FISCAL MONITORING AS A FEDERAL DEFICIT INSTITUTION: EVIDENCE ON DESIGN, DEBT, AND INVESTMENT FROM U.S. STATE OVERSIGHT

Working Paper submitted to the NBER Conference on
Long-Term Budget Deficits: Economic Effects and Potential Responses (May 20–21, 2027)

Trang Hoang, Ph.D.
Associate Professor
Texas A&M University
tthoang@tamu.edu

Craig S. Maher, Ph.D.
Distinguished Professor
University of Nebraska at Omaha
csmaher@unomaha.edu

August 28, 2026

Abstract

Traditional federal fiscal rules, such as statutory debt limits and procedural PAYGO rules, shows limited impacts in reducing budget deficits because they impose point-in-time constraints that incentivize short-term strategic evasion and creative accounting without addressing underlying structural deficits. This paper examines whether continuous, rules-based fiscal monitoring regimes can promote fiscal discipline in the absence of coercive enforcement authority. Utilizing a multi-decade panel of U.S. municipal governments, we estimate staggered difference-in-differences and quantile regression models with fixed effects to isolate the impacts of specific monitoring features, including early-warning diagnostics, stress-tier labeling, intervention authority, and bankruptcy authorization, on local governments operating budget, debt financing, capital spending. We find that non-coercive, stress-tier labeling significantly reduces outstanding debt (−6.3%) with debt service payments also declining at the upper tail of fiscal stress. However, this debt reduction is accompanied by a systematic reduction in capital spending (−1.6%), indicating that informational oversight prompts immediate liquidity adjustments via deferred investment rather than structural operational cuts. Evaluating these findings through the lens of separation-of-powers constraints, we assess the legal and economic viability of establishing a statutory, non-coercive a fiscal monitoring mechanism at the federal level.

Acknowledgements

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Introduction

The U.S. federal government faces large, structural deficits. The Congressional Budget Office projects federal debt could exceed 150 percent of GDP by 2055, with baseline and alternative scenarios illustrating how shifting macroeconomic conditions, interest rate volatility, and demographic pressures could either mitigate or exacerbate this trajectory (CBO 2025a,b). Yet over the past quarter-century, policymakers have taken no meaningful action to curb this rising debt (Dynan and Elmendorf 2025). This persistent inaction reflects structural dynamics rooted in the political economy of government debt, rather than merely isolated policy choices (see more Oates 1988; Buchanan & Wagner 1977). As Alesina and Passalacqua (2015) argue, collegial democratic legislatures often exhibit a deficit bias driven by a "common pool problem," where representatives prioritize targeted spending without fully internalizing the aggregate tax burden required to finance it. Consequently, conventional debates over whether to bridge the fiscal gap by raising revenues or cutting spending remain trapped in a partisan "war of attrition," where polarized factions delay stabilization to avoid imposing concentrated political costs on their constituent (Alesina and Passalacqua 2015). Traditional proposals to counteract these political incentives, such as federal Balanced Budget Rules (BBRs) or statutory debt limits, face substantial limitations as it hinders federal government of vital countercyclical flexibility during macroeconomic crises, incentivize creative off-budget accounting, and lack credible enforcement mechanisms against a sovereign legislature (Alesina and Passalacqua 2015; Poterba 1994; Auerbach 2008).

Because rigid rules fail and unconstrained bargaining yields inaction, a new institutional approach is warranted. Virtually absent from the literature is the concept of adapting a subnational fiscal monitoring system to the federal level. A fiscal monitoring framework offers continuous diagnostic oversight, statutory early-warning designations, and institutionalized feedback loops without eliminating macroeconomic policy flexibility. This raises an unexamined question of federal institutional design: is it desirable, or even feasible, to establish a systematic, rules-based fiscal monitoring mechanism at the federal level to identify fiscal deterioration and incentivize discipline before a crisis forces reactive choices?

Subnational governments offer a compelling laboratory to examine these dynamics through the lens of Second-Generation Fiscal Federalism (SGFF), which models self-interested political actors operating under real institutional constraints (Oates 2005; Weingast 2009). Unlike the federal government, which operates under an inherently soft budget constraint, states utilize Fiscal Monitoring and Intervention Systems (FMIS) as external mechanisms to enforce fiscal discipline on subnational entities. These frameworks directly target the moral hazard, political agency frictions, and reporting lags that otherwise obscure local mismanagement (Nakhmurina 2024). By tracking standardized indicators such as liquidity, leverage, and operating ratios, an FMIS reduces information asymmetries between government tiers, limiting local officials' ability to cultivate fiscal illusion or defer structural adjustments. Beyond diagnostic oversight, these systems harden local budget constraints by mandating timely financial disclosures, elevating public and market scrutiny, and institutionalizing administrative capacity-building for proactive self-assessment and take proactive, timely action regarding their fiscal health.

However, state fiscal monitoring systems are far from uniform, and their effectiveness in achieving more sustainable fiscal outcomes vary dramatically. Highly proactive, collaborative frameworks, such as North Carolina's Local Government Commission, have succeeded in preventing financial distress through capacity building and strict debt oversight (Coe 2007). In contrast, reactive or heavily punitive models, such as Pennsylvania's prolonged distressed designations under Act 47 or Michigan's emergency manager regime,

have frequently failed to resolve structural deficits and, in some instances, have triggered severe secondary policy failures (Armezzani 2015; Hughes 2020). This divergence underscores the critical need to identify which policy mechanisms foster fiscal resilience.

To determine whether state-level solutions can inform federal reform, this research is structured in two main parts. First, it provides empirical evidence on what works and what doesn't across state monitoring frameworks, evaluating how design variations, such as monitoring scope, early warning indicators, stress-tier labeling, intervention authority, and bankruptcy authorization, impact local fiscal health and administrative capacity. Second, building on these empirical insights, the study examines what lessons can realistically be translated to the federal level, analyzing the political, constitutional, and institutional feasibility of constructing a federal fiscal monitoring framework. Ultimately, by bridging subnational empirical outcomes with federal governance challenges, this study provides a clear, data-driven foundation for whether proactive fiscal monitoring can serve as a viable tool in confronting the national debt crisis.

Literature Review

Fiscal Monitoring as an Accountability Mechanism: Information vs Consequence

A central question in subnational fiscal governance is whether institutional design achieves discipline primarily through information provision or consequence imposition. Empirical research demonstrates that informational channels can positively alter municipal behavior under the right institutional conditions. For instance, Kang and Chen (2024) document significant labeling effects within New York's Fiscal Stress Monitoring System, concentrated among localities in the early stages of fiscal distress. Similarly, Thompson (2017) shows that Ohio's fiscal stress designations prompt sharp expenditure reductions, with the most pronounced adjustments occurring among aid-dependent municipalities. Nakhmurina (2024) further illustrates that state monitoring improves financial reporting quality, lowers corruption convictions, increases electoral contestability, and strengthens fiscal health, with these political-economy benefits loading predominantly on states that publicly disseminate monitoring results—a defining hallmark of an informational mechanism. However, the existence of fiscal monitoring and reporting alone without an explicit consequence or early-warning architecture yields markedly weaker results (Kim & Park 2023). Synthesizing these insights alongside the institutional typology of Maher, Park, and McDonald (2025), the literature indicates that fiscal monitoring succeeds when design pairs predictive early-warning triggers with adaptive feedback loops that actively route diagnostic data back to decision-makers, rather than relying on static compliance reporting.

Fiscal Rules vs. Fiscal Monitoring Systems

Existing federal fiscal constraints, including statutory Pay-As-You-Go (PAYGO), the Gramm–Rudman–Hollings framework, and periodic debt-limit enforcement, have consistently failed to produce durable fiscal consolidation (Bourdeaux et al 2026). A primary reason for this failure lies in their structural design: these mechanisms function as point-in-time, procedural rules rather than continuous monitoring systems. Under procedural frameworks, constraints bind policy decisions only at discrete intervals, such as during legislative budget votes or when statutory ceilings are reached, forcing politicians into binary, high-stakes decisions. Because a sovereign legislature cannot bind future Congresses, these static checkpoints repeatedly succumb to political pressure; lawmakers routinely suspend rules, employ creative off-budget

accounting, or rely on emergency designations to bypass limits without addressing the underlying structural deficit (see more Rubin 2019).

This pattern underscores a critical theoretical distinction between fiscal rules and fiscal monitoring systems. Fiscal rules impose static, numerical, or procedural thresholds designed to restrict decision-making at specific points in time. When economic shocks or political pressures emerge, such rigid constraints offer little operational flexibility, encouraging strategic evasion or fiscal brinkmanship rather than meaningful adjustment. In contrast, a fiscal monitoring system operates as a continuous diagnostic architecture. Rather than enforcing a rigid binary outcome, a monitoring framework routinely tracks fiscal trajectories, generates early-warning signals, and establishes structured feedback loops to inform policymakers and the public well before a crisis forces reactive choices.

From a political economy perspective, point-in-time procedural rules fail because they do not counteract the incentives driving federal deficit bias. In collegial democratic legislatures, representatives face strong pressures to exploit common-pool resources by securing targeted spending while deferring the electoral costs of taxation (Alesina & Passalacqua 2015). Static procedural rules do little to alter this underlying calculus; instead, they can enable "fiscal illusion" by allowing politicians to claim compliance through short-term accounting maneuvers while structural debts accumulate (Bifulco et al 2012; Hoang & Chen 2026). By failing to provide transparent, continuous evaluation, traditional rules allow political actors to delay fiscal stabilization until forced by crisis conditions

So far, public finance literature has overwhelmingly focused on evaluating traditional numerical rules, such as balanced budget requirements versus unconstrained legislative discretion. Scholars have not systematically examined whether an information-based monitoring architecture could complement or substitute for rigid rules at the federal level. While subnational evidence demonstrates that early-warning and transparent reporting regimes can alter budgetary behavior even without coercive intervention authority, whether a similar diagnostic framework can penetrate federal deficit governance remains an unexamined, yet critical, question of institutional design.

