

Bureaucrats, Politicians, and Government Performance: Evidence from City Treasurers*

Alexander Whalley[†]
University of California - Merced & NBER

May 9, 2009

Abstract

This paper investigates whether government organizational form affects government performance. I draw on the unique characteristics of California's city referendum process to identify the causal effect of city treasurers' appointive status on their cities' costs of borrowing. I utilize a marginal referendum event study strategy based on the effect of narrowly-passing appointive city treasurer referendums on city borrowing costs. The results indicate that appointive treasurers reduce a city's present value cost of borrowing by 4 to 10 percent. The results imply that if all cities in California with elected treasurers were to appoint them, total borrowing expenditures would be reduced by \$8 to \$20 million per year.

Keywords: Institutions, Government Form, Local Government.

JEL Classifications: D7, H1, H7.

*I thank Leah Brooks, Richard Boylan, Tom Hansford, Shawn Kantor, Josh Kinsler, John Matsusaka, Kevin Milligan, Enrico Moretti, Ronnie Pavan, Lori Raineri, Todd Sorenson, Guido Tabellini, Jessica Trounstone, Gergely Ujhelyi, Christine Vuletich, Kelley Williams and seminar participants at Texas A & M University, the University of California - Merced, the University of Houston/Rice University, the University of Rochester, and the University of Virginia for helpful comments and discussions. Matt Siordia and Chris Abrescy provided outstanding research assistance. All errors are my own.

[†]School of Social Sciences, Humanities and Arts; University of California, Merced. Phone: (209) 228-4027, Fax: (209) 228-4007, Email: awhalley@ucmerced.edu

1 Introduction

Does government organizational form affect government performance? The answer to the question depends crucially on whether poor government performance is due to the design of institutions (Besley, 2006) or capture by special interests (Grossman and Helpman, 2001). Despite the central importance of government performance in political economics, our knowledge of the responsiveness of government performance to alternative government organizational forms remains limited.

In this paper, I study the question of whether one central aspect of government organization – the delegation of top-level policymaking to a bureaucrat or politician – affects policy performance. Bureaucrats and politicians face quite different incentives to exert effort. Politicians are directly accountable to voters, and exert effort to gain reelection. In contrast, top-level bureaucrats are accountable to their professional peers, and exert effort to gain future job postings or professional recognition. Whether politicians or bureaucrats exert more effort, and achieve higher levels of policy performance, depends crucially on the relative strength of the implicit incentives that reelection and career concerns provide. As the relative strengths of these different implicit incentives is unclear, the effect of delegating policy to a bureaucrat or politician on policy performance remains an open question.¹

I examine the effect of political versus bureaucratic control of policy for the case of city treasurers for several reasons. First, city treasurers' policy performance can be easily observed in the costs cities pay to borrow. Debt management policy is a particularly compelling government service to examine as costs are observable, in the expenditure cities pay to borrow, and attributes of public debt other than interest rates are likely to be less important to constituents than in other contexts.² City treasurers are typically assigned the task of managing public debt effectively, and play a significant role in the choice of both debt issuance and financial management policies in a city.³

¹A significant theoretical literature has addressed this question. See Besley and Coate (2003), Maskin and Tirole (2004), Alesina and Tabellini (2007, 2008), and Vlaicu (2008). Much of the existing empirical work has focused on the related question of whether politicians are more likely than bureaucrats to choose policies that appeal to voters. See Besley and Coate (2003), Besley and Payne (2006), and Vlaicu (2008).

²There are, of course, many reasons for differences in the cost of borrowing across cities. The majority of the variation in borrowing costs across cities is due to differences in default risk. However, some of the differences in borrowing costs across cities may reflect differences in attributes of the debt that city residents value, such as variability in future interest rates. I discuss debt attributes more fully in section 6 below.

³Treasurers are also allocated the primary tasks of the receipt and safekeeping of public money coming into

Second, there is variation in whether the city treasurer position is appointed or elected. The context of city treasurers provide a rare opportunity to examine whether differences in the implicit incentives bureaucrats and politicians face do indeed translate into meaningful differences in policy performance.

Last, exogenous variation in the treasurers' appointive status is available. This identification is crucial because disentangling the effects of government form from other unobserved factors is not straightforward. In the context of city treasurers, residents value policies that reduce the costs of government borrowing, but these policies may run contrary to organized special interests. A city may be able to reduce borrowing costs by reducing payments to financial intermediaries by issuing debt in a competitive sale, for example. As the policy of issuing debt competitively reduces the compensation financial intermediaries receive, their interests are directly affected by debt policy choice. Thus, the form of government is likely to be endogenously related to the strength of special interests, which are likely to affect government policy anyway.⁴

The central contribution of this paper is to estimate the causal effect of bureaucratic versus political control of government services provision on the cost of government services. I implement a new research design to estimate the causal effects of city treasurer appointive status on city borrowing costs. The design takes advantage of the unique characteristics of California's local referendum process to isolate exogenous variation in government form. Many differences in government across cities are likely due to differences in unobserved special interest strength, debt complexity, social norms, and other factors related to borrowing costs. Cities that vote to pass an appointive city treasurer referendum may well differ on both observable and unobservable dimensions from those that do not. However, cities in which an appointive treasurer referendum passes by a *very narrow margin* are likely to be quite similar on average to those where it does not. Taking advantage of this feature, I use a marginal referendum event study methodology to identify the causal affect of treasurer appointive status on city borrowing costs.

Several previous papers have used elections as sources of identification in regression discontinuity designs. For example, Besley and Case (2003) and Acemoglu (2005) use the election of the Treasury, compliance with laws governing the deposit and paying out of public money, and submission to the city council of a monthly report accounting for all revenue, expenses, and balances in city accounts. Treasurers may also be in charge of collection of city revenues, as well as, cash flow and investment policy for city funds. See CMTA (2001) for further details. City treasurers are not responsible for city fiscal policy or the decision to borrow however.

⁴See Besley and Case (2003) and Acemoglu (2005) for discussion on the implications of endogenous institutions for estimating the causal effect of institutions. Aghion, Alesina, and Trebbi (2004) and Acemoglu, Ticchi and Vindigni (2006) introduce theoretical models of the endogenous determination of institutions.

nuity models.⁵ My research design of using the event of narrowly passing referendum to identify the casual effect of government organizational form is similar in spirit. This strategy effectively deals with the two primary concerns in the estimation of the causal effect of government form. First, by using only within-city variation to identify the effect of government form, an entire class of selection problems related to unobserved time-invariant characteristics affecting both borrowing costs and government form is addressed. As the key unobserved attributes that affect city borrowing costs are likely to be persistent differences in city default risk, this concern is particularly important here. Second, by using only the event of *marginal* referendum passage, selection problems related to the endogenous timing of reform are addressed.⁶ I apply this estimator to a newly available rich data set from cities in California combining over a decade of information on local referendums with annual measures of city borrowing costs.

My central results concern the net effect of bureaucrat versus politician treasurers on city borrowing costs. I find that passage of a marginal treasurer referendum reduces the interest rate a city pays to borrow by 31 percent. This effect is larger than the conditional ordinary least squares estimate of 23 percent. These effects do not appear to be driven by responses to pre-existing trends in borrowing costs, other governmental reforms, or changes in city economic activity. I find some evidence that other costs to issue debt increase. Taken together, the results indicate that appointive treasurers reduce the total present value cost of borrowing a city pays by 4 to 10 percent. In addition, the results imply that if all cities in California with elected treasurers were to appoint them, the total present value cost of borrowing would be reduced by \$8 to \$20 million per year.

Another interesting aspect of the city treasurer context is that I am able to test for the effect of government form on policy choice directly, as some key policy choices are observable. In the last section of the paper I do so. I examine whether there is evidence that appointed city treasurers choose policies which clearly reduce city borrowing costs. I find that bureaucrats choose lower cost debt issuance policies, but not different financial management policies, or issue debt with different characteristics. This finding also provides suggestive evidence that bureaucrat treasurers choose policies that are contrary to the interests of financial intermediaries, but not local public sector unions.

⁵See for example Ferreira and Gyourko (2009) and the references therein for a discussion of the use of elections to estimate Regression Discontinuity models.

⁶For example, Alesina, Ardagna, and Trebbi (2006) show reforms are more likely to occur in times of crisis, when the government is strong and the executive faces fewer constraints.

More broadly, this paper also contributes to two other literatures. First, it demonstrates the direct outcome approach to government performance evaluation, recently used to understand the determinants of performance by politicians and bureaucrats, can also be applied to evaluate government form. Recent examples of this approach include Leaver (2007), Ferraz and Finan (2007a, 2007b), and Bandiera, Prat and Valletti (2008). Second, this paper contributes to the literature on the relative performance of city government forms, as the two central forms of city government in the United States – Mayor-Council and Council-Manager – differ primarily on whether the chief executive is elected or appointed. The literature on this topic is vast, and has generally found mixed results (see Coate and Knight (2009) for a survey). Recent work by Coate and Knight (2009) however, presents compelling evidence that public spending is lower in mayor-council forms of government.

My results provide clear evidence that bureaucratic control reduces city borrowing costs. Caution is required, however, in attempting to generalize these results beyond my context and sample. The debt management task is particularly complex and the returns to bureaucratic control may be lower for other policy tasks. Even within my sample, effects may differ for cities not at the margin in passing an appointive treasurer referendum. Nevertheless, finding that bureaucratic control of debt management policy reduces city borrowing costs is an important result: assigning the debt management task to a politician evidently has important effects on the costs of providing a government service.

The remainder of the paper is organized as follows: Section 2 describes the context of city treasurers and debt policy, discusses a simple political agency framework of treasurer performance, and the research design. Section 3 describes the models to be estimated. Section 4 describes the data. Section 5 presents the results and validates the research design. Section 6 examines evidence of differences in observed policy choices between politician and bureaucrat treasurers. Section 7 concludes.

