

Nakhmurina, Anya

Working Paper

Does Fiscal Monitoring Make Better Governments? Evidence from US Municipalities

Working Paper, No. 284

Provided in Cooperation with:

George J. Stigler Center for the Study of the Economy and the State, The University of Chicago
Booth School of Business

Suggested Citation: Nakhmurina, Anya (2018) : Does Fiscal Monitoring Make Better Governments? Evidence from US Municipalities, Working Paper, No. 284, University of Chicago Booth School of Business, Stigler Center for the Study of the Economy and the State, Chicago, IL

This Version is available at:

<https://hdl.handle.net/10419/262686>

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Stigler Center

for the Study of the Economy and the State

**Does Fiscal Monitoring Make Better Governments?
Evidence from US Municipalities**

Anya Nakhmurina

Booth School of Business, University of Chicago

November 2018

New Working Paper Series No. 29

Stigler Center for the Study of the Economy and the State
University of Chicago Booth School of Business
5807 S Woodlawn Ave
Chicago, IL 60637

Does Fiscal Monitoring Make Better Governments? Evidence from US Municipalities*

Anya Nakhmurina[†]

November 8, 2018

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Abstract

I study the effect of state fiscal monitoring on municipal governance. I focus on governance outcomes related to financial reporting quality, local corruption, political entrenchment, and the financial soundness of municipalities. I exploit the staggered adoption of fiscal monitoring policies, which entail a regular review of municipal financial reporting for signs of fiscal distress. I find that the introduction of monitoring policies is associated with an increase in proxies for reporting quality, a decrease in corruption convictions, and a reduced likelihood of reelection of incumbent politicians. Consistent with the intended purpose of state monitoring, I find evidence consistent with the financial health of municipalities improving following the initiation of state monitoring, as measured with financial statement-based ratios. Collectively, my results are consistent with state fiscal monitoring improving several important aspects of municipal governance.

*I am grateful for the thoughtful guidance of the members of my committee: Hans Christensen, Mark Maffett, Douglas Skinner and Abbie Smith (chair). I benefited from helpful comments and suggestions by Eliot Abrams, Phillip Berger, Matthias Breuer, Jung Ho Choi, Christine Cuny, Pingyang Gao, Anya Kleymenova, Oleg Kiriukhin, Alexey Khazanov, Sehwa Kim, Christian Leuz, Michael Minnis, Maximillian Muhn, Valeri Nikolaev, Rimmy Tomy, and Anastasia Zakolyukina, as well as the workshop participants at the University of Chicago and the New Economic School. I also thank Matthew Cook (Pew Charitable Trusts), Vincent Reitano (Government Finance Officers Association), Rachel Leven (Better Government Association), Crystal Dorsey (Colorado Office of the State Auditor), Andy Nielsen (Deputy Auditor of State, Financial Audit Division, Iowa), Steven Kraemer and Ernie Summerville (both at the Office of Louisiana Legislative Auditor), Ed Burgess and Rick Chasney (both at the Office of the New York State Comptroller) for helpful discussions about institutional details. I thank Jung Sakong for sharing data from ourcampaigns.com. Access to the local corruption data used in this research was secured as a result of my appointment as TRAC Fellow at the Transactional Records Access Clearinghouse (TRAC) at Syracuse University. I gratefully acknowledge support from the Bradley Fellowship awarded for this paper by the Stigler Center for the Study of the Economy and the State, and from the Fama-Miller Center for Research in Finance, the University of Chicago Booth School of Business. The online appendix is available [here](#). All errors are my own.

[†]Booth School of Business, the University of Chicago. Email: anakhmurina@chicagobooth.edu

1 Introduction

I study how state-level monitoring affects the governance of cities, towns, villages, and counties (“local governments” hereafter). Local governments play an important role in the economy and society by providing essential services such as infrastructure, public safety, and education. In doing so, local governments are allocating 23 percent of total governmental resources, or around 8 percent of the US GDP.¹ Although the quality of municipal governance over these resources can have a significant economic and societal impact, it remains largely unexplored. Anecdotal evidence points to a variety of governance failures such as reporting opacity, corruption, entrenchment of elected officials, and financial mismanagement.

To study the consequences of state oversight for local governance, I focus on state-level fiscal monitoring policies. Currently, 23 states have policies designed to keep track of the fiscal conditions of the local governments in the state and to detect local financial distress (Urahn et al., 2016). To assess the fiscal health of municipalities, relevant state offices within monitoring states create and use a range of summary indicators. Fiscal monitoring is usually done by the state auditor’s office, state comptroller’s office or a separate state unit dedicated to local governments. As an input to this analysis, most states use previously audited municipal financial statements, and some states also use unaudited financial reports and budgets of local governments.

State fiscal monitoring can serve as a mechanism to align the actions of local officials with the interests of their constituents. Fiscal oversight can discipline local officials by increasing the likelihood that mismanagement is detected. In addition, fiscal monitoring can potentially enhance decision-making if it results in a better measurement of the underlying economic positions of the local governments. However, it is plausible that state monitoring will not have significant effects if state officials are not motivated to monitor well, or if they make errors and classify distressed local governments as healthy, or healthy local governments as distressed (Spreen and Cheek, 2016). The disciplining effect can also be diminished if states cannot commit to penalize local officials by allowing local governments to fail as states expect voters to hold states accountable for municipal distress. Hence, the effect of state fiscal monitoring policies on the governance of municipalities is an open empirical question.

Although the accounting literature provides ample evidence that monitoring by various economic agents plays a key role in corporate governance (Becht et al., 2003; Core et al., 2003; Larcker et al., 2011), extrapolating these results to municipalities is challenging. The municipal setting fundamentally differs from the corporate setting in that the market forces that generate demand for monitoring are negligible. Compared to corporate shareholders,

¹In 2015, local spending was around \$1.5 trillion, and state spending was \$1.3 trillion (Urban Institute). Federal spending was \$3.7 trillion (Congressional Budget Office report). US GDP was \$18.2 trillion in 2015 (US Bureau of Economic Analysis).

voters are relatively unsophisticated, do not have a direct financial stake in local government, and are subject to free-rider problems. Conversely, relative to an average voter, state governments have more resources and potentially better expertise in accounting and finance.² Moreover, states potentially have an incentive to prevent local fiscal distress if they expect that voters will hold the state accountable for its consequences. Indeed, municipal distress can have negative implications for the state economy and disrupt the provision of essential services (Spiotto et al., 2012; Bomey, 2016). Therefore, state officials can have direct incentives to monitor local governments.

I hypothesize that state fiscal monitoring can improve municipal governance quality across four dimensions: quality of financial reporting, local corruption, entrenchment of local politicians, and local financial soundness. Specifically, I examine the effect of fiscal monitoring on financial reporting quality because reporting quality can proxy for both external transparency (Cuny et al., 2018) and internal information quality (Gallemore and Labro, 2015). I predict that fiscal monitoring can improve the timeliness and the accuracy of reporting if these characteristics are useful in accessing municipal fiscal health. Moreover, I study the effect of fiscal monitoring on corruption and political entrenchment because their occurrence could imply that local officials are abusing public office for private gain (Gans-Morse et al., 2018). I conjecture that state monitoring can deter local corruption if enhancements in reporting quality increase the likelihood that malfeasance can be detected by state monitors, local employees, or other external parties. I predict that state oversight can decrease incumbent reelection chances if local media and political opposition can more easily access and disseminate facts that can hurt political incumbents. Furthermore, I study the effect of fiscal monitoring on fiscal stability since it is likely that well-run municipalities should also be fiscally healthy. I predict that fiscal monitoring can improve municipal fiscal health if local officials make better decisions as a result of being disciplined by the mechanisms described above, or if they better understand the underlying economic position of their municipalities.

To identify the effects of state-level fiscal monitoring policies on local governments, I exploit the variation in several governance measures at the local government level. Ten states implemented fiscal monitoring at different points in time over my sample period, providing me with a quasi-experimental setting to explore the impact of state oversight. This staggering allows me to alleviate concerns that my results are driven by unrelated concurrent economic events or institutional changes. Specifically, I use a generalized difference-in-differences design to estimate the effects of fiscal monitoring. My specifications include local government and year fixed effects to absorb potentially confounding variation in the dependent variables.

I collect, obtain, and combine several novel datasets for my empirical analyses. Among others, my data include the financial statement information from Municipal Atlas, a new

²This expertise likely resides within the office of the state auditor or the state comptroller, who are responsible for fiscal monitoring in states that adopted the policy.

country-wide municipal database that has recently become available. I collected filing delays from the Electronic Municipal Market Access, a continuous disclosure portal for the issuers of the municipal securities. Because election data for US local governments are not readily available, I use a novel dataset that was recently obtained by collecting data from ourcampaigns.com, a crowd-sourced website that contains information about local political races. I describe other data sources further in the paper.

I document improvements in empirical measures of reporting quality, corruption, political entrenchment, and fiscal health following the introduction of fiscal monitoring policies. Consistent with improvements in reporting quality, I find that once fiscal monitoring is introduced, filing delay decreases by 40.7 days, the incidence of material weaknesses in internal controls declines by 7 percent, and the incidence of restatement goes down by 16 percent.³ Supporting the hypothesis that fiscal oversight can deter corruption, I find that upon the adoption of fiscal monitoring, the number of corruption convictions per the US Attorney’s Office decreases by 2.5, which represents 21 percent of the sample standard deviation. I also find that the likelihood of incumbent reelection decreases by 8 percent, or 23 percent of the sample standard deviation. Consistent with financial reporting playing a role in the decrease of political entrenchment, incumbent reelection failures are especially pronounced in local governments with poor reporting in the pre-adoption period.

To test the effect of state oversight on the fiscal stability of municipalities, I examine a set of fiscal health ratios (or approximations thereof) that are most often used to assess fiscal health in the fiscal monitoring process. I find that fiscal health ratios react in the positive direction following the adoption of fiscal monitoring policies. For example, the ratio of current assets to total liabilities increases by 0.14, and unrestricted fund balance increases by 0.08.⁴ I also find that whereas local governments’ expenditures significantly decrease, revenues remain unchanged. Taken together, these results present preliminary evidence that fiscal monitoring can induce improvements in operational efficiency, as local governments can easily control expenses, however, it is much harder for them to control revenues.⁵ I acknowledge the validity of an alternative interpretation whereby local officials manipulate the reported numbers to make their municipality seem fiscally healthy. In any case, the results are consistent with local officials reacting to fiscal monitoring by paying attention to the assessment of fiscal health ratios.

Consistent with my main results, I document that municipal bond markets recognize the positive governance benefits induced by fiscal monitoring. Offering yield spreads of the municipal bonds issued by the treated local governments decrease by 2 basis points (8 percent

³The latter two results represent 15 percent and 43 percent of the corresponding sample standard deviations.

⁴These results represent 11 percent and 23 percent of the corresponding sample standard deviations.

⁵The major sources of local governments’ revenues are transfers and local taxes, which are often capped by the states.

of the sample standard deviation) as compared to local governments that are not monitored. These results are consistent with fiscal monitoring decreasing local borrowing costs.

An important concern with the above tests is that the adoption timing of fiscal monitoring policies is endogenous, and therefore my results are driven by unobserved characteristics rather than the effects of fiscal monitoring (Ball, 1980). For example, states can introduce fiscal monitoring in response to a public scandal involving an unexpected municipal bankruptcy, and at the same time, local governments can react to the same scandal by improving their governance characteristics (Leuz and Wysocki, 2016; Hail et al., 2018). To address this concern, I perform a border analysis by running the generalized difference-in-differences regressions on the sample of local governments located at the border of monitoring and non-monitoring states. Because economic shocks (e.g., public outcry) are unlikely to be confined within the state borders, border analysis is less prone to the concern that such shocks are behind my results. Using a sample of local governments situated at the border, I find that reporting quality, elections, and financial results that are generally in line with my main results, mitigating the concern that results could be driven by public outrage.

In an ideal but impossible experiment, local governments would be randomly assigned to the fiscal oversight within the monitoring states. In the absence of such an experiment, I use school districts as an alternative control group within the monitoring states. School districts are located in the same geographical areas as local governments and have the same outcome variables that assess reporting and fiscal health. At the same time, school districts are unlikely to be affected by state-level fiscal monitoring. First, such monitoring is directed at local governments, not at school districts. Second, school districts are usually under higher scrutiny than local governments (e.g., from the state education departments). Therefore, school districts are unlikely to be significantly affected by spillovers from fiscal monitoring. I exploit this institutional fact and perform a difference-in-differences analysis by interacting a school district indicator with a fiscal monitoring adoption indicator in my reporting quality and fiscal health regressions. Supporting my prior inferences, I find that compared to school districts, monitored local governments experience improvements in both reporting quality and fiscal health measures.

The first contribution of this paper is establishing the real effects of state fiscal monitoring, and documenting of an association between state oversight and local corruption, political contestability, and fiscal stability. Even though prior literature documents that real effects of accounting are present in the municipal setting, the real effects of monitoring mostly remain unexplored. For example, Naughton et al. (2015) show a relation between pension accounting rules and higher future labor costs, and Costello et al. (2017) discover that states respond to strict balanced-budget requirements with real earnings management. Most related to my paper is a study by Spreen and Cheek (2016), who investigate the fiscal consequences of Michigan’s monitoring experiment but do not find significant results. This paper adds to

this literature by first tracing the effect of state-level fiscal monitoring policy to several key dimensions of local municipal governance.

Second, I also contribute to the literature that explores the capital market outcomes and the reporting quality effects of municipal regulations. So far, the literature has mostly studied the consequences of GAAP disclosure regulations (Gore, 2004; Baber and Gore, 2008), the effects of implementation of an online repository for municipal filings (Cuny, 2018), and the effects of states granting bankruptcy access (Gao et al., 2017). I add to this literature by showing that fiscal oversight policies impact reporting quality and the cost of municipal capital.

Third, I contribute to the literature that studies how municipal accounting affects politics by providing evidence that state oversight can decrease political malfeasance and deter elections of entrenched politicians to the local office. Prior literature has shown that political connections to federal representatives are related to the poor stewardship over public resources (Cuny et al., 2018) and that electoral incentives lead to manipulations in states' accounting reports (Kido et al., 2012).

Lastly, I contribute to the literature that studies the governance effects of monitoring. The prior literature documents that monitoring by various economic agents can improve corporate governance (Shleifer and Vishny, 1997; Becht et al., 2003). Moreover, a large body of literature on corporate disclosure regulation (e.g., Leuz and Wysocki, 2016) hints that when the market forces are strong, it might be efficient for a central planner to mandate disclosure of information and leave monitoring to the entity's stakeholders. However, this literature does not speak to how monitoring can be designed in a setting where market forces are relatively weak. My evidence suggests that in such setting centralized monitoring could be an effective way to align managerial incentives with the best interests of the entity's stakeholders.

One of the limitations of this paper is that it does not currently explore the mechanisms through which some of the documented effects operate. I aim to investigate these channels in future work. For example, it would be interesting to explore to what extent local media contributes to the decrease in local political entrenchment. I also plan to assess if local officials manipulate the financial numbers reported by examining the ability of the fiscal health ratios to explain subsequent defaults. Moreover, I acknowledge that some of the channels are unlikely to ever be empirically disentangled. In particular, it is likely impossible to separate the disciplining effect of state-level fiscal monitoring from improved local decision-making resulting from better measurement of underlying economic positions.

2 Municipal Governance, Role of States, Fiscal Monitoring Policies

2.1 Municipal Governance: Definition

Researchers in accounting and finance think about governance in profit-maximizing corporations as mechanisms designed to mitigate agency problems that arise as a result of separation between ownership and control. For example, Shleifer and Vishny (1997) defined corporate governance as “the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.” In this section, I define the municipal governance and highlight the differences between corporate setting and municipal setting. As I discuss, these differences make extrapolating findings from the corporate governance literature to the municipal governance challenging.

I define municipal governance as a set of mechanisms that align the actions of local officials with the interests of their constituencies. I think about these mechanisms very broadly. To my mind, municipal governance includes (but is not limited to) mechanisms that operate through incentive alignment, managerial learning, and election of better municipal managers.

