Earnings Management, Stakeholders and the impact of Competition and Political Representation

PhD Thesis

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Abstract

This PhD thesis is comprised of three individual research papers, examines issues around earnings management and its implications for firms and stakeholders, and provides new insights on factors that drive or mitigate the accounting practice of earnings management. In the second chapter, I examine whether earnings management and managerial overconfidence are factors that affect the relationship of the firm with its customers and employees. Furthermore, I examine the incremental effect of managerial overconfidence on the association between earnings management and stakeholder relationships, focusing on customers and employees. I find that both earnings management and managerial overconfidence improve the relationship between the firm and its customers, while I find some evidence that they deteriorate the relationship of the firm with its employees. I do not find evidence to suggest that managerial overconfidence acts as a factor amplifying the association between earnings management stakeholder relationships. The results remain consistent in various robustness tests, including alternative measures, instrumental variable regressions, and difference in differences approach. In the third chapter, I assess whether product market competition amplifies the negative relationship between ESG and earnings management. ESG engagement on its own is effective in mitigating earnings management. However, engagement in ESG practices is more important in limiting earnings management by the firm when competition is high. Disclosing ESG related information, irrespective of the actual ESG performance of the firm, also reduces earnings management when competition is high as managers voluntarily provide more information about the firm's operations. In the fourth chapter, I assess whether political representation amplifies the negative relationship between ESG engagement and earnings management. I find that when Democrats are in power as elected state governors, ESG engagement is effective in mitigating earnings management, as the Democratic party places more emphasis on ESG policies. A one standard deviation increase in ESG score leads to a 0.79% reduction in firms' earnings management when

Democrats are in power. Moreover, engagement in ESG practices is a better hedge against earnings management for firms incorporated in states with governors from the Democratic party compared to Republican states. Results remain consistent when using the control of the Senate suggesting that political representation has a persistent effect on ESG practices across different government levels.

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Table of Contents

List of Tables

List of abbreviations

ACT	Current Assets - Total
AR	Accounts Receivable
AT	Assets - Total
B2B	Business to Business
B2C	Business to Customer
BEA	Bureau of Economic Analysis
BIGAUD	Big (4) Auditor
BP	British Petroleum Company PLC
CEO	Chief Executive Officer
CEQ	Common/Ordinary Equity - Total
COGS	Cost of Goods Sold
CRM	Customer Relationship Management
CRSP	Center for Research in Security Prices
CS	Classification Shifting
CSHO	Common Shares Outstanding
CSR	Corporate Social Responsibility
DA	Discretionary Accruals
DD1	Long-Term Debt Due in One Year
DEM	Democrats
DLC	Debt in Current Liabilities - Total
DLTT	Long-Term Debt - Total
ECGI	European Corporate Governance Institute
EM	Earnings Management
ESG	Environmental Social Governance
GAAP	Generally Accepted Accounting Principles
HHI	Herfindahl–Hirschman Index
IFRS	International Financial Reporting Standards
IV	Instrumental Variable
KPMG	Klynveld Peat Marwick Goerdeler
LCT	Current Liabilities - Total
LEV	Leverage
LT	Liabilities - Total
MB	Market-to-Book
MTR	Marginal Tax Rate
NA	Normal Accruals
OECD	Organisation for Economic Co-operation and Development
OIADP	Operating Income After Depreciation
OLS	Ordinary Least Squares

PPE	Property Plant and Equipment
PRBA	Postretirement Benefit Asset
PRCC	Price Close - Annual
PRI	Principles of Responsible Investment
REM	Real Earnings Management
REP	Republicans
ROA	Return on Assets
SD	Standard Deviation
SEC	Securities and Exchange Commission
SIC	Standard Industrial Classification
TNIC	Text-based Network Industries Classification
TNICHHI	Text-based Network Industries Classification HHI
TXDITC	Deferred Taxes and Investment Tax Credit
UK	United Kingdom
US	United States
USA	United States America

1. Introduction

1.1 An overview of earnings management and motives

Earnings management occurs when managers use their own judgement when it comes to financial reporting and in structuring transactions (Healy and Whalen, 1999). Managers use earnings management to alter financial reports in an effort to mislead stakeholders and to influence contractual outcomes that depend on reported accounting numbers. Although prior research provides evidence that earnings management is often related to discretionary accruals, and as a result is not necessarily inconsistent with GAAP (in the US) (Merchant and Rockness, 1994; Ball et al., 2000; Chung et al., 2002; Peasnell et al., 2005; Ibrahim, 2009), it is considered an unethical managerial practice (Geiger et al., 2006; Barua et al., 2010; Kim et al., 2012) and has attracted a lot of research interest. Literature also finds a thin line between earnings management and financial fraud (Dechow and Skinner, 2000; Elias, 2002). Two landmark examples of large-scale accounting scandals caused by earnings management are those of Enron in 2001 and WorldCom in 2002.

Despite earnings management having value destroying effects for the firm (Huang et al., 2009), managers have different motives to engage in earnings manipulation. Incentives for earnings management are provided by management-compensation plans (Healy, 1985; Holthausen et al., 1995; Guidry et al., 1999), debt contracts and efforts to avoid debt covenant violations (Palepu, 1990; DeAngelo et al., 1994; DeFond and Jiambalvo, 1994; Sercu et al., 2006), and regulatory cases (Jones, 1991; Cahan, 1992; Key, 1997). Managers may also engage in earnings management to influence stock prices and stock offerings (Teoh et al., 1998; Erickson and Wang, 1999, Shivakumar, 2000), to avoid losses (Burgstahler and Dichev, 1997; Burgstahler and Eames, 2003) and to meet analysts' and management's forecasts (Degeorge et al., 1999). Another branch of literature also identifies managerial personality traits such as overconfidence (Schrand and Zechman, 2012) as drivers of earnings management. Fields et al. (2001) categorised

incentives for earnings management into three main groups. These are: contractual arrangements, asset pricing and third-party decisions.

1.2 Earnings management practices

As earnings management requires a certain degree of judgement from the part of the managers, it can be difficult to detect earnings management practices. However, literature has identified three main types of earnings manipulations. First, and most easily applicable compared to other forms of earnings management (Braam et al., 2015), is earnings management through discretionary accruals. As discretionary accruals are "the component most easily subject to successful managerial manipulation" (Teoh et al., 1998) is it a tool at the hands of the managers for earnings management. Earnings management through discretionary accruals falls within the generally accepted accounting principles (GAAP) and involves accounting choices that ''obscure'' or ''mask'' true economic performance of the firm (Dechow and Skinner, 2000; Gunny, 2010)

Second, managers may engage in real earnings management (REM), or real activities manipulation. REM occurs when managers' actions attempt to change the timing or the structuring of a firms' operation, an investment, or financing of a transaction to influence the output of the accounting system. In contrast to earnings management through discretionary accruals, which affects the choice of accounting methods used to represent the underlying operating activities of the firm, REM changes the actual operating activities of the firm (Gunny, 2010). Examples of REM include engagement in overproduction, to decrease the cost of goods sold (COGS) and cutting investments in research and development (R&D) to boost current period earnings.

A third and most recent form of earnings management is through classification shifting (CS). This form of earnings management refers to the classification shifting of income-decreasing expenses from core to special items and has received increasing research interest following the pioneer study of McVay (2006). CS bypasses the accounting system by misclassifying core

expenses as noncore within the income statement, and does not affect bottom-line income, effectively increasing core earnings (McVay, 2006).

1.3 Earnings management and its implications for stakeholders

Earnings management is not only a tool at the hands of the managers, often used for opportunistic reasons (Siregar and Utama, 2008), but it has significant implications for various groups of stakeholders. Extensive literature focuses on earnings management and its implications for financial stakeholders (shareholders and bondholders). Earnings management practices adversely affect the quality of firms' financial reports and increase information asymmetries between owners (shareholders) and managers (Hadani et al., 2011). Furthermore, in modern business environments, ownership is separated from control, and investors rely on the information produced by managers. To that end, earnings management misleads investors, and lead to resource misallocation (Bradshaw et al., 2001). Prior research also documents increased costs of capital (Lang and Lundholm, 1996; Botosan, 1997), declining stock prices (Dechow et al., 1996), and increased firm risk (Chatterjee et al., 1999) following engagement in earnings management by the firm. An example of the effects of extensive earnings management is that of Xerox between 1997 and 2001, when the firm was forced by SEC to restate reported earnings by $2.1 billion and reduce net income by $1.4 billion.

Much of the earnings management literature also documents a positive association between the level of debt and accruals-based earnings management because of the firm's proximity to restrictive debt covenants (DeFond and Jiambalvo, 1994; Jaggi and Lee, 2002). Gupta et al. (2008) also find a positive relation between short-term debt and earnings management. Firms with negative news are more likely to hide that news using discretionary accruals when the firm has more short-term debt. This is also consistent with the financial distress theory. Firms may also engage in earnings management to convince potential lenders to subscribe in terms they would not have accepted otherwise (Sercu et al., 2006).

The decision of the firm to engage in earnings manipulation also impacts other non-financial stakeholders, such as employees. Firms' human capital is an important driver of firm performance (Ployhart and Moliterno, 2011). In an effort to ensure job security, working conditions and better pay, employees often engage in union negotiations. However, the argument that managers structure the accounting choices of their firms to influence outcomes of collective-bargaining processes, like union negotiations, has been studied extensively. Bova (2013) argues that when unionized employees negotiate higher salaries, managers have incentives to signal a negative outlook to its employees. Sparks and Wilton (1971), Horwitz and Shabahang (1971), and Tomczyk (1975) also document a relationship between accounting profit and wage outcomes following collective-bargaining sessions.

Therefore, firms can manage earnings downwards in the short run to justify its inability to provide enhanced pay and benefits (Dou et al., 2016). The justification behind this is that employees bear significant costs of involuntary unemployment (Gibbons and Katz, 1991; Gruber, 1997) and thus they care about the financial stability of their firms (Brown and Matsa, 2016) such as earnings performance. On the other hand, firms will manage earnings upwards in the long run in order to signal their financial health, their ability to ensure fair employee treatment, to attract the most talented employees, and reduce cost of hiring and retaining employees (Dou et al., 2016).

Similar to employees, customers are more likely to purchase from and stay loyal to firms which demonstrate they can honour future commitments to their customers (Valenzuela et al., 2010). Firms then can manage earnings upwards to signal their financial ability to do so. Furthermore, by downwards earnings management, firms can lower their taxable income, and thus corporate taxes (Coppens and Peek, 2005; Haga et al., 2018). Some or all of these gains can be transferred to customers as product price reduction or increased RnD expenses to provide new products to customers. In contrast, as earnings management is an unethical accounting choice, that deteriorates the firms' information environment, it contradicts the notion of environmental, social and governance standard practice by the firm (ESG) (Kim et al., 2012),

and can damage the firms reputation in the product market. The earnings management literature and its implications for various stakeholder groups is extensive and covers institutional investors (Garel et al., 2021; Miller et al., 2021), firms' suppliers (Raman and Shahrur, 2008), policy uncertainty (Yung and Root, 2019) and others.

1.4 Thesis aims and main findings

This thesis aims to expand the literature around earnings management activity and motives, and to provide new insights on the relationship between ESG and earnings management as well as document how this relationship is impacted by external factors. Therefore, this study focuses on three main topics. First, having acknowledged the importance of stakeholder relationships for the success of the firm, I aim to understand and quantify the implications of earnings manipulation on various stakeholder groups and their relationships with the firm. There is extant literature on the relationship between earnings management and financial stakeholders (shareholders and bondholders) as well as suppliers. However, there is sparce evidence on the association between earnings management and customers and employees. Moreover, existing research only examines earnings management and its relationship with only certain aspects of these groups of stakeholders, such as corporate profitability (Markarian and Santalo, 2014; Tang and Chen, 2020) and employee turnover likelihood (Gao et al., 2018). I address this issue by focusing on these two stakeholder groups, while also attempting to capture their relationship with the firm as a whole. Furthermore, to understand the motives behind earnings management and their relationship with customers and employees, I incorporate into the analysis a managerial personality trait, managerial overconfidence. Research has shown this personality trait often acts as a driver of earnings manipulation (Schrand and Zechman, 2012; Hsieh et al., 2014).

I find evidence that firms that engage in earnings management build stronger relationships with their customers. These firms portrait themselves, through earnings manipulation, as having the financial capacity to meet customers' expectations, offer customer benefits and others. Furthermore, an overconfident CEO also has the same effect on the relationship of the firm with

its customers. The latter view CEO overconfidence as vision for the company's future, increasing benefits for loyal customers, rather than a decision bias. There is no evidence to suggest that CEO overconfidence reenforces earnings management' positive effect on customer relationships. As firms' earnings management decisions and CEO overconfidence positively affects the relationship of the firm with its customers, I also document a negative effect on the relationship of the firm with its employees. As company insiders, employees are in a better position, than customers, to understand the true financial health of their firms, while earnings management are often used to minimize cash and benefits pay-outs to employees, worsening their relationship with the firm. An overconfident CEO also negatively impacts employee relationship with their firm, as the CEO is viewed unfavourably by them. Once again, I find no evidence to suggest that CEO overconfidence reenforces the negative effect earnings management has on employee relationships. Given the effects of earnings manipulation on various stakeholder groups, such as customers and employees that were the focus of this part of the study, suppliers (Raman and Shahrur, 2008), and financial stakeholders (DeFond and Jiambalvo, 1994; Dechow et al., 1996; Jaggi and Lee, 2002; Pappas et al., 2019), as well as the numerous accounting scandals identified in the Finance literature such as Enron' (2001) and Xerox' (2002), I turn to consider a commonly examined hedge against earnings management, firms' environmental, social, governance and economical standards (commonly known as ESG). This motivates my second chapter.

Firms' actions and their implications for various stakeholder groups other than shareholders, such as social welfare, has received increasing attention from both the firms and the public. Firms themselves have also significantly increased their ESG engagement and reporting as a result. The Governance & Accountability Institute, which measures interest in ESG from corporate perspective, in 2018, reported that 86% of S&P 500 firms published sustainability or corporate responsibility reports. The same number was just under 20% in 2011. Furthermore, the Principles of Responsible Investment (PRI), an agreement to incorporate ESG issues into investment analysis and

decision-making, is signed by more than 3000 institutional investors and service providers. Following increased interest by investors and managers, ESG has attracted significant research interest from the Sustainable Finance literature (Gillan et al., 2021), while Accounting literature examines ESG and its implications for various accounting practices such as earnings management. The general consensus is that firms that choose to allocate resources in ESG investing, tend to limit their engagement in earnings management as a result, to align more with high ESG standards. In contrast, a counter argument, that managers increase their firms' ESG standards to build corporate reputation and stakeholder's trust so they can engage in an even greater levels of earnings management, has also been examined. Prior et al. (2008), argue that managers use socially responsible practices to justify their discretionary judgment on firms' accruals and engage in more earnings management. However, Business literature examines product market competition as a factor affecting firms' decisions to engage in both ESG and earnings management respectively, but no prior research examines ESG's ability to limit earnings management under different level of competition in the product market. Therefore, in my second chapter, I focus on the effectiveness of ESG to limit firms' earnings management practices in a very competitive business environment in order to gain a better understanding of what factors drive such behaviours by the firm.

I find evidence that significant competitive pressure in the product market provides managers with incentives to manipulate earnings to either meet or beat accounting earnings reported by industry peers (DeFond and Park, 1999) or to protect their jobs in a competitive environment (Tang and Chen, 2020). Furthermore, increased competition also encourages firms to allocate resources in ESG practices in an effort to acquire a much-needed competitive advantage (Jones, 1995; Hillman and Keim, 2001) in terms of corporate reputation (Fombrun and Shanley 1990; Verschoor 2005; Linthicum et al. 2010) and long-term financial performance (Waddock and Graves 1997; Griffin and Mahon 1997; Roman et al. 1999). These findings are consistent with the Business and Finance literature which argue that external factors, such as the level of competition in the product markets, have the ability to influence

managers decision making in areas such as financial reporting and ESG engagement. If my predictions are true, I expect to find ESG's mitigating effect on earnings management to be stronger for firms under significant competitive pressure. This is because if the firm is facing high competition in the product market, they are more inclined to stick to trustworthiness that comes with ESG investing and abstain from earnings management as a result. I find that product market competition significantly amplifies the negative relationship between ESG and earnings management by the firm. A one standard deviation increase in ESG score, for firms facing high competition, reduces earnings management by 0.90%.

In my second chapter I find that external factors in the product market influence managers' decisions and ESG's ability to mitigate earnings management. However, the level of competition in the product markets, as well as monitoring and managing anticompetitive behaviours, such as price setting, is regulated and influenced directly by policy makers. Firms' incentives to engage in both earnings management and ESG practices are also affected by the actions of policy makers. As such, my third chapter focuses on current political representation, and its implications for earnings management and ESG's ability to mitigate such practices. This study is further motivated by the bipartisan political setting: the Democratic Party and the Republican Party, provided by the US. Both sides differ in their preferences for economic and social policies and provide a powerful test for this part of the study.

Literature documents that the Democratic Party focuses more on ESG-related issues, including environmentally friendly policies, enforcement of anti-discrimination laws, and put in place employee protection mechanisms (Hutton et al., 2015). The Republican Party chooses to abstain from costly initiatives such as investing in environmental protection unless they provide immediate benefits for the firms (Hutton et al., 2015). Furthermore, the Democratic Party directly monitors firms' behaviour and punishment of corporate fraud through market intervention and regulation (Hutton et al., 2015). The Republican Party, on the other hand, leaves corporate discipline to the market and firms' stakeholders, such as institutional investors who

intervene if the firm's behaviour indicates financial reporting fraud (Chung, Firth, and Kim, 2002; Park and Shin, 2004).

Although prior research examines the implications of policy makers on firms' ESG engagement in the US (Hong and Kostovetsky, 2012; Di Giuli and Kostovetsky, 2014), no prior research examines the direct effect of current political representation on firms' earnings management decisions, or ESG's ability to limit earnings management under a Democratic or a Republican Party policy. Therefore, in the third empirical chapter, I attempt to close this gap in literature and establish the relationship between firms' political environment and earnings management, as well as how political environment affects ESG's mitigating effect on earnings management. The rationale behind the third chapter of this study, is that the Democratic Party's commitment to high ESG standards effectively pressures firms to adhere to stricter ESG practices. Firms then abstain from earnings manipulation, in line with the notion of ESG that firms should provide more transparent financial information. In order to establish the relationship between political representation, ESG, and earnings management, I focus on the US, as it provides a polarised bipartisan political setting, with the two parties (Democrats and Republicans) often representing very conflicting views and policies (Xu, 2020). Furthermore, I examine this relationship at the state level as the role of the governor at the state level is similar to that of the president at the national level, while state governors exercise a high degree of autonomy (Beland, 2015). Furthermore, as the change of state governors, following gubernatorial elections, is not static across different states and years, it is a more appropriate test, in contrast to the change of US president which occurred only ones in the sample period. The differences between political representation at the state level and the federal presidency level allow me to assess the aforementioned relationship, while incorporating state policies applied to state firms (using historic state of incorporation data) rather than a "one size fits all" approach at the federal level, aiming to gain insights on how regulatory policy environment impacts earnings management, and ESG's ability to limit earnings management.

I find that firms operating in Democratic leaning states (at the state governor level or senator level) engage in more earnings management practices. The rationale is that policy actions by the Democratic party encourage firms to manage earnings as a result. Stakeholders, such as institutional investors, also have less incentives to monitor firms' earnings management behaviour (Chung, Firth, and Kim, 2002; Park and Shin, 2004), as the Democratic party signals its willingness to punish such practices. Furthermore, when Democrats are in power (as State governors and Senators) ESG engagement is more effective in mitigating earnings management. A one standard deviation increase in ESG score leads to a 0.79% reduction in firms' earnings management when Democrats are in power. For my examination I further employ a difference in differences approach, following similar methodology with changes to firms' political environment (Carvalho and Guimaraes, 2018; Fink and Stahl, 2020), and assess my Hypothesis relative to a change in state governors' affiliated party, following gubernatorial elections, as an exogenous shock to political representation. Additional tests, including a placebo effect regression and alternative measures of political representation (as the state's elected senators' affiliated party), are also employed for robustness reasons. Similar approach has been followed for all three parts of this research.

1.5 Thesis contributions

The main contributions of this thesis can be summarized as follows. First, I extend the branch of literature around the accounting practice of earnings management and examine its relationship with stakeholders. I focus on customers and employees, in the context of their relationship with the firm, as there is sparse evidence of causality between earnings management and these groups of stakeholders. To the best of my knowledge, this is the first study that focuses on earnings management, and non-financial stakeholders, other than suppliers. Second, I incorporate managerial overconfidence into the analysis, as a factor that drives earnings management. I provide evidence of a statistically and economically significant impact of both earnings management and managerial overconfidence on firms' relationship with its customers and

employees. Specifically, I show that firms' engagement with earnings management, as well as an overconfident CEO, better the relationship of the firms with their customers. Customers choose to purchase from and stay loyal to firms which signal superior financial health, often through earnings management, expecting loyalty benefits, superior products, and others. Customers also view favourably an overconfident CEO, as being able to deliver the company's long-term vision. Jack Welch (General Electric) and Steve Jobs (Apple Inc.) both displayed overconfidence at some point during their tenure (Kenny et al., 2018). I also find evidence that earnings management and an overconfident CEO deteriorate the relationship of the firm with its employees. As corporate insiders, employees are in a better position, compared to customers, to understand the company's true financial performance, while managing earnings can be used by managers to affect employees' salary, benefits, work environment and others. Furthermore, taking into account personality trains of the firm they work for, employees do not view an overconfident CEO as favourably. I find no evidence to suggest that earnings management's effect on customers and employees is reinforced by the overconfidence of the CEO. Third, I further expand the literature around ESG as a way of limiting earnings management by the firm, and I examine this relationship under the context of a competitive environment in the product market. Although prior research establishes ESG's mitigating ability on earnings management practices (Kim et al., 2012), no prior study considers differences in the competitive pressure in a business environment. I document that ESG's ability to limit earnings management is more robust when the firm faces highly competitive pressure in the product market, compared to less competitive environments. Forth, in an effort to gain more insights as to what drives earnings management and having examined the business environment in terms of competition, I now examine the effect of the political environment on firms' decision to engage in earnings manipulation. I complement the earnings management and policy making literature, by investigating firms' earnings management in a Democrat versus Republican political environment in the US, two sides with conflicting views and impact on such practices. More

specifically, I find that firms that have their historic headquarters in states controlled by Democrats, engage in more extensive earnings management, compared to firms in states controlled by Republicans. Fifth, similarly to my previous approach, I examine ESG's mitigating effect on earnings management under a Democrat versus Republican political environment, as their views on ESG issues significantly differs (Hutton et al., 2015). More specifically, I find that for firms in a state controlled by Democrats, ESG is more effective in limiting earnings management, compared to firms in a state controlled by Republicans. The rationale is that Democrats place great emphasis on ESG related issues, and thus apply pressure to company's managers to invest more in ESG practices. Allocating resources in ESG investing then leads companies to limit their earnings management, in order to stay in line with high ESG standards, or to avoid damaging the reputation they build from ESG investing. In the long term, superior financial results that come with ESG investing also limits firms' incentives to manage earnings (Waddock and Graves 1997; Griffin and Mahon 1997; Roman et al. 1999). Furthermore, the Democratic Party's signalling of its willingness to punish lower ESG standards also limits earnings management. These findings aim to assist policy makers and regulators to gain a better understanding of the drivers of earnings management as an unethical business practice (Elias, 2002), its implications for stakeholders (i.e., customers and employees), and the impact of external factors (i.e., managerial overconfidence, competition, and political environment) on ESG's ability to act as a hedge for earnings management.

This study is of interest to companies, as it provides insights on earnings management as a widespread accounting practice, both to a small extent (such as accounting errors) and an established practice (such as due to managerial opportunism). Furthermore, this study is of great interest to regulators and policymakers, as it directly connects political environment and policy makers' actions to earnings management and ESG engagement by firms. As the main measure used to capture political representation is the political affiliation of the state governor, as well as of the elected state senators, results of this study are of interest to such policymakers when deciding on

policy changes at the state level. It sheds light on the effects of current political representations and their actions, in a polarised political setting like that of the US, on such practices. Results of this study are also of interest to policymakers at the federal level as this study uses US data. Given the recent trend in many Western counties, such as Switzerland, France, Denmark, Canada, as well as New Zealand, of adopting more polarised bipartisan political settings (Boxell et al., 2021), like that of the US, evidence from this study using US data could be extrapolated to other Western countries as well. Lastly, this study also contributes to investors, given the long-term damage of earnings management to firms' value (Huang et al., 2009) and the numerous accounting scandals around earnings management (such as Enron in 2001). For example, investors can choose to allocate their investments in states governed by a Republican governor, as results of this study suggest a positive association between a Democrat state governor and earnings management, with the accompanied long-term value destroying effects of earnings management (Huang et al., 2009). Moreover, investors that follow recent trends in responsible investing, might choose to invest in states governed by the Democratic Party, who's higher commitment to ESG also affects firm's earnings management. Finally, as this study incorporates various stakeholder groups, such as customers and employees, as well as firms in highly competitive industries and policy makers, this study could be of interest to a much wider variety of stakeholder.

1.6 Structure of the thesis

The remaining of this thesis is as follows. In Chapter 2, I document earnings management and managerial overconfidence's joint effect on the relationship of the firm with its customers and employees. I also assess the incremental effect managerial overconfidence has on the association between earnings management and customers and employees. Chapter 3 examines ESG's ability to limit earnings management and if increased competition in the product market drives both earnings management and ESG's ability to limit such practices. In Chapter 4, I focus on policy makers and political representation in the US and provide new insights on the drivers of earnings management and ESG's mitigating effect on earnings management. Chapter 5 provides a

summative discussion of the findings of this research and its limitations as well as offering suggestions for future research and a conclusion.

2. Does managerial overconfidence affect relationships of the company with its stakeholders through earnings management?

2.1 Introduction

It is well established that managers' cognitive bias, like overconfidence, influence financial reporting and earnings management decisions (Malmendier and Tate, 2005a, 2005b; Gervais et al., 2011). Earnings management is involved in numerous accounting scandals (Yu, 2008), such as the $2.1 billion restatement of Xerox's accounts in 2002 (Bergstresser and Philippon, 2006). Earnings management has a direct impact on financial stakeholders leading to higher cost of capital (Botosan, 1997; Lang and Lundholm, 1996) and poor share price performance (Dechow et al., 1996). But financial decisions may also influence other non-financial stakeholders, such as customers, employees, and suppliers in terms of loyalty, productivity, and reputation (e.g., Titman, 1984; Cornell and Shapiro, 1987; Itzkowitz, 2013; Ghaly et al., 2015). The effects of earnings management on suppliers and financial stakeholders have been studied extensively. However, there is scant evidence on the relationships between earnings management and employees and customers. Yet, it is established in prior literature that human capital is considered an important asset for firms (Ployhart and Moliterno, 2011), while failing to build firm customer relationships result in risk of losing long-term financial performance, such as customer lifetime value and customer equity (Wiesel et al., 2008). Therefore, the effects of the widespread accounting practice of earnings management on both should be explored further. I investigate the link between earnings management and the relationship between a company and two stakeholder groups: employees and customers through the managerial overconfidence channel.

Jensen (2005) argues that managers should make decisions by accounting for the interests of all stakeholders of the firm. Adopting a more distinct stakeholder engagement model is part of a recent trend of integrating social and environmental issues in the firm's operations (Eccles et al., 2014).

If a stakeholder perceives they are being unfairly treated they may choose to terminate their relationship with the firm (Clarkson, 1995). The importance of understanding stakeholder interests has led to what is known as stakeholder engagement, an engagement that is a morally neutral practice (Greenwood, 2007) but can help in building lasting and mutually beneficial relationships with stakeholders (Maak, 2007; Eccles et al., 2014). In return for building long lasting relationships with all stakeholders, the firm can experience higher financial returns (Henisz et al., 2014). This is because firms develop intangible assets in the form of strong stakeholder relationships (Eccles et al., 2014), which then act as competitive advantages (Hillman and Keim, 2001). Stakeholders use financial information reported by the firm to determine their desired relationship with the firm (Eccles and Serafeim, 2014). As a result, financial reporting decisions are often part of stakeholder's management.

However, this can be challenging as different stakeholders have different interests (Collier, 2008). Customers want low prices and high product quality, employees want high wages and job security, good working conditions and benefits such as health insurance and pension plans (Dulebohn et al., 2009; Chen et al., 2016a). All these are added costs to the firm and will impact its capacity to provide low-cost and high-quality products to customers[1]. Through earnings management[2], managers can have a significant impact on stakeholders with conflicting interests and thus their relationships with the firm. Engaging in earnings management, intentionally or not, can serve the interests of some stakeholders at the expense of others. Furthermore, as earnings management is a tool at the hands of managers, earnings management

[1] Furthermore, investors want low risk and high returns (Bessler et al., 2018; King and Wen, 2011), often in the form of dividends which conflicts with bondholders who want low dividends to ensure debt repayment (Black, 1976). Meanwhile, stakeholders, such as shareholders and suppliers that have become highly connected with the firm through ownership or business cooperation, need to ensure that their interests are protected. Therefore, they exercise control over corporate insiders and managers through corporate governance mechanisms (John and Senbet, 1998).

[2] Earnings management occurs when managers use their own judgement, driven by executives' overconfidence and miscalibration (Ben-David et al., 2013), especially when it comes to financial reporting and structuring transactions (Healy and Whalen, 1999).

can be either value maximizing, or opportunistic, such as falsely improving managerial performance, driven by agency costs (Fields et al., 2001).

By managing earnings downwards, the firm retains cash that would have otherwise been paid in the form of cash pay-outs to employees (Dou et al, 2016), and helps the managers use the excess cash to invest in more profitable projects or use them for opportunistic reasons[3]. Maintaining a good relationship between a firm and its employees is no longer only an issue of a fixed salary[4]. Employee friendly practices have become a priority for firms as an important source of long-term sustainability (Fauver, McDonald & Taboada, 2018). Extant literature examined the effect of employee friendly practices in terms of productivity (Darrough, Kim & Zur, 2019), performance (Ding et al., 2009), innovation efficiency (Chen et al., 2016, Mao and Weathers, 2019), and firm value (Fauver et al., 2018), and concludes that employee friendly workplace environments increase employees' commitment, enhance firms' reputation, and affect firms' sales, performance, and borrowing costs (Saeed, 2021). In such environments, employees will respond with higher efforts when the firm reports lower earnings (Hannan, 2005), while firms can lower labour costs with downwards earnings management.

In contrast, in a B2C model, by managing earnings upwards, firms can improve the company's financial health as perceived by customers, which are more likely to purchase from and stay loyal to firms which demonstrate they can honour future commitments to their customers (Valenzuela et al., 2010). These can include product replacement and loyalty benefits. However, customers are also more likely to build loyalty with firms that demonstrate commitment to ethical behaviour (Lins et al., 2017). A good ESG performance of the firm contradicts engagement in earnings management (Kim et al., 2012).

[3] By managing earnings upwards, the company shows more financial health, thus encouraging shareholders to push for higher dividends. Bondholders and suppliers often oppose costly dividend policies as they want to ensure the company has enough assets in place to pay its obligations to them (Chu, 2017). Additionally, the firm is portraited as a desirable customer for suppliers or an attractive investment opportunity for investors, encouraging them to subscribe at terms they would not have accepted otherwise (Sercu et al., 2006).

[4] "To win in the marketplace you must first win in the workplace." Doug Conant, CEO of Campbell Soup.

Furthermore, in a B2B model, firms have more incentives to engage in upwards earnings management to signal their ability to form long-term B2B relationships. Such firms, with significant relationship specific investments with their business customers, may also engage in downwards earnings management to justify their inability to offer more price concessions, when the relationship is under renegotiation (Chen, 2022). I examine how managerial overconfidence, which drives earnings management engagement by the firm, impacts the relationships between the firm and two groups of stakeholders: customers and employees.

I use a sample of US firms, excluding financials and utilities, from 1992 to 2018 to test my conjectures. I argue customers are more likely to build stronger relationships with firms that show superior financial performance by manipulating earnings. Such firms may also engage in earnings management to manipulate relationship specific investments with business customers. Prior literature has also established managerial overconfidence to be a driver of earnings management by the firm (Schrand and Zechman, 2012), and this personality trait can affect stakeholders through more extensive earnings management. Therefore, I expect to find a positive relationship between earnings management and customer relationships, with stronger effect when the manager (CEO) is overconfident. I also expect to find a negative relationship between earnings management and employee relationships, reenforced by managerial overconfidence. This is driven by managerial incentives to manipulate earnings to minimize employee benefits, working conditions, to attract talented human capital and others. I use the absolute value of discretionary accruals from the modified Jones model (1991) to capture earnings management and options exercise behaviour as a proxy for managerial overconfidence. I also use a measure constructed from sales growth, sales efficiency, and receivables collection period to capture the relationships of the firms with their customers. Lastly, I use a measure constructed from employee workplace quality scores (from Datastream) and average salary, as well as output per employee, to quantify the relationships of the firms with their employees.

The baseline results suggest that engagement in earnings management practices and an overconfident CEO have a significant positive association with the relationship of the firm with its customers. Firms that influence their financial portrayal, often through earnings management, build stronger relationships with their customers since they show they can honour their commitments to their customers. The empirical findings suggest that a one standard deviation increase in earnings management improves the firm-customer relationship by 11.27% (the firm-customer relationship is captured by the natural logarithm of the sum of sales growth, sales efficiency and change in receivable collection period)[5]. Customers also prefer to be loyal to firms with an overconfident CEO. The overconfidence bias is perceived by customers as vision for the firms' future, and confidence for the firms' commitments to customers, rather than a cognitive bias with detrimental effects. Furthermore, I find weak evidence that earnings management and CEO overconfidence have an adverse effect on the relationship of the firm with its employees. An increase in firm's engagement in earnings management by 1% worsens its relationship with employees by 0.24%[6], when the CEO is overconfident[7]. Employees are reluctant to build good relationships with their employer if the firm uses earnings management to manipulate its financial health, as well as if the CEO they work for is overconfident. Although I find that earnings management and CEO overconfidence individually affect the relationship of the firm with its customers and employees, I do not find evidence to support that the incremental effect of overconfident CEOs on earnings management is significant.

As a good relationship between firms and their customers results in customer loyalty, increased corporate profitability, and more stable earnings

[5] A plausible counter argument to the above results is that these stand only for firms in B2B industries, where business customers are more likely to know the firms' financial position, compared to retail customers.

[6] This relationship is captured by a combination of employee workplace quality scores, including layoffs, bonuses paid, strikes and others, measured on a scale of 0 to 100, as well as the average salary.

[7] These are the results of an IV regression, however, not consistent after including control variables in the regression.

(Blocker et al., 2011; Blocker 2011), and a good relationship between the firm and its employees results in increased employee productivity (Brown et al., 2015) and corporate profitability (Lee et al., 2013), firms' incentives to engage in earnings management are limited. Thus, the model potentially suffers from endogeneity due to unobservable factors. I use an instrumental variable (IV) approach using firm's auditor and special accounting items as instruments for earnings management. The results from the instrumental variable regressions confirm the baseline results, that earnings management as well as CEO overconfidence improve the relationship of the firm with its customers but worsen its relationship with employees. Lastly, I exploit the Deepwater Horizon oil spill at the Gulf of Mexico in 2010, as an industry wide shock to earnings management for the oil and gas industry and employ a triple difference in differences approach. The results remain consistent. Earnings management and CEO overconfidence improve the relationship of the firm with its customers, week evidence that earnings management and CEO overconfidence worsen firm-employee relationships, yet no significant incremental effect where CEO overconfidence would amplify the above relationships.

This paper makes several contributions. First, I examine the association between customer and employee relationships with the firm and earnings management. Second, I investigate whether managerial overconfidence amplifies or mitigates these relationships. Lastly, I introduce new measures, to the best of my knowledge, in the literature, to capture customer and employee relationships with the firm. The new measure used to capture customer relationships, incorporates different elements prior literature identifies as being directly influenced by this relationship. These are the level of sales growth, sales efficiency, and the receivable collection period. Furthermore, the new measure for employee relationships is constructed using output per employee as a percentage of capital and labour input, instead of focusing on variables such as employee productivity only. An alternative measure constructed for this relationship combines the average salary per employee and a variety of employee workplace quality scores obtained from ASSET4 of Refinitiv. These

scores reflect actions taken by both firms and their employees that affect workplace quality, and as a result the relationship of firms with their employees.

Prior literature investigates earnings management in relation to certain elements of these relationships, such as employee effort (Haga et al., 2021), employee stock option reissues (Coles et al., 2006) and international customer base diversification (Berrill et al., 2021). But no prior research examines customer and employee relationships with the firm altogether. I use an instrumental variable regression and a triple difference in differences approach to provide robust evidence.

This paper adds to the literature that examines the relationship between earnings management and firms' stakeholders. Prior literature finds that managers engage in earnings management to extract short term benefits while such activity has an adverse effect on shareholders' value (Bhojraj, Hribar, Picconi, & McInnis, 2009). Furthermore, Jung, Soderstrom, and Yang (2013) examine firms' incentives to manage earnings through discretionary accruals to reduce earnings volatility to influence their credit ratings and firms' relationship with their bond holders. Liu, Ning, and Davidson (2010) also document a positive association between firms' discretionary accruals the year prior to new debt issuance and successful reduction of the obtained yield spread. Although all this research examines the interactions between firms' earnings management and stakeholders, it focuses only on financial stakeholders. Research that examines the association between earnings management and non-financial stakeholders is sparse and limited. Raman and Shahrur, (2008) examine this association under the context of supplier/customer relationship specific investments. They find that firm-level proxies for the intensity of relationship specific investments by suppliers are positively related to the level of discretionary accruals. Yet, there is no research that focuses on customers, employees, and earnings management. I address this issue and examine the causal link between firm's earnings management activities and its relationships with customers and employees. This causality is driven by firms' incentives to manipulate earnings to affect their financial

performance, and consequently, their ability to meet customer expectations, bargaining power in relationship specific investments with business customers[8], ensure fair employee treatment, cash pay outs to employees and others[9]. I also introduce managerial overconfidence as a channel through which earnings management could further impact this relationship.

2.2 Literature review

2.2.1 Earnings Management, managerial overconfidence, and Non-Financial Stakeholders

Earnings management can be unintentional or opportunistic, driven by factors such as the level of debt (Sercu et al., 2006), as managers try to avoid debt covenant violations that would worsen their performance. Managers make decisions often based on their specific cognitive biases like overconfidence, rather than maximizing the utility of all stakeholders (Daniel et al., 1998; Hong and Stein, 1999; Bertrand and Mullainathan, 2001). However, decisions influenced by managers' cognitive biases (Kahneman and Tversky, 1974) can be harmful and value destroying for the firm (Andreou et al., 2018) such as unsuccessful M&As (Malmendier and Tate, 2008). Such decisions can be in the form of earnings management, driven by managerial overconfidence (Schrand and Zechman, 2012).

Overconfidence bias can materialise in two forms. First, via the belief that the company's current assets are undervalued. Therefore, overconfident managers can engage in earnings management activities to correct for what they perceive as mispricing. Second, via managers' miscalibration whereby they overestimate future cash flows and underestimate future volatility which affects corporate policies (Ben-David et al., 2013). Since overconfidence is related with an optimistic bias when it comes to decision making (Weinstein and Klein, 1996), there is a positive relationship between managerial overconfidence and earnings management, especially if there are weaker

[8] There is an argument these are primarily concerned with firms in B2B models and industries.
[9] Depending on the motive, firms can choose to engage in upwards or downwards earnings management.

governance mechanisms (Schrand and Zechman, 2012), which mitigate agency costs.

Non-financial stakeholders (eg. employees, customers) are affected by managers' financial decisions and reporting (Dou et al., 2016). This is done mainly through two channels, corporate reputation, and perceived financial health of the company, which can be driven by earnings management. Corporate reputation is one of the most important strategic resources for firms (Fombrun and Shanley, 1990; Roberts & Dowling, 2002; Weigelt & Camerer, 1988). Stakeholders observe the strategic choices made by the company's managers and infer from their outcomes the firm's ability to create value for them (Basdeo et al., 2006). However, if managers make decisions that are motivated by opportunistic behaviour or favour some stakeholders at the expense of others (Bednar et al., 2016), it can be harmful for the firm's reputation, and this can damage stakeholder's relationship with the firm. Additionally, firm's financial reports are used by stakeholders, usually business partners like suppliers or major customers, to identify the current financial condition of the firm. As earnings management can alter reported earnings, they can change the firm's perceived financial health as viewed by stakeholders. Consequently, earnings management can affect the type of relationship stakeholders want to maintain with the firm, which can vary from a close relationship to no relationship at all.

Jones (1995) argues that firms conducting business on the basis of trust and cooperation have an incentive to demonstrate a commitment to ethical behaviour. In the finance literature, the notion of corporate reputation, or social capital, is mainly concerned with the elements of civic engagement and trust and cooperative norms (Scrivens and Smith, 2013; Lins et al., 2017). Trust is defined as the expectation that another person (or institution) will perform actions that are beneficial, or at least not detrimental, regardless of one's capacity to monitor those actions, so that one will consider cooperating with that person (the institution) (Sapienza and Zingales, 2012). Definitions of

CSR[10] tend to map directly into aspects of social capital such as civic engagement, cooperative norms, shared beliefs, and trust while a series of studies exist which shows that firms can build social capital and trust through CSR investments (Sacconi and Degli Antoni, 2011).

