Responsibility and Sustainable Finance. In *Oxford Research Encyclopedia of Economics and Finance*.
- Liqi, Y., Tao, L., Erli, D., & Ting, Z. (2023). Corporate social responsibility and environmental performance: “Sincerity” or “concealment”? *Journal of Industrial Engineering and Engineering Management*, 37(2).
- Liu, C., Yuen, C. Y., Yao, L. J., & Chan, S. H. (2014). Differences in earnings management between firms using US GAAP and IAS/IFRS. *Review of Accounting and Finance*, 13(2), 134–155.

- Mackey, A., Mackey, T. B., & Barney, J. B. (2007). Corporate Social Responsibility and Firm Performance: Investor Preferences and Corporate Strategies. *Academy of Management Review*, 32(3), 817–835.
- Maglio, R., Rey, A., Agliata, F., & Lombardi, R. (2020). Connecting earnings management and corporate social responsibility: A renewed perspective. *Corporate Social Responsibility & Environmental Management*, 27(2), 1108–1116.
- McNichols, M. F. (2002). DISCUSSION OF The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *Accounting Review*, 77(4), 61.
- McWilliams, A., & Siegel, D. (2001). Corporate Social Responsibility: A Theory of the Firm Perspective. *The Academy of Management Review*, 26(1), 117–127.
- Mohmed, A., Flynn, A., & Grey, C. (2020). The link between CSR and earnings quality: Evidence from Egypt. *Journal of Accounting in Emerging Economies*, 10(1), 1–20.
- Mutuc, E. B., Lee, J.-S., & Tsai, F.-S. (2019). Doing Good with Creative Accounting? Linking Corporate Social Responsibility to Earnings Management in Market Economy, Country and Business Sector Contexts. *Sustainability*, 11(17), Article 17.
- Nguyen, Q., Kim, M. H., & Ali, S. (2024). Corporate governance and earnings management: Evidence from Vietnamese listed firms. *International Review of Economics & Finance*, 89, 775–801.
- O'Brien, R. M. (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality and Quantity*, 41(5), 673–690.
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate Social and Financial Performance: A Meta-analysis. *Organization Studies*, 24(3), 403–441.
- Petersen, M. A. (2009). Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches. *The Review of Financial Studies*, 22(1), 435–480.
- Petrovits, C. M. (2006). Corporate-sponsored foundations and earnings management. *Journal of Accounting and Economics*, 41(3), 335–362.
- Pirsch, J., Gupta, S., & Grau, S. L. (2007). A framework for understanding corporate social responsibility programs as a continuum: An exploratory study. *Journal of Business Ethics*, 70(2), 125–140.
- Porter, M. E., & Kramer, M. R. (2006, December). Strategy & Society: The Link Between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review*, 84(12), 78–92.
- Prior, D., Surroca, J., & Tribó, J. A. (2008). Are Socially Responsible Managers Really Ethical? Exploring the Relationship Between Earnings Management and Corporate Social Responsibility. *Corporate Governance: An International Review*, 16(3), 160–177.
- Rahman, M. J., Zhu, H., & Chen, S. (2023). Does CSR reduce financial distress? Moderating effect of firm characteristics, auditor characteristics, and covid-19. *International Journal of Accounting & Information Management*, 31(5), 756–784.
- Raleigh, P. (2014). *Corporate social responsibility*. Grant Thornton International Ltd. Home. Available at: <https://www.grantthornton.global>
- Refinitiv. (2022). Environmental, Social and Governance Scores. Refinitiv. Available at: <https://www.lseg.com>
- Rezaee, Z., & Tuo, L. (2019). Are the Quantity and Quality of Sustainability Disclosures Associated with the Innate and Discretionary Earnings Quality? *Journal of Business Ethics*, 155(3), 763–786.