The municipal setting fundamentally differs from the corporate setting in that the market forces that generate demand for monitoring are potentially negligible. In the corporate setting, shareholders recognize the managerial agency problem and demand systems that create profit-maximizing incentives for the executives (Shleifer and Vishny, 1997). As a result, corporate governance mechanisms arise. For example, firm executives are subject to the monitoring activities by institutional shareholders, boards of directors, and analysts, and are disciplined by executive compensation contracts (Becht et al., 2003; Core et al., 2003). In addition, in market of corporate control stock ownership disciplines under-performing managers (Becht et al., 2003).

Conversely, municipal constituents do not have financial “skin in the game.” Unlike holding shares, paying taxes does not result in ownership in the municipality. Moreover, monitoring of the local government’s activities is potentially costly, because it requires an understanding of the governmental accounting principles and dealing with delayed financial reports. The monitoring costs can be exacerbated by a relative unsophistication of the voters. The uncertain benefits together with high costs of monitoring can potentially create free-riding problems.⁶ Moreover, performance of municipal officials is potentially rarely assessed. As opposed to being continuously evaluated by sophisticated investors and disciplined by the market price, governmental managers are elected to the office at regular but infrequent time intervals. In addition, the compensation of the municipal managers typically consist of a wage and does

⁶Similarly, unlike corporate debtholders, investors in municipal debt are mostly households (MRSB, 2017). Municipal bondholders have low interest in regular monitoring, because rated municipal bonds have had a remarkably low historical default rate (Moody’s, 2014). Moreover, municipal bondholders may expect the state to step in and bail out troubled municipalities (Chirinko et al., 2018).

not include incentive-based pay (Enikolopov, 2017).

Another core difference between corporations and local governments is in their objective function. Whereas the objective of a firm, profit maximization, is relatively straightforward, the objective of the government is to maximize the public good, which is inherently more vaguely defined. In terms of measurement, corporate performance can be assessed by relatively objective and timely measures such as returns and bottom line numbers. By contrast, measuring the public good objectively is difficult as different groups of citizens likely think about welfare differently. Public good can be estimated by using variables such as quality of infrastructure, public safety, education, local GDP per capita, life expectancy, and overall happiness of citizens. The complexity of performance measurement can potentially make evaluating managerial performance in the governmental setting difficult, and exacerbate agency problems.⁷

2.2 Role of state oversight in municipal governance

Ex ante, the extent to which state fiscal oversight can mitigate governance problems is uncertain. On the one hand, one can imagine that increased state oversight can both directly and indirectly discipline local officials, and educate them about optimal fiscal management. On the other hand, fiscal monitoring might not affect governance for many reasons. In this subsection, I discuss both arguments in detail.

Fiscal monitoring can improve governance in several ways. First, state scrutiny of financial reporting can directly impact municipal governance. For example, state monitoring can potentially increase demand for better reporting and thus can impose a disciplining effect by increasing the detection probability of mismanagement, internal control breaches, and corruption. Moreover, states can provide local governments with feedback on their fiscal position and reporting as a part of monitoring process. Local officials can learn from this feedback and become better in fiscal management and in preparing financial reporting.

Second, municipal governance can improve as a result of increased monitoring by economic agents other than the state if fiscal monitoring enhances quality of available information about local governments. Indeed, a broad set of economic agents can benefit from more transparent reporting. For example, local media sheds light on municipal affairs by scrutinizing local financial statements (Snyder and Stromberg, 2010; Gao et al., 2018). During local elections, political opponents use municipal performance metrics to illustrate governance drawbacks of the incumbent politicians (Baber, 1990). Both media and politicians can participate in local governance by informing voters. Although voters are unlikely to monitor financial statements directly (Zimmerman, 1977), they can factor in the information produced by other agents

⁷Consistent with this, the research on the municipal performance measures discusses very vague definitions of internal performance. Moreover, it appears that less than 40 percent of local governments are using meaningful performance measures in the decision processes (Poister and Streib, 1999).

when they participate in local elections (Ingram and Copeland, 1981; Baber, 1983; Baber et al., 2013).

Fiscal monitoring policies may not affect governance for a few reasons. First, the relationship between the state and its local governments is likely subject to the soft budget constraint problems (Maskin, 1996). In other words, states cannot commit to letting municipalities fail because of legal reasons or if states expect to be accountable by voters in the event of municipal bankruptcy. Therefore states might not be able to discipline local elected officials based on the signal produced by fiscal monitoring. Second, oversight by the state can crowd out monitoring by other economic agents, and thus not improve governance. Third, oversight by the state may not be of serious concern to municipal managers whose careers depend on the results of regularly held elections that are determined by the views of the citizens that are not necessarily as sophisticated as investors in firms (Zimmerman, 1977). Moreover, factors other than fiscal stability (e.g., ideological positions) can play a role in determining elections results. Thus, the extent to which monitoring by the state could incentivize municipal management to be better in governing is unclear.

Fourth, it can be difficult for state officials to recognize what is best for local governments. Therefore, introduction of fiscal monitoring can create tensions between a local government and a state, especially if local officials think the state is overstepping its bounds. Local officials can feel they can detect fiscal issues faster than the state (Urahn et al., 2016) and that independence from the state can potentially help local governments to recover from negative economic shocks faster (Daniel et al., 2018). Moreover, if the state officials make errors and classify distressed local governments as healthy, or healthy local governments as distressed, then monitoring is unlikely to have any positive effects (Spreen and Cheek, 2016).

Even when monitoring detects fiscal problems, adjusting the municipal financial decisions could be politically difficult, especially in the short term. Relatedly, if the financial problems are severe, detection might not be enough to solve them. In this case, some form of fiscal assistance might be needed.

2.3 Institutional details: Fiscal Monitoring Policies

To study the implications of state fiscal oversight over local governments, I use the introduction of fiscal monitoring policies (FMPs) by US states. These policies require an annual review of the municipal financial statements by the relevant state office (usually state auditor, state comptroller, or a unit specifically dedicated to local governments). The purpose of FMP is to detect local fiscal distress. Specifically, the monitoring states assess the fiscal health of municipalities by creating and using a range of summary indicators. As an input for this analysis, most states use previously audited (by a CPA firm or by a state auditor) financial statements, and some states also use unaudited financial reports and budgets. Although

most states routinely collect documents such as financial reports and budgets from local governments, only 23 states analyze this information under FMPs. Ten monitoring states adopt FMP in my sample period, 2009-2017 (Urahn et al., 2016).

The ultimate goal of FMP is to prevent fiscal crises, or at least to mitigate their severity. States are interested in preventing local fiscal crises for several reasons. First, states are interested in a continuous supply of public services that are usually provided by the local governments, such as education, public safety, and collection of trash. States care about the provision of public services (e.g., trash collection) because the absence of these services causes citizens' disaffection, creating political problems for state politicians. Needless to say, fiscal distress constrains local governments, impeding the provision of these services. Next, fiscal distress that culminates with a Chapter 9 bankruptcy can be costly for the state, in both monetary and reputation terms. In addition, states might want to detect fiscal problems to be able to stop distress from spreading from one local government to another. Moreover, fiscal distress can spill over to firms, causing economic distress, especially in poorly governed municipalities (Colonnelli and Prem, 2017; Parsons et al., 2018). Finally, FMP increases states' understanding of local fiscal positions. Better information about local finances might help to allocate state transfers more efficiently, and to ensure they are appropriately used.

Studying regulations imposed by states is important because states are the main regulators of their local governments. State authority in deciding key regulatory issues is secured under the Tenth Amendment of the US Constitution: “[T]he powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.” For example, it is up to US states to decide if local governments have to comply with GASB’s GAAP standards, perform annual audits, levy taxes, or promulgate requirements surrounding municipal bond issuances (Feldstein and Fabozzi, 2008).

In addition, unlike in the private sector, the federal agencies have limited regulatory scope over municipal reporting. Historically, Congress exempted municipal securities from most provisions of the federal Securities Exchange Act of 1934 because of the perceived absence of abusive practices, the predominance of institutional investors,⁸ and federal-state comity (Feldstein and Fabozzi, 2008). Further, municipal issuers were exempt from the provisions of the Sarbanes-Oxley Act.⁹ As a result, periodic reporting provisions of the securities laws that require SEC registrants to file quarterly and annual reports and the provisions that require SEC registrants to maintain reliable internal controls and accurate books and records do not apply to state or local governmental issuers. The same is true of SEC Regulations S-X and S-K, which provide substantial guidance on the form and the content of financial statements and other information filed with the SEC (Feldstein and Fabozzi, 2008). Overall, federal agencies

⁸At the time.

⁹ “[R]eferences to rules of the Municipal Securities Rulemaking Board ... shall not apply,” The Sarbanes-Oxley Act of 2002 (Pub.L. 107204, 116 Stat. 745, enacted July 30, 2002)

have two main regulatory powers over local governments: SEC and MRSB have broker-dealer regulation, and the SEC has the power to enforce antifraud provisions of the securities laws. The rest is up to states.

2.4 FMP and municipal governance outcomes

In this paper, I hypothesize that state fiscal monitoring can improve municipal governance across four dimensions: quality of financial reporting, local corruption, entrenchment of local politicians, and local financial soundness. I choose these variables as my outcome measures for the following reasons. First, I focus on financial reporting quality because reporting quality can proxy for both external transparency (Cuny et al., 2018) and internal information quality of the local government (Gallemore and Labro, 2015). Second, I study the effect of fiscal monitoring on corruption and political entrenchment because their occurrence can imply that local officials are abusing public office for private gain (Gans-Morse et al., 2018). Third, political entrenchment could signal poor accountability of the local government. Fourth, I examine the effect of fiscal monitoring on fiscal stability since it is likely that well-run municipalities should also be fiscally healthy. Besides, fiscal stability is the ultimate goal of the state oversight (Urahn et al., 2016).

Figures 1 and 2 schematically describe the relationship between FMP and four governance outcomes of interest, and show that various effects of FMP are not independent but likely reinforce each other. Figure 1 portrays the potential relationship between FMP and reporting quality, corruption, and entrenchment of local politicians. As shown in the Figure 1, FMP can directly affect reporting quality and corruption. Moreover, FMP can indirectly affect reporting quality, corruption and political entrenchment. Briefly, FMP can improve reporting characteristics that are useful in accessing municipal fiscal health. Moreover, FMP can deter local corruption and decrease incumbent reelection chances if enhancements in reporting quality increase detection of private benefits consumption by state monitors, local employees, media, or other external parties.

Figure 2 shows that FMP can potentially affect municipal fiscal health via learning and disciplining channels. There are two potential learning channels. First, FMP can directly inform local officials about state's assessment of the municipal fiscal position and can provide guidance on how to evaluate fiscal health. Second, FMP can increase reporting quality, enhancing measurement of the underlying economic position of the municipality, and thus improve municipal resource allocation. In terms of disciplining, FMP can decrease corruption and deter elections of entrenched politicians into the local office. The decrease in private benefits consumption can potentially improve fiscal management, directing resources where they are most needed.

I discuss the mechanisms that can connect fiscal monitoring and governance variables

of interest in detail below, along with the description of corresponding results. Specifically, reporting quality is described in section 4, corruption in section 5, incumbent reelection in section 6, and fiscal management in section 7.

3 Data, Summary Statistics, and Identification Strategy

3.1 Data

3.1.1 Adoption dates

Table 1 presents adoption years of monitoring policies. In my sample period, 2009-2017, 23 states engaged in fiscal monitoring.¹⁰ Out of these states, 10 adopt monitoring policies in my sample period: Colorado, Louisiana, Nevada, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, and Tennessee. To collect the adoption dates, I start with Urahn et al. (2016) to identify the states that engage in monitoring, and then examine the public resources of the state auditor or state comptroller to learn when the monitoring started.

3.1.2 Reporting Quality data

I use reporting quality data from several sources. First, I calculate the filing delay, or the time it takes for the municipality to make the financial report public. To do so, I collect both the filing date and the fiscal year end from the Electronic Municipal Market Access (EMMA) over 2009-2017. EMMA is a continuous disclosure portal that was established in 2009 by Municipal Securities Rulemaking Board (MRSB). It is self-regulatory organization of municipal securities professionals. EMMA is the sole official repository for issuers' continuing disclosure documents, which are freely available to the public.

Second, I measure the informativeness of the financial statements with the data from Single Audits database that I obtained from Audit Analytics. Single audits are required for entities that receive over \$750,000 in federal funds. Specifically, fund recipients' financial statements have to be audited. In addition, the auditors have to examine whether the usage of federal funds was compliant with the conditions under which the funds were provided, and whether these allocations are in compliance with relevant regulations. Before executing a single audit, the auditor has to determine if the local government is a high-risk or low-risk auditee. High risk auditees are subject to additional scrutiny: the auditor is required to audit at least 40% (as opposed to 20% for low-risk auditees) of all federal funds received in the fiscal year. Third, I obtain data on financial reports that were subsequently restated from Atlas Municipal database, which is described in subsection 3.1.4. The definition of restatement, according to Atlas Municipal database is the inconsistency between previously reported and

¹⁰The restriction on the time period is imposed by data availability.

future reported numbers. For example, the Municipal Atlas would flag the case in which the financial numbers for the fiscal year 2016 as reported in 2016 financial statements are different from the financial numbers for the fiscal year 2016 that are reported for comparison in the 2017 financial statements.

3.1.3 Offering bond yields

I obtain the data on municipal bond offerings from the Mergent Municipal Bond Securities Database (Mergent). For each bond, Mergent contains its issue series, issuance date, maturity date, coupon rate, bond size, rating, use of proceeds (e.g., if it is a general obligation bond or a revenue bond), and whether the bond is callable or puttable. For consistency with other data sources, I restrict the data to 2009-2017. I exclude municipal bonds with a maturity of more than 100 years, a variable coupon rate, and bonds that are subject to federal taxes. I also exclude bonds that were issued in the US territories, because US territories have limited legal regulation rights as opposed to the US states. Finally, I exclude bonds that were issued by the US states themselves.

3.1.4 Financial and socio-demographic data

I obtain the financial data from Atlas Municipal database (Atlas). Atlas provides financial data for various types of local governments: counties, cities, townships, public school districts, community colleges, universities, utilities, highways, airports, and health care institutions with total debt of over \$50 million and an average of 10 years of history. Atlas obtained these data from the annual reports of the local governments. For each local government, Atlas contains data from Statement of Revenues, Expenditures, and Changes in Fund Balance, and from the Balance Sheet. The database also has information about total debt outstanding. Moreover, Atlas has gathered socio-economic data from the Census Bureau and integrated them with the financial data. This data includes population, household income, unemployment rate, college degree rate, housing value, and so on. I use these data to control for socio-economic factors in my regressions. Data from Atlas span the period of 2009-2017.

3.1.5 Corruption data

Data on corruption convictions comes from the annual Department of Justice's Report to Congress on the Activities and Operations of the Public Integrity Section. The data contains information about the number of corruption convictions per US Attorneys office over 2009-2016. The number of United States Attorneys totals 93: one for each of the 94 federal judicial districts, except for Guam and the Northern Marianas, where a single US Attorney serves both districts. I drop three US Attorney's Offices that cover US territories, which leaves me with data from ninety one US Attorney Offices. To scale the number of convictions by the

population of the federal judicial district, I obtain information about the counties covered from the US Attorney Offices websites, and construct population sizes based on the data from the 2010 US Census.

3.1.6 Election data

I obtain results of the municipal elections from the data collected from ourcampaigns.com, 2009-2017.¹¹ This website contains information about national and local races in the US. For each election, the data contains general information about the candidates, such as party affiliation, as well as the information about the election results and votes given for each of the candidates. I drop national and local judicial elections from the data, so my sample only contains elections for the city management: mayoral, city commissioner, city council, alderman, or borough president.

3.1.7 Border data

I use the Zip Code Adjacency Data Set from the Nate Hilger's¹² website to identify municipalities at the state border. This dataset contains zip codes with their distance to the closest adjacent neighboring states.

I winsorize all continuous and unbounded variables at the 1st and 99th percentiles to mitigate the impact of extreme values due to data errors. Table 1 provides the definitions of the variables that I use in my empirical analysis, as well as the corresponding data sources.