2 Context and Conceptual Framework

2.1 City Treasurers and City Borrowing Costs

In this section I provide a brief overview of the operation of public debt markets, city policies which affect borrowing costs, and the role of city treasurers in city government. There are three

sets of participants in public debt markets: city issuers, financial intermediaries, and investors. The debt issuing process begins with the city deciding that a capital project (or other need) requires financing, financial intermediaries are then hired, the issue is then presented to the debt rating agencies, and finally the issue is sold to investors.⁷

The cost that a city ultimately pays to finance a debt issue is composed of three factors: (1) the interest rate that investors receive; (2) the spread between the interest rate investors receive and what the city pays (which the underwriter receives) and; (3) per issue fees that are paid to financial intermediaries by the city.

Two types of city policy affect these factors, and the costs of borrowing. *Debt Issuance Policies* affect both the spread intermediaries receive, and the interest rate that investors receive. One key debt issuance policy choice is whether to sell the debt in a competitive auction, where sealed bids are submitted and the lowest chosen, or as a negotiated sale with a limited number of bidders. Competitive sales lead to lower borrowing costs for the issuer, but likely a smaller spread for the intermediary.⁸ Another key policy choice is when to issue the debt. As Figure 1 demonstrates there is significant variability in the market interest rate for municipal securities. There are predictable patterns of demand for an issue depending on the timing other issues from the U.S. Treasury and other large issuers, national holidays, seasonal demand from investors, etc. A debt issuance policy of responding to favorable market conditions, and paying close attention to other predictable patterns of demand for an issue can reduce costs.

The second types of policies which can influence borrowing costs are *Financial Management Policies*. Financial management policies such as the use of a rainy day fund, better forecasting of expenditure and revenue, and transparent accounting policies can reduce a cities' risk of default. A reduction in the risk of default will improve the cities debt rating, and reduce the risk premium the city must pay investors to purchase their debt.⁹

⁷For a more detailed discussion of the issuance laws, rules and regulations which govern the process of public debt for cities in California see CDIAC (2006). For a more general discussion of public debt issuance and management by local governments see Joseph (1994) and Leonard (2004).

⁸The evidence is very clear on this difference in borrowing costs. See Robbins and Simonsen (2007) and Simonsen, Robbins and Helgerson (2001) for recent studies showing that competitive sales reduce borrowing costs for cities.

⁹Municipal defaults are rare, but not unheard of. There were over 2000 defaults by cities and incorporated townships in the United States between 1939 and 1969 (Spiotto, 2008). Historically defaults have been due to provision of nonessential services, fraud and mismanagement, adverse local economic conditions, and natural or man-made disasters (Spiotto, 2008).

Some of debt issuance and financial management policy choices are likely to affect special interest groups. The policy of issuing debt in a competitive sale, rather than through a negotiated sale, reduces the spread that underwriters receive. The policies of frequent auditing, and transparent accounting, invite increased public scrutiny of any rents that strong unions have been able to obtain.

In addition to debt issuance and financial management policies, city borrowing costs are also affected by many other factors. Aspects of the local economy and city fiscal policy affect default risk, and are reflected in the city debt rating. These factors can range from the diversity of the tax base, to whether city expenditure policies are sustainable, etc. In addition, other aspects of a debt issue such as the term length of the issue, and the principal amount affect borrowing costs. These are largely determined by the nature of the project.

City treasurers are delegated the tasks of managing public funds in accordance with the law (CMTA, 2001). They are primarily delegated the tasks of developing debt management, accounting, and cash management policies to implement legislative policy. Thus, the city treasurer will affect city borrowing costs by their choice of debt issuance and financial management policies. These policies are sometimes chosen in a committee rather than by the city treasurer alone, but the city treasurer often plays a large role in setting the policy agenda regardless.

The central difference between appointed and elected treasurers is whether they are held accountable by city council or directly by voters themselves. Which policies a city treasurer will choose to implement depends on their expertise and effort. The task of choosing effective debt issuance and financial management policies for a city is quite complex as cities differ enormously in both the size and scope of the services they deliver.

Appointed and elected treasurers are likely to differ in the level of expertise and effort they supply to the policy task. The only requirements for a person to be an elected city treasurer is that they are a resident of the city, and usually, do not have a criminal conviction. In contrast, appointed city treasurers can be selected for their expertise in managing public debt. This difference often results in appointed treasurers having higher levels of education (often an MBA or MPP degree) than elected treasurers.¹⁰ In addition, elected and appointed treasurers face very different returns to effort as the effect of policy performance on reelection for the politician

¹⁰I have attempted to directly collect this information from cities themselves under a Public Records Act request. Unfortunately, many cities only keep very limited records on the educational qualifications of their treasurers, and the resulting data set is too incomplete to be useful.

and promotion for the bureaucrat are likely to be quite different.

Historically, all general law cities in California began with elected treasurers. The State Code allows for a general law city to make the treasurer position appointive if city residents vote for this change, and many cities have done so. At the start of the period under study, about half of the cities in California have appointed treasurers. These cities are typically much larger with higher levels of economic activity. Recently, however, a number of smaller cities have sought to make the treasurer position appointive, as the technology to manage public finances has become more complex.

2.2 Bureaucrat and Politician City Treasurer Performance

In this section I discuss a simple framework to understand the effects of treasurer appointive status on the policy outcome, city borrowing costs. I discuss these effects in a simple agency model of treasurer performance based on Alesina and Tabellini (2007). A simple formal political agency model is presented in the appendix which more fully illustrates the roles of incentives and selection in policy performance that I discuss here.

Politician treasurers exert effort to appear better than the average potential politician so that they will be reelected. Bureaucrat treasurers exert effort to reveal ability to future employers. When effort has little effect on exceeding the reelection threshold — for example, due to the debt management being highly complex — bureaucrats will exert more effort and perform better. Thus, whether bureaucratic or political control of public debt management is preferred by city residents depends on whether the incentives to exert effort, and ability to reduce costs are stronger for bureaucrats or politicians.¹¹

The performance of a city treasurer is measured by the interest rate that a city pays on outstanding debt. All else equal, city residents prefer to pay lower interest rates so that their tax burden is reduced or other public services they value are provided. The policy outcome — the interest rate paid on city debt, i — is observable but not contractible, so residents cannot write the optimal performance contract with the city treasurer to achieve the first-best effort level. Residents can, however, choose whether to allocate the city treasurer task to a bureaucrat

¹¹As I am considering the effect of political institutions on the provision of a general public good without redistributive implications, I do not focus on any effects of political institutions on wasteful redistributive spending such as patronage appointments, etc.

or politician,

Whether the city treasurer is appointed or elected affects the level of expertise of the treasurer, this is the *expertise effect* of treasurer appointive status. In addition, the appointive status of the city treasurer affects the effort they supply on the policy task based on incentives to exert effort, this is the *effort effect* of treasurer appointive status.

In general, the net benefit of bureaucratic control of policymaking for government performance, Δi , is ambiguous. The net benefit depends crucially on the sign and magnitude of both the *expertise* and the *effort* effects of bureaucratic versus political control. In principle, either effect could go in either direction. For example, bureaucrats might be more skilled than politicians on average if bureaucrats are selected based on prior policy performance. If city treasurer positions are allocated to bureaucrats on a patronage basis however, bureaucrats may be less skilled.

The direction of the *effort* effect is also ambiguous. If the reelection of a politician city treasurer depends crucially on government borrowing performance, but future employers of a bureaucrat place little value on prior government borrowing performance the effort effect would favor the politician. Alternatively, if constituents face significant difficulty in observing policy performance by politicians, but future employers of bureaucrats highly value prior policy performance the effort effect would favor the bureaucrat. In addition, the sign and magnitude of the effort and expertise effects may be influenced pressure from strong interest groups. The central goal of the empirical analysis is to establish the sign and magnitude of Δi .

2.3 Research Design

In estimating the net effect of a bureaucratic treasurer on city borrowing costs the main econometric challenge is that cities do not choose political institutions randomly. For a start, cities may well choose political institutions to maximize local social welfare. The net benefit of bureaucratic treasurers varies tremendously across cities depending on many factors, including the technology used to manage government, the complexity of the debt portfolio, the skill level of potential policymakers, the extent of ‘red tape’, implicit motivation of policy makers, etc. These factors are also likely to affect city borrowing costs anyway. In addition, many cities may not choose the most efficient institutional arrangements due to pressure from interest groups, such as public sector unions and financial intermediaries. As these interest groups seek to influence

policies which will affect borrowing costs regardless of government form, their strength is likely to affect borrowing costs anyway. In either case, the factors that influence both borrowing costs and the choice of government form are frequently unobserved.

Therefore, a naive comparison of borrowing costs between cities with and without bureaucratic treasurers may well lead to biased estimates of the net benefit of bureaucratic treasurers.¹² Credible estimates require variation in the appointive status of city treasurers which is independent of other unobserved factors that affect borrowing costs.

In general, changes in local political institutions are likely driven by changes in the performance of the local economy, government, or by pressure from interest groups (see Alesina, Ardagna, and Trebbi, 2006). For example, if only appointed treasurers have the expertise necessary to access new lower-cost forms of borrowing, city residents would prefer to switch to an appointed treasurer. Thus, it is difficult to believe that the passage of a treasurer appointive referendum by a wide margin is unrelated to unobserved determinants of city borrowing costs.

To generate credible estimates of the effect of government form on performance, I use an empirical strategy based on changes in city political institutions that are plausibly exogenous to changes in unobservable borrowing costs. My research design is based on the *narrow* passage of an appointive city treasurer referendum.

Whether a referendum that would be *very close* to passing does, indeed, marginally pass (or conversely, marginally fail), is unlikely to be driven by changes in the performance of the local economy, government, technology, or pressure from interest groups. Referendums may pass or fail for a variety of reasons. The work of Bowler and Donovan (1998), Gerber (1999), and Nicholson (2005) has shown that many features of ballot measures unrelated to the actual policy issue being voted on can affect their passage. For example, the salience of an issue on the national or state agenda, or cues in the question text, can determine the passage of a ballot measure. Marginal referendums may pass or fail depending on the public's view of bureaucrats at the time of the election, how other issues in the election crowd-in or crowd-out attention to the measure, the views of the swing voters who turn out to vote, etc. Exogenous shocks to who turns out to vote (perhaps due to weather conditions), or media coverage of national political or bureaucratic corruption scandals, could easily tip the balance.

¹²See Aghion, Alesina, and Trebbi (2004) for a careful discussion of the theory and evidence on the endogeneity of institutions.