2.2.2 Earnings Management and Customers

A channel through which earnings management can affect the relationship of the firm with its customers is that of ESG engagement. Firms use ESG activities as a tool for building social capital. This is because the benefits of ESG outweigh the costs of ESG investing when trust declines unexpectedly (Lins et al., 2017). Therefore, customers are more likely to help high social-capital firms in crisis-periods, given that such firms displayed greater cooperation with stakeholders in the past, while stronger customer engagement via ESG can also mitigate the effects of short-term opportunistic behaviour by managers (Gao and Zhang, 2006). As a result, socially responsible firms, that created stronger relationships with customers through ESG, are less likely to manage earnings (Kim et al., 2011), a practice that contradicts the notion of ESG investing.

However, a counter argument suggests a positive relationship between earnings management and ESG investing (Prior et al., 2008). Firms intentionally engage in ESG practices to hide earnings management, which is not illegal but is arguably unethical and contradicts the spirit of ESG. This is because managers may attempt to form relationships with various stakeholder groups, such as customers, in order to ensure their own job security. Therefore, managing earnings, can lead to increased ESG investing by the firm, which then translates to improved firm-customers relationship.

Another way earnings management can influence the relationship of the firm with its customers is through the perceived financial health of the company. Firms use their resources to acquire new customers and retain

[10] A commonly used definition, proposed by the World Business Council for Sustainable Development (2004), is that "CSR is the commitment of a business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve the quality of life".

existing customers (Stahl et al., 2012) in order to increase their current and future cash flows and ultimately firm value (Hanssens, Rust and Srivastava, 2009). Therefore, it is important that managers can influence customers' acquisition and retention rates (loyalty), which are the two main drivers of customer lifetime value (Zhang et al., 2016).

Consumers are more likely to purchase from and stay loyal to firms which demonstrate they can honour future commitments to their customers (Valenzuela et al., 2010). This does not stop at the point of purchase. Instead, it has various post-purchase obligations and customer benefits like product replacement and loyalty benefits. Firms can therefore manage earnings upwards to improve the company's perceived financial health and as a result show their ability to honour these commitments to customers. For firms in B2B industries, showing improved financial performance also provides incentives for customers to subscribe to terms they would not have accepted otherwise, for example due to increased bargaining power. By downwards earnings management, firms decrease their taxable income, and lower corporate taxes paid (Coppens and Peek, 2005; Haga et al., 2018). Firms then can allocate cash, that would have otherwise been paid as taxes, to provide lower cost products to customers or to increase their R&D investments and develop new products for customers. Downwards earnings management also allows firms in B2B industries to avoid relationship renegotiation with customers with significant relationship specific investments. This is due to firms' perceived inability to accept different conditions that would benefit the customers, such as more price concessions (Chen, 2022), and therefore avoid damaging the relationship specific investment in the future. As I hypothesise that managerial overconfidence is a channel between earnings management and customer relationship, the following hypothesis is developed:

H2.1: There is a positive relation between customers and earnings management, and the effect is stronger for firms with an overconfident CEO

2.2.3 Earnings Management and Employees

Good firm-employee relationships can keep the most valuable employees in the company. By not creating good firm employee relationships, companies lose the ability to attract the most talented employees (Greening and Turban, 2000; Eccles et al., 2014). Attracting and maintaining human talent has been identified by literature as a new form of competitive advantage, with traditional competitive advantages like access to financial markets, and economies of scale, losing their importance (Greening and Turban, 2000). Human resources come as a competitive advantage in the form of skilled employees and managers, important to the success of the firm (Meyer, 1991). Decisions like earnings management can affect firm-employee relationships in various ways, such as labour costs and fair employee treatment.

Jensen and Meckling (1976) and Edmans et al. (2014) suggest that maintaining good employee relationships is associated with higher labour costs. The reason being benefit offerings are associated with employee satisfaction, which in turn is associated with attitudes and behaviours that serve the employer's interests as the employees voluntarily provide benefits (Harris & Fink, 1994). Firms increase labour costs expecting increased productivity among employees (Akerlof, 1982; Dulebohn et al., 2009). Firms then can lower these labour costs by managing earnings downwards to reduce cash pay-outs to employees that can result from high levels of earnings if these benefits are associated with employees' individual performance. Furthermore, firms that rely heavily on employees to create value are more likely to create employee friendly relations (Hannan, 2005), where employees will respond with higher efforts when the firm reports lower earnings.

However, the impact of earnings management on the relationship of the firm with its employees via the channel of labour costs might be limited due cost stickiness. Anderson et al. (2003) define sticky costs as costs that respond less to decreases in the level activity than to increases in the level of activity. If employee wages are contractually fixed, and thus a "sticky" cost for the firm (Banker et al., 2013), lowering labour costs via downwards earnings management primarily refers to employee benefits, such as bonuses, that

would result from increased productivity from employees. However, when activity levels decrease, or when firms use downwards earnings management to justify employee lay-offs to reduce labour costs, resulting labour cost adjustments, such as firing costs per employee, can act as a mitigating force. This can effectively limit the effects of earnings management on employee relationships via labour costs.

Like customer relationships, another way earnings management can affect company-employee relationship is through the company's reputational capital. Employee-friendly firms are more likely to build reputational capital, providing managers with incentives to manipulate earnings upwards (Bae et al., 2011). The reason being to signal the firm's ability to honour the firm's commitment to fair employee treatment (Bowen et al., 1995; Raman and Shahrur, 2008).

Despite manager's incentives to engage in earnings management to directly influence employee relationships, there are adverse implications to the firm's reputational capital through CSR. CSR practices can have positive effects to employee commitment to the company (Brammer et al., 2007), while the reputation associated with CSR activities makes the company a more desirable workplace (Turban and Greening, 1996; Lee et al., 2013). Furthermore, as socially responsible firms do not engage in extensive earnings management (Fombrun and Shanley, 1990), by doing so they damage firm's reputation and employee relations. In contrast, CSR activities can cause employees to feel dissatisfied with their working conditions or even that CSR engagement can affect their salary (Stawiski et al., 2010). As I hypothesise that managerial overconfidence is a channel between earnings management and employee relationships the following hypothesis is developed:

H2.2: There is an inverse relation between employees and earnings management driven by the CEO overconfidence channel

2.3 Empirical Framework

2.3.1 Sample and Data

I collect data for US firms from Compustat from 1995 to 2017. Following prior literature (Boubaker et al., 2018) firms in the financial services sector (SIC 6000–6999) and utilities industries sector (SIC 4900–4999) are eliminated because of their special regulatory environment. Data for CEO-related information are obtained from ExecuComp database. Data on workplace quality scores are obtained from Datastream.

Capturing earnings management by the firm is critical yet challenging. Prior literature has developed various approaches for capturing and measuring earnings management. Healy (1985) first developed a model for earnings management as the level of working capital accruals as a proxy for discretionary accrual. Burgstahler David and Dichev Ilia (1997) present a cross sectional model for estimating earnings management as the difference between observed frequencies of earnings changes and frequencies which would have been expected in the absence of earnings management. Jones (1991) suggest a model which includes the change in revenues and the level of PPE as determinants of nondiscretionary accruals. However, this model has low power when firms use misstatement of net accounts receivable to manipulate revenue, as the Jones model includes the change in credit sales as one of the determinants of nondiscretionary accruals, effectively removing discretionary accruals. Dechow, Sloan and Sweeney (1995) develop the modified Jones modes where cash revenue is used in place of reported revenue. This model of accruals quality, although has different variations (such as those developed by Dechow and Dichev and further extended by McNichols in 2002) is the most widely used model for estimating earnings management through discretionary accruals[11].

More recent literature proposes other ways of capturing earnings manipulation, without measuring the level of accruals. Blanco et al. (2021) for

[11] Other variations of the modified Jones model include lead, lag, and contemporaneous cash flow terms (Dechow and Dichev), and indicator variables that account for both initial earnings management and the reversal of earnings management (Dechow et al., 2012).

example propose a readability index, for the annual report produced by the firm, as a means of capturing earnings management. Managers may purposefully attempt to obscure the content of produced financial statements to hide earnings management or poor firms' financial performance (Bloomfield, 2008, Li, 2008, Lo et al., 2017), as the information environment is subject to managerial judgement. Subsequent accounting restatements is also used as a proxy for earnings management (Desai et a., 2006; Hao and Li, 2022) as firms with high discretionary accruals are often forced to accounting restatements[12].

As firmly established in the earnings management literature (Cohen et al., 2008, Francis et al., 2008, Katmon and Farooque, 2015, Yu, 2008), the modified Jones model (1991) and the performance-matched discretionary accruals model of Kothari, Leone, and Wasley (2005) are the models most commonly used to estimate the absolute value of the discretionary accruals. I follow Cohen et al. (2008)[13] and use the absolute level of discretionary accruals as a measure for earnings management. I use the absolute value of discretionary accruals rather than their signed value as the scope of this research is to identify the impact of earnings management on the relationships of the firm with its customers and employees, rather than the impact of income increasing/decreasing motives (such as reduce taxable income or cash pay-outs) on the aforementioned relationships. Furthermore, discretionary accruals in their absolute value also capture accrual reversals following past periods' earnings management (Cohen et a., 2008). The absolute value of discretionary accruals is used as a proxy for the overall earnings management of the firm regardless of manager's income-increasing or decreasing incentives.

CEO overconfidence is measured with managers' stock option exercise behaviour as developed by Malmendier and Tate (2005a, 2008), and has been applied extensively (e.g., Engelen et al., 2014; Galasso & Simcoe, 2011; Hribar

[12] Accounting restatement refers to the corporate act of informing investors that previously reported financial statements are incomplete, inaccurate, or misleading (Palmrose et al., 2004).
[13] Cohen et al. (2008) argue that the more meaningful measure of earnings management is the absolute level of discretionary accruals.

& Yang, 2016; Humphery-Jenner et al., 2016). This is based on CEOs' personal investment decisions according to their systematic overestimation of the returns from holding deep in-the-money stock options of their firms. CEOs are not able to trade their granted options in the vesting period and hedge price risk by short selling shares ahead, yet their invested human capital will affect their personal wealth through their firm's performance. Consequently, rational managers will exercise options soon after the end of the vesting period when the stock price reaches a rational level (Malmendier & Tate, 2005, 2008). However, overconfident CEOs will choose not to exercise highly in-the-money vested options because they are overly optimistic about the firm's prospects under their leadership. Additionally, despite their exposure to systematic risk due to under diversification, overconfident CEOs will sometimes choose to buy additional firm equity after the end of the vesting period (Malmendier and Tate, 2005a).

The options-based measure is constructed with data from the ExecuComp database. Overconfidence takes the value of 1 if a CEO postpones the exercise of vested options that are at least 67% in-the-money and 0 otherwise. As the Execucomp database does not provide detailed data on a CEO's options holdings and exercise prices per option grant, I follow prior research (Campbell et al., 2011; Hirshleifer et al., 2012; Humphery-Jenner et al., 2016) and estimate in-the-money value, as average percent of moneyness of a CEO's options portfolio. I calculate the per option average realizable value as the total realizable value of the options divided by the number of options held by the CEO. The average exercise price is then estimated by subtracting the average realizable value from the fiscal year-end stock prices. Following the literature, the average percent of moneyness of the options equals the per-option realizable value divided by the estimated average exercise price (Campbell et al., 2011; Hirshleifer et al., 2012; Humphery-Jenner et al., 2016).

To capture the relationship of the firm with its customers, I turn to the customer relationship management (CRM) literature. CRM provides users with information to understand customers and to create value for the firm (Payne and Frow, 2005). This is achieved using a cross-functional integration

of processes, people, operations, and marketing capabilities through information technology. In other words, the purpose of CRM is to develop and maintain relationships with customers. Implementing CRM systems positively affects firm's performance (Krasnikov et al., 2009; Coltman et al., 2011). An enhanced relationship between the firm and its customers will result in improved corporate sales, sales efficiency (spend less in expenses for each sale made), and the ability to collect accounts receivable, due to better tracked information regarding outstanding bills.

My measure for the relationship of the firm with its customers is thus the sum of sales growth, annual percentage change in sales efficiency, and annual percentage change in receivable collection period[14]. When examined individually, each component of the customer relationship variable is representative of the customer related performance of the firm. Strong (weak) sales growth is a direct result of a positive (negative) relationship of the firm with its customers. Prior literature (Narver and Slater, 1990; Kirca, Jayachandran, and Bearden, 2005; Zang et al., 2020) also finds that sales performance improves as firms become more customer oriented. Strong sales efficiency[15] is also a result of a good firm-customer relationship as the firm needs to spend less in selling, general and administration expenses for each new sale made. Lastly, the CRM literature suggests good firm-customer relationships will also result in better collection of accounts receivables, due to better tracking of customer related information and outstanding bills, while Haislip and Richardson (2017) find that receivables collectability improves following CRM system implementation. By combining all three outcomes of CRM implementation, I provide a well-rounded measure of the firm-customer relationship[16].

[14] All variables are defined in Appendix B variable definition.

[15] Sales efficiency is measured as the ratio of sales of year t to selling, general and administration expenses of year t-1

[16] The firm specific normal accruals model used in the measurement of the independent variable (EM) includes the change in accounts receivable. The measure developed to proxy for the firm-customer relationship also includes change in receivables collection. However, resulting endogeneity is minimized for two reasons. First, firm specific normal accruals uses the value of account receivables for the current and the preceding year, while the firm-customer relationship proxy uses the change in receivable collection period while this is also expressed

To measure the firm employee relationship, I use two alternative variables. The first proxy is the output per employee, as a percentage of labour and capital input. An improved firm employee relationship will result in employees voluntarily putting more effort in the firm (Harris & Fink, 1994) and an increased output per employee. As an alternative measure of employee relationship, I use the sum of firm's average salary and workplace quality scores, as employees may set their salary as a second priority and focus more on other factors such as job security, employee motivation etc (Kohll, 2018). I use the average salary calculated as the firm's total wages divided by the number of employees in the firm. Workplace quality scores[17] are obtained from ASSET4 database (part of Refinitiv).

To test the first hypothesis, I use the following model:

$$CustomerRelationship_{i,t} = a_{i,t} + b_1 Holder67_{i,t} + b_2 EarningsManagement_{i,t} + b_3 Holder67_{i,t} * EarningsManagement_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

To test the second hypothesis, I use the following model:

$$EmployeeRelationship_{i,t} = a_{i,t} + b_1 Holder67_{i,t} + b_2 EarningsManagement_{i,t} + b_3 Holder67_{i,t} * EarningsManagement_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

Where Earnings Management is the absolute value of discretionary accruals as I want to capture the extent of earnings management irrespective

as a percentage, instead of absolute values. Second, the customer relationship variable uses the natural logarithm of the sum of the three components, which further reduces resulting endogeneity due to account receivables used in both proxies. Removing the receivable collection component from the firm-customer proxy would significantly reduce its strength as a valid measure. Literature identifies other potential measures for this relationship, such as the customer satisfaction index (Truong et al., 2021).

[17] Detailed information regarding the individual scores of workplace quality are reported in Appendix A workplace quality scores definition.

of income increasing or decreasing incentives. Holder67 is a binary variable that takes the value of one the firm's CEO is overconfident, based on their option exercise behaviour, zero otherwise. $X_{i, t-1}$ is a vector of the control variables of the model. I control for firm-level factors commonly used in prior literature. These factors include the age of the firm (AGE) as it is easier for stakeholders to build relationships with older firms, firm-size (SIZE) (Dechow and Dichev, 2002), corporate profitability (ROA), firm's leverage (LEV), the market to book ratio (MB) (Hribar and Nichols, 2007; Dechow et al., 2011).

I also include market share (MRK_SHR) and financial distress (DISTRESS). I include an indicator variable for low marginal tax rate (LOW_MTR). A low marginal tax rate is assumed if the firm's marginal tax rate is below the statutory tax rate (Blouin et al., 2010). Lastly, I introduce a binary variable to account for firm's balance sheet bloat (BLOAT). θ and γ stand for year and industry fixed effects.

2.3.2 Summary statistics

Summary statistics for the variables in the sample are reported in table 1. Panel A reports the summary statistics for the sample between 1992 and 2018 used in the first hypothesis. Customer relationships dependent variable has a mean of 3.10 and median of 3.19. A firm with an average relationship with its customers experiences a combination of sales growth, improvement in receivables collection period, and improvement in sales efficiency of 3.1% on an annual basis. Firms with extreme adverse customer relationships on the other hand (lower 1% of the sample) experience of decrease of 0.54% annually. CEOs are overconfident for 49.87% of the firms in the sample. The mean value of earnings management, as discretionary accruals which reflect the proportion of accruals that cannot be explained by firm-specific fundamentals or normal business activities (Ding et al., 2007; Wilson and Wang, 2010; Chen et al., 2011; Ali and Zhang, 2015), is 8.42%. Therefore, firms engage in 8.42% of income increasing or income decreasing earnings management. Firms in the sample between 1992 and 2018 experience marginally losses (mean ROA is -0.06%) and have average size of 565 million.

Panel B and C report the summary statistics for the subsamples between 2002 and 2017, using workplace quality scores and output per employee as a measure for employee relationships respectively[18]. Employee workplace quality score as a dependent variable has a mean of 1.56 (median = 1.64) on a scale from 0 to 2.[19] Employee output as the dependent variable in panel C, has a mean of -0.0544, which suggests output per employee to account for 5.44% of capital and labour input.

"Insert Here Table 2-1"

Table 2 reports the correlation matrix for the variables in the common subsample from 2002 to 2017. I use the common subsample for the customer relationship variable and the two measures of employee relationships to also define the correlations between customer and employee relationships. Holder67 has a significant weak correlation with both alternative measures of employee relationships, while I observe a significant weak correlation between Holder67 and customer relationships. Earnings management is also positively correlated with customer relationships and negatively correlated` with employee relationships, while I also observe a significant positive correlation between earnings management and CEO overconfidence (Holder67). Lastly, customer relationship has a negative significant correlation with both measures of employee relationships.

"Insert Here Table 2-2"

2.3.3 Baseline regression

Table 3 reports the result of the baseline regression for the relationship between customer relationships, CEO overconfidence and earnings management. Columns (1) and (2) examine the relationship between the dependent variable and Holder67, a binary variable that takes the value of one

[18] The difference in the number of observations between the two samples (2002-2017) is the result of limited data availability for workplace quality score and the number of employees from Datastream database.

[19] As I use the natural logarithm of the employee scores, which range from 0 to 100, and the ratio of total salaries over the number of employees, the scale is defined from log(0) to log(100).

if the firm's CEO is overconfident, zero otherwise. There is a significant positive relationship between Holder67 and the dependent variable, without and with control variables, suggesting firms with overconfident CEOs experience better relationships (by 23.33%) with their customers, compared to their non-overconfident peers. Columns (3) and (4) examine the relationship between the dependent variable and earnings management. I find a significant positive association between customer relationships and earnings management. The results suggest firms' incentive to engage in earnings manipulation makes customers view those firms more favourably. Managers use earnings management for various reasons. Reducing taxable income (Coppens and Peek, 2005; Haga et al., 2018) and use the excess cash for R&D, providing lower price or more discounts to customers, or signalling strong financial position to meet customers' expectations (Valenzuela et al., 2010) are some examples that explain a positive association between earnings management and customer relationships[20]. In columns (5) and (6) I examine the relationship between customer relationships, CEO overconfidence and earnings management, without and with control variables. The coefficients of Holder67 and Earnings management remain consistent. However, I find no evidence that earnings manipulations' positive effect of firms' relationship with customers if reenforced by managerial overconfidence. The coefficient of the interaction term between Holder67 and earnings management is not significant suggesting that conditional on CEO overconfidence, earnings management has no effect on the relationship of the firm with its customers.

"Insert Here Table 2-3"

Table 4 reports the baseline regression that examines the relationship between employee relationships, CEO overconfidence and earnings management. Panel A uses Employee scores, while panel B uses output per employee as a measure for employee relationships. In panel A, columns (1) and (3) examine the relationship between the dependent variable and Holder67

[20] However, firms can also use earnings management for opportunistic reasons (Fields et al., 2001; Siregar and Utama, 2008).

and earnings management respectively, without control variables. I find a significant negative relationship between the dependent variable and Holder67 as well as earnings management. Opposite to customer relationships, the relationship of the firm with its employees is adversely affected by the firm's engagement in earnings management or overconfidence of its CEO. The results, however, are not consistent after I control for firm-specific variables. Similarly, I find no significant relationship between employee relationships, Holder67 and earnings management in columns (5) and (6) without and with control variables.

In panel B, I use output per employee as a measure for employee relationships. I find a significant negative relationship between the dependent variable and Holder67 before controlling for firm-specific variables. In columns (3) – (6) I find a consistent significant negative association between the dependent variable and earnings management by the firm. In the most robust model of column (6), 1% increase in earnings manipulation will result in a 5.06% worsening of the relationship of the firm with its employees, as captured by output per employee. Consistent with prior literature, employee satisfaction is associated with employee attitudes and behaviours that serve the employer's interests as the employees voluntarily provide benefits (Harris & Fink, 1994). This also suggests employees choose to reduce their output when they feel dissatisfied with the firm. As corporate insiders, employees are in a better position to understand the firm's true financial position and can feel managers use earnings manipulation to reduce benefit offerings to employees. This explains a negative association between earnings management and output per employee, used as a measure for the firm-employee relationship.

Consistent with panel A, I find no evidence to suggest that earnings management adversely affect the relationship of the firm with its employees when the CEO is overconfident.

"Insert Here Table 2-4"

2.4 Robustness Test

2.4.1 Endogeneity

From the results of the baseline regressions, managerial overconfidence and earnings management affect the relationship of the firm with its customer. I also find weak preliminary evidence that they are factors adversely affecting the relationship of the firm with its employees. Furthermore, I find no evidence that managerial overconfidence amplifies the relationships between earnings management and customer / employee relationships with the firm. However, the model suffers from potential endogeneity due to unobservable factors, as both engagement in earnings management and actions that determine customer and employee relationships[21] are subject to managerial discretion. Furthermore, good relationship of the firm and its customers leads to increased profitability and improved financial performance for the firm (Blocker et al., 2011; Blocker 2011) which then limits firms' incentives to manipulate earnings. Moreover, good employee relationships result in increased employee productivity and better performance for the firm (Lee et al., 2013; Brown et al., 2015), also limiting firms' incentive to engage in earnings management. The endogeneity problem here is therefore primarily an issue of reverse causality.

Following prior literature (Ferrell et al., 2016), I use an instrumental variable approach to minimize the endogeneity bias. I use a binary variable (BIGAUD) as an instrument for earnings management. BIGAUD takes the value of one if the firm is audited by one of the Big4 auditing firms (Deloitte, Ernst & Young, KPMG and PricewaterhouseCoopers). I expect the BIGAUD variable to negatively affect the variable of interest (earnings management), as auditors' reputation moderate earnings management by the firm (Kanagaretnam et al., 2010). If the firm is being audited by one of the big4 auditors at year t, I expect firms to engage in less aggressive earnings manipulation, as the big4 have more expertise in detecting earnings

[21] Examples include loyalty benefits and discounts, R&D, cash pay-outs to employees and working conditions.

management and more power to damage the firms' reputation if they do[22]. However, there is no evidence to suggest that the firms' choice of auditor affects the relationship of the firm with its customers or employees.

Table 5 reports the results of an instrumental variable regression using customer relationships as the dependent variable. Columns (1) and (3) report the 1st stage regression without and with firm specific control variable. In column (1), Holder67 has a significant positive coefficient with earnings management, consistent with prior literature (Schrand and Zechman, 2012), managerial overconfidence encourages earnings manipulation. BIGAUD also has a significant negative association with earnings management, suggesting firms audited by the big4 auditing firms choose to abstain from aggressive earnings management. I report the results of the 2nd stage regression in columns (2) and (4). Results remain consistent with those from the baseline regression. Earnings management and managerial overconfidence improve the relationship of the firm with its customers. Overconfident managers tend to overstate their abilities and often appear certain of the firms' success under their leadership. This is viewed by customers as managers' vision of the firm's future and tend to build long-term relationships with such firms. These results are in line with prior research, which find that overconfident executives are more likely to be appointed as firms' CEOs (Banerjee et al., 2020). Furthermore, incentives for engagement in earnings management to show financial health also promote good customer relationships as firms seem able to honour their long-term commitments to their customers. Lastly, I find no evidence to suggest managerial overconfidence amplifies the relationship between earnings management and customer and employee relationships.

"Insert Here Table 2-5"

[22] I expect a negative coefficient between earnings management and BIGAUD, results verified at the 1st stage regression below. Evidence on the satisfaction of the exclusion criterion are presented in Appendix C. Although BIGAUD is a good instrument for the customer relationship and employee relationship using workplace quality scores as a proxy, it does not satisfy the exclusion criterion using output per employee as a proxy. I still present the results, however, as the coefficient shows it has a very weak relationship with the dependent variable, output per employee (coefficient of 0.55%).

In the instrumental variable regression above using customer relationships as the dependent variable, the chosen instrument, BIGAUD, takes the value of one for firms being audited by one of the Big4 Accounting firms in the sample period. However, the sample period starts from 1995, while Arthur Andersen was also part of what was called "big 5" prior to 2002[23]. As a result, variation of the BIGAUD instrumental variable for firms before 2002 is lost[24]. To address this issue, I first drop all observations in the sample prior to 2002 and use the same big4 instrument for an instrumental variable regression. The results are presented in columns (1) and (2) of Appendix F.

Second, instead of dropping all observations prior to 2002, I complement the original dataset with firms' auditor data prior to 2002 from compustat, and redefine the BIGAUD variable, which takes the value of one if the firm is being audited by one of the big5 firms (Arthur Andersen, Ernst & Young, Deloitte & Touche, PriceWaterhouseCoopers, KPMG). The results are presented in columns (3) and (4) of Appendix F. The results suggest only weak evidence of causality between earnings management and customer relationships. I find CEO overconfidence still has a significant positive relationship with firm-customer relationships. Moreover, the results suggest CEO overconfidence drives the relationship between earnings management and customer relationships, with a significant coefficient of the interaction term Holder67xEM.

Table 6 reports the results of the IV regression using employee relationships as the dependent variable. Panel A uses employee scores as a measure of employee relationships. Columns (1) and (3) report the 1st stage regression, where BIGAUD has a significant negative association with earnings management. In column (2) I report the 2nd stage regression without control variables. I find a significant negative relationship between CEO

[23] Arthur Andersen collapsed in 2002, as a result of its questionable accounting practices for energy company Enron and telecommunications company Worldcom, both of which constituted large accounting scandals that led to the enactment of the Sarbanes-Oxley Act of 2002.

[24] In the IV regression using employee relationships as the dependent variable, a similar approach is not required, as the data sample period starts from 2002.

overconfidence and employee relationships. Furthermore, I find that earnings management adversely affect the relationship of the firm with its employees only when the CEO is overconfident, where an increase in firms' engagement in earnings management by 1% deteriorates their relationships with employees by 0.24%. These results however are not consistent after I account for firm specific control variables.

Panel B uses output per employee as a measure for employee relationships. I find results consistent with the results of the baseline regression. Earnings management and managerial overconfidence have a significant negative association with employee relationships. There is no statistically significant relationship between the interaction term Holder67xEM and the dependent variable. The results of panel B, however, are biased as the chosen instrument does not satisfy the exclusion criterion, although the dependent variable has a very weak relationship with the instrument (coefficient of 0.0055), providing minimum validity to this test.

"Insert Here Table 2-6"

For further robustness, I use special accounting items as a second instrument for earnings management. Classification shifting (shifting expenses from core to special items) has emerged as a new form of earnings management as managers do not change bottom-line earnings but overstates core earnings. The main incentive is to meet the analyst forecast earnings benchmark, as special items tend to be excluded from both pro forma and analyst earnings definitions (McVay, 2006). Firms' engagement in classification shifting will affect the ability of those firms to also engage in earnings management through discretionary accruals. [25]

The results of the IV regression using special accounting items as the instrument for earnings management are presented in table 7. Panel A uses Customer relationships as the dependent variable. Panel B and C use Employee

[25] I expect special accounting items to have a significant relation with firms' earnings management, as a form of such practices. I do not expect a significant relation between earnings management and the dependent variables. Information regarding the exclusion criterion satisfaction is presented in Appendix E for both instruments.

relationships as the dependent variable and use employee workplace quality scores and output per employee as a proxy, respectively. Results remain consistent, with earnings management through discretionary accruals, and CEO overconfidence improving the relationship of the firm with its customers and deteriorate the relationship of the firm with its employees. Lastly, using the chosen instrument I don't find a significant incremental effect.

"Insert Here Table 2-7"

2.4.2 Deepwater Horizon Oil Spill as an exogenous shock on earnings management

I exploit the Deepwater horizon oil spill in the facilities of oil and gas company BP in the Guld of Mexico in 2010 as an exogenous for the oil and gas industry. This environmental event resulted in immense environmental damage, reduced aesthetic amenities and the general welfare of the area, harmed coastal economies reliant on the Gulf for fishing and recreation, and has been characterised as the world's biggest accidental oil leak (Financial Times, 2010). BP's Deepwater Horizon bill counts thousands of dollars per barrel, with 4.9m barrels of oil spilled into the gulf (Financial Times, 2010) and got wide coverage in public press. As a result, this exogenous shock is strong enough to affect all firms in the oil and gas industry in the sample. Deepwater Horizon Oil Spill has also been used by prior literature as an exogenous shock for the oil and gas industry (Dyck et el., 2019; Bardos et al., 2020).

The shock did not affect firms' incentives to engage in income earnings management as the financial shock was strong enough only for BP, and the actual oil spill did not result in a rise in oil prices (Financial Times, Commodities) or an oil supply shock in the market directly attributed to the incident. However, it had a serious impact on the reputation of the oil and gas industry across the country through negative public press[26]. To avoid further damaging their reputation under the spotlight of public attention, firms in the

[26] I report in Appendix E the results of an OLS regression with earnings management as the dependent variable, dropping all observations of firms not in the oil and gas industry, and the DiD estimator as the independent variable. I find a significant negative association suggesting firm in the oil and gas industry reduced earnings management following the shock.

oil and gas industry chose to abstain from earnings management following the event. Deepwater Horizon oil spill is thus an appropriate shock for earnings management in the oil and gas industry.

I run the following regressions:

$$CustomerRelationship_{i,t} = a_{i,t} + b_1 OilSpill_{i,t} + b_2 Holder67_{i,t} + b_3 EarningsManagement_{i,t} + b_4 Holder67_{i,t} * EarningsManagement_{i,t} + b_5 OilSpill_{i,t} * Holder67_{i,t} * EarningsManagement_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

$$EmployeeRelationship_{i,t} = a_{i,t} + b_1 OilSpill_{i,t} + b_2 Holder67_{i,t} + b_3 EarningsManagement_{i,t} + b_4 Holder67_{i,t} * EarningsManagement_{i,t} + b_5 OilSpill_{i,t} * Holder67_{i,t} * EarningsManagement_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

Where OilSpill is a binary variable that takes the value of one for firms in the oil and gas industry following the shock in 2010, zero otherwise. Customer Relationships is used as the dependent variable in model (1) and Employee Relationships is used as the dependent variable for model (2). Holder67 as the measure for CEO overconfidence and the absolute value of discretionary accruals as the measure for earnings management are used as defined before. I report descriptive statistics for the treatment and control groups for the two models in Appendix D.

Table 7 reports the result of the difference of differences method for model (1), using customer relationships as the dependent variable. The oil spill in the Gulf of Mexico did not firms' relationships with their customers in the oil and gas industry as the OilSpill coefficients are not statistically significant. The coefficients of Holder67 and earnings management remain consistent. An overconfidence CEO and firms' engagement on earnings management betters

the relationship of the firm with its customers. Conditional on managerial overconfidence, earnings management does not affect the relationship of the firm with its customers, and this does not change following the oil spill in the Guld of Mexico in the oil and gas industry as the coefficients of the interaction term Holder67xEM and the triple interaction term OilSpillxHolder67xEM are not statistically significant.

"Insert Here Table 2-8"

Table 8 reports the results of the difference in differences approach using employee relationships as the dependent variable. In panel A I use workplace quality scores to measure employee relationships. Using this proxy, I find that the accident in the Guld of Mexico (binary variable OilSpill) resulted in improved relationships of the firms in the oil and gas industry and their employees. As this measure is constructed using firms' average salaries to its employees and a combination of scores regarding employee treatment, working conditions, benefits etc, these results suggest that these firms increased various benefits to employees in an effort to counter the negative public opinion of the industry following the shock. Overall, firms' relationships with their employees in the oil and gas industry, in the form of various benefits to employees, increased by 6.88% following the Oil Spill in the Guld of Mexico. In column (3), before controlling for firm specific variables, Holder67 has a significant negative relationship with the dependent variable, consistent with baseline regression and IV regression results. However, EM does not appear to be a significant factor, and the effect remains insignificant when conditional on CEO overconfidence.

In panel B I use output per employee to measure employee relationships. In columns (1) and (2) I examine the effect of deepwater horizon oil spill on the dependent variable. Employee relationships, as captured by output per employee as a percentage if capital and labour input, were not affected by this shock. Columns (3) and (4) examine the relationship between OiSpill, Holder67, earnings management and the dependent variable employee relationships. The results are consistent with baseline regression and IV regression results. CEO overconfidence and earnings management deteriorate

the relationship of the firm with its employees. The interaction term Holder67xEM and the triple interaction OilSpillxHolder67xEM remain not statistically significant, which suggest that CEO overconfidence does not amplify the relationship between earnings management and employee relationships.

"Insert Here Table 2-9"

2.5 Conclusions

I assess the effects of earnings management on firm's relationship with its stakeholders, more specifically, customers and employees and I incorporate CEO overconfidence as a factor I hypothesize amplifies this relationship. Prior literature examines the impact of corporate policies and earnings management decision on firms' stakeholders. Bhojraj, Hribar, Picconi and McInnis (2009) show earnings management can extract short term benefits but have long-term value destroying effects for the shareholders. Earnings management can also reduce earnings volatility and influence credit ratings of the firm to convince bond holders to subscribe to terms they would not have accepted otherwise (Jung, Soderstrom, and Yang, 2013). However, the earnings management literature that focuses on non-financial stakeholders is sparce. Raman and Shahrur (2008) examine the impact of earnings management on suppliers, under the context of relationship specific investments, however, no prior research focuses on customers and employees. I contribute to the literature by further examining the relationship between firms' earnings management policies and stakeholders' engagement, focusing on customers and employees, while considering the potential reverse causality between earnings management and stakeholder relationships with the firm.

Another branch of literature examines the effects of managerial personality traits on corporate policies. For example, Duong et al., (2021) examine the relationship between CEO conservatism and capital expenditures, risky policies, cash holdings and others. Schrand and Zechman (2012) find CEO overconfidence drives earnings management by the firm. However, no prior research examines the effects of CEO overconfidence on stakeholders, more specifically on customers and employees, or its amplifying effects on the

relationship between earnings management and these stakeholders. I close the gap in literature by incorporating the managerial personality trait of overconfidence into the analysis.

The results suggest that earnings management, as captured by firms' discretionary accruals, and managerial overconfidence, as captured by CEOs' option exercise behaviour at the end of the vested period, have a statistically and economically significant positive effect on the relationships of the firms with their customers. Firms that engage in earnings manipulation are able to show financial health and better signal their ability to honour their commitment to their customers. Furthermore, managerial overconfidence, as captured by CEOs' overconfidence, is seen by customers as vision for the firm's future and choose to build relationships with such companies. In contrast, I find evidence that both earnings management and CEO overconfidence is detrimental for the firms' relationship with employees as they are in better position to understand firms true financial position and dislike their firm engaging in earnings manipulation. Furthermore, employees are not keen on working for an overconfident CEO. Finally, I find no evidence to suggest that managerial overconfidence acts as a factor that amplifies the positive (negative) relationship of the firm with its customers (employees).

Table 2-1. Summary Statistics

This table presents the descriptive statistics for the variables used in this study of all U.S. firms in CRSP/Compustat. Panel A uses a sample between 1992 and 2018, while panels B and C use a sample from 2002 to 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. Summary statistics for all sample firms in the sample used for the first hypothesis are reported in panel A. Summary statistics for all sample firms in the sample used for the second hypothesis with Employees Scores as a measure of employee relationships are reported in panel B, and output per employee as a measure of employee relationships reported in panel C. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Customers

	N	Mean	Median	SD	1st Percentile	99th Percentile
CustomerRel	49,294	3.1073	3.1906	1.2266	-0.5437	5.8576
Holder67	18,754	0.4987	0.0000	0.5000	0.0000	1.0000
EM	49,294	0.0842	0.0503	0.1105	0.0010	0.5518
AGE	48,902	19.3183	14.0000	14.6461	3.0000	62.0000
ROA	49,294	-0.0066	0.0428	0.3634	-1.0730	0.4126
SIZE	49,294	5.6581	5.6670	2.1356	1.2686	10.6475
LEV	48,646	0.2315	0.1631	0.3340	0.0000	1.2310
MB	45,241	1.6588	1.1038	2.2314	-0.1870	9.7005
DISTRESS	49,294	0.0212	0.0000	0.1440	0.0000	1.0000
LOW_MTR	49,294	0.7546	1.0000	0.4303	0.0000	1.0000
BLOAT	49,294	0.0353	0.0000	0.1846	0.0000	1.0000
MRK_SHR	49,294	0.0113	0.0015	0.0329	0.0000	0.1561

Panel B: EmployeeScores

	N	Mean	Median	SD	1st Percentile	99th Percentile
EmployeesScore	8,842	1.5692	1.6409	0.2401	0.7192	1.8139
Holder67	7,903	0.4593	0.0000	0.4984	0.0000	1.0000
EM	9,502	0.0525	0.0354	0.0691	0.0007	0.3372
AGE	9,426	28.8554	23.0000	19.0513	2.0000	67.0000
ROA	9,502	0.0322	0.0554	0.2696	-0.7323	0.3265
SIZE	9,502	8.2760	8.2440	1.4783	4.6161	11.9359
LEV	9,324	0.2446	0.2173	0.2229	0.0000	0.8829
MB	8,608	1.8212	1.3583	2.1979	0.1765	8.2790
DISTRESS	9,502	0.0001	0.0000	0.0103	0.0000	0.0000
LOW_MTR	9,502	0.8826	1.0000	0.3220	0.0000	1.0000
BLOAT	9,502	0.0542	0.0000	0.2264	0.0000	1.0000
MRK_SHR	9,502	0.0339	0.0105	0.0580	0.0000	0.2836

Panel C: Employee output

	N	Mean	Median	SD	1st Percentile	99th Percentile
EmployeesRel	49,048	-0.0544	-0.0322	0.1360	-0.3881	0.0000
Holder67	19,077	0.4521	0.0000	0.4977	0.0000	1.0000
EM	49,059	0.0982	0.0541	0.1382	0.0010	0.7678
AGE	48,624	18.5772	14.0000	14.6976	2.0000	63.0000

ROA	49,059	-0.1001	0.0226	0.9151	-1.9685	0.4575
SIZE	49,059	5.5381	5.5013	2.1935	1.1132	10.7943
LEV	48,481	0.2101	0.1237	0.3692	0.0000	1.2986
MB	45,859	1.8668	1.1436	3.5722	-0.2621	12.5937
DISTRESS	49,059	0.0260	0.0000	0.1590	0.0000	1.0000
LOW_MTR	49,059	0.8374	1.0000	0.3690	0.0000	1.0000
BLOAT	49,059	0.0314	0.0000	0.1744	0.0000	1.0000
MRK_SHR	49,059	0.0100	0.0008	0.0311	0.0000	0.1549

Table 2-2. Correlation Matrix

This table presents the pearson correlation between the variables used in this study of all U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

	Customer Rel	Employees Score	Employees Rel	Holder67	EM	AGE	ROA	SIZE	LEV	MB	DISTRESS	LOW_MTR	BLOAT	MRK_SHR
CustomerRel	1													
EmployeesScore	-0.0497*	1												
EmployeesRel	-0.1395*	-0.0179*	1											
Holder67	0.0886*	-0.0967*	-0.0544*	1										
EM	0.1641*	-0.0847*	-0.0582*	0.0180*	1									
AGE	-0.1680*	0.2497*	0.0557*	-0.1218*	-0.1300*	1								
ROA	-0.0903*	0.1230*	-0.0355*	0.2124*	-0.3766*	0.1077*	1							
SIZE	-0.1185*	0.4311*	0.0028	-0.0664*	-0.3480*	0.3256*	0.2206*	1						
LEV	-0.0114*	0.0154	0.0042	-0.0321*	0.0470*	-0.0293*	-0.1017*	0.1250*	1					
MB	0.1091*	-0.0709*	0.0172*	0.2374*	0.2355*	-0.1103*	-0.2790*	-0.1566*	0.2409*	1				
DISTRESS	0.0682*	.	-0.0042	-0.0253*	0.2831*	-0.0565*	-0.2868*	-0.2748*	0.1849*	0.2459*	1			
LOW_MTR	0.0061	-0.0186	0.0481*	-0.0629*	0.0632*	-0.0238*	-0.1012*	0.0324*	0.0557*	0.0366*	0.0625*	1		
BLOAT	0.1350*	0.0048	-0.1219*	0.0171*	0.0290*	-0.0160*	0.0027	0.0871*	0.0538*	-0.0495*	0.0055	-0.0024	1	
MRK_SHR	-0.0614*	0.2109*	-0.0148*	-0.0411*	-0.1167*	0.2918*	0.0636*	0.4711*	0.0426*	-0.0469*	-0.0543*	0.0115*	-0.0245*	1

Table 2-3. The Relationship between Customer relationships, CEO overconfidence and earnings management.