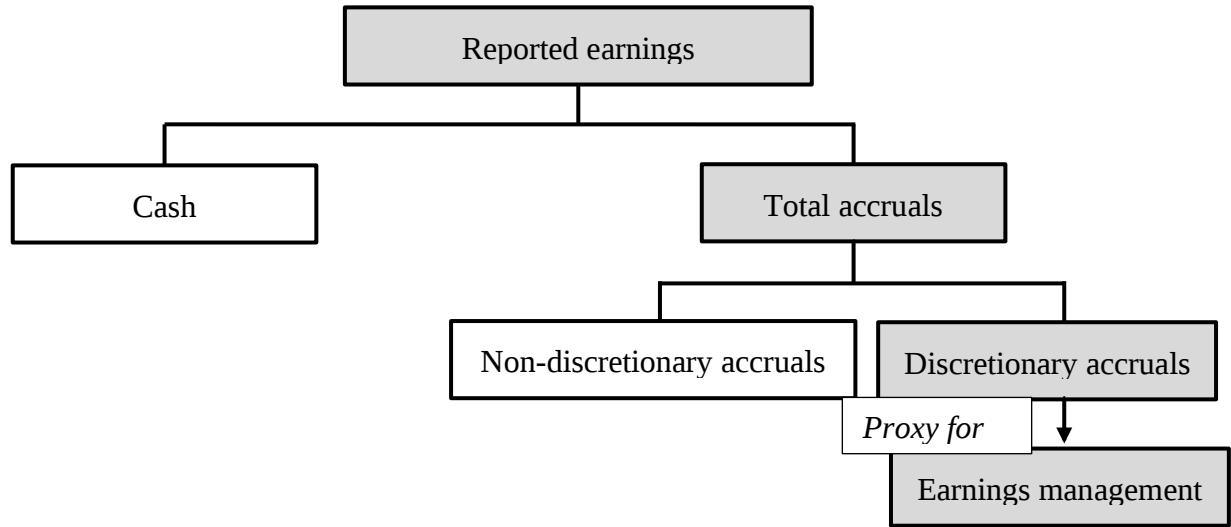
- Rojo-Suárez, J., & Alonso-Conde, A. B. (2024). Have shifts in investor tastes led the market portfolio to capture ESG preferences? *International Review of Financial Analysis*, 91, 103019.
- Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370.
- Ruwanti, G., Chandrarin, G., & Assih, P. (2019). Corporate social responsibility and earnings management: The role of corporate governance. *Humanities and Social Sciences Reviews*, 7(5), 1338–1347.
- Schipper, K. (1989). Earnings Management. *Accounting Horizons*, 3(4), 91–102.
- Shi, H., Liu, H., & Wu, Y. (2022). Are socially responsible firms responsible to accounting? A meta-analysis of the relationship between corporate social responsibility and earnings management. *Journal of Financial Reporting and Accounting*.
- Subramanyam, K. R. (1996). The pricing of discretionary accruals. *Journal of Accounting and Economics*, 22(1), 249–281.
- Suyono, E., & Farooque, O. A. (2018). Do governance mechanisms deter earnings management and promote corporate social responsibility? *Accounting Research Journal*, 31(3), 479–495.
- Tirole, J. (2001). Corporate Governance. *Econometrica*, 69(1), 1–35.
- Toukabri, M., Jilani, P. F., & Jemâa, O. B. (2014). The Interaction between Environmental Accounting Practices and Earnings Management. *Journal of Business Studies Quarterly*, 5(3), 99.
- Toukabri, M., & Kateb, I. (2023). The bidirectional relationship between corporate social responsibility and financial reporting quality: Does gender diversity matter? Evidence from US companies. *Journal of Corporate Accounting and Finance*, 34(2), 187–212.
- Wang, H., & Qian, C. (2011). Corporate Philanthropy and Corporate Financial Performance: The Roles of Stakeholder Response and Political Access. *Academy of Management Journal*, 54(6), 1159–1181.
- Wang, K., Li, T., San, Z., & Gao, H. (2023). How does corporate ESG performance affect stock liquidity? Evidence from China. *Pacific Basin Finance Journal*, 80.
- Warfield, T. D., Wild, J. J., & Wild, K. L. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics*, 20(1), 61–91.
- Yamaguchi, T. (2022). Earnings management to achieve industry-average profitability in Japan. *Asia-Pacific Journal of Accounting & Economics*, 29(2), 402–431.
- Yip, E., van Staden, C., & Cahan, S. (2011). *Corporate Social Responsibility Reporting and Earnings Management: The Role of Political Costs*. *Business & Finance Journal*, 2011, 5(3), 17-34.
- Yongtae Kim, Myung Seok Park, & Wier, B. (2012). Is Earnings Quality Associated with Corporate Social Responsibility? *Accounting Review*, 87(3), 761–796.
- Young, S. (1999). Systematic Measurement Error in the Estimation of Discretionary Accruals: An Evaluation of Alternative Modelling Procedures. *Journal of Business Finance & Accounting*, 26(7–8), 833–862.
- Zahra, S. A. (2005). Entrepreneurial Risk Taking in Family Firms. *Family Business Review*, 18(1), 23–40.
- Zang, A. Y. (2012). Evidence on the Trade-Off between Real Activities Manipulation and Accrual-Based Earnings Management. *Accounting Review*, 87(2), 675–703.
- Zhang, D., & Liu, L. (2022). Does ESG Performance Enhance Financial Flexibility? Evidence from China. *Sustainability*, 14(18), Article 18.