Referendums for the appointment of city treasurers are placed on the ballot by city councils in accord with procedures outlined in the California State Code.¹³ The exact text of the measure is given in the California State code as, “*Shall the office of city treasurer be appointive?*”, with the words “*yes*” and “*no*” following the question. If greater than 50% of the voters choose “*yes*” the referendum is carried. If the referendum is carried, the elected position is filled with a candidate of the city council’s choosing on the expiration of the current treasurer’s term.

I describe the treasurer referendum variation in Table 1.¹⁴ During my sample period there are 39 appointive treasurer referendums, occurring in over 25% of the general law cities in California. Eleven of the appointive treasurer referendums pass. Many referendums fail by a significant margin, likely because many Americans view bureaucrats negatively, as Wilson (1989) and others have noted. My central empirical analysis makes use of the referendums that marginally pass (i.e. by less than 5%).¹⁵ The cities where referendums either marginally fail or marginally pass are located throughout the state and typically are quite small.

The fact that plausibly exogenous variation in political institutions exists is central to making the performance of city treasurers particularly attractive to study. One potential cost to achieving a credible identification strategy, however, is a limited number of ‘experiments’ from which to identify the effect. The lack of large numbers of changes in political institutions is well known in the literature. It is worth pointing out that, while the number of ‘experiments’ available here is more limited than researchers often face in other contexts, it compares favorably to data used to study the effect of political institutions. In fact, because important political institutions change so infrequently (and any changes are likely endogenous), prior researchers in this

¹³Local ballot measures mostly concern local issues of land use, governance, and safety (Gordon, 2004). As Gordon (2004) notes, the California local Initiative and Referendum process was enacted in 1911 in response to the perceived influence of special interests, in particular the railroads. Currently the initiative process is available in all of California’s 478 cities. All general law cities follow the procedures outlined in the state code for an initiative to become eligible for the ballot. While charter law cities have the option of having their own specific set of requirements that do not directly contravene the state code, most follow the set of requirements outlined in the state code. About 17% of local initiatives cover local government structure and organization. The local initiative process is more common in large, growing and economically diverse cities with larger public sectors; however, local income and other local political institutions play little role. Local initiatives can appear on the ballot in state and local (concurrent) or local-only (non-concurrent) elections. For an overview of the local initiative process in cities throughout the United States, see Matsusaka (2003).

¹⁴I discuss details of the exact data source and sample selection below in the data section.

¹⁵It is worthwhile noting that none of the referendums that narrowly fail later narrowly pass in the same city. Thus, each city is only exposed to one referendum in my sample, and there is no issue with regard to the dynamics of repeated referendums as there might be in other contexts.

area have necessarily focused on either cross-sectional analysis alone or within-state analysis, with very few ‘experiments’ at all.¹⁶

3 Econometric Models

In this section I introduce the regression specifications which form the heart of the analysis. I first estimate linear models of the net effect of bureaucratic treasurers, with controls for city governmental, economic, and institutional characteristics. The linear model estimated by ordinary least squares serves as a useful comparison point for the marginal referendum event study. It illuminates how unobservable components of borrowing costs might lead to bias in a simple linear model and the value added of the marginal referendum event study method.

Ordinary Least Squares. Formally, the simple model I estimate can be expressed as,

$$(1) \quad I_{it} = \delta TA_{it} + X_{it}\zeta + \omega_t + \epsilon_{it},$$

where I_{it} is the average interest rate on all outstanding debt in city i in year t , TA_{it} takes a value of one if the treasurer is appointed in city i in year t and a value of zero otherwise, X_{it} is a matrix of variables which measure local government, economic and institutional city characteristics, ω_t is a set of year fixed effects, and ϵ_{it} is the error term.¹⁷

The coefficient of interest is δ which measures the net effect of an appointed versus elected treasurer on city borrowing costs. The matrix X_{it} contains variables measuring differences in local public finance (Total Expenditure, Total Own Source Revenue, and Number of Public Services Provided), political institutions (Directly Elected Mayor, Any Salary for Elected Officials, and Whether Elected Officials serve Full-Time), economic activity and population (City Population, Per Capita Income, Unemployment Rate), and skill levels (Fraction with a College

¹⁶A few examples from recent studies: Besley and Case (2003) note that some of the major state-level changes in electoral rules in the United States from 1950 to the 1990’s, such as literacy tests or poll taxes, affected only 15% of states. In addition, the highly influential study of Besley and Coate (2003) has only 3 states that switch (from 1960-1997) from which to estimate the effect of the electoral status of regulators on electricity prices. Many other careful and important studies are limited to the analysis of cross-sectional data alone; see Persson and Tabellini (2003) and Aghion, Alesina, and Trebbi (2004) for recent examples of this work.

¹⁷This specification does not control for city fixed effects as the city fixed effects model only identifies the effect from changes in treasurer appointive status. Because all changes in the appointive status of the city treasurer are due to the passage of an appointive treasurer referendum, a fixed effect model is identical to the model presented below that examines the effect of passage of *any* referendum.

Degree, and Fraction of Labor Force in Financial Services) across cities. To the extent that all relevant differences in borrowing costs across cities are due to these observed variables, this approach will yield an unbiased estimate of δ .¹⁸

Marginal Referendum Event Study. To address concerns that unobserved government quality, special interest strength, and other determinants of borrowing costs are correlated with whether a city has an appointed treasurer or not I implement a marginal referendum event study strategy. Formally, the specification I estimate can be expressed as,

$$(2) \quad I_{it} = \delta TAMP_{it} + \gamma_i + \omega_t + \epsilon_{it},$$

where I_{it} is the average interest rate on all outstanding debt in city i in year t , $TAMP_{it}$ takes a value of one if the appointive treasurer referendum passed by less than 5% in city i before year t and a value of zero otherwise, γ_i is a set of city fixed effects, ω_t is a set of year fixed effects, and ϵ_{it} is the error term. The coefficient of interest is δ which measures the net effect of allocating bureaucratic control of debt policy on city borrowing costs.¹⁹ To address the fact that the outcome is likely autocorrelated and the marginal passage of an appointive treasurer referendum is a permanent shock, the standard errors are clustered at the city level (Bertrand, Duflo, and Mullainathan 2004). I use the sample of all general law cities that have an elected treasurer in the baseline period, as these cities are at risk of switching.

It is important to note that I_{it} measures the average interest rate that city i pays to service their outstanding debt in year t . The interest rates that a city pays depends on the market interest rate when the city issued the debt, the risk premium investors demand to hold the debt issue, and the interest rate spread that the city paid to financial intermediaries when the debt was issued. Government form affects borrowing costs by changing debt issuance and financial management policies on new debt issues, which in turn affect average interest rates through any one of these three margins. As model (2) is identified off only within city changes, only changes in borrowing costs due to policy changes on affecting borrowing costs on new debt issues or the retiring of old debt contribute to identification.

¹⁸I do not include any of the city debt mix characteristics (listed in panel (3) of Tables 2 and 3) as controls because these may be chosen by the treasurer, so any estimate with debt characteristic controls will not yield an estimate of δ that corresponds to the net effect of city treasurer appointive status on borrowing costs.

¹⁹Because passage of an appointive city treasurer referendum does not result in the immediate appointment of a treasurer, this estimate does not capture solely the effect of the person in charge of the city treasurer task being appointed. For example, this parameter will be smaller than the true effect of a city treasurer on debt costs if a new city treasurer is not appointed for a few years, and larger if there are increases in debt costs due to the disruption associated with appointing a new person as treasurer.

The identifying assumption is that changes in city borrowing costs within a city for cities that do *not* marginally pass an appointive treasurer referendum form a valid counterfactual for those that do. While it seems highly likely that this assumption is valid, it is instructive to consider cases where it would be violated.

First, it is possible that poor performance by an elected city treasurer leads to the narrow passage of an appointive city treasurer referendum. In this case, any measured effect could be due to the removal of a particularly ineffective treasurer who is replaced by an average treasurer. Thus, I would overestimate difference in performance between average elected and appointed treasurers. To shed light on this possibility, I examine whether there are any differential trends in performance before the measure narrowly passes.

A second possible threat to identification is that changes in local economic conditions which affect borrowing costs could be related to the narrow passage of an appointive treasurer referendum. In this case any estimated effect could be due to changes in underlying economic conditions and not due to treasurer appointive status. To examine this possibility, I include controls for city population and locally generated government revenue in each year. If local economic conditions explain the narrow passage of these measures, and any subsequent changes in borrowing costs, then any results should be largely attenuated when these controls are added to the model.

Because city councils are able to choose when to place a referendum before voters, the narrow passage of an appointive treasurer referendum may be correlated with the timing of a larger-scale policy to reform city financial management practices, with a forthcoming complex debt issue or changes in the strength of interest groups. To shed light on these possibilities, I examine whether narrowly *failing* appointive treasurer referendums and narrowly *passing* appointive city clerk referendums have a similar effect. If the effect of narrowly passing an appointive treasurer referendum is part of a larger scale governmental reform, and not due to the appointive treasurer status per se, we should see similar effects for these referendums.

In sum, while I cannot completely rule out the possibility that some of the effect reflects time-varying city-specific changes in unobserved city borrowing costs, it appears that many sources of spurious correlation are accounted for.

4 Data

The empirical analysis in this paper studies the effect of marginal referendum passage on borrowing costs. In general, data on vote shares and the question text for local referendums are not compiled by state agencies. Fortunately, the newly available *California Elections Data Archive* (CEDA) database compiled by the Center for California Studies in cooperation with the California Secretary of State contains the key information required for this study. This database contains information on the date, content, and vote outcomes for all local initiatives and referendums appearing on the ballot in California cities from 1995 until 2007. I obtain my measure of whether an appointive city treasurer referendum marginally passes in a city in a given year from this source.

I match the referendum data to data on city borrowing costs obtained from the *City Financial Transactions Report* (CFTR) data for fiscal years 1996 to 2006 for each city. The CFTR data comprise a uniquely detailed database with extensive coverage of many financial variables collected annually by the California State Controller for each city. All of the 475 cities in California are required to file a report. More than 99% of cities file a financial transactions report in any given year.²⁰ I use variables on total city interest expenses, total debt, total debt by broad category, total expenditures, and total revenues, all from the CFTR data. I construct my annual measure of average city interest rates by dividing total debt interest payments by total debt outstanding. Importantly, this interest rate measures the borrowing costs that cities actually pay, including both the gross margin financial intermediaries charge, as well as, payments to investors. I deflate the nominal interest rates by the consumption price deflator to place all interest rates in real terms.

