



Fiscal monitoring policy and corporate social responsibility

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ABSTRACT

This paper examines how state-level fiscal monitoring policy (FMP) affects firms' corporate social responsibility (CSR) performance. Using a sample of S&P 500 firms from 2001 to 2020 and exploiting staggered FMP adoption across U.S. states, we employ a difference-in-differences framework and document a positive, statistically significant relationship between FMP adoption and firms' CSR. Economically, FMP adoption is associated with an approximately 2.64% increase in CSR performance. We can interpret this result as fiscal monitoring reducing local corruption and strengthening institutional governance by enhancing fiscal transparency, enforcement credibility, and long-term orientation. While CSR is the outcome of interest, our findings provide new evidence on the private-sector spillover effects of fiscal monitoring policy, extending the FMP literature beyond public-sector outcomes. Additional analyses show that environmental dynamism, product-market competition, financial constraints, and geographic dispersion weaken the FMP–CSR relationship, whereas right-to-work laws strengthen it. Overall, our study highlights subnational fiscal governance as a novel institutional determinant of corporate behavior.

1. Introduction

Corporate social responsibility (CSR) has gained increasing prominence with stakeholders recently (Chiu & Lin, 2024). CSR refers to a firm's voluntary commitment to actions that extend beyond legal and regulatory requirements and contribute to broader societal goals and values (Chen, Liu, Song, & Zhou, 2020). For instance, an EPG poll (2015) reports that Fortune 500 firms recognized as the most admired corporations invested more than \$19.9 billion in CSR initiatives between 2011 and 2013. Likewise, a global Nielsen survey (2014) finds that over 67% of respondents prefer to work for socially responsible firms, while more than 55% are willing to pay a premium for products and services offered by such companies. Consistent with these trends, a KPMG survey (2015) reveals that approximately 92% of the world's largest firms disclose CSR-related information, either within their annual financial statements or through standalone sustainability reports (Ding, Levine, Lin, & Xie, 2022).

CSR not only addresses stakeholder concerns but is now a core component of corporate governance (Benlemlih, Ge, & Zhao, 2021; Chiu & Lin, 2024). Boards and senior executives are expected to include CSR in strategic planning (Benlemlih & Girerd-Potin, 2017; Breuer, Müller, Rosenbach, & Salzmann, 2018; Deng, Kang, & Low, 2013). CSR offers many benefits. It can act as insurance-like

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protection by reducing firm risk and building social capital, thereby limiting negative perceptions and potential sanctions following adverse events (Kim, Lee, & Kang, 2021; Koh, Qian, & Wang, 2014). It also improves relationships with authorities (Wang & Qian, 2011); lowers the cost of capital (Breuer et al., 2018); improves employee motivation and productivity (Gubler, Larkin, & Pierce, 2018); customer loyalty (Servaes & Tamayo, 2013); and facilitates product differentiation (Albuquerque, Koskinen, & Zhang, 2019).

FMP is a state-level oversight mechanism in which higher-level authorities systematically review local governments' financial reports to identify fiscal distress, enhance financial discipline, and enable timely corrective interventions (Nakhmurina, 2024). Since the U.S. Congress enacted FMP, 23 states have adopted it. It functions as a governance tool that mitigates agency problems at the local level (such as the entrenchment of elected officials, resource misallocation, and corruption) by encouraging sound accounting practices, improving fiscal transparency, and strengthening enforcement credibility (Knust & Oesch, 2024; Nakhmurina, 2024). In this paper, we explore the impact of local fiscal monitoring policy (FMP) on firms' CSR performance. Nakhmurina (2024) shows that state intervention under FMP may involve appointing fiscal officers to oversee municipal finances and, in some instances, imposing spending restrictions. Overall, FMP strengthens public governance by encouraging sound accounting and financial practices and reducing corruption, potentially with positive implications for economic growth (Knust & Oesch, 2024; Nakhmurina, 2024).¹

While FMP is expected to reduce local government corruption and to increase accountability and transparency in public finance, its impact on firm CSR remains theoretically ambiguous. We therefore outline two competing hypotheses regarding the effect of FMP on firm CSR. The first hypothesis predicts a positive association between FMP implementation and CSR, attributable to two complementary channels: a *corruption channel*, whereby fiscal monitoring reduces local corruption and strengthens enforcement, and an *institutional governance channel*, through which FMP improves fiscal transparency, enforcement credibility, and normative expectations, thereby reshaping firms' strategic incentives toward long-term stakeholder engagement.

First, by strengthening fiscal oversight, FMP reduces local corruption, such as bribery, fraud, and conflicts of interest, thereby improving enforcement capacity and limiting opportunities for regulatory evasion (Knust & Oesch, 2024; Nakhmurina, 2024). Because local corruption reflects weak political and legal institutions and undermines regulatory effectiveness (King, Loncan, & Khan, 2025), it alleviates resource misallocation and lowers firms' compliance and bribery costs, thereby freeing resources for productive and socially responsible investments (Banerjee, Boly, & Gillanders, 2022). Moreover, corruption weakens social norms and firms' incentives to engage in CSR (Qian, Weng, Lu, & Jiang, 2025; Ucar & Staer, 2020), suggesting that improved integrity environments under FMP can foster stronger CSR engagement. Second, beyond reducing corruption, FMP constitutes a broader institutional governance reform that enhances fiscal transparency, the credibility of enforcement, and the consistency of public oversight (Knust & Oesch, 2024; Nakhmurina, 2024). By strengthening the regulative pillar and increasing the likelihood that opportunistic or socially harmful behavior will be detected and sanctioned, FMP reshapes firms' strategic incentives toward compliance, transparency, and long-term stakeholder engagement, thereby promoting greater CSR involvement.

In contrast, the second hypothesis predicts a negative association between FMP adoption and CSR. There are also reasons to expect that FMP may negatively affect firms' CSR engagement. While FMP enhances oversight and discipline at the local government level, prior research suggests that intensified external monitoring can foster managerial short-termism and myopia (e.g., Gonzalez & André, 2014). Heightened fiscal scrutiny may pressure local officials to prioritize short-term economic performance and fiscal balance over longer-term social and environmental objectives, thereby reducing their willingness to promote or enforce policies that encourage corporate CSR. In such settings, local governments may allocate fewer resources to stakeholder-oriented initiatives and become more tolerant of corporate actions that generate immediate economic benefits at the expense of broader social welfare (Qian et al., 2025). Anticipating weaker normative support and limited long-term policy commitment, firms operating in FMP states may respond by deprioritizing discretionary CSR investments, which often involve upfront costs and yield benefits only over longer horizons. Accordingly, this perspective predicts a negative relationship between FMP adoption and CSR.

To test these competing predictions, we examine a sample of S&P 500 firms from 2001 to 2020. We employ a difference-in-differences (DiD) framework with firm and industry-year fixed effects. Our findings support the first hypothesis, revealing a positive and statistically significant association between FMP adoption and CSR. This effect is economically meaningful, as implementing FMP results in a 2.64% increase in CSR performance ($0.474 \times 2.816 / 50.49$). The result remains robust across a battery of sensitivity tests, alternative CSR decompositions, estimation methods, measures, and endogeneity checks. Additional analyses demonstrate that environmental dynamism, product-market competition, geographic dispersion, and financial constraints weaken the FMP–CSR relationship, while right-to-work laws strengthen it.

We make several contributions. First, we extend the nascent literature on fiscal monitoring policy (e.g., Knust & Oesch, 2024; Nakhmurina, 2024) by documenting a previously unexplored corporate-level consequence: firms headquartered in FMP states exhibit significantly higher CSR performance. To our knowledge, we are the first to establish both theoretical and empirical links between the implementation of FMP and CSR. Importantly, FMP represents a multidimensional institutional shock that improves fiscal transparency, enforcement credibility, and long-term orientation, rather than merely serving as a proxy for corruption. Consistent with *corruption* and *institutional governance* channels, we provide novel evidence that FMP adoption is positively associated with CSR.

Second, we contribute to the CSR literature (e.g., Chen et al., 2020; Ding et al., 2022). To our knowledge, we are the first to identify

¹ A salient example of how FMP can increase transparency and accountability is from the state of New York. In 2024, the New York State Office of the Comptroller identified and published details of “significant issues with financial transparency and accountability among the state’s 532 villages” and stressed that “the financial consequences of this lack of oversight can be severe.” The report cited a case where a CFO used village funds to make improper payments to herself and pay personal bills, resulting in over \$58,000 in theft. Such incidents could have been prevented or detected earlier with proper audits (FingerLakes1.com p. 1).

FMP as a determinant of firms' CSR performance. Our work complements [Ucar and Staer \(2020\)](#), who document that higher local corruption is associated with lower CSR. However, our study differs fundamentally in its focus and contribution. While [Ucar and Staer \(2020\)](#) treat local corruption as a persistent regional trait, we focus on FMP as a discrete, exogenous reform that directly enhances local state-level fiscal transparency and enforcement. This policy setting enables us to identify the causal impact of fiscal governance on CSR, rather than merely documenting correlations between corruption and corporate behavior. More broadly, our results show that fiscal monitoring influences CSR through governance channels beyond corruption, highlighting economically meaningful private-sector spillovers of subnational fiscal oversight. In doing so, we also contribute to understanding the role of geography in finance (e.g., [John, Knyazeva, & Knyazeva, 2011](#); [Shi, Sun, Zhang, & Jin, 2017](#)) by identifying local government as a geography-related factor that explains regional variations in firms' CSR.

The remainder of the paper is organized as follows: Section 2 presents the literature review and outlines the research hypotheses. Section 3 describes the research design. Section 4 presents the empirical analysis. Section 5 reports several sensitivity tests. Section 6 provides additional endogeneity tests. Section 7 presents the moderating variables. Section 8 concludes.

2. Literature review and hypothesis development

2.1. Corporate social responsibility (CSR)

CSR refers to a firm's commitment to reduce the negative impact of its operating, investing, and financing operations on its stakeholders while increasing the long-term positive impact on society ([Liang & Renneboog, 2017](#)). Despite heated debate over the social and economic benefits of CSR, recent research has focused on its positive effects. In this vein, the stakeholder viewpoint of CSR assumes that companies rely on several stakeholders (e.g., employees, owners, the community, customers, suppliers, and the entire society) to assist firms in achieving the long-term organizational objectives, such as legitimacy, good financial and non-financial performance, and reputation ([Dennis, Tsai, & Via, 2025](#); [Wang, Ma, Chang, & Wang, 2025](#)). Furthermore, companies may rely on CSR to differentiate themselves from competitors and signal trustworthiness and ethical behavior to capital markets, thereby facilitating easier, cheaper access to external finance ([Deng et al., 2013](#)). Moreover, [Kim, Park, and Wier \(2012\)](#) show that organizations that practice CSR exhibit lower earnings management, leading to less asymmetric information and greater financial transparency.