A Typology of Monitoring Design

State-level Fiscal Monitoring and Intervention Systems (FMIS) vary widely in institutional architecture, spanning a continuum of coerciveness that dictates both local autonomy impacts and federal transferability. At its baseline, a fiscal monitoring presence establishes regular, standardized financial reviews, requiring municipalities to submit timely, audited financial statements to state oversight agencies. This foundational tier continuously tracks standardized financial condition indicators, such as cash liquidity ratios, debt service coverage, and operating margins, to eliminate reporting lags and mitigate information asymmetries.

Building upon baseline monitoring, early-warning systems utilize statutory definitions of distress and predictive diagnostic models to flag emerging structural imbalances well before insolvency occurs. Rather than imposing external control, these frameworks focus on early administrative engagement—providing advisory technical assistance, structured diagnostic feedback loops, and requesting voluntary corrective action plans to help local officials address vulnerabilities proactively, as seen in states like Ohio, Louisiana, Nevada, and Tennessee (Pew 2016).

Distinct from administrative early warnings, public labeling and stress-tier systems operate strictly

through an informational salience mechanism. These frameworks convert dense financial disclosures into visible, categorical designations (e.g., "significant stress," "moderate stress," or "susceptible to stress"). Exemplified by New York's Fiscal Stress Monitoring System, labeling systems rely on public transparency and targeted score dissemination rather than state oversight triggers. By dramatically lowering information-processing costs for voters, news media, and municipal bond markets, stress-tier labeling generates reputational and market-based incentives for fiscal adjustment without infringing upon local decision-making authority.

At the coercive end of the institutional spectrum, state oversight transitions from information provision to direct legal override. Intervention authority equips state oversight bodies with statutory powers to compel binding corrective action plans, withhold state intergovernmental transfers, restrict municipal bond issuance, or supplant local elected officials altogether with state-appointed emergency managers, receivers, or financial oversight commissions—a model historically deployed in Pennsylvania under Act 47, Michigan, and Rhode Island. Finally, bankruptcy authorization establishes the legal bridge to municipal insolvency, defining the statutory conditions under which local jurisdictions may file for federal Chapter 9 debt adjustment, either unconditionally or conditional upon prior state approval (Yang 2019).

Arrayed along this continuum, these distinct institutional features highlight a fundamental feasibility constraint for federal institutional design. Because constitutional separation of powers and sovereign currency issuance preclude external administrative receiverships or bankruptcy filings for the federal government, coercive intervention and bankruptcy features are structurally non-transferable. Consequently, the non-coercive informational tier, combining continuous diagnostic monitoring, predictive early warning, and categorical public labeling—defines the maximum viable ceiling for a federal fiscal monitoring architecture (see Table 1).

<Table 1 – A Typology of Fiscal Monitoring System>

Conceptual Framework

To analyze whether fiscal monitoring system oversight can induce fiscal discipline, our conceptual framework synthesizes Second-Generation Fiscal Federalism (SGFF) with principal-agent theory. Together, these paradigms examine how institutional architectures alter political payoff structures, mitigate information asymmetries, and attempt to harden budget constraints when self-interested political actors operate under electoral and agency frictions.

Second-Generation Fiscal Federalism and the Problem of the Soft Budget Constraint

A useful framework for conceptualizing our research question is second-generation fiscal federalism (SGFF). First-generation fiscal federalism (Oates 1972) modeled decentralization as an efficiency problem solved by a benevolent central planner matching public-good provision to local preferences. SGFF replaces that assumption with self-interested political actors operating under real institutional constraints, asking not what decentralization should optimally look like but what incentive structure induces politicians to behave as if they faced a budget constraint at all (Oates 2005; Weingast 2009). The literature's central construct is the hard budget constraint: subnational fiscal discipline in market-preserving federal systems is less a function of formal rules than of a credible expectation that a fiscally irresponsible government will bear the consequences

of its own choices rather than be bailed out by a higher-level authority (Qian & Weingast 1997; Kornai 1986; Rodden 2006).

The U.S. federal government is not considered in this literature since is the lender of last resort rather than a borrower disciplined by one, and it issues the currency in which its own debt is denominated — precisely the conditions Rodden (2006) identifies as producing the softest possible budget constraint. This is one reason the coercive end of the FMIS continuum — intervention and bankruptcy authority — is not applicable to our research question. In SGFF terms, the paper's empirical question becomes: absent the market-discipline and transfer-conditionality channels that harden subnational budget constraints, can the softer, reputational discipline of information and public labeling substitute for a hard constraint the federal government structurally cannot have? This framing clarifies the limits of the state-local evidence: state monitoring systems operate against the backdrop of an already-harder constraint (state balanced-budget requirements, the possibility of municipal bankruptcy, capital markets that price local credit risk), so federal monitoring would have to do the discipline work largely alone.

Principal-Agent Frictions, Public Choice, and Fiscal Governance

Theoretical and empirical literature in political economy attributes municipal fiscal deterioration primarily to information asymmetries, political agency frictions, and electoral incentives (e.g., Buchanan & Wagner 1977; Ferejohn 1986; Rogoff 1990; Besley 2006). Under classical agency theory, local elected officials (agents) possess private information regarding long-term structural liabilities, off-balance-sheet commitments, and budgetary erosion that voters, municipal bondholders, and oversight bodies (principals) cannot observe without incurring significant monitoring costs (Waterman & Meier 1998; Besley & Ghatak 2005). Public choice models suggest that short electoral horizons induce political actors to exhibit high discount rates, prioritizing expenditure programs that yield immediate, concentrated political gains while deferring financial liabilities onto future taxpayers (Buchanan & Wagner 1977; Alesina & Passalacqua 2015). To sustain these budget dynamics without triggering immediate political pushback, officials exploit monitoring frictions to cultivate fiscal illusion, using reporting delays, optimistic revenue forecasts, and opportunistic accounting choices to conceal emerging deficits (Nordhaus 1975; Hoang & Maher 2022; Hoang & Chen 2026).

State-level Fiscal Monitoring and Intervention Systems (FMIS) act as external, rules-based institutional constraints designed to alter this political payoff matrix and dismantle fiscal illusion. Theoretically, an FMIS restructures municipal incentives through two primary operational channels: the Information and Public Labeling Channel ($\text{FMIS}_{\text{Info}}$) and the Consequence and Enforcement Channel ($\text{FMIS}_{\text{Coercion}}$).

The Dual Channels of Fiscal Monitoring

The Information and Public Labeling Channel ($\text{FMIS}_{\text{Info}}$) operates entirely through transparency, standardized financial reporting, and predictive early-warning diagnostics (Kang & Chen 2024; Nakhmurina 2024). By systematically reducing information asymmetry, statutory early-warning indicators convert dense financial disclosures into salient, easily digestible public signals, such as categorical "fiscal stress" designations. This public dissemination dramatically lowers information-processing costs for voters, political rivals, and news media, thereby imposing immediate reputational and electoral costs on incumbent officials who attempt to mask fiscal distress (Thompson 2017; Thompson & Whitley 2017). Concurrently, public stress designations signal elevated credit risk to municipal bond markets, generating borrowing-cost penalties that incentivize

preemptive, non-coercive fiscal adjustments. Beyond political accountability, early monitoring serves a capacity-building function by identifying administrative deficiencies and transmitting financial management best practices directly to local officials.

In contrast, the Consequence and Enforcement Channel ($\text{FMIS}_{\text{Coercion}}$) relies on state statutory authority to override local political discretion. It operates through progressive tiers of state intervention, including mandatory corrective action plans, debt issuance restrictions, administrative receivership, emergency management, and conditional authorization for Chapter 9 municipal bankruptcy filing (Kim & Park 2023; Yang 2019). By threatening the loss of local political sovereignty if fiscal conditions cross statutory distress thresholds, the presence of credible enforcement mechanisms fundamentally alters the payoff structure of local officials, forcing time-consistent structural restructuring when self-interested actors would otherwise resist adjustment.

Coerciveness Continuum and Federal Transferability

To evaluate how subnational empirical evidence can inform federal institutional design, FMIS statutory features can be ordered along an axis of increasing coerciveness, defined by a scalar index $\mathcal{C}_k \in [0, 1]$:

$$\mathcal{C}_{\text{Monitoring}} < \mathcal{C}_{\text{Early Warning}} < \mathcal{C}_{\text{Public Labeling}} \ll \mathcal{C}_{\text{Intervention}} < \mathcal{C}_{\text{Bankruptcy}}$$

Along this continuum, low coerciveness ($\mathcal{C} \approx 0$) encompasses baseline data audits, standardized reporting, and predictive early-warning labeling, whereas high coerciveness ($\mathcal{C} \approx 1$) involves administrative takeovers, emergency receiverships, and municipal bankruptcy authorizations.

Constitutional separation of powers – specifically, the barring of executive enforcement authority in an officer removable by Congress, established in Bowsher v. Synar, 478 U.S. 714 (1886) – preclude the creation of an external oversight body possessing takeover or receivership authority over the federal government, rendering coercive intervention and bankruptcy features structurally non-transferable ($\mathcal{C}_{\text{Intervention}}, \mathcal{C}_{\text{Bankruptcy}} = \emptyset$). Consequently, the maximum achievable coerciveness for a federal fiscal monitoring framework is strictly bounded by $\mathcal{C} \leq \mathcal{C}_{\text{Early Warning}}$. This institutional boundary dictates the primary analytical objective of this study: if state-level empirical policy evaluations demonstrate that fiscal improvements are generated exclusively by coercive intervention ($\mathcal{C}_{\text{Intervention}}$), a federal monitoring architecture is conceptually non-viable. Conversely, if information provision, predictive early-warning diagnostics, and public labeling ($\mathcal{C}_{\text{Early Warning}}$; $\mathcal{C}_{\text{Public Labeling}}$) independently dismantle fiscal illusion and induce measurable fiscal discipline, a non-coercive federal monitoring mechanism represents a viable governance tool.

