State government trifectas and municipal bond pricing

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Abstract

States hold broad powers over local governments, including imposing, monitoring, and enforcing laws and policies important to local bondholders. States also vary considerably in terms of the strength of that power. For example, some states have a strong power dynamic in the form of a "trifecta," whereby one party controls the governorship and both legislative branches. Yet little is known about how local bond investors view state trifectas. Using a causal generalized staggered difference-in-differences design and a broad sample of secondary market trades, we explore whether state government trifectas affect local bondholder yields. Primary findings are that bondholder yields are significantly lower under state trifecta regimes. Further analysis corroborates primary findings using a stacked event study design and a border analysis to further establish causality. Cross-sectional tests explore three state-level institutions reflecting a municipal bond default risk channel – state laws over (i) chapter 9 municipal bankruptcy, (ii) restricting local tax increases, and (iii) allowing direct voter initiatives. Findings demonstrate that results are magnified under all three measures, suggesting trifectas help offset the risk imposed by these state institutions. Additional analysis explores trifecta tenure and veto-proof trifectas, finding effects increase with trifecta power. Overall, our study provides novel evidence of municipal bond market implications of state-level political dominance.

1. Introduction

The question of whether state control over local governments influences investor assessments of municipal bond prices is an important, yet arguably under-explored research topic. States exert considerable control over local governments, including imposing, monitoring and enforcing laws, statutes, and administrative policies (hereafter, "enforcement" and "policies") arguably important to bondholders (Gerber and Hopkins 2011; Baber, Beck and Koester 2024). As examples, states maintain policies over creditors' rights such as municipal bankruptcy, the ability of local governments to raise and spend taxes (Gerber and Hopkins 2011), and the restrictiveness or laxness of regulatory enforcement (Baber and Gore 2008). Many of these decisions affect municipal bond prices, which, due to tax implications, tend to be held by buy-and-hold investors within their own states (Chalmers et al. 2021).[1]

While states generally possess strong control over locales, they also vary considerably in terms of their ability to readily exercise control as well as their incentives to utilize such influence. For example, some states have a strong power dynamic in the form of a "trifecta," whereby a single political party holds the governorship and a majority in both houses of the state legislature (i.e., the state senate and house of representatives).[2] Single-party control can have a significant impact on a variety of state policies impacting local governments, as well as the level of monitoring and enforcement applied (Edwards III, Barrett, and Peake 1997; Coleman 1999; Rogers 2005; Parker and Dull 2013).

[1] For parsimony, we interchangeably use the terms municipal bondholder, investor, and municipal bond prices and yields to reflect municipal bondholder yields. In addition, we interchangeably apply the terms policies, regulations, laws, and statutes to reflect state government rules over local governments.

[2] The political science literature often utilizes the term "unified government" to describe trifectas, and "divided government" to denote when each political party controls at least one branch. In contrast, the popular press and citizens groups refer to them as trifectas. We use the terms "trifecta" and "unified government" interchangeably throughout the manuscript.

How do municipal bond investors view this one-party state dominance – that is, does it impact the prices they pay when trading municipal bonds? While some extant literature investigates the effect of state institutions on local bond prices, little is known about whether trifectas affect local bondholder yields. *Ex ante*, the effects are not obvious. On one hand, investors may be concerned that trifectas could take state-level actions that impede local government ability to maintain their financial health and hence affect default risk. For instance, some trifecta states have implemented policies limiting local government autonomy. Two recent examples include the trifecta states of Texas and Florida, each of which passed broad "preemption" laws designed to limit local government powers. In particular, the Texas state measure is dubbed the "Death Star" bill due to its broad powers limiting a wide swathe of local government policies, including budgeting and zoning, among others (Bloomberg 2023). Trifecta states can also more readily impose unfunded mandates that push costs down to local governments (Kelly 1994). The Illinois state government trifecta is a recent example, whereby politicians enacted dozens of unfunded mandates with financial consequences imposed on locales (Illinois Municipal League 2021).

Each of the above trifecta actions – limiting local government autonomy and externally imposing unfunded, increased expenditures – can reduce the ability of local governments to balance budgets and service existing debt, hence increasing default risk (Poterba 1994). Under these scenarios, we expect that municipal investor yields will be higher among trifecta states to reflect the increased default risk.

While state political dominance can impose negative externalities on local governments, it is equally plausible that trifecta governments take actions that bond investors consider beneficial. Literature in political economy suggests trifecta states respond quickly to fiscal

problems and possess the ability to swiftly implement policies that guarantee bond repayment in the event of default (Alt and Lowry 1994). Trifecta state officials may also circumvent and/or decline to enforce laws that do not align with their policy preferences. For example, Gerber, Lupia, and McCubbins (2004) find that politicians and bureaucrats can prevent winning citizen initiatives (laws directly proposed and passed by voters) from being implemented or enforced. Many of these initiatives are designed to limit politicians' ability to tax and spend, or so-called tax and expenditure limitation (TEL) measures. Moreover, even if state institutions are seemingly immutable, such as those embedded within state constitutions, trifecta government politicians may allow locales to effectively circumvent them. Many of these actions are not observable. For example, in response to restrictive state TELs, some state governments such as California tacitly allowed local governments to use special districts to circumvent tax limitations (Bowler and Donovan 2004; Goodman et al. 2021). If bondholders view state trifectas as more responsive to local fiscal distress or otherwise promote policies that reduce default risk, then we anticipate lower municipal bondholder yields among trifecta states. Overall, then, relations between state government trifectas and municipal bondholder yields are not straightforward.

To investigate the effects of trifectas on bondholder yields, we study a broad sample of secondary market trades across a wide variety of local bonds traded from 2005 - 2018, including schools, special districts, counties, cities, and towns.[3] Our identification strategy employs a staggered state- and time-varying difference-in-differences design to allow for a causal interpretation. Primary findings are that investor yields for bonds traded during trifecta state-

Note that including all local government bond trades – for all types of local governments and bonds – allows us to holistically consider effects of state institutions on trifecta-bondholder yield relations. That is, if trifecta state politicians respond to increased risk and/or constraints imposed by state institutions by reducing enforcement or allowing flexibility across types of entities, such as the case of avoiding TEL restrictions through the use of special purpose districts, our sample will likely capture this behavior by including all bonds. In contrast, extant literature that confines analysis to a subset of entities such as cities may empirically miss this behavior (Baber et al. 2024).

years are an economically significant 4 – 20 basis points lower.[4] Results are robust to a variety of alternate specifications, including a border state analysis and a stacked event study difference-in-differences research design wherein we examine new trifectas for eight year windows surrounding their initiation (Cornaggia et al. 2022; Cengiz, Dube, Lindner, Zipperer 2019).[5] Overall, primary findings show that municipal investor yields are significantly reduced under state government trifecta regimes.

We next investigate three state institutions through which we posit trifectas decrease investor yields, primarily through a default risk channel. Findings in Schwert (2017) suggest that default risk is an important component of municipal bond prices, comprising 74 – 84% of average spreads.[6] To explore this, we focus on three state institutions that prior research suggests increase municipal bondholder yields through a higher default risk channel – state laws over Chapter 9 municipal bankruptcy, state laws limiting local government tax increases ("tax limitation laws"), and state laws allowing direct voter initiatives. If trifectas reduce local bond yields in part by offsetting the higher default risk imposed by these state institutions, then we expect our results will be magnified across these states.

With respect to municipal bankruptcy, Gao, Lee and Murphy (2020) find that municipal yield spreads are generally higher among states that allow unconditional access to Chapter 9

[4] Primary specifications utilize secondary market trades because it better aligns with our theory and represents a cleaner test for a larger sample. Nonetheless, additional analysis examines primary market bond trades in a supplemental appendix, with consistent findings.

[5] Such a design uses a more stringent standard for control group construction. In addition, it is more robust to potential problems with two-way fixed effect estimators in the presence of heterogeneous treatment effects, as is often the case in standard staggered difference-in-differences designs (Cengiz et al. 2019). Additional analysis utilizes a stacked event study design in section 5.2.

[6] In contrast, Schwert (2017) and Wang et al. (2008) find that the role of liquidity in municipal bond pricing is not as substantial, most likely because the typical retail investor is buy-and-hold and the liquidity discount is small. Hence we primarily focus on a default risk channel, and consider potential tax effects by also studying after-tax yield spreads. That said, we acknowledge that liquidity could impact trifecta effects on bond yields, as well as other forms of risk beyond default risk, and consider our study a first step toward understanding the effects of state trifectas on local yields.

(municipal) bankruptcy because bondholders are less likely to be protected in the event of default. If investors view trifecta politicians as able to offset this risk, e.g. by swiftly responding to poor local financial conditions (Alt and Lowry 1994), then we expect the reduced yields under trifectas to be stronger among states allowing Chapter 9 bankruptcy. Consistent with this reasoning, our results show the reduced investor yields in trifecta states are magnified among states that allow municipal bankruptcy.

Second, we consider state laws limiting local government tax increases. Restrictive laws over raising taxes can hinder local governments' ability to secure resources required to repay debt, and hence are associated with higher bond yields (Poterba 1994; Poterba and Reuben 1999). If bondholders view trifectas as potentially offsetting or circumventing the effects of state tax limitations, then we expect the lower bondholder yields in trifecta states to be stronger among states with more restrictive local tax laws. Our evidence is consistent with this expectation, revealing a significantly stronger effect among states with restrictive tax limitation laws.

The third state-level institution we consider, state laws allowing direct voter initiatives, enables activist voters to limit or reduce government employment, spending, and taxes (Matsusaka 2009; Matsusaka and McCarty 2001). If trifectas serve to counterbalance the risk imposed by activist voters, then we expect the trifecta effect to be stronger among states that allow direct initiatives. Findings suggest that this is the case, as the lower investor yields from trifectas are magnified among states with direct voter initiative laws. Overall, cross-sectional tests of state institutions provide evidence consistent with trifecta states at least partially counterbalancing the higher default risk (and yields) imposed by states with laws over municipal bankruptcy, TELs, and direct voter initiatives.