Another line of research examines the relationship between CSR and firm performance and presents mixed evidence. Some studies contend that CSR is ineffective and time-consuming, yields no financial benefits, and distorts profit maximization, potentially leading to resource misallocation and lower shareholder value ([Zadek, 2004](#)). Similarly, [Krüger \(2015\)](#) finds that positive CSR news and events trigger adverse stock market reactions, suggesting that investors may interpret such activities as value-destroying or opportunistic. [Lin, Li, Cheng, and Lam \(2021\)](#) show that CSR is associated with lower investment efficiency (e.g., overinvestment). [Manchiraju and Rajgopal \(2017\)](#) investigate how the implementation of a new regulation requiring Indian corporations to allocate 2% of their net profits to CSR results in a 4.1% decline in stock price. By contrast, several studies show that CSR has a favorable impact on corporate performance through improvements in firm-stakeholder relationships, which promote long-term organizational goals ([Deng et al., 2013](#)). [Benlemlih and Girerd-Potin \(2017\)](#) demonstrate that CSR considerably reduces business idiosyncratic and systemic risks. [Fauser and Utz \(2021\)](#) find that CSR reduces company litigation risk by 0.7% and that a decrease in CSR, as measured by the CSR score, results in a significant decline in market value. According to [Bofinger, Heyden, and Rock \(2022\)](#), corporate social responsibility decreases misvaluation and improves market efficiency. [Kim, Li, and Li \(2014\)](#) provide evidence that enhancing CSR, for example, by avoiding bad-news hoarding and increasing transparency, reduces stock price crash risk.

A third line of inquiry focuses on the invisible and intangible aspects of CSR activities, which are difficult to quantify and to determine whether they represent outputs or inputs. Previous studies identify several ramifications of this intangibility. One is that the equity market may be unable to fully reflect or value CSR operations ([Dunbar, Li, & Shi, 2020](#)). In this context, [Edmans \(2011\)](#) offers an alternate reason for why intangibles are difficult to factor into stock prices. He stated that investors use traditional valuation approaches that primarily analyze physical assets and cannot assess intangibles. [Godfrey \(2005\)](#) indicates that CSR generates moral capital, which is predominantly in the form of relationship-based intangible assets (such as customer loyalty). This moral capital offers organizations insurance-like security. [Albuquerque et al. \(2019\)](#) investigate how CSR can be used as a product-differentiation strategy, thereby reducing the price elasticity of demand. This lower level of elasticity protects enterprises from adverse economic shocks and their possible effects on company performance, ultimately resulting in a significant reduction in corporate risk.

2.2. Fiscal monitoring and CSR

Over the past few decades, monitoring and intervening in local governments' financial positions has received particular attention from state governments. Large cities in the U.S. experienced a severe fiscal crisis in the 1970s, which motivated state governments to intervene to detect and predict local budgetary distress. To achieve this, several state governments regularly monitor and assess the fiscal circumstances and positions of their local governments to better understand their fiscal positions and, in turn, predict and detect potential fiscal distress. [Kim, Plumlee, and Stubben \(2022\)](#) argue that agency conflicts may affect employees and officials of local governments and that these problems may result from the desire to entrench elected officials, financial misconduct, and other forms of local corruption.

Despite its important role in practice, the implications of local government fiscal monitoring and its impact on corporate performance have only begun to be explored by academic research. [Nakhmurina \(2024\)](#) shows that local governance may be significantly affected by FMP, and this impact is evident in political entrenchment (electoral outcomes), local corruption, disclosure and reporting

quality, and fiscal and financial soundness. For example, her findings suggest that states' adoption of fiscal monitoring negatively influences incumbent politicians' chances of being re-elected. [Knust and Oesch \(2024\)](#) present evidence consistent with the notion that corporate activity is also influenced by FMP. Specifically, they show that FMP is associated with an increase in corporate investment (capital expenditures and research and development expenditures).

While these are important findings, the impact of FMP on firm CSR remains unexplored in the literature. We address this gap. The impact of FMP on corporate CSR is theoretically ambiguous. In the remainder of this subsection, we outline two competing hypotheses that predict that there should either be a significant and positive relationship between the adoption of FMP and CSR or a negative one.

First, FMP could be associated with increases in firms' CSR. Consistent with this notion, we outline two complementary mechanisms through which FMP affects firm-level CSR. The first is a *corruption channel*, whereby fiscal monitoring reduces local corruption and strengthens enforcement. The second is an *institutional governance channel*, through which FMP improves fiscal transparency, enforcement credibility, and normative expectations, thereby reshaping firms' strategic incentives toward long-term stakeholder engagement.

We begin by discussing the *corruption channel*. Local corruption is a serious concern for social welfare and can lead to the misallocation of resources. High levels of corruption are also indicative of weak political and legal institutions ([King et al., 2025](#)). Consistent with this, recent studies (e.g., [Qian et al., 2025](#); [Ucar & Staer, 2020](#)) argue that local corruption weakens regulatory and law enforcement capacity, thereby promoting unethical activities and reducing firms' willingness to engage in CSR. Thus, firms in areas with higher levels of corruption tend to have lower social values and norms, which diminishes the appetite for CSR activities among firms and stakeholders. Moreover, corruption imposes significant additional costs on firms, such as bribes, which may prevent firms from pursuing economically lucrative investments ([Banerjee et al., 2022](#); [King et al., 2025](#)). Therefore, firms operating in highly corrupt environments may lack sufficient resources to undertake CSR initiatives. [Knust and Oesch \(2024\)](#) and [Nakhmurina \(2024\)](#) argue that the introduction of FMP results in a significant reduction in local corruption (obstruction of justice, conflicts of interest, bribery, extortion, fraud, and campaign-finance violations). According to [Knust and Oesch \(2024\)](#), the reduced corruption promotes corporate investments. Therefore, firms in FMP states are more likely to have sufficient resources to undertake CSR initiatives.

While the reduction in local corruption constitutes an important mechanism through which FMP may affect CSR, focusing exclusively on corruption risks understates the broader institutional implications of FMP. Importantly, FMP represents a multidimensional governance reform that reshapes the institutional environment in which firms operate by strengthening fiscal transparency, enhancing enforcement credibility, and altering firms' strategic incentives in ways that extend beyond corruption alone ([Knust & Oesch, 2024](#); [Nakhmurina, 2024](#)). Consequently, a positive relationship between FMP and CSR can also be understood from the perspective of an institutional governance channel. From an institutional perspective, FMP strengthens the regulative pillar by improving the quality, consistency, and credibility of public financial reporting and oversight at the local government level ([Nakhmurina, 2024](#)). Enhanced fiscal monitoring reduces ambiguity regarding government enforcement and intervention, increasing firms' expectations that opportunistic or socially harmful behavior is more likely to be detected and sanctioned. In such environments, firms face stronger incentives to align their operations with prevailing legal and societal expectations, including greater engagement in CSR activities that demonstrate compliance, transparency, and social accountability ([Ucar & Staer, 2020](#)).

Beyond formal regulation, FMP also influences the normative and cognitive pillars of the institutional environment. By curbing fiscal mismanagement and improving governance quality, FMP reinforces social norms that value ethical conduct, accountability, and long-term sustainability. These norms shape managerial cognition and strategic priorities, encouraging firms to internalize CSR as a legitimate and expected component of corporate behavior rather than as a discretionary or symbolic activity. As a result, firms operating in FMP states may be more inclined to invest in CSR initiatives that build reputational capital, moral legitimacy, and stakeholder trust ([Deng et al., 2013](#); [Godfrey, 2005](#)).

Moreover, FMP alters firms' political and strategic incentives by reducing the returns to rent-seeking and political connections. In weak institutional environments, firms may substitute CSR investments with political influence, informal payments, or preferential treatment to secure favorable outcomes from local authorities. Stronger fiscal oversight limits such strategies by increasing transparency and monitoring, thereby making political favoritism more costly and less effective ([Nakhmurina, 2024](#)). In this context, CSR emerges as a more efficient and sustainable strategy for managing stakeholder relationships, mitigating risk, and securing long-term legitimacy ([Albuquerque et al., 2019](#); [Benlemlih & Girerd-Potin, 2017](#)).

Finally, FMP may influence firms' intertemporal orientation. Improved fiscal discipline and governance reduce uncertainty surrounding public finances and local economic conditions, fostering a more predictable operating environment ([Knust & Oesch, 2024](#)). Such predictability supports long-term corporate planning and investment, including CSR initiatives whose benefits accrue gradually. This channel is particularly relevant given prior evidence that uncertainty and weak institutions discourage long-term investments and socially responsible behavior ([Ucar & Staer, 2020](#)).

Taken together, this discussion suggests that FMP affects CSR not only by reducing corruption but also by reshaping firms' expectations, norms, and strategic trade-offs, consistent with an institutional governance channel. By strengthening local governance and institutional quality more broadly, FMP encourages firms to adopt CSR as an integral component of long-term value creation and stakeholder engagement. Based on this discussion, we therefore expect that firms in FMP states will have higher CSR scores. The first hypothesis is stated as follows:

H₁. : *Ceteris paribus*, we expect a significant and positive relationship between the adoption of FMP and corporate social responsibility.

Despite the governance-enhancing features of fiscal monitoring policy (FMP), its effect on corporate social responsibility (CSR) is ambiguous. A competing perspective emphasizes managerial myopia and short-termism as a dominant behavioral response to

intensified external monitoring. Managerial myopia is the tendency of managers with short time horizons to underinvest in long-term value-enhancing projects and instead reallocate resources toward short-term efforts that boost near-term performance or share prices (Arya & Ramanan, 2024; Fan, Chen, & Mo, 2024). A growing body of research argues that such behavior is pervasive in modern corporations, driven by short-horizon incentive schemes, pressure from short-term investors, and heightened scrutiny of near-term outcomes (Tong & Zhang, 2024).

FMP strengthens fiscal oversight and places greater emphasis on budgetary discipline, financial balance, and near-term accountability at the local government level (Nakhmurina, 2024). While these features improve institutional governance, they may also reinforce short-term performance pressures on local officials and firms through this *myopia-based channel*. Under intensified monitoring, local governments may prioritize immediately observable economic outcomes, such as fiscal solvency, employment, and tax revenues, over longer-term social and environmental objectives. As a result, governments in FMP states may devote fewer resources to stakeholder-oriented initiatives or provide weaker normative and policy support for corporate CSR engagement (Qian et al., 2025).

From the firm's perspective, CSR investments are inherently long-term, intangible, and costly in the short run, with benefits accruing gradually through reputational capital, legitimacy, and stakeholder trust (Albuquerque et al., 2019; Godfrey, 2005). Because CSR often depresses short-term earnings, managers focused on near-term performance may rationally deprioritize these investments. Consistent with this view, Graham, Harvey, and Rajgopal (2005) show that 78% of executives would reject a positive-NPV project if it caused them to miss short-term earnings targets. In an environment of heightened fiscal scrutiny and compliance pressure, managers may further reallocate attention and resources away from discretionary CSR activities toward projects that deliver immediate and measurable returns.

Taken together, these arguments suggest that FMP may unintentionally exacerbate managerial myopia by reinforcing short-term performance orientation, thereby discouraging long-term, discretionary investments such as CSR. Accordingly, an alternative prediction is that FMP adoption is associated with lower CSR performance. Hence, our second hypothesis can be stated as follows:

H₂ : *Ceteris paribus*, we expect a significant and negative relationship between the adoption of FMP and corporate social responsibility.