- Zhang, J., Li, Y., Xu, H., & Ding, Y. (2023). Can ESG ratings mitigate managerial myopia? Evidence from Chinese listed companies. *International Review of Financial Analysis*, 90, 102878.
- Zheng, Q., Luo, Y., & Maksimov, V. (2015). Achieving legitimacy through corporate social responsibility: The case of emerging economy firms. *Journal of World Business*, 50(3), 389–403.

Appendix

Appendix 1

Visualization of Reported Earnings to Earnings Management



Appendix 2

Variable Definitions for Estimating Discretionary Accruals

Currency: Euro

Variable	Definition	Calculation	Data Source
$TA_{i,t}$	Total Accruals calculated as net income for firm i in year t less cash flow from operations for firm i in year t	$TA_{i,t} = NI_{i,t} - CFO_{i,t}$	Capital IQ
$NI_{i,t}$	Net Income for firm i in year t	None	Capital IQ
$CFO_{i,t}$	Cash Flow from Operations for firm i in year t	None	Capital IQ
$A_{i,t-1}$	Total Assets for firm i in year $t-1$	None	Capital IQ
$\Delta Rev_{i,t}$	Change in revenue measured as revenue for firm i in year t less revenue for firm i in year $t-1$	$\Delta Rev_{i,t} = Rev_{i,t} - Rev_{i,t-1}$	Capital IQ
$\Delta Rec_{i,t}$	Change in accounts receivables measured as accounts receivables for firm i in year t less accounts receivables for firm i in year $t-1$	$\Delta Rec_{i,t} = Rec_{i,t} - Rec_{i,t-1}$	Capital IQ

PPE _{i,t}	Gross Property, Plant and Equipment for firm <i>i</i> in year <i>t</i>	None	Capital IQ
ROA _{i,t}	Return on Assets, calculated as net income for firm <i>i</i> in year <i>t</i> scaled by total assets for firm <i>i</i> in year <i>t-1</i>	ROA _{i,t} = NI _{i,t} / A _{i,t-1}	Capital IQ

Estimating discretionary accruals using the Modified Jones model:

$$\frac{TA_{i,t-1}}{A_{i,t-1}} = \beta_0 \frac{1}{A_{i,t-1}} + \beta_1 \frac{(\Delta Rev_{i,t} - \Delta Rec_{i,t})}{A_{i,t-1}} + \beta_2 \frac{PPE_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

Estimating discretionary accruals using the Kothari model:

$$\frac{TA_{i,t-1}}{A_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{A_{i,t-1}} + \beta_2 \frac{\Delta Rev_{i,t}}{A_{i,t-1}} + \beta_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \beta_4 ROA_{i,t} + \varepsilon_{i,t}$$

Appendix 3

OLS Model Assumptions

- (1) Linearity: The regression model exhibits linearity in the coefficients and the error term.
- (2) No endogeneity: The independent variables are uncorrelated with the error term.
- (3) Normality of residuals: The error term has a population distribution with a mean of zero.
- (4) Homoscedasticity: The error term has constant variance.
- (5) No autocorrelation: Observations of the error term are uncorrelated with each other.
- (6) No multicollinearity: There is no correlation among the independent and control variables.

Appendix 4

Country Distribution

Country	Firm-Year Obs.	Percentage (%)
Austria	334	1.20%
Belgium	750	2.70%
Bulgaria	428	1.54%
Croatia	439	1.58%
Cyprus	378	1.36%
Czech Republic	74	0.27%
Denmark	849	3.06%
Estonia	161	0.58%
Finland	1232	4.44%

France	3571	12.86%
Germany	3510	12.64%
Greece	1001	3.60%
Hungary	175	0.63%
Ireland	408	1.47%
Italy	1331	4.79%
Latvia	58	0.21%
Lithuania	194	0.70%
Luxembourg	354	1.27%
Malta	132	0.48%
Netherlands	948	3.41%
Poland	3639	13.10%
Portugal	313	1.13%
Romania	631	2.27%
Slovakia	9	0.03%
Slovenia	96	0.35%
Spain	914	3.29%
Sweden	5850	21.06%