Additional analysis preliminarily considers relative trifecta strength, using two different approaches. The first proxy of trifecta strength is whether the trifecta has a veto-proof majority in the state legislature. The second explores trifecta tenure, since there is significant variation in the length of time trifectas are in place, both across states and over time. Trifectas that endure for many years arguably imply a relatively stronger, more powerful government. Evidence from these two tests – while preliminary – shows that the local bondholder yield reductions grow more substantial when state legislatures are veto-proof and as state trifecta tenure grows longer.

Our study contributes to the literature in several respects, where research regarding the consequences of state government trifectas on municipal finance is surprisingly scant. One prior study examines the effects of state government trifectas on municipal investment (Beck, Gore and Rich 2023). We add to the trifecta literature by exploring the effects of state trifectas on local bondholder yields.

Within the context of municipal bond studies, recent literature explores financial disclosure-related aspects (e.g., Cuny, Li, Nakhmurina, and Watts 2022; Cuny 2018), price transparency (e.g., Schultz 2012; Chalmers et al. 2021), effects of state opium use and state marijuana regulations (Cornaggia et al. 2022; Cheng, DeFranco, and Lin 2023), and state governor elections and political influence (Cestau 2018; Gao, Murphy, and Qi 2019; Dagostino and Nakhmurina 2023).

We complement and extend the municipal bond literature by focusing on political dominance of all three branches of state government, and comprehensively exploring whether and how individual investor yields are impacted by the effective capture of state institutions. While fewer than 48% of state governments were controlled by a single party in the 1990s, each year since 2007, single parties dominate up to 80% of state governments (in 2024). Hence, our

study also has implications for public policy and suggests that – notwithstanding rising concerns over state preemption of local decisions and issues of federalism – local bondholders seemingly view trifectas favorably, as reflected in significantly lower yields.

The remainder of the paper proceeds as follows. Section 2 develops our hypothesis, Section 3 describes our research design, and section 4 describes our sample and presents univariate statistics. Primary results and cross-sectional tests are presented in section 5, supplemental analyses in section 6, while section 7 concludes.

2. Hypothesis development

2.1 Hypothesis development

State government policies – and the level of enforcement of those policies – can directly or indirectly affect local governments in a manner that *ex ante* does not have a straightforward impact on bondholder yields. It is plausible that municipal bond investors view one-party state political dominance unfavorably and demand higher yields. State governments can maintain and/or enforce policies that effectively constrain local governments' ability to repay debt, including those affecting local taxes, bankruptcy, and balanced budgets. For example, the State of Michigan maintains restrictive policies over local governments in its requirements for deficit elimination plans (Baber and Gore 2008). Furthermore, states can use preemption to enact regulatory changes limiting local government autonomy, and pass unfunded mandates that push burdens down to lower levels of government. The lack of political frictions under trifectas may encourage and/or exacerbate such policies, increasing risk over municipal bondholders. Lax enforcement of existing laws can also take place. For example, Parker and Dull (2013) find evidence suggesting that trifectas are associated with fewer (and shorter) investigations into

fraud and abuse, likely because they would be investigating their own decisions. Yet such actions can harm bondholders since extant research suggests local investors demand higher yields when states exhibit higher corruption levels (Butler et al. 2009). Overall, then, if investors view trifectas as taking actions that increase default risk, then local bondholder yields will correspondingly be higher.

On the other hand, investors may consider state government trifectas as better able to respond to financial problems, avoid gridlock, and quickly take actions to shore up local government finances when necessary. Trifecta state officials may also allow locales to effectively circumvent laws such as TELs and citizen initiatives that arguably constrain them financially. As a result, the combined effects imply that municipal bondholder yields will be lower among state government trifectas. Given these competing possibilities, we propose the following null hypothesis:

> *Hypothesis:* There is no relation between state government trifectas and municipal bondholder yields.

3. Research design

State trifectas are state- and time-varying, offering the potential for a causal staggered difference-in-differences research design. We employ the following specification using a sample of secondary municipal market trades, collapsed to a bond-month unit of observation (Gao et al. 2020; Cheng et al. 2023):[7]

$$Yield_{b,t} = \alpha + \beta_1 Trifecta_{b,t} + \sum \gamma_j Controls + Fixed\ Effects + \varepsilon_{i,t} \quad (1)$$

[7] Note that we use monthly yield following prior literature, because municipal bonds are highly illiquid and not all bonds trade daily. Results are substantially the same if we use daily trade observations and raw yield as the main outcome variable.

Trifecta is an indicator set to one if the same political party holds the governor's office, and majorities in both the state house and senate in a given state-year.[8] The coefficient β_1 is a two-way fixed effect estimator that captures the differential change in yields across trifecta state-years with respect to non-trifecta state-years. A reduction in bond yields will produce a negative coefficient on β_1, while an increase produces a positive coefficient.

Our primary analysis employs two alternate measures of the dependent variable (*Yield*). *Raw Yield* is the average yield on all secondary market, customer purchase transactions for an individual bond *b* (e.g., school, special district, county, city, town, etc.) during month *t,* weighted by the par value traded (Gao et al. 2020).[9] Alternatively, we include the *Tax-adjusted Yield Spread* to account for investor tax effects and macroeconomic factors that can influence bondholder yields. *Tax-adjusted Yield Spread* is the tax-adjusted raw yield on the bond, minus the yield on a coupon-equivalent synthetic treasury bond (Schwert 2017; Gurkaynak et al. 2007; Gao et al. 2020). The tax-adjusted raw yield is calculated as the raw yield multiplied by an adjustment factor for the marginal tax rate impounded into tax-exempt bond yields, as follows:

$$\textit{Tax-adjusted raw yield} = \frac{Raw\ Yield}{(1-\tau_t^{fed})*(1-\tau_{s,t}^{state})}$$

Where τ_t^{fed} is the top federal tax rate each year from Schwert (2017), and $\tau_{s,t}^{state}$ is the highest statutory income tax rate in each state-year (from taxfoundation.org). The yield on a coupon-equivalent synthetic treasury bond (r_t) is calculated as the present value of future principal and interest payments on bond *b,* discounted based on the U.S. Treasury Bond yield curve, following Gurkaynak et al. (2007). This yield measure captures the required return on a

[8] In the case of Nebraska, which has only one legislative body (called the Unicameral), we set *Trifecta* to one in years where the governor and the majority of the Unicameral are from the same party.
[9] In additional unreported analysis, we use the yield spread for each bond rather than calculating it by month, with consistent results.

municipal bond relative to an identical risk-free alternative under equivalent market conditions. The *Tax-adjusted Yield Spread* is defined as:

$$\frac{Raw\ Yield}{(1-\tau_t^{fed})*(1-\tau_{s,t}^{state})} - r_t$$

We include an array of control variables identified in prior literature as correlated with municipal bond yields. To control for bond characteristics, we include the time remaining to maturity in years (*Maturity*); the bond's credit rating at issuance or, if it is rated by multiple agencies, the average of the S&P, Moody's and/or Fitch ratings (*Avg Rating,* ranging from 0 to 16, the lowest to highest rating); the issue's coupon rate (*Coupon*); issue amount (*Ln_Amount);* whether the bond is callable (*Callable*); general obligation (*GO*); or insured (*Insured*). To control for issue-level trading activity, we include the par value of all transactions for the bond during a given month (*Ln_AggTrades*); the number of trades in a day (*Ln_Numtrades*); whether the trade is considered a retail or institutional investor (*Institutional*), measured using a transaction size cutoff of $100,000 following Cuny 2018, Edwards et al., 2007; Schultz, 2001; and the time in the dealer's inventory (*Inventory*), an indicator set to 1 if a purchase (sale) does not follow (precede) a sale (purchase) within one day of the trade date (e.g., Sirri 2014). To control for issuer economic conditions, we include state GDP (*Ln_GSP)* and state personal income level *(Ln_PersIncome)*.

Specifications incorporate fixed effects for the use of proceeds (e.g., General Purpose, Education, and Water/Sewer), issuer, and trade date. While *Ln_GSP* and *Ln_PersIncome* help control for time-variant local economic-related factors, issuer fixed effects control for an array of time-invariant issuer-related factors that could affect investor yields, such as government type and state. Likewise, trade date fixed effects control for market-wide economic factors.

Appendix A provides detailed variable definitions. All continuous variables are winsorized at the 1% (99%) level to reduce the effects of outliers and possible errors in the dataset; standard errors are clustered by issue and year-month.[10]

4. Sample and descriptive statistics

4.1 Sample selection

Our main analyses utilize a broad sample of secondary market municipal bond trades occurring between 2005 and 2018.[11] We begin by identifying the universe of municipal bond trades reported by the Municipal Securities and Rulemaking Board (MSRB) transaction database. Bond-level characteristics (e.g., offering date, size, maturity date, credit ratings, etc.) are from the Mergent Municipal Fixed Income database, which we match to the MSRB data using bond-level CUSIPs. This yields an initial dataset comprised of 2,449,446 bonds from 55,871 issuers, including a wide variety of local governments (schools, special districts, counties, cities, towns, etc.) and all types of bonds traded (e.g. general obligation, revenue bonds, and others such as loan agreements, leases, mortgage loans, etc.).

We next implement a number of sample screens. Notably, we are interested in how state level dominance in the form of trifectas affect local level bondholder yields, so we drop state-level bond trades.[12] Following extant literature, we only retain customer purchase trades (drop customer sales and interdealer trades), and drop variable rate bonds, taxable bonds, thinly traded

[10] Our results are unchanged if variables are not winsorized. Double clustering at the issue and year-month level is standard in this literature (e.g., Gao, Lee, Murphy 2019; Cornaggia et al. 2022; Cheng et al. 2023). Since bonds within the same issue serve similar purpose, the residuals are correlated at the issue level. Further, residuals are correlated over time due to macroeconomic conditions and other time-varying factors; hence, clustering at year-month level is appropriate.

[11] Note the sample is constructed using both the earliest and most recent dates for which all necessary data are available at the time of the study.

[12] Results are the same if we retain state-level secondary market bond trades.

bonds that trade only once during our sample window, and those with insufficient data to perform our analyses (e.g., Schultz 2012; Chalmers et al. 2021).[13] Secondary market trades are defined as those transpiring more than 60 days following issuance (Dougal, Gao, Mayew, and Parsons 2019; Cestau, Green, and Schurhoff 2013).[14] Finally, we aggregate par-value weighted trades to the bond-month level (Gao et al. 2020). The final sample consists of 3,142,515 bond-months, representing 471,174 bond issues and 22,333 unique local governments, including schools, special districts, counties, cities, towns, and others. Appendix A provides detailed variable definitions and data sources.