3. Research design

3.1. Data and sample

From LSEG DataStream, we collect market and accounting data for all constituents of the S&P 500 from 2001 through 2020. The sample initially comprises 9700 firm-year observations for 485 unique firms. We focus on S&P 500 companies since prior research (e.g., Martin, Thomas, & Wieland, 2017) demonstrates that firms listed on the S&P 500 do not experience information asymmetry between management and outside shareholders as a result of the steady flow of information (e.g., both public and private). The issue of asymmetric information is crucial in shaping the incentives for or against CSR activities (Rhodes, 2010). Furthermore, asymmetric information plays a key role in capital allocation efficiency, including investments in CSR (Chen et al., 2017a, b). Moreover, we exclude the period 2021–2023 to mitigate the potential impact of the COVID-19 pandemic, since this had a significant impact on corporate behavior, prompting business organizations to make significant changes in HR, marketing, CSR, finance, and investment policies (Howe, Chauhan, Soderberg, & Buckley, 2021). All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the potential impact of outliers.

Across the full sample, 75% of firm-year observations have complete ESG data, while 25% have missing ESG information. Specifically, out of 9700 total observations, 7230 have complete ESG data and 2470 have missing values. A clear improvement in ESG data coverage is observed over time. In 2001, only 26% of firms had complete ESG data (126 observations), whereas 74% had missing data (357 observations). By 2005, ESG data availability improved substantially, with 66% of firms reporting complete ESG information (318 observations) and 34% still missing (167 observations). The trend continued in later years. In 2010, 84% of observations had complete ESG data (409), compared to only 16% missing (76). By 2020, ESG data coverage became nearly universal, with 94% of firms reporting complete ESG data (457 observations) and only 6% missing (28 observations). Overall, these figures indicate a significant increase in ESG data availability over the sample period, reflecting improved disclosure practices and broader ESG reporting adoption over time.²

3.2. Variables

Our dependent variable is CSR. Following Bofinger et al. (2022) and Fauser and Utz (2021), we use the environmental, social, and governance (ESG) scores from DataStream as our primary proxy for CSR performance. These scores assess a firm's CSR performance across multiple dimensions and range from 0 to 100, where 100 reflects the highest CSR performance. We focus on three main components, “pillars”, namely, environmental (E), social (S), and governance (G). The environmental component reflects the firm's effectiveness in reducing CO₂ emissions, promoting green innovations, and reducing resource consumption. The social component reflects a firm's commitment to diversity, human rights, safety and health, serving the community, product responsibility, and employment quality. The governance pillar consists of three subgroups, namely, management, shareholders, and CSR strategy, and

² We employed “*misstable*” STATA code to produce these estimates.

reflects the firm's effectiveness in compensation policy, board structure, shareholders' rights, board functions, and strategy and vision.

Our independent variable is fiscal monitoring policy (FMP) adopted by the U.S. states. The FMP is constructed as a dummy variable equal to 1 if a company has its headquarters in a state that adopts the FMP in year t , and 0 otherwise. Consistent with the extant literature, business headquarters locations are obtained from companies' annual 10-K filings for the fiscal years under investigation. Appendix A presents a timeline of states that implemented the FMP and those that did not during the sample period. It indicates that approximately 13 U.S. states implemented the FMP between 2001 and 2020, namely Florida, Colorado, Michigan, Louisiana, Nevada, New York, New Mexico, Ohio, Oregon, Rhode Island, Pennsylvania, Virginia, and Tennessee. It also demonstrates that around 10 U.S. states have implemented the FMP before 2001: Iowa, Connecticut, Maryland, Kentucky, Minnesota, New Jersey, New Hampshire, North Carolina, Washington, and South Dakota.

Following the prior literature, we include several firm-level characteristics as control variables that may impact CSR, namely, M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, and CAPEX (Bae, El Ghouli, Gong, & Guedhami, 2021; Dunbar et al., 2020; Qian et al., 2025). M-B is measured as the market-to-book ratio. M-B ratio controls for firm performance and growth opportunities. Firms with a greater M-B ratio are more likely to engage in CSR. Second, size is measured as the natural log of market capitalization. Chang, Oh, Jung, and Lee (2012) document a positive association between firm size and CSR, as large firms tend to engage in a broader range of activities and are more resourceful and visible. R&D is measured as the ratio of R&D expenditures to total assets. R&D investment controls for investment risk. ROA is measured as the ratio of earnings before interest and taxes to total assets. Leverage is measured as the ratio of total debt to total assets. Both ROA and leverage are included because the firm's sustainable performance may be impacted by financial position (Waddock & Graves, 1997). Firms with superior financial performance (e.g., high profits or lower debt obligations) are more likely to engage in CSR. Sales growth is measured as the percentage change in annual sales (Compustat: $(\text{sale}_t - \text{sale}_{t-1}) / \text{sale}_{t-1}$). Firm age is measured as the natural log of the number of years since a company has been publicly listed. Older firms are more likely to engage in CSR to meet higher stakeholder expectations. Dividend is a dummy variable that equals 1 if a firm pays dividends and 0 otherwise. Dividends reduce the available resources for CSR. CAPEX is measured by the ratio of capital expenditures to total assets. Firms with greater capital expenditures have lower resources for CSR.

Because the FMP, the independent variable, is a state-level variable, we added three state-level economic variables to control for regional economic conditions (following Qiu & Wang, 2018, and Nguyen & Qiu, 2022). The first variable is state income, computed as the natural logarithm of state income. The second variable is state income growth. The third variable is state GDP per capita, computed as the natural logarithm of state GDP per capita. Definitions of all variables are provided in Appendix B.

3.3. Econometric framework

We follow prior literature (e.g., Knust & Oesch, 2024; Nakhmurina, 2024) by employing a difference-in-differences (DiD) estimator, in which firms in non-FMP states serve as the unaffected (control) group and firms in FMP states as the affected (treatment) group. The staggered adoption of the state-level FMP can induce exogenous variation in fiscal monitoring policy. We specify the following regression model:

$$CSR_{it} = \beta_0 + \beta_1 FMP_{s,t} + \beta_2 Controls_{ist} + \alpha_f + \gamma_t + \varepsilon_{s,t} \quad (1)$$

Where CSR is measured as the overall CSR company score, employing the self-reported information in the environmental, social, and governance components and representing the dependent variable. The FMP is measured as a dummy variable that equals 1 if a firm is headquartered in a state that implements it and 0 otherwise and serves as the main independent variable of interest. We include several firm-level and state-level controls. The firm-level controls include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, and political orientation. The state-level controls include state income, state income growth, and state GDP per capita. α_f denotes firm fixed effects. γ_t denotes industry-year fixed effects (SIC 4-digit code). Industry-year and firm fixed effects allow us to control for time-varying heterogeneities across sectors (e.g., industry-level shocks to demand) and unobserved firm attributes. ε_{ist} refers to error terms that are clustered at the state and year levels (state $\times$ year) to account for two-way dependence across states and over time, given that FMP is implemented at the state level (following Chava, Danis, & Hsu, 2020).

Based on Knust and Oesch (2024), our specification assumes that a reliable causal interpretation of β_1 is that the average change in CSR scores is the same in both groups if the FMP does not exist. A potential drawback is that confounding factors may influence both the CSR and the adoption of FMP. Our specification strategy alleviates this issue in two ways. First, the adoption of FMP is staggered over the years and states. Consequently, the confounding factors would have to be staggered over time and states. Second, the FMP adoption is exogenous to companies and is implemented by state governments. Thus, it is highly unlikely that the adoption of FMP is driven by firm-specific attributes.

4. Main empirical results

4.1. Summary statistics

We present the results of descriptive statistics in Table 1. We observe that the independent variable, FMP, has a standard deviation of 0.474 and a sample mean of 0.341. The sample mean indicates that 34.1% of the firms' headquarters in our sample are located in FMP states, and 65.9% of the sample firms are headquartered in non-FMP states. The dependent variable, CSR, is proxied by the CSR score. The sample standard deviation is 20.311, while the sample mean is 50.930. (Table 1)

Correlations between study variables are shown in Table 2. We observe a correlation coefficient of 0.148 between FMP and CSR, providing tentative evidence in support of our first hypothesis (H_1). Further, all correlation coefficients in the table are lower than 0.50 in absolute terms, which are relatively small. These small correlations mitigate multicollinearity concerns.

4.2. Main regression results

We present the baseline regression results in Table 3. The first column presents the effect of FMP on CSR, with no control variables but with firm- and industry-year fixed effects. Column two adds model controls and controls for industry-year fixed effects, while Column 3 similarly includes controls but for firm fixed effects. Finally, Column 4 includes all controls and both firm- and industry-year fixed effects. Across all models, we find a clear positive and statistically significant effect of FMP on firm CSR. For example, the coefficient for FMP in Column 4 is positive and statistically significant at the level of 1% ($\beta = 3.2$).³ The results are also economically significant, as implementing FMP yields a 2.64% increase in CSR performance ($0.474 \times 2.816 / 50.49$).

Consistent with our first hypothesis (H_1), our baseline results indicate that firms in FMP tend to have higher CSR scores than those in non-FMP states. This finding can be understood from two mutually supportive channels: *corruption* and *institutional governance*. First, this finding aligns with the corruption channel, whereby FMP reduces local corruption—an indicator of weak political and legal institutions that undermines regulatory enforcement, social norms, and firms' incentives and capacity to engage in CSR (Qian et al., 2025; Ucar & Staer, 2020). High corruption weakens law enforcement, promotes unethical behavior, and imposes additional costs on firms, such as bribes, which may prevent economically productive investments and constrain resources available for CSR activities (Banerjee et al., 2022; King et al., 2025). In contrast, evidence suggests that the introduction of FMP leads to significant reductions in corruption, including obstruction of justice, conflicts of interest, bribery, extortion, fraud, and campaign-finance violations—and promotes corporate investments, thereby increasing firms' capacity to engage in CSR initiatives (Knust & Oesch, 2024; Nakhmurina, 2024). Second, beyond corruption, our baseline results also provide support for a broader institutional governance channel. FMP represents a multidimensional governance reform that strengthens the institutional environment by enhancing fiscal transparency, improving the quality and credibility of public financial reporting, and increasing the effectiveness of enforcement (Knust & Oesch, 2024; Nakhmurina, 2024). Improved oversight reduces uncertainty regarding government intervention, making opportunistic or socially harmful behavior more likely to be detected and sanctioned and providing firms with stronger incentives to align with legal and societal expectations, including increased engagement in CSR activities that demonstrate compliance, transparency, and social accountability (Ucar & Staer, 2020).

4.3. Mechanism test: Corruption reduction

To support this main conclusion, we also conduct an additional test to assess whether the CSR is stronger in states where corruption declined the most following the FMP adoption. To perform this test, we remove all non-FMP firms. Next, we collect the number of federal convictions as an objective indicator of local corruption from the Department of Justice (DOJ), following Nakhmurina (2024). After that, we create a dummy variable that takes the value 1 if the state has a below-median number of federal convictions following the FMP adoption, and 0 otherwise. Then, we used this newly created dummy variable as an independent variable in model (1) in place of FMP. The finding shows a positive coefficient for the newly created dummy variable, significant at the 10% level (coefficient = 1.508, SE = 0.854), providing supplementary support for our first hypothesis (H_1). Results are not tabulated to conserve space but are available from the authors upon request.