Appendix 5

Variance Inflation Factor: VIF

	MJM_VIF	KM_VIF
CSR_Score	2.274	2.282
Size	2.878	2.883
MB	1.410	1.410
ROA	1.403	1.404
Lev	1.488	1.483
Age	1.641	1.645

Appendix 6

Variable Definitions for MJM Regression and KM Regression

Currency: Euro

Variable	Definition	Calculation	Data Source
MJM_DA _{i,t}	The absolute value of discretionary accruals calculated using the Modified Jones model, for firm <i>i</i> in year <i>t</i>	Equation 5: $\mathcal{E}_{i,t}$	Capital IQ
KM_DA _{i,t}	The absolute value of discretionary accruals calculated using the Kothari model, for firm <i>i</i> in year <i>t</i>	Equation 5: $\mathcal{E}_{i,t}$	Capital IQ

CSR_Score _{i,t}	ESG_Score calculated by Eikon and used interchangeably with CSR_Score. CSR_Score reflects CSR performance and is retrieved as a value between 0-100, for firm <i>i</i> in year <i>t</i>	CSR_Score _{i,t} = ESG_Score _{i,t}	Eikon
ROA _{i,t}	Return on Assets, calculated as net income for firm <i>i</i> in year <i>t</i> scaled by total assets for firm <i>i</i> in year <i>t-1</i>	ROA _{i,t} = NI _{i,t} / A _{i,t-1}	Capital IQ
Size _{i,t}	Size calculated as the natural logarithm of market capitalization for firm <i>i</i> in year <i>t</i>	Size _{i,t} = log(MC _{i,t})	Capital IQ
MB _{i,t}	Market-to-book ratio calculated as the market capitalization for firm <i>i</i> in year <i>t</i> scaled by total equity of firm <i>i</i> in year <i>t</i>	MB _{i,t} = MC _{i,t} / E _{i,t-1}	Capital IQ
Lev _{i,t}	Leverage calculated as the long-term debt for firm <i>i</i> in year <i>t</i> scaled by total assets for firm <i>i</i> in year <i>t</i>	Lev _{i,t} = MC _{i,t} / A _{i,t}	Capital IQ
Age _{i,t}	Age calculated as the natural logarithm of 1 + number of years the firm has been active. The number of years the firm has been active is calculated as the fiscal year less year founded	Age _{i,t} = log(1 + year founded)	Capital IQ

MJM regression and KM regression.

Main regression models for studying the relationship between CSR and EM:

$$MJM_DA_{i,t} \text{ or } KM_DA_{i,t} = \beta_0 + \beta_1 CSR_Score_{i,t} + \beta_2 Size_{i,t} + \beta_3 MB_{i,t} + \beta_4 ROA_{i,t} + \beta_5 Lev_{i,t} + \beta_6 Age_{i,t} + Year\ FE + Industry\ FE + Country\ FE + \varepsilon_{i,t}$$

Robustness Tests

Appendix 7

	<i>Hausman Test</i>	
	MJM	KM
P-Value	0.9969	0.9971
Null Hypothesis	<i>Fail to reject</i>	<i>Fail to reject</i>

Appendix 8

Pooled OLS Regression Model (Excluding Sweden)

<i>Variable</i>	<i>Dependent Variable</i>	
	MJM_DA	KM_DA
Constant	0.082 ^{***} (0.011)	0.077 ^{***} (0.010)
CSR_Score	-0.00001 (0.0001)	-0.0001 (0.0001)
Size	-0.006 ^{***} (0.001)	-0.005 ^{***} (0.001)
MB	0.001 ^{**} (0.0005)	0.001 ^{***} (0.0004)
ROA	-0.092 ^{**} (0.036)	-0.047 (0.030)
Lev	0.019 (0.013)	0.011 (0.013)
Age	0.0004 (0.002)	-0.0004 (0.001)
Year FE	YES	YES
Country FE	YES	YES
Industry FE	YES	YES
R ²	0.174	0.177
Adjusted R ²	0.147	0.149
F-Statistic	7.871 ^{***}	7.830 ^{***}

Note:

*, **, *** Indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively, based on two-tailed tests.

All test statistics and significance levels are calculated based on the robust standard errors clustered at firm and year level and with year, industry and country fixed effects.