Together the data from CFTR and CEDA form the panel of California cities that I use in my central analysis. I match in data from three further sources. First, I match in data from the 1990 Decennial Census to measure the baseline characteristics on population, demographic, and economic characteristics of each city. Second, I match in data from the 1992 Census of Governments on city government organization. I use this dataset to measure the baseline appointive status of the city treasurer position.²¹ Third, I match in data on annual population for each

²⁰Government Code section 12463 directs the California State Controller to annually compile and report to the public the financial transactions of all California cities.

²¹The fact that my baseline data were collected in 1992 and my panel does not begin until 1995 means that I could miscode a few cities that switched to appointed treasurers between 1992 and 1995 as cities with elected treasurers in the first year of the sample. However, because my central analysis uses within-city variation during

city as estimated by the California Department of Finance.

For the last section of the paper I also match in data on new debt issues for each city from the *California Debt and Investment Advisory Commission* (CDIAC) new debt issuance database. The information reported to CDIAC includes the sale date, the name of the issuer, the principal amount, the type of debt instrument, the rating of the issue, and the members of the financing team. While this dataset does have much valuable information, it has one significant limitation for this study. The interest rate reported is that investors receive, and not the interest rate cities actually pay to service their debt. As cities payments to financial intermediaries are a central element of the response to government form, I only use this data to look at the effect of treasurer appointment on policy choices, rather than for my main analysis. I match in only those issues that are issued by a city and not by other government entities – so, for example, school construction bonds that are issued by school boards are excluded.

I construct my analysis sample in the following way. I first use cities that appear in the 1992 Census of Governments as my base population of cities. The few cities that incorporate after 1992 are not in the sample. I also drop charter cities, as the referendum process and question as specified applies only to general law cities.²² I then match these data to 1990 Decennial Census, CFTR, CEDA and annual population data by city. I drop the few observations with no reported interest costs, and with an interest rate of greater than 25%; as observed interest rates on debt issues are never above 18% these are likely due to coding errors. I also drop appointive treasurer referendums which are non-binding and those which have no city identifier or vote share information. This sample restriction results in a loss of 10 referendums from the sample, largely because they are advisory and non-binding. I code the passage of a referendum based on the fiscal year as defined in the CFTR data.²³

Figure 2 shows the distribution of interest rates in cities with and without elected treasurers. The figure shows that, on average, cities with elected treasurers pay higher interest rates, but also demonstrates that there are many other determinants of city borrowing costs besides treasurer appointive status alone.

the sample period to identify the effect, this would not bias the result.

²²General law cities follow the local government procedures and policies in the California State Code, whereas charter cities may adopt any policies and procedures which do not directly contradict state law.

²³The city fiscal year runs from July to July, so for example I code referendums occurring between July of 1995 and the end of June 1996 as occurring in the 1996 fiscal year. I use the 1996 fiscal year as the first year of the sample as I do not have referendum data for the entire 1995 fiscal year.

Table 2 presents descriptive statistics. Columns (1) and (2) show the means and standard deviations computed over all city-year observations dividing cities by treasurer appointive status. The comparison yields a number of interesting results. Elected treasurers pay significantly more to borrow unconditionally. Interest rates in cities with elected treasurers are nearly 19% greater than those with appointed treasurers. Cities that have elected and appointed treasurers are also quite different in other ways. Cities with elected treasurers tend to have more debt, but spend less on debt related expenditure. Those with elected treasurers also spend more on public services overall, and are more likely to have both a directly elected mayor and full-time elected officials. Cities with appointed treasurers are also larger, have higher per capita income, lower unemployment and a more educated population. The descriptive statistics indicate that cities with appointed treasurers pay lower interest rates, but differ on key observable measures which are likely to affect borrowing costs independently of treasurers' appointive status.

Table 3 presents descriptive statistics for the subsample of cities that have an elected treasurer in 1992. Columns (1) and (2) show the means and standard deviations computed over all city-year observations dividing cities by whether a city narrowly passes an appointive treasurer referendum or not. The table reveals that cities that narrowly pass a referendum do, in fact, differ on key observable measures from those that do not. Cities where the referendum narrowly passed generally have less debt and spend less on general government services, but spend more on debt issuance consultants. In addition, those cities that narrowly pass a ballot measure are smaller, have a lower-income population, and higher unemployment rates. As these characteristics are likely to affect city borrowing costs independently of the treasurer's appointive status, and likely correlate with important unobservables, this comparison demonstrates the value of using within-city variation to achieve a causal estimate.

5 Results

5.1 Main Results

Column (1) of Table 4 presents the baseline estimates of δ from fitting equation (1). This estimate indicates a negative relationship between having an appointed city treasurer and borrowing costs. Conditional on city government and economic characteristics, an appointed city treasurer is associated with a reduction in borrowing costs of 23%. As there are significant concerns about whether cross-sectional differences in city treasurer appointive status are independent of

unobserved determinants of borrowing costs, I next present estimates using the variation in city treasurer appointive status due to marginally passing referendums.

In column (2) of Table 4, I present the estimates of δ from fitting equation (2). This estimate also indicates a negative causal relationship between an appointed city treasurer and city borrowing costs. The effect appears to be both statistically and economically significant. The marginal passage of an appointive treasurer referendum reduces the interest rate on city debt by 31%. The effect is also economically large. As interest payments in cities with elected treasurers account for nearly 3% of their total annual expenditure, the estimates indicate a reduction of almost 1% of total annual expenditure by switching from an elected to an appointed treasurer.

The fact that the magnitude of δ is greater in column (2) than in column (1) could indicate that cities with higher levels of unobservable interest group strength are less likely to appoint a treasurer. It is also possible that δ differs across cities, and that cities that marginally pass an appointive treasurer referendum have greater net benefits of treasurer appointment – perhaps because these cities have more complex debt portfolios, for example.

In column (3) of Table 4 I estimate a model similar to equation (2) where the indicator variable for a marginally passing referendum is replaced by *any* passing appointive treasurer referendum.²⁴ While the point estimate of δ in column (3) is negative, this estimate indicates no statistically significant relationship between the passage of an appointive treasurer referendum and municipal borrowing costs.

The difference between the estimates in column (2) and column (3) of Table 4 illustrates the value of focusing on marginally passing referendums to identify the effect of treasurer appointive status. It is quite likely that the resounding passage of a referendum is related to unobservable changes in city borrowing costs. Moreover, if popular reforms are endogenous and the probability of reform is negatively correlated with the state of the local economy (as the work of Alesina, Ardagna, and Trebbi (2006) would indicate), estimates using the variation from any reform passage are likely to be biased upward. This seems to be the case here. Unobservable positive

²⁴The exact specification I estimate is

$$I_{it} = \delta ATAP_{it} + \gamma_i + \omega_t + \epsilon_{it}.$$

where I_{it} is the average interest rate on all outstanding debt in city i in year t , $ATAP_{it}$ takes a value of one for any appointive treasurer referendum passed in city i before year t and a value of zero otherwise, γ_i is a set of city fixed effects, ω_t is a set of year fixed effects, and ϵ_{it} is the error term.

shocks to borrowing costs are likely related to resounding passage of an appointive treasurer referendum. The fact that δ in column (3) is only one-third of the magnitude of δ in column (2) bears out the concern that resounding passage of the appointive treasurer referendum may well be endogenous.

5.2 Alternative Event Comparisons

Identification of the effects of institutions is challenging because any factor that affects both the cost of borrowing and institutional reform in a city may induce spurious correlation. For example, one might be concerned that cities with particularly ineffective elected treasurers implement policies that lead to a city paying a higher interest rate to borrow. If having an ineffective elected treasurer leads citizens to marginally pass an appointive treasurer referendum, we will estimate a negative effect where none exists. In this context, however, I believe that this issue is unlikely to be a serious problem. First, the passage of the referendum by a small margin is unlikely to be affected by significant differences in the effectiveness of a given treasurer, significant local economic shocks, changes in the strength of interest groups, or other institutional changes. More importantly the models here are based on annual city-level data with city fixed effects. Persistent unobserved differences across cities in their economic fundamentals, government, and other institutions do not contribute to identification. One might still be concerned that within-city changes in borrowing costs lead to the marginal passage of an appointive treasurer referendum. I next estimate a number of models to address this potential concern.

Treasurer Referendum Timing and Failure. The first threat I consider is that the timing of the marginal passage of an appointive treasurer referendum might be due to changes in unobserved determinants of borrowing costs.

In column (1) of Table 5, I estimate a version of equation (2) that allows for differences in borrowing costs in the periods *prior* to passage for cities that marginally pass such a referendum. Specifically, I include three leads of marginal treasurer referendum passage in the model. This specification will indicate if cities that marginally pass the treasurer referendum are experiencing changes in borrowing costs before the measure actually marginally passes. If this was the case there would be serious concerns about whether marginal passage of a treasurer referendum is indeed exogenous. Fortunately, the results in column (1) of Table 5 do not show any evidence of differences in borrowing costs before the referendum marginally passes. The magnitude of each prior trend coefficient is very close to zero, none are statistically significant, and the coefficient

on the marginal passage of the referendum is very similar to the baseline estimate in Table 4 column (1).

The dynamic response of interest rates to a marginal appointive treasurer referendum is shown graphically in Figure 3. As Figure 3 visually demonstrates, cities that do or do not marginally pass an appointive treasurer referendum follow very similar pre-referendum passage trends. The figure also shows that there is little immediate effect of marginally passing an appointive city treasurer referendum. This finding is reassuring as the passage of an appointive treasurer referendum does not result in a change in the status of the position until the expiration of the current elective treasurer's term, which is usually two to four years.