5. Sensitivity analyses

5.1. Decomposition of ESG scores and alternative measures of CSR

While our main findings indicate a positive and statistically significant relationship between FMP implementation and CSR, a concern is that our results may be driven by the CSR measure used. In this subsection, we first address this by decomposing ESG scores into individual E, S, and G pillars. We then reestimate model (1) for each pillar separately. This analysis is important for a comprehensive understanding of the effect of FMP on CSR, thereby informing managers in formulating effective CSR policies. The results are presented in Table 4. Column 1 considers the environmental pillar “E,” Column 2 the social pillar “S,” and Column 3 the governance pillar “G”.

Across all models, we find a positive and statistically significant effect of FMP on each pillar, indicating that FMP has a substantial impact on all components of the CSR score. While the magnitude of effect is similar for E (coefficient = 2.885) and G (coefficient = 2.981) pillars, the effect on the social pillar “S” is appreciably larger (coefficient = 4.579). Since the effect of FMP is strongest for the social pillar, this finding is consistent with the corruption channel, as prior research shows that corruption weakens regulatory enforcement and social norms, particularly in stakeholder-facing domains (Dass, Nanda, & Xiao, 2016; Qian et al., 2025; Ucar & Staer, 2020). Because the social dimension captures labor practices, community engagement, and product responsibility, reductions in corruption and improvements in fiscal oversight following FMP adoption (Knust & Oesch, 2024; Nakhmurina, 2024) are likely to

³ Our findings are robust to removal of all financial institutions (SIC codes 6000–6999), as they have different regulations. The results, after removing the financial sector, show a robust positive and statistically significant impact of FMP on CSR at the level of 1% ($\beta = 3.166$, $t = 2.91$).

Table 1
Summary statistics.

Panel A. Summary statistics for variables						
Variable	Mean	Median	Standard deviation	Minimum	Maximum	Obs
CSR	50.490	50.930	20.311	0.600	95.16	9172
Fiscal monitoring	0.341	0.000	0.474	0.000	1.000	9700
M-B	1.970	1.484	1.702	0.475	4.851	9465
Size (log)	16.504	16.482	1.457	3.478	21.535	9039
ROA	0.095	0.083	0.091	−0.220	0.386	9465
Leverage	0.679	0.626	0.477	0.072	4.016	9465
R&D	0.021	0.000	0.046	0.000	0.256	9465
Sales growth	0.080	0.061	0.184	−0.413	0.933	9116
Firm age	22.673	24.000	11.949	0.000	42.000	8550
Dividends	0.798	1.000	0.401	0.000	1.000	9700
CAPEX	−0.003	0.079	0.848	−0.612	0.968	9464
State income (log)	27.208	27.091	0.848	24.748	28.639	9684
State income growth	0.014	0.016	0.027	−0.067	0.087	9215
State GDP per capita (log)	10.749	10.737	0.192	10.380	11.187	8092
Environmental dynamism	0.510	0.332	0.570	0.036	3.510	9378
Product market competition	0.303	0.408	0.046	0.000	1.000	9478
Financial constraints (WW)	−0.117	0.188	−0.111	−0.216	−0.017	9456
Right to work laws	0.336	0.001	0.393	0.000	1.000	9656
CEO age	55.800	6.988	58.263	38.000	78.000	8969
CEO gender	0.035	0.172	0.000	0.000	1.000	9202
CEO education (MBA)	0.381	0.202	0.000	0.000	1.000	9352
CEO education (PhD)	0.098	0.298	0.000	0.000	1.000	9202
External CEO	0.214	0.410	0.000	0.000	1.000	9347
CEO tenure	6.225	5.825	6.740	1.000	45.000	9488
Political orientation	0.501	0.521	0.092	0.331	0.698	9536

Panel B. Industry distribution of FMP firms					
No	Industry	SIC 2-digit codes	No. of firms	Percentage	No. of observations
1	Agriculture	01–09	1	0.5	20
2	Mining	10–14	2	1.2	40
3	Construction	15–17	2	1.2	40
4	Manufacturing	20–39	62	36.4	1235
5	Transportation	40–49	25	14.6	500
6	Wholesale	50–51	3	1.7	60
7	Retail	52–59	16	9.3	320
8	Finance	60–67	36	21	720
9	Services	70–89	24	14.1	480
10	Public administration	90–99	0	0	0
Total			171	100%	

The table illustrates the summary statistics, including the mean, median, standard deviation, minimum, and maximum of all variables used in this research (Panel A) and the distribution of firms within industries in FMP states. Definitions of variables are presented in Appendix B.

translate most directly into enhanced social performance. This pattern also supports the institutional governance channel, whereby stronger local transparency and enforcement increase firms' incentives to build legitimacy and moral capital through stakeholder-oriented CSR (Deng et al., 2013; Godfrey, 2005).

Next, in Table 5, we further address concerns that our results may be driven by our choice of CSR measure and employ four alternative CSR measures: *ESG combined* (in Column 1), *average ES* (in Column 2), *sum ES* (in Column 3), and Kinder, Lydenberg, and Domini (KLD) CSR ratings, collected from the MSCI KLD dataset (in Column 4). *ESG* is constructed as the firm's overall CSR score, with ESG controversies overlaid (e.g., Cheng & Huang, 2024); *average ES* is measured as the average of “E” and “S” scores (e.g., Bae et al., 2021); *sum ES* is computed as the sum of “E” and “S” scores (e.g., Breuer et al., 2018); finally, KLD CSR ratings are primarily based on a firm's reported actions and/or events (Zhang, Zhu, & Ding, 2013).

In all cases, we observe a positive and statistically significant effect of FMP on CSR, irrespective of the proxy used. We therefore conclude that our results are not sensitive to the choice of CSR measures employed.

5.2. Alternative regression estimators

To mitigate concerns that our main findings are not driven by the choice of model estimator, in this subsection, we re-estimate our main results using alternative estimators, namely, weighted least squares (WLS), Sys-GMM, Petersen (2009), Newey-West, Tobit, and stacked DiD. The results are shown in Table 6. Column 1 exhibits the results of the WLS estimator, which allows us to address heterogeneity across industry sectors (based on the 4-digit SIC code). Column 2 presents results for the Sys-GMM estimator, which

Table 2
Correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1-CSR	1.000														
2- FMP	0.148	1.000													
3- M-B	−0.060	−0.001	1.000												
4- Size	0.480	0.077	0.114	1.000											
5- ROA	−0.012	0.023	0.421	0.139	1.000										
6- R&D	−0.002	−0.172	0.054	−0.012	−0.032	1.000									
7- Leverage	0.062	0.123	−0.295	0.003	0.051	−0.088	1.000								
8- Growth	0.054	0.006	0.155	0.140	0.015	0.081	−0.035	1.000							
9- Firm age	0.370	0.070	−0.076	0.250	−0.006	−0.059	0.063	−0.069	1.000						
10- Dividends	0.270	0.113	−0.195	0.189	−0.010	0.366	0.120	−0.147	0.271	1.000					
11- CAPEX	0.201	0.070	−0.240	0.443	−0.190	−0.132	0.057	−0.008	0.079	0.120	1.000				
12- State income	0.029	−0.224	0.075	0.110	−0.029	0.239	−0.153	0.098	−0.065	0.069	−0.047	1.000			
13- State income growth	0.320	0.217	0.161	0.264	−0.046	0.122	−0.012	0.262	0.127	0.126	−0.061	0.264	1.000		
14- State GDP per capita	0.241	0.105	0.087	0.201	−0.023	0.005	0.011	0.442	0.147	0.060	0.013	0.129	0.475	1.000	
15- Political orientation	0.245	−0.055	0.314	0.076	−0.116	−0.043	0.193	0.211	0.372	−0.115	0.431	0.264	−0.298		1.000

This table illustrates the coefficients of correlation among the dependent, independent, and control variables. Definitions of variables are as presented in Appendix B.

Table 3
Main regression output.

Variable	Model (1)	Model (2)	Model (3)	Model (4)
Constant	50.453*** (0.260)	−57.884*** (0.830)	−64.223 (0.671)	77.215 (1.885)
Fiscal	1.707*** (0.524)	1.674*** (0.572)	1.225** (0.573)	2.816*** (0.745)
M-B		−2.604*** (0.301)	−1.204*** (0.205)	−0.485 (0.340)
Size		4.255*** (0.791)	3.404*** (0.456)	2.749*** (0.830)
ROA		2.684*** (5.630)	0.873 (3.148)	8.121* (4.808)
R&D		6.075*** (9.663)	−2.670* (1.457)	4.896 (1.840)
Leverage		2.047** (0.831)	0.001 (1.144)	−0.717 (1.350)
Growth		−0.105* (0.057)	−0.005 (0.008)	0.069 (0.075)
Firm age		0.219*** (0.025)	0.897*** (0.138)	1.057 (1.228)
Dividends		7.450*** (0.972)	4.380*** (1.123)	3.834*** (1.734)
CAPEX		0.001* (0.001)	0.001** (0.001)	0.001 (0.001)
State income		0.673 (0.451)	−1.443*** (3.119)	−1.522* (8.754)
State income growth		7.320*** (2.438)	3.785*** (4.443)	2.763** (1.242)
State GDP per capita		2.181 (3.712)	−2.581* (1.507)	−0.890 (2.265)
Political orientation		2.416*** (0.741)	2.037** (0.801)	2.148** (0.958)
Firm FE	Yes	No	Yes	Yes
Industry- year FE	Yes	Yes	No	Yes
Adj. R ² (%)	79.26	44.33	76.11	79.63
F-statistics	9.45 (0.002)	41.41 (0.000)	203.60 (0.000)	4.66 (0.000)
P-value				
Obs	8550	8541	8550	8550

This table illustrates the main regression estimates. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, political orientation, state income, state income growth, and state GDP per capita. Figures in parentheses are standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

Table 4
Decomposition of ESG score.

Variable	E	S	G
Constant	11.987 (2.753)	−22.721 (2.280)	6.290** (2.549)
FMP	2.885** (1.219)	4.579*** (1.008)	2.981** (1.434)
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Industry- year FE	Yes	Yes	Yes
Adj. R ²	80.07	77.62	54.64
F-statistics	7.76 (0.000)	3.71 (0.000)	5.18 (0.000)
P-value			
Obs	8515	8515	8515

The table illustrates the regression results of the impact of FMP on the three components of ESG, namely, environmental pillar “E”, social pillar “S”, and governance pillar “G”. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, state GDP per capita, and political orientation. Figures between parentheses are standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

Table 5
Sensitivity based on alternative measures.

Variable	ESG combined	Average ES	Sum ES	KLD
Constant	27.071 (1.789)	−22.615 (2.243)	−4.522 (4.486)	4.098* (1.557)
FMP	3.252*** (0.991)	3.649*** (0.928)	7.298*** (1.855)	2.654*** (0.557)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry- year FE	Yes	Yes	Yes	Yes
Adj. R ²	68.45	83.35	83.35	72.487
F-statistics	8.14 (0.000)	7.22 (0.000)	7.22 (0.000)	19.07
P-value				
Obs	8522	8522	8522	8643

The table illustrates the regression estimates using four different measures of CSR, namely, ESG combined; average ES measured as the average of “E” and “S”, and sum ES measured as the sum of “E” and “S”. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, state GDP per capita, and political orientation. Figures between parentheses are standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

Table 6

Sensitivity: Alternative estimators.