Based on this political economy framework, this research aims to test the two following hypotheses:

Hypotheses 1: Monitoring frameworks that incorporate predictive early-warning indicators and public labeling features generate stronger and more persistent fiscal improvements than systems simply with fiscal monitoring.

Hypotheses 2: In the absence of coercive intervention authority, public labeling and early-warning mechanisms induce non-linear fiscal adjustments that concentrate in the tail of the fiscal stress distribution and are moderated by local administrative capacity and economic conditions.

Data

The data for this analysis include the long multi-decade panel of U.S. municipal governments combining financial, institutional, and socioeconomic data. Fiscal outcomes are drawn from the U.S. Census Bureau's Annual Survey of Government Finances and Census of Governments, covering the universe of general-purpose municipal governments. This sample avoids selection biases inherent in debt-threshold or municipal bond-issuance samples.

State FMIS statutory regimes are collected by the authors. These variables coded from historical state legislative archives, session laws, and baseline classifications established by the Pew Charitable Trusts (2016), Gordon (2018), Yang (2019), Nakhmurina (2024), and Maher, Park, and McDonald (2025).

The institutional context dataset incorporates state-level fiscal constraints, including Tax and Expenditure Limits (TELs), Balanced Budget Requirements (BBRs), statutory debt limits, and legislative supermajority rules. Socioeconomic controls are integrated from the U.S. Bureau of Economic Analysis (BEA), UKCPR National Welfare Data, and the data from Surveillance, Epidemiology, and End Results (SEER) Program.

Variables

Dependent variables. We focus on four main outcome variables: operating ratio (revenues/expenditures), debt burden (debt as % of revenues), capital spending (% of expenditures), debt-service payments (% of expenditures). These are core fiscal metrics in the fiscal condition literature (see Maher et al., 2023), and also most consistent with the federal government's fiscal challenges of operating deficit (spending more than taking in), high debt level, and growing debt service (see Table 2)

Independent variables.. The main independent variables capture the staggered adoption of specific FMIS design features in state s and year t, including the fiscal monitoring system, early warning, public labeling, intervention authority and conditional/unconditional bankruptcy.

Control variables. Fiscal rules, including balanced-budget requirements, tax-and-expenditure limits, debt limits, and supermajority rules — both confounders of the outcomes and predictors of which states adopt monitoring, so they enter explicitly rather than being absorbed into fixed effects. TELs limits, in particular, do not bind localities uniformly within a state (Park, Maher & Ebdon, 2017), so their measured effect on fiscal outcomes is itself heterogeneous – a further reason to model them explicitly rather than as a fixed-effect absorbed constant. Other socioeconomic variables including personal income per capita (county-level), political structure (unified vs. divided state governments, political party of the governors, population dynamics (county-level).

<Table 2 – Variable Description>

Empirical Strategy

Stage 1: Cross-State Comparison of FMIS Design Features

To identify which components of Fiscal Monitoring and Intervention Systems (FMIS) drive fiscal adjustments, Stage 1 estimates a generalized difference-in-differences (DiD) framework with staggered treatment timing. The baseline specification is:

$$Y_{ist} = \alpha + \beta \text{FMIS}_{st} + \mathbf{X}'_{ist}\gamma + \mu_i + \lambda_t + \varepsilon_{ist}$$

where Y_{ist} represents a fiscal outcome for municipality i in state s at year t; μ_i and λ_t denote municipality and year fixed effects, respectively; and $\mathbf{X}_{ist}$ is a vector of time-varying local controls (e.g., population density, per capita personal income, demographic composition, intergovernmental aid dependency, and state political alignment).

Because fiscal monitoring systems rarely alter a local government's financial position overnight, we re-estimate the fixed-effects model using an event-study approach to evaluate pre-treatment trajectories and dynamic post-treatment impacts. We evaluate parallel trends using the following dynamic specification:

$$Y_{ist} = \mu_i + \lambda_t + \sum_{k \neq -1} \beta_k \mathbb{I}\left(t - g_s = k\right) + \mathbf{X}'_{ist}\gamma + \varepsilon_{ist}$$

where g_s denotes the cohort year in which state s adopted the policy feature, and k represents event time relative to adoption. Pre-treatment leads ($k < 0$) test the identification assumption of identical counterfactual trajectories.

As a robustness check, we account for the fact that classical Two-Way Fixed Effects (TWFE) estimators can produce biased coefficients in the presence of staggered treatment adoption and heterogeneous dynamic treatment effects (Goodman-Bacon 2021). Consequently, we estimate group-time average treatment effects, $ATT(g,t)$, using the robust estimators developed by Callaway and Sant'Anna (2021) and Sun and Abraham (2021).

Furthermore, we hypothesize that the marginal effect of a fiscal monitoring system will be stronger at the distributional tails—specifically when local governments are already in deep financial distress. For all the effect that are founded in the full-sample analysis, we re-estimate the model following the fixed-effects panel quantile regression.

Stage 2: Within-State Mechanics and Marginal Adjustments

Conditional on Stage 1 establishing the broader macro-trends, Stage 2 investigates the internal mechanics of a unified reporting regime using New York's Fiscal Stress Monitoring System (NYS FSMS) to isolate the causal impact of informational mechanism of the FMIS system. he Office of the State Comptroller (OSC) calculates a continuous fiscal stress score $S_{it} \in [0, 100]$ based on operating deficits, fund reserves, and short-term liquidity[1]. Public stress labels (T_{it}) are assigned whenever this score meets or exceeds rigid numeric cutoffs (c).

Because municipalities immediately above and below a cutoff are virtually identical in underlying characteristics, we utilize a staggered Regression Discontinuity Design (RDD) to test (1) whether initial fiscal labeling effectively alters behavior, and (2) whether repeated labeling intensifies this effect or produces a null result due to warning fatigue.

[1]A higher score indicates greater fiscal distress severity. The cutoff thresholds for general purpose local governments are: (1) No Designation (not fiscally stress): Score < 45; (2) Susceptible Fiscal Stress: $45 \leq$ Score < 55 (indicates entities heading toward distress without corrective action); (3) Moderate Fiscal Stress: $55 \leq$ Score < 65; (4) Significant Fiscal Stress: Score ≥ 65. The OSC publicly releases these labeling results, which frequently garner local media attention. Residents can also search and download the results via an online OSC toolkit (DiNapoli 2016). The assignment of a label strictly based on these arbitrary numeric cutoffs provides the necessary exogenous shock—entities just above and just below the threshold are fiscally similar, but only those above receive the public label.

Finally, to identify the mechanisms that amplify or blunt this information channel, we estimate interaction models focusing on the fiscal dependency of local governments:

$$Y_{it} = \alpha + \beta_1 \text{Label}_{it} + \beta_2 \left(\text{Label}_{it} \times \text{Dep}_i\right) + \lambda_t + \varepsilon_{it}$$

where Dep_i represents baseline pre-treatment characteristics for fiscal dependency, measured by intergovernmental transfers as a proportion of total revenue. This specification explicitly tests the transfer-linkage channel documented by Thompson (2017). Estimating β_2 isolates the structural conditions under which informational governance mechanisms induce municipal adjustments, directly informing the structural parameter space necessary for effective federal system design.

Exogeneity and Identification Challenges

A fundamental condition for valid causal inference in models is the strict exogeneity of policy adoption. In the context of state-level public finance, however, treatment assignment is rarely exogenous; states frequently enact fiscal monitoring legislation in direct response to escalating local financial distress. This reverse causality raises concerns over selection bias, making the parallel trends assumption mathematically and practically difficult to achieve across a national sample. However, we have taken several steps for this analysis to help alleviate this empirical concerns: (1) we estimate the regression using one-year lag period between the year of the FMIS adoption and the fiscal outcomes; (2) we evaluate the visualization of the even-study to identify any pre-trend trajectory; (3) we run the post-estimation test following the Callaway and Sant'Anna (2021) model to identify any group/time that potentially cause an issue with pre-trend analysis (p-value >0.05), we, then, exclude those groups and re-estimate the model to ensure the consistency of the results. Additionally, following Callaway and Sant'Anna (2021) model suggestions, we run the analysis with two treatment groups: never treat and not-yet-treat; (4) we utilize the RDD to estimate the results from the sample of local government in NY to re-evaluate the impacts of the fiscal labelling system to ensure robust results.

Preliminary Evidence: Local Fiscal Responses to State Monitoring Design

The following section providing our preliminary findings from Stage 1. Using the Census Annual Survey of Government Finances merged with state FMIS adoption dates (discussed above). We estimate two-way fixed-effects models of four local fiscal outcomes — capital spending, outstanding debt, debt service, and the operating ratio (revenues/expenditures) — on time-varying indicators for each of six monitoring design features, with locality and year fixed effects and controls for population, intergovernmental revenue, and revenue ($N \approx$ 27,300 local government-year observations). Table 3 reports the coefficient on each design feature from a separate specification per outcome.

<Table 3 – Preliminary Findings>

Results from table 3 shows different effect of the information and public labeling channel. Among the information channel, we found that stress-tier labeling — a categorical distress designation with no statutory link to intervention — is statistically and negatively associated with outstanding debt (−6.3%, p<0.05).

Early-warning systems is positively associated with the operating ratio (+4.2%, p<0.05) but unexpectedly, also positively associated with debt service (+1.4%, p<0.10), with neither significant findings on outstanding debt nor capital spending models. A potential explanation for this scenario is a preemptive response of the capital market. Governments with early warning active might signal higher risk for investors, which could potentially raise their borrowing cost. Additionally, we found that fiscal monitoring system is not without cost. Our results indicate that the presence of the fiscal monitoring system is negatively associated with spending on capital (1.2%, p<0.05), while having a stress_tier labeling system is also statistically and negatively associated with and capital spending (−1.6%, p<0.05).