This table reports OLS estimates of Customer relationships, CEO overconfidence and earnings management. Customer relationships is used as the dependent variable. The absolute value of firm's discretionary accruals is used as a measure for earnings management. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) CustomerRel	(2) CustomerRel	(3) CustomerRel	(4) CustomerRel	(5) CustomerRel	(6) CustomerRel
Holder67	0.3046***	0.2333***			0.2692***	0.2022***
	(0.0293)	(0.0266)			(0.0373)	(0.0382)
EM			1.8283***	1.1533***	1.7981***	1.0207***
			(0.0857)	(0.0754)	(0.2841)	(0.2270)
Holder67xEM					0.4129	0.5516
					(0.3600)	(0.4095)
AGE		-0.0088***		-0.0113***		-0.0086***
		(0.0009)		(0.0009)		(0.0009)
ROA		-0.6408***		-0.2192***		-0.5557***
		(0.1026)		(0.0492)		(0.0968)
SIZE		-0.0653***		-0.0195**		-0.0546***
		(0.0137)		(0.0074)		(0.0135)
LEV		-0.0389		-0.1519***		-0.0203
		(0.0702)		(0.0357)		(0.0702)
MB		0.0582***		0.0442***		0.0466***
		(0.0065)		(0.0045)		(0.0060)
DISTRESS		-0.4947		0.0146		-0.4269
		(0.3758)		(0.0619)		(0.3218)
LOW_MTR		0.0286		0.0606***		0.0211
		(0.0211)		(0.0177)		(0.0208)
BLOAT		0.0406		0.0245		0.0346
		(0.1055)		(0.0681)		(0.1068)

MRK_SHR		0.4231		-0.3002		0.3035
		(0.4884)		(0.4802)		(0.4895)
Constant	2.7835***	3.4243***	2.9534***	3.2457***	2.6888***	3.3074***
	(0.0176)	(0.0930)	(0.0099)	(0.0464)	(0.0216)	(0.0939)
Observations	18,753	16,824	49,294	44,107	18,753	16,824
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.0986	0.1420	0.0836	0.1234	0.1126	0.1478

Table 2-4. The Relationship between Employee relationships, CEO overconfidence and earnings management.

This table reports OLS estimates of Employee relationships, CEO overconfidence and earnings management. Employee relationships is used as the dependent variable. The absolute value of firm's discretionary accruals is used as a measure for earnings management. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. Panel A uses Employee workplace quality scores as a measure for employee relationships, panel B uses output per employee as a measure for Employee relationships. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Employee workplace quality scores as a measure of employee relationships

	(1) EmployeesScore	(2) EmployeesScore	(3) EmployeesScore	(4) EmployeesScore	(5) EmployeesScore	(6) EmployeesScore
Holder67	-0.0258**	-0.0078			-0.0190**	-0.0045
	(0.0095)	(0.0074)			(0.0089)	(0.0076)
EM			-0.2732***	0.0614	0.0173	0.1470
			(0.0760)	(0.0588)	(0.0965)	(0.1090)
Holder67xEM					-0.1469	-0.0759
					(0.1161)	(0.0981)
AGE		0.0005**		0.0010***		0.0005**
		(0.0002)		(0.0003)		(0.0002)
ROA		0.0379		0.0214		0.0424
		(0.0377)		(0.0267)		(0.0362)
SIZE		0.0695***		0.0672***		0.0699***
		(0.0123)		(0.0104)		(0.0123)
LEV		-0.0261		-0.0252		-0.0264
		(0.0231)		(0.0207)		(0.0229)
MB		0.0216***		0.0109**		0.0213***
		(0.0047)		(0.0046)		(0.0047)
LOW_MTR		-0.0013		-0.0052		-0.0016
		(0.0077)		(0.0077)		(0.0077)
BLOAT		-0.0035		-0.0202		-0.0053
		(0.0298)		(0.0295)		(0.0302)

MRK_SHR		-0.1182		-0.1549*		-0.1221
		(0.0947)		(0.0863)		(0.0956)
Constant	1.6092***	0.9684***	1.5829***	0.9805***	1.6085***	0.9591***
	(0.0055)	(0.1095)	(0.0050)	(0.0902)	(0.0059)	(0.1106)
Observations	7,536	6,518	8,842	7,561	7,536	6,518
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.0993	0.2555	0.1287	0.2752	0.0995	0.2558

Panel B: Employee output as a measure of employee relationships

	(1) EmployeesRel	(2) EmployeesRel	(3) EmployeesRel	(4) EmployeesRel	(5) EmployeesRel	(6) EmployeesRel
Holder67	-0.0067***	-0.0027			-0.0066***	-0.0031
	(0.0015)	(0.0016)			(0.0019)	(0.0020)
EM			-0.0409***	-0.0383***	-0.0478***	-0.0506***
			(0.0079)	(0.0071)	(0.0134)	(0.0120)
Holder67xEM					0.0004	0.0072
					(0.0153)	(0.0136)
AGE		0.0005***		0.0005***		0.0005***
		(0.0001)		(0.0001)		(0.0001)
ROA		-0.0287***		-0.0100***		-0.0322***
		(0.0093)		(0.0019)		(0.0097)
SIZE		0.0034***		0.0022***		0.0029***
		(0.0010)		(0.0006)		(0.0009)
LEV		-0.0041		-0.0018		-0.0039
		(0.0123)		(0.0039)		(0.0122)
MB		-0.0007		0.0006		-0.0005
		(0.0006)		(0.0004)		(0.0006)
DISTRESS		-0.0034		-0.0002		0.0024
		(0.0163)		(0.0061)		(0.0177)
LOW_MTR		-0.0047		0.0064		-0.0045

		(0.0027)		(0.0041)		(0.0027)
BLOAT		-0.0027		0.0100		-0.0019
		(0.0076)		(0.0082)		(0.0076)
MRK_SHR		-0.1345***		-0.1018**		-0.1291***
		(0.0368)		(0.0394)		(0.0366)
Constant	-0.0443***	-0.0726***	-0.0504***	-0.0780***	-0.0417***	-0.0668***
	(0.0012)	(0.0057)	(0.0011)	(0.0050)	(0.0013)	(0.0054)
Observations	19,075	16,863	49,048	42,144	19,075	16,863
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.2100	0.2210	0.0684	0.0781	0.2122	0.2229

Table 2-5. The Relationship between Customer relationships, CEO overconfidence and earnings management.

This table presents the results of the IV approach, which estimates the relationship between Customer relationships, CEO overconfidence and earnings management with Big4 Audit firms used as instrument. over the sample period of 1992-2018. The absolute value of firm's discretionary accruals is used as a measure for earnings management variable. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. The results of the 1st stage are presented in columns (1) without control variables and (3) with control variables. Columns (2) and (4) report the results of 2nd stage regression without and with control variables. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) CustomerRel	(1) EM	(2) CustomerRel
BIGAUD	-0.0591***		-0.0551***	
	(0 .0008)		(0 .0007)	
EM		2.4276***		1.5967***
		(0.3135)		(0.3209)
Holder67	0.0035***	0.2382***	0.0005	0.1666***
	(0 .0009)	(0.0285)	(0 .0009)	(0.0281)
Holder67xEM		0.1945		0.5417
		(0.4324)		(0.4261)
AGE			-0.00007***	-0.0092***
			(0 .00001)	(0.0006)
ROA			-0.0402***	-0.5370***
			(0 .0105)	(0.0819)
SIZE			-0.0034***	-0.0411***
			(0 .0003)	(0.0067)
LEV			-0.0071***	0.0621
			(0 .0021)	(0.0456)
MB			0.0048***	0.0284***
			(0 .0008)	(0.0056)
DISTRESS			-0.0344	-0.3510
			(0 .0492)	(0.3993)
LOW_MTR			0.0026***	-0.0504***
			(0 .0007)	(0.0184)
BLOAT			0.0046***	0.5382***
			(0 .0016)	(0.0486)
Constant	0.0572***	2.6749***	0.0772***	3.2627***
	(0 .0009)	(0.0200)	(0 .0028)	(0.0506)
Observations	18,754	18,755	16,824	16,825
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.5512	0.0322	0.5800	0.0776

Table 2-6. The Relationship between Employee relationships, CEO overconfidence and earnings management.

This table presents the results of the IV approach, which estimates the relationship between Employee relationships, CEO overconfidence and earnings management with Big4 Audit firms used as instrument. over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as a measure for earnings management variable. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. The results of the 1st stage are presented in columns (1) without control variables and (3) with control variables. Columns (2) and (4) report the results of 2nd stage regression without and with control variables. Panel A uses Employee workplace quality scores as a measure for employee relationships, panel B uses output per employee as a measure for Employee relationships. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Employee workplace quality scores as a measure of employee relationships

	(1) EM	(2) EmployeesScore	(3) EM	(4) EmployeesScore
BIGAUD	-0.0463***		-0.0452***	
	(0 .0009)		(0 .0009)	
EM		0.0507		0.1645*
		(0.0977)		(0.0906)
Holder67	0.0023**	-0.0260***	0 .0006	-0.0091
	(0 .0009)	(0.0083)	(0 .0010)	(0.0075)
Holder67xEM		-0.2458*		-0.1368
		(0.1448)		(0.1250)
AGE			-0.00003**	0.0006***
			(0 .00001)	(0.0001)
ROA			-0.0215***	0.1109***
			(0 .0075)	(0.0299)
SIZE			-0.0004	0.0670***
			(0.0003)	(0.0020)
LEV			-0.0040**	-0.0461***
			(0.0018)	(0.0140)
MB			0.0021**	0.0151***
			(0.0006)	(0.0021)
LOW_MTR			0.0011	0.0155**
			(0.0009)	(0.0062)
BLOAT			0.0029*	-0.0088
			(0.0015)	(0.0094)
MRK_SHR			-0.0025	-0.0127
			(0.0051)	(0.0329)
Constant	0.0451***	1.6147***	0.0484***	0.9757***
	(0 .0009)	(0.0056)	(0.0029)	(0.0188)
Observations	7,537	7,537	6,518	6,518
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes

Adj R-squared	0.6473	0.0080	0.6722	0.1963

Panel B: Employee output as a measure of employee relationships

	(1) EM	(2) EmployeesRel	(3) EM	(4) EmployeesRel
BIGAUD	-0.0622***		-0.0566***	
	(0.0010)		(0.0008)	
EM		-0.0916***		-0.1092***
		(0.0217)		(0.0241)
Holder67	0.0001	-0.0089***	-0.0010	-0.0058***
	(0.0010)	(0.0020)	(0.0010)	(0.0022)
Holder67xEM		0.0256		0.0157
		(0.0335)		(0.0380)
AGE			-0.00001	0.0003***
			(0.00002)	(0.0000)
ROA			-0.0628***	-0.0330***
			(0.01181)	(0.0061)
SIZE			-0.0050***	-0.0008*
			(0.0004)	(0.0004)
LEV			0.0063	-0.0054
			(0.0060)	(0.0054)
MB			0.0035***	0.0003
			(0.0007)	(0.0003)
LOW_MTR			0.0019**	-0.0063***
			(0.0008)	(0.0010)
BLOAT			0.0105***	-0.0698***
			(0.0022)	(0.0030)
MRK_SHR			0.0498***	-0.0346***
			(0.0074)	(0.0109)
Constant	0.0621***	-0.0388***	0.0904***	-0.0291***
	(0.0011)	(0.0012)	(0.0033)	(0.0024)
Observations	19,075	19,075	16,863	16,863
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.4874	0.0056	0.5314	0.0497

Table 2-7. The Relationship between Customer / Employee relationships, CEO overconfidence and earnings management.

This table presents the results of the IV approach, which estimates the relationship between Customer / Employee relationships, CEO overconfidence and earnings management with special accounting items used as instrument for earnings management over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as a measure for earnings management variable. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. The results of the 1st stage are presented in columns (1) without control variables and (3) with control variables. Columns (2) and (4) report the results of 2nd stage regression without and with control variables. Panel A uses Customer relationships as the dependent variable, panel B uses Employee workplace quality scores as a measure of employee relationships, panel C uses Employee output as a measure of employee relationships. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Customer relationships

	(1) EM	(2) CustomerRel	(3) EM	(4) CustomerRel
SpecialItems	0.00014***		0.00008***	
	(6.46e-06)		(7.54e-06)	
EM		1.5625***		0.3698
		(0.4934)		(0.5147)
Holder67xEM		0.4496		0.4201
		(0.9036)		(0.8600)
Holder67	0.0063***	0.2415***	0.0023**	0.1715***
	(0.0009)	(0.0534)	(0.0010)	(0.0495)
AGE			-0.0001***	-0.0097***
			(0.00002)	(0.0006)
ROA			-0.0643***	-0.5908***
			(0.0114)	(0.0850)
SIZE			-0.0084***	-0.0638***
			(0.0005)	(0.0082)
LEV			-0.0095***	0.0621
			(0.0030)	(0.0466)
MB			0.0063***	0.0408***
			(0.0006)	(0.0059)
DISTRESS			0.0088	-0.3005
			(0.0748)	(0.4584)
LOW_MTR			0.0035***	-0.0416**
			(0.0010)	(0.0190)
BLOAT			0.0096***	0.5837***
			(0.0025)	(0.0497)
MRK_SHR			0.0558***	0.9326***
			(0.0090)	(0.2712)
Constant	0.0521***	2.7226***	0.1049***	3.4561***
	(0.0006)	(0.0283)	(0.0034)	(0.0646)
Observations	18,383	18,383	16,498	16,498

Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.1896	0.0323	0.2704	0.0767

Panel B: Employee workplace quality scores as a measure of employee relationships

	(1)	(2)	(3)	(4)
	EM	EmployeesScore	EM	EmployeesScore
SpecialItems	0.0001***		0.00008***	
	(3.72e-06)		(4.20e-06)	
EM		-0.1919*		-0.1795*
		(0.1093)		(0.1073)
Holder67xEM		-0.0435		0.3258*
		(0.1953)		(0.1698)
Holder67	0.0025**	-0.0243**	0.0001	-0.0280***
	(0.0011)	(0.0108)	(0 .0011)	(0.0096)
AGE			-0.00005**	0.0005***
			(0.00002)	(0.0001)
ROA			-0.0522***	0.1033***
			(0.0157)	(0.0304)
SIZE			-0.0024***	0.0673***
			(0.0005)	(0.0020)
LEV			0.0007	-0.0375***
			(0.0042)	(0.0138)
MB			0.0047***	0.0163***
			(0.0010)	(0.0021)
LOW_MTR			0.0026*	0.0140**
			(0.0014)	(0.0063)
BLOAT			0.0121***	-0.0136
			(0.0027)	(0.0095)
MRK_SHR			0.0066	0.0045
			(0.0092)	(0.0308)
Constant	0.0433***	1.6363***	0.0578***	0.9895***
	(0.0007)	(0.0059)	(0.0047)	(0.0190)
Observations	7,433	7,433	6,426	6,426
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.2414		0.2725	0.1937

Panel C: Employee output as a measure of employee relationships

	(1)	(2)	(3)	(4)
	EM	EmployeesRel	EM	EmployeesRel
SpecialItems	0.0001***		0.00008***	
	(6.80e-06)		(7.37e-06)	
EM		-0.0297**		0.0073
		(0.0135)		(0.0140)
Holder67xEM		-0.0160		-0.0468
		(0.0333)		(0.0342)
Holder67	-0.00003	-0.0057**	-0.0008	-0.0008
	(0.0010)	(0.0023)	(0.0010)	(0.0023)

AGE			0.00001	0.0002***
			(0.00002)	(0.0000)
ROA			-0.0732***	-0.0263***
			(0.0123)	(0.0056)
SIZE			-0.0101***	0.0007*
			(0.0006)	(0.0004)
LEV			0.0081	-0.0084
			(0.0059)	(0.0055)
MB			0.0046***	-0.0007**
			(0.0008)	(0.0003)
LOW_MTR			0.0048***	-0.0085***
			(0.0010)	(0.0012)
BLOAT			0.0225***	-0.0740***
			(0.0028)	(0.0030)
MRK_SHR			0.0760***	-0.0239**
			(0.0097)	(0.0113)
Constant	0.0558***	-0.0405***	0.1139***	-0.0428***
	(0.0007)	(0.0010)	(0.0037)	(0.0024)
Observations	18,854	18,854	16,665	16,665
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.1554	0.0049	0.2605	0.0457

Table 2-8. The Relationship between Customer relationships, CEO overconfidence and earnings management, following Deepwater oil horizon spill.

This table presents the relationship between Customer relationships, CEO overconfidence and earnings management using the Deepwater Horizon Oil Spill as an industry-wide shock for earnings management. Treatment firms are firms in the oil and gas industry following the 2008 Oil spill in the Gulf of Mexico. during 1992-2017. OilSpill is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as a measure for earnings management. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. Customer relationships is used as the dependent variable. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) CustomerRel	(2) CustomerRel	(3) CustomerRel	(4) CustomerRel
OilSpill	0.1569	0.1401	0.2493	0.2401
	(0.0987)	(0.1091)	(0.1730)	(0.1593)
Holder67			0.2708***	0.2044***
			(0.0364)	(0.0377)
EM			1.8020***	1.0332***
			(0.2819)	(0.2237)
Holder67xEM			0.4094	0.5411
			(0.3581)	(0.4070)
OilSpillxHolder67xEM			0.0030	-0.3712
			(2.7544)	(2.4383)
AGE		-0.0113***		-0.0086***
		(0.0009)		(0.0009)
ROA		-0.2506***		-0.5505***
		(0.0531)		(0.0964)
SIZE		-0.0395***		-0.0548***
		(0.0079)		(0.0135)
LEV		-0.1390***		-0.0195
		(0.0353)		(0.0703)
MB		0.0515***		0.0464***
		(0.0051)		(0.0060)
DISTRESS		0.0801		-0.4267
		(0.0561)		(0.3192)
LOW_MTR		0.0710***		0.0221
		(0.0182)		(0.0208)
BLOAT		-0.0042		-0.0483
		(0.0772)		(0.1067)
MRK_SHR		0.0125		0.3066
		(0.4776)		(0.4927)
Constant	3.1048***	3.4255***	2.6841***	3.3045***
	(0.0068)	(0.0500)	(0.0214)	(0.0932)
Observations	49,294	44,107	18,753	16,824
Year Fixed Effects	Yes	Yes	Yes	Yes

Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.0577	0.1144	0.1130	0.1481

Table 2-9. The Relationship between Employee relationships, CEO overconfidence and earnings management, following Deepwater oil horizon spill.

This table presents the relationship between Employee relationships, CEO overconfidence and earnings management using the Deepwater Horizon Oil Spill as an industry-wide shock for earnings management. Treatment firms are firms in the oil and gas industry following the 2008 Oil spill in the Gulf of Mexico. during 2002-2017. OilSpill is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as a measure for earnings management. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. Employee relationships is used as the dependent variable. Panel A uses Employee workplace quality scores as a measure for employee relationships, panel B uses output per employee as a measure for Employee relationships. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Employee workplace quality scores as a measure of employee relationships

	(1) EmployeesScore	(2) EmployeesScore	(3) EmployeesScore	(4) EmployeesScore
OilSpill	0.0692**	0.0753**	0.0644**	0.0688***
	(0.0302)	(0.0276)	(0.0289)	(0.0231)
Holder67			-0.0173*	-0.0029
			(0.0090)	(0.0077)
EM			0.0150	0.1533
			(0.0903)	(0.1046)
Holder67xEM			-0.1380	-0.0902
			(0.1131)	(0.1006)
OilSpillxHolder67xEM			-0.2810	0.2618
			(0.3066)	(0.2026)
AGE		0.0010***		0.0005**
		(0.0003)		(0.0002)
ROA		0.0209		0.0514
		(0.0255)		(0.0356)
SIZE		0.0666***		0.0698***
		(0.0104)		(0.0122)
LEV		-0.0266		-0.0274

		(0.0204)		(0.0227)
MB		0.0114**		0.0211***
		(0.0048)		(0.0048)
DISTRESS		0.2325		0.0000
		(0.1917)		(0.0000)
LOW_MTR		-0.0049		-0.0013
		(0.0077)		(0.0078)
BLOAT		-0.0721**		-0.0552*
		(0.0315)		(0.0266)
MRK_SHR		-0.1439		-0.1151
		(0.0869)		(0.0948)
Constant	1.5666***	0.9869***	1.6056***	0.9580***
	(0.0036)	(0.0900)	(0.0057)	(0.1103)
Observations	8,842	7,561	7,536	6,518
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.1249	0.2762	0.1000	0.2572

Panel B: Employee output as a measure of employee relationships

	(1) EmployeesRel	(2) EmployeesRel	(3) EmployeesRel	(4) EmployeesRel
OilSpill	0.0107	0.0045	0.0048	0.0016
	(0.0072)	(0.0100)	(0.0073)	(0.0074)
Holder67			-0.0066***	-0.0031
			(0.0020)	(0.0020)
EM			-0.0479***	-0.0507***
			(0.0133)	(0.0120)
Holder67xEM			0.0024	0.0092
			(0.0144)	(0.0133)
OilSPillxHolder67xEM			-0.1322	-0.1025

			(0.1195)	(0.1325)
AGE		0.0005***		0.0005***
		(0.0001)		(0.0001)
ROA		-0.0089***		-0.0322***
		(0.0018)		(0.0098)
SIZE		0.0030***		0.0029***
		(0.0006)		(0.0009)
LEV		-0.0027		-0.0037
		(0.0039)		(0.0123)
MB		0.0004		-0.0005
		(0.0004)		(0.0006)
DISTRESS		-0.0026		0.0022
		(0.0057)		(0.0179)
LOW_MTR		0.0060		-0.0045
		(0.0041)		(0.0027)
BLOAT		0.0066		-0.0012
		(0.0111)		(0.0077)
MRK_SHR		-0.1147**		-0.1291***
		(0.0397)		(0.0365)
Constant	-0.0546***	-0.0846***	-0.0418***	-0.0667***
	(0.0012)	(0.0050)	(0.0013)	(0.0054)
Observations	49,048	42,144	19,075	16,863
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.0668	0.0770	0.2123	0.2229

3. Corporate Social Responsibility and Earnings Management: The impact of Product Market Competition.

3.1 Introduction

Prior literature establishes the adverse effects of engagement in earnings management by the firm. Earnings management is involved in numerous accounting scandals (Yu, 2008), such as the $2.1 billion restatement of Xerox's accounts in 2002 (Bergstresser and Philippon, 2006). Such practices also lead to higher cost of capital (Botosan, 1997; Lang & Lundholm, 1996) and are considered unethical accounting practices. As such, stakeholders rely on high ESG standards, adopted by the firm, to limit such practices, which contradict the notion of ESG investing. To that end, negative relationship between ESG and earnings management (Kim et al., 2012) suggests that firms engaging in ESG are less likely to manage earnings. However, external to the firm factors, such as the level of competition in the product market, impact firms' incentives to engage in both sides of this association, earnings management and ESG standards adopted by the firm. Firms in highly competitive markets often turn to ESG to acquire a competitive advantage, such as higher market share or good reputation (Fombrun and Shanley, 1990; Dhaliwal et al., 2012). Moreover, as competition in the product market increases, firms' pricing ability and profitability decreases. Therefore, firms in highly competitive markets have incentives to engage in earnings management (Datta et al., 2013) to smooth cash flows and stock returns (Peress, 2010) or to protect the managers' job by meeting targets (Tang and Chen, 2020). It is thus unclear how competition in the product market affects ESG's ability to limit earnings management, yet this relationship has largely been ignored. I address this question and examine how product market competition amplifies the adverse effects of ESG on earnings management.

Corporate social responsibility, otherwise known as ESG, is the practice of integrating social and environmental issues in the firm's operations

(Eccles et al., 2014)[27]. In return for short-term allocation of resources to ESG investing, the firm can experience higher financial returns (Henisz et al., 2014) in the long-term. This is because firms develop intangible assets in the form of strong stakeholder relationships (Eccles et al., 2014), which then act as competitive advantages (Hillman and Keim, 2001) such as customer loyalty and corporate reputation.

On a more opportunistic practice (Fields et al., 2001; Sercu et al., 2006), earnings management occurs when managers use their own judgement when it comes to financial reporting and structuring transactions (Healy and Whalen, 1999). This obscures firms' transparency in financial reporting, which contradicts the notion of ESG investing (Atkins, 2006). Firms that allocate resources in implementing ESG practices to meet stakeholders' ethical expectations are likely to constrain earnings management, driven by incentives to be honest, trustworthy, and ethical. Thereby, providing investors with more transparent and reliable financial information (Kim et al., 2012).

However, ESG implementation by those firms is influenced by the level of market competition. High competition acts as a pressure mechanism to managers (Alchian, 1950; Stigler, 1958; Schmidt, 1997) and forces them to make value increasing investment and financing decisions (Grossman and Hart, 1983). ESG then acts as a tool that helps firms stand out and achieve a competitive advantage (Jones, 1995) in the form of intangible assets like corporate reputation and bigger market share. This is because firms engage in ESG investing to improve corporate image and reputational capital and strengthen marketing tactics effects (Maignan, Ferrell, and Ferrell, 2005). Lai, Chiu, Yang and Pai (2010) also examine this relationship between ESG and firms' performance, in B2B markets and find ESG positively affects firm's performance. Therefore, firms have incentives to engage in ESG when product

[27] Such practices are consistent with the stakeholder theory. Jensen (2005) argues that managers should make decisions by accounting for the interests of all stakeholders of the firm, which is known as stakeholder engagement.

competition is high, leading to a positive relationship between product market competition and ESG engagement.

While product market competition provides firms with incentives to adopt ESG practices to overcome competition, it also has a direct effect on financial reporting and earnings management decisions. Highly competitive business environment provides managers with incentives to manipulate earnings to influence stock prices (Shleifer, 2004). DeFond and Park (1999) suggest that manager's incentives to "meet or beat" accounting earnings reported by other firms in the industry also encourages earnings management.

Earnings management can have value destroying effects for the firm (Huang et al., 2009), even bigger when investors are concerned about managerial opportunistic behaviour (Coles et al., 2006), with numerous accounting scandals around earnings management (Yu, 2008). Thus, I explore ESG's ability to mitigate earnings management when the firm is affected by the level of competition in the product market, in which firms have different incentives to engage in both ESG and earnings management practices.

I use a sample of U.S. firms, excluding financial and utilities firms, for the period 2002-2017. I do not restrict the sample by only including firms that have available ESG information[28], to assess whether having ESG credentials in the first place impacts the relationship between ESG and earnings management. I use an array of alternative proxies for competition: a) the product market fluidity index by Hoberg et al. (2014) to measure product market competition; b) the product Vertical Integration Index by Hoberg et al. (2016); c) the Herfindahl-Hirschman Index; d) the product similarity index by

[28] ESG score is the average of the firms' environmental, social, governance and economical scores, as these are obtained from Asset4 of Refinitiv. Firms' corporate governance mechanisms adversely affect the extent of earnings management by firms' managers (Liu and Lu, 2007), yet firms' governance score is included in the ESG calculation. Kim et al. (2012) argues corporate governance is as a distinct construct from ESG and propose using the remaining five dimensions from KLD database as a measure of ESG, as well as introducing the governance score as a control variable in the model. In this empirical chapter, however, removing the governance dimension from the ESG score, from Asset4, would result in ESG losing significant variation, while using the governance score as a control variable as well would introduce further endogeneity problems. I thus follow prior literature (Buchanan et al., 2018; Baker et al., 2021) and include firms' governance score into the ESG calculation.

Hoberg et al. (2014). The baseline results suggest that the level of competition faced by the firm significantly amplifies the mitigating effects of ESG on earnings management[29]. The results are also economically significant. A one standard deviation increase in ESG score, for firms facing high competition, reduces earnings management by 0.90% using fluidity as a measure of competition. It also reduces earnings management by 0.34% using vertical integration as a measure of competition. If the firm is facing high competition in the product market, they are more inclined to stick to trustworthiness that comes with ESG investing and abstain from earnings management.

Because firms' engagement in earnings management also affects their ESG performance (Bozzolan et al., 2015), there is potential endogeneity bias due to unobservable omitted variables. I use an instrumental variable approach using the industry average ESG as an instrument. Firms' ESG choices are often correlated in the same industries. But industry-level ESG is not related to earnings management in the firm-level (Cao et al., 2019). I use the average ESG score for each industry-year pair as instrument for ESG. The results from the instrumental variable regression confirm the baseline results. Overall, high competition makes ESG a more effective hedge against earnings management practices by the firm.

Second, I identify a new exogenous shock, that to the best of my knowledge has not been utilised by prior literature, to perform a triple difference in differences approach. I employee the introduction of a state-wide or city-wide ban, or a pricing mechanism, of the use of single use plastic bags in the retail industry to capture regional changes in competition. The introduction of the ban in the retail industry shifted competitive pressure from retail firms in affected areas to firms in areas that were not affected by the legislation. Consequently, the introduction of the ban created an industry-wide

[29] The relationship between ESG and earnings management by the firm can however be endogenously determined (Rezaee et al., 2020) due to unobservable factors, such as both ESG engagement and earnings management practices being subject to managerial discretion, or investors' demand for more ethical behaviour by the firm. To alleviate this issue, a series of robustness tests are employed, including instrumental variable regressions and difference in difference approach. The results remain consistent.

and state-wide adverse product competition shock. As the relevant ban legislation is staggered across different States it provides a robust setup to test the hypothesis.

My contribution to the literature is threefold. First, I extent the line of research that identifies the causal effect of ESG on firms' engagement in earnings management. Consistent with prior literature (Kim et al., 2012), I find that firms with high ESG standards engage in less earnings management. However, no prior research examines this relationship when conditional on competition. Second, I introduce competition in the product market as a factor amplifying this association. Recent literature finds that product market competition is one of the many determinants of managers' propensity to engage in earnings management (Datta et al., 2013; Laksmana & Yang, 2014; Markarian & Santalo, 2014). With more firms competing in the same industry, shareholders have more incentives to monitoring managers' performance against industry peers (Vickers, 1995; Meyer and Vickers, 1997). For example, CEO turnover is more often associated with benchmark performance evaluation when competition is high (DeFond and Park, 1999), providing managers with incentives to manage earnings to show superior financial results. On the other hand, increased competition means more firms competing for the same amount of funds in the capital market (Laksmana and Yang 2014), and therefore managers have incentives to manage earnings to extract as much funds as possible from investors. I find that ESG is more effective in mitigating earnings management for firms facing significant competitive pressure, compared to firms in less competitive product markets. I use an IV approach to provide robust evidence of causality between earnings management, ESG and competition, and perform a triple difference in differences approach. While most other studies use import tariff cuts as a shock to product market competition (Zhang, 2020; Rahman et al., 2021), I use a new exogenous shock on competition driven by regulatory changes in the retail industry. Third, I use a comprehensive sample of U.S. firms and not just those firms that have an ESG rating, to examine whether even disclosing ESG related information

impacts earnings management by the firm, and how this association is affected by product market competition.

3.2 Literature Review and Hypothesis Development

3.2.1 Product market competition and ESG

As competition in the product market increases, and more firms compete in the same industry, shareholders are more inclined to monitor managers' actions of their investee firms and ensure they are making value maximization decisions to acquire a competitive advantage for their firms (Vickers, 1995; Meyer and Vickers, 1997). ESG investing then can indicate managerial efforts to increase firm value and to protect manager's jobs, while prior literature documents a positive association between ESG engagement and firms' long-term value when market competition is high (Jiao and Shi, 2014; Ryu et al., 2016).

Furthermore, adopting ESG practices, thus disclosing more information about the firm and its operations, also results in reduced information asymmetry (Dhaliwal et al., 2012; Kim et al., 2012; Cho et al., 2013), and therefore lower cost of capital for the firm. As a result, higher ESG firms benefit from lower cost of capital, securing cheaper financing for their operations (Sharfman and Fernando, 2008; El Ghoul et al., 2011; Girerd-Potin et al., 2014; Ng and Rezaee, 2015), making it easier to compete with their industry peers[30].

Moreover, high ESG firms are perceived as being less risky by investors (Robinson et al., 2008; Starks, 2009) as ESG can act as a buffer in the event of poor financial performance by reducing firm risk (Godfrey, 2005; Luo and Battacharya, 2009), while firms are more likely to invest in ESG as a differentiation strategy when facing fierce competitive pressure (Siegel and Vitaliano, 2007; Fisman et al., 2006; Declerck and M'Zali, 2012; Fernández-

[30] The lower cost of capital allows the firm to finance its projects at lower cost (Heinkel et al., 2001; El Ghoul et al., 2011).

Kranz and Santaló, 2010) in an effort to acquire a competitive advantage.[31] For firms in competitive industries, any competitive advantage results in higher market share and ESG helps firms to stand out when competition increases (Sheikh, 2018; Fisman et al., 2006)[32]. Competitive advantages also result in bigger increase in cash flows when competition is high (Sheikh, 2019). As a result, firms are more likely to invest in ESG practives in more competitive markets (Fisman et al., 2006; Harjoto and Jo, 2011; Declerck and M'Zali, 2012).

3.2.2 Product market competition and earnings management

Agency theory suggests an increase in product market competition results in more information being available to shareholders which can be used to more accurately monitor managers' actions and performance in comparison to their peers (DeFond and Park, 1999; Holmstrom,1982; Nalebuff and Stiglitz, 1983). A counter argument by Datta et al. (2013), however suggests increased competition prompts managers to limit disclosure of information to industry rivals, while managerial career concerns outweigh the disciplinary impact of competition, such as value maximisation decisions, providing managers with incentives to manipulate earnings.

Fierce competitive pressure also puts constant pressure on managers to "meet or beat" accounting earnings reported by competing firms (DeFond and Park, 1999), beat prior years' earnings or analysts' forecasts, as evidence suggests the market reacts positively to beating individual forecasts (Kirk et al., 2014). The rationale is relative performance evaluation (RPE), such as evaluation of a CEO's performance relative to her peers, is often taken into account by boards of directors to identify unfit CEOs, while competition enhances the usefulness of RPE (DeFond and Park, 1999). CEO compensation plans are also often related to RPE of CEOs (Kim, 1996; DeFond and Park,

[31] Firms' ESG activities are often taken into account by customers who tend to be loyal to socially responsible firms, or even willing to pay a higher price (e.g., Sen and Bhattacharya, 2001; Bhattacharya and Sen, 2004; Kitzmueller and Shimshack, 2012).

[32] Competitive advantages derived from ESG investments can be in the form of customer loyalty, brand image and social capital, or even lower cost of capital for the firm (Sheikh, 2019).

1999). Consequently, competition provides managers with incentives to manipulate earnings. Similar arguments that product market competition encourages earnings management have been brought forward by many studies (Datta et al., 2013; Laksmana and Yang, 2014; Markarian and Santalo, 2014).

Earnings management engagement can also influence stock prices under high competition. Markarian and Santalo (2014) argue that when competition increases, engagement in earnings management induces higher returns in the stock market when reported earnings indicate the possession of a competitive advantage. Thus, managers have incentives to manipulate earnings to influence stock prices. Moreover, as the number of firms competing in an industry increases, funds from the capital markets that can be allocated to each firm decreases (Lemma et al., 2018). As a result, firms' incentives to secure funds and reduce the cost of capital leads them to increased disclosure in an effort to reduce information asymmetry (Diamond and Verrecchia, 1991). Hoberg and Phillips (2010) argue that firms reduce information asymmetry to obtain financing at more favourable rates. Therefore, this part of the literature suggests a negative relationship between product market competition and earnings management.

3.2.3 Effects of competition on the relationship between ESG and earnings management

Kim et al. (2012) find a negative relationship between ESG engagement and earnings manipulation and provide reasons that explain this relationship, other than ethical and social obligations. ESG is often a tool for building corporate reputation (Fombrun and Shanley 1990; Verschoor 2005; Linthicum et al. 2010). Consistent with a negative association between ESG and earnings management, firms use ESG to improve their reputation and abstain from earnings management to avoid damaging their reputation. Finance literature also finds evidence of a positive association between ESG and financial performance (Waddock and Graves 1997; Griffin and Mahon 1997; Roman et al. 1999). High ESG firms with superior financial performance have less incentives to engage in aggressive earnings management, meaning a negative relation between ESG and earnings management.

However, the effects of competition have largely been ignored. Facing increased competition, firms have incentives to adopt higher ESG standards, and limit earnings management to stick to the trustworthiness that comes with ESG standards (Sheikh, 2018; Dhaliwal et al., 2012; Fisman et al., 2006; Fombrun and Shanley, 1990). Firms also have incentives to engage in earnings manipulation, for opportunistic reasons, such as ensure CEO compensation, or value maximization (Laksmana and Yang,2014; Markarian and Santalo, 2014; Datta et al., 2013; DeFond and Park, 1999). However, the above are often observed under the assumption that competition is high. Under fierce competitive pressure, product markets, as well as capital markets, can penalise firms that do not adhere to strict ESG standards (Flammer, 2013). If firms operate in less competitive industries, their market power and pricing ability is stronger. Thus, they enjoy more stable cash flows and stock returns compared to those facing significant market pressure and have to adhere to market forces (Peress, 2010). Consequently, firms in low competition industries can afford to be penalised by the market for unethical behaviour like earnings manipulation[33] or abstaining from ESG policies.

In addition, as high ESG scores can act as a buffer to their reputation (Godfrey, 2005; Luo and Battacharya, 2009), firms operating in low competition markets, have even more incentives to engage in earnings management, effectively hiding their earnings management behind a seemingly high ESG score. If this is true, then I expect to find significant negative relationship between ESG and earnings management if competition is high. Therefore, the following hypothesis is developed:

H3-1: Product market competition amplifies the relationship between earnings management and ESG.

[33] In the event of earnings management fraud exposure and damage to firm's reputation, less competitors are able to claim firm's market share following the exposure, in low competition markets, minimizing damage to the firm.

3.3 Empirical Framework

3.3.1 Sample and Data

I collect ESG data from Asset4 of Refinitiv (formerly known as Thomson Reuters) from 2002 to 2017. Asset4 collects data and scores firms on the ESG dimensions starting from the fiscal year 2002[34]. I use the natural logarithm of the equally weighted score of the four pillars to proxy for ESG[35], and then break ESG down to those four individual components for robustness reasons. Data of US firms are collected from Compustat. Following prior literature (Boubaker et al., 2018; Sheikh, 2019) firms in the financial services sector (SIC 6000–6999) and utilities industries sector (SIC 4900–4999) are eliminated because of their special regulatory environment.

As firmly established in the earnings management literature (Cohen et al., 2008, Francis et al., 2008, Katmon and Farooque, 2015, Yu, 2008), the modified Jones model (1991) and the performance-matched discretionary accruals model of Kothari, Leone, and Wasley (2005) are used to estimate the absolute value of the discretionary accruals. Cohen et al. (2008) argue that the more meaningful measure of earnings management is the absolute level of discretionary accruals. The discretionary accruals in the absolute value as a proxy for the overall earnings management is used rather than the signed value in order to capture earnings management regardless of manager's income-increasing or decreasing incentives.

As a primary measure of competition, I use product market fluidity index of Hoberg et al. (2014) and Hoberg et al. (2016). This is a measure of how intensively the product market is changing around the firm each year, and measures threats and instabilities arising from the actions of competitors.

[34] It includes 900 evaluation points per firm, all primary data and publicly available. Typical sources include stock exchange filings, ESG and annual reports, and nongovernmental organization websites. These 900 evaluation points are then used as equally weighted inputs to calculate 250 key performance indicators (KPIs) that are further organized into 18 categories within four pillars of corporate social responsibility. These pillars are economic performance, environmental performance, social performance, and corporate governance.

[35] For robustness reasons, I also exclude the economic pillar as economic performance can be directly or endogenously related to both earnings management and competition, and repeat the fixed effects and instrumental variable regressions.

Measures of fluidity are customized to each firm based on each firm's unique product market vocabulary. Greater fluidity represents increased threats and increased competition in the product markets. As a second measure of product market competition, I use the Fresard, Hoberg and Phillips (2016) vertical textual network industry relatedness classification, or vertical integration. The vertical integration score indicates the potential of firm's products to be vertically related to the other products sold by the same firm. Intuitively, if this score is high, the firm is vertically integrated, and thus competition in the product market is low. Vertical integration, which is based on Herfindahl index, is identified at the individual firm level by assessing the overlap between firms' product descriptions and the actual product words and descriptions used by the BEA in their input-output tables.

I also use the Hoberg and Phillips (2014) text-based industry concentration index as a measure of product market competition. They use 10-K text-based network industries (TNIC) classification to construct Herfindahl index (TNICHHI) of market power. This industry classification can better classify firms with similar products into the same industry and makes comparisons more reasonable[36]. A low HHI indicates that there are many firms in the industry, the average market share of each firm is low, and industry competition is fierce. A very high HHI value indicates that the industry includes only a few large firms that could easily dominate the market, and hence, industry competition is low. Since both Vertical Integration and HHI have an inverse relationship with product market competition (ie. Higher HHI means lower competition) I multiply all vertical integration and HHI observations with minus one to make a more intuitive interpretation of the results.

[36] Suppose, for example, two firms produce the same product and thus compete in the same product market. Based on the traditional SIC codes, these firms might belong to different industries. Therefore, Compustat HHI fails to measure the competition between the two firms in the same product market. The text-based network industry classification (Hoberg and Phillips, 2014) identifies product similarity between the two firms, and thus, TNICHHI better captures the product market competition between the two firms.

Lastly, I also use product similarity index of Hoberg et al. (2014) to measure product market competition. They calculate similarity scores[37] by parsing the product descriptions from the firm 10Ks and forming word vectors for each firm to compute continuous measures of product similarity for every pair of firms. To test the hypothesis, I use the following model:

$$EarningsManagement_{i,t} = a_{i,t} + b_1 ESG_{i,t} + b_2 High\_Competition_{i,t} + b_3 ESG_{i,t} x High\_Competition_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

Where Earnings Management is the dependent variable as the absolute value of discretionary accruals. ESG captures corporate social responsibility as the natural logarithm of the weighted average of governance, economic, environmental, and social performance. High_Competition is a binary variable that takes the value of one if the measure of product market competition, captured as fluidity, vertical integration, HHI and similarity, is higher than the industry-year average[38].