Variable	WLS (1)	Sys-GMM (2)	Petersen (2009) (3)	Newey-west (4)	Tobit (5)	Stacked DiD (6)
Constant	−2.894*** (2.115)	−4.479 (3.239)	2.662 (2.707)	−2.895*** (2.055)	−3.313*** (0.510)	−2.904** (0.457)
FMP	2.441*** (0.724)	2.130** (0.956)	3.507** (1.664)	1.763*** (0.652)	0.034** (0.016)	
FMP _{t-1}		0.727*** (0.037)				2.444*** (0.711)
Controls	Yes	Yes	Yes	Yes	Yes	
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry- year FE	Yes	Yes	Yes	Yes	Yes	Yes
No of instruments		263				Yes
Sargan statistic		269.948 (0.343)				
p-value						
AR (2)		0.583 (0.205)				
Adj. R ²	33.93		78.88		10.45	
F-statistic	174.81 (0.000)			117.92 (0.000)		
P-value						
Obs	8463	8310	8463	8463	8463	8463

The table illustrates the regression estimates using six different estimators, namely, WLS, Sys-GMM, Petersen (2009), Newey-West, Tobit, and stacked regression estimators. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, state GDP per capita, and political orientation. Figures between parentheses are standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

captures the dynamic nature of corporate policies (Flannery & Hankins, 2013). Column 3 exhibits the results of the Petersen (2009) two-way clustering estimator, which accounts for time-series and cross-section dependence in panel data. Here, we cluster standard errors at the firm- and year levels rather than at the state-year level. In Column 4, we provide estimates using the Newey-West estimator, which controls for heteroscedasticity and autocorrelation. Column 5 presents results from the Tobit estimator, which mitigates concerns about censoring in CSR data. Finally, Column 6 shows the estimates of the stacked DiD estimator. We implement this estimator to mitigate concerns that the timing of treatment for unique units (or states) may bias the basic DiD estimator (Baker, Larcker, & Wang, 2022). This estimating technique aligns and stacks events in event time, avoiding the use of previously handled units as effective units of comparison, particularly when events occur concurrently.

The results in Table 6 demonstrate that, irrespective of the alternative estimator employed, we continue to find a positive and statistically significant effect of FMP on CSR. Thus, our results are fully robust to the use of alternative estimators.

6. Endogeneity concerns

Throughout this paper, we employ the DiD estimator based on an exogenous shock that varies by location and time, combined with firm- and industry-year fixed effects; this approach facilitates strong empirical identification (Karpoff & Wittry, 2018). Nonetheless, we acknowledge that endogeneity concerns may still persist. Therefore, in this subsection, we present several additional tests to address remaining concerns. Specifically, we employ the dynamic DiD estimator, use CEO characteristics as additional controls, apply an impact threshold for an omitted confounding variable (ITCV), employ entropy balancing, and employ propensity score matching (PSM).

In Table 7, we begin by performing a dynamic DiD to address potential violations of the parallel-trends assumption (reverse causality). In our setting, reverse causality would imply that some U.S. states may exhibit poorer CSR performance than others, thereby motivating the implementation of FMP. The parallel trends assumption posits that the treatment and control groups follow parallel

Table 7

Endogeneity: Reverse causality or parallel trend.

Variable	Parallel trends			
	FMP Year _{3 to 0}	FMP Year ₊₁	Placebo	FMP Year _{+2 to +3}
Constant	14.446 (1.855)	17.177 (1.092)	26.398 (19.947)	35.056*** (5.335)
FMP	−0.123 (0.595)	1.318** (0.669)	−0.518 (0.441)	0.696*** (0.136)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry- year FE	Yes	Yes	Yes	Yes
Adj. R ² (%)	79.50	75.56	2.36	74.78
F-statistics	3.61 (0.000)	17.38 (0.000)	2.89 (0.000)	10.90 (0.000)
P-value				
Obs	8525	8505	8504	8505

This table presents tests addressing reverse causality and violation of the parallel assumption. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, state GDP per capita, and political orientation. Figures in parentheses are standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

trajectories prior to the implementation of FMP. To tackle this issue, we test the timing of changes in CSR performance relative to the implementation of FMP. If an increase occurred before the implementation of FMP, it would undermine the inferences we draw because of a violation of the parallel trends assumption. Specifically, we examine CSR over three years, around the implementation of FMP (before and after). Consistent with prior research, we exclude all firm-year observations in which firms' headquarters are located in states that never implemented the FMP. After that, we generate three dummy variables, namely, $FMP_{-3 \text{ to } 0}$, FMP_{+1} , and $FMP_{+2 \text{ to } +3}$, which take a value of 1 if a firm is headquartered in an FMP state (e.g., Colorado, Louisiana, Nevada, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, and Virginia) for the 3 years prior to the implementation of FMP, the first effective year, and firms that had implemented FMP two or three years prior, respectively, and 0 otherwise. Columns 1 to 3 present the results. We find that the post-implementation variables, FMP_{+1} and $FMP_{+2 \text{ to } +3}$, are positive and statistically significant at the 5% and 1% levels, respectively. Thus, these results suggest that parallel trends are not a concern.

Furthermore, Fig. 1 presents further visual evidence that parallel trends are not a concern. The figure shows year-by-year event study estimates of the impact of fiscal monitoring policy on corporate social responsibility. The coefficients in the pre-treatment periods are close to zero and statistically insignificant, providing visual support for the parallel trends assumption. Following the implementation of the policy, the estimated effects become positive and statistically significant. Importantly, the magnitude of the coefficients increases over time, with a larger effect observed three years after the event compared to one year after, indicating a strengthening impact of the policy.

As a further step, we employ a falsification test (e.g., a placebo test) to support causal identification. Each state that accepts or rejects the FMP is assigned a pseudo-FMP adoption (rejection) year at random, different from the actual FMP adoption (rejection). We then use the pseudo-FMP year to generate an indicator variable, *Placebo FMP*, in the same manner as the baseline estimate. We re-estimate our baseline model using *Placebo FMP* rather than the original one. The final column of Table 7 shows the results of this test. The coefficient for *Placebo FMP* is statistically insignificant, implying that these randomly chosen pseudo-FMP adoption (rejection) years have no significant relationship with CSR.

Taken together, the results in Table 7 support the notion that firms in FMP states exhibit better CSR performance only after the implementation of FMP, not before. Thus, we conclude that the findings of this research are not driven by violations of the parallel trends assumption or by reverse causality.

A growing literature emphasizes that managerial characteristics are relevant for corporate decision-making and outcomes (e.g., King, Srivastav, & Williams, 2016; Chen et al., 2020; Dunbar et al., 2020). For example, Dunbar et al. (2020) and Chen et al. (2020) illustrate that the CEO characteristics play an important role in encouraging or discouraging the CSR initiatives. Therefore, to ensure that our findings are robust to omitted variable bias, we add six CEO characteristics as new controls motivated by the extant literature on CEO style (e.g., Manner, 2010; King et al., 2016): *CEO age*, *CEO gender*, *CEO education (MBA)*, *CEO education (PhD)*, *external CEO*, and *CEO tenure*. These variables are as defined in Appendix B. In columns 1–6 of Table 8, we run regressions with each variable individually and then all together in Column 7.

We present the results in Table 8. Importantly, the findings indicate that adding CEO characteristics as controls does not alter the positive relationship between FMP and CSR. Consistent with the managerial style literature (e.g., Manner, 2010; King et al., 2016; Chen et al., 2020; Dunbar et al., 2020), we also find, in columns 1–6, that *CEO age*, *CEO gender*, and *CEO education (MBA)* are positively and significantly associated with firm CSR, while *CEO education (PhD)*, *external CEO*, and *CEO tenure* are all negatively and significantly associated with firm CSR. In Column 7, with all factors included, only the variables *CEO age* and *external CEO* retain statistical significance at conventional levels, whereas the other CEO characteristics are not statistically significant.

In the same vein, we further address omitted-variable bias by adding several firm-level factors (the KZ index as a proxy for financial constraints that is developed by Kaplan and Zingales (1997) and state-level demographics (population, median age, and unemployment rate) as additional control variables, both individually and collectively. These statistics are gathered from the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS). Including these variables helps mitigate the risk of omitted variable

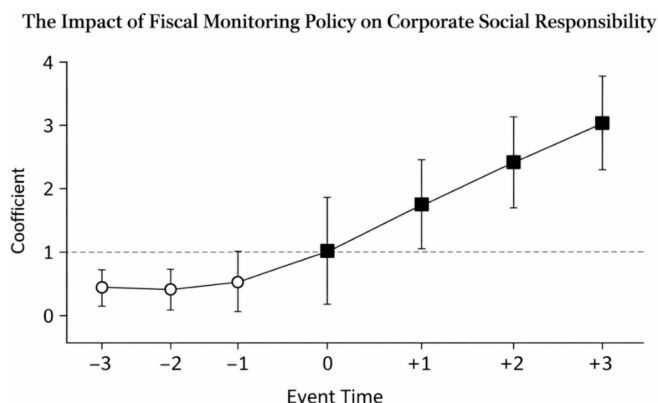


Fig. 1. Event study estimates of the impact of fiscal monitoring policy on corporate social responsibility. The figure shows coefficients and 95% confidence intervals for each event time relative to the implementation of the policy.

Table 8

Endogeneity: Using CEO characteristics as new controls.

Variable	CEO age	CEO gender	CEO education (MBA)	CEO education (PhD)	External CEO	CEO tenure	All
Constant	19.401 (1.680)	−27.864*** (8.312)	16.849 (1.942)	12.607 (1.739)	−17.856 (1.474)	−5.586 (1.301)	13.483 (1.820)
FMP	2.816*** (0.897)	3.428*** (0.859)	2.997*** (0.927)	2.484*** (0.841)	3.519*** (0.974)	3.603*** (0.925)	3.110*** (0.966)
CEO age	0.074* (0.040)						0.101* (0.058)
CEO gender		2.908* (1.535)					2.102 (1.732)
CEO education (MBA)			1.320** (0.596)				0.485 (0.633)
CEO education (PhD)				−2.268** (1.739)			−0.529 (1.198)
External CEO					−2.478*** (2.82)		−2.159** (0.955)
CEO tenure						−0.098** (0.043)	−0.030 (0.054)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry- year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ² (%)	79.53	78.75	80.35	79.95	79.20	78.87	79.92
F-statistics	24.11 (0.000)	27.98 (0.000)	8.22 (0.000)	18.38 (0.000)	11.77 (0.000)	13.94 (0.000)	16.37 (0.000)
P-value							
Obs	8467	8467	8467	8467	8467	8467	8467

The table presents regression estimates after adding a number of CEO characteristics, namely, CEO gender, CEO age, CEO education measured as whether the CEO holds a PhD degree or not, CEO education measured as whether the CEO holds an MBA degree or not, external CEO who was appointed from outside the firm, and CEO tenure, and all of them as new controls. Other control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, state GDP per capita, and political orientation. The parentheses report the standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

bias; for example, the concern that FMP adoption may be associated with other location-specific CSR-relevant traits. The results, shown in Table 9, indicate that the firm- and state-level factors above are significant. However, they do not substantially change the influence of FMP on CSR. Our findings are therefore robust to the inclusion of these additional controls.