That pairing is consistent with a specific mechanism rather than two unrelated effects: governments under a monitoring system or public label appear to restrain borrowing partly by deferring capital projects, the classic "starve the capital budget" coping response documented in the Ohio labeling literature (Thompson 2017), rather than by cutting current operations or raising revenue. If this holds up under the causal design, it identifies debt reduction under a purely informational regime — the design closest to what a federal institution could adopt — as coming with an investment cost, not a free lunch.

Among the consequence and enforcement channel, unconditional bankruptcy authorization, filing available without prior state approval, is associated with lower capital spending (−1.7%, p<0.05) but higher cash holdings (+7.3%, p<0.10). The results signal that local governments under this system build precautionary reserves while still cutting investment. Authorization that is conditional on the state having already intervened shows the reverse liquidity pattern with cash holdings fall sharply (−6.9%, p<0.05) while the operating ratio rises (+2.2%, p<0.10). The same underlying exposure (potential Chapter 9 access) thus coincides with reserve-building in one procedural regime and reserve drawdown in the other — a design-contingent, and only partly intended, liquidity effect worth separating from the debt story.

Read together, our preliminary estimates demonstrate that informational discipline is not a free lunch: the debt reduction observed under stress-tier labeling (−6.3%) coincides directly with a statistically significant reduction in capital spending (−1.6%). This finding aligns directly with Poterba's (1995) evidence on capital budgets and state fiscal discipline, which demonstrates that institutional fiscal constraints disproportionately suppress public capital outlays. When faced with heightened transparency or fiscal stress labels, elected officials selectively cut or defer capital projects—which carry diffused long-term costs—rather than cutting immediate operating outlays or raising revenues (Thompson 2017; Poterba 1995). For federal policy design, this reveals a crucial institutional tradeoff: establishing an information-based federal monitoring body may successfully curb debt accumulation, but likely at the cost of starving public infrastructure investment unless capital accounting frameworks are explicitly protected.

Event Study – Trend Analysis

For this preliminary analysis, we focus the event study analysis on significant coefficients (effects) found in the previous steps. The trend analysis shows that for all the models, no notable pre-trend can be detected over a decade prior to the implementation of the fiscal monitoring system, including the early warning and the stress-tier/labeling. In the post implementation period, as expected, we found that it takes time for the fiscal monitoring system to take effect. We observed that coefficients for the impacts the stress-tier labelling system on debt service does not drop under zero until the 6^{th} and 7^{th} year period after the adoption; and coefficients for the impacts the stress-tier labelling system on total outstanding does not drop under zero until the 4^{th} and 5^{th} year period after the adoption. However, we also observed that in the much later time period,

both the effect of the debt and debt service model become non-statically significant, which can show either that the effect eventually faded out, or that the governments (when they are no longer label as fiscal-stress) might continue borrowing more money, including to pay for the needed capital that might have been delayed during the fiscal stress designation period. We hope to clarify this effect using the specific case study of New York in Stage 2 of this analysis (Figures 1-4).

<Figures 1-4>

Quantile Analysis

To evaluate Hypothesis 2, we test whether behavioral responses to informational monitoring mechanisms vary across the conditional distribution of local fiscal conditions. The panel quantile regression estimates presented in Tables 4.1 through 4.4 demonstrate that the fiscal adjustments induced by stress-tier labeling are highly non-linear and concentrated almost exclusively in the upper tail of fiscal distress. For municipalities operating at low-to-moderate leverage, public stress-tier designations exert no statistically discernible impact on total debt burdens or debt service obligations. However, among local governments situated in the highest debt quantile, stress-tier labeling produces a statistically significant 7.7% reduction in total outstanding debt ($p < 0.05$). A parallel tail effect emerges in the debt service distribution, where stress-tier labeling generates a 2.6% reduction in debt service expenditures ($p < 0.10$) specifically within the highest debt-service quantile.

These empirical patterns directly support Hypothesis 2, confirming that informational discipline does not act uniformly across the municipal panel. Instead, statutory early-warning indicators and public stress labels function as targeted institutional shocks whose political and reputational costs bind primarily where fiscal illusion and structural liabilities are most acute. Where municipal financial margin is minimal, categorical public labeling dramatically lowers information-processing costs for voters, news media, and municipal credit markets, incentivizing local officials to undertake corrective fiscal adjustments. Conversely, in jurisdictions with moderate debt, the marginal reputational penalty of a monitoring flag remains insufficient to alter baseline budgetary trajectories. In addition, Table 3.4 reveals that early-warning systems coincide with a 2.3% increase in capital spending ($p < 0.05$) among jurisdictions in the highest capital outlay quantile, suggesting that early diagnostic engagement may help high-investment municipalities preserve infrastructure spending while restructuring broader debt obligations. Overall, these quantile dynamics highlight that non-coercive oversight operates as a tail-specific corrective mechanism rather than a generalized operational constraint.

<Tables 4.1-4.4 –insert here>

CSDID Preliminary result

To address potential identification challenges inherent in traditional Two-Way Fixed Effects (TWFE) panel estimators—specifically staggered treatment timing and heterogeneous dynamic treatment effects—we re-estimate our core models using the robust staggered difference-in-differences estimator developed by Callaway and Sant'Anna (2021). Table 5 reports the overall Average Treatment Effect on the Treated (ATT) across two separate comparison cohorts: not-yet-treated units and never-treated units. The parameter estimates exhibit exact consistency across both control group specifications, verifying that our main baseline results are not artifacts of negative weighting schemes or improper comparison units.

Across both comparison frameworks, stress-tier labeling maintains a statistically significant negative

association with debt service expenditures ($\beta = -0.017, p < 0.10$), reinforcing the directional debt-reduction dynamics observed in the standard panel regressions. Concurrently, early-warning mechanisms show stable positive point estimates for the operating ratio ($\beta = 0.065, p < 0.01$), total debt ($\beta = 0.072, p < 0.05$), and debt service ($\beta = 0.026, p < 0.05$), regardless of whether not-yet-treated or never-treated jurisdictions serve as the counterfactual baseline. This empirical invariance across control cohorts demonstrates the structural robustness of our findings. By confirming that informational monitoring design features yield stable behavioral responses under non-parametric staggered difference-in-differences estimators, these preliminary results provide a credible empirical foundation for evaluating how information-based institutions influence municipal fiscal trajectories

<Table 5 –insert here>

Relevance to Long-Term Deficit Policy

This study uses U.S. state experience to establish and empirically test what a monitoring-type fiscal institution does and does not achieve the fiscal goals of reducing debt financing and budget deficit, and at what cost, when intervention authority is absent. Two findings bear directly on the federal deficit question. First, the debt-reducing effect of monitoring is concentrated in its least coercive form, which is also the form most structurally compatible with a federal government that cannot be placed into receivership — informative about the ceiling on what an information-based federal fiscal institution could plausibly achieve. Second, debt reduction under monitoring is not fiscally costless: it coincides with reduced capital investment or reduced liquidity in different design configurations, a tradeoff relevant to any assessment of how institutional fiscal discipline interacts with long-run growth and investment.

The results provide some key observations on its transferability to federal fiscal oversight system. First, Information asymmetry is only partially resolved at the federal level. While the CBO outlook serves as a strong early-warning analog, it lacks an institutionalized feedback loop—resulting in information without a consequence architecture, a setup the literature demonstrates does not reliably alter fiscal behavior. This limitation is fixable by statute rather than new analytical infrastructure. Second, transfer linkages are structurally absent because there is no superior government to condition fiscal transfers. The primary substitute—the sovereign borrowing cost market channel—is substantially weaker, functions primarily when fiscal stress is already severe, and is further blunted by the federal government's position as a currency issuer. Third, public labeling represents the most readily transplantable feature. Federal fiscal data are widely accessible, and CBO projections carry strong institutional credibility. However, these forecasts currently lack conversion into categorical, tiered designations that carry public and political reputational weight. Establishing this mechanism requires a statutory designation framework rather than new data collection or organizational capacity. Fifth, intervention authority is structurally absent by constitutional design. Separation of powers precludes external receivership or direct state-style takeovers, leaving procedural triggers—such as mandatory congressional hearings or automatic review processes tied to fiscal designations—as the only available substitutes, though their enforcement leverage remains far weaker than direct administrative authority.

<Table 6 – Federal Transferability –insert here>

Design implications: a federal minimum-viable architecture

These findings yield three core principles for designing a minimum-viable federal fiscal monitoring architecture. First, the framework must prioritize early warning over crisis response. Because sovereign-level constraints eliminate direct transfer and intervention channels, a federal monitoring system must rely on informational and electoral mechanisms that operate most effectively during early to moderate fiscal stress. Consequently, a crisis-stage framework misses the critical window in which its available political levers can exert influence. Second, fiscal labeling should be categorical and institutional rather than purely forecast-based. Under a robust statutory framework, standard Congressional Budget Office metrics would translate into tiered designations, ranging from sustainable and watch to observation and distress, applied to both aggregate positions and specific program categories, thereby triggering mandatory, structured responses from key congressional committees and the Office of Management and Budget. Third, institutional independence must serve as the structural substitute for financial leverage. Because federal designations cannot rely on financial dependency for enforcement, statutory independence, fixed-term leadership, and transparent analytical methodologies become load-bearing elements, ensuring that institutional credibility drives political accountability

Legal and Constitutional Feasibility

The design implications assume that even the non-coercive, information-and-labeling tier of a federal monitoring architecture is constitutionally straightforward to build, which is far from the truth. Any federal monitoring design that gives a designation automatic legal or budgetary force risks failure unless enforcement authority is vested in an officer under ordinary presidential appointment and removal, which reintroduces the political control the architecture is meant to insulate against (see Bowsher v. Synar, 478 U.S. 714 (1986).