4.2 Descriptive statistics

Table 1 provides descriptive statistics for our sample. Approximately 62.5% of average bond trades occur during years when a trifecta is in place (mean *Trifecta*), which is similar to the proportion of state-years with a trifecta during our sample period (58.2%, untabulated). The median bond rating (*Avg Rating*) of 13 corresponds to an AA- rating category. In terms of bond features, 66.1% of the bond-month observations are callable bonds, and 42.9% are insured. Only 10.3% of trades are in increments over $100,000 (*Institutional*), reflecting the dominance of retail investors in the municipal marketplace.

4.3 Correlations

Table 2 provides select correlations between the variables of interest (*Trifecta* and *Yield*) and other model variables. Focusing on *Trifecta* in column 1, *Yield* and *Trifecta* are significantly negatively correlated (coefficient = -0.075), providing initial evidence that investor yields are lower under trifecta regimes. Correlations between *Trifecta* and some variables do not

[13] We retain only customer purchase trades in order to eliminate the possibility of bid-ask bounce effects, which can be influential in the municipal market (Chordia et al. 2023; Downing and Zhang 2004; Gao et al. 2019).
[14] Results are robust if we define secondary market trades as those that take place beyond 90 days following issuance, following Green (2007).

necessarily provide a cohesive interpretation, however. Bonds trading during *Trifecta* state-years have significantly higher ratings (*Avg Rating* coefficient = 0.032), but also have longer maturities (*Maturity* coefficient = 0.041), a higher likelihood of call features (*Callable* coefficient = 0.025), and a lower likelihood of insurance (*Insured* coefficient = -0.031) – characteristics typically associated with higher yields.[15] Bonds appear to trade less often during trifecta years (*Ln_Aggtrades* coefficient = -0.006 and *Ln_Numtrades* coefficient = -0.005) and are more likely to be purchased by institutional investors (*Institutional* coefficient = 0.004).

5. Results

5.1 Main results

We begin by assessing common trends assumptions. In staggered treatment designs, common trends assumptions are often assessed by employing a Granger (1969) type specification test that includes lead and lag year and treatment interaction terms (Angrist and Pischke 2008). Yet the test assumptions may be violated if groups can switch in or out of treatment, as is the case in our trifecta setting (de Chaisemartin and D'Haultfoeuille 2022).[16] Accordingly, we assess common trends through the use of placebo estimators with the Stata command *did_multiplegt* from de Chaisemartin and D'Haultfoeuille (2022). Results suggest that common trends assumptions are satisfied.[17]

[15] Note that *Avg Rating* is based on ratings assigned at issuance, yet our primary sample consists of secondary market trades. Thus, correlations between *Trifecta* and *Avg Rating* provide limited inferences regarding the contemporaneous association between trifectas and default risk.

[16] Traditional difference-in-differences settings implicitly maintain an assumption of irreversibility whereby the treatment can only switch on and stay on, such as in studies examining regulation changes (de Chaisemartin and D'Haultfoeuille 2022). These assumptions are not valid in our setting, since trifectas stop and start during our sample timeframe.

[17] Specifically, we utilize the Stata command *did_ multiplegt* specifying placebo estimates for three lead and three lag periods, with seven periods in total (t-3 to t+3). Results show that placebo estimates are not statistically significant individually for t-3, t-2, and t-1, nor combined under the option *jointtestplacebo*, where we find

To test our hypothesis, we estimate Eq. (1) and present results in Table 3, with fixed effects alone in columns 1 and 3, and include additional control variables in columns 2 and 4. We alternately define the dependent variable as the raw yield in columns 1 and 2, and the tax-adjusted yield spread in columns 3 and 4. Across all columns, we find evidence consistent with univariate statistics in Table 2. Focusing on raw yields in column 2, *Trifecta* is significantly negative (coefficient = -0.042; t-statistic = 3.280), which suggests that yields are an economically significant 4.2 basis points lower during trifecta state-years, holding constant other relevant factors. Similarly, turning to the tax-adjusted yield spreads in column 4, *Trifecta* is similarly significantly negative (coefficient of -0.072; t-statistic = 3.534), which shows that yield spreads are 7.2 basis points lower during trifecta state-years. Overall, our results suggest that state government political trifectas significantly reduce secondary bondholder yields.

Recent econometrics literature highlights potential problems with two-way fixed effects estimators when treatment effects are heterogenous (e.g., vary across observations and over time) as is the case in our setting. Specifically, de Chaisemartin and D'Haultfoeuille (2020) document that average treatment effect estimates could be positive, yet negative weights may apply to some events. Accordingly, we use the Stata command *twowayfeweights* to investigate whether our results are significantly impacted by negative parameter weights (de Chaisemartin and D'Haultfoeuille 2020). Results show that a relative minority of treatments (19%) possess negative weights, which is within limits suggested by prior literature (e.g., Cantoni and Pons 2021; Gore et al. 2023).

5.2 Stacked event study design

e(p_jointplacebo) p = 0.55 and, 0.36 for raw yields and tax-adjusted yield spreads, respectively, suggesting that common trends assumptions are satisfied.

Although our primary approach utilizes a generalized staggered difference-in-differences research design, recent econometrics literature suggests it may not provide a valid estimate of the causal estimand of interest in some cases (Baker, Larcker and Wang, 2021). In addition, our setting differs from a typical staggered design in that the trifecta treatment does not necessarily "switch on and stay on" over time, but rather, can also "switch off" during our sample period (de Chaisemartin and D'Haultfoeuille 2022).

To address these concerns, we utilize a stacked event study regression design, as described in Baker et al. (2022) and implemented in Cengiz et al. (2019). We identify new trifecta events as eight year windows with four pre-trifecta years (*Trifecta* = 0) followed by four post-trifecta years (*Trifecta* = 1). The treatment sample only includes state-years within the eight year window surrounding the new trifecta. For each new trifecta, we identify separate "clean control" samples, wherein no trifecta exists throughout the same eight calendar years. For example, if State A has a new trifecta beginning in 2010, *Trifecta* = 1 from 2010-2013 and *Trifecta* = 0 from 2006-2009. The clean control sample consists of all states with *Trifecta* = 0 during the entire trifecta event window (in our example, from 2006-2013). In a second, more powerful test, we restrict the control sample further to only incorporate the state with the capital city geographically nearest to the trifecta state's capital as the control state. This helps address concerns that the implementation of a trifecta could correlate with economic cycles, which are unlikely to be fully contained within state borders.

We use Eq. (1) for the analyses, with some modifications to the fixed effect structure. First, we add window-year*event fixed effects, where window-years span from one to eight. Continuing the previous example, year one is 2006 and year eight is 2013. We also replace issuer and trade date fixed effects with event*issuer and event*trade date fixed effects. These

modifications are necessary because observations in state-years can serve as controls for multiple trifecta events (Cengiz et al. 2019).[18]

We first visualize the dynamic analysis estimates in Figure 2. The graph for coefficient estimates of trifecta initiation shows indistinguishable pre-trends between treated and control observations, a sharp decline in the yield during the trifecta initiation year, and negative coefficients in the entire post-trifecta window. The parallel pre-shock trends and timing of the decline are consistent with the causal interpretation of our baseline results reported in Table 3.

Table 4 displays findings for the stacked event study design; columns 1 and 3 include all control states, while columns 2 and 4 restrict the control sample to the closest border states. Turning to column 1, we find raw yields are reduced by 16.6 basis points in *Trifecta* state-years, which is economically and statistically significant (t-statistic = 5.08). Column 3 presents the tax-adjusted yield spread, which demonstrates *Trifecta* has a 29.4 basis point yield spread reduction (t-statistic = 5.156). Columns 2 and 4 restrict the control sample to the closest neighbor states, so while sample sizes are smaller, we continue to find a significant yield reduction of approximately 19.9 basis points for raw yields (t-statistic = 6.654) and 34.3 basis points for tax-adjusted yield spreads (t-statistic = 6.489).

Overall, evidence from the stacked event study specifications and border analyses help corroborate our primary results, in that municipal bondholder yields are substantially lower during trifecta state-years.

5.3 Cross-sectional tests of state institutions

[18] Note that inclusion of window-year*event fixed effects precludes the use of a *Post* main effect, while the use of issuer*event fixed effects precludes the use of a *Treatment* main effect. Thus, the variable *Trifecta* in Eq. (1) serves as the two-way fixed effect estimator equivalent of *Post*Treatment* in a traditional presentation of a difference-in-differences design.

Primary findings show that municipal bondholder yields are significantly reduced under trifecta state regimes. We next explore one channel through which this may occur – default risk – and more specifically, focus on three state institutions that extant literature finds associated with increased bond yields. Specifically, we consider state laws over Chapter 9 municipal bankruptcy, state tax limitation laws, and state laws allowing direct voter initiatives. If municipal bondholders view state government trifectas as helping to offset the default risk imposed from these state institutions, then we expect the reduced yields under trifectas to be stronger among these states.

Note that as described previously, our study focuses on a default risk channel, since extant finance literature emphasizes it as an important component in explaining municipal bond yield spreads (e.g. Schwert 2017; Wang et al. 2008). That said, we acknowledge that other forms of risk (e.g. liquidity) may be at play (Ang et al. 2014). Accordingly, we do not argue that a default risk channel is the only mechanism through which state trifectas reduce local bond yields. Rather, we view our analyses as an important first step toward exploring how state political dominance can impact local bond yields.

5.3.1 State Chapter 9 municipal bankruptcy laws

States vary in the extent to which they help local governments in financial distress. For example, some states unconditionally allow Chapter 9 (municipal) bankruptcy, while others are relatively more proactive in assisting local governments. The hands-off bankruptcy approach to financial distress implies that local governments may be "on their own" in the event of default. Prior research provides evidence that the bond market penalizes issuers in Chapter 9 states by requiring higher yields (Gao et al. 2020).