3.2 Summary statistics

Table 2 reports summary statistics of relevant local government characteristics. Panel A reports summary statistics for all local governments in my sample. An average local government has population of 86,000 people,¹³ whose average age is around 36 years, and the median household income is around \$60,000. On average, nearly 64% of citizens have a college degree, and 7% are unemployed. In terms of reporting characteristics, the mean filing delay is 334 days (around 11 months), the mean audit delay is 262 days (around 9 months). Material weakness in internal controls is found 30% of the time, local government is deemed high risk for the purposes of Single Audit 63% of the time, and the financial variables are corrected 83% of the time. On average, a US Attorney's district makes 10 corruption convictions in per year. The incumbents win 86% of the local elections where they participate, and close elections are relatively rare and occur 4% of the time. Local governments collect around \$2,250 revenues

¹¹I am very grateful to Jung Sakong for sharing these data with me.

¹²Nate Hilger is an economist who provides Zip Code Adjacency Data Set free of charge. Data can be obtained on [Nate Hilger's website](#).

¹³ $\exp(11.37) = 86,682$.

per capita, and spend around \$2,140 per capita. Mean value of Current Assets/Current Liabilities is 6.3, Current Assets/Total Liabilities is 0.85, Unrestricted Fund Balance/Liabilities is 0.36, operating margin is 0.05, and governmental activities Total Liabilities/Total Assets is equal to 0.51. An average local government in my sample issues public debt with offering yield spread of 0.21, and time to maturity of 8.7 years. These bonds are insured 16% of the time.

Panel B suggests that local governments in monitoring states are comparable in size, education, employment, and wealth to the local governments in non-monitoring states. Local governments in both state types also have similar municipal bond characteristics.

3.3 Identification Strategy

I use a generalized difference-in-differences design to estimate the effects of fiscal monitoring policies. In effect, the treatment group is the local governments in the states that recently adopted monitoring policy, and the control group is local governments in all other states. A beneficial feature of my setting is that monitoring policies were adopted by different states at different points in time. This staggering alleviates concerns that the results are driven by the unrelated economic conditions or institutional changes.

I implement the generalized difference-in-differences design by estimating the following specification:

$$Y_{it} = \beta FMP_{st} \times Post_{st} + \theta_t + \lambda_{is} + \gamma X_{it} + \epsilon_{ist}, \quad (1)$$

where i indexes the local governments operating in state s at time t . The dependent variable Y_{it} is one of the possible outcomes at the local government level. I have four main outcome categories: reporting quality, local corruption, political entrenchment, and fiscal health. The main dependent variable is $FMP_{st} \times Post_{st}$, which is an indicator variable that takes the value of 1 starting in the year t if state s of the local government i adopts the monitoring policy in time $t - 1$. Given the staggered adoption of the monitoring policies, local governments in different adopting states are treated in different points in time.

All the specifications include local government fixed effects λ_{is} as well as the year fixed effects θ_t to absorb variation in the dependent variable that results from unrelated changes in the local government and year-specific shocks. X_{it} is a vector of control variables at the local government level.

4 Reporting Quality: Predictions and Results

I predict that FMP positively affects both reliability and timeliness of municipal financial reporting. This section documents the improvements in both reporting quality characteristics

and discusses the mechanism behind this effect.

4.1 Reporting Quality: Mechanism

Reporting quality is an important characteristic of local governance. Poor reporting quality could be both a signal and a source of governance problems. In particular, poor reporting practices can result in noisy measurement of the underlying economic position of the municipality, and thus can distort allocation of governmental resources. In addition, poor reporting can incentivize corrupt behavior if it makes detecting wrongdoing more difficult. Specifically, poor reporting practices may reduce the monitoring abilities of the media, competing politicians, law enforcement, municipal bondholders, voters, and other economic agents, giving rise to malfeasance.

Reporting quality is a particularly important measure of governance in the context of local governments because the municipal reporting quality is generally not as high as the reporting quality in the commercial sector and because municipal disclosure requirements are limited. Governmental reporting has long been criticized for the lack of timeliness, voluntary adherence to GAAP, and generally for being hard to understand and even incorrect (Green, 1939; Zimmerman, 1977; Ruppel, 2005; Feldstein and Fabozzi, 2008; Novy-Marx and Rauh., 2012). Low municipal reporting quality is also reflected in my data, as described in the summary statistics section.

Nonetheless, governmental disclosures are not completely uninformative: the existing literature finds that municipal markets price information about increased and consistent disclosure (Cuny, 2016; Cuny and Dube, 2017), unfunded pension liabilities (Lekhi et al., 2017), and accounting restatements (Baber et al., 2013). Facilitated access to the municipal disclosure levels the municipal bond playing field for retail investors (Cuny, 2018). Moreover, changes in accounting could induce real effects (Naughton et al., 2015). Therefore, an improvement in quality of information provided by local governments can result in the increased oversight by governmental stakeholders, and discipline local officials.

FMP can decrease filing delays, because states are interested in detecting fiscally distressed local governments in a timely fashion. To do so, they may need up-to-date financial statements that reflect the most current underlying economic conditions. Therefore, fiscal monitoring policies by the state could increase demand for more timely reporting. Local governments are expected to respond to this demand by preparing their financial statements more quickly, resulting in decreased time to prepare and file financial reports.

Moreover, FMP can potentially reveal errors and misstatements in the reporting *ex post*, which can improve the quality of reported content *ex ante*. Detecting financial distress requires having precise information about the underlying economic conditions of local governments, increasing states' demand for a more accurate reporting. Moreover, the quality of reported

content could improve if local officials learn best reporting practices from their monitors. Indeed, many state auditors and comptrollers in the monitoring states dedicate resources to educate local government officials.

4.2 Reporting quality: Results

My ability to make causal conclusions about the consequences of FMP predicates on the parallel trends assumption. Therefore, I begin the description of reporting quality results by graphically examining the trends in quality of reporting. To do so, I estimate the model (1) replacing $FMP \times Post$ indicator by a set of 7 separate dummies, each marking one time period relative to the policy introduction year ($t=0$). I omit the indicator for period $t-1$, which serves as the benchmark period with both a coefficient and standard error of zero.

The graph for the filing delay is shown in Figure 3.¹⁴ Before the introduction of FMP, the filing delay trends appear parallel across both monitored and non-monitored local governments. However, after the introduction of FMP, the two groups diverge, with monitored local governments sharply decreasing their filing delay.

The regression results are consistent with my reporting quality predictions. The main results are reported in Table 3. In columns (1) and (2), I document improvements in timeliness of reporting. The filing delay (time between fiscal year end and the filing date) decreases by 40.7 days.¹⁵ The audit delay (time between fiscal year end and the audit date) decreases by 10.3 days. Further, columns (3)–(5) show enhancements in financial reporting reliability. $I(\textit{Material Weakness})$, the probability of an auditor detecting a material weakness in local government reporting, decreases by a relative 7 percent. The result is economically meaningful, because it represents 15 percent of a sample standard deviation of the material weakness incidences.¹⁶ $I(\textit{High Risk})$, a probability of the local government being identified as high risk, decreases by a relative 5 percent (10 percent of a corresponding sample standard deviation). $I(\textit{Restatement})$, a probability of restatement, decreases by 16 percentage points, or by 43 percent of a sample standard deviation.

Note that the sample size in Table 3 decreases from column (1) to column (5), because I take advantage of all the available data from various data sources. I estimate the regression in column (1) using the filing delays that were hand-collected from MRSB EMMA municipal portal, the largest universe of local governments in my possession. Regressions in columns (2)–(4) are estimated using the Single Audits database, which contains audit results for the subsample of local governments receiving over \$750,000 in federal funds, and thus are subject to the Single Audit regulation. Finally, I estimate the regression in column (5) using the Municipal Atlas database, which contains financial data for a subsample of local governments

¹⁴This graph is representative of other reporting quality variables analyzed in this paper.

¹⁵Computed as $(\exp(-0.11) - 1) \cdot 334.46 = 40.7$ days.

¹⁶Computed as $0.07/0.46 = 0.15$.

with more than \$50 million in municipal debt outstanding.

Overall, I take advantage of the largest local government sample in my possession in Table 3. To account for potentially confounding local-government and year-specific variation, I include local government and year fixed effects. This approach allows me to make general conclusions about the impact of state-level oversight on the quality of municipal reporting, but limits my ability to control for socio-economic characteristics of local governments.

To alleviate the concern that the socio-economic characteristics drive my results, I exploit the existent control variables in Table 4. Including controls in my regressions significantly reduces sample size, because the control variables come from Municipal Atlas, a database with the smallest number of observations. Nevertheless, the results remain qualitatively unchanged. Filing delay (time between fiscal year end and the filing date) decreases by 19.5 days, and the probability of restatement decreases by a relative 14 percent, which represents 38 percent of the sample standard deviation.

By and large, confidently disentangling the effects of the FMP on the municipal reporting characteristics from the effects driven by characteristics or events that are unrelated to FMP is difficult. For example, a reader could be concerned that my results are driven by the public response to a scandal that involves, an unexpected but outrageous bankruptcy. To address this concern, my identification strategy is to compare bordering local governments in monitoring and non-monitoring states. Because of the likely similar macroeconomic environment of the local governments situated at the border, any differences in the outcome variables are more likely attributed to the fiscal monitoring. Moreover, the analysis from the bordering subsample is even less prone to the concern that economic conditions drive my results, because economic shocks (such as public response to a scandal) are unlikely to be contained within the state borders.

I test the same regression model (1) as before, but on the sample that only includes local governments located in the twenty seven state-border pairs in which one state has fiscal monitoring, and a neighboring state which does not. I find that my inferences remain unchanged. Regressions in Table 5 indicate the filing delay decreases by 46.6 days, and audit delay decreases by 36.6 days. Similarly, probability of material weakness decreases by a relative 21 percent, probability of the high risk goes down by a relative 16 percent and the probability of the restatement decreases by a relative 8 percent.¹⁷ Collectively, these results support a causal interpretation, whereby the observed changes in reporting quality appear to be driven by the introduction of FMP.

¹⁷These results represent a decrease up to 15 percent, 35 percent and 44 percent of the corresponding standard deviations.

5 Local Corruption: Predictions and results

5.1 Local Corruption: Background

The reader may associate the phrase “public corruption” with headline stories about the FBI uncovering corruption of high-profile officials, such as the case of Rod Blagojevich, a former Illinois governor who was impeached and went to jail for soliciting bribes for political appointments.¹⁸ In reality, these stories are not representative of the majority of corruption cases. In fact, high-ranking federal and state officials constitute only around 1% of all convictions for corruption-related offenses (Cordis and Milyo, 2016).

The majority of corruption convictions are under Title 18,¹⁹ and most charges are related to any sort of embezzlement, bribery, conspiracy, false statements, and theft. Specifically, local officials are often prosecuted under the Hobbs Act. Even though the Hobbs Act was passed to combat racketeering and labor union extortion, it is often deployed against officials who obtained, “under color of right,” any property or payment to which they were not entitled. The reason for its frequent usage against local officials is that under the Hobbs Act, the prosecutorial burden to prove wrongdoing is relatively low: it suffices to prove the public official agreed to take some official action in exchange for payment as opportunities arose to do so.²⁰

Anecdotally, municipal corruption occurs due to internal control failures. For example, lack of segregation of duties played a key role in the biggest municipal fraud case. In that case, a former comptroller embezzled \$53.7 million from Dixon, IL, a city with a population of only 16,000 people. The embezzlement was going on for 20 years and was possible because the comptroller had nearly complete control over Dixon’s accounts and was responsible for both internal audit, and for contracting with external auditors. At the same time, few city employees’ duties included reviewing the city’s financial statements for any purpose.²¹

5.2 Local Corruption: Mechanism

I hypothesize that FMPs can deter local corruption via two potential mechanisms: increased expected detection by the state and increased expected detection by the local employees. Both mechanisms can operate by increasing expected costs of corruption through the improved information environment of the local government.

First, corruption can decrease if local officials expect state officials to uncover corrupt activities while assessing the fiscal health of local governments. If local officials’ perceived probability of being caught increases, they might be less likely to participate in corrupt ac-

¹⁸Blagojevich Convicted on Corruption Charges, The Wall Street Journal, June 28, 2011

¹⁹Title 18, Crimes and Criminal Procedure, can be assessed at [Office of Law Revision Counsel](#).

²⁰Criminal resource manual for US Attorneys, can be assessed at [Department of Justice website](#).

²¹For more details, visit the [Wikipedia page](#) dedicated to a former Dixon’s comptroller, Rita Crundwell.

tivities. Specifically, the increased probability of detection can increase the expected costs of consequent litigation and potential conviction. Moreover, elected officials might experience increased reputation costs. For example, mayoral incentives to embezzle municipal resources can decrease if they believe that FMP increases probability of revealing malpractices to the public and can hurt their reelection chances. This conjecture is consistent with the corruption literature (e.g., Gans-Morse et al., 2018) that concludes governmental anti-corruption audits are one of the few means of battling corruption. For example, a recent work by Avis et al. (2018) finds that local governments subject to anti-corruption audits by Brazil's government reduce corruption, and that this reduction is likely attributed to increased litigation costs.

Second, corruption can be deterred if state oversight improves the internal information environment and strengthens internal controls. Better internal information, coupled with strong internal controls, can increase the likelihood of detecting malfeasance by local government employees. Substantial information asymmetry can exist between different parties within the local government, and without good internal information, corruption and mismanagement might be overlooked. Increased usefulness, timeliness, and reliability of the internal information can reveal reporting or financial irregularities. Potentially, these irregularities can point to corrupt activities. Increases in internal information quality can make corrupt activities more visible to other local employees, which can increase the probability of detection and thus deter corrupt behavior.

Corruption and mismanagement can occur in local governments with internal control deficiencies such as the absence of the separation of duties, lack of internal authorization, verification and approval for municipal financial operations, the absence of properly designed records, and lax review of operating performance.²² Specifically, internal control weaknesses could result in inaccurate or erroneous internal information, which can make the detection of malfeasance harder. Hence, internal controls potentially strengthened by FMP can reduce the opportunities for corrupt behavior.

The managerial accounting literature has documented the importance of the internal information quality in the efficiency of the corporations. Different parties within the firm can have different information sets, and be subject to information asymmetry (Bushman et al., 1995). High quality of the internal information within the firm mitigates internal information asymmetry and improves managerial decision-making through improved managerial coordination. (e.g., Gallemore and Labro, 2015). Relatedly, the literature shows that in the corporate setting, monitoring induces managerial learning (Campbell et al., 2011).

Some of my evidence is suggestive of an improved internal information environment. The reporting quality results discussed in subsection 4.2 show that several measures of municipal financial reporting quality improved upon the introduction of state-level fiscal monitoring.

²²Evaluating Internal Controls: A Local Government Managers Guide, Government Finance Officers Association, 1996.

This increase likely improved internal information quality as well. According to the managerial accounting literature, the timeliness of financial reporting, the incidence of material weaknesses in internal controls, and the incidence of restatements could serve as proxies for internal information quality (Gallemore and Labro, 2015). Specifically, timely financial reporting can indicate high quality of internal accounting systems that are able to quickly integrate the information produced within the firm, and thus quickly close the books. As discussed above, material weakness in internal controls can result in opaque and inaccurate reporting. Moreover, restatements that occur as a result of both unintentional and intentional accounting and data errors, can introduce noise into the information environment within the firm.

5.3 Local Corruption: Results

I use the number of federal convictions for corruption-related crimes to measure the corruption across the US states. This number counts the corruption cases prosecuted by each of the US Attorney’s Offices across the country, as reported in the annual Report to Congress on the Activities and Operations of the Public Integrity Section compiled by the Department of Justice (DoJ Report).²³ Although corruption is fundamentally unobservable (Gans-Morse et al., 2018), the literature on corruption concludes the number of convictions is one of the best corruption proxies available and uses it often (e.g., Glaeser and Saks, 2006; Campante and Do, 2014).

For the purposes of this paper, the number of federal corruption convictions is a reasonably objective measure, because focusing on the federal convictions alleviates concerns that state-specific characteristics, such as the amount of resources or political biases, are driving the results. This is because this measure is produced by the activities of the Department of Justice, a federal institution that acts independently from the US States. Therefore changes in the policies of the US States is unlikely to affect the way corruption is prosecuted in the US Attorney’s Offices located in corresponding states.