$X_{i,t}$ is a vector of the control variables of the model. I control for firm-level factors that prior literature identified as antecedents of firms' earnings management activity. These factors include firm-size (SIZE) (Dechow and Dichev, 2002), corporate profitability (ROA), firm's leverage (LEV), the market to book ratio (MB) (Dechow et al., 2011, Hribar and Nichols, 2007).

I also include market share (MRK_SHR) and financial distress (DISTRESS), a binary variable of big 4 audit (BIGAUD) as firms audited by one of the big4 auditing firms are less likely to manage earnings. I include an indicator variable for low marginal tax rate (LOW_MTR). A low marginal tax rate is assumed if the firm's marginal tax rate is below the statutory tax rate

[37] This is achieved with the cosine similarity method, following basic screening to eliminate common words from the product descriptions from the firm 10Ks. For any two firms, product similarity is a real number in the interval [0,1] describing how similar the words used by the two firms are.

[38] I perform further robustness tests with alternative classifications of High and Low competition using the industry 75% and 90% percentile in table 12.

(Blouin et al., 2010). Lastly, I introduce a binary variable to account for firm's balance sheet bloat (BLOAT). θ and γ denote year and industry fixed effects. All variables are defined in the appendix B, variable definition.

3.3.2 Summary Statistics

Table 1 presents the summary statistics for the sample. The mean value of earnings management is 10.51%, suggesting firms' abnormal accruals account for 10.51% of total normal accruals. Therefore, firms in the sample engage in 10.51% income increasing or income decreasing earnings management in absolute terms. The lower 1% of firms engage in only 0.1% income increasing or income decreasing earnings management while the top 1% engage in 84.43%. The ESG score has a mean value of 50.2 and a standard deviation of 30.41. These results are consistent with prior literature that used the same measure for ESG (Halbritter and Dorfleitner, 2015; Ferrell et al., 2016).

A very high vertical integration (VertInt) means the firm is vertically integrated, its products are vertically related to the other products sold by the same firm, and competition is low. It has a mean of 1.03% and Standard Deviation of almost 1%. The lower 1% of firms have a Vertical Integration score of 4.38%, which indicates very low competition, and the top 1% a Vertical Integration score of just 0.02% indicating very high competition. The measure Fluidity (Fluidity) measures the actions taken by competitors, and a high Fluidity score mean high competition. It has a mean of 6.81 with the lowest 1% of firms having Fluidity of just 1.57 and the top 1% having Fluidity of over 18.14.

Firms in the sample have a mean Market Share (MRK_SHR) of almost 1% (with a median close to zero)[39] and a mean value of ROA of -12%. The median value of ROA (median=1.72%) suggests a wide variation in corporate profitability. In the sample, only 2.8% of the firms are in financial distress, while 49.9% of the firms are audited by one of the big 4 Audit firms. For further analysis, descriptive statistics for firms facing high competition, low

[39] The median value of firms' market share in our sample is 0.0007.

competition and no ESG data available are presented in Panels B, C and D respectively.

"Insert Table 3-1"

Table 2 presents the pearson correlation between the variables in the sample. Earnings management seems to have a significant weak negative correlation with ESG score. It also has weak positive significant correlations with all product market competition measures. This suggests that firms engaging in ESG activities abstain from earnings management, while competition encourages earnings management. Product market power measures vertical integration and HHI have been multiplied by minus one to make a more intuitive interpretation of the results, which explains their positive correlations with product market competition measures, fluidity, and similarity. ESG score has negative significant correlations with competition measures HHI, vertical Integration, fluidity, and similarity, meaning that competition actually discourages ESG activities by the firm.

"Insert Table 3-2"

3.3.3 Baseline results

Table 3 reports results from regressions with industry and year fixed effects clustered at the firm level. Consistent with the theory presented in the hypothesis development section, I expect the coefficient of the interaction term between high competition and ESG to be negative. Panel A uses Fluidity as measure of product market competition. Columns (1), (3) and (5) show the results of the individual variables of interest without control variables. Columns (2), (4) and (6) show the individual variables of interest with the control variables of the model. Columns (1) and (2) show that the higher ESG engagement, the lower the firm's earnings management activities. Columns (3) and (4) indicate a positive association between high competition and firms' earnings management engagement.

In column (6), however, including the interaction term ESGxHighFluidity and controlling for firm specific and earnings management

specific variables, I find ESG is not statistically significant, while the interaction term remains significant at 10% level of significance. These results suggest increased competition in the product market drives the relationship between earnings management and ESG and ESG engagement by the firm mitigates earnings management only if competition is high. Overall, preliminary results suggest the coefficients on high competition are positive and statistically significant meaning firms that operate in highly competitive markets tend to have higher engagement in earnings management practices. Moreover, the coefficient of the interaction term between ESG and high competition is negative and significant. The results suggest that the firm's engagement in ESG is more important in mitigating earnings management if competition is high.

Panel B is using Vertical Integration as the measure of product market competition. Consistent with results from panel A, ESG engagement is better in limiting earnings management under high competition in the product market.

"Insert Table 3-3"

3.4 Robustness Test

3.4.1 Endogeneity

From the baseline regressions presented above, it is shown that competition is a factor that affects ESG's ability to limit earnings management. However, the relationship between earnings management and corporate social responsibility can be endogenous. Jones (1995) argues that firms conducting business on the basis of trust and cooperation, being socially responsible, have an incentive to demonstrate a commitment to ethical behaviour, thus limiting earnings management. It is also firmly established in the literature that firm's engagement in earnings management practices also affects ESG performance of the firms (Bozzolan et al., 2015), thus the model suffers from endogeneity.

Following prior literature (Ferrell et al., 2016), I use an instrumental variable approach to remove the aforementioned bias, using the industry average ESG score as the instrument. Research shows it is an appropriate

instrument as industry peers ESG performance systematically affects the firm's ESG policies (Cheng et al., 2013; Ioannou and Serafeim, 2017). The chosen instrument does not have a significant relation with the dependent variable (Earnings Management) satisfying the exclusion criterion[40]. It is also highly correlated with the ESG score of the firm[41] (coefficient of -0.95[42] using fluidity as a measure of product market), satisfying the relevance criterion.

Table 4 reports the results of an instrumental variable regression. Columns (1) and (4) report the first stage regression on the ESG score. Columns (2) and (5) report the second stage regression results without control variables. Consistent with baseline regression results, ESG firms engage in less earnings management while the coefficient of high product market competition is positive and statistically significant, meaning firms in highly competitive markets have more incentives to engage in earnings management. The interaction terms between ESG and high competition have statistically significant negative relationships with dependent variable.

Columns (3) and (6) report second stage regression results after controlling for firm specific and earnings management specific factors. With the endogeneity bias minimized, using fluidity as a measure of product market competition, I do not find results consistent with the baseline results. ESG has a significant negative relationship with earnings management, consistent with prior literature (Kim et al., 2012), however product market competition does not affect earnings management, or drives the relationship between earnings management and ESG by the firm. Using firms' product vertical integration as a measure of competition however, I find results consistent with baseline regression. ESG remains not significant as a factor for earnings management. If the firm is facing highly competitive pressure however ESG's mitigating

[40] I test whether the instrument is exogenous in our data using an industry-year fixed effects regression with and without controls. In both cases the instrument does not have a significant relationship with the dependent variable earnings management. Further evidence are provided in Appendix C.
[41] When calculating the average, the commands "rangestat" and "asrol" were used as well as manually, excluding the focal observation. The results remained consistent.
[42] The negative coefficient is the result of using the natural logarithm of the weighted average ESG score.

role on earnings management becomes significant, supporting my Hypothesis. Increased product market competition also positively affects earnings management using vertical integration as a measure of competition.

The results provide some evidence[43] that there is negative relationship between earnings management and ESG. Additionally, the results confirm that the effect is amplified in markets where product market competition is high. Firms incorporate competition in their decision making relevant to financial reporting quality and ESG policies. For firms operating in highly competitive markets, ESG engagement forces them to adopt strict standards when it comes to financial reporting. Moreover, if firms operate in absence of competitive pressure, they do not limit earnings management as much as part of their ESG strategy. The results are consistent using both fluidity and vertical integration as measures of product market competition.

"Insert Table 3-4"

For robustness reasons, I run the same IV regressions using HHI index and Product Similarity as alternative measures of product market competition. The results are presented in Table 5. Using both measures of competition in columns (2) and (5), without the use of control variables, there is a positive statistically significant relation between earnings management and product market competition. The coefficients of the interaction terms between ESG and high product market competition remain negative and statistically significant. In columns (3) and (6) however, after controlling for earnings management variables, I do not find consistent results.

"Insert Table 3-5"

3.4.2 Pillars of Corporate Social Responsibility

To further examine the effects of product market competition on the relationship between earnings management and ESG, I break down the weighted average ESG score to its four individual pillars, governance score,

[43] Primarily using product vertical integration as a measure of competition.

economic score, environmental score, and social score, and run the same IV regressions using the four pillars instead of the ESG score.

Prior studies also follow a similar approach, and often find that one specific pillar predominantly drives each specific relationship (Dimson, Karakaş and Li, 2015; Sassen, Hinze and Hardeck, 2016). For example, literature documents the social dimension of firms' ESG score to be the main driver of relationship between ESG and firm value (Bajic and Yurtoglu, 2018). Ding et al. (2021) find the association between climate risk and earnings management is more amplified for firms operating in environmentally sensitive industries, where firms have more incentives to show greater environmental performance. Harris et al. (2019) examine female CEOs, that are more prone to the social desirability response bias, and find higher manipulation of earnings to increase the value of equity-based compensation. Kim et al. (2012) argues corporate governance is as a distinct construct from ESG and propose using the remaining five dimensions from KLD database as a measure of ESG. Prior research also finds that corporate governance, in the form of quality board characteristics, mitigates earnings management by the firm, while the effect is stronger for firms in non-concentrated markets. A significant branch of prior literature (Ioannou and Serafeim, 2012; Cheng, Ioannou and Serafeim, 2013; Hawn and Ioannou, 2016; Flammer, 2021) also isolates the economic pillar from the ESG score, as firms' economic performance affects earnings management decision[44].

Table 6 reports the results using product market fluidity as a measure of competition in panel A. Columns (1), (2), (3) and (4) presents the second stage regression results for governance, economic, environmental, and social score, respectively. Firms' environmental and social policies engagement alone do not limit earnings management by the firm. Firms' governance and economic scores, however, are factors that adversely affects earnings management activities. I find no evidence to suggest that each pillar

[44] A separate discussion focusing on the economic pillar and ESG score excluding the economic pillar is provided later in the same section.

individually mitigates earnings management when the firm faces highly competitive pressure.

Panel B reports the results of a second stage regression using vertical integration as a measure for product market competition. Only the economic pillar of ESG on its own mitigates earnings management by the firm. Economic, environmental and social scores adversely affect earnings management when competition is high. The governance ESG pillar is not an element of ESG that has any effect on firm's earnings management decisions, irrespective of the level of competition. The other three pillars of ESG are taken into account by managers when deciding on financial reporting, especially when the firm is facing high competition in the product market. Consistent with prior literature (Dimson, Karakaş and Li, 2015; Sassen, Hinze and Hardeck, 2016), I find that the relationship between earnings management and ESG, including the economic pillar, is primarily driven by one pillar, firms' economic score. When ESG is examined based on its four pillars, the results posit that just enjoying a good ESG performance is not as important in mitigating earnings management. However, ESG performance does matter when the firm faces significant competitive pressure.

"Insert Table 3-6"

In both baseline and IV regression analysis so far, ESG is defined as the weighted average of environmental, social, governance and economical performances of the firm. However, firms' economic performance affects earnings management decision, while competition also affects firms' economic performance. Therefore, economic performance can be directly or endogenously related to both earnings management and product market competition. By separating the four pillars of ESG in the above analysis, it is also observed that the negative association between ESG and earnings management is primarily driven by the economic performance of the firm. A significant branch of prior literature (Ioannou and Serafeim, 2012; Cheng, Ioannou and Serafeim, 2013; Hawn and Ioannou, 2016; Flammer, 2021) also excludes the economic pillar from the same measure of ESG from Asset4.

Therefore, for further robustness, I exclude the economic pillar from the ESG score, and repeat the baseline regression and instrumental variable regression using product market fluidity and vertical integration as a measure of competition[45].

The results of the baseline regression, using industry and year fixed effects, are presented in Appendix 3-D. Results remain consistent. ESG adversely affects firms' earnings management, only without the use of control variables in column (1), while competition increases firms' engagement in earnings management. ESG is also more effective in limiting earnings management by the firm when competition is high, in most model specifications. Instrumental variable regression, using the industry average ESG score as an instrument, provides similar results. Results are presented in Appendix 3-E.

3.4.3 The Halo Effect

The weighted average ESG score that is used as the measure of ESG can also be used to provide further results through the voluntary disclosure theory. Although this theory originally referred exclusively to the voluntary disclosure of financial information, it has also been applied to explain the voluntary disclosure of non-financial information (Bewley and Li, 2000, Clarkson et al., 2008). A firm enjoying superior sustainability performance, voluntarily discloses non-financial information to reveal the nature of its true performance and to (potentially) increase its market value (Clarkson et al., 2008). Dhaliwal et al. (2011) document that superior sustainability performers have significantly lower costs of equity capital when they publish a standalone sustainability report for the first time.

However, firms may provide high-quality information regarding topics that are favourable to themselves (superior performance) while disclosing only low-quality information on topics that may be detrimental to their interests (poor performance) (Hummel and Schlick, 2016). Irrespective of the quality of

[45] The industry average ESG score, used as the instrument for the IV regression, is recalculated using the new ESG score, excluding the economic pillar.

information, firms that disclose ESG related information expect certain benefits from it. In table 1, there are over 43,000 firm-year observations for each of the product market competition measures and over 55,000 firm-year observations for most of the other variables except ESG score. For the weighted average ESG score I get 9,404 firm-year observations for the same period.

This suggests that firms tend to signal their ability to be socially responsible, by providing more transparent ESG disclosures to construct an average ESG score. This provides them with the "Halo Effect", referring to firms portraying themselves as ethical and cooperative through the disclosure of ESG related information and reporting. Stakeholders, such as suppliers and shareholder are more likely to establish cooperation with such firms as a result. To test the halo effect through ESG disclosure, I create a binary variable (ESGscore) that takes the value of 1 if there is a weighted average ESG, and the value of 0 otherwise. Table 7 presents the results of an IV approach. Panel A uses product market fluidity as a measure of competition. Columns (1) and (3) report the results of the 1st stage regressions without and with control controls, respectively. The industry average ESG score is used again as the instrument. Columns (2) and (4) report the 2nd stage regression results. After controlling for firm and earnings management specific control variables, I find that firms disclosing ESG related information, engage in 1.85% more earnings management activities. However, after accounting for high level of competition, I find that firms disclosing ESG related information in highly competitive markets engage in less earnings management.

In panel B, vertical integration is used as a measure of competition. Columns (1) and (3) report 1st stage regression results, while columns (2) and (4) report 2nd stage regression. The results are consistent with those of Panel A. Overall, disclosing ESG related information leads to more earnings management. The rationale behind this is that ESG can act as a reputational buffer for firms, giving them incentives to risk extracting the benefits earnings management as well. However, there is no such option when competition is

high, where managers need to decide on the trade-off between ESG and earnings management.

"Insert Table 3-7"

Overall, besides the actual ESG performance, firms' ability to disclose ESG related information also affects earnings management. Disclosing ESG information adds to the transparency of the firm and can mitigate earnings management by the firm in the face of competition. In highly competitive markets, firms are more inclined to disclose information about their operations. If that information can be used by stakeholders (such as competitors or policymakers) to derive an ESG score, then firms have more incentives to abstain from earnings management. Moreover, firms disclosing such information in competitive markets are provided with the halo effect. They are, as a result, viewed as more reliable business partners, which can help build long term relationships, and constitute tools to counter product market competition.

Despite results suggesting ESG disclosure leads to more earnings management, while this association is impacted by product market competition, this can be an issue of firms' self-selection. Similar to prior literature that firms' often use engagement in ESG practices to "hide" their earnings management (Prior et al., 2008), firms with high engagement in earnings management might self-select to compensate for their unethical behaviour by greenwashing their financial reporting through higher ESG standards, and thus disclose more ESG related information. Therefore, this could be an issue of reverse causality. Similar arguments that firms choose to disclose low-quality information on topics that may be detrimental to their interests have been brought forward by prior literature (Hummel and Schlick, 2016).

3.4.4 Ban of single use plastic bags as an exogenous shock on product market competition

I exploit the implementation of the ban of single use plastic bags in the retail industry (SIC 5200-5999) across different states as an exogenous shock

to product market competition and employ a triple difference-in-difference approach to establish the causal effect between ESG and earnings management depending on the level of competition. The ban can be either at the state level, led by the state of California in 2014 that decided to ban the use of single use plastic bags by all retailers in all incorporated areas, or in the local level, like the implementation of city-wide ban on plastic bags in Portland, Oregon in 2011.

As the ban was adopted by different states or city councils across different years, it is a powerful test for our hypothesis. Following a similar legislation enforcement only in Los Angeles County in 2011, a survey was conducted by the national center for policy analysis to determine the effects of the ban on sales and employment at the stores affected by the ban. It also tried to determine if consumers changed their shopping behaviour by increasing purchases at stores that could still offer plastic bags. The year following the ban, 60% of the stores that were not affected by the ban reported an increase in the number of customers, while store that were affected reported a decrease in customers (Villarreal and Feigenbaum, 2012). Thus, competition was shifted from affected areas to areas that were not included in the ban, making it an appropriate shock on competition in the retail industry.

I collect historic state of incorporation data from Spamann and Wilkinson (2019) to identify in which states the firms in the sample were incorporated. Next, I merge state of incorporation data with our existing sample containing the ESG score from Asset4, firm-level accounting data from Compustat and competition data from Hoberg et al. (2014) and Hoberg et al. (2016). As the ban was directed to the retail industry, I use retail firms to construct the treatment group. Finally, I create a binary variable which is equal to one if the firm is incorporated in a state that enforced the ban of single use plastic bags, or a pricing mechanism, following the law enforcement, zero otherwise.

Information regarding the states and cities that have implemented a ban or a pricing mechanism on the use of plastic bags in the retail industry is

presented in Appendix A. A comparison of summary statistics between the treatment and control groups at the national level is presented in Table 8. Lastly, I estimate the following model:

$$
\begin{aligned}
EarningsManagement_{i,t} \\
&= a_{i,t} + c_1 Plastic\_Ban_{i,t} \\
&+ c_2 Plastic\_Ban_{i,t} x ESG_{i,t} x High\_Competition_{i,t} \\
&+ b_1 ESG_{i,t} + b_2 High\_Competition_{i,t} \\
&+ b_3 ESG_{i,t} x High\_Competition_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma \\
&+ u_{i,t}
\end{aligned}
$$

Earnings management, ESG High_Competition and the vector of control variables $X_{i,t-1}$ is as defined before in baseline regression. Plastic_Ban is a binary variable (DiDiD estimator), which is equal to one if the firm operates in the retail industry in a state that enforced regulation against the use of single use plastic bags following the implementation and zero otherwise. The ban on single use plastic bags shifted competitive pressure in the retail industry, from states affected by the regulation to non-affected states, effectively reducing the number of customers in affected areas. Consequently, this results in increased competition for firms in the treatment group[46]. As I hypothesize high competition amplifies the negative association between earnings management and ESG, I expect to find a negative coefficient of the triple interaction term Plastic_BanxESGxHigh_Competition. This suggests ESG can mitigate the firm's engagement in earnings management when competition is high, while the effect is stronger following an increase in competition in the retail industry as a result of the ban on single use plastic bags.

"Insert Table 3-8"

[46] The number of customers is reduced, however the number of firms competing for the reduced number of customers remains constant, resulting in increased competition amongst those firms.

Table 9 reports the results from the triple difference in differences, where I include in the treatment group all firms in the retail industry across all states following the 2014 decision by the state of California to ban single use plastic bags. I use the chosen shock as California was the first state to impose a state-wide ban. I use product market fluidity as a measure of product market competition. Lastly, all firms with no ESG score from Asset4 are excluded from the sample for this test, to ensure comparability between treatment and control groups. Columns (1) and (2) report the estimates of the Plastic_Ban estimator, a binary variable that takes the value of one for firms in the treatment group, zero otherwise. The ban of single use plastic bags in the retail industry did not affect firms' earnings management. Columns (3) and (4) report the estimates of the model presented above. The variable of interest is the triple interaction term (Plastic_BanxHighCompxESG).

The main hypothesis, that high competition amplifies the negative relationship between ESG and earnings management, continues to hold, with significant negative relationship between the interaction term HighCompxESG and earnings management and I find that ESG engagement mitigates earnings management by the firm when product market competition is high. Moreover, the effect is 0.57% stronger for firms in the treatment group, operating in the retail industry following the introduction of measures against the use of single use plastic bags from the state of California. The triple interaction term Plastic_BanxHighFluidityxESG is negatively correlated with the dependent variable and statistically significant.

"Insert Table 3-9"

Next, I repeat our estimations using a different treatment and control group. As a treatment group, I use only those firms in the retail industry incorporated in states that enforced a state-wide or a local city ban or pricing mechanism following the event[47]. As different states adopted policies on single

[47] In states without a state-wide ban, and more than one city enforcing a ban on plastic bags, I use the first city regulation to determine the time of the event used as treatment for the whole state.

use plastic bags across different years, it is a more appropriate test for our hypothesis. The results are presented in table 10, using product market fluidity as a measure of competition. The estimates are consistent with those of the previous approach before including control variables. The triple interaction term Plastic_BanxHighFluidityxESG and the interaction HighFluidityxESG are negative and statistically significant suggesting that high competition amplifies the negative effects of ESG on earnings management.

"Insert Table 3-10"

Furthermore, I repeat the same approach using in the treatment group firms incorporated in the specific areas that adopted the regulation, without also including firms in parts of the state that did not enforce a regulation against that use of single use plastic bags. First, specific cities, counties or states that adopted the ban were identified in each state and matched with their respective Zip codes. Firms' incorporation Zip codes data were obtained from compustat (item addzip) and merged in our sample. Firms were then assigned in the treatment group if they are in the retail industry, addressed in a zip code that belongs to a city or county or state that adopted the regulation, following the event[48]. Firms incorporated in states that did not adopt relevant regulation at any level were excluded. This ensures more robust results due to close proximity, as firms in the control group are incorporated in neighbouring areas of those in the treatment group, in the same states[49].

The results are shown in table 11, using product market fluidity as a measure of competition. The estimates of the interaction terms Plastic_BanxHighFluidityxESG and HighFluidityxESG hold only before the use of control variables in column (5), with no statistically significant results in column (6) after controlling for firm specific and earnings management specific variables.

[48] The event could be either a ban on single use plastic bags, or a pricing mechanism, or a recycling program.

[49] Due to significant drop in observations in the sample, the binary variable for high competition was recalculated

"Insert Table 3-11"

Lastly, for robustness reasons I repeat the IV approach of the basic model using different classifications for High Competition. The results are presented in table 12. Panel A uses fluidity as a measure of competition and panel B uses vertical integration. In columns (1) and (2), high competition is calculated using the 75% percentile of competition instead of the mean like in the previous analysis. In columns (3) and (4) high competition is calculated using the 90% of fluidity and vertical integration as the benchmark. The results remain consistent.

"Insert Table 3-12"

3.4.5 Market Share as a measure for product market competition

Lastly, as an additional alternative measure for product market competition, I use firms' market share[50]. As firms' market share increases, there are less firms competing in the same industry, and competition decreases. Market share thus has an inverse relationship with product market competition[51]. If the predictions of this empirical chapter are true, I expect to find a negative relationship between firms' market share and earnings management, and a positive relationship between the interaction term ESGxHighMRK_SHR[52] and earnings management. The results are presented in Appendix 3-F.

Consistent with prior literature, ESG has a significant negative association with earnings management (Kim et al., 2012). I also find, a significant negative relationship between firms' market share and the dependent variable, suggesting that when market share increases, and less firms compete in the same industry, firms engage in less earnings management. Consequently, when competition increases firms engage in more earning management practices, consistent with prior results. The interaction term

[50] For all the above analysis, firms' market share has been employed as a control variable for earnings management.
[51] If market share increases, product market competition decreases, and vice versa.
[52] HighMRK_SHR is a binary variable that takes the value of one for firms with market share higher than the industry average, zero otherwise.

ESGxHighMRK_SHR has a significant positive association with earnings management. For firms with a higher market share than the industry average, and thus less competitive pressure, ESG leads to more earnings management and vice versa. However, these results stand only without the use of control variables.

Considered together, the additional tests presented in this section support earlier conclusions that product market competition significantly affects the relationship between earnings management and corporate social responsibility. More importantly, I find that highly competitive pressure, amplifies the effects of ESG engagement on firm's earnings management policies.

3.5 Conclusions

I use a sample of US firms over the 2002–2017 period to assess ESG's mitigating effect on firms' engagement in earnings management practices through product market competition. I extend the literature by investigating the relationship between earnings management and ESG driven by product market competition throughout the sample period as well as industry-wide competition shock. I also consider the potential reverse causality between ESG and earnings management.

I find that firms that operate in highly competitive markets engage more in earnings management practises, suggesting that the disciplinary power of product market competition provides managers with incentives to show superior financial results. More importantly, I find that significant competitive pressure in the product market effectively amplifies ESG's mitigating effects on earnings management. This suggests that high ESG standards are more effective in limiting earnings management by the firm when product market competition is high. These results stand up to various robustness checks, including addressing endogeneity concerns through a triple difference-in-difference analysis, an instrumental variable approach, as well as using alternative proxies of product market competition and classifications of high competition.

I also break down the proxy for ESG to its four individual pillars, governance, economic, environmental, and social, to examine the effects of each on earnings management, and how competition affects each relationship. I find that different pillars provide different incentives to abstain from earnings management, however, most relationships become negative under competitive pressure. Moreover, I examine the effects of disclosure of ESG related information on earnings management, and the effects of product market competition on this relationship, irrespective of high or low ESG score by the firm. I find that even disclosing ESG information, provides firms with incentives to limit earnings management under competitive pressure. Lastly, I employ a triple difference in differences approach in three individual tests. The baseline regression and robustness checks still hold using this approach.

Table 3-1. Summary Statistics

This table presents the descriptive statistics for the variables used in this study of all publicly traded U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4999) due to their special regulatory environment. Summary statistics for all sample firms, firms with high competition, firms with low competition, and firms without an ESG score are reported in Panels A, B, C, and D respectively. Firms are classified as high and low competition based on Tercile classification and using product market fluidity as a measure of competition. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: All Firms

	N	Mean	Median	SD	1st Percentile	99th Percentile
EM	55,090	0.1051	0.0556	0.1509	0.0010	0.8443
ESG scores	9,404	50.2447	44.7900	30.4100	6.8000	97.0800
Fluidity	43,761	6.8102	6.0459	3.6285	1.5778	18.1485
Vertical Integration	44,208	-0.0103	-0.0071	0.0098	-0.0438	-0.0002
HHI	44,185	-0.3137	-0.1975	0.2842	-1.0000	-0.0281
Similarity	44,185	4.7209	1.6249	8.2902	1.0000	46.9208
MRK_SHR	55,090	0.0098	0.0007	0.0327	0.0000	0.1630
ROA	55,090	-0.1268	0.0172	0.9434	-2.4783	0.5028
SIZE	55,090	5.4825	5.4648	2.2540	1.0339	10.7928
MB	49,079	1.9535	1.1594	3.8035	-0.2874	13.7993
LEV	54,462	0.2327	0.1330	0.3950	0.0000	1.5144
DISTRESS	55,090	0.0287	0.0000	0.1669	0.0000	1.0000
LOW_MTR	55,090	0.8726	1.0000	0.3335	0.0000	1.0000
BIGAUD	55,090	0.4991	0.0000	0.5000	0.0000	1.0000
BLOAT	55,090	0.2331	0.0000	0.4228	0.0000	1.0000

Panel B: High Competition Firms

	N	Mean	Median	SD	1st Percentile	99th Percentile
EM	32,326	0.1240	0.0618	0.1758	0.0011	0.9570
ESG scores	4,512	46.4792	37.8850	30.4143	6.3300	97.0800
Fluidity	20,997	9.1818	8.4493	3.4972	3.8130	18.5095
Vertical Integration	21,457	-0.0090	-0.0061	0.0088	-0.0437	-0.0004
HHI	21,421	-0.2086	-0.1288	0.2129	-1.0000	-0.0251
Similarity	21,421	7.6176	3.1801	10.8155	1.0000	55.5935
MRK_SHR	32,326	0.0089	0.0004	0.0329	0.0000	0.1541
ROA	32,326	-0.2056	-0.0060	1.1946	-3.2976	0.5871
SIZE	32,326	5.2061	5.1548	2.3195	0.9369	10.7819
MB	27,459	2.3340	1.2948	4.7314	-0.3071	17.3673
LEV	31,973	0.2573	0.1242	0.4638	0.0000	1.8073
DISTRESS	32,326	0.0416	0.0000	0.1998	0.0000	1.0000
LOW_MTR	32,326	0.8952	1.0000	0.3063	0.0000	1.0000
BIGAUD	32,326	0.4885	0.0000	0.4999	0.0000	1.0000
BLOAT	32,326	0.2618	0.0000	0.4396	0.0000	1.0000

Panel C: Low Competition Firms

	N	Mean	Median	SD	1st Percentile	99th Percentile
EM	22,764	0.0782	0.0487	0.0998	0.0009	0.4977
ESG scores	4,892	53.7177	51.1100	29.9929	7.3000	97.0800
Fluidity	22,764	4.6227	4.3268	2.0140	1.5778	10.7348
Vertical Integration	22,751	-0.0115	-0.0081	0.0106	-0.0438	-0.0002
HHI	22,764	-0.4126	-0.3161	0.3065	-1.0000	-0.0394
Similarity	22,764	1.9951	1.2059	2.8287	1.0000	14.7806
MRK_SHR	22,764	0.0111	0.0013	0.0324	0.0000	0.1725
ROA	22,764	-0.0148	0.0384	0.3250	-1.0702	0.3843
SIZE	22,764	5.8751	5.8658	2.0960	1.5839	10.8227
MB	21,620	1.4702	1.0262	1.9978	-0.2556	8.2085
LEV	22,489	0.1978	0.1418	0.2644	0.0000	0.9859
DISTRESS	22,764	0.0102	0.0000	0.1007	0.0000	1.0000
LOW_MTR	22,764	0.8404	1.0000	0.3662	0.0000	1.0000
BIGAUD	22,764	0.5143	1.0000	0.4998	0.0000	1.0000
BLOAT	22,764	0.1922	0.0000	0.3941	0.0000	1.0000

Panel D: No ESG Firms

	N	Mean	Median	SD	1st Percentile	99th Percentile
EM	45,686	0.1157	0.0621	0.1605	0.0011	0.8896
Fluidity	34,674	6.8758	6.1203	3.6191	1.5778	17.9340
Vertical Integration	34,974	-0.0100	-0.0067	0.0096	-0.0438	-0.0002
HHI	34,972	-0.3226	-0.2011	0.2921	-1.0000	-0.0285
Similarity	34,972	4.7742	1.6377	8.0806	1.0000	44.3420
MRK_SHR	45,686	0.0047	0.0004	0.0186	0.0000	0.0745
ROA	45,686	-0.1594	0.0040	1.0254	-2.7179	0.5432
SIZE	45,686	4.9087	4.9421	1.9342	0.9936	9.4372
MB	40,584	1.9647	1.0973	3.9930	-0.3253	14.9811
LEV	45,239	0.2296	0.1026	0.4208	0.0000	1.6113
DISTRESS	45,686	0.0345	0.0000	0.1826	0.0000	1.0000
LOW_MTR	45,686	0.8683	1.0000	0.3381	0.0000	1.0000
BIGAUD	45,686	0.4634	0.0000	0.4987	0.0000	1.0000
BLOAT	45,686	0.2264	0.0000	0.4185	0.0000	1.0000

Table 3-2. Correlation Matrix

This table presents the pearson correlation between the variables used in this study of all publicly traded U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4999) due to their special regulatory environment. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

	EM	ESG scores	Fluidity	Vertint	HHI	Similarity	MRK_SHR	ROA	SIZE	MB	LEV	DISTRESS	LOW_MTR	BIGAUD	BLOAT
EM	1														
ESG scores	-0.1751*	1													
Fluidity	0.1695*	-0.2115*	1												
Vertint	0.1295*	-0.1351*	0.2999*	1											
HHI	0.0213*	-0.1093*	0.4996*	0.1308*	1										
Similarity	0.1656*	-0.2261*	0.6762*	0.2433*	0.3429*	1									
MRK_SHR	-0.1142*	0.3607*	-0.0857*	-0.1234*	0.0139*	-0.0906*	1								
ROA	-0.3161*	0.1816*	-0.2372*	-0.1191*	-0.0765*	-0.2757*	0.0573*	1							
SIZE	-0.3661*	0.6175*	-0.0852*	-0.2093*	0.1351*	-0.1075*	0.4582*	0.1965*	1						
MB	0.2477*	-0.0916*	0.1752*	0.1308*	0.0735*	0.1843*	-0.0447*	-0.1972*	-0.1982*	1					
LEV	0.0607*	-0.0301*	0.0604*	-0.0696*	0.0481*	0.0315*	0.0342*	-0.0600*	0.0822*	0.2121*	1				
DISTRESS	0.2343*	-0.0134	0.0416*	0.0459*	-0.0097*	0.0278*	-0.0514*	-0.1298*	-0.2608*	0.1804*	0.1917*	1			
LOW_MTR	0.0821*	0.0066	0.1172*	0.0774*	0.0807*	0.0836*	-0.0190*	-0.0768*	-0.0449*	0.0476*	0.0462*	0.0595*	1		
BIGAUD	-0.1729*	-0.0192*	0.0486*	-0.0277*	0.1368*	0.0484*	0.1219*	0.0689*	0.3887*	-0.0774*	0.0266*	-0.1486*	-0.0125*	1	
BLOAT	0.0545*	-0.0159	0.0168*	-0.0441*	0.0083*	0.0533*	0.0781*	-0.0963*	0.0767*	0.0430*	0.0639*	0.0234*	0.0231*	0.0139*	1

Table 3-3. The Relationship between ESG and earnings management under competition

This table reports OLS estimates of ESG, competition, and earnings management. As an ESG measure, I use the natural logarithm of the weighted average ESG score from Asset4. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and high vertical integration are binary variables equal to one if the firm's fluidity (Fluidity) or vertical integration (VertInt) is higher that the industry-year average. To measure product market competition, I use two variables: (i) Fluidity (ii) Vertical Integration, by Hoberg and Phillips data library. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Fluidity as a measure of competition

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
ESG	-0.0164***	-0.0036*			-0.0084***	-0.0020
	(0.0026)	(0.0018)			(0.0019)	(0.0019)
HighFluidity			0.0420***	0.0113***	0.0602***	0.0139***
			(0.0021)	(0.0017)	(0.0098)	(0.0044)
ESGxHighFluidity					-0.0137***	-0.0024*
					(0.0025)	(0.0012)
MRK_SHR		0.0822**		0.3709***		0.0793**
		(0.0298)		(0.0402)		(0.0291)
ROA		-0.0194**		-0.0102		-0.0183**
		(0.0074)		(0.0069)		(0.0069)
SIZE		-0.0073***		-0.0220***		-0.0074***
		(0.0018)		(0.0008)		(0.0018)
MB		0.0063***		0.0064***		0.0061***
		(0.0016)		(0.0010)		(0.0016)
LEV		0.0089		0.0295***		0.0092
		(0.0061)		(0.0046)		(0.0063)
DISTRESS		-0.2026***		0.0660***		-0.1967***
		(0.0545)		(0.0141)		(0.0528)
LOW_MTR		0.0059***		0.0098***		0.0057**
		(0.0019)		(0.0023)		(0.0019)

BIGAUD		-0.0017		-0.0061***		-0.0017
		(0.0016)		(0.0018)		(0.0016)
BLOAT		0.0024		0.0135***		0.0022
		(0.0018)		(0.0022)		(0.0018)
Constant	0.1138***	0.1037***	0.0804***	0.1793***	0.0790***	0.0965***
	(0.0098)	(0.0123)	(0.0013)	(0.0043)	(0.0066)	(0.0122)
Observations	9,404	7,802	55,090	41,247	9,404	7,802
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0840	0.1388	0.0673	0.2426	0.0938	0.1403

Panel B: Vertical Integration as a measure of competition

	(1)	(2)	(3)	(4)	(5)	(6)
	EM	EM	EM	EM	EM	EM
ESG	-0.0164***	-0.0036*			-0.0093***	-0.0009
	(0.0026)	(0.0018)			(0.0026)	(0.0018)
HighVertInt			0.0394***	0.0062***	0.0481***	0.0199**
			(0.0023)	(0.0015)	(0.0091)	(0.0076)
ESGxHighVertInt					-0.0109***	-0.0045**
					(0.0022)	(0.0020)
MRK_SHR		0.0822**		0.3760***		0.0809**
		(0.0298)		(0.0396)		(0.0299)
ROA		-0.0194**		-0.0104		-0.0189**
		(0.0074)		(0.0070)		(0.0073)
SIZE		-0.0073***		-0.0221***		-0.0072***
		(0.0018)		(0.0008)		(0.0018)
MB		0.0063***		0.0064***		0.0061***
		(0.0016)		(0.0010)		(0.0016)
LEV		0.0089		0.0301***		0.0094
		(0.0061)		(0.0045)		(0.0062)
DISTRESS		-0.2026***		0.0670***		-0.2011***

		(0.0545)		(0.0141)		(0.0546)
LOW_MTR		0.0059***		0.0103***		0.0055**
		(0.0019)		(0.0022)		(0.0019)
BIGAUD		-0.0017		-0.0058***		-0.0017
		(0.0016)		(0.0018)		(0.0016)
BLOAT		0.0024		0.0142***		0.0023
		(0.0018)		(0.0023)		(0.0018)
Constant	0.1138***	0.1037***	0.0775***	0.1808***	0.0824***	0.0911***
	(0.0098)	(0.0123)	(0.0016)	(0.0046)	(0.0097)	(0.0156)
Observations	9,404	7,802	55,090	41,247	9,404	7,802
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0840	0.1388	0.0627	0.2414	0.0899	0.1400

Table 3-4. The Relationship between ESG and earnings management under competition.

This table presents the results of the IV approach, which estimates the relationship between ESG and firm's earnings management when facing high competition over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and high vertical integration are binary variables equal to one if the firm's fluidity (Fluidity) or vertical integration (VertInt) is higher that the industry-year average. To measure product market competition, I use two variables: (i) Fluidity (ii) Vertical Integration, by Hoberg and Phillips data library. *ESG* is the natural logarithm of the overall ESG score from Asset4 instrumented with the average ESG score for each industry-year pair. The results of the 1st stage are presented in column (1) and (4). Columns (2) and (5) report the results of 2nd stage regression without control variables. In columns (3) and (6) I show the 2nd stage regression results with control variables. All variables are defined in the Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) ESG	(2) EM	(3) EM	(4) ESG	(5) EM	(6) EM
Industry_ESG	-0.9569***			-0.9587***		
	(0.0063)			(0.0063)		
ESG		-0.0083***	-0.0035**		-0.0084***	-0.0010
		(0.0015)	(0.0016)		(0.0015)	(0.0017)
ESGxHighFluidity		-0.0120***	0.0005			
		(0.0026)	(0.0026)			
HighFluidity		0.0538***	0.0029			
		(0.0102)	(0.0102)			
ESGxHighVertInt					-0.0107***	-0.0045**
					(0.0022)	(0.0020)
HighVertInt					0.0475***	0.0201**
					(0.0090)	(0.0080)
MRK_SHR	-0.3874***		0.0801***	-0.3867***		0.0811***
	(0.0332)		(0.0198)	(0.0329)		(0.0197)
ROA	0.0364***		-0.0180*	0.0380***		-0.0182*
	(0.0102)		(0.0104)	(0.0106)		(0.0104)
SIZE	0.0297***		-0.0075***	0.0295***		-0.0072***
	(0.0015)		(0.0013)	(0.0015)		(0.0012)

MB	0.0045***		0.0060***	0.0044***		0.0060***
	(0.0010)		(0.0014)	(0.0010)		(0.0014)
LEV	0.0176***		0.0096	0.0165***		0.0097
	(0.0058)		(0.0069)	(0.0058)		(0.0068)
DISTRESS	0.0983		-0.1933***	0.1130		-0.1954***
	(0.0892)		(0.0710)	(0.0867)		(0.0704)
LOW_MTR	0.0003		0.0058***	0.0006		0.0055***
	(0.0032)		(0.0019)	(0.0033)		(0.0019)
BIGAUD	0.0058**		-0.0017	0.0058**		-0.0018
	(0.0023)		(0.0015)	(0.0023)		(0.0015)
BLOAT	-0.0165***		0.0023	-0.0169***		0.0024
	(0.0025)		(0.0018)	(0.0025)		(0.0018)
Constant	3.3914***	0.1199***	0.1304***	3.4098***	0.1190***	0.1185***
	(0.0285)	(0.0130)	(0.0132)	(0.0297)	(0.0134)	(0.0133)
Observations	7,788	9,381	7,788	7,788	9,381	7,788
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.9836	0.0933	0.1400	0.9836	0.0896	0.1399

Table 3-5. The Relationship between ESG and earnings management under competition.