Earlier, we reasoned that investors potentially view trifectas favorably if lower political frictions allow state governments to offset this risk, for example, by responding more swiftly to local financial problems. If so, then we anticipate trifectas can mitigate the higher yields associated with bonds trading in Chapter 9 states. We investigate this possibility in Table 5 by partitioning the sample based on whether a state unconditionally allows Chapter 9 bankruptcy, following Gao et al. (2020).[19] Among Chapter 9 states, trifectas are in place for 61% of state-years, compared to 45% for non-trifecta state-years (untabulated). Columns 1 and 3 present results for Eq. 1 estimated for the subsample of Chapter 9 states, while columns 2 and 4 display the remaining states.

Findings show that trifectas reduce the higher yields exhibited in Chapter 9 municipal bankruptcy states. Specifically, the yield reduction effect of *Trifecta* is concentrated within Chapter 9 states (columns 1 and 3), where the raw yield is approximately 9 basis points lower (t statistic = 3.454) and the tax-adjusted yield spread is approximately 20 basis points lower (t statistic = 4.369). In contrast, we do not detect a statistically significant effect for *Trifecta* within the remaining states. Tests of restrictions demonstrate that the coefficients for *Trifecta* are statistically different across partitions (8.5 basis points; p-value < 0.01), and results are consistent when using an interaction term (*Trifecta*Chapter 9*) in place of the partitioning approach (untabulated). Overall, the evidence is consistent with the notion that investors view trifecta governments as at least partially offsetting the higher default risk found among Chapter 9 states, hence reducing their default risk.

5.3.2 State tax limitation laws

[19] The Chapter 9 states are Alabama, Arkansas, Arizona, California, Idaho, Minnesota, Missouri, Montana, Nebraska, Oklahoma, South Carolina, and Washington.

Our second state-level mechanism is state laws limiting local government tax increases. Some states restrict the ability of elected officials to raise taxes, colloquially known as tax limitation measures. Local governments operating under tax limitation measures are more constrained in their ability to respond to fiscal shocks that potentially threaten bondholder repayment, thereby increasing risk to bondholders. Consistent with this theory, evidence in Poterba and Reuben (1999) shows higher interest costs in states with more restrictive tax limitations.

Poterba (1994) finds that states under single party control respond more swiftly to fiscal shocks, and are significantly more likely to raise taxes to resolve deficits. If investors view trifecta states as more willing to allow local governments to raise taxes to repay debt, potentially circumventing tax limitation measures (Figlio and O'Sullivan 2002), then we anticipate stronger results among states with more restrictive tax limitation measures in place.[20]

To test this expectation, Table 6 partitions our sample based on the level of restrictiveness of state tax limitation laws. We classify states using the median level of tax restrictiveness from Wen, Xu, Kim, and Warner (2020) and Baber et al. (2024). Findings reveal that the *Trifecta* coefficients are statistically greater in magnitude among bonds trading in states with more restrictive tax limitation laws (*High Restrictiveness*), as shown in column 1 (coefficient = -0.059; t-statistic = 3.481). Results are similar for the tax-adjusted yields displayed in column 3 (coefficient = -0.134; t-statistic = 4.596). Moreover, tests of restrictions demonstrate that the coefficient magnitude for *Trifecta* is significantly different across partitions (coefficient difference of 0.047 and 0.159; p-value < 0.001). Overall, we interpret our evidence as consistent

[20] Note that another means of effectively circumventing tax limitation measures is by increasing fee revenues. Although not directly studying bonds, Figlio and O'Sullivan (2002) find evidence that cities subject to a statewide tax limit manipulate their mix of productive and administrative services in an attempt to convince voters to override the statewide limit. Hence local governments can override state tax limitation laws in some contexts.

with trifecta states reducing the risk imposed by states with restrictive local government tax limitation measures.

5.3.3 State laws allowing direct voter initiatives

Our third state-level mechanism is whether state laws allow voters to directly place measures on the ballot. In some states, citizens can propose and pass laws directly, without approval from elected officials (Gordon 2009). In the remaining states, laws originate from the state legislature. Other things equal, elected officials prefer to avoid the constraints imposed by "citizen lawmaking" in initiative states (Matsusaka 1995; Matsusaka 2017). Extant research suggests that voter initiative laws are associated with lower spending (Matsusaka and McCarty 2001), less financial statement manipulation (Chen et al. 2023), and reduced incident of restatements (Baber, Gore, Rich, and Zhang 2013), consistent with constraining politicians' actions.

We next partition our sample based on whether states have direct initiative laws in Table 7; state classifications follow Chen et al. (2023). The evidence shows that the *Trifecta* coefficients are 8.5 basis points lower among bonds trading in states with the initiative process (t-statistic = 4.537 in column 1), while are not statistically significant in column 2. Results are similar for specifications using the tax-adjusted yield spread in column 3 (coefficient -0.189; t-statistic 5.891 in column 3). Tests of restrictions demonstrate that the coefficients are economically and statistically different, with a 9 and 24 basis point reduction for raw yields and tax-adjusted yield spreads, respectively.

Overall, then, results from our three cross-sectional tests exploring state-level institutions support the notion that trifectas help offset the risk imposed by these institutions, leading to a significant reduction in municipal bondholder yields when default risk is relatively higher.

6. Supplemental Analyses

6.1 Trifecta strength

Additional analysis preliminarily considers trifecta strength, using two proxies –whether the trifecta has a veto-proof majority in the state legislature and trifecta tenure.

6.1.1 Veto-proof majority trifectas

We next consider the strength of the trifecta by distinguishing trifectas with a veto-proof majority in the legislature. A veto-proof majority is when one party has a majority in a state legislature that is large enough to override a gubernatorial veto without any votes from members of the minority party. *Veto Proof* is an indicator variable takes the value of 1 for state-years with a veto proof majority, 0 otherwise.

Findings reported in Table 8 Panel A show that our primary results are stronger for trifectas with a veto proof majority. The evidence shows that the *Trifecta* coefficients are 19.6 basis points lower among bonds trading in state-years with veto proof majority (t-statistic = 10.271 in column 1), while are not statistically significant in column 2. Results are similar for specifications using the tax-adjusted yield spread in column 3 (coefficient -0.308; t-statistic 9.783 in column 3). Tests of restrictions demonstrate that the coefficients are economically and statistically different, with a 20 and 30 basis point reduction for raw yields and tax-adjusted yield spreads, respectively.

6.1.2 Trifecta tenure

We next consider the length of the trifecta as a second, albeit coarser measure of trifecta strength. Trifectas that endure for many years imply a relatively stronger, more powerful government. To explore the effect of long-running trifectas, we use the stacked event study

regression design, which allows us to examine the effect of trifecta length following the initiation of each new trifecta events for four post-trifecta years (*Trifecta* = 1). The control group includes pre-trifecta years and non-trifecta state years. Results, reported in Table 8 Panel B, demonstrate that the *Trifecta* coefficients for raw yield are 10.2 basis points lower in the first year of the trifecta. This negative effect on raw yield monotonically increases to 15.4, 16.8, 21 and 22 basis points, respectively, for the next four years following trifecta initiation. Results in Column (2) considers the effect on closest border states and are quantitatively similar. Results in Columns (3) and (4) are similar for specifications using the tax-adjusted yield spread. Overall, collective results from tests of trifecta strength suggest that relatively stronger trifectas result in significantly lower investor bond yields.

6.2. Primary market analyses

Our main analyses utilize secondary market trades. Although the municipal bond market is often characterized as one whereby investors buy and hold securities to term, secondary market trading is significant (Chalmers et al. 2021). However, it is plausible that primary market investors make similar assessments with regards to state government political dominance.

In additional analyses, we replicate our findings using a sample of primary market trades, using municipal bond issuances between 2005-2018. We follow the same process previously used to identify the secondary market sample, except we confine the sample to trades that occur within the first fourteen days following issuance and pre-issuance (Gore, Henderson, Ji 2023). We use Eq. (1), replacing the dependent variable with the primary market raw yield weighted average on a daily basis with the par value of the trade and add controls for whether the bond is bank-qualified, whether the sale is negotiated, and the duration-matched risk-free treasury yield following Cornaggia et al. (2022). Results are reported in Supplemental Internet Appendix,

Table IA1. Similar to the secondary market findings, results demonstrate trifectas significantly reduce primary market bondholder yields, albeit coefficient magnitudes are not as substantial. Specifically, primary market offering yields are approximately 2.3 basis points lower ($p < 0.01$).

7. Conclusion

We explore whether state government trifectas affect local bondholder yields. Despite the perceived power that they hold, as often characterized by the popular press, little extant research explores investor perceptions of state government political dominance. Using a broad sample of secondary market trades, including schools, special districts, counties, cities, and towns, our identification strategy employs a causal staggered state- and time-varying difference-in-differences design. Primary findings are that investor yields for local bonds traded during trifecta state-years are an economically significant 4 - 20 basis points lower. Results are robust to alternate specifications, including a border state analysis and a stacked event study difference-in-differences research design.

Cross-sectional tests examine whether the yield reduction is more substantial when default risk is higher across three state institutions – states that allow unconditional access to Chapter 9 municipal bankruptcy, state laws limiting local government taxes, and state laws allowing direct voter initiatives. The evidence suggests that trifecta effects are more substantial under all three state institutions laws, which is consistent with trifectas serving to counterbalance increased default risk imposed by these institutions. Overall, our study provides novel evidence of municipal bond market implications of state-level political party dominance.