As before, I start my analysis by examining trends in corruption convictions in both monitored and non-monitored local governments. To assess the assumption of parallel trends, I estimate the model (1), using the number of corruption convictions as a dependent variable, and replacing the FMP indicator with a set of seven separate dummies, each marking one time period relative to the policy-introduction year ($t=0$). I omit the indicator for period $t-1$, which serves as the benchmark period with an OLS coefficient and standard error of zero. Graphically, the parallel trends assumption seems reasonable, as shown in the Figure 4. In the pre-adoption period, the corruption conviction trends move in parallel: the difference between

²³The corruption measure aggregates state-, federal-, and local-level officials, and others involved. State and federal convictions add some noise to the extent of how much the governance improvements found could be attributed to the local governments. However, it contains a lot of relevant information, because local officials constitute a large fraction of those implicated in corruption at the level of state politics.

the slope coefficients is not significantly different from zero. However, once FMP is in effect, the trends diverge substantially, with monitored local governments experiencing significantly fewer corruption convictions.

In line with Figure 4, Table 6 shows a significant decrease in corruption convictions following the FMP introduction. The coefficient estimate in column (1) shows the number of corruption convictions per US Attorney’s district decreases by 2.5 convictions, which represents 21 percent of the sample standard deviation. To alleviate concerns that my results were driven by the base, or different population sizes of the US Attorney’s districts, I scale the dependent variable by the population of the US Attorney’s district. I obtain the population number by adding up the 2010 Census populations of counties that constitute the US Attorney’s district. The results of this regression are shown in column (2). The coefficient implies that FMP decreases corruption convictions by 0.8, which corresponds to 19 percent of the sample standard deviation.

A potential concern is that the results in Table 6 are driven not by the FMP, but by other confounding events such as anti-corruption initiatives. If the states started anti-corruption campaigns simultaneously with FMP, disentangling the effects of these two policies might be challenging. In this case, even using federal convictions data will not help, if local officials reduce malpractices because of anti-corruption campaigns, and not because of FMP.

To address this challenge, I review the state-by-state anti-corruption laws and other proposals published in the Oversight and Enforcement of Public Integrity study, a resource created by the Columbia Law School.²⁴ I detect four states (New Mexico, New York, Oregon, and Pennsylvania) that introduced any new anti-corruption measures over the sample period. To assess the robustness of my results, I drop these states from my sample and rerun the analysis. The results remain unchanged, as shown in Table 7, suggesting the decrease in corruption was indeed caused by the FMPs. Overall, these estimates provide evidence on the lower bound of corruption, and reflect the net difference between the increased corruption detections and decreased participation in corrupt activities by the local officials.

For robustness, I also use a measure of corruption restricted to local-level officials. State and local corruption is not partitioned in the DoJ Report, but some of the information can be recovered from the Transactional Records Access Clearinghouse (TRAC) at Syracuse University, a database compiling information about the federal government. I obtain yearly local corruption data grouped by the lead charge for each US Attorney’s Office and fiscal year between 2009 and 2017. As shown in Table D1 in the online appendix, my inferences are robust to using TRAC data, both when I aggregate the data to resemble the DoJ specifications, and when my unit of observation is lead charge-US Attorney’s office-year, which allows me to include corresponding fixed effects.

²⁴The reports could be accessed at [Columbia Law School website](#).

As a limitation to the above results, my results can manifest if instead of decreasing the corrupt activities in response to fiscal monitoring, local officials become more sophisticated, and are able to better hide the consumption of the private benefits. This concern is similar to one of the classical limitations of the earnings management literature (Dechow et al., 2010; Correia, 2014; Zakoluykina, 2018). It is unlikely to be ever ruled out, because the actions of the local officials are unobservable.

6 Incumbent Entrenchment: Mechanism and Results

Oversight by the state can facilitate monitoring by the local media, competing politicians, and voters. For example, an increase in reporting transparency can facilitate the production of media stories about local finances. Relatedly, political candidates can use local performance metrics to illustrate governance drawbacks of the incumbent politicians. Ultimately, the voters are the ones who are affected by the improved information environment and can punish entrenched incumbents that are up for reelection (Ferraz and Finan, 2008; Alt and Lowry, 2010).

Anecdotal evidence suggests the local officials pay attention to the assessments produced by fiscal monitoring. Surprisingly, these effects manifest even in relatively small local governments. For example, the mayoral candidates engaged in heated discussions about the results of the fiscal stress assessments that came out just before mayoral elections in the city of Utica, NY.²⁵ In another anecdote, Mayor of Manorhaven, NY, rushed to defend herself when a report revealed the extremely bad fiscal position of the village. At the same time, local activists were disseminating both the financial information and the mayor’s comments to the voters.²⁶ Finally, mayors like to discuss the financial successes of their local governments and to attribute them to their governance talents.²⁷ Consistent with these anecdotes, previous literature shows that gubernatorial incumbents who are under a lot of scrutiny recognize the importance of reporting good results in the election year (Kido et al., 2012).

In line with the anecdotal evidence discussed above, I document a decrease in official entrenchment in the post-FMP period. Table 8 presents the results that show a decrease the probability of incumbent reelection and an increase in the incidence of close elections. I estimate regression (1), augmenting it with a rich fixed-effects structure. In addition to having usual local government and year fixed effects, I also include party affiliation,²⁸ position,²⁹

²⁵Financial stress eases, Comptroller: City improves; mayoral candidates disagree on path to recovery, Observer-Dispatch, September 30, 2015

²⁶Manorhaven Under Fiscal Stress, Port Washington News, February 24, 2014

²⁷See e.g., City passes state fiscal stress test - again, The Post-Standard, May 19, 2016; or Peekskill Passes Fiscal Stress Test, Peekskill Daily Voice, July 23, 2013

²⁸These are indicators for candidates identifying as Democrat, Republican, Libertarian, Green, Green Rainbow, Democratic Farmer Labor, Progressive, Conservative and Independent.

²⁹These are indicators for different elections: mayoral, city council or alderman, city commissioner or bor-

special election, and incumbent participation fixed effects. As reported in column (1), the incidence of incumbent reelection decrease by 8 percent once the state introduces fiscal oversight, which corresponds to 23 percent of the sample standard deviation. In column (2), I use an alternative measure of official entrenchment, election contestability. The logic behind this measure is that even if the incumbent gets reelected, doing so it might be harder. As shown in column (2), frequency of close elections increases by 4 percent, or 20 percent of the sample standard deviation. Overall, the results of Table 8 suggest decrease in official entrenchment once FMP is introduced.

As discussed above, anecdotal evidence suggests the improved quality of financial reporting drives decreased entrenchment. As the reporting quality increases, media, voters and politicians are better able to identify the problems in the local government and to challenge the politicians in charge.³⁰ Because poor reporting quality could be an indication of governance problems, local governments with poor financial reporting are likely to react more strongly to the FMP. Specifically, local governments with more opaque reporting in the pre-adoption period are more likely to have more problems revealed as FMP is adopted. If local governments with good and bad reporting respond similarly to FMP, something other than increased reporting quality could be driving the results.

With this intuition in mind, I augment the baseline analysis to test whether monitored local governments' post-FMP shift towards more competitive elections was differentially present in local governments with poor reporting, as compared to local governments with better reporting. To do so, I run a triple-difference analysis, with Pre—Post difference, FMP—no FMP difference, and poor—not-poor reporting difference. To be able to do this analysis, I manually merge elections data from ourcampaigns.com with the filing delays data from MRSB. Then I create an indicator for poor reporting, *Big Filing Delay*, which is equal to 1 if the local government's filing delay was bigger than the median filing delay. To mitigate endogeneity concerns, I measure *Big Filing Delay* prior to FMP.

I estimate the following regression model:

$$Y_{it} = \beta FMP_{st} \times Post_{st} \times Big\ Filing\ Delay + \theta_t + \lambda_{is} + \alpha_{s,t} + \beta_{s,i} + \delta_{t,i} + \gamma X_{it} + \epsilon_{ist}, \quad (2)$$

where i indexes the local governments operating in state s at time t . In addition to control variables in model (1), I also include state-by-year fixed effects $\alpha_{s,t}$, state-by-filing delay fixed effects $\beta_{s,i}$, and year-by-filing delay fixed effects, $\delta_{t,i}$.

The results align with my predictions, as shown in Table 9. The shift to election competitiveness is differentially pronounced for monitored local governments that had particularly

ough president.

³⁰Unlike bond rating analysts who can request to receive interim reports, citizens and the media may have access only to year-end external financial reports. Large reporting lags can stale the information contained in the reports by the time it is available (Waymire et al., 2015).

large filing delays in the pre-period. This finding is consistent with decreased entrenchment was at least in part driven by the increased quality of reporting, and that voters in places with bad reporting punish incumbents by not electing them.

7 Local Fiscal Health

My analyses in sections 4 and 5 indicate FMP can positively affect local governance characteristics such as municipal reporting quality, local corruption, and local political entrenchment. However, these results do not speak to whether fiscal monitoring enhances fiscal health of the local governments. I address this question in this section.

7.1 Local fiscal health: Mechanism

FMP can promote better financial management of municipalities through several potential mechanisms. These mechanisms are schematically portrayed in Figure 2. First, the state can use the information produced by fiscal oversight to help local governments. In particular, early detection of fiscal problems can prevent these problems from developing into a full fiscal crisis without state intervention or takeover. Instead, the state can inform local officials about the first signs of trouble and advise them on the potential paths to recovery. This process would allow local officials to make fiscal decisions suitable to the situation.

Second, FMPs can facilitate learning about ways to access fiscal distress, allowing local officials to better understand the economics of their local governments. Anecdotally, many local governments don't have the ability or capacity to accurately assess their fiscal position. This might be especially true in places where filling the finance director position with a job candidate with good financial expertise is difficult (Urahn et al., 2016). However, local officials can learn how to measure fiscal health when the state evaluates the fiscal health of their local governments and provides them with relevant feedback. Moreover, as documented in section 4, state oversight results in fewer reporting mistakes and violations. In other words, the measurement of fiscal position becomes less noisy, which could also improve decision-making. Overall, local governments can learn more from the state about fiscal measurement, which, coupled with improved reporting quality, can allow them to make better fiscal decisions.

Third, improvements in financial management can be caused by the enhancement in internal controls. Being aware that the review process is in place, local officials may pay closer attention to fiscal matters and thus make better decisions. Moreover, as was discussed earlier in section 5, knowledge that the review process is in place can reduce consumption of private benefits. Reduced consumption of private benefits can encourage more efficient allocation of resources, resulting in more fiscally stable governments. Relatedly, fiscal monitoring can provide local officials with external validation to make politically difficult decisions. If the state

raises concerns about local fiscal health, local officials might have an easier time gathering public support to raise taxes or cut expenditures.

On the other hand, despite its potential benefits, fiscal monitoring cannot always prevent local distress, especially if the problems are caused by macroeconomic forces beyond the control of a local government. That is, FMP is unlikely to resolve the difficulties of places without a diversified economic base, where the problems could arise, for instance, because a major employer is moving or going out of business. Moreover, fiscal monitoring systems are not designed to address broader issues that can impact local budgets, such as state restrictions on local taxes. Furthermore, poorly designed FMP wouldn't work. For example, classifying fiscally distressed local governments as fiscally healthy can have no effect on or even amplify the problems (Spren and Cheek, 2016).

7.2 Local fiscal health: Results

In this subsection, I investigate the consequences of state-level fiscal monitoring on the quality of municipal financial management. To do so, I explore the reactions of municipal fiscal-position measures to the FMP. To measure the municipal fiscal position, I use fiscal health ratios that are used by states that have fiscal monitoring policies. This approach allows me to ensure consistency with the FMP actions and to benchmark my results. I select the ratios that are widely used, and that I can calculate with the Atlas data.

The results, presented in Table 11, show improvements in fiscal health ratios. Overall, the results are consistent with that once FMP is in place, local governments become more frugal in managing their finances, and that the decrease in expenditures likely drives these improvements. This result hints at the increased operational efficiency of the municipalities, because they have full control of their expenditures but limited control over revenues, because municipal revenues are mostly tax-based and municipalities often need the state's permission to raise the taxes. I describe each of the fiscal health ratios in Table 11 and corresponding results below.

In columns (1) and (2), the dependent variables approximate the ratio of cash to current liabilities, which shows how much cash a government has to pay for its current liabilities. This ratio assesses whether a government can pay its short-term bills. In my analysis, I approximate this ratio with the ratio of current assets to current liabilities and with the ratio of current assets to total liabilities. I have to make this approximation because Atlas Municipal, which I use to measure the local finances, provides finance data at a very aggregated level, and does not have a separate variable for cash. In column (1), I find the ratio of current assets to current liabilities increases by 2, which represents 21 percent of the sample standard deviation. Current assets to total liabilities increases by 0.14, or by 11 percent of the sample standard deviation, as shown in column (2). Overall, this result implies monitored local governments

improve their ability to cover short-term expenditures.

Next, column (3) documents an increase in the unrestricted fund balance ratio, a uniquely governmental fiscal metric. This ratio assesses whether local governments' available fund balance is sufficient to cover the potential financial emergencies. Specifically, this ratio shows the amount of fund balance the local government has to cover future expenditures, without corresponding revenues. The fund balance represents the cumulative results of general fund operations and is the amount of current assets the local government has accumulated over time. It acts as a savings account of a local government. The general fund balance has three components: non-spendable, restricted, and unrestricted. Generally, the non-spendable and restricted amounts are not considered available for spending, whereas the unrestricted amounts are. Unrestricted-fund-balance ratio is computed as the general fund unrestricted fund balance divided by general fund total expenditures, net of transfers. As shown in column (3) of Table 11, the unrestricted fund balance ratio increases by 0.08, which represents 23 percent of the sample standard deviation. This result is consistent with monitored local governments improve their ability to cover their expenses out of the unrestricted general fund.

Further, I find that FMP increases the operating margin ratio, as shown in column (4). This ratio indicates the amount added to the local government's reserves for every dollar generated in revenue. It is computed as the ratio of general fund total revenue net of general fund total expenditures and net of transfers to the general fund total revenue. In general, a government that has sustainable operations will have more operating revenue than expenditures at any given time. Local governments that consistently have more expenses than revenues might be financing their expenditures with long-term debt, which is not a sustainable operational model. As shown in column (4), the operating margin of the treated local governments increases by 0.01, which corresponds to 16 percent of the sample standard deviations. This result implies an increase in operational efficiency upon introduction of FMP.

Next, I find that debt to assets in governmental activities decreases post-FMP in column (5). Debt-to-assets ratio of the governmental activities fund shows the extent to which its debt is used to finance governmental activities' assets. This measure takes the governmental activities' total liabilities and divides it by the governmental activities' total assets. The coefficient shown in column (5) implies debt to assets decreases by 0.03, which represents 10 percent of a sample standard deviation. This result suggests governmental activities become less reliant on debt after the introduction of the FMP.

Having documented that FMP positively affects fiscal health measures of local governments, I explore the sources of these improvements. Generally, these improvements could be driven by either a decrease in expenditures or an increase in revenue collections. My evidence suggests that the former is likely.

I find that after FMP is in place, expenditures per capita decrease by 0.04, which represents 22 percent decrease of a sample standard deviation, as shown in column (6). As

shown in column (7), I do not find significant changes in revenue per capita. Typically, the majority of governmental revenue consists of tax collections and transfers from other levels of government.³¹ This result is consistent with to improve their operational efficiency, local governments cut down on expenditures.

Generally, disentangling the effects of the FMP on the fiscal health of the local governments from the confounding effects driven by state characteristics that are unrelated to FMP is difficult. For example, the effects could be driven by the response to a scandal, or by differential economic trends in the large, geographically dispersed monitoring states. To address this concern, my identification strategy is to compare bordering local governments in monitoring and non-monitoring states. I test the same regression as before, but on the sample that only includes bordering local governments. As shown in Table 12, the results remain unchanged. Monitored local governments at the border appear more operationally efficient, and the effect is likely driven by the decrease in expenditures rather than an increase in revenues.

I interpret the above fiscal health results with caution. Although the better allocation of the municipal resources could drive the improvements in the fiscal health measures, there is an alternative interpretation. Many monitoring states provide clear benchmarks of the fiscal health ratios, which creates incentives for bunching. Specifically, my results could be the consequence of window-dressing by local officials to be classified as “fiscally healthy.” In any case, my evidence is suggestive of improved understanding how to assess financial position with fiscal health ratios. Local officials could learn how to access the fiscal position of their municipality and change the allocation of municipal resources for the better. Alternatively, local officials could learn how to access their fiscal health and pretend to strengthen the municipal fiscal health.