This table presents the results of the IV approach, which estimates the relationship between ESG and firm's earnings management when facing high competition over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. High similarity and high HHI are binary variables equal to one if the firm's product similarity (Similarity) or HHI (HHI) is higher that the industry-year average. To measure product market competition, I use two variables: (i) Similarity (ii) HHI index, by Hoberg and Phillips data library. *ESG* is the natural logarithm of the overall ESG score from Asset4 instrumented with the average ESG score for each industry-year pair. The results of the 1st stage are presented in column (1) and (4). Columns (2) and (5) report the results of 2nd stage regression without control variables. In columns (3) and (6) I show the 2nd stage regression results with control variables. All variables are defined in the Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) ESG	(2) EM	(3) EM	(4) ESG	(5) EM	(6) EM
Industry_ESG	-0.9577***			-0.9576***		
	(0.0063)			(0.0063)		
ESG		-0.0086***	-0.0026*		-0.0077***	-0.0046**
		(0.0014)	(0.0014)		(0.0022)	(0.0023)
ESGxHighSimilarity		-0.0153***	-0.0025			
		(0.0028)	(0.0029)			
HighSimilarity		0.0654***	0.0134			
		(0.0112)	(0.0116)			
ESGxHighHHI					-0.0100***	0.0013
					(0.0028)	(0.0033)
HighHHI					0.0425***	-0.0033
					(0.0115)	(0.0132)
MRK_SHR	-0.3791***		0.0801***	-0.3808***		0.0836***
	(0.0326)		(0.0200)	(0.0329)		(0.0201)
ROA	0.0338***		-0.0177*	0.0362***		-0.0188*
	(0.0096)		(0.0104)	(0.0100)		(0.0106)
SIZE	0.0293***		-0.0073***	0.0297***		-0.0074***
	(0.0015)		(0.0013)	(0.0015)		(0.0013)
MB	0.0047***		0.0060***	0.0045***		0.0062***

	(0.0010)		(0.0014)	(0.0010)		(0.0014)
LEV	0.0183***		0.0095	0.0179***		0.0094
	(0.0058)		(0.0069)	(0.0059)		(0.0068)
DISTRESS	0.0869		-0.1915***	0.1055		-0.1974***
	(0.0861)		(0.0712)	(0.0823)		(0.0719)
LOW_MTR	0.0004		0.0058***	0.0001		0.0059***
	(0.0032)		(0.0019)	(0.0033)		(0.0019)
BIGAUD	0.0052**		-0.0017	0.0058**		-0.0017
	(0.0023)		(0.0015)	(0.0023)		(0.0015)
BLOAT	-0.0161***		0.0024	-0.0172***		0.0025
	(0.0025)		(0.0018)	(0.0025)		(0.0018)
Constant	3.3996***	0.1220***	0.1269***	3.4214***	0.1187***	0.1338***
	(0.0283)	(0.0131)	(0.0131)	(0.0294)	(0.0144)	(0.0149)
Observations	7,788	9,381	7,788	7,788	9,381	7,788
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.9837	0.0949	0.1400	0.9837	0.0869	0.1387

Table 3-6. The Relationship between pillars of ESG and earnings management under competition.

This table presents the results of the IV approach, which estimates the relationship between the four pillars of ESG (governance, environmental, economic, and social) and firm's earnings management when facing high competition over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and High vertical integration are binary variables equal to one if the firm's fluidity (Fluidity) or vertical integration (VertInt) is higher than the industry-year average. To measure product market competition, I use two measures: (i) Fluidity (ii) Vertical Integration, by Hoberg and Phillips data library. Each of the four pillars of *ESG* is the natural logarithm of the relevant ESG score from Asset4 instrumented with the average ESG score for each industry-year pair. Column (1) reports the 2nd stage regression for the firm's governance score. Column (2), (3) and (4) report the 2nd stage regression for the firm's economic, environmental, and social score respectively, all with control variables. All variables are defined in the Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Fluidity as a measure of competition

	(1) EM	(2) EM	(3) EM	(4) EM
Gov	-0.00632*			
	(0.00331)			
GovxHighFluidity	0.00879			
	(0.00605)			
Eco		-0.00609***		
		(0.00138)		
EcoxHighFluidity		-0.000471		
		(0.00229)		
Env			9.98e-05	
			(0.00135)	
EnvxHighFluidity			-0.000291	
			(0.00206)	
Soc				-0.000659
				(0.00142)
SocxHighFluidity				0.00114
				(0.00229)
HighFluidity	-0.0317	0.00573	0.00621	0.00120
	(0.0259)	(0.00894)	(0.00786)	(0.00877)
MRK_SHR	0.0807***	0.0761***	0.0810***	0.0811***
	(0.0200)	(0.0195)	(0.0196)	(0.0197)
ROA	-0.0188*	-0.0161	-0.0185*	-0.0186*
	(0.0106)	(0.00998)	(0.0105)	(0.0106)
SIZE	-0.00837***	-0.00643***	-0.00853***	-0.00853***
	(0.00115)	(0.00112)	(0.00121)	(0.00125)
MB	0.00598***	0.00623***	0.00594***	0.00596***
	(0.00141)	(0.00142)	(0.00141)	(0.00141)
LEV	0.0101	0.00792	0.0101	0.0102
	(0.00678)	(0.00681)	(0.00685)	(0.00680)

DISTRESS	-0.198***	-0.185***	-0.197***	-0.198***
	(0.0718)	(0.0671)	(0.0717)	(0.0721)
LOW_MTR	0.00582***	0.00536***	0.00578***	0.00582***
	(0.00188)	(0.00183)	(0.00186)	(0.00187)
BIGAUD	-0.00166	-0.00188	-0.00173	-0.00173
	(0.00147)	(0.00146)	(0.00146)	(0.00146)
BLOAT	0.00257	0.00202	0.00269	0.00269
	(0.00177)	(0.00174)	(0.00177)	(0.00177)
Constant	0.150***	0.133***	0.125***	0.127***
	(0.0180)	(0.0130)	(0.0129)	(0.0130)
Observations	7,788	7,788	7,788	7,788
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.139	0.144	0.139	0.139

Panel B: Vertical integration as a measure of competition

	(1)	(2)	(3)	(4)
	EM	EM	EM	EM
Gov	-0.00185			
	(0.00335)			
GovxHighVertInt	-0.000995			
	(0.00474)			
Eco		-0.00349**		
		(0.00149)		
EcoxHighVertInt		-0.00504***		
		(0.00189)		
Env			0.00168	
			(0.00139)	
EnvxHighVertInt			-0.00323**	
			(0.00159)	
Soc				0.00200
				(0.00145)
SocxHighVertInt				-0.00436**
				(0.00179)
HighVertInt	0.00769	0.0211***	0.0147**	0.0190***
	(0.0202)	(0.00737)	(0.00600)	(0.00680)
MRK_SHR	0.0832***	0.0754***	0.0834***	0.0823***
	(0.0199)	(0.0193)	(0.0196)	(0.0196)
ROA	-0.0191*	-0.0161	-0.0191*	-0.0189*
	(0.0106)	(0.00991)	(0.0106)	(0.0105)
SIZE	-0.00830***	-0.00620***	-0.00839***	-0.00822***
	(0.00114)	(0.00110)	(0.00121)	(0.00123)
MB	0.00598***	0.00623***	0.00595***	0.00595***
	(0.00141)	(0.00142)	(0.00141)	(0.00141)
LEV	0.0101	0.00810	0.0101	0.0102
	(0.00678)	(0.00683)	(0.00679)	(0.00679)
DISTRESS	-0.200***	-0.187***	-0.201***	-0.200***
	(0.0720)	(0.0659)	(0.0719)	(0.0714)
LOW_MTR	0.00580***	0.00502***	0.00567***	0.00554***

	(0.00188)	(0.00183)	(0.00188)	(0.00188)
BIGAUD	-0.00172	-0.00191	-0.00176	-0.00177
	(0.00146)	(0.00146)	(0.00146)	(0.00146)
BLOAT	0.00279	0.00201	0.00294*	0.00282
	(0.00176)	(0.00173)	(0.00178)	(0.00177)
Constant	0.131***	0.121***	0.118***	0.115***
	(0.0184)	(0.0130)	(0.0129)	(0.0132)
Observations	7,788	7,788	7,788	7,788
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.139	0.144	0.139	0.139

Table 3-7. The Relationship between ESG disclosure and earnings management under competition.

This table presents the results of the IV approach, which estimates the relationship between disclosure of ESG information and firm's earnings management when facing high competition over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and vertical integration are binary variables equal to one if the firm's fluidity (Fluidity) or vertical integration (VertInt) is higher that the industry-year average. To measure product market competition, I use two variables: (i) Fluidity (ii) Vertical Integration, by Hoberg and Phillips data library. *ESGscore* is a binary variable equal to one if there is an overall ESG score from Asset4 instrumented with the average ESG score for each industry-year pair. The results of the 1st stage are presented in column (1) and (3). Columns (2) and (4) report the results of 2nd stage regression without and with control variables. All variables are defined in the Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Fluidity as a measure of competition

	(1) ESGscore	(2) EM	(3) ESGscore	(4) EM
Industry_ESG	-0.0470***		-0.0569***	
	(0.0010)		(0.0014)	
ESGscore		-0.0448***		0.0185***
		(0.00122)		(0.00196)
ESGscorexHighFluidity		-0.0308***		-0.00807***
		(0.00195)		(0.00191)
HighFluidity		0.0433***		0.0131***
		(0.00133)		(0.00135)
MRK_SHR			-0.0980***	0.356***
			(0.0158)	(0.0184)
ROA			0.0002	-0.00777
			(0.0002)	(0.00492)
SIZE			0.0016***	-0.0237***
			(0.0001)	(0.000663)
MB			0.0005***	0.00614***
			(0.0001)	(0.000944)
LEV			-0.0016**	0.0309***
			(0.0007)	(0.00405)
DISTRESS			-0.0005	0.0638***
			(0.0011)	(0.00843)
LOW_MTR			0.00003	0.00932***
			(0.0006)	(0.00139)
BIGAUD			0.0027***	-0.00559***
			(0.0005)	(0.00120)
BLOAT			-0.0014**	0.0141***
			(0.0006)	(0.00198)
Constant	0.1679***	0.165***	0.2664***	0.199***
	(0.0050)	(0.0106)	(0.0066)	(0.0108)
Observations	54,838	54,838	41,125	41,125

Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.9843	0.088	0.9848	0.243

Panel B: Vertical integration as a measure of competition

	(1) ESGscore	(2) EM	(3) ESGscore	(4) EM
Industry_ESG	-0.0470***		-0.0569***	
	(0.0010)		(0.0014)	
ESGscore		-0.0398***		0.0171***
		(0.00134)		(0.00187)
ESGscorexHighVertInt		-0.0340***		-0.00496***
		(0.00186)		(0.00184)
HighVertInt		0.0412***		0.00707***
		(0.00129)		(0.00125)
MRK_SHR			-0.0924***	0.360***
			(0.0157)	(0.0185)
ROA			0.0002	-0.00787
			(0.0002)	(0.00496)
SIZE			0.0016***	-0.0237***
			(0.0001)	(0.000676)
MB			0.0005***	0.00623***
			(0.0001)	(0.000954)
LEV			-0.0016**	0.0316***
			(0.0007)	(0.00408)
DISTRESS			-0.0006	0.0652***
			(0.0011)	(0.00844)
LOW_MTR			0.00002	0.0100***
			(0.0006)	(0.00140)
BIGAUD			0.0028***	-0.00525***
			(0.0005)	(0.00121)
BLOAT			-0.0013**	0.0149***
			(0.0006)	(0.00200)
Constant	0.1687***	0.162***	0.2667***	0.200***
	(0.0050)	(0.0107)	(0.0066)	(0.0109)
Observations	54,838	54,838	41,125	41,125
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.9843	0.084	0.9848	0.242

Table 3-8. Summary Statistics

This table presents the descriptive statistics for the control and treatment groups used in the difference in differences approach of publicly traded U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. I also exclude firms with no ESG score from Asset4. Summary statistics for all firms in the control group are reported in Panel A. Summary statistics for all firms in the treatment group are reported in Panel B. Firms are assigned in the treatment group if they are in the retail industry (SIC does 5200-5999) following the 2014 ban of single use plastic bags in California. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Control group

	N	Mean	Median	SD	1st Percentile	99th Percentile
EM	9,240	0.0536	0.0358	0.0708	0.0007	0.3391
ESG scores	9,240	50.3693	45.0050	30.3732	6.8000	97.0800
Fluidity	8,930	6.5773	5.7545	3.6702	1.5778	18.5095
Vertical Integration	9,075	-0.0117	-0.0085	0.0106	-0.0438	-0.0002
HHI	9,055	-0.2821	-0.1908	0.2493	-1.0000	-0.0272
Similarity	9,055	4.5405	1.5716	9.0751	1.0000	56.2532
MRK_SHR	9,240	0.0343	0.0093	0.0619	0.0000	0.2836
ROA	9,240	0.0309	0.0572	0.2765	-0.7471	0.3265
SIZE	9,240	8.2841	8.2430	1.4857	4.5780	11.9397
MB	8,333	1.8876	1.3973	2.7287	0.1914	8.5742
LEV	9,069	0.2466	0.2206	0.2221	0.0000	0.8835
DISTRESS	9,240	0.0001	0.0000	0.0104	0.0000	0.0000
LOW_MTR	9,240	0.8963	1.0000	0.3049	0.0000	1.0000
BIGAUD	9,240	0.6715	1.0000	0.4697	0.0000	1.0000
BLOAT	9,240	0.2646	0.0000	0.4411	0.0000	1.0000

Panel B: Treatment group

	N	Mean	Median	SD	1st Percentile	99th Percentile
EM	164	0.0485	0.0312	0.0606	0.0013	0.2996
ESG scores	164	43.2230	25.2350	31.7336	7.8900	94.5000
Fluidity	157	5.5681	5.1838	2.3490	2.4531	15.9134
Vertical Integration	159	-0.0073	-0.0067	0.0049	-0.0192	-0.0001
HHI	158	-0.1654	-0.0927	0.1901	-1.0000	-0.0326
Similarity	158	3.2612	2.1971	6.5687	1.0000	52.7118
MRK_SHR	164	0.0444	0.0135	0.0701	0.0008	0.3302
ROA	164	0.0794	0.0870	0.1162	-0.3211	0.3752
SIZE	164	7.4765	7.2617	1.4983	4.7861	11.4560
MB	162	2.5274	1.7555	2.2230	0.2670	11.1952
LEV	154	0.3363	0.2134	0.4758	0.0000	2.8015
DISTRESS	164	0.0000	0.0000	0.0000	0.0000	0.0000
LOW_MTR	164	0.7134	1.0000	0.4536	0.0000	1.0000
BIGAUD	164	0.7500	1.0000	0.4343	0.0000	1.0000

BLOAT	164	0.3110	0.0000	0.4643	0.0000	1.0000

Table 3-9. The Relationship between ESG and earnings management following a shock in the product market at national level.

This table presents the relationship between earnings management and ESG when firms face an industry wide product market shock, the ban of the use of single use plastic bags in the retail industry. Treatment firms are firms in the retail industry following the 2014 decision to ban single use plastic bags in California. Plastic_Ban is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity is a binary variable equal to one if the firm's fluidity (Fluidity) is higher that the industry-year average for year. To measure product market competition, I use product market Fluidity, by Hoberg and Phillips data library. ESG is the natural logarithm of the overall ESG score from Asset4. All variables are defined in Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM
Plastic_Ban	-0.00680	-0.00305	0.00200	0.00374
	(0.00674)	(0.00581)	(0.00777)	(0.00694)
Plastic_BanxHighFluidityxESG			-0.00627***	-0.00579**
			(0.00189)	(0.00215)
HighFluidityxESG			-0.0137***	-0.00255**
			(0.00251)	(0.00119)
HighFluidity			0.0606***	0.0146***
			(0.00982)	(0.00431)
ESG			-0.00837***	-0.00191
			(0.00185)	(0.00185)
MRK_SHR		0.0832**		0.0782**
		(0.0299)		(0.0290)
ROA		-0.0200**		-0.0182**
		(0.00758)		(0.00690)
SIZE		-0.00852***		-0.00737***
		(0.00158)		(0.00177)
MB		0.00616***		0.00610***
		(0.00160)		(0.00163)
LEV		0.00967		0.00930
		(0.00598)		(0.00627)
DISTRESS		-0.207***		-0.196***
		(0.0550)		(0.0532)
LOW_MTR		0.00588***		0.00567**
		(0.00195)		(0.00191)
BIGAUD		-0.00165		-0.00170
		(0.00159)		(0.00158)
BLOAT		0.00290		0.00224
		(0.00183)		(0.00182)
Constant	0.0536***	0.100***	0.0788***	0.0962***
	(0.000628)	(0.0128)	(0.00643)	(0.0122)
Observations	9,404	7,802	9,404	7,802

Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.058	0.138	0.094	0.141

Table 3-10. The Relationship between ESG and earnings management following a shock in the product market in states that adopted the regulation.

This table presents the relationship between earnings management and ESG when firms face an industry-state wide product market shock, the ban of the use of single use plastic bags in the retail industry. Treatment firms are firms in the retail industry that were incorporated in states that adopted the relevant ban regulation following the event during 2002-2017. Plastic_Ban is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity is a binary variable equal to one if the firm's fluidity (Fluidity) is higher that the industry-year average. To measure product market competition, I use Fluidity, by Hoberg and Phillips data library. ESG is the natural logarithm of the overall ESG score from Asset4. All variables are defined in Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM
Plastic_Ban	-0.00732	-0.0106*	-0.00295	-0.00724
	(0.00549)	(0.00534)	(0.00606)	(0.00598)
Plastic_BanxHighFluidityxESG			-0.00444**	-0.00286
			(0.00206)	(0.00272)
HighFluidityxESG			-0.0139***	-0.00280**
			(0.00254)	(0.00120)
HighFluidity			0.0612***	0.0152***
			(0.00985)	(0.00434)
ESG			-0.00856***	-0.00216
			(0.00184)	(0.00187)
MRK_SHR		0.0846**		0.0802**
		(0.0300)		(0.0291)
ROA		-0.0200**		-0.0181**
		(0.00762)		(0.00692)
SIZE		-0.00856***		-0.00729***
		(0.00157)		(0.00176)
MB		0.00618***		0.00613***
		(0.00160)		(0.00163)
LEV		0.00970		0.00923
		(0.00592)		(0.00626)
DISTRESS		-0.207***		-0.196***
		(0.0548)		(0.0529)
LOW_MTR		0.00591***		0.00576***
		(0.00197)		(0.00192)
BIGAUD		-0.00162		-0.00171
		(0.00158)		(0.00157)
BLOAT		0.00285		0.00214
		(0.00183)		(0.00181)
Constant	0.0537***	0.101***	0.0797***	0.0965***
	(0.000645)	(0.0128)	(0.00645)	(0.0121)

Observations	9,359	7,760	9,359	7,760
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.058	0.138	0.095	0.141

Table 3-11. The Relationship between ESG and earnings management following a shock in the product market in areas that adopted the regulation.

This table presents the relationship between earnings management and ESG when firms face an industry-zip-state wide product market shock, the ban of the use of single use plastic bags in the retail industry. Treatment firms are firms in the retail industry that were incorporated in areas (based on zip codes) or states that enforced a ban of single use plastic bags during 2002-2017. Plastic_Ban is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The control group is comprised of firms in the retail industry that are incorporated in the areas that did not adopt the ban of those same states. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and is a binary variable equal to one if the firm's fluidity (Fluidity) is higher than the industry-year average. To measure product market competition, I use Fluidity, by Hoberg and Phillips data library. ESG is the natural logarithm of the overall ESG score from Asset4. All variables are defined in Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM
Plastic_Ban	-0.0126**	-0.0136**	-0.00687	-0.0109
	(0.00580)	(0.00583)	(0.00705)	(0.00786)
Plastic_BanxHighFluidityxESG			-0.00506**	-0.00204
			(0.00194)	(0.00262)
HighFluidityxESG			-0.0125***	-0.000245
			(0.00264)	(0.00114)
HighFluidity			0.0559***	0.00480
			(0.0103)	(0.00503)
ESG			-0.0111***	-0.00362*
			(0.00212)	(0.00177)
MRK_SHR		0.107***		0.104**
		(0.0358)		(0.0357)
ROA		-0.0169**		-0.0157**
		(0.00658)		(0.00617)
SIZE		-0.00983***		-0.00851***
		(0.00201)		(0.00230)
MB		0.00675***		0.00680***
		(0.00194)		(0.00197)
LEV		0.00794		0.00748
		(0.00682)		(0.00719)
DISTRESS		-0.201***		-0.194***
		(0.0500)		(0.0468)
LOW_MTR		0.00574**		0.00542**
		(0.00251)		(0.00252)
BIGAUD		-0.00125		-0.00125
		(0.00198)		(0.00198)
BLOAT		0.00464**		0.00390*
		(0.00186)		(0.00203)
Constant	0.0563***	0.110***	0.0912***	0.112***
	(0.000769)	(0.0162)	(0.00740)	(0.0142)

Observations	7,315	5,988	7,315	5,988
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.059	0.148	0.096	0.150

Table 3-12. The Relationship between ESG and earnings management under competition.

This table presents the results of the IV approach, which estimates the relationship between ESG and firm's earnings management when facing high competition over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and high vertical integration are binary variables equal to one if the firm's fluidity (Fluidity) or vertical integration (VertInt) is higher that the industry-year 75% of firms in columns (1) and (2) and higher than the 90% of firms in terms of competition in columns (3) and (4). To measure product market competition, I use two variables: (i) Fluidity (ii) Vertical Integration, by Hoberg and Phillips data library. *ESG* is the natural logarithm of the overall ESG score from Asset4 instrumented with the average ESG score for each industry-year pair. Columns (1) and (2) define High Competition at the 75th percentile without and with control variables. Columns (3) and (4) define High Competition at the 90th percentile without and with control variables. All variables are defined in the Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Fluidity as a measure of competition

	(1) EM	(2) EM	(3) EM	(4) EM
ESG	-0.0100***	-0.0029**	-0.0119***	-0.0035**
	(0.0012)	(0.0014)	(0.0012)	(0.0014)
ESGxHighFluidity	-0.0157***	-0.0013	-0.0160***	0.0019
	(0.0033)	(0.0033)	(0.0048)	(0.0047)
HighFluidity	0.0703***	0.0118	0.0760***	0.0036
	(0.0132)	(0.0133)	(0.0185)	(0.0185)
MRK_SHR		0.0806***		0.0818***
		(0.0200)		(0.0203)
ROA		-0.0174*		-0.0175*
		(0.0104)		(0.0105)
SIZE		-0.0075***		-0.0075***
		(0.0013)		(0.0013)
MB		0.0059***		0.0060***
		(0.0014)		(0.0014)
LEV		0.0098		0.0097
		(0.0068)		(0.0068)
DISTRESS		-0.1928***		-0.1892***
		(0.0694)		(0.0708)
LOW_MTR		0.0055***		0.0057***
		(0.0018)		(0.0019)
BIGAUD		-0.0018		-0.0019
		(0.0015)		(0.0015)
BLOAT		0.0023		0.0023
		(0.0018)		(0.0017)
Constant	0.1267***	0.1294***	0.1358***	0.1312***
	(0.0129)	(0.0129)	(0.0128)	(0.0129)

Observations	9,381	7,788	9,381	7,788
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.0955	0.1405	0.0963	0.1408

Panel B: Vertical Integration as a measure of competition

	(1) EM	(2) EM	(3) EM	(4) EM
ESG	-0.0110***	-0.0030**	-0.0128***	-0.0025*
	(0.0012)	(0.0015)	(0.0012)	(0.0015)
ESGxHighVertInt	-0.0161***	-0.0033	-0.0190***	-0.0124**
	(0.0034)	(0.0031)	(0.0052)	(0.0051)
HighVertInt	0.0693***	0.0173	0.0760***	0.0498**
	(0.0135)	(0.0121)	(0.0204)	(0.0200)
MRK_SHR		0.0788***		0.0780***
		(0.0198)		(0.0198)
ROA		-0.0178*		-0.0188*
		(0.0104)		(0.0104)
SIZE		-0.0072***		-0.0072***
		(0.0013)		(0.0012)
MB		0.0060***		0.0060***
		(0.0014)		(0.0014)
LEV		0.0097		0.0090
		(0.0069)		(0.0067)
DISTRESS		-0.1954***		-0.2051***
		(0.0698)		(0.0716)
LOW_MTR		0.0056***		0.0057***
		(0.0019)		(0.0019)
BIGAUD		-0.0020		-0.0018
		(0.0015)		(0.0015)
BLOAT		0.0024		0.0025
		(0.0018)		(0.0018)
Constant	0.1325***	0.1284***	0.1399***	0.1265***
	(0.0129)	(0.0130)	(0.0129)	(0.0129)
Observations	9,381	7,788	9,381	7,788
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.0935	0.1397	0.0894	0.1398

4. Earnings management and ESG: The impact of political representation

4.1 Introduction

The negative relationship between ESG and earnings management (Kim et al., 2012) suggests that firms engaging in ESG are less likely to manipulate earnings. However, the effects of political representation on both sides of this association have largely been ignored. The political environment reflects the prevailing cultural attributes of the firms, which translate into their ethical values and norms (Hutton et al., 2015). For example, Hutton et al. (2014) find that firms with Republican leaning managers tend to adopt more conservative corporate policies, due to their conservative personal ideology reinforced by a Republican political environment. Meanwhile, firms in a Democratic political environment adopt more socially responsible policies (Di Giuli and Kostovetsky, 2014), as the Democratic Party places more emphasis on ESG-related issues such as environmental protection, anti-discrimination laws, and employee protection (Hutton et al., 2015). Corporate decisions, such as earnings manipulation (Han and Wang, 1998; Cahan et al., 2000) and ESG standards (Di Giuli and Kostovetsky, 2014) are affected as a result of the ruling party's political agenda. Given the increasing importance of adopting ESG practices (Bian et al., 2020), as well as the value destroying effects of earnings management (Huang et al., 2009), I address the following question. How does political representation affect the ability of ESG practices to mitigate earnings management?

Firms that allocate resources in implementing ESG practices are less likely to manage earnings through discretionary accruals (Hong and Andersen, 2011; Kim et al., 2012). The rationale is that managers are driven by ethical concerns to produce high-quality financial reports (Bozzolan et al., 2015). This is consistent with notions underlying ESG standards such as managers' incentive to be honest, trustworthy, and ethical (Kim et al., 2012). I extend this line of research by incorporating political representation into this relationship,

as the ruling party's ideology matches or contradicts the ethical concerns of ESG standards.

The US provides a bipartisan political setting: the Democratic Party and the Republican Party. Both sides differ in their preferences for economic and social policies. The Republican party leaves corporate attitudes, such as towards earnings management, to be subject to market discipline instead of government regulation, while the party abstains from costly initiatives such as environmental protection and unionization unless they generate ex-ante benefits for firms (Hutton et al., 2015). The Democratic party places emphasis on government intervention to prevent corporate misbehaviour, while encouraging firms to adopt high environmental, social and governance standards (Rubin, 2008; Hutton et al., 2015).

Moreover, Di Giuli and Kostovetsky (2014) argue that firms located in Democratic-leaning counties or states tend to have a higher commitment to ESG compared to their counterparts in Republican environments. A 2007 National Consumers League survey finds that 96% of Democrats believe Congress should encourage firms to address social issues, compared to 65% of Republicans. In contrast, Republicans have been in favour of setting back ESG standards. This is showcased by the 2017 US withdrawal from the Paris climate accord under a Republican president while the US re-joined the Paris agreement in 2021 soon after a Democrat President assumed office. A 2019 survey from Pew Research Centre finds a strong consensus among Democrats (90%, including independents who lean toward the Democratic Party) on the need for more government efforts to reduce the effects of climate change, whereas Republican views differ significantly depending on ideology, generation and gender lines.

Core principles of current political representation, translated into governments' actions, influence firms' incentives to adopt ESG practices. Furthermore, governments' actions also affect firms' financial reporting decisions, such as earnings management. The Democratic party supports corporate discipline backed by government intervention. In contrast, the choice of the Republican party to limit government regulation suggests that markets

take on the role of monitoring and disciplining firms. Firms then abstain from earnings management, as shareholders, such as long-term institutional investors, act as governance mechanisms (Koh, 2007), or to avoid damaging firms' reputation (Fama & Jensen, 1983).

However, limited government regulation leads to increased market competition as new and foreign firms face less barriers to enter the US market. More competition means more information being available to shareholders which can be used to monitor managers more accurately in comparison to their peers (DeFond and Park, 1999; Holmstrom,1982; Nalebuff and Stiglitz, 1983) and apply constant pressure on them to "meet or beat" accounting earnings reported by competing firms (DeFond and Park, 1999). Consequently, it provides managers with incentives to manipulate earnings under a Republican governor. Managers may also engage in earnings management to influence stock prices when competition increases (Markarian and Santalo, 2014). Therefore, it is unclear how a Democratic or Republican political representation affects earnings management through competition.

Earnings management can have value destroying effects for the firm (Huang et al., 2009), with numerous accounting scandals around earnings management (Yu, 2008). Furthermore, firms have different incentives to engage in both ESG and earnings management practices driven by the actions of policymakers. Given the importance of the political environment in shaping firms' policies, I explore the ability of ESG standards to mitigate earnings management when the firm is affected by the current political representation.

I use a sample of U.S. firms, excluding financial and utilities firms, for the period 2002-2017. I also include firms with no available ESG information to incorporate ESG disclosure in our analysis. I use the weighted average ESG score and Gubernatorial party affiliation (and later US Senate representation) as a measure of political representation. I focus on state governors because the role of the governor at the state level is similar to that of the president at the national level, while state governors exercise a high degree of autonomy (Beland, 2015). Furthermore, as the governors' party is not constant across states and years, it provides a more powerful test for our hypothesis, compared

to change of the presidents' party which happened once in our sample period. Baseline regression results suggest that policies enforced by a governor from the Democratic party have a direct positive effect on firms' earnings management. This advocates stakeholders rely on these polices by a governor from the Democratic Party to limit such practices. Therefore, the states' role of monitoring firms' behaviour through government regulation reduces stakeholders' incentives to also monitor firms' behaviour. This increases earnings management incentives for firms, as prior literature finds a negative association between stakeholders such as institutional investors and earnings manipulation (Chung, Firth, and Kim, 2002; Park and Shin, 2004). Furthermore, the Democratic party places more emphasis on issues such as equal rights, labour rights, and environmental protection, rather than securities fraud and intellectual property rights (Hutton et al., 2015). Conditional on ESG standards[53], however, actions taken by the Democratic party encourage firms to limit earnings management. Political representation from the Democratic party amplifies the negative association between earnings management and ESG, backed by the party's commitment to high ESG standards by the firm. I find a negative association between ESG engagement and earnings management under a Democratic state governor. The results are both statistically and economically significant. I document firms in a Democratic leaning political environment engage in 2,79% more extensive earnings management, compared to their Republican peers. This is driven by actions from Democratic governors that induce incentives for earnings management, such as the market's reduced disciplinary power and the party's focus on issues other than corporate earnings management such as environmental protection. Furthermore, the Democratic party's commitment to high ESG standards, and notions that are inconsistent with earnings manipulation, amplifies ESG's mitigating power on firms' earnings management activities.

[53] These ESG standards refer to the Democratic Party's ideology and actions that stress government regulation to protect interests of stakeholders and the public, ensure ethical business practices, enforce labour rights, environmental protection, social safety nets, as well as corporate social responsibility (Kim, Ryou and Yang, 2020).

As firms' engagement in earnings management also affects their ESG performance (Bozzolan et al., 2015), there is potential endogeneity bias. I use the industry average ESG as an instrument as well as the state average ESG score excluding the firm of interest. Firms' ESG choices are often correlated in the same industries. But industry-level ESG is not related to earnings management in the firm-level (Cao et al., 2019). The results from the instrumental variable regression confirm the baseline results. Next, I use state governors' election results to capture changes in governors' party as staggered exogenous changes to political representation and perform a difference in differences approach. As the change in state governor party is staggered across different states in different years, it provides a powerful econometric test for out hypothesis. Changes in state governors' party affect the variable of interest political representation. I also expect firms' earnings management to be affected, as actions by the new governor provide incentives for firms to engage or abstain from earnings management and firms can adjust their policies following an election. To provide robust evidence, I employ the entropy balancing technique to balance differences between the treatment and control group. Entropy balancing allows us to build the covariate balance directly into the weight function that is used to adjust the control units. Popular techniques like the nearest neighbour matching or propensity score matching often result in low levels of covariate balance in practice and require to manually search for a suitable weighting (Hainmueller and Xu, 2013). I also use the political party of US senators as an alternative measure of political representation. The results remain consistent.

This paper makes several contributions. First, I extend the line of research that examines the causal link between earnings management and firms' engagement in ESG (Prior et al., 2008; Kim et al., 2012; Agoglia et al., 2022). Second, I introduce political representation, in a bipartisan political setting like that of the US, as a key factor affecting the relationship between earnings management and ESG. Prior research examines the association between political representation and ESG (Di Giuli and Kostovetsky, 2014; Hutton et al., 2015). Hutton et al. (2014) documents a positive relationship

between Republican leaning managers and financially conservative corporate policies. No prior research however focuses on the impact of political representation on earnings management, or its effect on ESG's mitigating role on earnings management. Third, I use a comprehensive sample of U.S. firms with or without ESG information to incorporate ESG disclosure in our analysis through the existence of an ESG score. Most studies related to ESG only use a sample defined by the number of available ESG observations (Bhandari and Javakhadze, 2017; Cai et al., 2020). By including firms with no available ESG score I do not lose variation in our other variable of interest (ie political representation). Also, I provide an indication regarding this relationship as defined by ESG disclosure and not the actual ESG performance of the firm.

This paper adds to the earnings management literature. Extensive research finds a negative association between earnings management practices and ESG engagement by the firm (Kim et al., 2012; Liu et al., 2017; Ni, 2020). Another strand of the literature examines how the political factor affects one side of this association. Firms with Republican leaning managers are more likely to experience lower ESG performance compared to Democratic leaning firms (Hutton et al., 2015). Hutton et al. (2014) show that Republican managers tend to adopt more conservative corporate policies, but they do not assess the firms' earnings management activities. Di Giuli and Kostovetsky (2014) also find that firms headquartered in Democratic rather than Republican-leaning states/environments achieve higher ESG scores. However, no prior research examines how political representation impacts the negative association between earnings management practices and ESG. I extend this line of research by examining the causal link between firms' ESG activities and earnings management and introduce political representation as a factor amplifying this relationship.

4.2 Literature Review and Hypothesis Development

4.2.1 Political representation and Earnings management

The actions taken by government bodies either from the Democratic or the Republican party differ in their ideological background and economic policies, ranging from R&D spending to corporate regulation (Xu, 2020).

These actions affect corporate policies, such as earnings management. Actions from the Republican party tend to limit government regulation and let the market discipline take on the role of monitoring firms' behaviour (Hutton et al., 2015). This is part of a trend of policy makers globally, who want institutional investors and stakeholders to play a more active role in the governance of their investee firms (Kim et al., 2017). To that end, prior research finds a negative relationship between institutional ownership and earnings management (Chung, Firth, and Kim, 2002; Park and Shin, 2004). Fear of damaging their reputation in the market (Fama & Jensen, 1983) and the lower cost of capital that comes with more transparent financial information (Barth et al., 2013) also discourages earnings management.

However, limited government regulation, indirectly affects earnings management by the firm through product market competition. Limited government regulation means less barriers for new firms to enter the US product market. This results in increased competition, in turn, increasing the managers' incentives to manipulate earnings to influence stock prices (Shleifer, 2004). DeFond and Park (1999) also suggest that manager's incentives to "meet or beat" accounting earnings reported by other firms in the industry also encourages earnings management.

A counter argument, however, suggests the Republican Party follows more conservative policies on the issue of foreign competition. Although the party's limited government regulation allows new firms to enter the US product market internally, protectionist economic policies, often adopted by the Republican Party, tend to limit the influx of competition from foreign firms to the US market[54]. This would in turn reduce product market competition. On the other hand, limited regulation means less government monitoring of anticompetitive behaviour and punishment of illegal collusion such as price setting (Cherchye and Verriest, 2016). This acts as a counter to increasing product market competition driven by limited government regulation from the

[54] For example, the US president Donald Trump followed a protectionist approach for the US industries between 2017 and 2021, both internally and abroad, including trade wars, tariffs, new barriers for foreign firms, as well as attempts to buyout foreign firms with significant presence in the US market.

Republican Party. Actions taken by the Democratic party address those issues by enforcing government regulation (Hutton et al., 2015). Hence, it can also be argued that antitrust laws and punishment of anticompetitive behaviour, introduced by the Democratic Party to ensure fairer competition, increase competition in the US market, providing managers with incentives to engage in both ESG and earnings management. Therefore, it is unclear how political representation affects the relationship between earnings management and ESG, via the channel of competition.

In the US, State governors can make decisions such as license fees, tax revenue allocation, regulate business and levy taxes (Beland, 2015). To that end, Democratic governors are more likely to raise taxes (Besley and Case, 1995). Reed (2006) also finds that tax burdens are higher when Democrats control another state legislative body, the state legislature. As a result, states can experience a hike in taxes following a shift from Republicans to Democrats. Firms then can manipulate earnings to reduce taxes (Blake and Salas, 1996, Baralexis, 2004, Othman and Zeghal, 2006). Moreover, Pastor and Veronesi (2020) identify a pattern to US election results based on times of high and low risk aversion. They find that when the economy is in distress, voters are more likely to elect a Democratic candidate, and investors with high risk aversion will demand higher premiums to take on the excess risk (Pastor and Veronesi, 2020). Firms are encouraged to engage in more earnings management to meet the expected high returns investors demand as a result. Therefore, I expect firms in Democratic leaning environments to engage in more earnings management, driven by product market competition[55], increased tax burden, and higher risk premiums investors demand in a distressed economy where Democrats are more likely to assume office. My first hypothesis is the following:

H4-1: Firms operating in a Democratic party environment engage in more earnings management

[55] However, product market competition as a channel for the relationship between earnings management and Democrats in power is unclear, as prior literature suggest both arguments for and against increasing competition under the Democratic / Republican Party.

4.2.2 Earnings management, ESG engagement and the impact of political representation

Kim et al. (2012) find a negative relationship between ESG engagement and earnings manipulation and provide reasons to explain this relationship, other than ethical and social obligations of the managers. ESG often acts as a tool that managers use to build corporate reputation (Fombrun and Shanley 1990; Verschoor 2005; Linthicum et al. 2010). Consistent with a negative relationship between ESG engagement and earnings management, firms use ESG to improve their reputation and abstain from earnings management to avoid damaging their reputation. Moreover, ESG is positively related with financial performance (Waddock and Graves 1997; Griffin and Mahon 1997; Roman et al. 1999). As such, high ESG firms with superior financial performance have less incentives to engage in aggressive earnings management.

However, the effects of the political environment on this association have largely been ignored. The literature shows a positive association between a Democratic political environment and firms' ESG standards (Di Giuli and Kostovetsky, 2014). Meaning that firms operating in Democratic states or counties tend to allocate more resources in ESG investments, encouraged by the actions of the government. Democrats, in contrast to Republicans, are more willing to support causes such as environmental and labour protection while opposing smoking, guns, and defence (Hong and Kostovetsky, 2012). Tobacco, alcohol, guns, and defence firms are considered socially irresponsible (Kim et al., 2020), while Democratic-oriented mutual fund managers are less likely to hold such stocks.

Furthermore, the relationship between ESG standards adopted by firms, or enforced by the Democratic Party, and a Democratic candidate in office, can also be endogenously determined, through the practice of lobbying, a widespread business practice in the US. Political contributions, allow business groups with special interests to gain important favours from or access to legislators over a preferred policy, such as ESG (Besley and Coate, 2001; Wolton, 2021). In other words, given the recent trend and demand for higher

ESG standards, ESG intensive firms can lobby and financially support Democratic candidates, that will enforce ESG policies after assuming office. Similarly, firms that incur higher expenses as a result of more vigorous ESG government policies, particularly transportation and oil and gas industries, lobby Republican candidates. Catola and D'Alessandro (2020) find these two industries doubled their political contributions from 2007 to 2009[56], during President Obama's first term of office, while both industries show clear preference for the Republican party, traditionally opposing environmental regulation.

I argue that firms engage in more earnings management in Democratic political environments, driven by lack of market discipline, higher taxes and higher risk premiums. Moreover, high ESG standards are more prevalent for firms under a Democratic governor, often promoted and financed from lobbying activities, as well as the government's ability to ensure higher ESG standards for all firms. Hence, firms are more likely to stick to notions and values of ESG investing, under a Democratic governor, and limit their earnings management practices. Therefore, I expect the mitigating role of ESG on earnings management to be stronger for firms when they operate in a Democratic political environment, in comparison to a Republican environment. My second hypothesis is the following:

H4-2: The relationship between ESG and earnings management is amplified by the actions of the Democratic party.

4.3 Empirical Framework

4.3.1 Sample and Data

I collect ESG data from Asset4 of Refinitiv (formerly known as Thomson Reuters) from 2002 to 2017. Asset4 has collected data and scored firms on the ESG dimensions starting from the fiscal year 2002[57]. I use the

[56] Transportation industry spent more than $240 million annually during President Obama's first term of office, the oil and gas industry doubled its spending from 2007 to 2009 (Catola and D'Alessandro, 2020).

[57] It includes 900 evaluation points per firm, all primary data and publicly available. Typical sources include stock exchange filings, ESG and annual reports, and nongovernmental organization websites. These 900 evaluation points are then used as equally weighted inputs to calculate 250 key performance indicators (KPIs) that are further organized into 18 categories

equally weighted score of the four pillars to proxy for ESG. Data of US firms are collected from Compustat. Following prior literature (Boubaker et al., 2018) firms in the financial services sector (SIC 6000–6999) and utilities industries sector (SIC 4900–4999) are eliminated because of their special regulatory environment. I collect historic state of incorporation data from Spamann and Wilkinson (2019).