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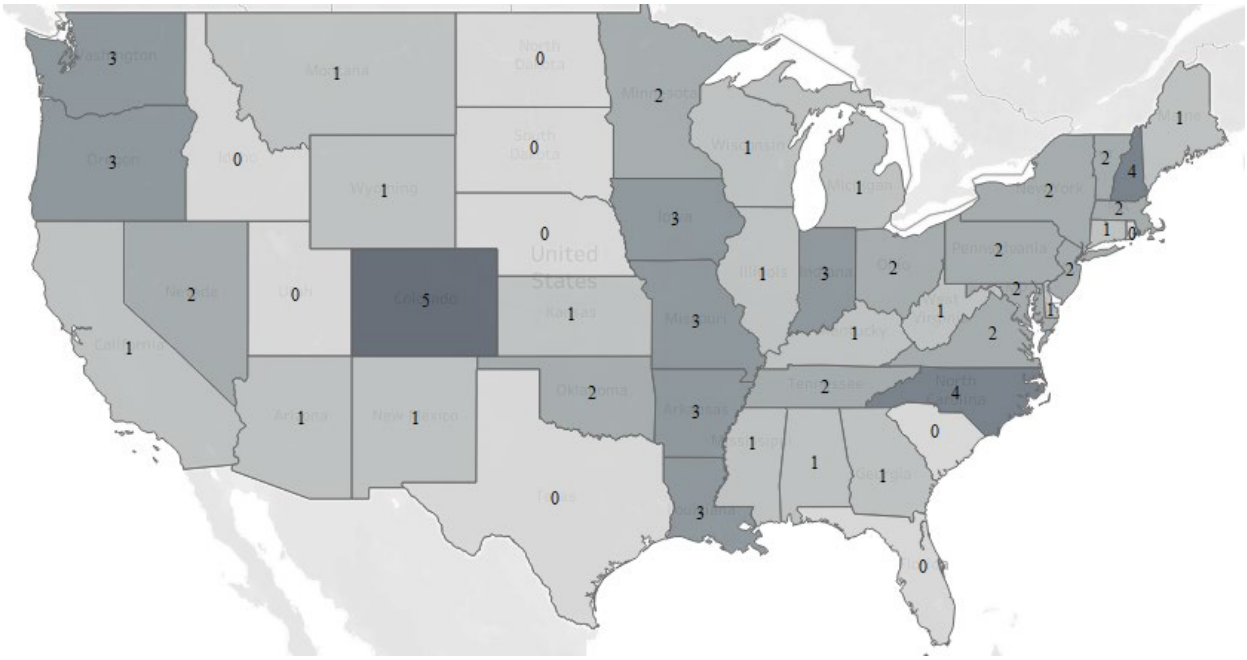
Appendix A
Variable Definitions

Variable	Description	Data Source
Dependent Variables		
Raw Yield	The average yield on all secondary market customer purchase transactions for an individual bond during a given month, weighted by the par value traded	MSRB
Tax-adjusted Raw Yield	The Tax-adjusted Raw Yield is calculated as: $\frac{Raw\ Yield}{(1-\tau_t^{fed})*(1-\tau_{s,t}^{state})}$	MSRB, taxfoundation.org
Tax-adjusted Yield Spread	Calculated as the difference between the Tax-adjusted Raw Yield and the coupon-equivalent risk-free yield (r_t) . The risk-free yield is based on the present value of coupon payments and the face value of the municipal bond using the US treasury yield curve, based on maturity-matched zero-coupon yields as given by Gurkaynak et al. (2007). This yield spread calculation is similar to Longstaff et al. (2005). We follow Schwert (2017) in applying the tax adjustment. It is calculated as below: $\frac{Raw\ Yield}{(1-\tau_t^{fed})*(1-\tau_{s,t}^{state})} - r_t$	MSRB, FEDS, taxfoundation.org
Treatment Indicators		
Trifecta	Indicator variable set to 1 if the same state political party holds the governor's office, and majorities in both the state house and senate, 0 otherwise	Ballotpedia; Klarner (2013)
Long (Short) Trifecta	Indicator variable set to 1 if the trifecta last for greater (less) than or equal to 5 years	Constructed
Trade Level Control Variables		
Duration	Time remaining to maturity	MSRB
Ln_Numtrades	The natural log of the number of trades during a day.	Constructed
Ln_AggTrades	The natural log of the trade value of all transactions in a bond during a day	Constructed
Inventory	An indicator equals one if a purchase (sale) does not follow (precede) a sale (purchase) within one day of the trade date	Constructed
Institutional	An indicator set to one for trades with par values over $100,000	Constructed
Bond Characteristics Control variables		
Callable	Indicator variables set to one for callable bonds	Mergent

Variable	Description	Data Source
Maturity	Years to Maturity	Mergent
Coupon	Bond coupon rate	Mergent
GO	Indicator variables set to one for general obligation bonds, 0 otherwise	Mergent
Ln_Amount	Natural logarithm of issue amount	Mergent
Use of Proceeds	A factor variable that denotes the use of proceeds (proceeds are separated into five categories, such as General Purposes, Education, and Water and Sewer etc).	Mergent
Insured	Indicator variables set to one for insured bonds, 0 otherwise	Mergent
Avg Rating	The average of the Moody's, Fitch and S&P rating if the issue is rated by at least one the three rating agencies	Bloomberg
Other Control variables		
Ln_GSP	The natural log of State GDP	Constructed
Ln_PersIncome	The natural log of state personal income level	Constructed

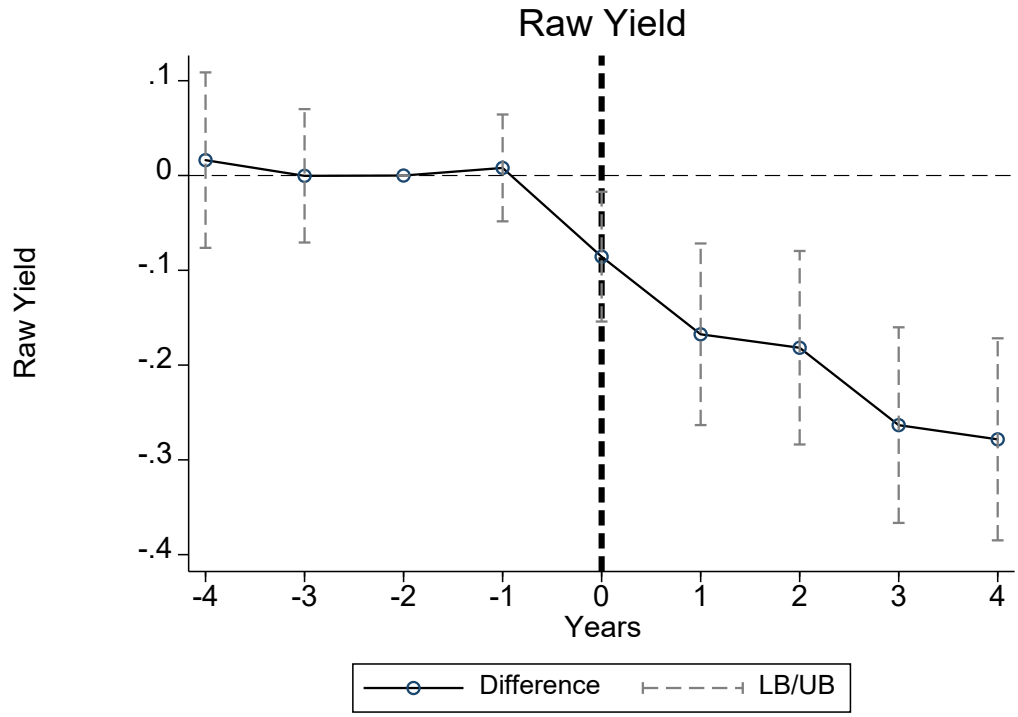
This table displays variable definitions for all tables.

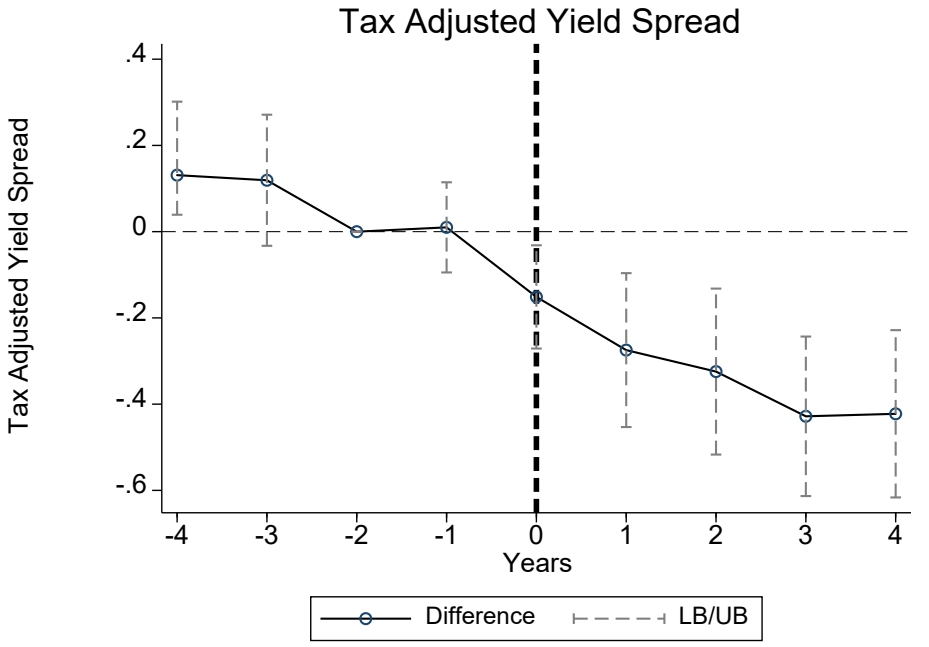
Figure 1
Trifecta/Non-Trifecta Transitions by State
2005-2018



This figure displays the number of times throughout our sample period (2005-2018) that each state transitions between years where *Trifecta* = 1 and *Trifecta* = 0. For example, Pennsylvania's first transition was from *Trifecta* = 0 in 2005-2010 to *Trifecta* = 1 from 2011-2014. Its second transition was to *Trifecta* = 0 from 2015-2018.

Figure 2





This figure plots regression estimates of difference-in-differences coefficients with 95% confidence intervals. For this plot, we use the initiation of a trifecta (Year 0), indicated by the bold dashed line, with four years preceding and following trifecta initiation. *Raw Yield* is defined as the par value-weighted secondary market raw yield at the bond-month level, while *Tax Adjusted Yield Spread* is the difference between *Tax Adjusted Raw Yield* and the Synthetic Treasury Yield of coupon equivalent bonds defined in Appendix A.