7.3 Municipal market: Results

Overall, net benefits (or costs) of the FMPs, if they exist, will be recognized by the municipal markets, and reflected in the cost of capital of affected local governments. Indeed, the municipal yields are expected to decrease with FMP introduction if FMP mitigates the default risk by strengthening local governance and fiscal position. This prediction is consistent with the opinion of credit-rating agencies. For example, Moody’s believes state oversight inhibits risks of financial distress.³²

To determine how FMP affects municipal bond yields, I estimate regression model (1) using municipal bond offering data. My dependent variable is offering municipal bond spreads, or spreads of yields recorded when the bond is offered at the primary market over comparable

³¹According to the Tax Policy center, in 2014 these two sources of revenue comprised more than 70 percent of the total local government revenues.

³²Announcement: Moody’s: Levels of state oversight and support for distressed local governments vary widely, Moody’s Investor Service, September 16, 2013.

risk-free bonds. I select offering yield spreads as the dependent variable because they are less anticipatory in nature than secondary (trading) yields, and could be measured over relatively short periods of time. These two features allow me to exploit the differences in the timing of FMP adoption and separate the effects of FMP from other institutional changes.

The results show that municipal markets positively react to FMP, as can be seen in Table 13. Specifically, upon FMP adoption the primary municipal bond yield decreases by 0.08 standard deviations. Column (1) shows the results of a regression on the full sample of municipal bonds, and in column (2) regression is run on a data augmented with socio-economic characteristics from Municipal Atlas. The control variables in both specifications account for bond characteristics. Specifically, I include ratings fixed effects, as assigned by Moody's. I also control for time to maturity (TTM), whether the bond is insured, general obligation, callable, puttable, and reoffered. I proxy for liquidity with bond size, because the municipal finance literature documents liquidity premium and shows it plays an important role in prices of municipal bonds (Bergstresser et al., 2013; Longstaff, 2011).

8 Additional Analyses and Interpretation Concerns

8.1 Which institutional characteristics predict FMP introduction?

Pre-existing institutional structure in a state can affect its decision to adopt FMP (Leuz and Wysocki, 2016). Based on my conversations with state officials and a review of related literature, I formulate four key institutional features that might affect adoption decisions: access to bankruptcy (Gao et al., 2017), reporting comparability (Gore, 2004), size of the state government, and home rule (Daniel et al., 2018). In what follows, I describe these features and formally assess which of them are associated with FMP.

First, states that have higher stakes in municipal bankruptcies are more likely to adopt FMP. Generally, when local government is unable to meet its obligations, it can file for bankruptcy in the federal court under Chapter 9. US states could be divided into two groups based on their Chapter 9 policies. States in the first group intervene in local governments' management in the event of financial distress, and implement proactive steps designed to avoid bankruptcy. In these states, local governments cannot file for bankruptcy without state permission. States in the second group grant their local governments unconditional access to Chapter 9. Because the states in the first group have higher financial stake in the fiscal health of their localities, they are more likely to introduce FMPs.

Second, introduction of FMP could be associated with reporting comparability across a state's local governments. Not all the states mandate uniform accounting reporting. In fact, only 24 states require compliance with GASB's GAAP standards (GASB, 2008). Naturally, differential reporting standards across municipalities would make setting up the fiscal moni-

toring system difficult.

Third, the size of the state government could be related to the feasibility of FMP. States that have more governmental employees in their financial administration division are potentially have more capacity to adopt fiscal monitoring. These states can have more resources to develop and run the fiscal monitoring system, and to provide local governments with technical assistance. Thus, states with large financial administration are more likely to adopt FMP.

Fourth, the extent of local governments' independence from the state can be an important determinant of FMP. Specifically, monitoring local governments with greater autonomy, or "home rule," might be more difficult. The concept of "home rule" refers to local government authority implementing some policy changes (e.g., introducing new taxes) without prior state approval.³³ If the home rule municipalities constitute a majority in the state, state officials might feel FMP is overstepping local autonomy. At the same time, local officials from home rule municipalities could oppose FMP if they are already knowledgeable about their financial problems and think they have enough authority to resolve the issue themselves (Urahn et al., 2016). On the other hand, greater autonomy might imply a greater need to monitor local governments.

I formally analyze whether these factors affect the FMP adoption. I find that the requirement to obtain bankruptcy approval from the state, the size of the financial administration of state government, and the uniformity of reporting are significantly positively associated with the adoption decision in a cross section of state-level characteristics. Home rule is not significantly associated with adoption of fiscal oversight. The results of this analysis are reported in Table A1 in the online appendix. In this regression, I include the dummy that is equal to 1 if the state has to approve Chapter 9 filing, obtained from Urahn et al. (2013) and Gao et al. (2017). I proxy for uniformity of reporting with an indicator variable equal to 1 if state requires GAAP reporting. I obtain information about these states from (GASB, 2008). I proxy for the size of the government by dividing aggregate payroll of the state financial administrative employees to the state revenues. To do that, I augment my data with state Financial Administration payroll data from the US Census' Annual Survey of Public employment and Payroll. Finally, I include a dummy for home rule, based on home rule descriptions in Krane (2000).

8.2 Plausibility of treatment exogeneity

My identification strategy critically depends on the assumption that FMP adoption timing is not driven by omitted variables that are directly or indirectly tied to the behavior of local governments. Anecdotally, this assumption holds. Municipal fiscal crises across the US in the

³³According to the Tenth Amendment of the Constitution, only a state has the power to grant home rule to its local governments (Krane, 2000).

late 2000s and especially the Detroit crisis and bankruptcy led to the interest in implementing fiscal monitoring programs. These cases raised the concern that a similar crisis could happen in the adopting states. This concern, coupled with state officials' realization that they have a limited understanding of the municipal fiscal conditions, prompted the adoption of fiscal monitoring policies at the state level. Therefore, although the adoption was not random at the state level, it was unlikely endogenous to the majority of the treated local governments.

To empirically assess whether FMP adoption timing is quasi-exogenous, I investigate whether time-varying characteristics of local governments, aggregated at the state level, predict the adoption of FMP. I find the adoption of FMP is not associated with most of the dependent variables that I use in my analysis (Table B1 in the online appendix). Among all the dependent variables used in my analysis, only the number of corruption convictions is statistically significantly associated with the adoption of FMP. Taken together, the results in Table B1 in the online appendix, suggest states' implementation timing is not predicted by the state-specific trends in the variables of interest, which is in line with the idea that implementation of these policies is plausibly exogenous.

8.3 School districts as a control group

In an ideal but impossible experiment, local governments would be randomly assigned to be subject to fiscal oversight within the monitoring states. In the absence of such an experiment, I rely on a quasi-experimental approach to substantiate the inferences. I use school districts as an alternative control group within the monitoring states. School districts are unlikely affected by the FMP. First, FMP is directed at local governments, not at school districts.³⁴ Second, school districts are usually under higher scrutiny than local governments (e.g., from the state education departments). Therefore, school districts are unlikely to be significantly affected either directly by fiscal monitoring or by its spillovers.

I incorporate school districts in my analysis by running triple difference-in-differences regressions. Specifically, I run a difference-in-differences regression with Pre—Post difference, FMP—no FMP difference, and school district—not-school district difference. The results of these regressions are consistent with my prior inferences. As shown in Tables C1 and C2 in the online appendix, compared to school districts, local governments in monitoring states experience improvements in reporting quality and fiscal health.

³⁴Except for the case of New York state, which enacted monitoring of school districts simultaneously with that of local governments. For that reason, I drop New York from my analysis in Tables C1 and C2 in the online appendix.

8.4 Interpretation concerns

A potential concern is that the effects of FMP documented in this paper are likely dependent on the other institutions in the adopting state (Leuz and Wysocki, 2016). Because FMP was likely caused by the existing economic and legal institutions in the states that adopted the policy, I am likely observing joint effects of the existing institutions and FMP. Although the above is true, the heterogeneity in the relevant institutions in the adopting states potentially allows me to attribute the results to FMP. Specifically, out of 10 FMP states 6 allow filing for bankruptcy, 3 do not require adherence to GAAP, and 5 have home rule.

Moreover, heterogeneity of institutions in states that adopt FMP poses an external validity threat to my results: for example, what works in New York will unlikely work in Alabama. This concern is valid, and external validity is unlikely to ever be achieved in any study that compares countries or states. However, US states are much more similar institutionally than countries that are used in cross-country analysis, suggesting this problem is less pronounced. To further mitigate this problem, I implicitly control for the varying institutional structure by including local government fixed effects in my regressions.

9 Conclusion

Although municipal governance can have a significant economic and societal impact, we currently have limited empirical evidence about the mechanisms that align the actions of local officials with interests of their constituencies. This paper studies the governance effects of fiscal monitoring policies, by which some US states examine reporting of local governments for any signs of fiscal distress. Using unique data at the local government level, I document that monitored local governments exhibit improvements in measures of several governance characteristics: reporting quality, corruption, political entrenchment, and fiscal management.

I find that upon the adoption of fiscal monitoring, several measures of municipal reporting quality significantly improve. This finding is consistent with local officials becoming better at preparing reporting and understanding underlying economic conditions of their local governments. Consistent with municipal reporting quality mattering for how municipalities are governed, I find that local officials are less likely to be convicted for corruption. This finding suggests that fiscal oversight by the state deters malfeasance by increasing the difficulty of hiding the consumption of private benefits. Moreover, I document that reelection chances of incumbent politicians decrease, and that this result is stronger in the local governments with historically poor reporting. Finally, my results suggest fiscal monitoring improves local fiscal-health indicators.

The results of this paper should be interpreted with the following caveats in mind. First, I examine the effects of fiscal monitoring by the states and do not speak to the potential

effects of other types of monitoring. Second, I do not currently empirically explore many of the channels through which fiscal monitoring affects reporting quality, corruption, incumbent entrenchment, and fiscal health. Currently, I am working on gathering additional data to test the channels that can be tested. For example, to connect corruption convictions and reporting, I am gathering the corruption data at the local government level. Importantly, although some channels of fiscal monitoring could be tested in the future, testing and empirically disentangling other channels appears implausible. For example, it is likely impossible to separate the disciplining effect of state-level fiscal monitoring from improved local decision-making resulting from better measurement of underlying economic positions. Third, it is beyond the scope of this paper to speak to the net societal benefits of state oversight. I leave investigation of these effects to future research.

References

- Alt, James E. and Robert C. Lowry**, “Transparency and Accountability: Empirical Results for US States,” *Journal of Theoretical Politics*, 2010, 22 (4), 379–406.
- Avis, Eric, Claudio Ferraz, and Frederico Finan**, “Do Government Audits Reduce Corruption? Estimating the Impacts of Exposing Corrupt Politicians,” *Journal of Political Economy*, 2018, 0 (0), 000–000.
- Baber, William R.**, “Toward understanding the role of auditing in the public sector,” *Journal of Accounting and Economics*, 1983, 5, 213 – 227.
- , “Toward a framework for evaluating the role of accounting and auditing in political markets: The influence of political competition,” *Journal of Accounting and Public Policy*, 1990, 9 (1), 57 – 73.
- **and Angela K. Gore**, “Consequences of GAAP Disclosure Regulation: Evidence from Municipal Debt Issues,” *The Accounting Review*, 2008, 83 (3), 565–592.
- Baber, William R, Angela K Gore, Kevin T Rich, and Jean X Zhang**, “Accounting restatements, governance and municipal debt financing,” *Journal of Accounting and Economics* 212-227., 2013.
- Ball, Ray**, “Discussion of: Accounting for Research and Development Costs: The Impact on Research and Development Expenditures,” *Journal of Accounting Research* 18, Supplement, pp. 27-37., 1980.
- Becht, Marco, Patrick Bolton, and Ailsa Roell**, “Corporate Governance and Control,” in George M. Constantinides, Milton Harris, and Ren M. Stulz, eds., *Corporate Finance*, Vol. 1 of *Handbook of the Economics of Finance*, Elsevier, 2003, pp. 1 – 109.
- Bergstresser, Daniel, Randolph Cohen, and Siddharth Shenai**, “Demographic Fractionalization and the Municipal Bond Market,” *Municipal Finance Journal*, 2013, 34 (3), 1 – 38.
- Bomey, Nathan**, *Detroit Resurrected: To Bankruptcy and Back*, W. W. Norton & Company, 2016, 2016.
- Bushman, Robert M., Raffi J. Indjejikian, and Abbie Smith**, “Aggregate Performance Measures in Business Unit Manager Compensation: The Role of Intrafirm Interdependencies,” *Journal of Accounting Research*, 1995, 33, 101–128.
- Campante, Filipe R. and Quoc-Anh Do**, “Isolated Capital Cities, Accountability, and Corruption: Evidence from US States,” *The American Economic Review*, 2014, 104 (8), 2456–2481.
- Campbell, Dennis, Marc J. Epstein, and F. Asis Martinez-Jerez**, “The Learning Effects of Monitoring,” *The Accounting Review*, 2011, 86 (6), 1909–1934.
- Chirinko, Robert, Ryan Chiu, and Shaina Henderson**, “What Went Wrong?: The Puerto Rican Debt Crisis and the Treasury Put,” *Working*, 2018.
- Colonnelli, Emanuele and Mounu Prem**, “Corruption and Firms: Evidence from Randomized Audits in Brazil,” *Working Paper.*, 2017.
- Cordis, Adriana S. and Jeffrey Milyo**, “Measuring Public Corruption in the United States: Evidence From Administrative Records of Federal Prosecutions,” *Public Integrity*, 2016, 18 (2), 127–148.

- Core, John, Wayne Guay, and David Larcker**, “Executive Equity Compensation and Incentives: A Survey,” *Economic Policy Review*, 9(1), pp. 2750., 2003.
- Correia, Maria M.**, “Political connections and SEC enforcement,” *Journal of Accounting and Economics*, 2014, 57 (2), 241 – 262.
- Costello, Anna M., Reining Petacchi, and Joseph P. Weber**, “The Impact of Balanced Budget Restrictions on States’ Fiscal Actions,” *The Accounting Review*, 2017, 92 (1), 51–71.
- Cuny, Christine**, “Voluntary disclosure incentives: Evidence from the municipal bond market,” *Journal of Accounting and Economics* 87-102., 2016.
- , “When knowledge is power: Evidence from the municipal bond market,” *Journal of Accounting and Economics* 109-128, 2018.
- **and Svenja Dube**, “The moderating effect of disclosure quality on changes in the cost of debt : Evidence from municipal credit rating downgrades,” *Working Paper.*, 2017.
- , **Jungbae Kim, and Mihir N. Mehta**, “Friends in High Places: An Examination of Politically Connected Governments,” *Working Paper*, 2018.
- Daniel, Shoag, Tuttle Cody, and Veuger Stan**, “Rules versus Home Rule. Local Government Responses to Negative Revenue Shocks,” *Working Paper.*, 2018.
- Dechow, Patricia, Weili Ge, and Catherine Schrand**, “Understanding earnings quality: A review of the proxies, their determinants and their consequences,” *Journal of Accounting and Economics*, 2010, 50 (2), 344 – 401.
- Enikolopov, Ruben**, “Are Bureaucrats Really Paid Like Bureaucrats?,” *Working Paper*, 2017.
- Feldstein, Sylvan G. and Frank J. Fabozzi**, *The Handbook of Municipal Bonds*, John Wiley & Sons, Inc, 2008.
- Ferraz, Claudio and Frederico Finan**, “Exposing Corrupt Politicians: The Effects of Brazil’s Publicly Released Audits on Electoral Outcomes,” *The Quarterly Journal of Economics*, 2008, 123 (2), 703–745.
- Gallemore, John and Eva Labro**, “The importance of the internal information environment for tax avoidance,” *Journal of Accounting and Economics*, 2015, 60 (1), 149 – 167.
- Gans-Morse, Jordan, Mariana Borges, Alexey Makarin, Theresa Mannah-Blankson, Andre Nickow, and Dong Zhang**, “Reducing bureaucratic corruption: Interdisciplinary perspectives on what works,” *World Development*, 2018, 105, 171 – 188.
- Gao, Pengjie, Chang Lee, and Dermot Murphy**, “Municipal Borrowing Costs and State Policies for Distressed Municipalities,” *Journal of Financial Economics (JFE)*, *Forthcoming.*, 2017.
- , — , **and** — , “Financing Dies in Darkness? The Impact of Newspaper Closures on Public Finance,” *Working Paper*, 2018.
- GASB**, “State and Local Government Use of Generally Accepted Accounting Principles for General Purpose External Financial Reporting,” 2008.