As a further step, we perform the “impact threshold for an omitted confounding variable” (ITCV) to handle omitted confounding factor bias. Omitted confounding factor bias refers to the situation in which variables that affect both CSR and the implementation of FMP are omitted (Chapman, Miller, & White, 2019). This method induces a correlation coefficient between the most important control variable and an omitted variable, which is required to disconfirm our results. This method is appropriate for our research because our confounding factor is unobservable. Table 10 presents the results. The coefficient of interest is the ITCV coefficient, which represents the minimum product of the partial correlations between CSR and the other independent variables. The ITCV coefficient is 0.0304, whereas, according to the table, the correlation coefficient between the implementation of FMP and CSR, controlling for unobservable confounding variables, is expected to be 0.174, which would be sufficient to reject our results. Since we lack information about the confounding variable, we compare the partial and raw effects of each independent variable using the variable with the lowest correlation. Since no individual regressor has an effect greater than the lowest correlation, we conclude that our main findings are not driven by unobservable confounding factors.

We also employ entropy balancing (EB) and propensity score matching (PSM) to address concerns that the enactment of state-level fiscal monitoring policies (FMP) is unlikely to be random and may be correlated with underlying economic, political, and institutional characteristics that also influence firms' CSR activities. We begin by implementing EB. This approach segments the sample into a treatment group (firms in FMP states) and a control group (firms in non-FMP states) and then reweights the data to ensure the two subsamples are comparable in mean, skewness, and standard deviation. Appendix D reports entropy balancing statistics of matched samples. We present the main results for the EB matched sample in the first column of Table 11. Consistent with our main findings, the impact of FMP on CSR remains statistically significant and positive at the 1% level (coefficient = 2.580), suggesting that the findings of this research are not driven by design choice bias.

For the PSM analysis, we match firms headquartered in FMP states with observationally similar firms in non-FMP states based on firm-level and state-level characteristics that affect both the likelihood of FMP exposure and CSR engagement. Here, firms in states that implement the non-FMP serve as the control group, and those in states that implement it constitute the treatment group. Similar to EB, this approach allows us to construct a more credible counterfactual and enhances the causal interpretation of our results. We allow the PSM to differ by 0.10, after which we re-estimate the baseline model. Appendix E reports propensity score matching statistics for the matched samples. We present the main results in the second column of Table 11. Our findings illustrate that the average CSR for FMP firms is 56.799, whereas it is 53.802 for non-FMP firms. The difference between the two subsamples is statistically significant and positive at the level of 1% (coefficient = 2.996). Thus, we conclude that our findings are not biased due to the observed firm attributes.

Finally, as a further supporting endogeneity check, we examine firms that relocated their headquarters from a non-FMP state to an FMP state, excluding relocations within the same state. We identified 22 such companies over the study period. We create a dummy variable *Post*, equal to 1 for the period following relocation, and an interaction term (*Post* × *FMP*). The last column of Table 11 presents the findings. The interaction term is positive and statistically significant at the 1% level, consistent with our main results. We note that, given the small number of relocating firms, this test should be interpreted as corroborating rather than independent evidence for our main findings; its purpose is to lend supplementary support to the causal interpretation rather than to serve as a primary identification strategy.

7. Moderating effects

7.1. Environmental dynamism

In this subsection, we examine the potential moderating effect of environmental dynamism on the relationship between FMP and CSR. Previous research defines environmental dynamism as the rate of fluctuation and unpredictability of external environmental components, driven by social and physical factors (Yuan, Xue, & He, 2021). Moreover, Priem, Rasheed, and Kotulic (1995) show that external and environmental factors play an important role in shaping organizational outcomes, structures, processes, and strategies, and that the decision to engage in CSR initiatives is at management's discretion and subject to the availability of internal resources.

Given the significant differences in environmental characteristics across firms and industries, it is reasonable to conjecture that the relationship between FMP and CSR should vary across environments (Dennis et al., 2025). Yet the effect is theoretically ambiguous. On one hand, in dynamic environments, firms may seek legitimacy and support from various stakeholders by investing heavily in CSR, as such investments can protect companies against rapid and unforeseen changes. Firms in superior positions, with stable customer preferences in stable surroundings, may not need to make such social and other sustainable investments (Chen et al., 2017a, b). Similarly, CSR may serve as a product-differentiation strategy in hostile and dynamic contexts, as well as a tool for securing valuable resources from diverse stakeholders (Skandera, McKenny, & Combs, 2023). Based on these arguments, we expect that firms in FMP states with dynamic settings to exhibit higher CSR than those operating in more stable industry environments. On the other hand, another line of research claims that strong environmental dynamism promotes managerial myopia and short-termism. From this perspective, managers may prioritize enhancing short-term performance to indicate their talents and capabilities to the market at the expense of CSR (e.g., Wang, 2024). In this case, we anticipate that firms in FMP states experiencing volatile settings will have lower CSR than firms in stable contexts.

To investigate the moderating influence of environmental dynamism on the link between FMP and CSR, we define it as the standard deviation of industry yearly sales over a five-year period (Vahlne & Jonsson, 2017). We then create a dummy variable equal to 1 if a

Table 9

Endogeneity: Using additional firm-level and state-level controls.

Variable	Firm-level			State-level			
	KZ index	Institutional ownership	All	Population	Population age	Unemployment	All
Constant	10.104** (1.850)	−2.186* (1.112)	−2.186* (1.001)	6.810 (4.024)	−2.167 (3.330)	3.068 (4.311)	2.225* (1.992)
FMP	1.618*** (0.669)	1.425*** (0.924)	1.709*** (0.711)	1.876*** (0.068)	2.519*** (0.971)	3.806*** (0.257)	2.145*** (0.914)
KZ index	0.004** (0.220)		0.003* (0.284)				
Institutional ownership		−1.741** (1.043)	0.911** (0.393)				
Population				−1.746** (1.339)			−0.373 (0.487)
Population age					1.932*** (2.17)		0.410 (1.198)
Unemployment						0.074** (0.033)	0.755** (0.639)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry- year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ² (%)	88.17	81.17	82.09	66.67	82.47	80.98	80.99
F-statistics	25.34 (0.000)	19.02 (0.000)	21.26 (0.000)	24.83 (0.000)	29.88 (0.000)	20.80 (0.000)	22.77 (0.000)
P-value							
Obs	8447	8447	8447	8447	8447	8447	8447

The table presents regression estimates after adding several firm characteristics and state-level variables as new controls, namely, KZ index, institutional ownership, population, population age, and unemployment. Other (original) control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, GDP per capita, and political orientation. The parentheses report the standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

Table 10

Endogeneity: Impact threshold for an omitted confounding variable (ITCV).

Variables	CSR	
	Raw	Partial
M-B	−0.001	−0.0032
Size	0.0469	−0.0015
ROA	0.0002	0.0029
R&D	−0.0011	−0.0110
Leverage	0.0097	0.0042
Growth	0.0001	−0.0002
Firm age	0.0393	0.0032
Dividends	0.0317	0.0154
CAPEX	0.0216	0.0650
State income	−0.0174	0.0079
State income growth	0.0255	−0.0019
State GDP per capita	0.0732	0.0610
Political orientation	0.0313	0.0041
ITCV	0.0304	
Correlations	0.174	
Obs	8434	

This table presents estimates of the impact threshold for an omitted confounding variable (ITCV) method used to investigate the impact of FMP adoption on CSR. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, state GDP per capita, and political orientation. Definitions of variables are presented in Appendix B.

Table 11

Endogeneity: Entropy balancing and Propensity score matching.

Variables	Entropy balancing	PSM	Headquarter change
Constant	−6.779 (1.178)		2.687 (1.032)
FMP	2.580*** (0.988)		
Post * FMP			0.839*** (0.440)
Controls	Yes		Yes
Firm FE	Yes		Yes
Industry- year FE	Yes		Yes
Adj. R ² (%)	78.28		50.06
F-statistics	25.81 (0.000)		15.22 (0.000)
P-Value			
Firms in FMP states		56.799	
Firms in non-FMP states		53.802	
Difference		2.996*** (0.000)	
P-value			
Obs	8409		440

The table presents the entropy balancing estimates in the first column, the estimates from propensity score matching in the second column, and the headquarters change in the last column. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, and state GDP per capita. Figures in parentheses are standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels.

firm exceeds the sample median for environmental dynamism and 0 otherwise. Subsequently, we construct the interaction term: $FMP \times environmental\ dynamism$. The results are presented in Column 1 of Table 12. The interaction term of interest ($FMP \times environmental\ dynamism$) has a statistically significant negative coefficient at the 1% level (coefficient = −3.301). This result supports the short-termism and management myopia hypothesis, which predicts that firms in FMP states and more dynamic environments exhibit worse CSR than those in stable environments. One reason is that corporate directors may prioritize short-term performance to demonstrate their talents and capabilities to the market, at the expense of CSR.

7.2. Product-market competition

This section highlights the moderating effect of product-market competition on the relationship between FMP implementation and CSR. Prior literature offers several reasons to explain why companies in highly competitive markets may engage more actively in CSR than those in less competitive industries. The first argument is that competition can serve as an effective governance mechanism that disciplines managers to balance the interests and needs of all stakeholders, thereby earning legitimacy and supporting firm survival and growth (Boubaker, Saffar, & Sassi, 2018; Giroud & Mueller, 2011). The second reason is that highly competitive marketplaces encourage businesses to use CSR as a competitive tool to differentiate their products and services (Fernández-Kranz & Santaló, 2010).

Table 12
Moderating factors.

Variable	Environmental dynamism	Product market competition	Financial constraints	RTW	Geographic dispersion
Constant	16.777 (1.706)	27.056 (1.881)	−12.689 (2.070)	7.064 (1.877)	−2.458* (1.321)
FMP	4.994*** (1.147)	4.054*** (0.990)	2.401** (0.972)	2.084** (0.931)	2.668** (1.033)
Environmental dynamism	0.536 (1.256)				
FMP × Environmental dynamism	−3.301*** (1.283)				
Product market competition		2.526** (1.263)			
FMP × PMC		−4.014*** (1.417)			
Financial constraints			−0.001** (0.001)		
FMP × Financial constraints			−0.002*** (0.001)		
RTW				−3.946** (1.826)	
FMP × RTW				4.045*** (1.563)	
Geographic dispersion					−0.057*** (1.167)
FMP × GD					−0.704** (0.837)
Controls	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes
Industry- year FE	Yes	Yes	Yes	Yes	Yes
Adj. R ² (%)	79.69	79.95	79.98	80.14	65.09
F-statistics	16.96 (0.000)	12.27 (0.000)	7.14 (0.000)	4.71 (0.000)	11.94
P-value					
Obs	8490	8490	8490	8490	8622

This table presents the regression results for the moderating effects of environmental dynamism, product market competition, financial constraints, and the implementation of right-to-work (RTW) laws. Control variables include M-B, size, ROA, R&D, leverage, sales growth, firm age, dividends, CAPEX, state income, state income growth, state GDP per capita, and political orientation. Figures in parentheses are standard errors. ***, **, and * refer to 1%, 5%, and 10% significance levels. Definitions of variables are presented in Appendix B.