Table 1
Descriptive statistics

Variable (N= 3,142,515 bond-month)	*Mean*	*Std. Dev.*	*P25*	*Median*	*P75*
Dependent Variable:					
Raw Yield (%)	2.485	1.41	1.262	2.355	3.59
Tax-adjusted Yield	4.139	2.302	2.168	3.974	5.897
Tax-adjusted Yield Spread	2.345	2.544	0.559	1.902	3.882
Variables of Interest:					
Trifecta	0.625	0.484	0	1	1
Bond Characteristics:					
Maturity (Years)	15.016	7.382	9.395	13.592	19.556
Avg rating	12.818	2.122	11.5	13	14
Coupon	4.539	0.808	4	5	5
Ln_Amount	17.833	1.36	16.884	17.773	18.764
Offering Amount (M$)	136.295	244.106	21.5	52.325	141.025
Callable	0.661	0.473	0	1	1
GO	0.497	0.499	0	0	1
Insured	0.429	0.495	0	0	1
Trade Characteristics:					
Ln_Aggtrades	2.438	0.109	2.372	2.424	2.502
Ln_Numtrades	0.324	0.224	0.094	0.327	0.476
Institutional	0.103	0.275	0	0	0
Inventory	0.685	0.432	0.1	1	1
Ln_ParTraded	10.402	1.083	9.616	10.127	10.869
Economic Controls:					
Ln_PersIncome	13.23	0.888	12.604	13.294	13.958
Ln_GSP	13.39	0.905	12.763	13.413	14.174

The table presents descriptive statistics for variables used in the regression analyses. The sample contains a maximum of 22,333 unique issuers with 471,174 bonds and 3,142,515 bond-months for the period 2005 to 2018. All variables are defined in Appendix A.

Table 1 (continued)
Descriptive statistics for secondary market analysis

Panel B: Sample Composition (#Bonds) by Use of Proceeds:

Use of proceeds	*Trifecta*	*Non-Trifecta*	*Diff*
Gen Purpose/Pub Improvement	91,011 (33.9%)	72,026 (35.5%)	-1.6%***
Primary/Secondary Education	76,306 (28.5%)	61,136 (30.1%)	-1.7%***
Water and Sewer	36,646 (13.7%)	19,148 (9.43%)	4.2%***
Higher Education	7,583 (2.83%)	5,184 (2.55%)	0.28%***
Other (Hospital, Public Power, Airports etc.)	56,681 (21.1%)	45,453(22.4%)	-1.3%***
Total (#Bonds)	268,227	202,947	

Panel C: Sample Composition by Type of Bonds:

Bond Type	*Trifecta*	*Non-Trifecta*	*Diff*
General Obligation	160,180 (59.7%)	132,648(65.4%)	-5.6%***
Revenue Bonds	46,217(17.2%)	35,177(17.3%)	-0.1%
Other	61,830 (23.1%)	35,122 (17.3%)	5.8%***
Total (#Bonds)	268,227	202,947	

Panel D: Sample Composition by Type of Bonds:

Bond Type	*Trifecta*	*Non-Trifecta*	*Diff*
Schools	75,678(28.2%)	62,272(30.7%)	-2.5%***
Special Districts	103,283(38.5%)	67,699(33.4%)	5.1%***
Counties	23,181(8.6%)	19,029(9.4%)	-0.7%***
Municipalities (Cities, Town, Village, Borough)	65,903(24.6%)	53,841(26.5%)	-1.9%***
Other	182 (0.07%)	106 (0.05%)	0.02%**
Total (#Bonds)	268,227	202,947	

The table presents descriptive statistics for the secondary market analysis sample. This sample contains a maximum of 22,333 unique issuers with 471,174 bonds and 3,142,515 bond-month during the period 2005 to 2018. Panel A presents descriptive statistics for variables used in the regression analyses. Panel B displays the sample composition delineated by the use of proceeds, and Panel C by type of bonds, for bonds issued during trifecta and non-trifecta state-years, respectively. All variables are defined in Appendix A.

Table 2

Correlations

		(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1)	Trifecta	1															
(2)	Raw Yield	-0.0751*	1														
(3)	Maturity (Years)	0.0405*	0.2121*	1													
(4)	Avg Rating	0.0318*	-0.2048*	-0.1811*	1												
(5)	Coupon	0.0388*	0.0201*	0.3596*	-0.1527*	1											
(6)	Ln_Amount	-0.0279*	0.0376*	0.1693*	0.0607*	0.3557*	1										
(8)	Callable	0.0245*	0.1759*	0.6436*	-0.0996*	0.1964*	0.0775*	1									
(9)	Go	-0.0688*	-0.1158*	-0.2136*	0.2646*	-0.2028*	-0.2599*	-0.0834*	1								
(10)	Insured	-0.0308*	0.0018*	0.1144*	-0.3885*	0.0972*	-0.0812*	0.0922*	-0.0616*	1							
(11)	Ln_Aggtrades	-0.0064*	-0.0395*	-0.0132*	0.0200*	0.0718*	0.0944*	-0.0138*	0.0065*	-0.0101*	1						
(12)	Ln_Numtrades	-0.0053*	0.1235*	0.1787*	-0.0698*	0.0778*	0.1286*	0.1053*	-0.0708*	0.0228*	0.5150*	1					
(13)	Institutional	0.0042*	-0.0893*	-0.0623*	0.0395*	0.0531*	0.0171*	-0.0366*	0.0342*	-0.0258*	0.5679*	0.0742*	1				
(14)	Ln_GSP	0.0615*	0.0298*	0.0836*	-0.0338*	0.1112*	0.2269*	0.0682*	-0.0730*	0.0001	0.0200*	0.0217*	-0.0001	1			
(15)	Ln_PersIncome	0.0725*	0.0318*	0.0849*	-0.0422*	0.1066*	0.2211*	0.0690*	-0.0816*	0.0024*	0.0149*	0.0205*	-0.0041*	0.9970*	1		
(16)	Ln_Par Traded	-0.0034*	-0.1079*	-0.0853*	0.0550*	0.0649*	0.0791*	-0.0619*	0.0324*	-0.0302*	0.8510*	0.1452*	0.6969*	0.0196*	0.0141*	1	
(17)	Inventory	0.0025*	0.0128*	-0.0963*	0.0195*	-0.0512*	-0.0445*	-0.0808*	0.0224*	-0.0343*	-0.1932*	-0.2970*	-0.0723*	-0.0104*	-0.0101*	-0.0913*	1

*indicates statistical significance at the 1% level.

This table reports Pearson correlations between various variables of interest. Variables are defined in Appendix A.

Table 3
Effect of state government trifectas on municipal bond yield spreads

Dependent variable	(1) Raw Yield	(2) Raw Yield	(3) Tax-Adjusted Yield Spread	(4) Tax-Adjusted Yield Spread
Trifecta	-0.035***	-0.042***	-0.066***	-0.072***
	(-2.631)	(-3.280)	(-3.125)	(-3.535)
Control Variables:				
Maturity		0.057***		0.049***
		(25.316)		(9.352)
Avg rating		-0.090***		-0.151***
		(-12.289)		(-12.674)
Coupon		-0.190***		-0.350***
		(-35.225)		(-38.607)
Ln_Amount		0.058***		0.099***
		(9.894)		(10.310)
Callable		0.238***		0.506***
		(17.901)		(24.172)
GO		-0.066***		-0.104***
		(-2.968)		(-2.843)
Insured		-0.581***		-1.029***
		(-18.286)		(-17.740)
Ln_Aggtrades		-0.202***		-0.360***
		(-5.657)		(-6.009)
Ln_Numtrades		0.466***		0.745***
		(38.959)		(32.121)
Institutional		0.002		0.008
		(0.278)		(0.751)
Ln_GSP		-0.277		-0.796**
		(-1.447)		(-2.555)
Ln_PersIncome		-2.149***		-2.724***
		(-9.628)		(-7.003)
Ln_ParTraded		-0.094***		-0.148***
		(-16.104)		(-15.478)
Inventory		0.145***		0.272***
		(25.091)		(26.454)
Issuer Fixed Effects	Yes	Yes	Yes	Yes
Year-Month Fixed Effects	Yes	Yes	Yes	Yes
Use of Proceeds Fixed Effects	No	Yes	No	Yes
Adjusted R-squared	0.526	0.638	0.605	0.663
Number of Bond-Months	3,142,515	3,142,515	3,142,515	3,142,515

***, **, and * indicate statistical significance at the 1%, 5%, and 10% p-levels (two-tailed), respectively.

This table reports staggered difference-in-differences OLS specifications of the effect of state government political trifectas on secondary market municipal bond yields. *Trifecta* is an indicator variable set to 1 if the same state political party holds the governor's office, and majorities in both the state house and senate (0 otherwise). All specifications include issuer and year-month fixed effects, with t-statistics based on robust standard errors double clustered by issue and year-month. Variables are defined in Appendix A.

Table 4
Effect of state government trifectas on municipal bond yield spreads
Stacked event study design

	(1)	(2)	(3)	(4)
Dependent variable	Raw Yield	Raw Yield	Tax-Adjusted Yield Spread	Tax-Adjusted Yield Spread
Trifecta	-0.166***	-0.199***	-0.294***	-0.343***
	(-5.077)	(-6.654)	(-5.156)	(-6.489)
Control Variables:				
Maturity	0.056***	0.067***	0.031***	0.054***
	(16.589)	(23.165)	(3.959)	(8.227)
Avg rating	-0.066***	-0.076***	-0.103***	-0.115***
	(-6.640)	(-6.516)	(-6.578)	(-6.157)
Coupon	-0.192***	-0.190***	-0.330***	-0.328***
	(-17.872)	(-21.678)	(-17.547)	(-21.703)
Ln_Amount	0.066***	0.053***	0.107***	0.082***
	(6.523)	(5.115)	(6.491)	(4.807)
Callable	0.273***	0.294***	0.535***	0.562***
	(12.332)	(15.969)	(14.741)	(17.722)
GO	-0.026	-0.081**	-0.036	-0.136**
	(-0.648)	(-2.088)	(-0.522)	(-2.034)
Insured	-0.320***	-0.519***	-0.591***	-0.974***
	(-6.866)	(-10.492)	(-7.064)	(-11.126)
Ln_Aggtrades	-0.141**	-0.156***	-0.227**	-0.261***
	(-2.251)	(-2.869)	(-2.137)	(-2.787)
Ln_Numtrades	0.370***	0.435***	0.623***	0.727***
	(21.341)	(31.704)	(20.301)	(28.552)
Institutional	0.054***	0.020**	0.083***	0.033**
	(5.187)	(2.337)	(4.522)	(2.212)
Ln_GSP	-1.219***	-0.719	-1.548**	-0.890
	(-2.955)	(-1.275)	(-2.045)	(-0.978)
Ln_PersIncome	-1.599***	0.305	-3.074***	0.011
	(-2.680)	(0.396)	(-2.850)	(0.008)
Ln_ParTraded	-0.092***	-0.108***	-0.149***	-0.175***
	(-9.015)	(-13.279)	(-8.880)	(-12.779)
Inventory	0.102***	0.129***	0.195***	0.239***
	(10.988)	(16.753)	(12.484)	(18.431)
Issuer X Event Fixed Effects	Yes	Yes	Yes	Yes
Year-Month X Event Fixed Effects	Yes	Yes	Yes	Yes
Window X Event Fixed Effects	Yes	Yes	Yes	Yes
Use of Proceeds Fixed Effects	Yes	Yes	Yes	Yes
Control States	All	Closest Border	All	Closest Border
Adjusted R-squared	0.640	0.658	0.740	0.716
Number of Bond-Month-Event	1,990,356	1,001,404	1,990,356	1,001,404