As firmly established in the earnings management literature (Cohen et al., 2008, Francis et al., 2008, Katmon and Farooque, 2015, Yu, 2008), the modified Jones model (1991) is used to estimate the absolute value of the discretionary accruals. Cohen et al. (2008) argue that the more meaningful measure of earnings management is the absolute level of discretionary accrual. Therefore, the absolute value of discretionary accruals is used as a proxy for the overall earnings management to capture earnings management regardless of manager's income-increasing or decreasing incentives.

To capture political representation at the state level, I first obtain historic state of incorporation data from Spamann and Wilkinson (2019). Next, I merge historic state of incorporation data to our sample including ESG data from Asset4 of Refinitiv and financial data from Compustat. I collect data of state governor (from Democratic party or Republican party) for each state-year pair from Dave Leip's Atlas of U.S. Presidential Elections and other online sources such as national governors association.

4.3.2 Summary Statistics

Table 1 presents the summary statistics for variables in the subsample with available ESG score[58]. Panel A includes all firms with an ESG score, Panel B and C report summary statistics for firms headquartered in states with a Democratic and a Republican governor, respectively. The mean value of Earnings management (EM) suggests that firms in the sample engage in earnings management by an average 5.31% income increasing or decreasing. The lower 1% of firms engage in only 0.07% income increasing or income decreasing earnings management while the top 1% engage in 34.22%. The

within four pillars of corporate social responsibility. These pillars are economic performance, environmental performance, social performance, and corporate governance.

[58] Summary statistics for the whole sample are reported in Appendix E.

ESG score has a mean value of 50.24 and a standard deviation of 30.41. These results are consistent with prior literature that used the same measure for ESG (Halbritter and Dorfleitner, 2015; Ferrell et al., 2016).

For all firms in the subsample, DEMOCRAT_STATE has a mean value of 0.9149. The majority of firms in the sample have their historic headquarters in states with governors from the Democratic party 91.49% of the time. A standard deviation of 27.91% for the variable DEMOCRAT_STATE also suggests significant volatility and change in state governors, thus in the political environment. The average market share is 3.42% with variation from 0% to 28.79%. Firms in the sample are profitable with mean ROA of 3.19% and large in size with mean size of 826 million dollars. The remaining control variables have summary statistics consistent with those of prior literature (García Lara et al., 2020; Ni, 2020).

"Insert Table 4-1"

Appendix H presents the correlation matrix for variables in the sample. Earnings management through discretionary accruals is negatively correlated with both ESG engagement and DEMOCRAT_STATE suggesting that firms that allocate resources in ESG practices, or firms that operate in states with Democratic environments engage in less earnings management practices.

4.3.3 Baseline results

I explore the impact of political representation on the relationship between ESG and earnings management in the US setting of a dual-party system. I examine this relationship at the state level to capture the actions of state governors that operate in a semi-autonomous setting. For further robustness, I also examine this relationship at the upper chamber of the federal government: the US Senate. Lastly, I create a binary variable (DEMOCRAT_STATE), equal to one if the state governor at year t is from the Democratic party, zero otherwise. To test the hypothesis, I use the following model:

$$EarningsManagement_{i,t} = a_{i,t} + b_1 ESG_{i,t} + b_2 DEMOCRAT\_STATE_{i,t} + b_3 ESG_{i,t} * DEMOCRAT\_STATE_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

Where Earnings Management, the dependent variable, is captured by the discretionary accruals in absolute values as I want to measure the extent of earnings management irrespective of income increasing or decreasing incentives. ESG captures corporate social responsibility as the natural logarithm of the weighted average of governance, economic, environmental, and social performance. DEMOCRAT_STATE is a binary variable that takes the value of one if the state governor at year t is from the Democratic party, zero otherwise.

$X_{i,t-1}$ is a vector of firm-level factors that prior literature identified as antecedents of firms' earnings management activity. These factors include firm-size (SIZE) (Dechow and Dichev, 2002), corporate profitability (ROA), firm's leverage (LEV), the market to book ratio (MB) (Dechow et al., 2011, Hribar and Nichols, 2007). I also include market share (MRK_SHR) and financial distress (DISTRESS), a binary variable of big 4 audit (BIGAUD) as firms audited by one of the big4 auditing firms are less likely to manage earnings. I include an indicator variable for low marginal tax rate (LOW_MTR). A low marginal tax rate is assumed if the firm's marginal tax rate is below the statutory tax rate (Blouin et al., 2010) and firm's sales growth (Sales_Growth) as earnings volatility provides incentives for earnings management. Lastly, I introduce a binary variable to account for firm's balance sheet bloat (BLOAT). All variables are defined in Appendix B variable definition. θ and γ stand for year and industry fixed effects. I use industry fixed effects, rather than firm fixed effects, to control for systematic differences in the financial environment and performance across different industries which can be impacted unevenly by the policy changes. Table 2 reports results from regressions with industry and year fixed effects clustered at the firm level. Consistent with the theory presented in the hypothesis development section, I expect the coefficient of the DEMOCRAT_STATE binary variable to be

positive, and the coefficient of the interaction term between DEMOCRAT_STATE and ESG to be negative. Columns (1) and (2) examine the relationship between earnings management and ESG engagement by the firm. Consistent with prior literature (Kim et al., 2012) ESG engagement adversely affects earnings management.

In columns (3) and (4) I examine the relationship between earnings management and a Democratic political environment through a Democratic state governor. In column (3), without control variables, I find a significant negative relationship, where firms in states with a Democratic governor engage in 2.64% less earnings management practises. After controlling for firm specific and earnings management specific control variables, in column (4) I do not find consistent results. Including the interaction term between DEMOCRAT_STATE and ESG in column (5) and (6), I find that firms in Democratic environments engage in more earnings management (by 2.79% after including control variables), as per our first hypothesis.

I also find a negative coefficient of the interaction term in columns (5) and (6). After controlling for firm and earnings management specific variables, I find that a Democratic political environment, in this case a state governor from the Democratic party, amplifies the negative association between ESG and earnings management by 0.65%. Firms engage in more earnings management practices when they operate in an environment governed by the Democratic party. Minimum market intervention and increased product market competition encourage firms to manipulate earnings. Moreover, the Democratic party's commitment to high ESG standards makes ESG engagement a more effective hedge against earnings management.

"Insert Table 4-2"

4.4 Robustness Test

4.4.1 Endogeneity

Our earlier findings suggest that a governor's political party affiliation affects the ability of ESG to limit earnings management. I also find that this effect is stronger for firms in Democratic political environments. However, the relationship between earnings management and ESG engagement can be

endogenous. Jones (1995) argues that firms conducting business on the basis of trust and cooperation, being socially responsible, have an incentive to demonstrate a commitment to ethical behaviour, thus limiting earnings management. It is also firmly established in the literature that firm's engagement in earnings management practices also affects ESG performance of the firms (Bozzolan et al., 2015), thus the model can potentially suffer from endogeneity.

Following the literature, e.g., Ferrell et al. (2016), I use the state-average and industry-average ESG score as instruments. Research shows it is an appropriate instrument as industry peers ESG performance systematically affects the firm's ESG policies (Cheng et al., 2013; Ioannou and Serafeim, 2017)[59].

Table 3 reports the results of an instrumental variable regression. Panel A uses the average ESG score for each state-year pair as an instrument. Columns (1) and (3) report the results of the first stage regressions. The chosen instrument has a negative relation with the endogenous variable ESG, satisfying the relevance criterion. Columns (2) and (4) report the results of the second stage regressions. Our results remain consistent with the baseline regression results, with a significant positive relation between the dependent variable and DEMOCRAT_STATE without and with control variables. The interaction term DEMOCRAT_STATExESG also has a significant negative relation with earnings management. Results suggest ESG mitigates earnings management by the firm, while the effect is more profound for firms operating in states controlled by Democrats. Panel B uses the average ESG score for each industry-year pair as an instrument. I find consistent results with panel A, before including control variables in column (2), and in column (4) including firm specific and earnings management specific control variables.

"Insert Table 4-3"

[59] The chosen instruments do not have a consistent significant relation with the dependent variable (Earnings Management) satisfying the exclusion criterion as shown in Appendix A.

4.4.2 Change of State Governor's party as an exogenous shock on political representation

I exploit election results that lead to a change in state governors' political party (governor from the Democratic party to governor from the Republican party) as a shock to political representation to employ a difference in difference approach, to establish the causal effect between ESG and earnings management, reenforced by a shock on political representation. Similar empirical approach is applied to prior research, either in the form of changes in the political environment (Carvalho and Guimaraes, 2018; Fink and Stahl, 2020) or changes in firms' environment such as CEO sudden deaths (Nguyen and Nielsen, 2010; Al Mamun et al., 2020). Firms' earnings management and ESG incentives that are driven by the current governing party, either from the Democratic or the Republican Party, remain unchanged while the same governing party stays in power[60]. However, following gubernatorial elections results, governing party can change, and thus affect firms' incentives to engage or abstain from earnings management. Therefore, it provides an appropriate shock on political representation. Furthermore, as the change in state governor's party occurred in different states across different years, it is a powerful test for the hypothesis.

First, I identify state-year pairs that experienced a change to governors' political party. As all states in the sample period 2002-2017 have state governors from either the Democratic party or the Republican party there are two possible changes, from a Democrat governor to a Republican governor and the change of the opposite direction. I only include the direction of change from a Democrat to a Republican governor to make a more intuitive interpretation of the results[61]. Then I create a binary variable, DEM_to_REP, equal to one if the election results lead to a change from a Democratic governor to a Republican governor at year t.

[60] In this research this is primarily referred to the state level government party.
[61] This refers to a more intuitive interpretation of the results on the dependent variable, earnings management. I do not expect that firms adjust their ESG standards upwards/or downwards following a change of the governing party. Firms are reluctant to worsen their ESG practices, even following election results where a Republican candidate assumes office.

Information regarding the state governors is presented in Appendix C. Firms in the treatment group are those with their (historic) headquarters in states that experienced change of governor from the Democratic party to the Republican party for the two years following that change. I use a two-year window for two reasons. First to address concerns regarding low number of observations in the treatment group. Second, because firms cannot instantly adjust their earnings management activities following the change of governor. A comparison of summary statistics between the treatment and control groups is presented in Table 4. I also drop all observations without and ESG score to ensure I do not include firms with no ESG score in the control group. Lastly, I estimate the following model:

$$EarningsManagement_{i,t} = a_{i,t} + b_1 ESG_{i,t} + b_2 DEM\_to\_REP_{i,t+1} + b_3 ESG_{i,t} * DEM\_to\_REP_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

Earnings management, ESG and the vector of control variables $X_{i,t-1}$ are as defined in baseline regression. DEM_to_REP is a binary variable (DiD estimator), that takes the value of one for year t and year t+1 following the elections if the firm has its historic headquarters in a state that changed its governor from the Democratic party to a governor from the Republican party at year t. If firms in a Democratic political environment engage in more earnings management, I expect a negative coefficient between the dependent variable earnings management and the binary variable DEM_to_REP and a positive relationship or no relationship between earnings management and the interaction term ESG*DEM_to_REP.

"Insert Table 4-4"

Table 5 reports the results from the difference in differences. Columns (1) and (2) report the estimates of the DEM_to_REP estimator. I find that the dependent variable is driven by a change from a Democratic governor to a Republican governor. This results in a 1% (including control variables) reduction in firms earnings management following a change in governor. Columns (3) and (4) report the relationship between earnings management and ESG, and I find results consistent with literature (Kim et al., 2012). In columns

(5) and (6) I report the results of the difference in differences model presented above. DEM_to_REP and the interaction term DEM_to_REPxESG do not have a consistent, after the use of control variables, relationship with the dependnt variables earnings management. This is only observed in column (5) without control variables, with a significant negative coefficient of the DEM_to_REP variable, suggesting when the state governor changes from the Democratic party to the Republican party, firms limit their earnings management activities by 4.52%. In contrast, firms engaging in ESG activities end up doing more earnings management following the change in governor's party from Democratic to Republican in column (5)[62]. However, there are significant differences in the number of observations between the treatment and control group, with the 9,239 observations in the control group and only 159 in the treatment group.

"Insert Table 4-5"

To provide robust results, and to further address the issue of difference in the number of observations between the treatment and control group I employ the entropy balancing technique. Popular techniques like the nearest neighbour matching or propensity score matching often result in low levels of covariate balance in practice and often require to manually search for a suitable weighting that balances the covariate distributions (Hainmueller and Xu, 2013). Entropy balancing uses a pre-processing scheme where covariate balance is directly built into the weight function that is used to adjust the control units.[63] Using entropy balancing, I adjust the weights of the control group for the first moment (Mean), second moment (Variance) and third moment (Skewness) order to match those of the treatment group. I then re-run the diff-in-diff approach including the weights in out model. The results are reported in Table 6.

In columns (1) and (2) I find, consistent with prior results, that firms engage in less earnings management following change in state governor from

[62] For further analysis, I repeat the same difference in difference approach using the four individual pillars of ESG instead of the overall ESG score. Results remain fairly consistent. Results are presented in Appendix G.

[63] Appendix F provides a detailed comparison after the entropy balancing of the treatment and control groups.

Democratic to Republican. After including ESG in column (5) without control variables and in columns (6) with control variables, DEM_to_REP and ESG individually adversely affect earnings management. However, I find that ESG is not a factor that affects earnings management following a change in state governors from Democratic to Republican.

"Insert Table 4-6"

Lastly, for further evidence, I run a placebo test, where I assume that the change in state governor from a Democratic to Republican happens two years earlier, as I use a two-year window for the DEM_to_REP variable. If our predictions are true, and political representation affects the relationship between ESG and earnings management, then there should be no significant coefficient for the FalseDEM_to_REP binary variable or the interaction term. The results are presented in table 7.

In panel A I report the regression results without balancing the treatment and control groups. In columns (3) to (6), ESG remains statistically significant. The binary variable FalseDEM_to_REP and the interaction term FalseDEM_to_REPxESG are not significant in any of the model's specifications. In panel B, I use entropy balancing to balance the treatment and control groups as I did in our previous analysis. Results remain consistent, suggesting the variation in firms' earnings management is the result of the actual change in state governors party from a Democratic governor to a Republican governor.

"Insert Table 4-7"

4.4.3 Earnings management, ESG disclosure and political representation

I also examine the relationship between earnings management and ESG disclosure and how political representation impacts this relationship. In our sample I have 55,072 firm-year observations for the earnings management proxy and the remaining variables for the 2002-2017 period. I also have only 9,398 firm-year observations for the ESG score variable from Asset4 of Refinitiv database. Therefore, I use this to exploit the impact of ESG disclosure, instead of the actual ESG score of the firm.

I create a binary variable ESG_disclosure, which takes the value of one if there is an ESG score available for the firm-year pair, zero otherwise. If there is an ESG score for the firm, that means the firm voluntarily disclosed information that could be used to construct and average ESG score. Furthermore, by doing this I include ESG disclosure in the first place in our analysis, and not only the actual ESG performance of the firm.

I run the following regression:

$$EarningsManagement_{i,t} = a_{i,t} + b_1 ESG\_disclosure_{i,t} + b_2 DEMOCRAT\_STATE_{i,t} + b_3 ESG\_disclosure_{i,t} DEMOCRAT\_STATE_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

Where ESG_disclosure is a binary variable equal to one when an ESG score is available, zero otherwise. Earnings management, DEMOCRAT_STATE and the vector of the control variables are all as defined previously. To overcome the endogeneity bias between earnings management and ESG disclosure, I use the state average ESG_disclosure, (percentage of firms in the same state that do voluntary ESG disclosure) and the industry peers average, as instruments.

Table 8 reports the results of an IV regression. Panel A uses ESG_disclosure for each state-year pair as an instrument. Columns (1) and (3) report the first stage regression without and with control variables. In column (2), I find that even disclosing ESG related information about the firm limits earnings management. I also find that in states with a governor from the Democratic party, firms disclosing ESG information, engage in more earnings management.

When using the average ESG_disclosure for each industry-year pair as an instrument for ESG_disclosure in Panel B, I find no consistent results with Panel A. The positive coefficient of the interaction term DEMOCRAT_STATExESG_disclosure remains significant only before including control variables. Overall, I find results not consistent with our hypothesis. However, despite using an IV approach to overcome endogeneity concerns, results remain biased due to data availability. ESG_disclosure takes

the value of one for those firms that I could find an ESG score. There is no guarantee that firms without ESG score did not disclose ESG related information, rather data for these firms were not included in the source of our sample.

"Insert Table 4-8"

4.4.4 Alternative measure of political representation

To provide further robust results, I use an alternative measure for political representation. So far, I examine the impact of political representation using the elected governor at the state level. I also use US senators as a measure of political representation. The US senate is the upper chamber of the US Congress, with the House of Representatives being the lower chamber. The US Senate is comprised of 100 senators, two elected from each state. On even-numbered years when there is not a presidential election, one-third of the Senate and the whole House are included in the election. US senators are classified in three classes, depending on if their term ended with this Congress, face re-election, or their term began in the previous Congress. As a result, I do not use rolling election results of senators either from the Democratic or the Republican party, rather I use the two-years composition of the upper chamber of the US Congress at the state level[64]. Information on the biennial composition of the US Senate is presented in Appendix D.

First, I collect data on US senators from the federal election commission, at the state level. Senators in our 2002-2017 sample period are either from the Democratic party, the Republican party or are independent. As each state elects two senators, the biennial composition of the Senate can include zero, one or two senators from the Democratic party from each state. I then create a binary variable, DEMOCRAT_SENATE, that takes the value one if there are Democrat(s) senator(s) from the firm's state at year t. I examine both cases where both senators come from the Democratic party and where at least one comes from the Democratic party. Finally, I run the following regression:

[64] Using a 2-year rolling election results approach would be challenging as only one third of the Senate is up for re-election every two years.

$$EarningsManagement_{i,t} = a_{i,t} + b_1 ESG_{i,t} + b_2 DEMOCRAT\_SENATE_{i,t} + b_3 ESG_{i,t} DEMOCRAT\_SENATE_{i,t} + \sum c_i X_{i,t-1} + \theta + \gamma + u_{i,t}$$

Where Earnings Management and ESG are as defined in the baseline regression. DEMOCRAT_SENATE is a binary variable that takes the value of one if both or at least one senators elected by each state come from the Democratic party, zero otherwise. $X_{i,t-1}$ is the vector of control variables as defined in Appendix B. To minimize the endogeneity bias between the dependent variable and ESG, State-average ESG score and Industry-average ESG score are used as instruments.

Table 9 reports the results of the IV regression. Panel A uses the average ESG score for each state-year pair as an instrument. Columns (1) and (2) report the second stage regression when DEMOCRAT_SENATE takes the value of one if both of state elected senators at the current congress come from the Democratic party. There is a significant positive association between earnings management and DEMOCRAT_SENATE, meaning a Democratic political representation as measured at the US senate leads firms to engage in more earnings management. Furthermore, I find that, consistent with prior results in this research, a Democratic political representation amplifies the negative relationship between earnings management and ESG engagement by a 0.76%.

Columns (3) and (4) report the second stage regression where DEMOCRAT_SENATE takes the value of one if at least one of the two state elected senators are from the Democratic party. The results remain consistent which suggests that a Democratic political environment, even if not absolute, provides managers with incentives to engage in earnings management, while amplifying the negative relationship between earnings management and ESG. Panel B uses the average ESG score for each industry-year pair as an instrument for ESG. Results still hold without and with control variables.

"Insert Table 4-9"

4.5 Conclusions

I assess ESG's mitigating effect on firm's engagement in earnings management practices, and I incorporate political representation in the US setting as a factor amplifying this relationship. I contribute to the literature by investigating the relationship between ESG engagement and earnings management practices when the firm is incorporated in a Democratic political environment in comparison to its Republican peers, as well as during times of political change and state-wide political election shocks while considering the potential reverse causality between earnings management and ESG. The results suggest that political representation, as captured by the state governors' political party, or by the states elected senators' party, has a statistically and economically significant amplifying effect on the association between ESG and earnings management. Furthermore, firms choose to limit their earnings management activities following elections that lead to a change from a Democrat to a Republican state governor. In contrast, I find evidence that following a change from a Democrat to a Republican state governor, firms adopting ESG practices, also increase their engagement in earnings management, which suggests that ESG is set back under Republican governors.

Table 4-1. Summary Statistics

This table presents the descriptive statistics for the variables used in this study of all U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. Summary statistics for all sample firms with an ESG score, firms with their headquarters in state with Democratic governors, firms with their headquarters in states with Republican governors, are reported in Panels A, B and C respectively. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: All Firms

	N	Mean	Median	SD	1st Percentile	99th Percentile
Earnings Management	9,398	0.0531	0.0358	0.0694	0.0007	0.3422
ESG	9,398	50.2470	44.7900	30.4123	6.8000	96.7600
DEMOCRAT_STATE	9,398	0.9149	1.0000	0.2791	0.0000	1.0000
Market Share	9,398	0.0342	0.0100	0.0596	0.0000	0.2879
ROA	9,398	0.0319	0.0563	0.2722	-0.7392	0.3265
SIZE	9,398	8.2684	8.2268	1.4850	4.5818	11.9359
Market-to-Boo	8,489	1.8454	1.3769	2.2964	0.1737	8.3280
Leverage	9,217	0.2474	0.2193	0.2287	0.0000	0.8952
DISTRESS	9,398	0.0001	0.0000	0.0103	0.0000	0.0000
LOW_MTR	9,398	0.8932	1.0000	0.3089	0.0000	1.0000
BIGAUD	9,398	0.6730	1.0000	0.4691	0.0000	1.0000
BLOAT	9,398	0.2793	0.0000	0.4487	0.0000	1.0000
SALES_GROWTH	9,317	0.0074	0.0006	0.3957	-0.0050	0.0180

Panel B: Firms with headquarters in states with a Democratic governor

	N	Mean	Median	SD	1st Percentile	99th Percentile
Earnings Management	8,598	0.0539	0.0363	0.0711	0.0007	0.3496
ESG	8,598	50.3627	45.2600	30.5200	6.7800	96.7600
DEMOCRAT_STATE	8,598	1.0000	1.0000	0.0000	1.0000	1.0000
Market Share	8,598	0.0342	0.0096	0.0608	0.0000	0.2968
ROA	8,598	0.0296	0.0556	0.2826	-0.7645	0.3364
SIZE	8,598	8.2683	8.2324	1.5006	4.5683	12.0114
Market-to-Book	7,746	1.8712	1.3922	2.3547	0.1993	8.4259
Leverage	8,434	0.2454	0.2172	0.2300	0.0000	0.8838
DISTRESS	8,598	0.0001	0.0000	0.0108	0.0000	0.0000
LOW_MTR	8,598	0.8994	1.0000	0.3008	0.0000	1.0000
BIGAUD	8,598	0.6754	1.0000	0.4683	0.0000	1.0000
BLOAT	8,598	0.2740	0.0000	0.4460	0.0000	1.0000
SALES_GROWTH	8,518	0.0037	0.0006	0.1021	-0.0051	0.0195

Panel C: Firms with headquarters in states with a Republican governor

	N	Mean	Median	SD	1st Percentile	99th Percentile
Earnings Management	800	0.0444	0.0314	0.0459	0.0007	0.2296
ESG	800	49.0042	41.5750	29.2188	7.6900	96.7600
DEMOCRAT_STATE	800	0.0000	0.0000	0.0000	0.0000	0.0000

Market Share	800	0.0346	0.0164	0.0445	0.0001	0.2175
ROA	800	0.0567	0.0621	0.1067	-0.2914	0.2751
SIZE	800	8.2691	8.1810	1.3069	4.9316	11.2725
Market-to-Book	743	1.5769	1.2656	1.5402	-0.0714	7.3490
Leverage	783	0.2689	0.2460	0.2127	0.0000	1.1738
DISTRESS	800	0.0000	0.0000	0.0000	0.0000	0.0000
LOW_MTR	800	0.8263	1.0000	0.3791	0.0000	1.0000
BIGAUD	800	0.6475	1.0000	0.4780	0.0000	1.0000
BLOAT	800	0.3363	0.0000	0.4727	0.0000	1.0000
SALES_GROWTH	799	0.0471	0.0006	1.3095	-0.0048	0.0105

Table 4-2. The Relationship between ESG and earnings management in states with a Democratic governor

This table reports OLS estimates of ESG, political representation, and earnings management. As a ESG measure, I use the weighted average ESG score from Asset4. The absolute value of firm's discretionary accruals is used as the dependent variable. To measure political representation, I use the variable DEMOCRAT_STATE, which takes the value of one if the firm in year t has its headquarters in a state with a governor from the Democratic party, zero otherwise. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
ESG	-0.0163***	-0.0035*			-0.0050**	0.0024
	(0.0028)	(0.0017)			(0.0022)	(0.0033)
DEMOCRAT_STATE			-0.0264***	-0.0006	0.0526***	0.0279**
			(0.0045)	(0.0023)	(0.0149)	(0.0129)
DEMOCRAT_STATExESG					-0.0122***	-0.0065*
					(0.0037)	(0.0033)
MRK_SHR		0.0742**		0.3805***		0.0736**
		(0.0277)		(0.0404)		(0.0279)
ROA		-0.0424***		-0.0110		-0.0422***
		(0.0087)		(0.0080)		(0.0086)
SIZE		-0.0063***		-0.0220***		-0.0063***
		(0.0015)		(0.0009)		(0.0015)
MB		0.0051***		0.0065***		0.0051***
		(0.0010)		(0.0012)		(0.0010)
LEV		0.0039		0.0275***		0.0040
		(0.0049)		(0.0051)		(0.0049)
DISTRESS		-0.3157***		0.0725***		-0.3150***
		(0.0415)		(0.0148)		(0.0411)
LOW_MTR		0.0041**		0.0106***		0.0038**
		(0.0015)		(0.0021)		(0.0015)
BIGAUD		-0.0018		-0.0058***		-0.0018

		(0.0014)		(0.0018)		(0.0014)
BLOAT		0.0005		0.0138***		0.0004
		(0.0015)		(0.0020)		(0.0015)
SALES_GROWTH		0.0040***		0.0016		0.0041***
		(0.0004)		(0.0018)		(0.0004)
Constant	0.1131***	0.1018***	0.1271***	0.1837***	0.0645***	0.0764***
	(0.0105)	(0.0093)	(0.0039)	(0.0053)	(0.0086)	(0.0081)
Observations	9,398	7,732	55,072	40,088	9,398	7,732
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0913	0.1345	0.0533	0.2399	0.0934	0.1353

Table 4-3. The Relationship between ESG and earnings management in states with a Democratic governor

This table presents the results of the IV approach, which estimates the relationship between ESG and firm's earnings management when the firm operates in a Democratic political environment over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. To measure political representation, I use the variable DEMOCRAT_STATE, which takes the value of one if the firm in year t has its headquarters in a state with a governor from the Democratic party, zero otherwise. *ESG* is the overall ESG score from Asset4 instrumented with the average ESG score for each state-year pair (State-ESG) and for each industry-year pair (Industry-ESG). The results of the 1st stage are presented in columns (1) without control variables and (3) with control variables. Columns (2) and (4) report the results of 2nd stage regression without and with control variables. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Average ESG score for each state-year pair as an instrument

	(1) ESG	(2) EM	(3) ESG	(4) EM
State-ESG	-0.9952***		-0.9779***	
	(0.0064)		(0.0070)	
ESG		-0.0035		0.0062
		(0.0030)		(0.0039)
DEMOCRAT_STATE		0.0558***		0.0419***
		(0.0124)		(0.0149)
DEMOCRAT_STATExESG		-0.0132***		-0.0105***
		(0.0032)		(0.0039)
MRK_SHR			-0.2839***	0.1226***
			(0.0272)	(0.0323)
ROA			0.0406***	-0.0400***
			(0.0082)	(0.0118)
SIZE			0.0212***	-0.0070***
			(0.0012)	(0.0012)
MB			0.0027***	0.0054***
			(0.0007)	(0.0012)
LEV			0.0216***	0.0010
			(0.0048)	(0.0066)
DISTRESS			0.2103*	-0.3071***
			(0.1245)	(0.0992)
LOW_MTR			0.0110***	0.0035*
			(0.0031)	(0.0021)
BIGAUD			0.0061***	-0.0041**
			(0.0020)	(0.0018)
BLOAT			-0.0142***	-0.0007
			(0.0023)	(0.0029)
SALES_GROWTH			-0.0015*	0.0042***
			(0.0008)	(0.0004)
Constant	3.7108***	0.0904***	3.5630***	-0.0748

	(0.0312)	(0.0161)	(0.0330)	(0.0793)
Observations	9,267	9,267	7,628	7,628
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.9872	0.0931	0.9876	

Panel B: Average ESG score for each industry-year pair as an instrument

	(1) ESG	(2) EM	(3) ESG	(4) EM
Industry-ESG	-0.9698***		-0.9629***	
	(0.0060)		(0.0064)	
ESG		-0.0055**		0.0023
		(0.0026)		(0.0035)
DEMOCRAT_STATE		0.0457***		0.0275**
		(0.0111)		(0.0135)
DEMOCRAT_STATExESG		-0.0105***		-0.0066*
		(0.0028)		(0.0034)
MRK_SHR			-0.3739***	0.0962
			(0.0355)	(0.1236)
ROA			0.0600***	-0.0411***
			(0.0108)	(0.0130)
SIZE			0.0285***	-0.0066***
			(0.0015)	(0.0021)
MB			0.0037***	0.0053***
			(0.0010)	(0.0015)
LEV			0.0177***	0.0020
			(0.0059)	(0.0125)
DISTRESS			0.2173*	-0.3108***
			(0.1230)	(0.1033)
LOW_MTR			0.0011	0.0037*
			(0.0032)	(0.0019)
BIGAUD			0.0059**	-0.0031
			(0.0023)	(0.0068)
BLOAT			-0.0122***	-0.0004
			(0.0025)	(0.0040)
SALES_GROWTH			0.0002	0.0042***
			(0.0013)	(0.0004)
Constant	3.5511***	0.1012***	3.4189***	0.0102
	(0.0313)	(0.0151)	(0.0328)	(0.4766)
Observations	9,375	9,375	7,718	7,718
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.9822	0.0927	0.9834	

Table 4-4. Summary Statistics

This table presents the descriptive statistics for the variables used in this study of all U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. Summary statistics for firms in the control group, firms in the treatment group are reported in Panels A, and B. respectively. Firms are classified as being in the treatment group for years t and t+1 if they experience a change of governor party, from Democratic to Republican, as a shock at year t. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Control group

	N	Mean	Median	SD	1st Percentile	99th Percentile
Earnings Management	9,239	0.0532	0.0359	0.0697	0.0007	0.3445
ESG	9,239	50.3404	45.0000	30.3964	6.8000	96.7600
DEM_to_REP	9,239	0.0000	0.0000	0.0000	0.0000	0.0000
Market Share	9,239	0.0344	0.0101	0.0599	0.0000	0.2884
ROA	9,239	0.0319	0.0565	0.2736	-0.7323	0.3265
SIZE	9,239	8.2755	8.2326	1.4834	4.6242	11.9359
Market-to-Book	8,337	1.8468	1.3792	2.2957	0.1784	8.3194
Leverage	9,064	0.2475	0.2189	0.2295	0.0000	0.8976
DISTRESS	9,239	0.0001	0.0000	0.0104	0.0000	0.0000
LOW_MTR	9,239	0.8939	1.0000	0.3079	0.0000	1.0000
BIGAUD	9,239	0.6740	1.0000	0.4688	0.0000	1.0000
BLOAT	9,239	0.2802	0.0000	0.4491	0.0000	1.0000
SALES_GROWTH	9,158	0.0076	0.0006	0.3991	-0.0051	0.0185

Panel B: Treatment group

	N	Mean	Median	SD	1st Percentile	99th Percentile
Earnings Management	159	0.0473	0.0322	0.0493	0.0011	0.2712
ESG	159	44.8232	34.6800	30.9372	6.3300	96.1100
DEM_to_REP	159	1.0000	1.0000	0.0000	1.0000	1.0000
Market Share	159	0.0228	0.0060	0.0355	0.0000	0.1475
ROA	159	0.0321	0.0510	0.1770	-1.2190	0.2625
SIZE	159	7.8567	7.8847	1.5249	4.0738	11.6986
Market-to-Book	152	1.7736	1.2534	2.3400	-0.0365	8.8989
Leverage	153	0.2429	0.2498	0.1777	0.0000	0.8082
DISTRESS	159	0.0000	0.0000	0.0000	0.0000	0.0000
LOW_MTR	159	0.8491	1.0000	0.3591	0.0000	1.0000
BIGAUD	159	0.6164	1.0000	0.4878	0.0000	1.0000
BLOAT	159	0.2264	0.0000	0.4198	0.0000	1.0000
SALES_GROWTH	159	0.0009	0.0006	0.0022	-0.0041	0.0111

Table 4-5. The Relationship between ESG and earnings management, following a change of governor party as a shock

This table presents the relationship between earnings management and ESG when firms operate in states that experience a change in the state governor's party as a shock. Treatment firms are firms that were incorporated in states that changed their governor's party from Democratic to Republicans at year t during 2002-2017. DEM_to_REP is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as the dependent variable. ESG is the overall ESG score from Asset4. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
DEM_to_REP	-0.0135***	-0.0100***			-0.0452***	-0.0250
	(0.0039)	(0.0029)			(0.0071)	(0.0153)
ESG			-0.0163***	-0.0035*	-0.0165***	-0.0037**
			(0.0028)	(0.0017)	(0.0029)	(0.0017)
DEM_to_REPxESG					0.0087***	0.0042
					(0.0019)	(0.0040)
MRK_SHR		0.0743**		0.0742**		0.0741**
		(0.0281)		(0.0277)		(0.0279)
ROA		-0.0434***		-0.0424***		-0.0424***
		(0.0088)		(0.0087)		(0.0087)
SIZE		-0.0075***		-0.0063***		-0.0063***
		(0.0014)		(0.0015)		(0.0015)
MB		0.0050***		0.0051***		0.0051***
		(0.0009)		(0.0010)		(0.0010)
LEV		0.0045		0.0039		0.0038
		(0.0047)		(0.0049)		(0.0049)
DISTRESS		-0.3220***		-0.3157***		-0.3160***
		(0.0419)		(0.0415)		(0.0415)
LOW_MTR		0.0039**		0.0041**		0.0039**
		(0.0015)		(0.0015)		(0.0015)

BIGAUD		-0.0018		-0.0018		-0.0018
		(0.0014)		(0.0014)		(0.0014)
BLOAT		0.0009		0.0005		0.0004
		(0.0015)		(0.0015)		(0.0015)
SG		0.0040***		0.0040***		0.0040***
		(0.0004)		(0.0004)		(0.0004)
Constant	0.0533***	0.0990***	0.1131***	0.1018***	0.1141***	0.1028***
	(0.0006)	(0.0098)	(0.0105)	(0.0093)	(0.0107)	(0.0095)
Observations	9,398	7,732	9,398	7,732	9,398	7,732
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0655	0.1340	0.0913	0.1345	0.0922	0.1351

Table 4-6. Entropy Balancing

This table presents the relationship between earnings management and ESG when firms operate in states that experience a change in the state governor's party as a shock. Treatment firms are firms that were incorporated in states that changed their governor's party from Democratic to Republicans at year t during 2002-2017. DEM_to_REP is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as the dependent variable. ESG is the overall ESG score from Asset4. All independent variables in the control group are weighted for first order (Mean) second order (Variance) and third order (Skewness) to match variables in the treatment group using Entropy balancing. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
DEM_to_REP	-0.0110***	-0.0106**			-0.0202**	-0.0296**
	(0.0024)	(0.0037)			(0.0092)	(0.0114)
ESG			-0.0103***	-0.0046	-0.0118***	-0.0078**
			(0.0031)	(0.0042)	(0.0020)	(0.0033)
DEM_to_REPxESG					0.0026	0.0054
					(0.0034)	(0.0034)
MRK_SHR		0.0848***		0.0866***		0.0876***
		(0.0217)		(0.0204)		(0.0186)
ROA		-0.0162**		-0.0147*		-0.0145*
		(0.0074)		(0.0078)		(0.0068)
SIZE		-0.0062***		-0.0049		-0.0044
		(0.0020)		(0.0032)		(0.0031)
MB		0.0026**		0.0027*		0.0030**
		(0.0012)		(0.0015)		(0.0013)
LEV		0.0118		0.0115		0.0103
		(0.0068)		(0.0071)		(0.0067)
DISTRESS		-0.1110***		-0.1012***		-0.1098***
		(0.0139)		(0.0159)		(0.0141)
LOW_MTR		-0.0007		0.0002		-0.0007

		(0.0070)		(0.0070)		(0.0066)
BIGAUD		-0.0063		-0.0059		-0.0064
		(0.0059)		(0.0060)		(0.0056)
BLOAT		-0.0008		-0.0018		-0.0012
		(0.0036)		(0.0034)		(0.0039)
SG		-0.1643		-0.2667		-0.1799
		(0.4197)		(0.4232)		(0.4183)
Constant	0.0551***	0.0984***	0.0857***	0.0989***	0.0964***	0.1123***
	(0.0017)	(0.0083)	(0.0107)	(0.0075)	(0.0062)	(0.0090)
Observations	7,731	7,731	7,731	7,731	7,731	7,731
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.1197	0.1578	0.1286	0.1545	0.1348	0.1610

Table 4-7. Placebo Test

This table presents the relationship between earnings management and ESG when firms operate in states that experience a false change in the state governor's party as a shock. Treatment firms are firms that were incorporated in states that changed their governor's party from Democratic to Republicans at year t during 2002-2017. I assume that the change in the governors' party occurred two years before it actually did to perform this test. DEM_to_REP is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as the dependent variable. ESG is the overall ESG score from Asset4. Panel A does not include any balancing between the treatment and control group. In panel B, all independent variables in the control group are weighted for first order (Mean) second order (Variance) and third order (Skewness) to match variables in the treatment group using Entropy balancing. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Without balancing

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
FalseDEM_to_REP	-0.0058	-0.0018			-0.0052	0.0060
	(0.0047)	(0.0025)			(0.0450)	(0.0337)
ESG			-0.0163***	-0.0035*	-0.0163***	-0.0035*
			(0.0028)	(0.0017)	(0.0028)	(0.0017)
FalseDEM_to_REPxESG					0.0007	-0.0019
					(0.0110)	(0.0085)
MRK_SHR		0.0746**		0.0742**		0.0742**
		(0.0281)		(0.0277)		(0.0277)
ROA		-0.0435***		-0.0424***		-0.0424***
		(0.0088)		(0.0087)		(0.0087)
SIZE		-0.0075***		-0.0063***		-0.0063***
		(0.0014)		(0.0015)		(0.0015)
MB		0.0050***		0.0051***		0.0051***
		(0.0009)		(0.0010)		(0.0010)
LEV		0.0046		0.0039		0.0039
		(0.0048)		(0.0049)		(0.0049)

DISTRESS		-0.3218***		-0.3157***		-0.3157***
		(0.0420)		(0.0415)		(0.0415)
LOW_MTR		0.0040**		0.0041**		0.0041**
		(0.0015)		(0.0015)		(0.0015)
BIGAUD		-0.0018		-0.0018		-0.0018
		(0.0014)		(0.0014)		(0.0014)
BLOAT		0.0009		0.0005		0.0005
		(0.0015)		(0.0015)		(0.0015)
SG		0.0040***		0.0040***		0.0040***
		(0.0004)		(0.0004)		(0.0005)
Constant	0.0531***	0.0985***	0.1131***	0.1018***	0.1131***	0.1017***
	(0.0006)	(0.0096)	(0.0105)	(0.0093)	(0.0105)	(0.0094)
Observations	9,398	7,732	9,398	7,732	9,398	7,732
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0649	0.1335	0.0913	0.1345	0.0913	0.1345

Panel B: With balancing

	(1)	(2)	(3)	(4)	(5)	(6)
	EM	EM	EM	EM	EM	EM
FalseDEM_to_REP	-0.0028	-0.0045			0.0180	0.0283
	(0.0053)	(0.0032)			(0.0328)	(0.0234)
ESG			-0.0079*	-0.0051*	-0.0056**	-0.0011
			(0.0038)	(0.0026)	(0.0023)	(0.0028)
FalseDEM_to_REPxESG					-0.0054	-0.0084
					(0.0084)	(0.0065)
MRK_SHR		0.0388		0.0290		0.0334

		(0.0396)		(0.0391)		(0.0396)
ROA		-0.0022		-0.0016		-0.0016
		(0.0053)		(0.0046)		(0.0045)
SIZE		-0.0055***		-0.0035*		-0.0043**
		(0.0016)		(0.0018)		(0.0018)
MB		0.0060***		0.0064***		0.0061***
		(0.0018)		(0.0017)		(0.0016)
LEV		0.0101		0.0088		0.0088
		(0.0073)		(0.0069)		(0.0069)
DISTRESS		-0.0791***		-0.0773***		-0.0764***
		(0.0156)		(0.0140)		(0.0150)
LOW_MTR		0.0110**		0.0118**		0.0138**
		(0.0048)		(0.0054)		(0.0054)
BIGAUD		-0.0065***		-0.0061***		-0.0052**
		(0.0011)		(0.0018)		(0.0020)
BLOAT		0.0026		0.0017		0.0016
		(0.0028)		(0.0029)		(0.0029)
SG		-0.7432		-1.0332		-1.1274
		(0.6743)		(0.6774)		(0.6826)
Constant	0.0465***	0.0764***	0.0762***	0.0767***	0.0687***	0.0682***
	(0.0026)	(0.0141)	(0.0144)	(0.0144)	(0.0078)	(0.0156)
Observations	7,731	7,731	7,731	7,731	7,731	7,731
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.2070	0.2575	0.2180	0.2589	0.2203	0.2635