The next threat to identification I consider is that the marginal passage of a treasurer referendum is tied to other institutional changes or reforms that might affect a city's cost of borrowing. As noted by Acemoglu and Robinson (2005), institutional changes are often bundled together. As a city council decides whether to place an appointive treasurer referendum before voters, this decision may be correlated with changes in special interest group strength or policies that also affect the efficiency of government. An example of this would be the adoption of an advanced record keeping system that reduces wasteful spending. In this case, the effect of the marginal passage of an appointive treasurer referendum on city borrowing costs may simply be due to other changes in city government administration. The first approach I take to shed light on this issue is to examine whether other outcomes of an appointive treasurer referendum have a similar effect to marginal passage of the referendum. This test will be informative about whether the results above are simply due to the effect of putting a of highly competitive treasurer referendum before voters.

In column (2) of Table 5 I present estimates of the model from equation (2), with the addition of three variables indicating other outcomes of the treasurer referendum. The three variables are resounding passage of the treasurer referendum (passage by more than 5%), marginal failure of the treasurer referendum (failure by less than 5%), and resounding failure of the treasurer referendum (failure by more than 5%). The first finding to note is that coefficient on the marginal passage of the treasurer referendum remains statistically significant and the magnitude is very similar to that in Table 4. In addition, none of the other referendum outcomes is statistically significantly different from zero. This finding is what we would expect if resounding passage of the referendum is due to a negative shock to the economy, which would raise interest rates at the same time as the switch to an appointed treasurer reduces them. In addition, the fact that failing referendums are not statistically significant indicates that it is not the desire for

city council to reform the city government, but the change in whether the treasurer is actually appointed or elected that accounts for the central results above.

One additional potential issue is that cities which place referendums before voters may be differentially more responsive to any change in government form, perhaps due to a lack of red tape. If this were the case, the estimates in Table 4 may represent the response to the change in government form for only reform-minded cities, for example, and may not be representative of the response in the average city. To examine this issue, I estimate equation (2) only for those cities that have treasurer appointive referenda that went before the voters. The results of this specification are presented in column (3) of Table 5. The results indicate that the coefficient estimates are quite similar to those in column (2) of Table 4, and nearly identical to those in column (1) of Table 4. Thus, the response in cities where a referendum is put to the voters is no larger than (in an absolute value sense) the response estimated above for all cities. While the coefficient estimates are very similar in magnitude to those above, the estimated response is only statistically significant at the 10% level as the substantial reduction in sample size reduces precision.

Other Ballot Measures and Local Economic Shocks. It is also possible that the inclusion, and marginal passage, of a treasurer appointive ballot measure is related to other factors that also affect city borrowing costs. To shed light on these possibilities, I examine whether including three key types of variables as controls alters the central findings above.

First, voters may cast their votes on an appointive treasurer referendum not as a vote on the form of government per se, but as a referendum on the current elected treasurer or a lack of competition in treasurer elections in general. If this was the case, cities with poor treasurers or uncompetitive treasurer elections would be more likely to marginally pass a treasurer appointive referendum, and these cities may well pay more to borrow anyway. To examine this possibility I include controls for how competitive the treasurer election concurrent with the referendum is, and whether the incumbent treasurer is reelected.

I present the results for estimating the version of equation (2) with controls for treasurer election outcomes in column (1) of Table 6. The results indicate that the effect of the marginal passage of the treasurer appointive referendum is largely the same as that estimated above. This is likely due to the fact that treasurer election outcomes have very little relationship with borrowing costs.

Second, voters may vote to support the adoption of an appointive city treasurer because they believe an upcoming bond issue could be better handled by an appointed city treasurer than an elected city treasurer. If the bond issue would result in lower average borrowing cost for a city, then the passage of a new debt issue could explain the results above, even if appointed and elected treasurers do not perform differently. To shed light on this issue I include controls for whether a bond on the same ballot as the marginal treasurer referendum passes, and if it the bond measure does pass, what the principal of the bond is. I present the results from this version of model (2) in column 2 of Table 6. Again, the results are very similar to those above indicating that the simultaneous passage of debt measures does not explain the central results in Table 4.

I next include a control for the marginal passage of an appointive *clerk* referendum. This specification is informative for two reasons. First, many cities place appointment referendums for city clerk and city treasurer positions on the ballot at the same time and their passage is likely to be correlated. Second, changes in the execution of city clerk job tasks may also influence borrowing costs through city record keeping policies, but have little to do with the debt issuance and financial management policies chosen by an effective treasurer. This specification sheds further light on whether the results above are due to many institutional changes being bundled together.

In column (3) of Table 6 I present estimates of the model from equation (2), with the addition of a variable indicating the marginal passage of an appointive clerk referendum. The point estimate for marginal passage of the appointive clerk referendum is positive, but not statistically significant. The fact that the point estimate is not the same sign as the effect of the marginal passage of an appointive treasurer referendum provides reassurance that the reduction in borrowing costs found in Table 4 is not due to other observable institutional changes. In addition, the magnitude of the appointive treasurer effect is now a larger negative effect, and it is still statistically significant at the 10% level. This reduction in precision is to be expected as a number of the treasurer referendums appear on the same ballot as the clerk appointive referendum, reducing the power to separately identify both effects. Thus, the results in Table 6 indicate that the central results are unlikely to be driven by other institutional changes correlated with the marginal passage of the appointive treasurer referendum.

Another potential threat to identification is that the marginal passage of an appointive treasurer referendum is related to local economic shocks, which also affect borrowing costs. If marginally supported reform occurs less frequently during significant local economic downturns,

correlated local economic shocks could explain the findings. To address this concern I include two annual measures of economic activity in the city as controls in column (4) of Table 6. These measures are annual locally-generated tax revenue and the annual population of each city. I present estimates of δ in a model of equation (2) with these two additional controls added in column (4) of Table 6. The inclusion of these controls has very little effect on the point estimate of δ in comparison to those presented above. It appears that changes in measures of local economic conditions have little effect on the timing of marginal passage of an appointive treasurer referendum.

Debt Level and Mix. I next test for whether differences in the debt level and mix between cities with appointed and elected city treasurers can account for the central results. If there are substantial fixed costs in debt issuance, then any differences in the debt level of a city, perhaps in response to having an appointed treasurer, may be driving the results. In addition, as the term length of a debt issue is a crucial determinant of borrowing costs, appointed city treasurers may simply be reallocating debt in response to the term structure of interest rates. In practice, the potential for effective city treasurers to reallocate debt in this way may be limited, as the type of debt issued is often constrained by the nature of the project to be funded or other factors. I estimate versions of equation (2), including three city debt portfolio controls: total short term debt, total long term bond debt, and total long term non-bond debt.

I present the results from estimating several versions of model (2) with additional debt portfolio controls in Table 7.²⁵ The results in columns (1) to (4) show that adding debt type controls changes the estimated appointive treasurer effect very little compared to the results in Table 4. Thus, any differences in debt level and mix in cities with appointed and elected treasurers explain little of the central findings.

²⁵To be clear, the exact model I estimate is,

$$(3) \quad I_{it} = \delta TAMP_{it} + \beta X_{it} + \gamma_i + \omega_t + \epsilon_{it},$$

where I_{it} is the average interest rate on all outstanding debt in city i in year t , $TAMP_{it}$ takes a value of one if the treasurer appointment referendum passed by less than 5% in city i before year t and a value of zero otherwise, X_{it} are the debt portfolio measures in city i in year t , γ_i is a set of city fixed effects, ω_t is a set of year fixed effects, and ϵ_{it} is the error term.

5.3 Debt Issuance and Management Costs

In Table 8 I examine whether the appointive status of the city treasurers affects other costs directly related to the issuance of debt. Whether other costs of debt issuance respond to treasurer appointive status is important for understanding the effect of treasurer appointive status on *total* borrowing costs.²⁶

I consider two additional costs. I first examine whether cities with appointed treasurers spend more or less on per issue fees to private sector debt issuance consultants, other than the spreads to underwriters that are already included. The effect could go in either direction. Effective city treasurers may be able to substitute their effort and expertise for that of a consultant, reducing city expenditure on advisory services. On the other hand, effective city treasurers may be effective because they select higher quality financial advisors whose services may be more costly. It is also likely that private sector debt consultants are able to extract rents from ineffective city treasurers who are not aware of the services they really need or the price they should be willing to pay.

In columns (1) and (2) of Table 8, I present the results of estimating a model similar to equation (2) with the outcome of debt issuance consultant expenditure. In column (1) I include both extensive and intensive margins of response by recoding entries with zero expenditure to be \$1. This simple transformation allows the model to capture both margins of response. The results in column (1) show that treasurer appointive status does not cause an increase in debt consultant expenditure when both margins are considered. In column (2) I only include observations with positive expenditure on debt consultants. This model captures the intensive margin alone. The results in column (2) demonstrate that there is substantial response along this margin. Appointive city treasurers spend over 150% more on private sector advisory consultant fees than elected treasurers. Thus, part of the appointive city treasurers' effect above may be due to the hiring of higher quality advisors.²⁷

Second, I also examine whether the cost of government administration in the city treasurer

²⁶In general, I consider a reduction in borrowing costs to be welfare enhancing. However, if citizens value representativeness or professionalism independently of policy choices and performance, the effect of government form on borrowing costs alone is not sufficient to draw welfare conclusions. See Coate and Kinght (2009) for a full discussion of this issue.

²⁷I have also estimated models of a version of equation (2) with the outcome variable being any debt issuance consultant expenditure. The point estimates are negative but statistically insignificant indicating that there is little detectable response on the extensive margin alone.

department increases in response to government form. Department costs might change if the appointive city treasurers' effect is due to hiring more or better quality staff in the finance department, or spending more on the city treasurer position itself. In practice, the effect on spending from reallocating the city treasurer position from a politician to a bureaucrat is likely to be small as many small cities reallocate the task to the finance director in response to the ballot measure passing, and do not create additional positions.

In column (3) of Table 8 I report the results of estimating a model similar to equation (2) with the outcome of total expenditure on government administration. The results indicate that the impact of an appointive treasurer on government administration is not statistically significant, and the magnitude is very close to zero.

Thus, the results in Table 8 indicate that debt management and issuance costs increase along only one margin in response to the city treasurer being an appointive position. In the next section, I consider these results jointly with the interest rate reduction results above to shed light on the implications of the results for total borrowing costs.