***, **, and * indicate statistical significance at the 1%, 5%, and 10% p-levels (two-tailed), respectively.

This table reports OLS specifications of the effect of state government political trifectas on secondary market municipal bond yields using a stacked event study difference-in-differences design. We define an eight-year event window surrounding initiation of new trifecta state-years (four years pre- and post-event). Within each event

window, we compare treated trifecta state-years to non-trifecta state-years that serve as our control group. Columns (1) and (3) display results for all control state-years without a trifecta during the event window, while Columns (2) and (4) reports results for control states comprised of the closest border state-years without a trifecta during the event window. t-statistics are based on robust standard errors double clustered by issue and year-month. Variables are defined in Appendix A.

Table 5
Effect of state government trifectas on municipal bond yield spreads
State Chapter 9 municipal bankruptcy laws

	(1)	(2)	(3)	(4)
	Chapter9=1	*Chapter9=0*	*Chapter9=1*	*Chapter9=0*
			Tax-Adjusted	Tax-Adjusted
Dependent variable	Raw Yield	Raw Yield	Yield Spread	Yield Spread
Trifecta	-0.095***	-0.010	-0.203***	-0.002
	(-3.454)	(-0.914)	(-4.369)	(-0.107)
	Diff = 0.085 P-Value = 0.000		Diff= 0.201 p-value = 0.000	
Control Variables:				
Maturity	0.058***	0.056***	0.051***	0.047***
	(23.193)	(25.401)	(9.631)	(8.778)
Avg rating	-0.104***	-0.081***	-0.172***	-0.136***
	(-13.915)	(-7.322)	(-14.121)	(-7.430)
Coupon	-0.199***	-0.183***	-0.365***	-0.339***
	(-27.282)	(-29.925)	(-29.039)	(-33.089)
Ln_Amount	0.075***	0.045***	0.125***	0.080***
	(8.080)	(6.789)	(8.124)	(7.122)
Callable	0.256***	0.229***	0.536***	0.490***
	(16.022)	(15.887)	(20.467)	(21.474)
Insured	-0.025	-0.130***	-0.044	-0.198***
	(-0.902)	(-3.716)	(-0.957)	(-3.447)
GO	-0.678***	-0.520***	-1.202***	-0.920***
	(-18.802)	(-16.536)	(-18.331)	(-16.218)
Ln_Aggtrades	-0.213***	-0.196***	-0.370***	-0.355***
	(-5.629)	(-4.443)	(-5.866)	(-4.844)
Ln_Numtrades	0.467***	0.464***	0.746***	0.742***
	(34.348)	(34.837)	(28.287)	(29.940)
Institutional	-0.002	0.008	0.006	0.015
	(-0.339)	(1.101)	(0.447)	(1.257)
Ln_GSP	-0.960**	-0.470**	-2.551***	-1.018***
	(-2.065)	(-2.356)	(-3.355)	(-3.156)
Ln_PersIncome	-1.194**	-2.300***	-0.616	-3.268***
	(-2.561)	(-8.543)	(-0.813)	(-7.375)
Ln_ParTraded	-0.095***	-0.093***	-0.153***	-0.146***
	(-16.109)	(-13.717)	(-15.391)	(-13.250)
Inventory	0.149***	0.142***	0.274***	0.269***
	(24.586)	(22.266)	(24.807)	(24.201)
Issuer Fixed Effects	Yes	Yes	Yes	Yes
Year-Month Fixed Effects	Yes	Yes	Yes	Yes
Use of Proceeds Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R-squared	0.647	0.634	0.674	0.657
Number of Bond-Months	1,265,162	1,877,353	1,265,162	1,877,353

***, **, and * indicate statistical significance at the 1%, 5%, and 10% p-levels (two-tailed), respectively.

This table reports OLS specifications of cross-sectional effects of state government political trifectas on secondary market municipal bond yields after partitioning the sample based on Chapter 9 municipal bankruptcy status, whereby *Chapter 9=1* states allow municipal bankruptcy, and Chapter 9=0 are all remaining states. Columns (1) and (3) report results for Chapter 9 states, while columns (2) and (4) report results for all remaining states. t-statistics are based on robust standard errors double clustered by issue and year-month. Variables are defined in Appendix A.

Table 6
Effect of state government trifectas on municipal bond yield spreads
State tax limitation laws

	(1) *High Restrictiveness*	(2) *Low Restrictiveness*	(3) *High Restrictiveness*	(4) *Low Restrictiveness*
Dependent variable	Raw Yield	Raw Yield	Tax-Adjusted Yield Spread	Tax-Adjusted Yield Spread
Trifecta	-0.059***	-0.012	-0.134***	0.025
	(-3.481)	(-0.935)	(-4.596)	(1.000)
	Diff = -0.047 P-Value = 0.000		Diff= -0.159 p-value = 0.000	
Control Variables:				
Maturity	0.057***	0.057***	0.048***	0.052***
	(23.782)	(24.605)	(9.099)	(9.385)
Avg rating	-0.096***	-0.070***	-0.162***	-0.121***
	(-14.723)	(-3.997)	(-15.564)	(-3.979)
Coupon	-0.166***	-0.179***	-0.343***	-0.363***
	(-26.205)	(-23.352)	(-34.164)	(-26.841)
Ln_Amount	0.053***	0.061***	0.090***	0.113***
	(7.549)	(7.242)	(7.755)	(7.463)
Callable	0.258***	0.232***	0.519***	0.474***
	(17.307)	(14.987)	(22.224)	(18.851)
GO	-0.057**	-0.140**	-0.094**	-0.192**
	(-2.419)	(-2.371)	(-2.356)	(-2.229)
Insured	-0.628***	-0.465***	-1.112***	-0.848***
	(-18.346)	(-15.671)	(-17.736)	(-15.126)
Ln_Aggtrades	-0.218***	-0.196***	-0.385***	-0.319***
	(-5.748)	(-4.051)	(-6.201)	(-3.789)
Ln_Numtrades	0.482***	0.435***	0.762***	0.696***
	(40.733)	(27.787)	(32.860)	(24.160)
Institutional	-0.000	0.001	0.011	0.009
	(-0.021)	(0.187)	(0.916)	(0.618)
Ln_GSP	0.342	-1.587***	0.585	-1.997***
	(1.149)	(-6.134)	(1.216)	(-4.322)
Ln_PersIncome	-2.319***	-1.492***	-3.590***	-2.847***
	(-7.140)	(-5.046)	(-6.530)	(-5.579)
Ln_ParTraded	-0.100***	-0.084***	-0.152***	-0.137***
	(-16.404)	(-11.678)	(-15.285)	(-11.192)
Inventory	0.153***	0.131***	0.274***	0.264***
	(25.081)	(20.315)	(25.116)	(23.342)
Issuer Fixed Effects	Yes	Yes	Yes	Yes
Year-Month Fixed Effects	Yes	Yes	Yes	Yes
Use of Proceeds Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R-squared	0.634	0.652	0.669	0.654
Number of Bond-Months	2,163,470	1,075,617	2,102,995	1,038,375

***, **, and * indicate statistical significance at the 1%, 5%, and 10% p-levels (two-tailed), respectively.
This table reports analyses of the effect of state government political trifectas on secondary market municipal bond yields partitioned by the restrictiveness of state tax limitation laws. *High Restrictiveness* includes states above the median level of tax limitations for local governments following Wen et al. (2020). All Columns present OLS coefficient estimates, with t-statistics based on robust standard errors double clustered by issue and year-month. Variables are defined in Appendix A.