The purely informational tier proposed in Design Implications is on much firmer ground and consistent with existing institutions. The Congressional Budget Office and the Government Accountability Office's recurring long-term fiscal simulations (e.g., GAO-24-106987, 2024) show that Congress can and does fund an independent body to publish nonbinding fiscal assessments without separation-of-powers difficulty. A statutory designation framework that converts CBO/GAO metrics into tiered labels sits on the same footing as long as the label carries no automatic legal consequence: no non-delegation problem arises after Gundy v. United States, 588 U.S. 128 (2019), given the Supreme Court's persistently permissive "intelligible principle" standard, and no standing or political-question obstacle arises because no party suffers a cognizable injury from a label alone. The feasibility ceiling identified in the Coerciveness Continuum above is therefore best read as a design constraint rather than a defect to be drafted around: intervention-tier authority is unavailable not because a statute could be written more carefully, but because no version of that authority can be vested in a body Congress can also control.

Two refinements to the framing above follow from this. First, the relevant constitutional constraint is separation of powers among the federal branches, not the anti-commandeering doctrine of New York v. United States, 505 U.S. 144 (1992), and Printz v. United States, 521 U.S. 898 (1997): that doctrine protects state governments from federal compulsion and has no direct purchase where the federal government is both regulator and regulated party. Second, the institutional-independence recommendation above (statutory independence, fixed-term leadership) will itself face a for-cause-removal question if the designating body is insulated from presidential removal by more than one layer, per Free Enterprise Fund v. PCAOB, 561 U.S.

477 (2010); a single layer of for-cause removal, on the CBO or Federal Reserve model, is the safer institutional design. Neither point changes the paper's bottom line — that the informational tier is legally available and the coercive tier is not — but both should be reflected in how the constitutional claim is sourced and stated.

Discussion

In sum, the preliminary evidence in this paper offers insights into the questions on the effectiveness of a fiscal monitoring system. As Hypothesis 1 predicts, institutional design matters fundamentally, though not through the simplistic mechanism that "more monitoring is better." The findings indicates that stress-tier labeling emerges as the most consistently robust driver of fiscal adjustment. By contrast, early-warning systems display mixed effects (a positive operating-ratio effect paired with a small positive debt-service effect, plausibly a capital-market repricing response). Meanwhile, the coercive channel (bankruptcy authorization) shows a liquidity effect that flips sign with the procedural regime. Furthermore, the quantile analysis illustrates where in the distribution do the fiscal monitoring system exert the greatest leverage. The results show that the debt and debt-service effects of stress-tier labeling are several times larger in the highest-debt quantile than in the full-sample average, consistent with informational discipline doing more work where fiscal illusion has more slack to unwind. The consistent thread across both hypotheses is that debt reduction under a purely informational regime is not free: it travels with reduced capital spending or reduced liquidity depending on system design

Two scope conditions bound how far this evidence can be pushed. First, state monitoring systems operate against a harder budget constraint already in the background — state balanced-budget requirements, the possibility of municipal bankruptcy, capital markets that price local credit risk — none of which exist for a currency-issuing federal government. The state-local estimates therefore identify an upper bound on what informational discipline alone can accomplish under favorable conditions, not a direct estimate of a federal effect. Second, that restriction is structural, not just empirical: the coercive designs whose effects this paper can estimate directly are constitutionally unavailable at the federal level regardless of how well they perform in the state data, which is why the federal design implications lean entirely on the informational and labeling estimates.

The next stage of this project uses the New York State Fiscal Stress Monitoring System to test what Stage 1's cross-state panel cannot: within-state, plausibly exogenous variation around the OSC's numeric stress-score cutoffs. Four extensions are planned. First, the staggered RDD will separate an initial stress label from repeated labeling, directly testing the "warning fatigue" possibility raised in the Event Study discussion. Second, the interaction model in Stage 2 will be re-estimated with NY's more granular transfer-dependency measures to test the Thompson (2017) transfer-linkage channel directly. Third, NY's longer, better-measured fiscal-stress series will let us re-estimate the quantile regressions with a sample large enough to report results at multiple points in the distribution, not just the extremes, and to test whether Hypothesis 2's non-linearity holds up outside the national panel. Furthermore, the paper will incorporate measures of divided versus unified political control to test how institutional friction conditions the efficacy of oversight signals. Drawing on the foundational political economy literature (Poterba 1994; Alt and Lowry 1994), this extension will assess whether divided government exacerbates gridlock and delays the fiscal adjustments triggered by a stress designation, or whether unified governance enables swift structural correction.

Completing the paper along this design requires four remaining steps before May 2027: (1) revise the

statutory FMIS coding with additional coder to ensure the consistency of the coding; (2) re-estimate the model with more control variables, including the fiscal institutional constraints and political environment; (3) fill out the quantile and CSDID sections with the full distributional and design-by-design comparisons; (4) run the NY microdata extension once locality-level stress-score and label-history data are assembled from OSC records.

The paper's main contribution is to identify from the clearest available laboratory of subnational fiscal oversight, which components of a monitoring architecture move fiscal outcomes, at what cost, and under what design constraints those components could survive translation to a government that cannot be placed into receivership. If the completed analysis confirms this preliminary pattern, the paper's contribution to the long-term deficit debate is a ceiling estimate — the most a monitoring-type institution could plausibly do for the federal government, and the terms on which it would do it, absent any change to Congress's coercive or constitutional constraints.

References

Alesina, A., & Passalacqua, A. (2015). "The Political Economy of Government Debt," NBER Working Paper No. 21821

Armezzani, R. L. (2015). Trapped in distress: How the Act 47 program is failing Pennsylvania's municipalities. Dickinson Law Review, 120(2), 591–620.

Auerbach (2008). Federal Budget Rules: The US Experience, NBER Working Paper No. 14288

Besley, T. (2006). *Principled agents?: The political economy of good government*. Oxford University Press

Besley, T., & Ghatak, M. (2005). Competition and incentives with motivated agents. *American economic review*, *95*(3), 616-636

Bifulco, R., Bunch, B., Duncombe, W., Robbins, M., & Simonsen, W. (2012). Debt and deception: How states avoid making hard fiscal decisions. *Public Administration Review*, *72*(5), 659-667

Bourdeaux, C., Hoagland, G. W., Joyce, P. G., Kahn, T. S., & Lu, E. Y. (2026). Navigating the Power of the Purse—Fiscal Irresponsibility, Process Failures, and the New Constitutional Stress Test. *Public Administration Review* 86(5): 1255-1264

Bowsher v. Synar, 478 U.S. 714 (1986).

Buchanan, J. M., & Wagner, R. E. (1977). Democracy in deficit: The political legacy of Lord Keynes.

Callaway, B. & Sant'Anna, P. (2021). Difference-in-differences with multiple time periods. Journal of Econometrics 225(2): 200–230.

Canay, I. (2011). A simple approach to quantile regression for panel data. Econometrics Journal 14(3): 368–386.

Coe, C. K. (2007). Preventing local government fiscal crises: The North Carolina approach. *Public Budgeting & Finance*, *27*(3), 39-49.

Congressional Budget Office (CBO). (2025a). The Long-Term Budget Outlook Under Alternative Scenarios for the Economy and the Budget.

Congressional Budget Office (CBO). (2025b). The Long-Term Budget Outlook: 2025 to 2055

Dynan, K., & Elmendorf, D. (2025). Putting US fiscal policy on a sustainable path. *Journal of Economic Perspectives*, *39*(4), 27-48.

Ferejohn, J. (1986). Incumbent performance and electoral control. *Public choice*, *50*(1/3), 5-25.

Free Enterprise Fund v. Public Company Accounting Oversight Board, 561 U.S. 477 (2010).

Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. Journal of Econometrics 225(2): 254–277.

Gordon, T. (2022). Predicting Municipal Fiscal Distress: Aspiration Or Reality?. Lincoln Institute of Land Policy..

Government Accountability Office. (2024). The nation's fiscal health: Road map needed to address projected unsustainable debt levels (GAO-24-106987).

Gundy v. United States, 588 U.S. 128 (2019).

Hoang, T., & Chen, G. (2026). From Disclosure to Discipline: How Accounting Standards Shape Public Pension Plan Management. *Available at SSRN 6337699*.

Hoang, T., & Maher, C. S. (2022). Fiscal condition, institutional constraints, and public pension contribution: are pension contribution shortfalls fiscal illusion?. *Public Budgeting & Finance*, *42*(4), 93-124.

Hughes, S. (2020). Flint, Michigan, and the politics of safe drinking water in the United States. *Perspectives on Politics*, Cambridge University Press. 19(4) 1219-1232.

Kang, H. & Chen, G. (2024). The effect of fiscal stress labels on local governments' financial management: Evidence from the New York State Fiscal Stress Monitoring System. Public Finance Review.

Kim, Y. & Park, Y.J. (2023). Does accountability improve government performance? Evidence from the U.S. state fiscal monitoring and intervention systems. Public Management Review 25(10): 1903–1925.

Kornai, J. (1986). The soft budget constraint. Kyklos, 39(1), 3–30.

Maher, C. S., Park, S., & McDonald III, B. D. (2025). Fiscal Monitoring and Municipal Fiscal Health: Comparative Insights from Australia, Mexico, South Korea and the US. Lincoln Institute Working Paper.

Nakhmurina, A. (2024). Does fiscal monitoring make better governments? Evidence from US municipalities. *The Accounting Review*, *99*(4), 395-425.

New York v. United States, 505 U.S. 144 (1992).

Nordhaus, W. D. (1975). The political business cycle. *The review of economic studies*, *42*(2), 169-190.

Oates, W. E. (1972). Fiscal federalism. Harcourt Brace Jovanovich.

Oates, W. E. (1985). On the nature and measurement of fiscal illusion: A survey. College Park, MD: Department of Economics, University of Maryland.

Oates, W. E. (2005). Toward a second-generation theory of fiscal federalism. International Tax and Public Finance, 12(4), 349–373.