Table 4-8. The Relationship between ESG disclosure and earnings management in states with a Democratic governor

This table presents the results of the IV approach, which estimates the relationship between ESG, firm's earnings management and political representation over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. DEMOCRAT_STATE is a binary variable that takes the value of one if the firm is headquartered in a state with a Democratic governor at year t, zero otherwise. *ESG_disclosure* is a binary variable that takes the value of one if there is available ESG score for the firm at year t, zero otherwise. ESG_disclosure is instrumented with the state average ESG_disclosure and the industry average ESG_disclosure. The results of the 1st stage are presented in column (1) and (3) without and with control variables. Columns (2) and (4) report the results of 2nd stage regression without and with control variables. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Average ESG disclosure for each state-year pair as an instrument

	(1) ESG_disclosure	(2) EM	(3) ESG_disclosure	(4) EM
State-ESG	-0.0388***		-0.0443***	
	(0.0010)		(0.0012)	
ESG_disclosure		-0.0877***		0.0082**
		(0.0029)		(0.0035)
DEMOCRAT_STATExESG_disclosure		0.0262***		0.0058*
		(0.0031)		(0.0032)
DEMOCRAT_STATE		-0.0268***		-0.0031
		(0.0023)		(0.0023)
MRK_SHR			-0.0906***	0.3581***
			(0.0118)	(0.0199)
ROA			0.0006**	-0.0112
			(0.0002)	(0.0078)
SIZE			0.0014***	-0.0234***
			(0.0001)	(0.0008)
MB			0.0002**	0.0063***
			(0.0001)	(0.0012)
LEV			-0.0004	0.0279***
			(0.0006)	(0.0042)
DISTRESS			-0.0029**	0.0726***
			(0.0011)	(0.0091)
LOW_MTR			0.0015**	0.0101***
			(0.0006)	(0.0015)
BIGAUD			0.0040***	-0.0053***
			(0.0004)	(0.0012)
BLOAT			-0.0022***	0.0140***
			(0.0005)	(0.0020)
SALES_GROWTH			0.0001	0.0016
			(0.0002)	(0.0016)
Constant	0.1273***	0.2171***	0.2149***	0.1978***

	(0.0038)	(0.0114)	(0.0054)	(0.0122)
Observations	54,159	54,159	39,401	39,401
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.9889	0.0764	0.9892	0.2413

Panel B: Average ESG disclosure for each industry-year pair as an instrument

	(1) ESG_disclosure	(2) EM	(3) ESG_disclosure	(4) EM
Industry_ESG	-0.0471***		-0.0592***	
	(0.0010)		(0.0014)	
ESG_disclosure		-0.0864***		0.0105***
		(0.0027)		(0.0032)
DEMOCRAT_STATExESG_disclosure		0.0242***		0.0032
		(0.0029)		(0.0029)
DEMOCRAT_STATE		-0.0252***		-0.0007
		(0.0022)		(0.0021)
MRK_SHR			-0.0872***	0.3659***
			(0.0163)	(0.0197)
ROA			0.0002	-0.0098
			(0.0002)	(0.0068)
SIZE			0.0017***	-0.0235***
			(0.0001)	(0.0007)
MB			0.0005***	0.0062***
			(0.0001)	(0.0011)
LEV			-0.0019**	0.0288***
			(0.0007)	(0.0042)
DISTRESS			-0.0014	0.0708***
			(0.0012)	(0.0089)
LOW_MTR			-0.00003	0.0103***
			(0.0006)	(0.0014)
BIGAUD			0.0028***	-0.0053***
			(0.0005)	(0.0012)
BLOAT			-0.0016**	0.0141***
			(0.0006)	(0.0019)
SALES_GROWTH			0.0002	0.0016
			(0.0001)	(0.0016)
Constant	0.1662***	0.2122***	0.2619***	0.1961***
	(0.0050)	(0.0108)	(0.0076)	(0.0115)
Observations	54,820	54,820	39,968	39,968
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj R-squared	0.9843	0.0759	0.9851	0.2402

Table 4-9. The Relationship between ESG and earnings management in states with Democratic senator(s)

This table presents the results of the IV approach, which estimates the relationship between ESG and firm's earnings management when the firm operates in a Democratic political environment over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. ESG is the overall ESG score from Asset4 instrumented with the average ESG score for each state-year pair (IV1) and for each industry-year pair (IV2). To measure political representation, I use the variable DEMOCRAT_SENATE, which takes the value of one if the firm in year t has its headquarters in a state which elected senator(s) from the Democratic party, zero otherwise. ESG is the overall ESG score from Asset4 instrumented with the average ESG score for each state-year pair (IV1) and for each industry-year pair (IV2). In columns (1) and (2) DEMOCRAT_SENATE takes the value of one if both elected senators in the state at year t are from the Democratic party, zero otherwise. In columns (3) and (4) DEMOCRAT_SENATE takes the value of one if at least one of the two senators elected at the state at year t is from the Democratic party. The results of the 1st stage are presented in columns (1) and (3). Columns (2) and (4) report the results of 2nd stage regression. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Average ESG score for each state-year pair as an instrument

	(1-both dem) EM	(2-both dem) EM	(3-at least 1) EM	(4-at least 1) EM
ESG	-0.0069***	0.0027	-0.0007	0.0078*
	(0.0020)	(0.0024)	(0.0033)	(0.0046)
DEMOCRAT_SENATExESG	-0.0105***	-0.0076***	-0.0161***	-0.0121***
	(0.0023)	(0.0024)	(0.0036)	(0.0046)
DEMOCRAT_SENATE	0.0461***	0.0324***	0.0661***	0.0465***
	(0.0092)	(0.0095)	(0.0139)	(0.0179)
MRK_SHR		0.1217***		0.1239***
		(0.0322)		(0.0325)
ROA		-0.0396***		-0.0401***
		(0.0117)		(0.0118)
SIZE		-0.0070***		-0.0070***
		(0.0012)		(0.0012)
MB		0.0054***		0.0054***
		(0.0012)		(0.0012)
LEV		0.0007		0.0010
		(0.0067)		(0.0066)
DISTRESS		-0.3015***		-0.3072***
		(0.0965)		(0.0993)
LOW_MTR		0.0031		0.0035
		(0.0021)		(0.0021)
BIGAUD		-0.0041**		-0.0041**
		(0.0018)		(0.0018)
BLOAT		-0.0008		-0.0008
		(0.0029)		(0.0029)
SALES_GROWTH		0.0041***		0.0040***

		(0.0004)		(0.0004)
Constant	0.1029***	-0.0634	0.0803***	-0.0845
	(0.0138)	(0.0769)	(0.0172)	(0.0795)
Observations	9,267	7,628	9,267	7,628
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.0939		0.0928	

Panel B: Average ESG score for each industry-year pair as an instrument

	(1-both dem) EM	(2-both dem) EM	(3-at least 1) EM	(4-at least 1) EM
ESG	-0.0081***	0.0005	-0.0032	0.0037
	(0.0019)	(0.0024)	(0.0028)	(0.0038)
DEMOCRAT_SENATExESG	-0.0085***	-0.0051**	-0.0127***	-0.0079**
	(0.0023)	(0.0026)	(0.0030)	(0.0038)
DEMOCRAT_SENATE	0.0382***	0.0232**	0.0538***	0.0315*
	(0.0089)	(0.0105)	(0.0120)	(0.0165)
MRK_SHR		0.1046		0.0946
		(0.1358)		(0.1209)
ROA		-0.0404***		-0.0413***
		(0.0132)		(0.0130)
SIZE		-0.0067***		-0.0065***
		(0.0024)		(0.0021)
MB		0.0053***		0.0053***
		(0.0015)		(0.0015)
LEV		0.0010		0.0022
		(0.0131)		(0.0124)
DISTRESS		-0.3050***		-0.3113***
		(0.1007)		(0.1035)
LOW_MTR		0.0034		0.0038*
		(0.0021)		(0.0019)
BIGAUD		-0.0036		-0.0030
		(0.0075)		(0.0067)
BLOAT		-0.0007		-0.0003
		(0.0040)		(0.0040)
SALES_GROWTH		0.0041***		0.0040***
		(0.0005)		(0.0005)
Constant	0.1110***	-0.0194	0.0929***	0.0139
	(0.0135)	(0.5214)	(0.0158)	(0.4640)
Observations	9,375	7,718	9,375	7,718
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.0936		0.0924	

5. Concluding remarks

5.1 Overview and discussion

This PhD thesis consists of three individual research papers, exploring issues around the accounting practice of earnings management. It focuses on motives and drivers of earnings management, as well as how it impacts stakeholders and is impacted by internal and external to the firm factors, such as managerial overconfidence, product market competition and the political environment. Earnings management occurs when managers use their own judgement when it comes to financial reporting and in structuring transactions (Healy and Whalen, 1999). Although earnings management is not an illegal practice altogether, it is considered an unethical business practice, and depending on its extent, can be classified as corporate fraud (Schrand and Zechman, 2012). Balsam et al. (2002) define earnings management as firms having large discretionary accruals and motives to engage in such practices, such as meeting or beating a forecast.

As earnings management is a tool at the hands of the managers, its use is at their own discretion due to agency problems and can be used to provide a variety of benefits to the managers. For example, they can manipulate reported earnings to inflate stock prices (Cheng and Warfield, 2005; Bergstresser and Philippon, 2006; Cohen et al., 2008). Prior research documents managerial incentives to manipulate earnings to inflate stock prices when managers' compensation is dependent on stock prices (Cheng and Warfield, 2005; Bergstresser and Philippon, 2006; Cohen et al., 2008). Managers also have incentives to manage earnings in an effort to meet or beat accounting earnings reported by competition (DeFond and Park, 1999). While earnings management can provide certain benefits to the manager, it has detrimental effects on the actual owners of the firm, the shareholders. Extant literature shows that such practices will diminish the quality of financial reporting, increase the cost of capital (Aboody et al., 2005; Kim and Sohn, 2013), and ultimately negatively impact firms' long-term value (Mizik and Jacobson, 2007; Cohen and Zarowin, 2010). Engagement on earnings management by

the firm also has negative implications on stakeholders, other than shareholders, such as the firms' lenders. Managers can use earnings management to convince bondholders subscribe to terms they would not have accepted otherwise (Sercu et al., 2006).

Earnings management can be classified in two main categories, earnings management through discretionary accruals (DA) and real earnings management (REM)[65]. Earnings management through discretionary accruals is the practice of altering accounting methods or accounting estimates, in the disclosure of transactions in the reported financial statements. More specifically, accruals-based earnings management integrates managerial accounting choices in financial reporting with the goal of altering the financial statements in ways that seem fit to those who prepare them. Prior research suggests that analysts are aware of earnings management through discretionary accruals, but only partially account for it in their forecasts (Bradshaw et al., 2001; Liu and Schneible, 2017). On the other hand, real earnings management refers to the managerial practice of influencing real business activities to manipulate earnings. This involves operational, investment and financial decisions that deviate from the firms' normal business activities, once again with the goal of altering reported earnings. This makes real earnings management by the firm more difficult to detect, and this method's implications are more costly in the long term (Cohen and Zarowin, 2010;). For this reason and as accruals-based earnings management is commonly used practice due to its simplicity compared to other forms of earnings manipulation, this study focuses on earnings management through discretionary accruals.

The extent to which earnings management is used by corporations has attracted a lot of academic research interest in an effort to identify implications for both the firms and their stakeholders. Engagement in earnings management has a long-term detrimental effect on firms' value (Huang et al., 2009), while if exposed has damaging effects for the firms' reputation and social capital

[65] Recent academic literature has also identified a third category of earnings management, earnings management through classification shifting, however literature on this new form of earnings management is still limited.

(Martínez-Ferrero et al., 2016). Shareholders can incur the biggest losses from their firms' decision to engage in earnings management, where in cases such as that of Enron (2001) shareholders had to deal with huge losses (from a high of $90 per share in mid-2000 to under $1 by the end of 2001). Earnings management is also used by firms to convince lenders to subscribe to favourable for the firm terms, they would have declined otherwise (Sercu et al., 2006)[66] while earnings management is also used to avoid existing debt covenant violations (Jaggi and Lee, 2002). However, there is very limited research that examines the effects of earnings management on non-financial stakeholders, more specifically customers and employees. Furthermore, prior research identifies various drivers of earnings manipulation. Managers engage in earnings management to "meet or beat" competition and protect their jobs (DeFond and Park, 1999), to increase their wealth when their compensation is directly connected to the stock price (Harris et al., 2019), and when managers possess personality traits such as that of overconfidence (Hsieh et al., 2014).

The extensive use of earnings management practices, managerial overconfidence as a driver of earnings management, and lack of prior research on the relationship between earnings management and non-financial stakeholders, is what motivate the second chapter. I examine the impact of earnings management on the relationship between firms and customers and employees, as well as CEO's overconfidence incremental effect on these relationships. I find that both earnings management and CEO overconfidence improve the relationship of the firm with its customers. Customers prefer to build relationships with firms that show strong financial health and are governed by a CEO which shows what can be perceived by customers as vision for the company's future, rather than overconfidence. I also document that earnings management and CEO overconfidence worsen the firm's relationship with its employees. As firm insiders, employees are in better position to understand the firms' true financial position, while earnings management also affects their salaries as it can be used to reduce large pay outs to employees.

[66] Competing arguments say that banks often price firms' accruals earnings management and increase loan spread in response to an increase in the level of earnings management (Kim et al., 2021).

Furthermore, an overconfident CEO is not seen as a benefit for employees. Finally, I find no evidence to suggest that managerial overconfidence acts as a factor amplifying the relationship between earnings management stakeholder relationships.

My third chapter focuses on firms' ESG policies as a hedge against earnings management practices by the firm. Prior research finds a negative relationship between ESG and earnings management (Kim et al., 2012). Firms that allocate resources in implementing ESG policies, choose to limit their earnings management to stay in line with ESG's transparent financial reporting, and avoid damaging their reputation. However, the branch of literature that documents this association operates under the assumption that all firms in all industries face the same competitive pressure in the product market. In contrast, firms that face increased competition have incentives to manipulate earnings to show financial health in a competitive environment (DeFond and Park, 1999; Datta et al., 2013; Laksmana and Yang, 2014), to affect stock prices (Markarian and Santalo, 2014) and others. On the other hand, firms in a competitive environment also have incentives to engage in ESG practices in an effort to acquire a competitive advantage (Jones, 1995), to improve long term financial results (Waddock and Graves 1997; Griffin and Mahon 1997; Roman et al. 1999) and others. Thus, competition is an external factor affecting both sides of the abovementioned association. I therefore assess competition's impact on firms' earnings management, as well as its amplifying effect on ESG's mitigating ability on earnings management.

For this study, I distinguish between high and low competition in the product market and examine ESG's ability to limit earnings management. Consistent with prior literature (Kim et al., 2012), I find that ESG engagement on its own is effective in limiting earnings management by the firm. However, the effect is more profound when competition is high. Engagement in ESG practices is more important in limiting earnings management by the firm when the latter faces increased product market competition.

In the fourth chapter, I focus on differences in firms' political environment and how this impacts ESG's mitigating effect on earnings

management. This examination is motivated by the polarised political setting in the US, which is also the country from where the data used in this study are obtained. The US political stage is dominated by the Democratic and the Republican party. These two parties' governance ideology significantly differs in many aspects (Xu, 2020), including the importance of ESG engagement by firms (Hong and Kostovetsky, 2012; Hutton et al., 2015), and various policies that affect firms' decisions to engage or abstain from earnings manipulation, such as foreign competition related policies. Therefore, firms' political environment is another external factor affecting earnings management and ESG, as well as amplifying their relationship, and lacks academic research.

I distinguish between firms operating under the Democratic party, and those operating under the Republican party, at the state level, and examine the effect on both earnings management, and ESG's ability to limit earnings management. I find that when Democrats are in power firms engage in more earnings management to deal with increased competition and other factors that come from policies enforced by the Democratic party. Furthermore, ESG engagement is effective in mitigating earnings management. Moreover, I find that engagement in ESG practices is a better hedge against earnings management for firms incorporated in states with governors from the Democratic party compared to Republican states, as the Democratic party places more emphasis on ESG policies

I assess the above relationships using four different measures for product market competition, product fluidity, vertical integration, HHI and product similarity, as well as two different measures for political representation, at the state level and the US Senate level. The results remain consistent suggesting the effect persists in different government levels. The results also stand to a variety of robustness checks, including difference in difference, instrumental variable regression, placebo effect and others.

5.2 Contribution and implications

This study expands our knowledge around earnings management and makes several contributions to prior literature, which can be summarized as follows. I provide the first empirical evidence, to the best of my knowledge, on how

firms' decision to engage in earnings manipulation affects their relationship with two groups of non-financial stakeholders: customers and employees. Therefore, increasing our understanding of the impact of corporate policies such as earnings management on groups of stakeholders, in line with stakeholder management. To my knowledge, this study is the first to focus on customers and employees, rather than focusing on financial stakeholders. This study further examines if managerial overconfidence can act as a factor driving this relationship, prior research finds overconfident CEOs are more likely to engage in earnings management (Schrand and Zechman, 2012; Hsieh, 2014). I find both firms' earnings management and an overconfident CEO improve firms' relationship with customers but have a detrimental effect on firms' relationship with employees. CEO overconfidence, however, does not amplify earnings management's effect on these stakeholders. The findings of this study help firms make decisions to balance the interests of different groups of stakeholders, as different stakeholders often have conflicting interests.

Moreover, I contribute to the branch of literature that examines ESG's mitigating effect on firms' earnings management decisions. In line with prior research (Kim et al., 2012), I find that ESG practices are effective in limiting firms' earnings management. This study expands this line of research by incorporating into the analysis product market competition. I provide evidence that competition in the product market affects both earnings management and firms' ESG practices. I further show that ESG's mitigating effect on earnings management is more profound for firms facing significant competitive pressure. These finding assist firms decide on the exchange between earnings management and ESG policies in face of competition in the product market. They also assist regulators and policy makers as their decisions affect competition and thus both firms' financial transparency and ESG engagement.

Finally, this study further expands our understanding of earnings management and their implications, by documenting differences in relation to firms' political environment. Prior research shows that firms in states leaning towards the Democratic party adopt more ESG practices in comparison to their Republican peers (Di Giuli and Kostovetsky, 2014). This study also documents

a direct positive effect of the Democratic party to firms' earnings management decisions. I further show that the Democratic party's commitment to high ESG standards makes ESG a more effective hedge against earnings management in Democratic leaning states. This is because firms in states governed by a Democrat, increase their ESG practices, encouraged by the ruling party's policies. This in line makes firms be more transparent in financial disclosure and mitigates earnings management. The latter findings, assist regulators and policy makers in understanding the relationship between corporate earnings management and ESG engagement, and how these are impacted by their policies, both directly, to earnings manipulation, and indirectly, through ESG. Lastly, since earnings management has become a commonly used practice by firms and given its implications for both financial and non-financial stakeholders as well as numerous accounting scandals around earnings management, it can be argued that the findings of this study are important for a variety of stakeholders and policy makers.

This study's implications are of interest to firms and firms' stakeholders as it provides new knowledge on the effects of earnings management as an accounting practice with serious repercussions. The results of this study are also of interest to regulators and policymakers as their actions can affect both earnings management and the means of limiting / encouraging such practices including ESG engagement and competition. Third, since the US GAAP is closely aligned to the IFRS used in many countries, the results of this study, focusing mostly on earnings management as an accounting practice, can be extrapolated in many countries, and used proactively by firms and policymakers as new forms of earnings management arise, such as earnings management through classification shifting. Prior research finds IFRS firms to have greater accounting system and value relevance comparability with US firms compared to other non-US domestic standards firms (Barth et al., 2012).

5.3 Limitations

This section focuses on the limitations and weaknesses faced by this PhD thesis. As this study focuses on quantitative analysis to produce empirical results, it is impacted by data availability. For this study I employee the use of

various databases, including Compustat, ExecuComp, Datastream and Asset4 of Refinitiv (formerly known as Thomson Reuters), and other data sources such as Hoberg et al. (2014) and Hoberg et al. (2016), Spamann and Wilkinson (2019) and Dave Leip's Atlas of U.S. Presidential Elections and other online sources. Compustat and ExecuComp have a wide coverage of US data (which are used for this study), however Datastream and Asset4 of Refinitiv report more global data, and only part of their observations come from US listed firms. I therefore match those observations with those of the sample collected mainly from Compustat. In order to ensure integrity of the combined data, I correct for possible typos and extreme observations, by winsorizing all continuous variables in every sample at the 1% and 99%.

The sample is also limited when matched with datasets provided by Authors such as Hoberg et al. (2014) and Hoberg et al. (2016), who provide data related to product market competition, as well as Spamann and Wilkinson (2019), who provide the Historic state of incorporation data used in Chapter 4. The historic state of incorporation data are used instead of the state of incorporation provided by Compustat, as firms can freely change the location of their headquarters. To address the impact of merging different datasets on the sample size, different samples are used for each of the Chapters of the thesis, to maximize the number of observations and minimize the number of missing values.

Another limitation of this study is it recognises earnings management through discretionary accruals as the main method firms can use to manipulate earnings. Prior literature has identified methods such as real earnings management[67] and classification shifting[68], as other ways of engagement in earnings manipulation by the firm. Incorporating these practices into the analysis requires an entirely new dataset and data sources.

Finally, this PhD thesis faces common limitations imposed by the nature of empirical studies. The models developed and applied by this study

[67] Altering operating activities and real transactions for the purpose of manipulating financial reporting objectives (Cohen et al., 2020).
[68] Moving income-decreasing expenses from core to special items (Anagnostopoulou et al., 2021).

require the use of explanatory variables and control variables, different selections of which may alter the significant results. Certain variables, such firms' relationships with customers and employees, also require a certain amount of judgement on the way they are constructed. To address this issue, I use different model specifications as well as alternative measures to capture variables of interest, where possible.

5.4 Suggestions for further research

This study explores issues around earnings management and stakeholders, ESG's ability to limit such practices, and its effectiveness to do so under different circumstances. I focus on CEO's overconfidence bias, competition in the product market and the firm's political environment. While the impact of earnings management on the firm and its stakeholders is undeniable, an area of research that has been neglected is to understand what actually happens on the ground, and what is considered normal when it comes to engaging in earnings management. The vast earnings management literature implicitly assumes that earnings management should be as low as possible (Brennan, 2021). Yet in the samples used in this study it is found that the use of earnings management is widespread, ranging from 5% to 9% in the different samples of the second chapter of this thesis and over 10% in the sample used in the third chapter. Brennan (2021) argues for widespread corruption in accounting if the findings of the earnings management literature are to be believed, which raises the question if managers should have no choice of earnings management. Although to some extent earnings management is subjective, allowing managers unlimited room for judgements is not practical, yet taking away all judgement capacity could disadvantage investors (Healy and Wahlen, 1999). If there is a "normal" level of engagement in earnings manipulation, would the results of this or similar studies still stand if the earnings management variable is to be replaced not by the extend of earnings management but by their engagement above the norm?

An area for further research arises from the chosen measure of firms' relationships with their customers. The measure of this relationship used in this study comes from the customer relationship literature. It is a combination of

different individual components that are the result of a strong (or weak) relationship of the firm with its customers, such as an improvement of the receivable collection period, better sales growth and sales efficiency. However, one can argue this proxy is vague and introduces statistical problems, such as endogeneity with the earnings management variable, into the model, Although the research attempts to minimize these bias, future research could further address the issue from using alternative measures of firm-customer relationship such as the American Customer Satisfaction Index (Truong et al, 2021). It is not however the scope of this research to examine the relationship customer satisfaction and earnings management, but rather try to capture the relationship of the firm with its customers. A better measure of this relationship thus should be developed. Similar to that, although the relationship of the firm with its employees is captured mostly using workplace quality scores from ASSET4 of Refinitiv, and thus provides a more justified measure of this relationship, alternative measures such as bargaining power (Chang et al., 2022), proxied by labour union, can be used.

Another potential area for further research comes from the findings of Chapter 4 of this study. I find that engagement in ESG practices is a better hedge against earnings management, for firms incorporated in states with governors from the Democratic party compared to Republican states. This study is based on the US political setting of a dual-party system with conflicting views. However, this setting is similar to other countries' political environments. In the UK, although smaller parties have power in the parliament, the political stage is dominated by the Conservative Party and the Labor Party since the 1920s. In France, although there is no dual setting like that of the US, the winning party emerges from the second round of election results where the two biggest parties compete with each other. This leads to a de facto dual-party system, similar to that of the US, with the most recent evidence arising from the last French elections in 2017. Australia also operates as a two-party system as a result of the permanent coalition between the Liberal Party and National Party. In all of these cases, and many others either currently or in the past, the two (dominant) parties may significantly differ in their

preferences for ESG policies and corporate discipline. Therefore, future research could examine if the results of this study can be extrapolated globally and establish if political representation always affects ESG's ability to mitigate earnings management, or is it a particularity of the US setting, where the increasing importance of ESG is more prevalent.

Appendix

Appendix 2-A: Employee workplace quality score definitions

Score	Sign	Definition
Employment Quality/Announced Lay-offs	Negative	Total number of announced lay-offs by the company divided by the total number of employees.
Employment Quality/Bonus Plan	Positive	Does the company claim to provide a bonus plan to at least the middle management level? AND Is the employees' compensation based on personal or company-wide targets?
Employment Quality/Employment Awards	Positive	Has the company won an award or any prize related to general employment quality or "Best Company to Work For"?
Employment Quality/Generous Fringe Benefits	Positive	Does the company claim to provide its employees with a pension fund, health care or other insurances?
Employment Quality/Implementation	Positive	Does the company describe the implementation of its employment quality policy?
Employment Quality/Improvements	Positive	Does the company set specific objectives to be achieved on employment quality?
Employment Quality/Key Management Departures	Negative	Has an important executive management team member or a key team member announced a voluntary departure (other than for retirement) or has been ousted?
Employment Quality/Monitoring	Positive	Does the company monitor or measure its performance on employment quality?
Employment Quality/Net Employment Creation	Positive	Employment growth over the last year.
Employment Quality/Personnel Turnover	Negative	Percentage of employee turnover.
Employment Quality/Policy	Positive	Does the company have a competitive employee benefits policy or ensuring good employee relations within its supply chain? AND Does the

		company have a policy for maintaining long term employment growth and stability?
Employment Quality/Salary Gap	Negative	CEO's total salary (or other highest salary) divided by average wage (Highest Salary (US dollars) /Average Salaries and Benefits in (US dollars)).
Employment Quality/Strikes	Negative	Has there has been a strike or an industrial dispute that led to lost working days?
Employment Quality/Trade Union Representation	Positive	Percentage of employees represented by independent trade union organizations or covered by collective bargaining agreements.
Employment Quality/Wages or Working Condition Controversies	Negative	Is the company under the spotlight of the media because of a controversy linked to the company's employees, contractors or suppliers due to wage, layoff disputes or working conditions?

Appendix 2-B: Variable Definitions

Earnings Management	Absolute value of discretionary accruals.
Discretionary accruals	Difference between total accruals and the fitted normal accruals.
Total accruals	I run the following cross-sectional regression: $$\frac{TA_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{\Delta Rev_{it}}{Assets_{i,t-1}} + k_3 \frac{PPE_{it}}{Assets_{i,t-1}} + \varepsilon_{it}$$ Where TA represents total accruals defined as earnings before extraordinary items and discontinued operations minus the operating cash flows reported in the statement of cash flows. Asset represents total assets, ΔRev is the change in revenues from the preceding year and PPE is the gross value of property, plant and equipment.
Firm-specific normal accruals	I use the coefficient estimates total accruals to calculate the firm-specific normal accruals (NAit): $$NA_{it} = \hat{k}_1 \frac{1}{Assets_{i,t-1}} + \hat{k}_2 \frac{(\Delta Rev_{it} - \Delta AR_{it})}{Assets_{i,t-1}} + \hat{k}_3 \frac{PPE_{it}}{Assets_{i,t-1}}$$ Where ΔAR is the change in accounts receivable from the preceding year, which captures potential accounting discretion arising from credit sales.
Holder67	A binary variable that takes the value of one if the CEO is overconfident, zero otherwise. A CEO is overconfident is she postpones the exercise of vested options that are at least 67% at the end of the vested period.
Customer Relationship	Natural logarithm of the sum of Sales Growth, Sales Efficiency and change in receivable collection period.
Sales growth	Change in annual sales scaled over last year's sales multiplied by 100.
Sales Efficiency	The ratio of sales of year t to selling, general and administration expenses of year t-1
Change in receivable collection period	Change in receivable collection period (in days) from the previous year scaled over the receivable collection period of year t-1 multiplied by 100.
Receivable collection period	Average receivables over sales multiplied by 365.

Employee output (measure of firm – employee relationship)	Output per employee over the sum of labour input and capital input.
Output per employee	Sales plus inventory change over the number of employees of the firm, multiplied by minus one to capture the output (-) / input (+) relationship.
Labour input	Natural logarithm of the number of employees.
Capital input	Total assets over the number of employees.
Employee workplace quality scores (measure of firm - employee relationship)	All the individual scores are defined in Appendix A. EmployeeRelation = salaries /employees-layoffs+bonus+awards+fringebenefits+implementation+improvements-managementdeparture+monitoring+employmentcreation-personnelturnover+policy-salarygap-strikes+tradeunionrep-controversy
Market-to-Book	Market value of equity (Compustat item PRCC times item CSHO) over total assets (Compustat item AT).
Leverage	Long-term debt (Compustat item DLTT) plus long-term debt due in one year (Compustat item DD1) over Firm market value.
Firm market value	Total assets (Compustat item AT) minus Book equity plus Market Capitalization.
Book equity	Book equity is book common equity (Compustat item CEQ) plus total assets (Compustat item AT) minus total liabilities (Compustat item LT), minus Preferred stock, plus deferred taxes and investment tax credit (Compustat item TXDITC), if available, minus the post-retirement benefit asset (Compustat item PRBA), if available.
Market capitalization	Market capitalization at the end of the fiscal year (Compustat item PRCC times item CSHO).
Size	Natural logarithm of total assets.
Return on assets	Net income over lagged total assets
MRK_SHR	Firm's market share calculated as sales over annual industry sales
DISTRESS	A binary variable equal to one for those firms having an Altman's (1968) Z-score higher than 2.675, zero otherwise

Altman's Z-score	The Z-score is computed as follows: Z-score = 3.3 * (item OIADP / item AT) + 1.2 * ((item ACT - item LCT) / item AT) + item SALE / item AT + 0.6 * ((item CSHO * item PRCC) / (item DLTT + item DLC)) + 1.4 * (item RE / item AT). All items are from Compustat.
LOW_MTR	A binary variable equal to one for those firms having low marginal tax rate with total loss carries forward, zero otherwise.
BIGAUD	A binary variable equal to one if the firm is audited by one of the Big-4 auditing firms (Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers).
BLOAT	A binary variable equal to one if the firm's balance sheet Bloat is higher than the industry's average.
Balance sheet Bloat	The firm's net operating assets over lagged sales.
Age	The number of years between current year and the first year the firm appears in Compustat database.
Special Accounting Items	The sum of special items (Compustat item specit) and extraordinary items (Compustat item extraod).

Appendix 2-C: Exclusion criterion satisfaction.

This table reports OLS estimates of Customer and Employee relationships, and the chosen instruments BIGAUD and special accounting items. Customer and the two measures of employee relationships are used as the dependent variables. Panel A uses BIGAUD as the instrument. Panel B uses special accounting items as an instrument. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: BIGAUD as the instrument

	(1) CustomerRel	(2) CustomerRel	(3) EmployeesScore	(4) EmployeesScore	(5) EmployeesRel	(6) EmployeesRel
BIGAUD	-0.0939***	-0.0175	0.0044	0.0121	0.0082***	0.0055**
	(0.0169)	(0.0143)	(0.0089)	(0.0082)	(0.0024)	(0.0025)
AGE		-0.0114***		0.0010***		0.0006***
		(0.0009)		(0.0003)		(0.0001)
ROA		-0.2515***		0.0205		-0.0089***
		(0.0533)		(0.0254)		(0.0018)
SIZE		-0.0377***		0.0667***		0.0024***
		(0.0080)		(0.0103)		(0.0006)
LEV		-0.1387***		-0.0265		-0.0026
		(0.0353)		(0.0207)		(0.0039)
MB		0.0515***		0.0114**		0.0004
		(0.0051)		(0.0048)		(0.0004)
DISTRESS		0.0782		0.2245		-0.0020
		(0.0555)		(0.1899)		(0.0057)
LOW_MTR		0.0704***		-0.0043		0.0060
		(0.0181)		(0.0078)		(0.0041)
BLOAT		0.0400		-0.0177		0.0091
		(0.0666)		(0.0292)		(0.0082)
MRK_SHR		-0.0132		-0.1496		-0.1078**
		(0.4741)		(0.0859)		(0.0384)

Constant	3.1549***	3.4272***	1.5663***	0.9778***	-0.0586***	-0.0847***
	(0.0112)	(0.0497)	(0.0068)	(0.0921)	(0.0018)	(0.0050)
Observations	49,294	44,107	8,842	7,561	49,048	42,144
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.0604	0.1160	0.1298	0.2817	0.0688	0.0789

Panel B: Special items as the instrument

	(1) CustomerRel	(2) CustomerRel	(3) EmployeesScore	(4) EmployeesScore	(5) EmployeesRel	(6) EmployeesRel
specialitems	0.0009***	0.0001	-0.0003***	-0.0000	-0.0000***	-0.0000
	(0.0001)	(0.0001)	(0.0001)	(0.0000)	(0.0000)	(0.0000)
AGE		-0.0116***		0.0011***		0.0005***
		(0.0009)		(0.0003)		(0.0001)
ROA		-0.2455***		0.0197		-0.0089***
		(0.0535)		(0.0254)		(0.0018)
SIZE		-0.0387***		0.0655***		0.0029***
		(0.0081)		(0.0102)		(0.0007)
LEV		-0.1456***		-0.0255		-0.0025
		(0.0356)		(0.0208)		(0.0039)
MB		0.0545***		0.0112**		0.0004
		(0.0045)		(0.0049)		(0.0004)
DISTRESS		0.0819		0.2233		-0.0030
		(0.0579)		(0.1896)		(0.0057)
LOW_MTR		0.0748***		-0.0043		0.0061
		(0.0181)		(0.0078)		(0.0042)
BLOAT		0.0410		-0.0163		0.0096
		(0.0670)		(0.0283)		(0.0081)
MRK_SHR		0.0837		-0.1383		-0.1246**
		(0.4789)		(0.0850)		(0.0444)

Constant	3.1287***	3.4212***	1.5483***	0.9939***	-0.0553***	-0.0842***
	(0.0069)	(0.0506)	(0.0061)	(0.0889)	(0.0012)	(0.0050)
Observations	47,269	42,302	8,728	7,462	48,610	41,760
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.0618	0.1160	0.1579	0.2804	0.0678	0.0777

Appendix 2-D: Descriptive statistics for treatment and control groups

Panel A : Customer Relationship

	N		Mean		Median		SD		1st Percentile		99th Percentile	
	Control	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**
CustomerRel	48520	774	3.0960	3.8119	3.1813	3.8745	1.2238	1.2022	-0.5577	0.2721	5.8302	6.9717
Holder67	18465	289	0.4992	0.4671	0.0000	0.0000	0.5000	0.4998	0.0000	0.0000	1.0000	1.0000
EM	48520	774	0.0841	0.0890	0.0502	0.0539	0.1103	0.1214	0.0010	0.0011	0.5489	0.6062
AGE	48134	768	19.2953	20.7591	14.0000	16.5000	14.6282	15.6701	3.0000	3.0000	62.0000	66.0000
ROA	48520	774	-0.0063	-0.0243	0.0431	0.0231	0.3619	0.4468	-1.0747	-0.9162	0.4124	0.5055
SIZE	48520	774	5.6335	7.2020	5.6455	7.4381	2.1254	2.2069	1.2692	1.1544	10.6090	11.0699
LEV	47875	771	0.2293	0.3707	0.1600	0.3244	0.3334	0.3418	0.0000	0.0000	1.2172	1.9784
MB	44500	741	1.6680	1.1080	1.1097	0.8230	2.2418	1.3735	-0.1847	-0.2821	9.7409	8.0951
DISTRESS	48520	774	0.0210	0.0310	0.0000	0.0000	0.1435	0.1735	0.0000	0.0000	1.0000	1.0000
LOW_MTR	48520	774	0.7528	0.8630	1.0000	1.0000	0.4314	0.3440	0.0000	0.0000	1.0000	1.0000
BLOAT	48520	774	0.0232	0.7959	0.0000	1.0000	0.1505	0.4033	0.0000	0.0000	1.0000	1.0000
MRK_SHR	48520	774	0.0113	0.0152	0.0015	0.0017	0.0324	0.0552	0.0000	0.0000	0.1554	0.2520

Panel B : Employee Relationship using workplace quality scores

	N		Mean		Median		SD		1st Percentile		99th Percentile	
	Control	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**
EmployeesScore	8510	332	1.5689	1.5769	1.6400	1.6593	0.2398	0.2474	0.7351	0.3596	1.8142	1.8069
Holder67	7618	285	0.4609	0.4175	0.0000	0.0000	0.4985	0.4940	0.0000	0.0000	1.0000	1.0000
EM	9123	379	0.0521	0.0625	0.0352	0.0415	0.0693	0.0624	0.0007	0.0009	0.3373	0.2746
AGE	9051	375	28.9446	26.7013	23.0000	23.0000	19.0971	17.8008	2.0000	2.0000	67.0000	67.0000
ROA	9123	379	0.0334	0.0034	0.0570	0.0096	0.2743	0.1022	-0.7511	-0.3413	0.3267	0.3080
SIZE	9123	379	8.2542	8.8021	8.2183	8.7821	1.4804	1.3228	4.5780	5.6671	11.9692	11.6660
LEV	8947	377	0.2401	0.3516	0.2133	0.2820	0.2193	0.2747	0.0000	0.0000	0.8398	1.4931
MB	8240	368	1.8579	0.9992	1.3833	0.8234	2.2343	0.7162	0.1993	0.0398	8.3280	3.4106
DISTRESS	9123	379	0.0001	0.0000	0.0000	0.0000	0.0105	0.0000	0.0000	0.0000	0.0000	0.0000
LOW_MTR	9123	379	0.8806	0.9288	1.0000	1.0000	0.3242	0.2576	0.0000	0.0000	1.0000	1.0000
BLOAT	9123	379	0.0185	0.9129	0.0000	1.0000	0.1348	0.2823	0.0000	0.0000	1.0000	1.0000

MRK_SHR	9123	379	0.0339	0.0329	0.0109	0.0066	0.0568	0.0816	0.0000	0.0000	0.2810	0.5177

Panel C : Employee Relationship using output per employee

	N		Mean		Median		SD		1st Percentile		99th Percentile	
	Control	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**	**Control**	**Treatment**
EmployeesRel	48116	932	-0.0534	-0.1081	-0.0318	-0.0901	0.1365	0.0948	-0.3872	-0.4507	0.0000	0.0022
Holder67	18689	388	0.4522	0.4459	0.0000	0.0000	0.4977	0.4977	0.0000	0.0000	1.0000	1.0000
EM	48126	933	0.0981	0.1050	0.0540	0.0612	0.1380	0.1497	0.0010	0.0017	0.7640	0.8629
AGE	47700	924	18.5736	18.7619	14.0000	14.0000	14.6818	15.4974	2.0000	1.0000	63.0000	65.0000
ROA	48126	933	-0.1004	-0.0887	0.0231	-0.0133	0.9225	0.3778	-1.9879	-1.5174	0.4578	0.4385
SIZE	48126	933	5.5141	6.7792	5.4733	7.1991	2.1815	2.4395	1.1132	1.1288	10.7819	11.0584
LEV	47552	929	0.2079	0.3241	0.1205	0.2814	0.3699	0.3155	0.0000	0.0000	1.2920	1.5489
MB	44969	890	1.8751	1.4475	1.1505	0.8734	3.5882	2.6107	-0.2589	-0.3806	12.5966	11.4512
DISTRESS	48126	933	0.0261	0.0214	0.0000	0.0000	0.1593	0.1449	0.0000	0.0000	1.0000	1.0000
LOW_MTR	48126	933	0.8368	0.8703	1.0000	1.0000	0.3696	0.3361	0.0000	0.0000	1.0000	1.0000
BLOAT	48126	933	0.0153	0.8639	0.0000	1.0000	0.1226	0.3431	0.0000	0.0000	1.0000	1.0000
MRK_SHR	48126	933	0.0099	0.0141	0.0008	0.0011	0.0305	0.0543	0.0000	0.0000	0.1529	0.2520

Appendix 2-E: The relationship between earnings management and the Deepwater Horizon oil spill for the oil and gas industry

This table reports OLS estimates of earnings management as the dependent variable, and the Deepwater Horizon oil spill as a shock for the oil and gas industry. The sample size is between 1992 and 2018 to maximize the number of observations. The absolute value of firms' discretionary accruals is used as the dependent variables. OilSpill is a binary variable that takes the value of one for all firms in the oil and gas industry following the shock, zero otherwise. All observations of firms not in the oil and gas industry are dropped. All variables are defined in the Appendix B. All control variables are lagged by one year. I use heteroscedasticity robust standard errors, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM
OilSpill	-0.0105**	-0.0127**
	(0.0052)	(0.0061)
AGE		-0.0001
		(0.0002)
ROA		-0.0134
		(0.0092)
SIZE		-0.0186***
		(0.0014)
LEV		0.0501***
		(0.0194)
MB		0.0041
		(0.0030)
DISTRESS		0.0434*
		(0.0231)
LOW_MTR		0.0195***
		(0.0050)
BLOAT		0.0358***
		(0.0060)
MRK_SHR		0.2351***
		(0.0490)
Constant	0.0995***	0.1543***
	(0.0028)	(0.0094)
Observations	2,565	2,420
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Adj R-squared	0.0016	0.1882

Appendix 2-F: The Relationship between Customer relationships, CEO overconfidence and earnings management.