- Glaeser, Edward L. and Raven E. Saks**, “Corruption in America,” *Journal of Public Economics*, 2006, 90 (6), 1053 – 1072.
- Gore, Angela K.**, “The effects of GAAP regulation and bond market interaction on local government disclosure,” *Journal of Accounting and Public Policy*, 2004, 23 (1), 23 – 52.
- Green, Paul M.**, “Some Problems in Government Accounting,” *The Accounting Review* 11, no. 2 : 141-49., 1939.
- Hail, Luzi, Ahmed Tahoun, and Clare Wang**, “Corporate Scandals and Regulation,” *Journal of Accounting Research*, 2018, 56 (2), 617–671.
- Ingram, Robert W. and Ronald M. Copeland**, “Municipal Accounting Information and Voting Behavior,” *The Accounting Review*, 1981, 56 (4), 830–843.
- Kido, Nolan, Reining Petacchi, and Joseph Weber**, “The Influence of Elections on the Accounting Choices of Governmental Entities,” *Journal of Accounting Research*, 2012, 50 (2), 443–476.
- Larcker, David F., Gaizka Ormazabal, and Daniel J. Taylor**, “The market reaction to corporate governance regulation,” *Journal of Financial Economics*, 2011, 101 (2), 431 – 448.
- Lekhi, Zina, Roel Beetsma, and Eduard Ponds**, “U.S. municipal yields and unfunded state pension liabilities,” *Working Paper*, 2017.
- Leuz, Christian and Peter D. Wysocki**, “The Economics of Disclosure and Financial Reporting Regulation: Evidence and Suggestions for Future Research,” *Journal of Accounting Research*, 2016, 54 (2), 525–622.
- Longstaff, Francis A.**, “Municipal Debt and Marginal Tax Rates: Is There a Tax Premium in Asset Prices?,” *The Journal of Finance*, 2011, 66 (3), 721–751.
- Maskin, Eric S.**, “Theories of the soft budget-constraint,” *Japan and the World Economy*, 1996, 8 (2), 125 – 133.
- Moodys**, “US Municipal bond defaults and recoveries, 1970-2013.,” *Data report*, 2014.
- MRSB**, “Trends in Municipal Bonds Ownership,” 2017.
- N, Rigos; M Hill Krane Dale;**, *Home Rule In America: A Fifty-State Handbook*, CQ Press, 2000.
- Naughton, James, Reining Petacchi, and Joseph Weber**, “Public pension accounting rules and economic outcomes,” *Journal of Accounting and Economics*, 2015, 59 (2), 221 – 241.
- Novy-Marx, Robert and Joshua Rauh.**, “Fiscal Imbalances and Borrowing Costs: Evidence from State Investment Losses,” *American Economic Journal: Economic Policy.*, 2012.
- Parsons, Christopher A., Johan Sulaeman, and Sheridan Titman**, “Swimming Upstream: Struggling Firms in Corrupt Cities,” *Working paper*, 2018.
- Poister, Theodore H. and Gregory Streib**, “Performance Measurement in Municipal Government: Assessing the State of the Practice,” *Public Administration Review*, Vol. 59, No. 4 (Jul. - Aug.), pp. 325-335, 1999.

- Ruppel, Warren**, *Governmental Accounting Made Easy*, John Wiley & Sons, Inc, 2005.
- Shleifer, Andrei and Robert W. Vishny**, “A Survey of Corporate Governance,” *The Journal of Finance*, 1997, 52 (2), 737–783.
- Snyder, James M. and David Stromberg**, “Press Coverage and Political Accountability,” *Journal of Political Economy*, 2010, 118 (2), 355–408.
- Spiotto, James E., Ann E. Acker, and Laura E. Appleby**, “Municipalities in Distress? How States and Investors Deal With Local Government Financial Emergencies,” *Chapman & Cutler LLP*, 2012.
- Spreen, Thomas Luke and Caitlin M. Cheek**, “Does Monitoring Local Government Fiscal Conditions Affect Outcomes? Evidence from Michigan,” *Public Finance Review*, 2016, 44 (6), 722–745.
- Urahn, Susan K., Michael Ettliger, Meghan Salas Atwell, Stephen Fehr, Kil Huh, and Aidan Russell**, “The State Role in Local Government Financial Distress,” *The Pew Charitable Trusts*, 2013.
- , **Thomas P. Controy, Kil Huh, Matthew Cook, Stephen Fehr, Adrienne Lu, Mary Murphy, and Daniel Newman**, “State Strategies to Detect Local Fiscal Distress,” *The Pew Charitable Funds.*, 2016.
- Waymire, Tammy R., Shannon N. Sohl, and Brandy Howard**, “Public Administrators’ Understanding of External Financial Reporting: It Begins With Curriculum,” *Journal of Public Affairs Education*, 2015, 21 (2), 281–294.
- Zakoluykina, Anastasia A.**, “How Common Are Intentional GAAP Violations? Estimates from a Dynamic Model,” *Journal of Accounting Research*, 2018, 56 (1), 5–44.
- Zimmerman, JI.**, “Municipal Accounting Maze - Analysis of Political Incentives,” *Journal of Accounting Research* 107-155., 1977.

Appendix

Variable Definitions.

This table provides definitions for all variables used in the empirical analysis, as well as data source for these variables.

Variable type	Variable	Definition
Monitoring	FMP	Indicator of the monitoring state.
	Post	Indicator of the monitoring policy introduction year and all years thereafter.
Institutions	State has to approve Chapter 9	An indicator that local governments need state permission to file for bankruptcy. <i>Source: Gao et. al 2017, Pew Charitable Funds 2013</i>
	$\frac{\text{Aggregate Financial Salary}}{\text{State Revenue}}$	Ratio of aggregate state financial administration payroll to state revenues. <i>Source: US Census Annual Survey of Public Employment and Payroll, Atlas Municipal Database</i>
	GAAP	An indicator that state requires most of its local governments to comply with GASB's GAAP. <i>Source: GASB (2008)</i>
	Home Rule	An indicator that state granted most of its local governments with home rule. <i>Source: Krane (2000)</i>
Reporting Quality	Filing Delay	Time difference between disclosure date and financial year end. <i>Source: Municipal Securities Rulemaking Board's (MRSB) Electronic Municipal Market Access (EMMA) system</i>
	Audit Delay	Time difference between audit date and financial year end. <i>Source: Single Audits database, Audit Analytics</i>
	I(Material Weakness)	An indicator variable equal to 1 if the auditor identifies a material weakness in the internal controls over the financial statements, and zero otherwise <i>Source: Single Audits database, Audit Analytics</i>
	I(High Risk)	An indicator equal to 1 if the auditor does not identify the auditee as low risk during the planning phase of the Single Audit. <i>Source: Single Audits database, Audit Analytics</i>
	I(Restated)	An indicator equal to 1 if the financial statement was restated. <i>Source: Atlas Municipal Database.</i>
	<i>Big Filing Delay</i>	Indicator variable that is equal to 1 if the <i>Filing Delay</i> was bigger than sample median, or if the reporting was not provided for a given year. <i>Source: EMMA</i>
	Corruption	Convictions per US Attorney's office
$\frac{\text{Convictions per US Attorney's office}}{\text{population,mln}}$		Number of convictions per US Attorney's Office divided by the population of the US Attorney's District. <i>Source for the number of convictions: Department of Justice's Annual Reports to Congress on the Activities and Operations of the Public Integrity Section. Source for population: US Census.</i>
Entrenchment	I(1% margin)	Indicator that the winner of the election won by 1% margin or less. <i>Source: ourcampaigns.com</i>
	I(Incumbent Victory Participated)	Indicator that incumbent won in the race, given that she participated in an election. <i>Source: ourcampaigns.com</i>
Bond-level variables	Offering yield spread	The percentage spread between a municipal bond offering yield and a equivalent risk-free bond. <i>Sources: Mergent Municipal Bond Securities Database, Federal Reserve Board.</i>
	Time to Maturity (TTM)	Time to maturity, in years. <i>Source: Mergent Municipal Bond Securities Database</i>
	Insured	An indicator that the bond is insured. <i>Source: Mergent Municipal Bond Securities Database</i>

Finance	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	The ratio of general fund current assets to current liabilities. <i>Source: Atlas Municipal Database.</i>
	$\frac{\text{Current Assets}}{\text{Total Liabilities}}$	The ratio of general fund current assets to total liabilities. <i>Source: Atlas Municipal Database.</i>
	$\frac{\text{Unrestricted FB}}{\text{Expenditures}}$	The ratio of unrestricted fund balances to the general fund total expenditures net of transfers. This ratio is unique to the governmental environment. It shows the relationship between available fund balance and expenditures. Specifically, this ratio shows the amount of fund balance a government has to cover future expenditures, without corresponding revenues.
Operating Margin	$\frac{\text{Current Assets}}{\text{Total Liabilities}}$	The ratio of general fund current assets to total liabilities. <i>Source: Atlas Municipal Database.</i>
	$\frac{\text{GA Total Liabilities}}{\text{GA Total Assets}}$	The ratio of general fund total revenue net of general fund total expenditures and net of transfers to the general fund total revenue. <i>Source: Atlas Municipal Database.</i>
	$\frac{\text{Expenditures, k}}{\text{Population}}$	The governmental activities total liabilities and divides it by the governmental activities total assets. <i>Source: Atlas Municipal Database.</i>
Socio-Demographic	$\frac{\text{Revenues, k}}{\text{Population}}$	Expenditures per capita in thouthands of US dollars. <i>Source: Atlas Municipal Database.</i>
	Population	Revenues per capita in thouthands of US dollars. <i>Source: Atlas Municipal Database.</i>
	College Degree Rate	Population. <i>Source: Atlas Municipal Database.</i>
	Unemployment Rate	Share of population with college degree. <i>Source: Atlas Municipal Database.</i>
	Median Age	Unemployment rate. <i>Source: Atlas Municipal Database.</i>
	Median Household Income	Median age. <i>Source: Atlas Municipal Database.</i>
	Median Housing Value	Median household income over the last 12 months. <i>Source: Atlas Municipal Database.</i>
		Median housing value over the last 12 months. <i>Source: Atlas Municipal Database.</i>

Table 1: Year of Adoption of Monitoring Policy.

State	Policy Introduced	State	Policy Introduced
Colorado	2013	New Mexico	2012
Connecticut	(before sample)	New York	2013
Florida	(before sample)	North Carolina	(before sample)
Iowa	(before sample)	Ohio	2016
Kentucky	(before sample)	Oregon	2015
Louisiana	2014	Pennsylvania	2014
Maryland	(before sample)	Rhode Island	2016
Michigan	(before sample)	South Dakota	(before sample)
Minnesota	(before sample)	Tennessee	2014
Nevada	2015	Virginia	(before sample)
New Hampshire	(before sample)	Washington	(before sample)
New Jersey	(before sample)		

Table 2: Descriptive statistics.

This table reports summary statistics of the main sample used in the empirical analysis. I report the mean, standard deviation (SD), 10% quantile (p10), 25% quantile (p25), median (p50), 75% quantile (p75), and 90% quantile (p90). Variables are sorted by categories. *Reporting Quality* category contains descriptives of the reporting characteristics at the municipality level. *Finance* category contains descriptives of the financial statements data at the municipality level. *Bond* category contains descriptives of the bond-level characteristics. *Socio-Economic* category contains characteristics of the socio-economic variables at the municipality level. *Elections* category contains municipal election variables. *Corruption* category contains descriptives of the corruption convictions at the US Attorney’s office level. *Data Sources: MRSB, Audit Analytics, Municipal Atlas, DoJ, ourcampaigns.com.*

Panel A. Summary statistics of local government characteristics.

Variable type	Variable	Mean	SD	p10	p25	p50	p75	p90
Socio-Economic	$\log(\text{Population})$	11.37	1.49	9.81	10.38	11.14	12.15	13.39
	College Degree Rate, %	63.91	12.99	47.88	55.07	63.41	72.39	81.67
	Unemployment Rate, %	7.22	2.84	4.13	5.22	6.77	8.68	10.72
	Median Age	36.75	5.09	30.5	33.5	36.7	40	43.1
	Median Household Income, k	60.09	22.62	38.13	44.47	54.63	70.39	87.22
	Median Housing Value, 100k	2.44	1.67	1.06	1.37	1.9	2.85	4.6
Reporting Quality	Filing Delay	334.46	320.28	147	179	228	321	632
	Audit Delay	262.63	138.23	166	191	239	273	371
	$I(\text{Material Weakness})$	0.3	0.46	0	0	0	1	1
	$I(\text{High Risk})$	0.63	0.48	0	0	1	1	1
	Restated	0.83	0.37	0	1	1	1	1
Corruption	Convictions per US Attorney	10.63	12.07	1	3	6	13	28
	Convictions per US Attorney/(Population, mln)	3.62	4.14	0.33	1.16	2.47	4.5	7.82
Elections	$I(\text{Incumbent Victory} \mid \text{Participated})$	0.86	0.35	0	1	1	1	1
	$I(1\% \text{ margin})$	0.04	0.2	0	0	0	0	0
Finance	Current Assets/Current Liabilities	6.29	9.6	1.8	2.77	4.66	7.89	12.02
	Current Assets/Total Liabilities	0.85	1.28	0.27	0.42	0.64	0.99	1.52
	Unrestricted FB/Liabilities	0.36	0.62	0.05	0.1	0.22	0.43	0.76
	Operating Margin	0.05	0.12	-0.05	0	0.04	0.1	0.18
	GA Total Liabilities/GA Total Assets	0.51	0.32	0.17	0.28	0.44	0.66	0.94
	Expenditures/Population, k	2.14	1.49	0.74	1.21	1.72	2.62	4.31
	Revenue/Population, k	2.25	1.55	0.77	1.29	1.82	2.76	4.47
Bond	Offering Yield Spread	0.21	0.26	-0.11	0.05	0.21	0.37	0.57
	Time to Maturity, y	8.68	6.37	1.59	3.62	7.41	12.43	17.64
	Insured	0.16	0.37	0	0	0	0	1

Panel B. Summary statistics of socio-economic variables in monitoring vs. non-monitoring states.

	Monitoring States					Non-monitoring States				
	Mean	SD	p25	p50	p75	Mean	SD	p25	p50	p75
$\log(\text{Population})$	11.19	1.35	10.23	10.87	11.98	11.42	1.52	10.43	11.22	12.18
College Degree Rate, %	61.04	13.36	51.91	60.05	69.51	64.67	12.78	55.96	64.23	73.09
Unemployment Rate, %	7.48	2.2	5.87	7.31	8.83	7.17	2.94	5.1	6.67	8.63
Median Age	38.39	4.46	35.4	38.8	41.5	36.32	5.15	33.2	36.2	39.3
Median Household Income, k	58.03	19.6	43.81	54.77	68.25	60.62	23.32	44.58	54.6	71.17
Median Housing Value, 100k	2.07	1.2	1.28	1.72	2.46	2.53	1.76	1.39	1.95	2.99
Time to Maturity, y	8.3	6.27	3.36	6.99	11.81	8.82	6.4	3.73	7.61	12.75
Insured	0.24	0.43	0	0	0	0.13	0.33	0	0	0

Table 3: FMP and reporting quality.