Park, S., Maher, C. S., & Ebdon, C. (2018). Local property tax limits in Nebraska: Within-state variations in effects. Public Administration Quarterly, 42(3), 328-371.

Pew Charitable Trusts (2016). State strategies to detect local fiscal distress.

Poterba, J. M. (1994). State Responses to Fiscal Crises: The Effects of Budgetary Institutions and Politics. *Journal of Political Economy*, 102(4), 799–821.

Poterba, J. M. (1995). Capital budgets, finance, and state capital spending. Journal of Public Economics, 56(2), 165–187.

Printz v. United States, 521 U.S. 898 (1997).

Qian, Y., & Weingast, B. R. (1997). Federalism as a commitment to preserving market incentives. Journal of Economic Perspectives, 11(4), 83–92.

Richard W. Waterman, Kenneth J. Meier, Principal-Agent Models: An Expansion?, *Journal of Public Administration Research and Theory*, Volume 8, Issue 2, April 1998, Pages 173–202,

Rodden, J. (2006). Hamilton's paradox: The promise and peril of fiscal federalism. Cambridge University Press.

Rogoff, K. S. (1990). Equilibrium political budget cycles. NBER Working Paper series.

Rubin, I. S. (2019). *The politics of public budgeting: Getting and spending, borrowing and balancing.* CQ Press.

Sun, L. & Abraham, S. (2021). Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. Journal of Econometrics 225(2): 175–199.

Thompson, P.N. (2017). Effects of fiscal stress labels on municipal government finances, housing prices, and the quality of public services: Evidence from Ohio. Regional Science and Urban Economics 64: 98–116.

Thompson, P. N., & Whitley, J. (2017). The effect of school district and municipal government financial health information on local tax election outcomes: evidence from fiscal stress labels in Ohio. Public Choice, 170(3), 265-288.

Weingast, B. R. (2009). Second generation fiscal federalism: The implications of fiscal incentives. Journal of Urban Economics, 65(3), 279–293.

Yang, L. (2019). Not all state authorizations for municipal bankruptcy are equal: Impact on state borrowing costs. National Tax Journal, 72(2), 435-464.

Table 1 – A Typology of Fiscal Monitoring System

Design feature	**What the state does**	**Example states**	**Federal relevance**
Monitoring presence	Regular, standardized review of local fiscal condition; baseline of any system.	Most of the 19+ FMIS states	Necessary precondition
Early warning	Statutory distress definition + predictive flagging; advisory engagement and corrective-plan requests.	Ohio, Louisiana, Nevada, Tennessee	Partially transferable (flagging, not trigger authority)
Intervention authority	Power to compel corrective plans, restrict debt, install fiscal/emergency managers or receivers.	Pennsylvania (Act 47), Michigan, Rhode Island	Structurally not transferable
Bankruptcy authorization	Statutory permission (conditional/unconditional) for local Chapter 9 filing (Yang 2019).	Varies; ~14 unconditional, ~10 conditional	No federal analog (sovereign cannot file)

Table 2: Variable Description (Outcome Variables)

Variable	Operational Definition	Description
Operating Ratio	$\frac{\text{Revenues}}{\text{Expenditures}}$	Measures a government's ability to balance an annual budget by generating sufficient revenue to cover expenditures.
Debt Burden	$\frac{\text{Total Debt}}{\text{Total Revenues}} \times 100$	Evaluates how effectively a local government manages its long-term financial obligations relative to its revenue base.
Debt Service Payment	$\frac{\text{Debt Service}}{\text{Total Expenditures}} \times 100$	Captures the burden of fixed costs; higher commitments indicate greater vulnerability to immediate fiscal stress and long-run fiscal instability.
Capital Outlay	$\frac{\text{Capital Spending}}{\text{Total Expenditures}}$	Measures the proportion of total budgetary spending allocated toward physical infrastructure and long-term capital investments.

Table 3. Preliminary Fixed-Effects Estimates, by Monitoring Design Feature

Design Feature (time-varying, active = 1)	Operating Ratio	Debt (log)	Debt Service (log)	Capital Spending (log)
Monitoring Active (any FMIS)	0.001	−0.033	−0.001	−0.012**
Early Warning Active	0.042**	0.007	0.014*	−0.001
Stress-Tier Labeling Active	−0.012	−0.063**	−0.008	−0.016**
Intervention Authority Active	0.009	−0.023	0.002	−0.002
Unconditional Bankruptcy Auth. Active	0.008	−0.043	0.011	−0.017**
Conditional-on-Intervention Bankruptcy Auth. Active	0.022*	−0.013	0.007	−0.012

*Notes: Each cell is the coefficient from a separate log-linear (or, for the operating ratio, linear) fixed-effects specification of the outcome on the indicated time-varying design indicator, locality and year fixed effects, and controls (log population, log federal and state intergovernmental revenue per capita, revenue Herfindahl index). Robust standard errors clustered at the government level (not shown). *** p<0.01, ** p<0.05, * p<0.10. A seventh feature, "Conditional-on-Approval" bankruptcy authorization, is omitted: no sample variation identifies it separately from other features in the current coding, an issue the revised statutory coding described in Section IV will resolve. N = 27,321–27,322 across outcomes; within-R^2 ranges 0.03–0.29.*

Table 4.1– Quantile Analysis (Preliminary Results) – Effect on Operating Ratio (OR)

	Lowest OR level	Middle (50%)	Middle (75%)	Highest OR Level	Lowest OR level	Middle (50%)	Middle (75%)	Highest OR Level
Early Warning Active	-0.005	-0.002	0.002	0.110				
	(0.010)	(0.002)	(0.002)	(0.071)				
Stress-Tier Labeling Active					0.004	-0.002	0.000	0.061
					(0.008)	(0.002)	(0.002)	(0.071)
Constant	0.306***	0.969***	1.052***	1.318***	0.303***	0.971***	1.053***	1.313***
	(0.093)	(0.017)	(0.015)	(0.172)	(0.093)	(0.017)	(0.015)	(0.180)
Observations	6,847	6,258	7,018	7,193	6,847	6,258	7,018	7,193
R-squared	0.085	0.013	0.012	0.067	0.085	0.014	0.012	0.064
Number of govsid	496	497	497	495	496	497	497	495
Within R-squared	0.0849	0.0133	0.0118	0.0668	0.0849	0.0136	0.0116	0.0640
Overall R-squared	0.0469	0.0107	0.00650	0.0321	0.0467	0.0116	0.00633	0.0308
Robust standard errors in parentheses								
*** p<0.01, ** p<0.05, * p<0.1								

Table 4.2 – Quantile Analysis (Preliminary Results) – Effect on Debt

	Lowest Debt level	Middle (50%)	Middle (75%)	Highest Debt Level	Lowest Debt level	Middle (50%)	Middle (75%)	Highest Debt Level
Early Warning Active	-0.011	0.003	0.002	-0.002				
	(0.020)	(0.012)	(0.009)	(0.041)				
Stress-Tier Labeling Active					-0.022	-0.001	0.005	-0.077**
					(0.019)	(0.009)	(0.008)	(0.032)
Constant	-0.040	0.467***	0.822***	2.368***	-0.037	0.468***	0.821***	2.393***
	(0.157)	(0.074)	(0.069)	(0.509)	(0.155)	(0.074)	(0.069)	(0.507)
Observations	6,839	6,924	6,575	6,983	6,839	6,924	6,575	6,983
R-squared	0.046	0.021	0.021	0.099	0.047	0.021	0.022	0.101
Number of govsid	397	470	468	401	397	470	468	401
Within R-squared	0.0459	0.0211	0.0215	0.0990	0.0468	0.0210	0.0216	0.101
Overall R-squared	0.0802	0.0216	0.0103	0.0767	0.0800	0.0219	0.0105	0.0771
Robust standard errors in parentheses								
*** p<0.01, ** p<0.05, * p<0.1								

Table 4.3 – Quantile Analysis (Preliminary Results) – Effect on Debt Service

	Lowest level	Middle (50%)	Middle (75%)	Highest Level	Lowest level	Middle (50%)	Middle (75%)	Highest Level
Early Warning Active	0.001	0.001	-0.001	0.009				
	(0.002)	(0.002)	(0.004)	(0.014)				
Stress-Tier Labeling Active					-0.001	0.000	0.006	-0.026*
					(0.002)	(0.001)	(0.002)	(0.015)
Constant	-0.025	0.042***	-0.047*	0.563***	-0.025	0.042***	0.121***	0.576***
	(0.019)	(0.013)	(0.027)	(0.147)	(0.019)	(0.013)	(0.017)	(0.145)
Observations	5,666	7,903	20,051	6,761	5,666	7,903	6,992	6,761
R-squared	0.038	0.030	0.069	0.041	0.038	0.030	0.035	0.041
Number of govsid	401	475	497	463	401	475	487	463
Within R-squared	0.0383	0.0297	0.0691	0.0407	0.0382	0.0296	0.0352	0.0411
Overall R-squared	0.0489	0.00978	0.0745	0.0328	0.0491	0.00983	0.0196	0.0324
Robust standard errors in parentheses								
*** p<0.01, ** p<0.05, * p<0.1								

Table 4.4 – Quantile Analysis (Preliminary Results) – Effect on Capital Spending

	Lowest level	Middle (50%)	Middle (75%)	Highest Level	Lowest level	Middle (50%)	Middle (75%)	Highest Level
Early Warning Active	-0.003	0.001	0.001	0.023**				
	(0.003)	(0.002)	(0.003)	(0.009)				
Stress-Tier Labeling Active					0.003	0.001	-0.003	-0.008
					(0.002)	(0.002)	(0.002)	(0.013)
Constant	0.004	0.089***	0.188***	1.027***	0.001	0.088***	0.190***	1.031***
	(0.026)	(0.014)	(0.014)	(0.269)	(0.025)	(0.014)	(0.014)	(0.271)
Observations	6,330	6,918	7,473	6,601	6,330	6,918	7,473	6,601
R-squared	0.035	0.013	0.016	0.103	0.035	0.013	0.016	0.103
Number of govsid	457	492	495	478	457	492	495	478
Within R-squared	0.0350	0.0129	0.0161	0.103	0.0351	0.0128	0.0165	0.103
Overall R-squared	0.0831	0.0140	0.00469	0.0856	0.0823	0.0139	0.00446	0.0855
Robust standard errors in parentheses								
*** p<0.01, ** p<0.05, * p<0.1								