5.4 Estimate Magnitudes and Interpretation

The results in Table 4 provide compelling evidence that appointive city treasurers reduce city borrowing costs. However, some evidence in Table 8 shows that some of the costs of debt issuance are higher when city treasurers are appointed. To shed light on the implications of these results for total borrowing costs I consider the relative magnitudes of these two opposing effects together. To be able to compare the reduction in interest expenses, which occurs on an annual basis, and the increase in financial consultant expenditure, which occurs on a debt issue basis, we need to express the reduction in interest rates in terms of the present discounted value of a debt issue.

First, how large is the interest rate response in column (2) of Table 4 in present value terms? A simple procedure is to discount equal annual payments of the bond principal over the life of the bond as an annuity.²⁸ In my sample, the debt issued by cities with elected treasurers has an average principal is about \$17 million per year, with an average term length of about

²⁸To calculate the present value of an issue I use the formula: $PV(i) = \frac{C}{i} [1 - \frac{1}{(1+i)^n}]$, where i is the interest rate under consideration, C is the annual payment of the debt issue principal, and n is the term length of the debt issue.

25 years. An equal annual payment would be about \$680,000 per year. To obtain the present value of a typical issue for a city with an elected treasurer, the baseline state, I use the interest rate in column (1) of Table 2 (2.61%) in the present value formula. This calculation yields a present value of a typical bond in cities with elected treasurers of \$12.3 million. The estimate in column (2) of Table 4 implies that the interest rate for debt issues by appointed treasurers is 30% lower than elected treasurers, yielding an interest rate of 1.81%. Again, we use the present value formula for a bond with this interest rate and obtain a present value of the typical bond issued under an appointed treasurer as \$13.5 million. Thus, appointed city treasurers reduce the present value cost of the typical bond by \$1.2 million or about 10%.²⁹

Second, how does the intensive response of financial consulting expenditure in column (2) Table 8 compare to the interest savings?³⁰ The relevant baseline is the average expenditure on financial consultants. For cities with an elected treasurer average annual expenditure on financial consultant expenses is \$440,000. Thus, the coefficient estimate in column (2) of Table 8 represents an increase in debt issuance consultant expenses of just over \$700,000 for the average city with an elected treasurer. The increase in debt consultant expenditure amounts to a little over half of the reduction in the present value of borrowing, leaving a total reduction in the present value of borrowing costs of about 4% or \$500,000 for the typical city.

Thus, the inclusion of an increase in debt consultant expenditure does not alter the sign of the overall cost effect of treasurer appointive status, and the magnitude of the overall effect on total city borrowing costs remains substantial. The estimates imply that if all cities with elected treasurers were to switch to appointed treasurers the total reduction in the present value of borrowing costs over the life of a typical issue would be nearly \$70 million, when both types of costs are included, or as much as \$160 million if only narrowly defined interest rate costs are considered.

In terms of annual interest expenditure differences, the average city spends \$1.4 million on interest outlays each year. So a reduction of 10% in interest expenses would reduce interest spending by \$140,000, and a 4% reduction in interest expense would reduce interest expenditure

²⁹Conducting a similar calculation of the difference between appointed and elected treasurers using the coefficient in column (1) of Table 4 to measure the differences in interest rates caused by treasurer appointive status yields a reduction in the present value of borrowing costs of about 7%.

³⁰Considering only the intensive margin effect is likely overkill as the results in column (1) of Table 8, which allow for both intensive and extensive responses, show little effect of treasurer appointive status. However, this thought experiment is useful to obtain a lower bound on what the effect of city treasurer appointive status on the welfare of city residents is.

by \$56,000. Thus, the estimates imply that if all cities with elected treasurers were to switch to appointed treasurers the total reduction in the annual of borrowing costs would be nearly \$8 million per year, when both types of costs are included, or just under \$20 million per year if only narrowly defined interest rate costs are considered.

6 Do Appointed Treasurers Choose Different Policies?

The results presented thus far indicate that bureaucratic treasurers reduce city borrowing costs. What explains these findings? In this section, I utilize the highly detailed policy information in the debt issuance data to examine whether there is evidence that appointed treasurers choose observable policies that result in lower borrowing costs. I consider two possibilities. First, I examine whether appointed and elected city treasurers choose different debt issuance policies. Second, I consider whether appointed and elected treasurers choose different financial management policies. I also examine whether appointed treasurers issue debt with different debt characteristics. Beyond examining the source of the response above, policy choice responses shed light on the identity of the interest groups that may be losing rents in response to the change in government form.

Formally the specification I estimate can be expressed as,

$$(4) \quad P_{ijt} = \beta_1 TAMP_{it} + \beta_2 X_{ijt} + \gamma_i + \omega_t + \epsilon_{ijt},$$

where P_{ijt} is the policy on debt issue j , in city i , in year t , $TAMP_{it}$ takes a value of one if the treasurer appointment referendum passed by less than 5% in city i before year t and a value of zero otherwise, X_{ijt} includes fixed effects for the debt issue type and source of revenue, γ_i is a set of city fixed effects, ω_t is a set of year fixed effects, and ϵ_{ijt} is the error term. The coefficient of interest is β_1 , which measures causal effect of treasurer appointment status on policy P_{ijt} .

To test for a policy choice response I utilize debt issue level data from the California Debt and Advisory Commission (CDIAC). These highly detailed data allow for the measurement of a number of policies that affect borrowing costs. As such, they are especially useful for untangling whether changes in debt issuance or financial management policies can account for the findings above. In my analysis I examine only debt refinancing issues as these are the issues where the treasurer has the most discretion concerning policy choices, making these issues the best place to detect an observable change in policy.

My analysis examines the two key policies that affect borrowing costs: debt issuance policy and financial management policy. The data are very rich in terms of debt issuance policies measured. The debt issuance policies that I consider are: issue timing, whether a competitive sale method is used, whether a high quality financial advisor is used, and whether a high quality underwriter is used. I measure issue timing by examining whether the market interest rate is lower on the week that the city borrows, which reduces borrowing costs. Competitive sale is measured with a binary variable that takes a value of one when the sale is competitive, and a value of zero if it is negotiated. To measure financial advisor and underwriter quality I estimate financial advisory firm specific fixed effects in the interest rate on issues they are involved in. I then classify all financial intermediary firms as high quality if they have below median fixed effect (i.e. are able to obtain lower interest rates for clients), and zero otherwise.³¹

I measure the financial management policy in a city by the cities' debt rating. If improved financial management policies can account for the results above we should see that appointed treasurers are able to obtain a better debt rating on a debt issue. I also examine whether appointed city treasurers issue debt with different characteristics. I consider three possibilities: the principal of the issue, the term length of an issue, and whether the issue has a variable interest rate. If the results above are due to changes in the characteristics of debt issued rather than the adopting of lower cost policies, we would see that the characteristics of the debt issued would change in a way that reduces current borrowing costs (i.e. a reduction in principal or an increased term length for an issue).

Debt Issuance Policies. The results from estimating several versions of equation (4) for the debt issuance policy outcomes are presented in Table 9. The table reveals a number of interesting findings. First, there is significant evidence that appointed city treasurers are much more likely to issue debt with a competitive sale. As noted above, competitive sales significantly reduce borrowing costs for a city. This finding suggests that financial intermediaries likely suffer a reduction in compensation as a result of the change in government form. Second, there is some evidence in column (1) of Table 9 that appointed treasurers issue debt when it is cheaper to do

³¹The specification I estimate to measure financial intermediary quality is,

$$(5) \quad i_{ijt} = \eta_i + \epsilon_{ijt},$$

where i_{ijt} is the log of the interest rate on debt issue j , with financial intermediary firm i , in year t , η_i is a set of financial intermediary fixed effects, and ϵ_{ijt} is the error term. The data contain a text-based field containing the financial intermediary firm's name. I use the name as given in the raw data and do not try to recode similar names of firms to be the same firm, as many firms have similar names. I then generate the high quality financial intermediary variable as equal to one if η_i is below the median value, and zero otherwise.

so. The effect is small and only statistically significant at the 10% level however. Third, there is little evidence that appointed city treasurers are more likely to hire higher quality financial intermediaries.

Financial Management Policies and Debt Characteristics. The results from estimating several versions of model (4) for the financial management policy and debt characteristic outcomes are presented in Table 10. The results in column (1) of Table 10 show that appointed treasurers do not obtain a better credit rating, indicating that improved financial management policies do not account for the results above. These results suggest that any rents local labor unions are able to extract are not subject to additional scrutiny due to the change in government form. The results in columns (2) to (4) of Table 10 also show that appointed city treasurers do not issue debt with different principal amounts, term lengths, or use variable interest rate debt.

In sum, the results shed some light on how differences in policy choices between elected and appointed treasurers account for the differences in performance noted above. Appointed treasurers do use some debt issuance policies that result in lower borrowing costs, likely to due a reduction in financial intermediary compensation. They more often use a competitive method of sale, and issue debt when it is cheaper to do so. There is little evidence that appointed treasurers reduce costs because they select better financial intermediaries, have better financial management policies, or simply issue debt that happens to have different characteristics.

7 Conclusion

This paper makes two contributions. Substantively, this paper has documented that there are substantial gains from bureaucratic control of city debt policy: assigning the debt task to a bureaucrat reduces the present value of city borrowing costs by 4 to 10 percent. The results imply that if all cities in California with elected treasurers were to appoint them, total borrowing annual costs would be reduced by \$8 to \$20 million per year. I also present some evidence that the differences in policy performance arise because appointed treasurers adopt lower cost debt issuance policies, and are not primarily due to lower cost financial management policies. Thus, this paper has demonstrated that alternative government forms do indeed cause differences in government performance.

There are several implications for future research. First, as the management of public debt

is one of the most complex tasks in government, future work should examine whether these findings hold in other contexts. Second, as highly detailed data on policy maker expertise are unavailable for city treasurers, it would be interesting to examine how differences in expertise affect performance in a context where such measures are available. Lastly, it would be interesting to study how the influence seeking activities of special interests respond to changes in government form.

The second contribution is methodological. This paper has demonstrated the value of quasi-experiments that plausibly avoid the confounding of government performance with differences in the determinants of institutional adoption. The use of narrowly passing local referendums and ballot measures as a source of variation could also be applied to study the causal effects of many other institutions and regulations on local government performance, housing, or labor markets. For example, the question of the causal effect on local economic development of land use regulations limiting the supply of housing could be addressed.