This table presents the results of the IV approach, which estimates the relationship between Customer relationships, CEO overconfidence and earnings management with Big4 and Big5 Audit firms used as instrument over the sample period of 1995-2018. The absolute value of firm's discretionary accruals is used as a measure for earnings management variable. Holder67 is the measure for CEO overconfidence and takes the value of 1 if the CEO is overconfident, zero otherwise. The results of the 2nd stage are presented in columns (1) and (3) without control variables and (2) and (4) with control variables. Columns (1) and (2) report the results of 2nd stage regression when BIGAUD is defined at the Big4 level from 2002 until 2018. Columns (1) and (2) report the results of 2nd stage regression when BIGAUD is defined at the Big4 level from 2002 until 2017. Columns (3) and (4) report the results of 2nd stage regression when BIGAUD is defined at the Big5 level from 1995 until 2017. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1)	(2-2002)	(3-1995)	(2-1995)
	Big4 from 2002 CustomerRel	Big4 from 2002 CustomerRel	Big5 from 1995 CustomerRel	Big5 from 1995 CustomerRel
EM	0.0358*	0.0106	0.0312	-0.0004
	(0.0207)	(0.0209)	(0.0190)	(0.0193)
Holder67xEM	0.0976***	0.0980***	0.1382***	0.1400***
	(0.0367)	(0.0374)	(0.0334)	(0.0340)
Holder67	0.5358***	0.4939***	0.7358***	0.6836***
	(0.1312)	(0.1342)	(0.1179)	(0.1203)
AGE		-0.0070***		-0.0089***
		(0.0006)		(0.0006)
ROA		-0.5838***		-0.6635***
		(0.0900)		(0.0777)
SIZE		-0.0641***		-0.0453***
		(0.0074)		(0.0064)
LEV		0.0085*		0.0115**
		(0.0049)		(0.0054)
MB		0.0286***		0.0402***
		(0.0070)		(0.0048)
DISTRESS		-0.1278		-0.2764
		(0.4204)		(0.4484)
LOW_MTR		-0.0634***		-0.0488***

		(0.0231)		(0.0180)
BLOAT		0.9721***		0.6702***
		(0.0525)		(0.0528)
Constant	2.9052***	3.4977***	2.9156***	3.3694***
	(0.0751)	(0.0907)	(0.0683)	(0.0801)
Observations	13,815	12,460	19,438	17,476
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.0166	0.0729	0.0255	0.0752

Appendix 3-A: History of plastic bags ban in the US used in triple Diff-in-Diff

State	City / County	Year	Type	Code
Alaska	Various	2010	Ban	AK
Arizona	Bisbee	2014	Pricing mechanism	AZ
California	Various	2012	Pricing mechanism / Ban	CA
Colorado	Various	2012	Pricing mechanism	CO
District of Columbia	Washington	2010	Pricing mechanism	DC
Hawaii	Big Island Hawaii	2013	Ban	HI
Illinois	State-wide	2016	Recycling Program	IL
Iowa	Marshall	2009	Ban	IA
Maine	Belfast	2012	Ban	ME
Maryland	Montgomery County	2012	Pricing mechanism	MD
Oregon	Portland	2011	Ban	OR
Washington	Various	2012	Pricing mechanism	WA
Delaware	State-wide	2009	Recycling Program	DE

Appendix 3-B: Variable Definitions

Earnings Management	Absolute value of discretionary accruals.
Discretionary accruals	Difference between total accruals and the fitted normal accruals.
Total accruals	I run the following cross-sectional regression: $$\frac{TA_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{\Delta Rev_{it}}{Assets_{i,t-1}} + k_3 \frac{PPE_{it}}{Assets_{i,t-1}} + \varepsilon_{it}$$ Where TA represents total accruals defined as earnings before extraordinary items and discontinued operations minus the operating cash flows reported in the statement of cash flows. Asset represents total assets, ΔRev is the change in revenues from the preceding year and PPE is the gross value of property, plant and equipment.
Firm-specific normal accruals	I use the coefficient estimates total accruals to calculate the firm-specific normal accruals (NAit): $$NA_{it} = \hat{k}_1 \frac{1}{Assets_{i,t-1}} + \hat{k}_2 \frac{(\Delta Rev_{it} - \Delta AR_{it})}{Assets_{i,t-1}} + \hat{k}_3 \frac{PPE_{it}}{Assets_{i,t-1}}$$ Where ΔAR is the change in accounts receivable from the preceding year, which captures potential accounting discretion arising from credit sales.
ESG	Natural logarithm of equally weighted overall ESG score from Asset4.
Fluidity	The degree of competitive threat and product market change surrounding a firm, based on Hoberg et al. (2014).
High Fluidity	A binary variable equal to one for those firms having a fluidity measure greater than the annual average fluidity across all firms in the industry, excluding the firm in question from the average fluidity estimation, zero otherwise.
Vertical Integration	The degree of the firm's vertical integration defines as the overlap between firms' product descriptions and the actual product words and descriptions used by the BEA in their input-output tables, based on Hoberg et al. (2016).
High Vertical Integration	A binary variable equal to one for those firms having a vertical integration measure greater than the annual average vertical integration across all firms in the

	industry, excluding the firm in question from the average fluidity estimation, zero otherwise.
Herfindahl-Hirschman Index (HHI)	Text-based Network Industry Classifications identifying competitors to each firm, based on Hoberg et al. (2014).
High HHI	A binary variable equal to one for those firms having a HHI measure greater than the annual average HHI across all firms in the industry, excluding the firm in question from the average fluidity estimation, zero otherwise.
Similarity	The degree of similarity between the firm's products and those of competitors, based on Hoberg et al. (2014).
High Similarity	A binary variable equal to one for those firms having a similarity measure greater than the annual average HHI across all firms in the industry, excluding the firm in question from the average similarity estimation, zero otherwise.
Market-to-Book	Market value of equity (Compustat item PRCC times item CSHO) over total assets (Compustat item AT).
Leverage	Long-term debt (Compustat item DLTT) plus long-term debt due in one year (Compustat item DD1) over Firm market value.
Firm market value	Total assets (Compustat item AT) minus Book equity plus Market Capitalization.
Book equity	Book equity is book common equity (Compustat item CEQ) plus total assets (Compustat item AT) minus total liabilities (Compustat item LT), minus Preferred stock, plus deferred taxes and investment tax credit (Compustat item TXDITC), if available, minus the post-retirement benefit asset (Compustat item PRBA), if available.
Market capitalization	Market capitalization at the end of the fiscal year (Compustat item PRCC times item CSHO).
Size	Natural logarithm of total assets.
Return on assets	Net income over lagged total assets
MRK_SHR	Firm's market share calculated as sales over annual industry sales
DISTRESS	A binary variable equal to one for those firms having an Altman's (1968) Z-score higher than 2.675, zero otherwise
Altman's Z-score	The Z-score is computed as follows: Z-score = 3.3 * (item OIADP / item AT) + 1.2 * ((item ACT - item LCT) / item AT) + item SALE / item AT + 0.6 * ((item CSHO * item PRCC)

	/ (item DLTT + item DLC)) + 1.4 * (item RE / item AT). All items are from Compustat.
LOW_MTR	A binary variable equal to one for those firms having low marginal tax rate with total loss carries forward, zero otherwise.
BIGAUD	A binary variable equal to one if the firm is audited by one of the Big-4 auditing firms (Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers).
BLOAT	A binary variable equal to one if the firm's balance sheet Bloat is higher than the industry's average.
Balance sheet Bloat	The firm's net operating assets over lagged sales.

Appendix 3-C: Exclusion criterion satisfaction.

This table presents the results of a regression, which estimates the relationship between the chosen instrument and earnings management over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. *Industry_ESG* is the industry year average ESG score from Asset4. The results without control variables are presented in column (1). Column (2) reports the regression results with control variables. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM
Industry_ESG	-0.0012	0.0062
	(0.0033)	(0.0039)
MRK_SHR		0.3867***
		(0.0411)
ROA		-0.0105
		(0.0070)
SIZE		-0.0225***
		(0.0008)
MB		0.0064***
		(0.0010)
LEV		0.0300***
		(0.0046)
DISTRESS		0.0675***
		(0.0141)
LOW_MTR		0.0106***
		(0.0022)
BIGAUD		-0.0058***
		(0.0018)
BLOAT		0.0147***
		(0.0023)
Constant	0.1096***	0.1628***
	(0.0126)	(0.0150)
Observations	54,838	41,125
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
R-squared	0.0482	0.2410

Appendix 3-D: The Relationship between ESG and earnings management under competition.

This table reports OLS estimates of ESG, competition, and earnings management. As an ESG measure, I use the natural logarithm of the weighted average ESG score from Asset4, only including the environmental, social and governance pillars. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and high vertical integration are binary variables equal to one if the firm's fluidity (Fluidity) or vertical integration (VertInt) is higher that the industry-year average. To measure product market competition, I use two variables: (i) Fluidity (ii) Vertical Integration, by Hoberg and Phillips data library. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM
ESG	-0.00162*	0.00124	-0.00198	0.00130
	(0.000887)	(0.00114)	(0.00134)	(0.00146)
HighFluidity	0.346***	0.163***		
	(0.0549)	(0.0371)		
ESGxHighFluidity	-0.00464***	-0.00169*		
	(0.00109)	(0.000916)		
HighVertInt			0.241***	0.115
			(0.0701)	(0.0839)
ESGxHighVertInt			-0.00330**	-0.00169
			(0.00116)	(0.00135)
MRK_SHR		0.841*		0.867*
		(0.396)		(0.410)
ROA		-0.106		-0.120
		(0.0758)		(0.0806)
SIZE		-0.101***		-0.0990***
		(0.0184)		(0.0185)
MB		0.0384***		0.0399***
		(0.00993)		(0.00962)
LEV		-0.00652		-0.00490
		(0.0815)		(0.0793)
DISTRESS		-1.337		-1.424
		(0.775)		(0.818)
LOW_MTR		0.0769*		0.0774*
		(0.0410)		(0.0412)
BIGAUD		-0.0275		-0.0278
		(0.0308)		(0.0308)
BLOAT		0.434**		0.452**

		(0.181)		(0.180)
Constant	-3.471***	-2.965***	-3.439***	-2.971***
	(0.0421)	(0.125)	(0.0764)	(0.160)
Observations	9,404	7,802	9,404	7,802
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.071	0.079	0.069	0.078

Appendix 3-E: The Relationship between ESG and earnings management under competition.

This table presents the results of the IV approach, which estimates the relationship between ESG and firm's earnings management when facing high competition over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. High fluidity and high vertical integration are binary variables equal to one if the firm's fluidity (Fluidity) or vertical integration (VertInt) is higher that the industry-year average. To measure product market competition, I use two variables: (i) Fluidity (ii) Vertical Integration, by Hoberg and Phillips data library. ESG is the natural logarithm of the overall ESG score from Asset4, only including the environmental, social and governance pillars, instrumented with the average ESG score for each industry-year pair. Columns (1) and (2) report the results of 2nd stage regression without control variables and with control variables using high fluidity. Columns (3) and (4) report the results of 2nd stage regression without control variables and with control variables using high vertical integration. All variables are defined in the Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM
ESG	-0.00215***	-0.000498	-0.00108	0.00125
	(0.000813)	(0.00100)	(0.000911)	(0.00110)
ESGxHighFluidity	-0.00298**	0.000167		
	(0.00123)	(0.00135)		
HighFluidity	0.259***	0.0740		
	(0.0709)	(0.0787)		
ESGxHighVertInt			-0.00431***	-0.00336**
			(0.00122)	(0.00137)
HighVertInt			0.290***	0.196**
			(0.0707)	(0.0798)
MRK_SHR		0.0733		0.0563
		(0.254)		(0.254)
ROA		-0.205*		-0.211*
		(0.113)		(0.114)
SIZE		-0.0678***		-0.0617***
		(0.0142)		(0.0143)
MB		0.0584***		0.0586***
		(0.00792)		(0.00794)
LEV		-0.0788		-0.0812

		(0.0668)		(0.0671)
DISTRESS		-1.850**		-1.884**
		(0.798)		(0.797)
LOW_MTR		0.143***		0.139***
		(0.0422)		(0.0423)
BIGAUD		-0.0486*		-0.0489*
		(0.0283)		(0.0284)
BLOAT		0.456***		0.462***
		(0.0626)		(0.0622)
Constant	-3.476***	-3.190***	-3.521***	-3.303***
	(0.0489)	(0.110)	(0.0554)	(0.117)
Observations	9,381	7,788	9,381	7,788
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.015	0.035	0.012	0.035

Appendix 3-F: The Relationship between ESG and earnings management under market share as competition.

This table presents the results of the IV approach, which estimates the relationship between ESG and firm's earnings management when facing high competition over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. To measure product market competition, I use the market share of the firm. ESG is the weighted average of the three ESG pillars from Asset4, only including the environmental, social and governance pillars, instrumented with the average ESG score for each industry-year pair. Columns (1) and (2) report the results of 2nd stage regression without control variables and with control variables using high fluidity. All variables are defined in the Appendix B. All control variables are lagged by one year. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM
ESG	-0.00721***	-0.00259*
	(0.00136)	(0.00146)
ESGxHighMRK_SHR	0.00589***	0.00258
	(0.00160)	(0.00175)
HighMRK_SHR	-0.389***	-0.0811
	(0.0778)	(0.0869)
ROA		-0.208*
		(0.114)
SIZE		-0.0716***
		(0.0142)
MB		0.0580***
		(0.00792)
LEV		-0.0765
		(0.0670)
DISTRESS		-1.857**
		(0.794)
LOW_MTR		0.145***
		(0.0421)
BIGAUD		-0.0477*
		(0.0283)
BLOAT		0.462***
		(0.0623)
Constant	-3.128***	-3.057***
	(0.0598)	(0.117)
Observations	9,381	7,788

Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
R-squared	0.017	0.035

Appendix 4-A: Exclusion criterion satisfaction.

This table presents the results of a regression, which estimates the relationship between the chosen instruments and earnings management over the sample period of 2002-2017. The absolute value of firm's discretionary accruals is used as the dependent variable. *IV1* is the state year average ESG score and *IV2* is the industry year average ESG score from Asset4. The results without control variables are presented in column (1) and (3). Column (2) and (4) reports the regression results with control variables. All variables are defined in the Appendix B. All regressions include industry and year fixed effects. I use heteroscedasticity robust standard errors clustered at the firm/year level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

	(1) EM	(2) EM	(3) EM	(4) EM
State_ESG	-0.0298***	0.0020		
	(0.0041)	(0.0026)		
Industry_ESG			-0.0019	0.0029
			(0.0031)	(0.0032)
MRK_SHR		0.3827***		0.3880***
		(0.0407)		(0.0412)
ROA		-0.0109		-0.0110
		(0.0079)		(0.0080)
SIZE		-0.0221***		-0.0220***
		(0.0009)		(0.0009)
MB		0.0065***		0.0064***
		(0.0013)		(0.0012)
LEV		0.0271***		0.0277***
		(0.0052)		(0.0051)
DISTRESS		0.0749***		0.0724***
		(0.0147)		(0.0149)
LOW_MTR		0.0104***		0.0105***
		(0.0021)		(0.0021)
BIGAUD		-0.0058***		-0.0058***
		(0.0018)		(0.0018)
BLOAT		0.0142***		0.0139***
		(0.0019)		(0.0020)
SALES_GROWTH		0.0016		0.0016
		(0.0018)		(0.0018)
Constant	0.2175***	0.1766***	0.1120***	0.1724***
	(0.0155)	(0.0112)	(0.0118)	(0.0127)
Observations	54,159	39,401	54,820	39,968
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-squared	0.0522	0.2406	0.0490	0.2395

Appendix 4-B: Variable Definitions

Variable	Definition	Source of data
Earnings Management	Absolute value of discretionary accruals.	Authors' estimations
Discretionary accruals	Difference between total accruals and the fitted normal accruals.	Authors' estimations
Total accruals	I run the following cross-sectional regression: $\frac{TA_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{\Delta Rev_{it}}{Assets_{i,t-1}} + k_3 \frac{PPE_{it}}{Assets_{i,t-1}} + \varepsilon_{it}$ Where TA represents total accruals defined as earnings before extraordinary items and discontinued operations minus the operating cash flows reported in the statement of cash flows. Asset represents total assets, Δrev is the change in revenues from the preceding year and PPE is the gross value of property, plant and equipment.	Compustat
Firm-specific normal accruals	I use the coefficient estimates total accruals to calculate the firm-specific normal accruals ($NA_{i,t}$): $NA_{it} = \hat{k}_1 \frac{1}{Assets_{i,t-1}} + \hat{k}_2 \frac{(\Delta Rev_{it} - \Delta AR_{it})}{Assets_{i,t-1}} + \hat{k}_3 \frac{PPE_{it}}{Assets_{i,t-1}}$ Where ΔAR is the change in accounts receivable from the preceding year, which captures potential accounting discretion arising from credit sales.	Compustat
ESG	Natural logarithm of equally weighted overall ESG score.	Asset4 of Refinitiv (formerly known as Thomson Reuters)
DEMOCRAT_STATE	A binary variable equal to one if the firm is headquartered in a state with a state governor from the Democratic party, zero otherwise.	Historic state of incorporation data from Spamann and Wilkinson (2019). Dave Leip's Atlas of U.S.

		Presidential Elections and other online sources such as national governors association
DEMOCRAT_SENATE	A binary variable equal to one if the firm is headquartered in a state with one or both elected senators from the Democratic party, zero otherwise.	Dave Leip's Atlas of U.S. Presidential Elections and other online sources such as national governors association and Federal election commission
Market-to-Book	Market value of equity (Compustat item PRCC times item CSHO) over total assets (Compustat item AT).	Compustat
Leverage	Long-term debt (Compustat item DLTT) plus long-term debt due in one year (Compustat item DD1) over Firm market value.	Compustat
Firm market value	Total assets (Compustat item AT) minus Book equity plus Market Capitalization.	Compustat
Book equity	Book equity is book common equity (Compustat item CEQ) plus total assets (Compustat item AT) minus total liabilities (Compustat item LT), minus Preferred stock, plus deferred taxes and investment tax credit (Compustat item TXDITC), if available, minus the post-retirement benefit asset (Compustat item PRBA), if available.	Compustat
Market capitalization	Market capitalization at the end of the fiscal year (Compustat item PRCC times item CSHO).	Compustat
Size	Natural logarithm of total assets.	Compustat
Return on assets	Net income over lagged total assets	Compustat
MRK_SHR	Firm's market share calculated as sales over annual industry sales	Compustat
DISTRESS	A binary variable equal to one for those firms having an Altman's (1968) Z-score higher than 2.675, zero otherwise	Authors' estimations & Compustat
Altman's Z-score	The Z-score is computed as follows: Z-score = 3.3 * (item OIADP / item AT) + 1.2 * ((item ACT – item LCT)	Compustat

	/ item AT) + item SALE / item AT + 0.6 * ((item CSHO * item PRCC) / (item DLTT + item DLC)) + 1.4 * (item RE / item AT).	
LOW_MTR	A binary variable equal to one for those firms having low marginal tax rate with total loss carries forward, zero otherwise.	Compustat
BIGAUD	A binary variable equal to one if the firm is audited by one of the Big-4 auditing firms (Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers).	Compustat
BLOAT	A binary variable equal to one if the firm's balance sheet Bloat is higher than the industry's average.	Compustat
Balance sheet Bloat	The firm's net operating assets over lagged sales.	Compustat
Sales growth	Change in annual sales scaled over last year's sales multiplied by 100.	Compustat

Appendix 4-C: State Governors' Party

This table presents the political party (Democratic or Republican) of state governors. R means the state governor is from the Republican party. D means the state governor is from the Democratic party.

State Governors Party					
State	**2000**	**2004**	**2008**	**2012**	**2016**
Alabama	R	R	R	R	R
Alaska	R	R	R	R	R
Arizona	R	R	R	R	R
Arkansas	R	R	R	R	R
California	D	D	D	D	D
Colorado	R	R	D	D	D
Connecticut	D	D	D	D	D
Delaware	D	D	D	D	D
D.C.	D	D	D	D	D
Florida	R	R	D	D	R
Georgia	R	R	R	R	R
Hawaii	D	D	D	D	D
Idaho	R	R	R	R	R
Illinois	D	D	D	D	D
Indiana	R	R	D	R	R
Iowa	D	R	D	D	R
Kansas	R	R	R	R	R
Kentucky	R	R	R	R	R
Louisiana	R	R	R	R	R
Maine	D	D	D	D	D
Maryland	D	D	D	D	D
Massachusetts	D	D	D	D	D
Michigan	D	D	D	D	R
Minnesota	D	D	D	D	D
Mississippi	R	R	R	R	R
Missouri	R	R	R	R	R
Montana	R	R	R	R	R
Nebraska	R	R	R	R	R
Nevada	R	R	D	D	D
New Hampshire	R	D	D	D	D
New Jersey	D	D	D	D	D
New Mexico	D	R	D	D	D
New York	D	D	D	D	D
North Carolina	R	R	D	R	R
North Dakota	R	R	R	R	R
Ohio	R	R	D	D	R
Oklahoma	R	R	R	R	R
Oregon	D	D	D	D	D
Pennsylvania	D	D	D	D	R
Rhode Island	D	D	D	D	D

South Carolina	R	R	R	R	R
South Dakota	R	R	R	R	R
Tennessee	R	R	R	R	R
Texas	R	R	R	R	R
Utah	R	R	R	R	R
Vermont	D	D	D	D	D
Virginia	R	R	D	D	D
Washington	D	D	D	D	D
West Virginia	R	R	R	R	R
Wisconsin	D	D	D	D	R
Wyoming	R	R	R	R	R

Appendix 4-D: State Senators Party

This table presents the political party (Democratic or Republican) of state senators. Each state can elect two senators. Each senator in the sample period comes from the Democratic party or the Republican party or is independent. This table reports the percentage of the state's senators that come from the Democratic party.

	Percentage of Democratic Senators (0% or 50% or 100%)								
State	107th Congress **2001-2002**	108th Congress **2003-2004**	109th Congress **2005-2006**	110th Congress **2007-2008**	111th Congress **2009-2010**	112th Congress **2011-2012**	113th Congress **2013-2014**	114th Congress **2015-2016**	115th Congress **2017-2018**
Alabama	0	0	0	0	0	0	0	0	0
Alaska	0	0	0	0	50	50	50	0	0
Arizona	0	0	0	0	0	0	0	0	0
Arkansas	50	100	100	100	100	50	50	0	0
California	100	100	100	100	100	100	100	100	100
Colorado	0	0	50	50	100	100	100	50	50
Connecticut	100	100	100	100	50	50	100	100	100
Delaware	100	100	100	100	100	100	100	100	100
Florida	100	100	50	50	50	50	50	50	50
Georgia	100	50	0	0	0	0	0	0	0
Hawaii	100	100	100	100	100	100	100	100	100
Idaho	0	0	0	0	0	0	0	0	0
Illinois	50	50	100	100	100	50	50	50	100
Indiana	50	50	50	50	50	0	50	50	50
Iowa	50	50	50	50	50	50	50	0	0
Kansas	0	0	0	0	0	0	0	0	0
Kentucky	0	0	0	0	0	0	0	0	0
Louisiana	100	100	50	50	50	50	50	0	0
Maine	0	0	0	0	0	0	0	0	0
Maryland	100	100	100	100	100	100	100	100	100
Massachusetts	100	100	100	100	100	50	100	100	100
Michigan	100	100	100	100	100	100	100	100	100

Minnesota	100	50	50	50	100	100	100	100	100
Mississippi	0	0	0	0	0	0	0	0	0
Missouri	50	0	0	50	50	50	50	50	50
Montana	50	50	50	100	100	100	100	50	50
Nebraska	50	50	50	50	50	50	0	0	0
Nevada	50	50	50	50	50	50	50	50	50
New Hampshire	0	0	0	0	50	50	50	50	100
New Jersey	100	100	100	100	100	100	100	100	100
New Mexico	50	50	50	50	100	100	100	100	100
New York	100	100	100	100	100	100	100	100	100
North Carolina	50	50	0	0	50	50	50	0	0
North Dakota	100	100	100	100	100	50	50	50	50
Ohio	0	0	0	50	50	50	50	50	50
Oklahoma	0	0	0	0	0	0	0	0	0
Oregon	50	50	50	50	100	100	100	100	100
Pennsylvania	0	0	0	50	50	50	50	50	50
Rhode Island	50	50	50	100	100	100	100	100	100
South Carolina	50	50	0	0	0	0	0	0	0
South Dakota	100	100	50	50	50	50	50	0	0
Tennessee	0	0	0	0	0	0	0	0	0
Texas	0	0	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0	0	0
Vermont	50	50	50	50	50	50	50	50	50
Virginia	0	0	0	50	100	100	100	100	100
Washington	100	100	100	100	100	100	100	100	100
West Virginia	100	100	100	100	100	100	100	50	50
Wisconsin	100	100	100	100	100	50	50	50	50
Wyoming	0	0	0	0	0	0	0	0	0

Appendix 4-E: Summary Statistics

This table presents the descriptive statistics for the variables used in this study of all U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. Summary statistics for all sample firms, firms with their headquarters in state with Democratic governors, firms with their headquarters in states with Republican governors, are reported in Panels A, B and C respectively. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: All Firms

	N	Mean	Median	SD	25th Percentile	75th Percentile
EM	55,072	0.1048	0.0555	0.1506	0.0248	0.1176
ESG	9,398	50.247	44.79	30.4123	21.55	81.61
DEMOCRAT_STATE	55,072	0.845	1	0.3619	1	1
MRK_SHR	55,072	0.0098	0.0007	0.0317	0.0001	0.0051
ROA	55,072	-0.1266	0.0171	0.9432	-0.1281	0.0752
SIZE	55,072	5.4819	5.4642	2.2532	3.7918	7.0661
MB	49,062	1.9418	1.1542	3.7537	0.6629	2.0932
LEV	54,444	0.2325	0.133	0.3948	0.0003	0.3336
DISTRESS	55,072	0.0285	0	0.1664	0	0
LOW_MTR	55,072	0.8726	1	0.3334	1	1
BIGAUD	55,072	0.4993	0	0.5	0	1
BLOAT	55,072	0.2326	0	0.4225	0	0
SALES_GROWTH	53,288	0.0121	0.0007	0.7046	-0.0004	0.0022

Panel B: Firms with headquarters in states with a Democratic governor

	N	Mean	Median	SD	25th Percentile	75th Percentile
EM	46,535	0.1011	0.0541	0.146	0.0244	0.113
ESG	8,598	50.3627	45.26	30.52	21.3	81.82
DEMOCRAT_STATE	46,535	1	1	0	1	1
MRK_SHR	46,535	0.0102	0.0008	0.0323	0.0001	0.0054
ROA	46,535	-0.1214	0.0178	0.9789	-0.1218	0.0755
SIZE	46,535	5.6157	5.6033	2.222	3.971	7.1657
MB	41,405	1.9466	1.1695	3.7842	0.6729	2.1185
LEV	45,986	0.2315	0.1316	0.4036	0.0001	0.3314
DISTRESS	46,535	0.0253	0	0.157	0	0
LOW_MTR	46,535	0.8767	1	0.3288	1	1
BIGAUD	46,535	0.5129	1	0.4998	0	1
BLOAT	46,535	0.2262	0	0.4184	0	0
SALES_GROWTH	45,142	0.0107	0.0007	0.7262	-0.0004	0.0022

Panel C: Firms with headquarters in states with a Republican governor

	N	Mean	Median	SD	25th Percentile	75th Percentile
EM	8,537	0.125	0.0655	0.1724	0.0274	0.1448
ESG	800	49.0042	41.575	29.2188	22.6	78.595
DEMOCRAT_STATE	8,537	0	0	0	0	0
MRK_SHR	8,537	0.0077	0.0004	0.0278	0	0.0035

ROA	8,537	-0.1548	0.0125	0.7175	-0.1671	0.0733
SIZE	8,537	4.7526	4.5945	2.2827	2.9174	6.4676
MB	7,657	1.9157	1.0763	3.5839	0.617	1.9796
LEV	8,458	0.2382	0.1404	0.3429	0.0029	0.3441
DISTRESS	8,537	0.046	0	0.2096	0	0
LOW_MTR	8,537	0.8505	1	0.3566	1	1
BIGAUD	8,537	0.4249	0	0.4944	0	1
BLOAT	8,537	0.2674	0	0.4426	0	1
SALES_GROWTH	8,146	0.0201	0.0007	0.5702	-0.0004	0.0023

Appendix 4-F: Entropy Balancing

This table presents the balancing for the variables in the treatment and control group used in this study of all U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. DEM_to_REP is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. ESG is the overall ESG score from Asset4. All independent variables in the control group are weighted for first order (Mean) second order (Variance) and third order (Skewness) to match variables in the treatment group using Entropy balancing. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Before weighting

	Treat			Control		
	Mean	**Variance**	**Skewness**	**Mean**	**Variance**	**Skewness**
ESG	3.5030	0.6307	-0.1490	3.7190	0.5320	-0.5355
MRK_SHR	0.0223	0.0013	2.2370	0.0332	0.0034	3.6840
ROA	0.0315	0.0294	-5.7200	0.0441	0.0472	-14.9100
SIZE	7.6820	2.4480	-0.1448	8.2390	2.1990	0.0857
MB	1.7030	5.4350	6.9850	1.7780	2.2580	3.3210
LEV	0.2414	0.0327	0.7495	0.2431	0.0518	6.4160
DISTRESS	0.0000	0.0000	.	0.0004	0.0004	50.2600
LOW_MTR	0.8276	0.1437	-1.7340	0.8832	0.1032	-2.3870
BIGAUD	0.6000	0.2417	-0.4082	0.6717	0.2206	-0.7311
BLOAT	0.2414	0.1844	1.2090	0.2756	0.1997	1.0040
SALES_GROWTH	0.0009	0.0000	8.2370	0.0072	0.1847	84.4200

Panel B: After weighting

	Treat			Control		
	Mean	**Variance**	**Skewness**	**Mean**	**Variance**	**Skewness**
ESG	3.5030	0.6307	-0.1490	3.5030	0.5450	-0.1407
MRK_SHR	0.0223	0.0013	2.2370	0.0223	0.0020	4.4130
ROA	0.0315	0.0294	-5.7200	0.0315	0.0565	-8.3480
SIZE	7.6820	2.4480	-0.1448	7.6820	1.9940	0.0354
MB	1.7030	5.4350	6.9850	1.7030	1.7750	2.7990
LEV	0.2414	0.0327	0.7495	0.2414	0.0781	9.0280
DISTRESS	0.0000	0.0000	.	0.0000	0.0000	2509.0000
LOW_MTR	0.8276	0.1437	-1.7340	0.8276	0.1427	-1.7340
BIGAUD	0.6000	0.2417	-0.4082	0.6000	0.2400	-0.4082
BLOAT	0.2414	0.1844	1.2090	0.2414	0.1831	1.2090
SALES_GROWTH	0.0009	0.0000	8.2370	0.0009	0.0000	5.5850

Appendix 4-G: The Relationship between pillars of ESG and earnings management, following a change of governor party as a shock

This table presents the relationship between earnings management and the four individual pillars of ESG when firms operate in states that experience a change in the state governor's party as a shock. Treatment firms are firms that were incorporated in states that changed their governor's party from Democratic to Republicans at year t during 2002-2017. DEM_to_REP is a binary variable that takes the value of one for firms in the treatment group following the shock, zero otherwise. The absolute value of firm's discretionary accruals is used as the dependent variable. ESG pillars are the individual ESG score from Asset4. All regressions include industry and year fixed effects. All control variables are lagged by one year. I use heteroscedasticity robust standard errors clustered at the firm level, which are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. All continuous variables are winsorized at the 1% and 99% tails.

Panel A: Governance as a pillar of ESG

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
DEM_to_REP	-0.0135***	-0.0100***			-0.0507***	-0.0126
	(0.0039)	(0.0029)			(0.0155)	(0.0156)
Governance			-0.0149***	-0.0030	-0.0152***	-0.0031*
			(0.0037)	(0.0017)	(0.0037)	(0.0017)
DEM_to_REPxGovernance					0.0090**	0.0006
					(0.0038)	(0.0038)
MRK_SHR		0.0743**		0.0738**		0.0734**
		(0.0281)		(0.0279)		(0.0279)
ROA		-0.0434***		-0.0433***		-0.0433***
		(0.0088)		(0.0088)		(0.0088)
SIZE		-0.0075***		-0.0072***		-0.0072***
		(0.0014)		(0.0014)		(0.0014)
MB		0.0050***		0.0050***		0.0050***
		(0.0009)		(0.0009)		(0.0009)
LEV		0.0045		0.0045		0.0044
		(0.0047)		(0.0048)		(0.0048)
DISTRESS		-0.3220***		-0.3203***		-0.3206***
		(0.0419)		(0.0421)		(0.0421)
LOW_MTR		0.0039**		0.0040**		0.0039**
		(0.0015)		(0.0015)		(0.0015)
BIGAUD		-0.0018		-0.0018		-0.0018
		(0.0014)		(0.0014)		(0.0014)
BLOAT		0.0009		0.0007		0.0007
		(0.0015)		(0.0015)		(0.0015)
SG		0.0040***		0.0040***		0.0040***
		(0.0004)		(0.0004)		(0.0004)
Constant	0.0533***	0.0990***	0.1152***	0.1084***	0.1166***	0.1093***
	(0.0006)	(0.0098)	(0.0154)	(0.0096)	(0.0156)	(0.0095)
Observations	9,398	7,732	9,398	7,732	9,398	7,732
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

R-squared	0.0655	0.1340	0.0724	0.1338	0.0732	0.1343

Panel B: Economical as a pillar of ESG

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
DEM_to_REP	-0.0135***	-0.0100***			-0.0389***	-0.0404**
	(0.0039)	(0.0029)			(0.0104)	(0.0176)
Economical			-0.0149***	-0.0053***	-0.0150***	-0.0054***
			(0.0024)	(0.0016)	(0.0025)	(0.0016)
DEM_to_REPxEconomical					0.0072**	0.0087*
					(0.0026)	(0.0046)
MRK_SHR		0.0743**		0.0717**		0.0716**
		(0.0281)		(0.0272)		(0.0276)
ROA		-0.0434***		-0.0401***		-0.0402***
		(0.0088)		(0.0083)		(0.0083)
SIZE		-0.0075***		-0.0058***		-0.0058***
		(0.0014)		(0.0014)		(0.0015)
MB		0.0050***		0.0053***		0.0053***
		(0.0009)		(0.0010)		(0.0010)
LEV		0.0045		0.0026		0.0025
		(0.0047)		(0.0049)		(0.0048)
DISTRESS		-0.3220***		-0.3064***		-0.3076***
		(0.0419)		(0.0397)		(0.0393)
LOW_MTR		0.0039**		0.0038**		0.0036**
		(0.0015)		(0.0014)		(0.0014)
BIGAUD		-0.0018		-0.0019		-0.0019
		(0.0014)		(0.0014)		(0.0014)
BLOAT		0.0009		0.0005		0.0005
		(0.0015)		(0.0015)		(0.0014)
SG		0.0040***		0.0040***		0.0040***
		(0.0004)		(0.0004)		(0.0004)
Constant	0.0533***	0.0990***	0.1062***	0.1034***	0.1069***	0.1046***
	(0.0006)	(0.0098)	(0.0088)	(0.0092)	(0.0089)	(0.0097)
Observations	9,398	7,732	9,398	7,732	9,398	7,732
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0655	0.1340	0.0960	0.1372	0.0968	0.1380

Panel C: Environmental as a pillar of ESG

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
DEM_to_REP	-0.0135***	-0.0100***			-0.0283**	-0.0254
	(0.0039)	(0.0029)			(0.0097)	(0.0146)
Environmental			-0.0118***	-0.0008	-0.0119***	-0.0008
			(0.0024)	(0.0013)	(0.0024)	(0.0013)
DEM_to_REPxEnvironmental					0.0042	0.0046
					(0.0027)	(0.0038)
MRK_SHR		0.0743**		0.0753**		0.0751**
		(0.0281)		(0.0283)		(0.0284)

ROA		-0.0434***		-0.0434***		-0.0434***
		(0.0088)		(0.0088)		(0.0088)
SIZE		-0.0075***		-0.0073***		-0.0073***
		(0.0014)		(0.0014)		(0.0015)
MB		0.0050***		0.0050***		0.0050***
		(0.0009)		(0.0009)		(0.0009)
LEV		0.0045		0.0045		0.0044
		(0.0047)		(0.0049)		(0.0049)
DISTRESS		-0.3220***		-0.3212***		-0.3216***
		(0.0419)		(0.0419)		(0.0419)
LOW_MTR		0.0039**		0.0041**		0.0039**
		(0.0015)		(0.0015)		(0.0015)
BIGAUD		-0.0018		-0.0018		-0.0018
		(0.0014)		(0.0014)		(0.0014)
BLOAT		0.0009		0.0008		0.0008
		(0.0015)		(0.0015)		(0.0015)
SG		0.0040***		0.0040***		0.0040***
		(0.0004)		(0.0004)		(0.0005)
Constant	0.0533***	0.0990***	0.0935***	0.0989***	0.0941***	0.0998***
	(0.0006)	(0.0098)	(0.0083)	(0.0096)	(0.0084)	(0.0099)
Observations	9,398	7,732	9,398	7,732	9,398	7,732
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0655	0.1340	0.0807	0.1336	0.0814	0.1341

Panel D: Social as a pillar of ESG

	(1) EM	(2) EM	(3) EM	(4) EM	(5) EM	(6) EM
DEM_to_REP	-0.0135***	-0.0100***			-0.0387***	-0.0193
	(0.0039)	(0.0029)			(0.0088)	(0.0152)
Social			-0.0129***	-0.0006	-0.0131***	-0.0007
			(0.0027)	(0.0015)	(0.0028)	(0.0015)
DEM_to_REPxSocial					0.0072**	0.0028
					(0.0025)	(0.0040)
MRK_SHR		0.0743**		0.0750**		0.0748**
		(0.0281)		(0.0283)		(0.0284)
ROA		-0.0434***		-0.0434***		-0.0433***
		(0.0088)		(0.0089)		(0.0089)
SIZE		-0.0075***		-0.0073***		-0.0073***
		(0.0014)		(0.0014)		(0.0014)
MB		0.0050***		0.0050***		0.0050***
		(0.0009)		(0.0010)		(0.0010)
LEV		0.0045		0.0045		0.0044
		(0.0047)		(0.0047)		(0.0047)
DISTRESS		-0.3220***		-0.3210***		-0.3213***
		(0.0419)		(0.0425)		(0.0425)
LOW_MTR		0.0039**		0.0040**		0.0039**
		(0.0015)		(0.0015)		(0.0015)
BIGAUD		-0.0018		-0.0018		-0.0018

		(0.0014)		(0.0014)		(0.0014)
BLOAT		0.0009		0.0008		0.0008
		(0.0015)		(0.0015)		(0.0015)
SG		0.0040***		0.0040***		0.0040***
		(0.0004)		(0.0004)		(0.0004)
Constant	0.0533***	0.0990***	0.0984***	0.0988***	0.0992***	0.0996***
	(0.0006)	(0.0098)	(0.0097)	(0.0096)	(0.0098)	(0.0099)
Observations	9,398	7,732	9,398	7,732	9,398	7,732
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0655	0.1340	0.0844	0.1335	0.0852	0.1341

Appendix 4-H. Correlation Matrix

This table presents the pearson correlation between the variables used in this study of all U.S. firms in CRSP/Compustat between 2002 and 2017. I exclude financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4949) due to their special regulatory environment. All variables are defined in the Appendix B. All continuous variables are winsorized at the 1% and 99% tails.

	EM	ESG	DEMOCRAT_STATE	MRK_SHR	ROA	SIZE	MB	LEV	DISTRESS	LOW_MTR	BIGAUD	BLOAT	SG
EM	1												
ESG	-0.1786*	1											
DEMOCRAT_STATE	-0.0573*	0.0125	1										
MRK_SHR	-0.1187*	0.3623*	0.0291*	1									
ROA	-0.3172*	0.1785*	0.0128*	0.0590*	1								
SIZE	-0.3690*	0.6180*	0.1386*	0.4643*	0.1968*	1							
MB	0.2521*	-0.1069*	0.003	-0.0480*	-0.2002*	-0.2050*	1						
LEV	0.0598*	-0.0331*	-0.0061	0.0350*	-0.0598*	0.0812*	0.2162*	1					
DISTRESS	0.2346*	-0.0134	-0.0451*	-0.0529*	-0.1300*	-0.2598*	0.1853*	0.1926*	1				
LOW_MTR	0.0823*	0.0066	0.0284*	-0.0194*	-0.0766*	-0.0449*	0.0494*	0.0461*	0.0592*	1			
BIGAUD	-0.1744*	-0.0188*	0.0637*	0.1251*	0.0691*	0.3892*	-0.0794*	0.0263*	-0.1481*	-0.0126*	1		
BLOAT	0.0441*	-0.0015	-0.0353*	0.0854*	-0.0916*	0.0964*	0.0379*	0.0622*	0.0201*	0.0194*	0.0161*	1	
SG	0.0303*	-0.0182*	-0.0048	-0.0044	0.0023	-0.0129*	0.0072	0.0016	0.0013	0.0052	-0.0078*	0.0293*	1

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