Table 5 – Staggered Difference-in-Differences (Preliminary Results)

	Treatment group: Not-yet-treated				Treatment group: never-treated			
	OR	**Debt**	**Debt Service**	**Capital Spending**	**OR**	**Debt**	**Debt Service**	**Capital Spending**
Monitoring	-0.013	-0.033	0.005	0.001	-0.013	-0.033	0.005	0.001
Active	(0.017)	(0.031)	(0.009)	(0.013)	(0.017)	(0.031)	(0.009)	(0.013)
Early	0.065***	0.072**	0.026**	-0.015	0.065***	0.072**	0.026**	-0.015
Warning	(0.021)	(0.030)	(0.011)	(0.013)	(0.021)	(0.030)	(0.011)	(0.013)
Stress-Tier	0.006	-0.024	-0.017*	0.001	-0.001	-0.013	-0.017*	0.001
Labeling	(0.020)	(0.020)	(0.010)	(0.009)	(0.020)	(0.020)	(-0.010)	(0.009)

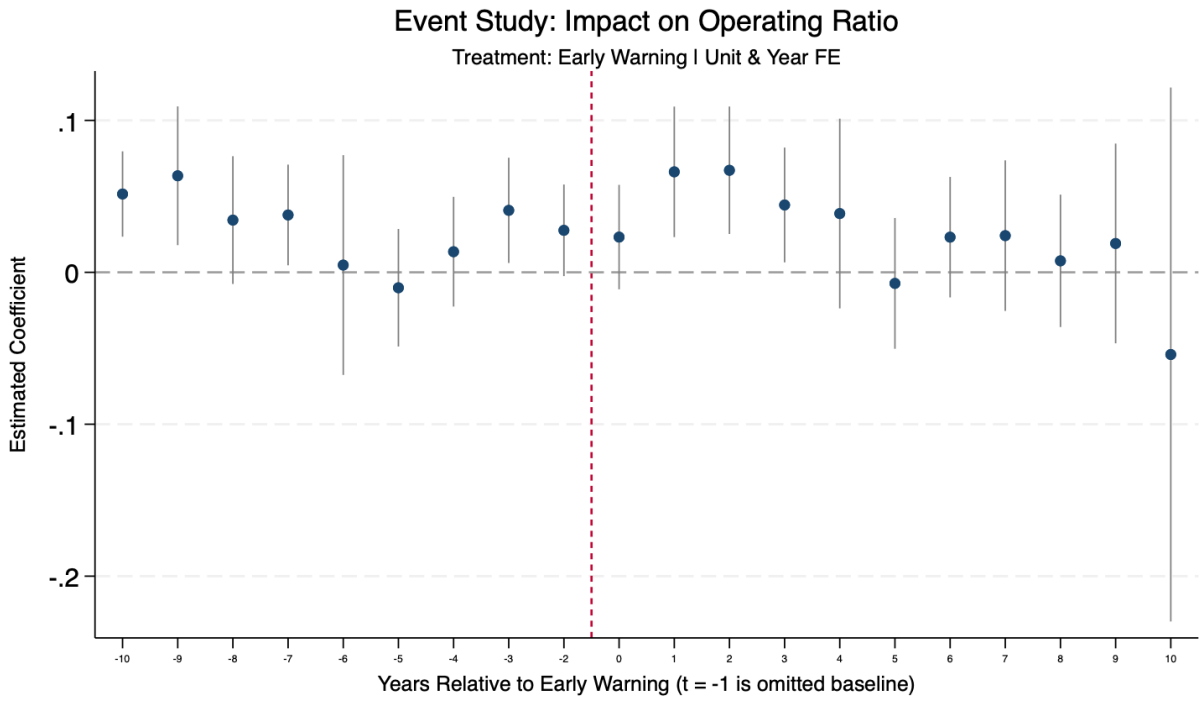
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Note: Estimates represent the overall Average Treatment Effect on the Treated (ATT). Columns (1)–(4) measure effects on Operating Ratio (OR), total Debt, Debt Service, and Capital Spending with the treatment groups comprised of locality in not-yet-treated states; Columns (5)–(9) measure effects on Operating Ratio (OR), total Debt, Debt Service, and Capital Spending with the treatment groups comprised of locality in never-treated states. Standard errors clustered at the unit level are displayed in parentheses.

Table 6 – Federal Transferability

Leverage condition	State → Local (tested model)	Federal → itself (proposed)	Transportability
1. Information-asymmetry reduction	Present — early warning narrows the info gap in both directions and moves outcomes even absent intervention (Kim & Park 2023).	Partial — CBO long-term outlook supplies the information but has no statutory feedback loop to Congress/OMB.	High — needs a response-requirement statute, not new infrastructure.
2. Financial dependency / transfer linkage	Present — transfer conditionality amplifies leverage; effects largest for the most aid-dependent localities (Thompson 2017).	Structurally absent — no superior government; sovereign borrowing-cost (market) channel is a weaker, asymmetric substitute.	Low — market-channel substitute only; blunted further by the federal currency-issuer position.
3. Public labeling / electoral accountability	Present — labeled entities face voter attention, media coverage, reputational cost (Thompson 2017; Thompson & Whitley 2017).	Partial — federal data are public and CBO is credible, but projections are forecasts, not categorical designations.	High — the labeling architecture is the most readily transplantable feature; needs a statutory designation framework.
4. Intervention authority / consequence credibility	Present — tiered escalation to corrective plans and emergency management raises the stakes of a warning (Kim & Park 2023).	Structurally absent — separation of powers precludes external takeover; only procedural triggers (hearings, automatic review) substitute.	Low — procedural-consequence substitutes only; far weaker than direct authority.

Figure 1 – Event Study Analysis – Operating Ratio



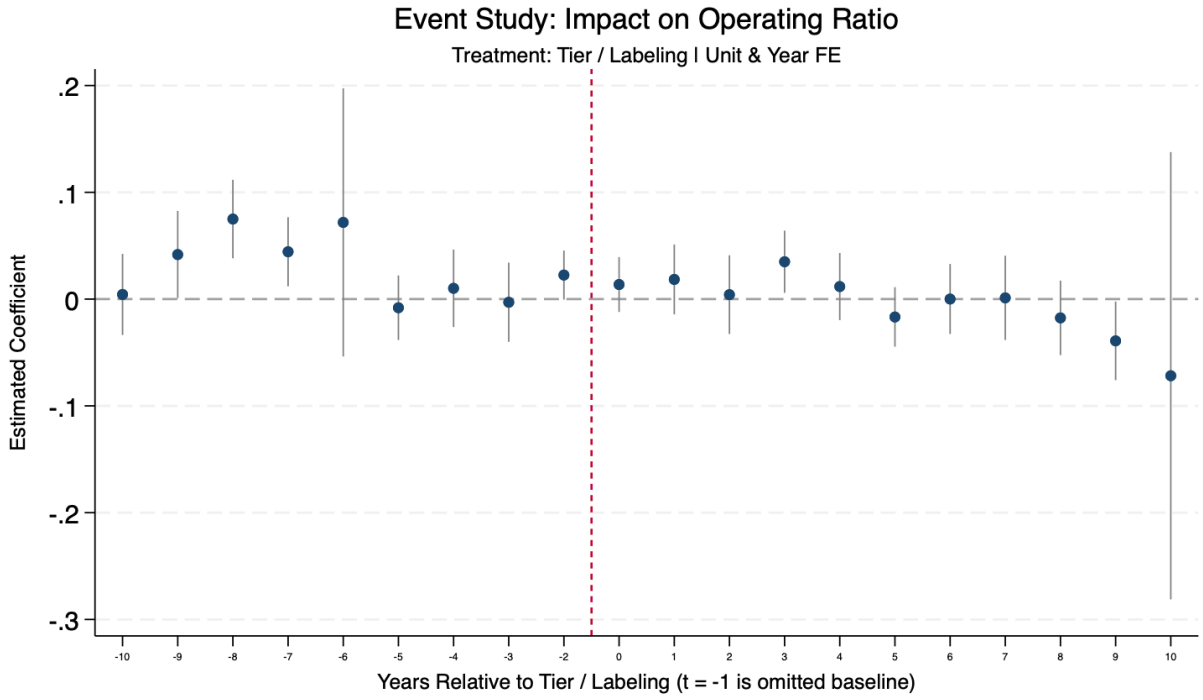
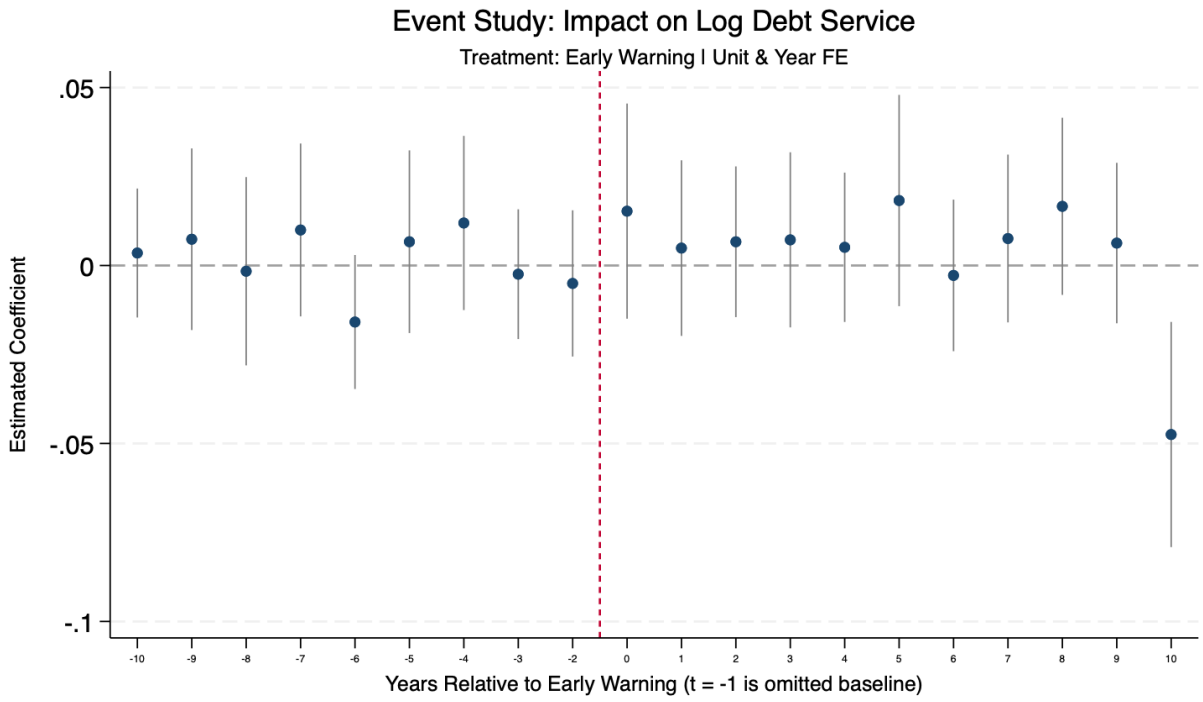