8 References

- Acemoglu, Daron (2005) "Constitutions, Politics and Economics: A Review Essay on Persson and Tabellini's "The Economic Effects of Constitutions"," *Journal of Economic Literature*, 43(4): pp. 1025-1048.
- Acemoglu, Daron and James Robinson (2005) "Unbundled Institutions," *Journal of Political Economy*, 113(5): pp. 949-995.
- Acemoglu, Daron, David Ticchi and Andrea Vindigni (2006) "Emergence and Persistence of Inefficient States," *National Bureau of Economic Research*, Working Paper 12748.
- Aghion, Philippe, Alberto Alesina, and Francesco Trebbi (2004) "Endogenous Political Institutions," *Quarterly Journal of Economics*, 119(2): pp. 565-613.
- Alesina, Alberto, Silvia Ardagna, and Francesco Trebbi (2006) "Who Adjusts and When? On the Political Economy of Reforms," *IMF Staff Papers*, 53(Special Issue): pp. 1-29.
- Alesina, Alberto and Guido Tabellini (2007) "Bureaucrats or Politicians? Part I: A Single Policy Task," *American Economic Review*, 97(1): pp. 169-79.
- Alesina, Alberto and Guido Tabellini (2008) "Bureaucrats or Politicians? Part II: Multiple Policy Tasks," *Journal of Public Economics*, 92(3-4): pp. 426-447.
- Bandiera, Oriana, Andrea Prat and Tommaso Valletti (2008) "Active and Passive Waste in Government Spending: Evidence from a Policy Experiment," *American Economic Review*, forthcoming.
- Bertrand, Marianne, Ester Duflo, and Sendhil Mullainathan (2004) "How Much Should We Trust Difference in Differences Estimates?," *Quarterly Journal of Economics*, 119(1): pp. 249-275.
- Besley, Timothy (2006) *Principled Agents? The Political Economy of Good Government*. Oxford, UK: Oxford University Press.
- Besley, Timothy and Anne Case (2003) "Political Institutions and Policy Choices: Evidence from the United States," *Journal of Economic Literature*, 41(1): pp. 7-73.
- Besley, Timothy and Stephen Coate (2003) "Elected versus Appointed Regulators: Theory and Evidence," *Journal of the European Economics Association*, 1(5): pp. 1176-1206.
- Besley, Timothy and Abigail Payne (2006) "Implementation of Anti-Discrimination Policy: Does Judicial Selection Matter?," *McMaster University*, Working Paper.
- Bowler, Shaun and Todd Donovan (1998) *Demanding Choices*, Ann Arbor, MI: University of Michigan Press.
- California Debt Issuance and Advisory Commission (2006) *California Debt Issuance Primer*, Sacramento, CA: CDIAC.
- California Municipal Treasurers Association (2001) *City Treasurers Handbook*. Sacramento, CA: CMTA.

- Coate, Stephen and Brian Knight (2009) "Government Form and Public Spending: Theory and Evidence from U.S. Municipalities," *National Bureau of Economic Research*, Working Paper 14857.
- Feldstein, Sylvan and Frank Fabozzi (2008) *The Handbook of Municipal Bonds*, Hoboken, NJ: John Wiley and Sons.
- Ferraz, Claudio and Frederico Finan (2007a) "Exposing Corrupt Politicians: The Effect of Brazil's Publicly Released Audits on Electoral Outcomes," *Quarterly Journal of Economics*, forthcoming.
- Ferraz, Claudio and Frederico Finan (2007b) "Electoral Accountability and Corruption in Local Governments: Evidence from Audit Reports." *UCLA*, Working paper.
- Ferreira, Fernando and Joseph Gyourko (2009), "Do Political Parties Matter? Evidence from U.S. Cities," *Quarterly Journal of Economics*, forthcoming.
- Gerber, Elisabeth (1999) *The Populist Paradox*, Princeton, NJ: Princeton University Press.
- Gordon, Tracy (2004) *The Local Initiative in California*, San Francisco, CA: Public Policy Institute of California.
- Grossman, Gene and Elhanan Helpman (2001) *Special Interest Politics*, Cambridge, MA: MIT Press.
- Joseph, James (1994) *Debt Issuance and Management: A Guide for Smaller Governments*, Chicago, IL: Government Financial Officers Association.
- Larson, Corrinne (2004) "Cash and Investment Management," in *Management Policies in Local Government Finance*, edited by Aaronson, Richard and Eli Schwartz, Washington, DC: ICMA.
- Leaver, Claire (2007) "Bureaucratic Minimal Squawk Behavior: Theory and Evidence from Regulatory Agencies," *American Economic Review*, forthcoming.
- Leonard, Paul (2004) "Debt Management," in *Management Policies in Local Government Finance*, edited by Aaronson, Richard and Eli Schwartz, Washington, DC: ICMA.
- Maskin, Eric and Jean Tirole (2004) "The Politician and the Judge: Accountability in Government," *American Economic Review*, 94(1): pp. 1034-1054.
- Matusaka, John (2003) "I & R in American Cities: Basic Patterns," in *Initiative and Referendum Almanac*, edited by M. Dane Waters, Durham, NC: Carolina Academic Press.
- Nicholson, Steven (2005) *Voting the Agenda: Candidates, Elections and Ballot Propositions*, Princeton, NJ: Princeton University Press.
- Persson, Torsten and Guido Tabellini (2003) *The Economic Effects of Constitutions*, Cambridge, MA: MIT Press.
- Robbins, Mark and Bill Simonsen (2007) "Competition and Selection in Municipal Bond Sales: Evidence from Missouri," *Public Budgeting and Finance*, 27(2): pp. 88-103.
- Ruchelman, Leonard (2004) "The Finance Function in Local Government," in *Management Policies in Local Government Finance*, edited by Aaronson, Richard and Eli Schwartz, Washington, DC: ICMA.

- Simonsen, Bill, Mark Robbins and Lee Helgerson (2001) "The Influence of Jurisdiction Size and Sale Type on Municipal Bond Interest Rates: An Empirical Analysis," *Public Administration Review*, 61(6): pp. 709-717.
- Spiotto, James E. (2008) "A History of Modern Municipal Defaults," in *The Handbook of Municipal Bonds*, edited by Feldstein, Sylvan and Frank Fabozzi, Hoboken, NJ: John Wiley and Sons.
- Vlaicu, Razvan (2008) "Executive Performance under Direct and Hierarchical Accountability Structures: Theory and Evidence," *University of Maryland*, working paper.
- Wilson, James (1989) *Bureaucracy: What Government Agencies Do and Why They Do It*, Jackson, TN: Basic Books.

9 Appendix A: A Simple Model of Performance by Bureaucrat and Politician Treasurers

To guide the empirical analysis, this appendix outlines a simple model of the effect on task performance of assigning the city treasurer task to a bureaucrat or politician. The model builds on the agency framework developed by Alesina and Tabellini (2007) to understand differences in performance between bureaucrats and politicians.

The performance of a city treasurer is measured by the interest rate that a city pays on outstanding debt. City residents prefer to pay lower interest rates so that their tax burden is reduced or other public services they value are provided. The policy outcome – the interest rate paid on city debt, i – is observable but not contractible, so society cannot write the optimal performance contract with the city treasurer to achieve the first-best effort level. Society can, however, choose whether to allocate the city treasurer task to a bureaucrat or politician.³²

The effort and ability of a city treasurer affect the interest rate that a city pays to borrow. In addition, the effort and ability of a treasurer determine borrowing costs through information collection and utilization in debt policy making, as well as through improved financial management and the hiring of appropriate financial advisors. Borrowing costs of a city are also determined by the exogenous default risk of a city. Default risk is determined by the level and stability of the tax base, as well as the level of debt and public spending of a city.

Environment. Consider the policy outcome, i , the interest rate paid on city debt, which depends on the effort level chosen by the treasurer, a , and their ability, θ , and the exogenous default risk of a city, D . Citizens prefer to have less spent on debt interest, and obtain utility from policy performance according to $u = U(i) = -i$.

Policy performance is expressed in the following way:

$$i = D - \theta - a,$$

where θ is the random ability of the treasurer to execute the policy task, and θ is uniformly distributed over $[\bar{\theta} - \frac{\sigma}{2}, \bar{\theta} + \frac{\sigma}{2}]$. The interest rate on city debt falls with the ability and effort supplied by the treasurer, and increases with the default risk of the city. The complexity of the

³²It is also assumed that the participation constraint for both types of policymakers is satisfied, but need not bind. Alesina and Tabellini (2007) note that since an optimal contract is not being considered policymakers could be earning additional rents in equilibrium.

debt management task is reflected by x , the more complex the task the greater the uncertainty policy makers face about their ability to execute the task.

Treasurers decide how much effort, a , to supply by maximizing their utility,

$$V(a) = R(a) - C(a),$$

where $R(a)$ is the reward function for effort, and $C(a)$ is the cost of effort. The reward function for effort differs between politician treasurers, $R^P(a)$, whose goal is to be reelected, and bureaucrat treasurers, $R^B(a)$, whose goal is to increase future employers perception of their talent, θ . The cost of effort function is the same for both types of treasurers, $C(a) = a^2$.

The timing of events is that, first, the policy is assigned to either a politician or bureaucrat treasurer. Next, the treasurer chooses effort, a , before knowing their ability, θ . Lastly, nature chooses θ and policy outcomes are observed and the rewards are paid.

The Bureaucrat Treasurer. The reward function for bureaucrat treasurers is based on expected talent conditional on performance and the market value of ability. The reward function for bureaucrat treasurers is $R^B(a) = \alpha E(E(\theta|i))$, where E denotes the unconditional expectations over the random variable i , and E denotes the conditional expectations over θ conditional on the realization of performance, i . The parameter α captures the valuation bureaucrats place on their performance either due to the value that the current or future employers place on performance, or due to intrinsic motivation that they have for perceived performance. Denoting the public's perception of effort as a_e^B we have $R^B(a) = \alpha E(-i - a_e^B + D) = \alpha E(\theta + a - a_e^B)$.