From these perspectives, more intense industry competition should be associated with higher CSR. Moreover, since our main findings establish that FMP adoption is positively associated with CSR through *corruption* and *institutional governance* channels, firms operating in (non-) FMP states may be expected to (not) prioritize CSR when faced with (lower) higher product market competition because of the combination of greater compliance and oversight costs and (lower) market discipline present in FMP states.

We use the Herfindahl-Hirschman Index (HHI) to examine the moderating effect of product-market competitiveness (e.g., Lee, Byun, & Park, 2018) on the relationship between FMP implementation and CSR. The HHI index takes into account the structure of product market competitiveness by assessing the degree of concentration in a specific industry, as follows:

$$HHI_i = \sum \left(X_j / \sum_{j=1}^n x_j \right)^2 \quad (2)$$

Where X_j denotes firm j 's sales, and i denotes industry. The HHI index is an inverse measure of competition. That is, a higher (lower) HHI index indicates a lower-level (higher-level) of competition in the product market of a certain sector. Next, we define a dummy variable equal to 1 if the HHI index exceeds the sample median and 0 otherwise. Then, we create an interaction term (*FMP × product market competition*). We present the results in Column 2 of Table 12. The significant, positive coefficient for *product market competition* indicates that lower levels of industry competition are associated with higher levels of CSR, consistent with the view that firms with greater market power use CSR to maintain legitimacy and manage stakeholder relations (Boubaker et al., 2018; Giroud & Mueller, 2011). Nevertheless, the negative, statistically significant coefficient for the interaction term *FMP × PMC* (product market competition) indicates that in low-competition environments, FMP exposure is associated with particularly low CSR. This result implies that the mechanism is attenuated in states with stronger fiscal monitoring. In such settings, firms operating in less competitive markets face weaker market discipline while simultaneously bearing higher compliance and oversight costs, leading managers to deprioritize discretionary CSR activities.

7.3. Financial constraints

Next, we examine the moderating role of financial constraints on the relationship between FMP implementation and CSR. As previously discussed, FMP represents a broad governance reform that reshapes firms' operating environment by enhancing fiscal transparency, strengthening the credibility of enforcement, and shifting firms' strategic incentives (Knust & Oesch, 2024; Nakhmurina, 2024). Our main findings provide strong evidence that FMP adoption is positively associated with CSR via *corruption* and *institutional governance* channels. However, financial constraints could undermine organizations' ability to invest in CSR, as such firms face limited internal cash flow and higher external financing costs (e.g., Benlemlih & Bitar, 2018). Thus, we conjecture that financial constraints should negatively moderate the positive effect of FMP on CSR. That is, firms in FMP states with substantial financial constraints are expected to have lower CSR than those with negligible financial constraints.

To examine the moderating influence of financial constraints, we first create the [Whited and Wu \(2006\)](#) index (WW index) of financial constraints as follows:

$$WW\ index = 0.091\ CF_{it} - 0.062\ Div_{it} + 0.021\ Lev_{it} - 0.044\ Size_{it} + 0.102\ IGrowth_{it} - 0.035\ Growth_{it} \quad (3)$$

where CF_{it} is the ratio of cash flows divided by total assets; Div_{it} refers to dividend payouts and is a dummy that is equal to 1 if a company pays a dividend and 0 otherwise; Lev_{it} represents firm leverage and is the ratio of total debts to total assets; $Size_{it}$ is company size measured as the natural log of market capitalization; $IGrowth_{it}$ refers to industry growth based on 2-digit SIC codes; and $Growth_{it}$ refers to the annual growth rate in firm sales. In terms of interpretation, companies with a lower WW index encounter fewer financial constraints, and vice versa. We also create a dummy variable equal to 1 if a company's WW index is greater than the sample median and 0 otherwise.

We present the results in the third column of [Table 12](#). We find that the key interaction term ($FMP \times financial\ constraints$) is negative and statistically significant at the 1% level (coefficient = -0.002). This reinforces our prediction that firms in FMP states and those facing strong financial constraints may lack sufficient resources to invest in CSR initiatives and, in turn, tend to have lower CSR scores than those with trivial financial constraints.

7.4. Right-to-work laws (RTW)

The United States passed the Taft-Hartley Act in 1947, which allowed all states to enact right-to-work (RTW) laws. As a result, workers are expected to receive the same benefits as those in unionized employees' collective bargaining agreements without paying union dues or joining a labor union. Labor unions typically oppose this law because it reduces their financial resources and bargaining power, thereby weakening their influence and viability ([Ahmed & Mertzanis, 2025](#); [Chava et al., 2020](#); [Nguyen & Qiu, 2022](#)). Despite heavy resistance from labor unions, 27 states have enacted RTW laws to date. [Appendix C](#) lists the US states that have implemented RTW.

Prior research demonstrates that firms strategically adjust their financial policies in response to labor bargaining power (e.g., [Heitz, Wang, & Wang, 2024](#); [Klasa, Maxwell, & Ortiz-Molina, 2009](#)). For example, [Klasa et al. \(2009\)](#) show that firms reduce cash holdings when facing strong labor unions to weaken unions' bargaining positions. This evidence suggests that labor institutions shape the extent to which firms perceive stakeholder pressure as credible and respond with real economic actions. Fundamentally, RTW therefore alters the institutional environment within which firms respond to FMP. Consistent with these views, we argue that RTW, by weakening labor bargaining power, attenuates stakeholder enforcement through the *institutional governance* channel, through which CSR enhances firms' responses to FMP. More specifically, in non-RTW states, firms' CSR engagement complements fiscal monitoring by enhancing legitimacy and mitigating labor-related enforcement risk, thereby strengthening the monitoring motive effect on firm behavior. In contrast, RTW weakens the labor-based legitimacy and enforcement mechanisms that give CSR its disciplining role, reducing the extent to which CSR amplifies firms' responses to FMP.

To test the potential moderating effect of RTW on the relationship between FMP and CSR, we construct a dummy variable equal to 1 if companies' headquarters are located in RTW states and 0 otherwise. We then generate the interaction term $FMP \times RTW\ adoption$ and re-estimate our baseline model with this interaction term included. The results are presented in Column 4 of [Table 12](#). The results indicate a positive and statistically significant interaction term at the 1% level (coefficient = 4.045). This supports our conjecture that RTW has an expected positive moderating effect on the relationship between FMP and CSR, with firms headquartered in RTW states exhibiting a stronger positive CSR response to FMP adoption than those in non-RTW states.

7.5. Geographic dispersion

In this subsection, we examine how geographic dispersion moderates the relationship between FMP implementation and CSR. Prior research shows that geographically dispersed firms face higher information asymmetry, weaker local social ties, and more complex organizational structures, all of which reduce the salience of local institutional pressures and impair firms' responsiveness to location-specific governance mechanisms ([García & Norli, 2012](#); [Shi et al., 2017](#)). Although our main results indicate that FMP adoption enhances CSR by improving fiscal transparency, enforcement credibility, and normative expectations at the local level ([Knust & Oesch, 2024](#); [Nakhmurina, 2024](#)), these effects are likely to be less pronounced for firms operating across multiple U.S. states. For such firms, exposure to heterogeneous regulatory environments and competing stakeholder demands dilutes the influence of any single state's fiscal monitoring regime, reducing its ability to shape firm-wide CSR strategies. Moreover, greater geographic dispersion increases coordination costs and managerial complexity, which may exacerbate information frictions and discourage discretionary, long-term investments such as CSR ([Godfrey, 2005](#); [Ucar & Staer, 2020](#)). Accordingly, we predict that geographic dispersion negatively moderates the relationship between FMP implementation and CSR, such that the positive effect of FMP on CSR is weaker for more geographically dispersed firms.

To proxy for geographic dispersion, we follow [García and Norli \(2012\)](#). The number of states in which a company operates, as stated in its 10-K filings, represents the degree of geographic dispersion. The number of times a U.S. state name appears in each 10-K is counted through computerized parsing of all 10-Ks submitted to the SEC between 2001 and 2020. State names are counted in the following sections: "Item 1: Business," "Item 2: Properties," "Item 6: Consolidated Financial Data," and "Item 7: Management's Discussion and Analysis." The analysis excludes companies that do not list any U.S. state names in their 10-K. Therefore, an integer in $\{1, 2, \dots, 50\}$ denotes the geographic dispersion for firm i based on its 10-K filing for fiscal year t . The greater the number of states, the

more geographically dispersed the firm. In Column 5 of Table 12, we re-estimate our baseline model by including an interaction term between our geographically dispersed measure (*GD*) and FMP. We find that the interaction term $FMP \times GD$ is negative and statistically significant at the 5% level, consistent with our prediction.

8. Concluding remarks

In this paper, we examine how state-level fiscal monitoring policy (FMP) affects firms' corporate social responsibility (CSR) performance. Prior research highlights the roles of firm characteristics, ownership structure, and national institutions in shaping CSR, yet little is known about how subnational fiscal governance influences corporate social behavior. Addressing this gap, we provide novel evidence that FMP adoption is positively and economically significantly associated with firm-level CSR. Using a difference-in-differences framework and a comprehensive sample of S&P 500 firms from 2001 to 2020, we document that firms headquartered in FMP states have higher CSR scores than those in non-FMP states. Economically, FMP implementation is associated with an approximately 2.64% increase in CSR performance.

Importantly, the primary economic contribution of this study is to advance our understanding of fiscal monitoring policy, rather than to document a new determinant of CSR per se. While CSR is a salient and economically meaningful corporate outcome, our results show that FMP, previously studied primarily in the context of public-sector governance, has significant spillover effects on private-sector behavior. By showing that FMP influences firms' CSR engagement, we identify a previously unexplored channel through which fiscal oversight reforms affect corporate decision-making and stakeholder outcomes. In this sense, CSR provides a powerful lens for evaluating the broader economic consequences of FMP.

Our findings align with two complementary mechanisms emphasized in the paper. First, FMP reduces local corruption and strengthens enforcement, thereby improving the institutional environment in which firms operate (Knust & Oesch, 2024; Nakhmurina, 2024). In less corrupt, more transparent environments, firms face stronger incentives to adhere to social norms and engage in socially responsible activities (Qian et al., 2025; Ucar & Staer, 2020). Second, beyond corruption, FMP represents a broader institutional governance reform that enhances fiscal transparency, enforcement credibility, and long-term orientation at the local level. By reshaping firms' expectations and reducing the returns to rent-seeking and political influence, FMP encourages firms to view CSR as a legitimate and efficient strategy for managing stakeholder relationships and building moral and reputational capital (Benlemlih & Girerd-Potin, 2017; Deng et al., 2013; Godfrey, 2005).

Our main findings are robust across a wide range of sensitivity analyses, including alternative CSR measures, decomposition of ESG scores into environmental, social, and governance pillars, alternative estimators, and multiple endogeneity checks. Importantly, we also examine several moderating factors that influence the strength of the FMP–CSR relationship. We find that environmental dynamism, product-market competition, financial constraints, and geographic dispersion weaken the positive effect of FMP on CSR, whereas RTW strengthens it. These findings highlight that the effectiveness of fiscal monitoring in shaping corporate behavior depends critically on firms' operating environments and institutional contexts. More specifically, the results for the moderation analyses provide some support for the myopia-based channel. Conditions that amplify short-term pressures, including high environmental dynamism, intense product-market competition, financial constraints, and greater geographic dispersion, appear to weaken the capacity of firms to commit to long-term CSR investments under FMP. In these settings, the disciplining effects of institutional governance may be dominated by managerial short-termism, leading firms to scale back CSR despite improvements in fiscal transparency and enforcement. In contrast, where such pressures are muted, the governance benefits of FMP are more likely to translate into sustained CSR engagement.