This table represents evidence on differential trends in reporting quality in monitored and not monitored local governments. I estimate the specification (1). In column (1), the dependent variable $\log(\text{Filing Delay})$, is a natural logarithm of the time between fiscal year end and reporting date. In column (2), the dependent variable $\log(\text{Audit Delay})$, is a natural logarithm of the time between fiscal year end and audit date. In column (3), the dependent variable, $I(\text{Material Weakness})$, is an indicator variable equal to 1 if material weakness was found in the reporting during the single audit. In column (4), the dependent variable, $I(\text{High Risk})$, is an indicator equal to 1 if the auditor identifies local government as not low risk in preparation for a single audit. In column (5), $I(\text{Restated})$, is an indicator equal to 1 if financial statement issued in a given year was eventually restated. All specifications include local government and year fixed effects. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: MRSB, Single Audits, Atlas Municipal.*

	<i>Dependent variable:</i>				
	$\log(\text{Filing Delay})$	$\log(\text{Audit Delay})$	I(Material Weakness)	I(High Risk)	I(Restated)
	(1)	(2)	(3)	(4)	(5)
FMP×Post	-0.13** (-2.30)	-0.04** (-2.01)	-0.07*** (-2.79)	-0.05** (-2.13)	-0.16*** (-3.53)
Year FE	Yes	Yes	Yes	Yes	Yes
LG FE	Yes	Yes	Yes	Yes	Yes
Clusters	State	State	State	State	State
Observations	72,786	44,088	44,088	44,088	22,467
Adjusted R ²	0.31	0.20	0.17	0.18	0.57

Table 4: FMP and reporting quality, with control variables.

This table represents evidence on differential trends in reporting quality in monitored and not monitored local governments, controlling for socio-economic and financial characteristics. I estimate the specification (1). In column (1), the dependent variable $\log(\text{Filing Delay})$, is a natural logarithm of the time between fiscal year end and reporting date. In column (2), the dependent variable $\log(\text{Audit Delay})$, is a natural logarithm of the time between fiscal year end and audit date. In column (3), the dependent variable, $I(\text{Material Weakness})$ is an indicator variable equal to one if material weakness was found in the reporting during the single audit. In column (4), the dependent variable, $I(\text{High Risk})$, is an indicator equal to 1 if the auditor identifies local government as not low risk in preparation for a single audit. In column (5), $I(\text{Restated})$, is an indicator equal to 1 if financial statement issued in a given year was eventually restated. Dependent variables include $\frac{\text{Revenue},k}{\text{Population}}$, or revenue per capita, MedianAge , or median age, CollegeDegreeRate , or percentage of population with college degree, $\text{Median H/H Income}, k$, or median household income in thouthands of US dollars, $\log(\text{Population})$, or natural logarithm of population. All specifications include local government and year fixed effects. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: MRSB, Single Audits, Atlas Municipal.*

	<i>Dependent variable:</i>	
	$\log(\text{Filing Delay})$	I(Restated)
	(1)	(2)
FMP×Post	-0.06** (-2.50)	-0.14*** (-3.30)
$\frac{\text{Revenue},k}{\text{Population}}$	0.001 (1.56)	0.0003* (1.74)
Median Age	0.01 (1.18)	0.0000 (0.03)
College Degree Rate	0.002 (0.76)	0.001*** (3.00)
Median H/H Income, k	-0.003* (-1.94)	-0.0001 (-0.88)
$\log(\text{Population})$	-0.02 (-1.06)	0.001 (0.24)
Year FE	Yes	Yes
LG FE	Yes	Yes
Clusters	State	State
Observations	19,754	19,754
Adjusted R ²	0.25	0.58

Table 5: FMP and reporting quality. Border analysis.

This table represents evidence on differential trends in reporting quality in local governments situated at the border of monitoring and non-monitoring states. I estimate the specification (1). In column (1), the dependent variable $\log(\text{Filing Delay})$, is a natural logarithm of the time between fiscal year end and reporting date. In column (2), the dependent variable $\log(\text{Audit Delay})$, is a natural logarithm of the time between fiscal year end and audit date. In column (3), the dependent variable, $I(\text{Material Weakness})$ is an indicator variable equal to 1 if material weakness was found in the reporting during the single audit. In column (4), the dependent variable, $I(\text{High Risk})$, is an indicator equal to 1 if the auditor identifies local government as not low risk in preparation for a single audit. In column (5), $I(\text{Restated})$ is an indicator that financial statement issued in a given year was eventually restated. All specifications include local government, year and border-pair fixed effects. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: MRSB, Single Audits, Atlas Municipal, Zip Code Ajacency Data Set.*

	<i>Dependent variable:</i>				
	Reporting Delay		Quality of Information Reported		
	$\log(\text{Filing Delay})$	$\log(\text{Audit Delay})$	I(Material Weakness)	I(High Risk)	I(Restated)
	(1)	(2)	(3)	(4)	(5)
FMP×Post	-0.15** (-2.34)	-0.15** (-2.14)	-0.22** (-2.52)	-0.16* (-1.70)	-0.08** (-2.08)
Year FE	Yes	Yes	Yes	Yes	Yes
LG FE	Yes	Yes	Yes	Yes	Yes
Border Pair FE	Yes	Yes	Yes	Yes	Yes
Clusters	State	State	State	State	State
Observations	6,972	4,007	4,007	4,007	661
Adjusted R ²	0.42	0.67	0.62	0.57	0.53

Table 6: FMP and corruption convictions.

This table represents evidence on differential trends in corruption convictions in local governments, aggregated at the US Attorney’s Districts. I estimate the specification (1). In column (1), the dependent variable *Convictions per US Attorney office* is the number of convictions per US Attorney’s Office. In column (2), the dependent variable *Convictions per US Attorney office/population, mln*, is number of convictions per US Attorney’s Office divided by the population of the US Attorney’s District. All specifications include US Attorney’s and year fixed effects. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: Department of Justice, US Census.*

	<i>Dependent variable:</i>	
	Convictions per US Attorney office	Convictions per US Attorney office population, mln
	(1)	(2)
FMP × Post	−2.49** (−2.02)	−0.82* (−1.94)
Year FE	Yes	Yes
US Attorney office FE	Yes	Yes
Clusters	State	State
Observations	712	712
Adjusted R ²	0.69	0.60

Table 7: FMP and corruption convictions. States with anti-corruption campaigns dropped.

This table represents evidence on differential trends in corruption convictions in local governments, aggregated at the US Attorney’s Districts. To make sure that results are not driven by anti-corruption initiatives, I drop the states that introduced anti-corruption measures in the sample period. I estimate the specification (1). In column (1), the dependent variable *Convictions per US Attorney office* is the number of convictions per US Attorney’s Office. In column (2), the dependent variable *Convictions per US Attorney office/population, mln*, is number of convictions per US Attorney’s Office divided by the population of the US Attorney’s District. All specifications include US Attorney’s and year fixed effects. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: Department of Justice, US Census.*

	<i>Dependent variable:</i>	
	Convictions per US Attorney office	Convictions per US Attorney office population, mln
	(1)	(2)
FMP × Post	−4.84*** (−2.84)	−1.68*** (−2.93)
Year FE	Yes	Yes
US Attorney office FE	Yes	Yes
Clusters	State	State
Observations	640	640
Adjusted R ²	0.70	0.60

Table 8: FMP and local political entrenchment.

This table represents evidence on differential trends in election competitiveness in monitored and not monitored local governments. I estimate the specification (1). In column (1), the dependent variable $I(\text{Incumbent Victory} \mid \text{Participated})$, is an indicator that incumbent won the race. In column (2), the dependent variable $I(1\% \text{ margin})$, is an indicator that the difference between the winner and the second place was less or equal to 1 percent. All specifications include local government and year fixed effects, as well as party affiliation fixed effect, position fixed effect, and fixed effect for a special election. Regression (2) also includes the fixed effect for incumbent participation. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Source: ourcampaigns.com*

	<i>Dependent variable:</i>	
	$I(\text{Incumbent Victory} \mid \text{Participated})$	$I(1\% \text{ margin})$
	(1)	(2)
FMP \times Post	-0.08*** (-3.26)	0.04** (2.09)
Year FE	Yes	Yes
LG FE	Yes	Yes
Party Affiliation FE	Yes	Yes
Position FE	Yes	Yes
Special election FE	Yes	Yes
Incumbent participated FE	No	Yes
Clusters	State	State
Observations	2,771	4,213
R ²	0.29	0.20

Table 9: Mechanism: FMP, election contestability, and reporting quality.

This table represents evidence on differential trends in election competitiveness in monitored and not monitored local governments, slicing both by the quality of reporting. I estimate the triple difference regression, as shown in specification (2). In column (1), the dependent variable $I(\text{Incumbent Victory} \mid \text{Participated})$, is an indicator that incumbent won the race. In column (2), the dependent variable $I(1\% \text{ margin})$, is an indicator that the difference between the winner and the second place was less or equal to 1 percent. All specifications include local government and year fixed effects, as well as party affiliation fixed effect, position fixed effect, and fixed effect for a special election. Regression (2) also includes the fixed effect for incumbent participation. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: ourcampaigns.com, MRSB.*

	<i>Dependent variable:</i>	
	$I(\text{Incumbent Victory} \mid \text{Participated})$	$I(1\% \text{ margin})$
	(1)	(2)
FMP \times Post \times Big Filing Delay	-0.11*** (-2.74)	0.04* (1.71)
Year FE	Yes	Yes
State FE	Yes	Yes
State \times Year	Yes	Yes
FMP \times Big Filing Delay	Yes	Yes
Post \times Big Filing Delay	Yes	Yes
Party Affiliation FE	Yes	Yes
Position FE	Yes	Yes
Special election FE	Yes	Yes
Incumbent participated FE	No	Yes
Clusters	State	State
Observations	2,771	4,213
R ²	0.06	0.04

Table 10: FMP and local political entrenchment. Border analysis.

This table represents evidence on differential trends in election competitiveness at the border of monitoring and non-monitoring states. I estimate the specification (1). In column (1), the dependent variable $I(\text{Incumbent Victory} / \text{Participated})$, is an indicator that incumbent won the race. In column (2), the dependent variable $I(1\% \text{ margin})$, is an indicator that the difference between the winner and the second place was less or equal to 1 percent. All specifications include local government, year and border-pair fixed effects, as well as party affiliation fixed effect, position fixed effect, and fixed effect for a special election. Regression (2) also includes the fixed effect for incumbent participation. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Source: ourcampaigns.com*

	<i>Dependent variable:</i>	
	$I(\text{Incumbent Victory} \text{Participated})$	$I(1\% \text{ margin})$
	(1)	(2)
FMP \times Post	-0.33*** (-3.45)	0.03* (1.97)
Year FE	Yes	Yes
LG FE	Yes	Yes
Party Affiliation FE	Yes	Yes
Border Pair FE	Yes	Yes
Position FE	Yes	Yes
Special election FE	Yes	Yes
Incumbent participated FE	No	Yes
Clusters	State	State
Observations	220	328
R ²	0.60	0.17

Table 11: FMP and fiscal health ratios.

This table represents evidence on differential trends in fiscal health indicators in monitored and not monitored local governments. In column (1), the dependent variable is $Current\ Assets/Current\ Liabilities$, the ratio of current assets to current liabilities. In column (2), the dependent variable is $Current\ Assets/Total\ Liabilities$, the ratio of current assets to total liabilities. In column (3), the dependent variable is $Unrestricted\ FB/Expenditures$, computed as general fund unrestricted fund balance divided by general fund total expenditures, net of transfers. In column (4), the dependent variable is Operating Margin, the ratio of unrestricted fund total revenue net of general fund total expenditures and net of transfers to the general fund total revenue. In column (5), the dependent variable is $GA\ Total\ Liabilities/GA\ Total\ Assets$, computed as governmental activities total liabilities and divides it by the governmental activities total assets. In column (6), the dependent variable is $Expenditures, k/Population$, expenditures per capita in thousands of US dollars. In column (7), the dependent variable is $Revenue, k/Population$, or revenue per capita in thousands of US dollars. Control variables include $Revenue, k/Population$, or revenue per capita in thousands of US dollars, $Median\ H/H\ Income, k$, or median household income in thousands of US dollars, $log(Population)$, or natural logarithm of population. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: Municipal Atlas.*

	<i>Dependent variable:</i>						
	$\frac{Current\ Assets}{Current\ Liabilities}$ (1)	$\frac{Current\ Assets}{Total\ Liabilities}$ (2)	$\frac{Unrestricted\ FB}{Expenditures}$ (3)	Operating Margin (4)	$\frac{GA\ Total\ Liabilities}{GA\ Total\ Assets}$ (5)	$\frac{Expenditures, k}{Population}$ (6)	$\frac{Revenue, k}{Population}$ (7)
FMP × Post	2.07* (1.74)	0.14** (2.37)	0.08* (1.93)	0.01** (2.15)	-0.03*** (-2.62)	-0.04** (-2.25)	0.02 (0.29)
$\frac{Revenue, k}{Population}$	-0.46 (-1.23)	-0.05 (-1.55)	-0.02 (-1.51)	0.16*** (15.32)	0.05*** (3.31)	0.40*** (7.00)	
Median Age	-0.04 (-0.51)	0.001 (0.13)	-0.005 (-1.04)	-0.001 (-0.71)	-0.01 (-1.25)	0.003 (0.61)	-0.01 (-1.35)
College Degree Rate	0.05 (0.79)	0.01*** (3.38)	0.01*** (3.50)	0.001 (1.26)	-0.004* (-1.77)	-0.004** (-2.03)	0.02*** (3.49)
Median H/H Income, k	0.02 (0.50)	-0.003 (-0.77)	0.001 (1.19)	-0.001** (-2.24)	0.001 (1.16)	0.003** (2.25)	-0.01 (-1.25)
Unemployment Rate	0.14 (1.58)	-0.001 (-0.19)	-0.02** (-2.55)	-0.01*** (-3.21)	-0.001 (-0.33)	0.02*** (2.97)	0.02 (1.16)
$log(Population)$	-4.69 (-1.27)	0.58*** (3.64)	-0.11*** (-9.51)	0.34*** (8.48)	-0.53*** (-6.06)	-1.03*** (-8.05)	-0.17*** (-3.85)
Time FE	Year	Year	Year	Year	Year	Year	Year
Location FE	LG	LG	LG	LG	LG	LG	LG
Clusters	State	State	State	State	State	State	State
Observations	9,185	9,185	9,185	9,185	9,046	9,185	9,185
R ²	0.71	0.86	0.38	0.68	0.88	0.99	0.56

Table 12: FMP and fiscal health ratios. Border analysis.

This table represents evidence on differential trends in fiscal health indicators situated at the border of monitoring and non-monitoring states. In column (1), the dependent variable is *Current Assets/Current Liabilities*, the ratio of current assets to current liabilities. In column (2), the dependent variable is *Current Assets/Total Liabilities*, the ratio of current assets to total liabilities. In column (3), the dependent variable is *Unrestricted FB/Expenditures*, computed as general fund unrestricted fund balance divided by general fund total expenditures and net of transfers. In column (4), the dependent variable is Operating Margin, the ratio of general fund total revenue net of general fund total expenditures and net of transfers to the general fund total revenue. In column (5), the dependent variable is *GA Total Liabilities/GA Total Assets*, computed as governmental activities total liabilities and divides it by the governmental activities total assets. In column (6), the dependent variable is *Revenue, k/Population*, or revenue per capita in thousands of US dollars. In column (7), the dependent variable is *Revenue, k/Population*, or revenue per capita in thousands of US dollars. Control variables include *Revenue, k/Population*, or revenue per capita in thousands of US dollars, *Median Age*, *College Degree Rate*, or percentage of population with college degree, *Median H/H Income, k*, or median household income in thousands of US dollars, *log(Population)*, or natural logarithm of population. All specifications include local government, year and border-pair fixed effects. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: Municipal Atlas.*

	<i>Dependent variable:</i>						
	$\frac{\text{Current Assets}}{\text{Current Liabilities}}$	$\frac{\text{Current Assets}}{\text{Total Liabilities}}$	$\frac{\text{Unrestricted FB}}{\text{Expenditures}}$	Operating Margin	$\frac{\text{GA Total Liabilities}}{\text{GA Total Assets}}$	$\frac{\text{Expenditures, k}}{\text{Population}}$	$\frac{\text{Revenue, k}}{\text{Population}}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
FMP × Post	1.54*** (3.05)	0.11* (1.76)	0.10** (2.20)	0.02* (1.68)	-0.10** (-2.08)	-0.06** (-2.29)	0.01 (0.58)
$\frac{\text{Revenue, k}}{\text{Population}}$	-0.39** (-2.50)	0.01 (0.28)	-0.16** (-2.35)	-0.01 (-0.27)	0.07 (0.81)	1.00*** (41.84)	
Median Age	-0.28 (-0.96)	-0.03 (-0.50)	0.01 (0.31)	-0.02*** (-2.67)	0.07* (1.71)	0.03** (2.47)	-0.01 (-0.37)
College Degree Rate	0.37*** (2.32)	0.07** (2.36)	0.01 (0.96)	0.005 (1.16)	-0.02 (-1.32)	-0.005 (-0.68)	-0.001 (-0.11)
Median H/H Income, k	0.08 (0.79)	-0.06** (-2.33)	0.02** (1.98)	0.0002 (0.09)	0.01 (1.18)	-0.003 (-0.68)	0.02*** (3.27)
Unemployment Rate	-0.26 (-1.54)	0.01 (0.60)	-0.002 (-0.10)	-0.01*** (-6.03)	-0.02** (-2.10)	0.01** (2.40)	-0.004 (-0.22)
$\log(\text{Population})$	3.31 (0.48)	0.75 (0.50)	1.19* (1.91)	0.06 (0.50)	-1.19* (-1.70)	-0.16 (-0.67)	-0.41 (-0.88)
Time FE	Year	Year	Year	Year	Year	Year	Year
Location FE	LG	LG	LG	LG	LG	LG	LG
Border Pair FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clusters	State	State	State	State	State	State	State
Observations	1,230	1,230	1,231	1,231	1,030	1,231	1,231
R ²	0.58	0.34	0.53	0.28	0.90	0.99	0.57

Table 13: FMP and offering yield spreads.