Table 7
Effect of state government trifectas on municipal bond yield spreads
State government initiative laws

	(1) *Initiatives*	(2) *No Initiatives*	(3) *Initiatives*	(4) *No Initiatives*
Dependent variable	Raw Yield	Raw Yield	Tax-Adjusted Yield Spread	Tax-Adjusted Yield Spread
Trifecta	-0.085***	0.006	-0.190***	0.053***
	(-4.545)	(0.589)	(-5.900)	(2.922)
	Diff = -0.091 P-Value = 0.000		Diff= -0.241 p-value = 0.000	
Control Variables:				
Maturity	0.058***	0.055***	0.052***	0.046***
	(23.005)	(25.420)	(9.534)	(8.848)
Avg rating	-0.074***	-0.094***	-0.126***	-0.159***
	(-7.583)	(-9.937)	(-7.833)	(-10.051)
Coupon	-0.151***	-0.184***	-0.325***	-0.365***
	(-20.467)	(-28.922)	(-24.848)	(-36.182)
Ln_Amount	0.046***	0.064***	0.079***	0.115***
	(5.361)	(9.365)	(5.388)	(9.971)
Callable	0.249***	0.253***	0.509***	0.508***
	(14.742)	(18.244)	(18.473)	(23.540)
GO	-0.160***	-0.039	-0.296***	-0.041
	(-3.782)	(-1.588)	(-3.925)	(-1.034)
Insured	-0.655***	-0.514***	-1.179***	-0.913***
	(-17.883)	(-17.201)	(-17.481)	(-16.588)
Ln_Aggtrades	-0.226***	-0.204***	-0.417***	-0.328***
	(-5.590)	(-4.780)	(-6.125)	(-4.620)
Ln_Numtrades	0.478***	0.461***	0.769***	0.723***
	(39.107)	(32.948)	(32.866)	(27.330)
Institutional	-0.007	0.003	-0.000	0.015
	(-0.841)	(0.555)	(-0.004)	(1.350)
Ln_GSP	0.290	-0.737***	0.869	-1.860***
	(0.728)	(-3.886)	(1.402)	(-6.028)
Ln_PersIncome	-1.982***	-1.136***	-4.141***	-0.261
	(-4.110)	(-5.422)	(-5.376)	(-0.713)
Ln_ParTraded	-0.104***	-0.087***	-0.159***	-0.138***
	(-15.816)	(-14.120)	(-14.523)	(-13.597)
Inventory	0.153***	0.139***	0.275***	0.266***
	(22.308)	(23.302)	(22.681)	(25.649)
Issuer Fixed Effects	Yes	Yes	Yes	Yes
Year-Month Fixed Effects	Yes	Yes	Yes	Yes
Use of Proceeds Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R-squared	0.631	0.646	0.668	0.661
Number of Bond-Months	1,412,314	1,828,017	1,371,865	1,770,650

***, **, and * indicate statistical significance at the 1%, 5%, and 10% p-levels (two-tailed), respectively.

This table reports analyses of the effect of state government political trifectas on secondary market municipal bond yields partitioned by whether states allow voters to directly place initiatives on the ballot. *Initiatives* states include those allowing direct intiatives, while *No Initiatives* are all remaining states. All Columns present OLS coefficient

estimates, with t-statistics based on robust standard errors double clustered by issue and year-month. Variables are defined in Appendix A.

Table 8
Trifecta Strength: Effect of state government trifecta on municipal bond yields

Panel A. Veto Proof Majority

	(1)	(2)	(3)	(4)
	Veto proof=1	*Veto proof=0*	*Veto proof=1*	*Veto proof=0*
Dependent variable	Raw Yield	Raw Yield	Tax-Adjusted Yield Spread	Tax-Adjusted Yield Spread
Trifecta	-0.196***	0.015	-0.308***	-0.020
	(-10.271)	(0.974)	(-9.783)	(-0.901)
	Diff =-0.211 ***P-value*** = 0.000		***Diff*** =-0.288 ***P-value*** = 0.000	
Control Variables:				
Maturity	0.066***	0.055***	0.069***	0.046***
	(23.249)	(24.491)	(12.106)	(8.463)
Avg rating	-0.024**	-0.100***	-0.042**	-0.165***
	(-2.276)	(-12.639)	(-2.401)	(-12.848)
Coupon	-0.180***	-0.185***	-0.345***	-0.339***
	(-24.859)	(-32.765)	(-27.679)	(-33.937)
Ln_Amount	0.049***	0.056***	0.087***	0.095***
	(5.144)	(8.876)	(5.248)	(9.228)
Callable	0.219***	0.246***	0.482***	0.515***
	(14.127)	(17.651)	(18.975)	(23.199)
GO	-0.106*	-0.054**	-0.199*	-0.083**
	(-1.654)	(-2.335)	(-1.862)	(-2.205)
Insured	-0.781***	-0.547***	-1.410***	-0.962***
	(-21.428)	(-17.035)	(-21.572)	(-16.425)
Ln_Aggtrades	-0.272***	-0.197***	-0.530***	-0.334***
	(-5.573)	(-5.339)	(-6.264)	(-5.528)
Ln_Numtrades	0.392***	0.468***	0.636***	0.748***
	(24.774)	(38.292)	(21.402)	(31.907)
Institutional	0.037***	-0.003	0.074***	-0.002
	(4.632)	(-0.435)	(5.204)	(-0.150)
Ln_GSP	0.727*	-0.286	0.786	-0.795**
	(1.916)	(-1.386)	(1.307)	(-2.379)
Ln_PersIncome	-1.289***	-2.152***	-2.430***	-2.658***
	(-3.176)	(-8.795)	(-3.697)	(-6.315)
Ln_ParTraded	-0.087***	-0.095***	-0.135***	-0.150***
	(-13.283)	(-15.438)	(-12.865)	(-14.928)
Inventory	0.112***	0.144***	0.223***	0.269***
	(15.537)	(25.057)	(17.208)	(26.647)
Issuer Fixed Effects	Yes	Yes	Yes	Yes
Year-Month Fixed Effects	Yes	Yes	Yes	Yes
Use of Proceeds Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R-squared	0.650	0.641	0.645	0.675
Number of Bond-Months	536,706	2,587,963	536,706	2,587,963

Table 8 (continued)
Trifecta Strength: Effect of state government trifecta on municipal bond yields

Panel B: Effect of state government trifecta tenure on municipal bond yields

	(1)	(2)	(3)	(4)
Dependent variable	Raw Yield	Raw Yield	Tax-Adjusted Yield Spread	Tax-Adjusted Yield Spread
Trifecta-Year (0)	-0.102***	-0.105***	-0.199***	-0.207***
	(-3.400)	(-3.873)	(-3.847)	(-4.087)
Trifecta-Year (1)	-0.154***	-0.148***	-0.283***	-0.255***
	(-4.153)	(-5.060)	(-4.385)	(-4.721)
Trifecta-Year (2)	-0.168***	-0.207***	-0.315***	-0.384***
	(-4.135)	(-5.321)	(-4.284)	(-5.625)
Trifecta-Year (3)	-0.210***	-0.256***	-0.374***	-0.436***
	(-5.125)	(-6.355)	(-5.283)	(-6.180)
Trifecta-Year (4)	-0.220***	-0.298***	-0.358***	-0.487***
	(-4.982)	(-6.616)	(-4.566)	(-6.143)
Issuer X Event Fixed Effects	Yes	Yes	Yes	Yes
Year-Month X Event Fixed Effects	Yes	Yes	Yes	Yes
Window X Event Fixed Effects	Yes	Yes	Yes	Yes
Use of Proceeds Fixed Effects	Yes	Yes	Yes	Yes
Control States	All	Closest Border	All	Closest Border
Control Variables	Yes	Yes	Yes	Yes
Adjusted R-squared	0.643	0.660	0.740	0.715
Number of Bond-Month-Event	2,034,987	1,025,898	1,990,356	1,001,404

***, **, and * indicate statistical significance at the 1%, 5%, and 10% p-levels (two-tailed), respectively.

Panel A reports analyses of the effect of state government political trifectas on secondary market municipal bond yields, partitioned by whether the state legislature has a veto-proof majority. *Veto Proof* takes the value of 1 for state-years with a veto-proof majority, else zero. Panel B reports the effect of state government political trifecta length on secondary market municipal bond yields using a stacked event sample. *Trifecta-Year (i) is the* coefficient for treated trifecta state compared to non-trifecta state in the *i-th* year of the trifecta and treated trifecta state in the pre-trifecta years. Columns (1) and (3) display results for all control state-years without a trifecta during the event window, while Column (2) and (4) reports results for control states comprised of the closest border state-years without a trifecta during the event window. All columns present OLS coefficient estimates, with t-statistics based on robust standard errors clustered by issue and year-month. Variables are defined in Appendix A. All Columns present OLS coefficient estimates, with t-statistics based on robust standard errors double clustered by issue and year-month. Variables are defined in Appendix A.

Table IA1: Primary Market Analysis

	(1)	(2)	(3)
Dependent variable	Raw Yield	Raw Yield	Raw Yield
Trifecta	-0.024***	-0.023**	-0.023**
	(-2.678)	(-2.583)	(-2.570)
Control Variables:			
Maturity	0.066***	0.066***	0.068***
	(25.336)	(25.293)	(22.026)
Avg rating	-0.053***	-0.053***	-0.052***
	(-13.752)	(-13.773)	(-13.631)
Coupon	0.277***	0.275***	0.272***
	(14.544)	(14.289)	(14.227)
Ln_Amount	0.014***	0.007*	0.009**
	(3.477)	(1.753)	(2.120)
Callable	0.380***	0.380***	0.379***
	(21.890)	(21.836)	(21.910)
GO	-0.019	-0.018	-0.018
	(-1.202)	(-1.099)	(-1.108)
Bank Qualified		-0.069***	-0.070***
		(-5.812)	(-6.099)
Negotiated		0.013	0.013
		(1.072)	(1.046)
Insured	-0.155***	-0.157***	-0.154***
	(-12.751)	(-12.969)	(-13.428)
Ln_Aggtrades	-0.043***	-0.042***	-0.042***
	(-16.512)	(-16.156)	(-15.965)
Ln_Numtrades	0.055***	0.054***	0.053***
	(8.122)	(7.862)	(7.586)
Institutional	0.023***	0.026***	0.026***
	(4.075)	(4.663)	(4.624)
Ln_GSP	-0.025	-0.056	-0.032
	(-0.145)	(-0.321)	(-0.190)
Ln_PersIncome	-1.643***	-1.581***	-1.613***
	(-8.315)	(-8.035)	(-8.329)
Ln_ParTraded	-0.012***	-0.012***	-0.012***
	(-5.308)	(-5.311)	(-5.314)
Inventory	0.001	0.001	0.000
	(0.115)	(0.105)	(0.045)
Treasury Spread			-0.048*
			(-1.848)
Issuer Fixed Effects	Yes	Yes	Yes
Year-Month Fixed Effects	Yes	Yes	Yes
Adjusted R-squared	0.680	0.680	0.680
Number of Bond-Months	685,416	685,416	685,416

***, **, and * indicate statistical significance at the 1%, 5%, and 10% p-levels (two-tailed), respectively.

This table reports staggered difference-in-differences specifications of the effect of state government political trifectas on primary market offering yields, defined as yield to maturity at the time of issuance. Trifecta is an indicator variable set to 1 if the same state political party holds the governor's office, and majorities in both the state

house and senate, 0 otherwise. All columns include issuer and Year-Month fixed effects. All columns present OLS coefficient estimates, with t-statistics based on robust standard errors clustered by bond and trade date. Variables are defined in Appendix A.