Figure 2 – Event Study Analysis – Total outstanding debt



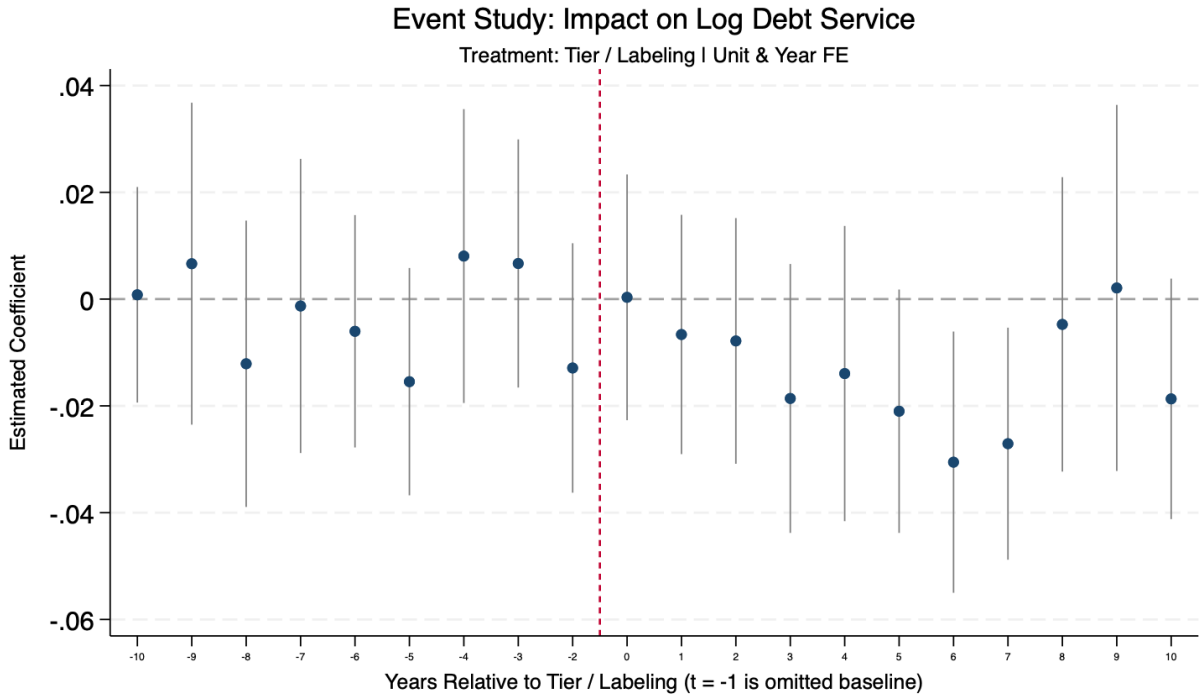
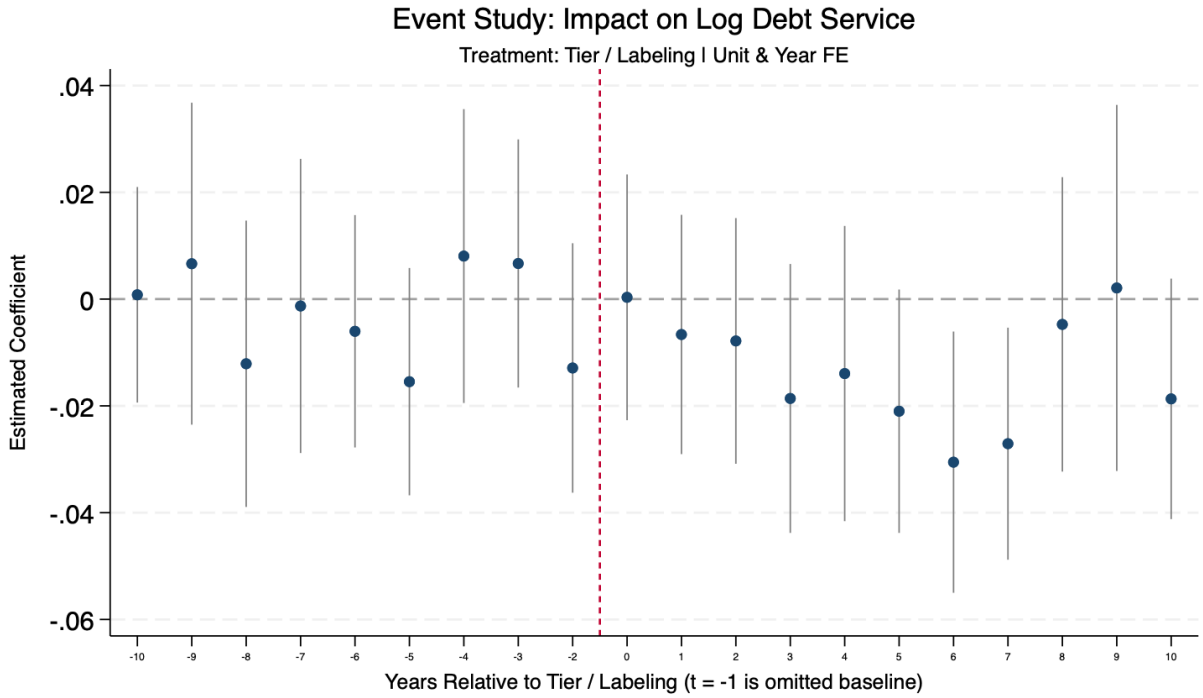


Figure 3 – Event Study Analysis – Debt Services



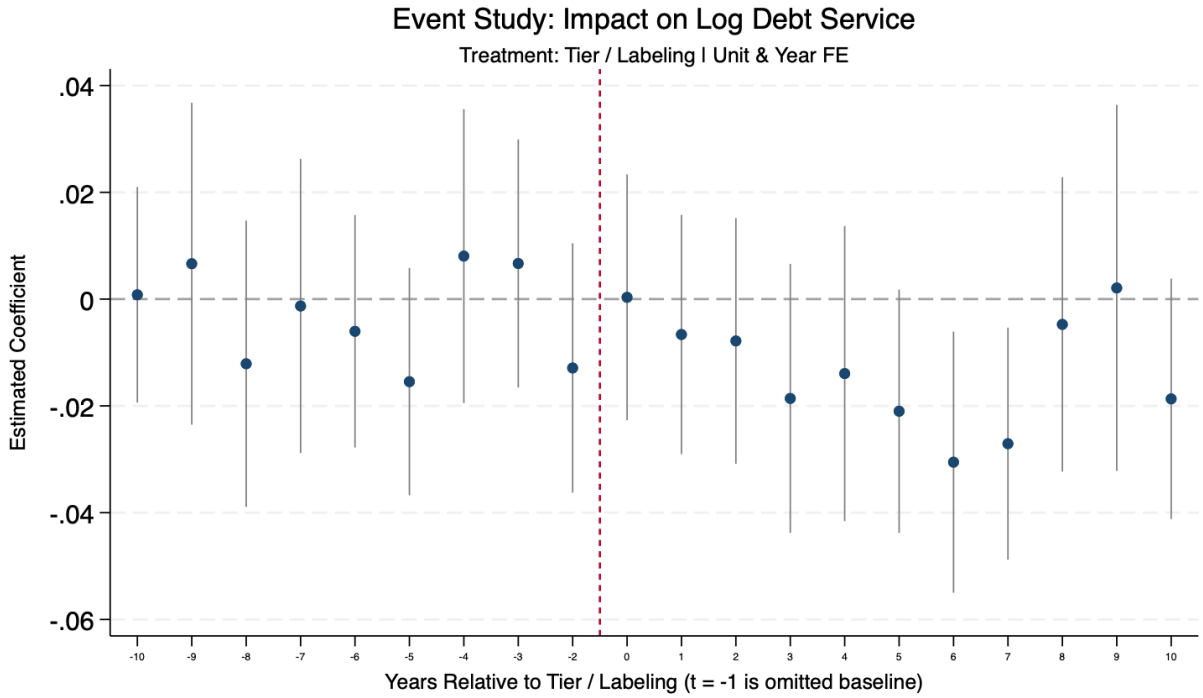


Figure 4 – Event Study Analysis – Capital Spending