This table represents evidence on differential trends in municipal yields issued by monitored and not monitored local governments. I estimate the specification (1). The dependent variable *Offering yield spread* is a percentage yield spread between a municipal bond and a coupon-equivalent risk-free bond. In both regressions, I include controls for *Time to Maturity (TTM)*, $\log(\text{Bond Size})$, and *Insured* indicator. In column (2) I also control for $\frac{\text{Revenue},k}{\text{Population}}$, or revenue per capita, *MedianAge*, *CollegeDegreeRate*, or percentage of population with college degree, *Median H/H Income, k*, or median household income in thousands of US dollars, $\log(\text{Population})$, or natural logarithm of population. All specifications include local government, year, rating and use of proceeds fixed effects. I also include fixed effects for callable bonds (callable and puttable indicator variables) and an indicator for reoffered bonds. Below each coefficient, I report a t-statistic, calculated using standard errors clustered by state. Table contains standard significance levels. *Data Sources: Mergent Municipal Bond Securities, Federal Reserve Board, Municipal Atlas.*

	<i>Dependent variable:</i>	
	Offering yield spread	
	All bonds	Bonds with financial data
	(1)	(2)
FMP × Post	−0.02** (−2.16)	−0.03*** (−2.91)
Time to Maturity (TTM)	−0.01*** (−19.46)	−0.02*** (−14.10)
$\log(\text{Bond Size})$	−0.01*** (−6.64)	−0.001 (−0.47)
Insured	−0.03*** (−5.21)	−0.03** (−2.41)
$\frac{\text{Revenue},k}{\text{Population}}$		−0.003 (−0.20)
Median Age		0.0002 (0.06)
College Degree Rate		−0.01** (−2.52)
Median H/H Income, k		0.002 (1.45)
Unemployment Rate		0.01 (1.15)
$\log(\text{Population})$		0.02 (0.22)
Year FE	Yes	Yes
LG FE	Yes	Yes
Rating FE	Yes	Yes
Use of proceeds FE	Yes	Yes
Callable FE	Yes	Yes
Reoffered FE	Yes	Yes
Clusters	State	State
Observations	695,355	229,127
R ²	0.45	0.43

Figure 1: Channels that connect FMP and reporting quality, corruption and election outcomes.

This figure describes the hypothesized connections between fiscal monitoring policies and municipal financial reporting quality, local corruption and local political elections. (1) FMP can improve the timeliness and the accuracy of reporting quality by increasing demand for these reporting quality characteristics. (2) FMP can also directly deter corruption by increasing attention to the local financial statements. (3) Enhanced reporting quality can deter corruption by increasing the likelihood that malfeasance can be detected by state monitors, local employees, or other external parties. (4) Reduced corruption can potentially eliminate the need to hide malfeasance and result in less opaque reporting. (5) Enhanced reporting quality can impact local political elections and decrease incumbent reelection chances if local media and political opposition can more easily access and disseminate facts that can hurt political incumbents. (6) Reporting quality can further improve if voters elect better managers, who do not need to hide consumption of private benefits with opaque reporting. (7) Election of better managers can also contribute to decrease in corruption if these managers strengthen the internal controls within local government. (8) Decreased corruption can deter election of worse managers in the local office by potentially decreasing the extent to which private benefits can be consumed within the monitored local government.

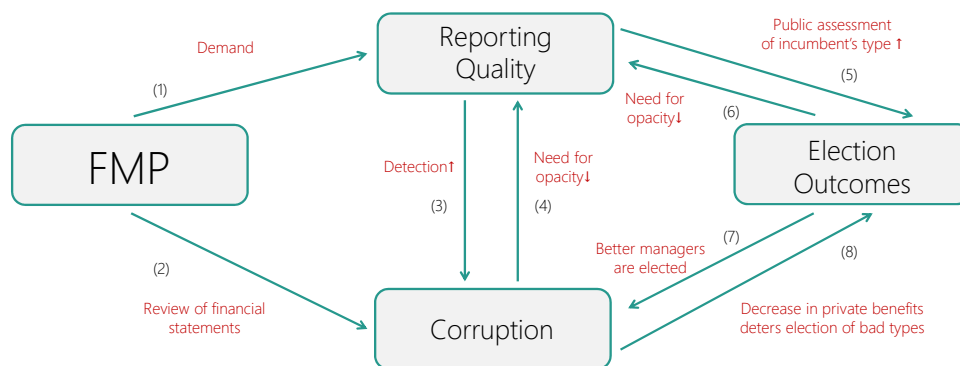


Figure 2: Channels that connect FMP with fiscal health.

This figure shows the hypothesized connections between fiscal monitoring policies and municipal fiscal health. Connections described in Figure 1 are omitted for clarity. *Learning:* FMP can directly inform local officials about state’s assessment of fiscal position of the local government, and can provide guidance on how to evaluate fiscal health. Moreover, FMP can increase reporting quality, enhancing measurement of the underlying economic position of the municipality, and improve resource allocation. *Disciplining:* FMP can decrease corruption and deter elections of entrenched politicians into the local office. Decrease in consumption private benefits can potentially improve fiscal management, directing resources where they are most needed.

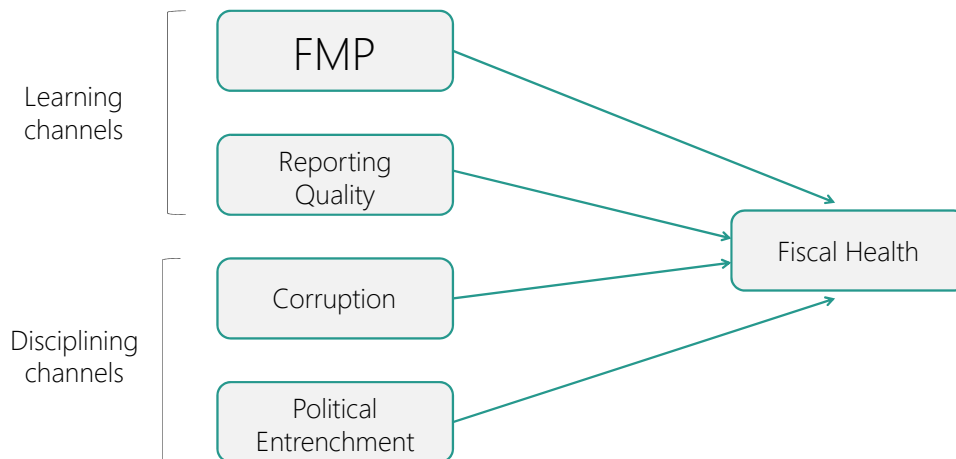


Figure 3: Parallel trends - filing delay.

This figure reports coefficients of OLS regressions that estimate the effect of fiscal monitoring policy on filing delay. I estimate the model (1) replacing $FMP \times Post$ indicator by a set of 7 separate dummies, each marking one time period relative to the policy introduction year ($t=0$). I omit the indicator for period $t-1$, which serves as the benchmark period with both coefficient and standard error of zero. Vertical bands represent 90% confidence intervals. *Data Source: MRSB.*

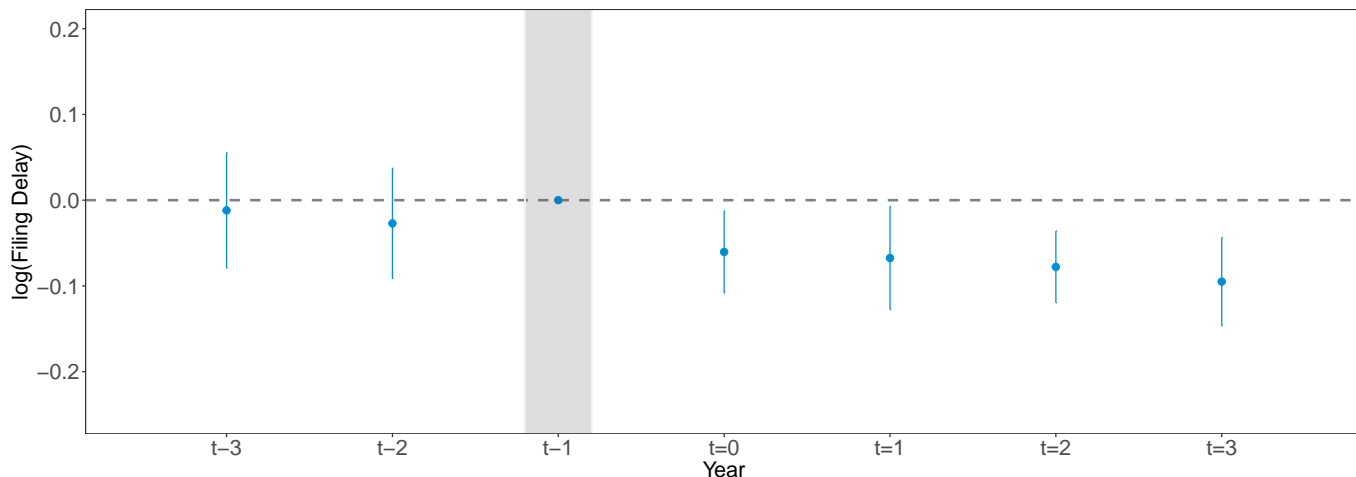


Figure 4: Parallel trends - corruption convictions.

This figure reports coefficients of OLS regressions that estimate the effect of fiscal monitoring policy on corruption convictions. I estimate the model (1) replacing $FMP \times Post$ indicator by a set of 7 separate dummies, each marking one time period relative to the policy introduction year ($t=0$). I omit the indicator for period $t-1$, which serves as the benchmark period with both coefficient and standard error of zero. Vertical bands represent 90% confidence intervals. *Data Source: Department of Justice.*

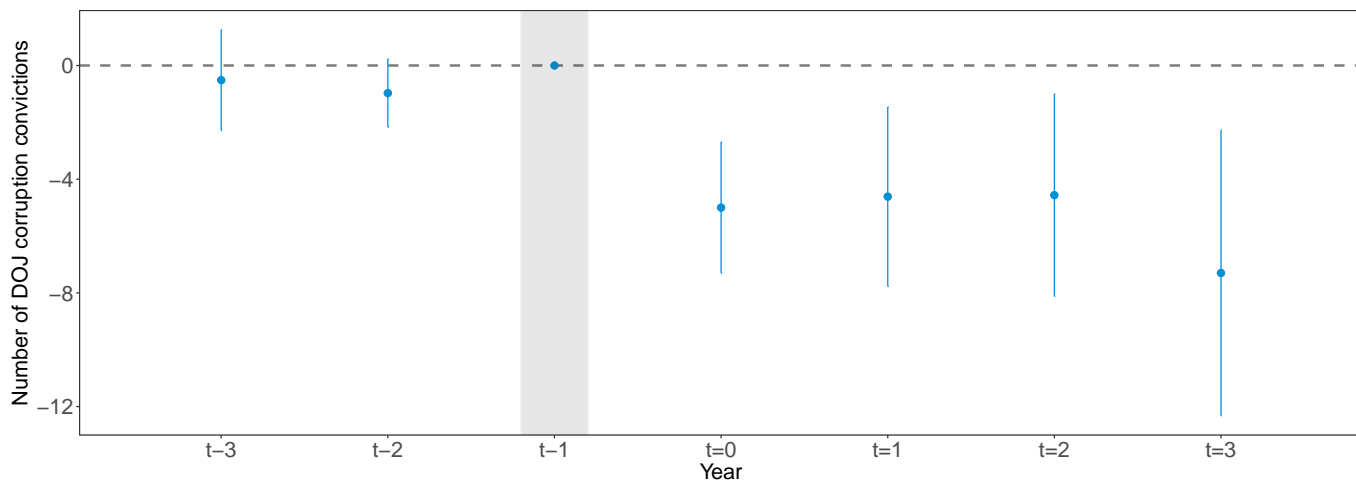


Figure 5: Parallel trends - incumbent victory.

This figure reports coefficients of OLS regressions that estimate the effect of fiscal monitoring policy on the incumbent’s chances to be reelected. I estimate the model (1) replacing $FMP \times Post$ indicator by a set of 7 separate dummies, each marking one time period relative to the policy introduction year ($t=0$). I omit the indicator for period $t-1$, which serves as the benchmark period with both coefficient and standard error of zero. Vertical bands represent 90% confidence intervals. *Data Source: ourcampaigns.com.*

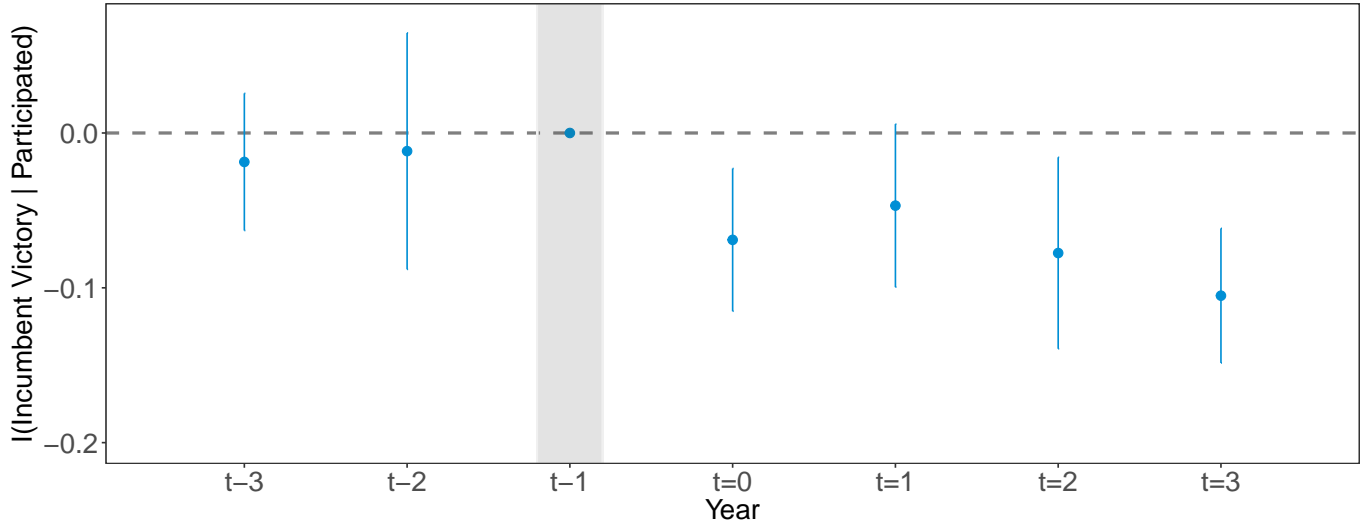


Figure 6: Parallel trends - finance.

This figure reports coefficients of OLS regressions that estimate the effect of fiscal monitoring policy on Current Assets/Current Liabilities. I estimate the model (1) replacing $FMP \times Post$ indicator by a set of 7 separate dummies, each marking one time period relative to the policy introduction year ($t=0$). I omit the indicator for period $t-1$, which serves as the benchmark period with both coefficient and standard error of zero. Vertical bands represent 90% confidence intervals. *Data Source: Atlas Municipal.*