Our findings have important implications for practice and policy. For policymakers, the findings suggest that fiscal monitoring policies yield benefits that extend beyond public-sector governance by influencing corporate behavior and promoting socially responsible outcomes. For firms, our results underscore the importance of geographic location and institutional context in shaping CSR strategies, particularly for those seeking to enhance legitimacy and stakeholder trust through long-term sustainability investments.

Finally, as with all empirical research, our study has limitations that also open up rich avenues for future research. Our analysis focuses on large, publicly listed S&P 500 firms, which are highly visible and subject to substantial stakeholder scrutiny. Future research could examine whether the documented effects extend to smaller or privately held firms. In addition, while our setting focuses on U.S. state-level fiscal governance, future studies could explore whether similar spillover effects of fiscal monitoring arise in other institutional contexts. Finally, future research could investigate the impact of FMP on other corporate policies, such as investment efficiency, risk management, employee relations, and financial reporting quality, to further illuminate the broader economic consequences of fiscal monitoring reforms.

Research involving human participants and/or animals

NA

CRediT authorship contribution statement

Mohamed Shaker Ahmed: Writing – original draft, Formal analysis. **Searat Ali:** Software, Data curation. **Charilaos Mertzanis:** Writing – review & editing, Supervision, Methodology, Funding acquisition, Formal analysis. **Timothy King:** Writing – review & editing, Software, Data curation, Conceptualization.

Informed consent

NA

Declaration of competing interest

None.

Appendix A. States adopting fiscal monitoring policies

State	State name	Year	Firms	Obs	State	State name	Year	Firms	Obs
AL	Alabama		2	40	MT	Montana		0	0
AK	Alaska		0	0	NE	Nebraska		2	40
AZ	Arizona		5	99	NV	Nevada	2015	3	60
AR	Arkansas		3	60	NH	New Hampshire	Before sample period	0	0
CA	California		71	1420	NJ	New Jersey	Before sample period	15	300
CO	Colorado	2013	9	180	NM	New Mexico	2012	0	0
CT	Connecticut	Before sample period	14	280	NY	New York	2013	50	1000
DE	Delaware		1	20	NC	North Carolina	Before sample period	17	340
DC	District of Columbia		2	40	ND	North Dakota		0	0
FL	Florida	2001	15	300	OH	Ohio	2016	21	420
GA	Georgia		17	340	OK	Oklahoma		4	80
HI	Hawaii		0	0	OR	Oregon	2015	2	40
ID	Idaho		2	40	PA	Pennsylvania	2014	18	360
IL	Illinois		34	680	RI	Rhode Island	2016	4	80
IN	Indiana		8	160	SC	South Carolina		0	0
IA	Iowa	Before sample period	1	20	SD	South Dakota	Before sample period	0	0
KS	Kansas		1	20	TN	Tennessee	2014	20	180
KY	Kentucky	Before sample period	3	60	TX	Texas		46	920
LA	Louisiana	2014	3	60	UT	Utah		2	40
ME	Maine		1	20	VT	Vermont		0	0
MD	Maryland	Before sample period	7	170	VA	Virginia	2017	18	360
MA	Massachusetts		20	400	WA	Washington	Before sample period	13	260
MI	Michigan	2002	11	220	WV	West Virginia		0	0
MN	Minnesota	Before sample period	14	280	WI	Wisconsin		7	140
MS	Mississippi		0	0	WY	Wyoming		0	0
MO	Missouri		9	180					

Source: [Nakhmurina \(2024\)](#) and [Knust and Oesch \(2024\)](#).

This table shows the states that have adopted fiscal monitoring policies and the corresponding number of firms.

Appendix B

Variable	Definition
CSR	The overall CSR company score employing the self-reported information in the environmental, social, and governance components.
Fiscal monitoring	The adoption of fiscal monitoring policies by a U.S. state and measured as a dummy that equals 1 if a company's headquarters is located in a state adopting the fiscal monitoring policies and zero otherwise.
MB	The ratio of market to book ratio and it captures firm growth opportunities. Specifically, computed as the ratio of market value of equity to book value of equity (Compustat: prcc_f × csho / ceq).
Size	The natural log of company's market capitalization in year t . (Compustat: $\log(\text{prcc_f} \times \text{csho})$).
ROA	The return on assets and is computed as the ratio of earnings before interest and taxes to total assets. (Compustat: ebit / at).
R&D	The ratio of R&D expenditures to total assets. (Compustat: xrd / at).
Leverage	The ratio of total debt to total assets in year t . (Compustat: (dlc + dlta) / at).
Sales growth	The percentage change in annual sales. (Compustat: $(\text{sale}_t - \text{sale}_{t-1}) / \text{sale}_{t-1}$).
Firm age	The natural log of the number of years since a firm has been publicly listed.
Dividends	A dummy that is equal to one if a firm pays dividends and zero otherwise.
CAPEX	The ratio of capital expenditures to total assets. (Compustat: capx / at).
State income	The natural log of state income.
State income growth	The percent of change in annual state income.
State GDP per capita	The natural log of state GDP per capita.
Environmental dynamism	The standard deviation (volatility) of yearly industry sales over a five-year period.
Product market competition	We used a Herfindahl-Hirschman Index (HHI). See section 7.2 for more details.
Financial constraints	The Whited and Wu (2006) index (WW index) of firm-level financial constraints.

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Variable	Definition
KZ index	A proxy for financial constraints that is developed by Kaplan and Zingales (1997) , computed as: $-1.002(ib + dp)/at + 3.139(dlc + dltd)/at - 39.368 dvt/at - 1.315 che/at + 0.283 \times \text{Tobin's } Q$, where $\text{Tobin's } Q = (at - ceq + prcc_f \times csho) / at$. Higher values indicate greater financial constraints.
Right to work laws	A dummy variable that is one if a firm is headquartered in an RTW state and zero otherwise
CEO age	The age of firms' CEOs.
CEO gender	A dummy that equals 1 if the CEO is female and zero otherwise.
CEO education (MBA)	A dummy that equals 1 if the CEO holds an MBA degree and zero otherwise.
CEO education (PhD)	A dummy that equals 1 if the CEO holds a PhD degree and zero otherwise.
External CEO	A dummy variable that takes a value of one if the CEO is appointed from outside the company and zero otherwise.
CEO tenure	The number of years a CEO has held the office.
Political orientation	The percentage of votes the Democratic presidential candidate received in the most recent election in the state where the company is based is known as political orientation, following Di Giuli and Kostovetsky (2014) . Data on political orientation are collected from https://uselectionatlas.org/

This table presents the definitions of all main study variables.

Appendix C. Timeline for states adopting the RTW laws in the United States

State	State name	Year RTW	State	State name	Year RTW
AL	Alabama	1953	MT	Montana	
AK	Alaska		NE	Nebraska	1947
AZ	Arizona	1947	NV	Nevada	1952
AR	Arkansas	1947	NH	New Hampshire	
CA	California		NJ	New Jersey	
CO	Colorado		NM	New Mexico	
CT	Connecticut		NY	New York	
DE	Delaware		NC	North Carolina	1947
DC	District of Columbia		ND	North Dakota	1948
FL	Florida	1943	OH	Ohio	
GA	Georgia	1947	OK	Oklahoma	2001
HI	Hawaii		OR	Oregon	
ID	Idaho	1986	PA	Pennsylvania	
IL	Illinois		RI	Rhode Island	
IN	Indiana	2012	SC	South Carolina	1954
IA	Iowa	1947	SD	South Dakota	1947
KS	Kansas	1958	TN	Tennessee	1947
KY	Kentucky	2017	TX	Texas	1947
LA	Louisiana	1976	UT	Utah	1955
ME	Maine		VT	Vermont	
MD	Maryland		VA	Virginia	1947
MA	Massachusetts		WA	Washington	
MI	Michigan	2013	WV	West Virginia	2016
MN	Minnesota		WI	Wisconsin	2015
MS	Mississippi	1960	WY	Wyoming	1963
MO	Missouri				

Source: [Chava et al. \(2020\)](#) and [Nguyen and Qiu \(2022\)](#).

This table presents a timeline of states' adoption of right-to-work (RTW) laws in the United States.

Appendix D. Entropy balancing statistics of matched samples

Variable	Before weighting					
	Treat			Control		
	Mean	Variance	Skewness	Mean	Variance	Skewness
M-B	1.587	2.541	2.398	1.835	3.372	2.063
Size	23.7	2.261	-1.933	23.12	1.329	-3.112
ROA	0.093	0.008	0.248	0.099	0.009	0.179
R&D	0.021	0.002	2.814	0.021	0.002	2.923
Leverage	0.699	0.210	4.666	0.660	0.271	4.781
Sales growth	0.421	0.184	29.66	1.067	0.292	27.55
Firm age	25.46	14.36	-0.469	19.32	11.34	0.036
Dividend	0.851	0.126	-1.976	0.701	0.209	-0.881

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Variable	Before weighting					
	Treat			Control		
	Mean	Variance	Skewness	Mean	Variance	Skewness
Variable	After weighting					
	Treat			Control		
	Mean	Variance	Skewness	Mean	Variance	Skewness
M-B	1.587	2.541	2.398	1.587	2.541	2.398
Size	23.7	2.261	−1.933	23.7	2.261	−1.933
ROA	0.093	0.008	0.248	0.093	0.008	0.248
R&D	0.021	0.002	2.814	0.021	0.002	2.814
Leverage	0.699	0.210	4.666	0.699	0.210	4.666
Sales growth	0.421	0.184	29.66	0.421	0.184	29.66
Firm age	25.46	14.36	−0.469	25.46	14.36	−0.469
Dividend	0.851	0.126	−1.976	0.851	0.126	−1.976

This table presents entropy-balancing statistics for matched samples, based on the full number of available observations. Definitions of variables are presented in Appendix B.

Appendix E. Propensity score matching estimates of matched samples

Variable	Unmatched sample			
	Treat	Control	Difference	t-statistics
M-B	1.702	1.676	0.025	2.92***
Size	23.783	23.601	0.182	5.33***
ROA	0.101	0.095	0.006	2.19**
R&D	0.010	0.026	−0.015	−11.76***
Leverage	0.765	0.642	0.122	8.50***
Sales growth	0.490	0.907	−0.417	−2.15**
Firm age	24.822	23.069	1.753	4.90***
Variable	Matched sample			
	Treat	Control	Difference	t-statistics
M-B	1.702	1.701	0.001	0.95
Size	23.783	23.751	0.032	−1.11
ROA	0.101	0.101	0.000	0.92
R&D	0.010	0.011	−0.001	−1.25
Leverage	0.765	0.762	0.003	1.50
Sales growth	0.490	0.509	−0.019	0.42
Firm age	24.822	24.711	0.111	1.43

This table presents propensity score matching estimates, based on the full number of available observations. Definitions of variables are presented in Appendix B.

Data availability

Data will be made available on request.

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