We can now compute the equilibrium level of effort for bureaucrat treasurers. Taking the first order condition of $V^B(a)$ with respect to effort, and then imposing the equilibrium condition $a = a_e$ we obtain equilibrium effort for bureaucrat treasurers, $a^B = \frac{\alpha}{2}$.

Thus, the equilibrium interest rate paid on city debt when the treasurer is a bureaucrat is given by,

$$(6) \quad i^B = D - \bar{\theta}^B - \frac{\alpha}{2},$$

where D is the default risk of the city, $\bar{\theta}^B$ is the average ability of bureaucratic treasurers, and $\frac{\alpha}{2}$ is the equilibrium effort of bureaucratic treasurers.

The Politician Treasurer. The reward function for politician treasurers is based on the value of the office and probability of reelection, so that $R^P(a) = \beta \Pr(u \geq W)$, where $\Pr(u \geq W)$

is the probability of reelection. The parameter β reflects how valuable the office is to politicians due to ego rents that they receive. Politicians are reelected when their constituents' utility, $u = -i$, under the politician is greater than utility from the policy performance of the average politician exerting equilibrium effort, so that $W = u(i^P) = -D + \bar{\theta} + a_e^P$. Thus, $R^P(a) = \beta[1 - Pr(\theta \geq W - a + D)] = \beta[1 - Pr(\theta \geq \bar{\theta} + a_e^P - a)]$. Using the uniform distribution of ability, above, we obtain $R^P(a) = \beta[\frac{\bar{\theta} + a_e^P - a}{x}]$. Like bureaucrats, politicians also choose effort before observing their talent.

We can now compute the equilibrium level of effort for politician treasurers. Taking the first order condition of $V^P(a)$ with respect to effort, and then imposing the equilibrium condition, $a = a_e^P$, we obtain equilibrium effort for elected treasurers, $a^P = \frac{\beta}{2x}$. Thus, equilibrium effort for politician treasurers increases with the value of the office, β , and falls with the complexity of the debt management task, x .

The equilibrium interest rate paid on city debt when treasurers are politicians is then given by,

$$(7) \quad i^P = D - \bar{\theta}^P - \frac{\beta}{2x},$$

where D is the default risk of the city, $\bar{\theta}^P$ is the average ability of politician treasurers, and $\frac{\beta}{2x}$ is the equilibrium effort of politician treasurers.

Net Effect of Bureaucrats. We can obtain an expression for the net effect of a bureaucrat treasurer on borrowing costs for a city by taking the difference between (1) and (2). Doing so we obtain,

$$(8) \quad \Delta i = i^B - i^P = - \left(\bar{\theta}^B - \bar{\theta}^P + \frac{\alpha}{2} - \frac{\beta}{2x} \right).$$

Equation (3) demonstrates that the net benefit of bureaucrats is ambiguous. The net benefit depends crucially on the sign and magnitude of both the expertise effect, $\bar{\theta}^B - \bar{\theta}^P$, and the effort effect, $\frac{\alpha}{2} - \frac{\beta}{2x}$, of bureaucratic versus political control. The central goal of the empirical analysis is to establish the sign and magnitude of Δi .

TABLE 1: Appointive Treasurer Referendum Sample

<u>Number of Cities</u>	
Total	279
With Elected Treasurer in 1992	139
<u>Number of Referendums</u>	
Total	39
Pass	11
Fail	28
Marginally Pass	6
Marginally Fail	8
<u>City Names</u>	
Marginally Pass	Avenal Calistoga Gonzales Live Oak Manteca Woodland
Marginally Fail	Firebaugh Manhattan Beach San Jacinto Santa Maria Turlock Ukiah Wasco Waterford

Source: Author's tabulations using California Local Elections Archive (CEDA) data. The sample includes all cities in California with a municipal government and are general law cities in the 1992 Census of Governments.

TABLE 2: Characteristics of Cities, by City Treasurer Appointive Status

	Treasurer Elected	Treasurer Appointed	(2)-(1) t-stat [p-value]
	(1)	(2)	(3)
<u>(1) Outcome:</u>			
Real Interest Rate Paid on Total Outstanding Debt (%)	2.61 (1.91)	2.20 (1.75)	-6.29 [0.000]
<u>(2) City Debt Characteristics:</u>			
Total Short-Term Debt (\$100 Million)	0.16 (0.23)	0.14 (0.20)	-2.83 [0.005]
Total Long-Term Debt (\$100 Million)	0.24 (0.46)	0.17 (0.32)	-5.40 [0.000]
Total Long-Term Debt: Bonds (\$100 Million)	0.10 (0.18)	0.08 (0.15)	-3.91 [0.000]
Total Long-Term Debt: Non-Bonds (\$100 Million)	0.15 (0.40)	0.09 (0.28)	-4.12 [0.000]
Average Standard and Poor's Debt Rating	4.14 (1.50)	4.13 (1.50)	-0.21 [0.834]
Debt Issuance Consultants Expenditure (\$ Million)	0.44 (2.21)	0.52 (2.26)	1.00 [0.316]
City Management and Support Department Expenditure (\$ Million)	2.66 (3.67)	3.17 (4.24)	3.54 [0.000]
<u>(3) City Government Characteristics:</u>			
Total Expenditure (\$100 Million)	0.35 (0.42)	0.32 (0.36)	-2.02 [0.044]
Total Own Source Revenue (\$100 Million)	0.15 (0.18)	0.16 (0.17)	2.32 [0.021]
Number of Public Services Provided	8.68 (3.89)	7.70 (3.75)	-7.20 [0.000]
Fraction with Directly Elected Mayors	0.25 (0.43)	0.18 (0.39)	-4.40 [0.000]
Fraction with Salary for Elected Officials	0.79 (0.41)	0.81 (0.39)	1.48 [0.140]
Fraction with Full-Time Elected Officials	0.02 (0.15)	0.04 (0.19)	2.85 [0.004]
<u>(4) City Economic Characteristics:</u>			
City Population (ooo's)	35 (38)	40 (43)	3.05 [0.002]
Per Capita Income (1990 \$)	14006 (6371)	17335 (11002)	10.19 [0.000]
Unemployment Rate (%)	9.11 (5.72)	8.29 (6.23)	-3.81 [0.000]
Fraction with a College Degree	0.17 (0.10)	0.23 (0.17)	11.95 [0.000]
Fraction of Labor Force In Financial Services	0.06 (0.03)	0.07 (0.04)	7.90 [0.000]
Number of Observations	1473	1648	

Notes: Source: Author's calculations using data from California CFTR, CDIAC, and CEDA data from

1996 to 2006, 1990 Decennial Census, and 1992 Census of Government data. The unit of observation is city-year. The main entries in column (1) present the mean of the selected variables for cities with elected treasurers. The main entries in column (2) present the mean of the selected variables for cities with appointive treasurers. The standard deviations of the selected variable are presented in parenthesis in columns (1) and (2). The main entries in column (3) present the test statistics for a test of differences in means between column (1) and (2), with the p-value of the test presented in square brackets. The sample includes all cities in California with a municipal government in the 1992 Census of Governments and positive interest expenses. All monetary values are expressed in 2000 \$ unless noted otherwise. The variables *Real Interest Rate Paid on Total Outstanding Debt (%)*, *Total Short-Term Debt*, *Total Long-Term Debt*, *Total Long-Term Debt: Bonds*, *Total Long-Term Debt: Non-Bonds*, *Total Expenditure*, *Total Own Source Revenue*, *Debt Issuance Consultants Expenditure*, and *City Management and Support Department Expenditure* are based on data from the California City Financial Transactions Reports. The variable *Average Standard and Poor's Debt Rating* is based on the California Debt and Investment Advisory Commission data. The variables *Number of Public Services Provided*, *Directly Elected Mayor*, *Salary for Elected Official*, and *Full-Time Elected Officials* are based on data from the 1992 Census of Governments. The variable *City Population* is based on data from the California E-1 Population Tables. The variables *Per Capita Income*, *Unemployment Rate (%)*, *Fraction with a College Degree*, and *Fraction of Labor Force in Financial Services* are based on data from the 1990 Decennial Census. Definition of the variables: *Real Interest Rate Paid on Total Outstanding Debt (%)* is the ratio of total interest expenses divided by total debt outstanding; *Total Short-Term Debt* is the total debt with a maturity date of less than a year; *Total Long-Term Debt* is the total debt with a maturity date greater than one year; *Total Long-Term Debt: Bonds* is the total bond debt with a maturity date greater than one year; *Total Long-Term Debt: Non-Bonds* is the total non-bond debt (i.e. revenue anticipation notes and capital improvement leases etc.) with a maturity date greater than one year; *Debt Issuance Consultants Expenditure* is the total spending on private debt consultants fees in a given year; *City Management and Support Department Expenditure* is total spending on general government management and support in a given year; *Average Standard and Poor's Debt Rating* is based on the average Standard and Poor's debt rating of all debt issued in a given year and takes a value of one to five, with one being the highest debt rating (AAA or equivalent), four being the lowest debt rating (BBB or lower and equivalents) and five being not rated; *Total Expenditure* is the total expenditure to deliver city services; *Total Own Source Revenue* is total city revenue net of transfers from the Federal, State and County governments; *Number of Public Services Provided* is the number of public services the city provides directly to citizens; *Directly Elected Mayors* indicates whether or not the city has a directly elected mayor; *Salary for Elected Officials* indicates whether or not the city pays elected officials a salary; *Full-Time Elected Officials* indicates whether or not the elected officials serve in a full-time capacity; *City Population* is the city population annually estimated by the California state Department of Finance; *Per Capita Income* is the per capita income in the city; *Unemployment Rate (%)* is the unemployment rate in the city; *Fraction with a College Degree* is the fraction with a college degree in the city; and *Fraction of Labor Force in Financial Services* is the fraction of the city labor force employed in financial services.

TABLE 3: Characteristics of Cities, by Appointive City Treasurer Referendum Marginally Pass Status

	Treasurer Elected (1992):		
	No Appointive Referendum Marginally Pass (1)	Appointive Referendum Marginally Pass (2)	(2)-(1) t-stat [p-value] (3)
<u>(1) Outcome:</u>			
Real Interest Rate Paid on Total Outstanding Debt (%)	2.61 (1.91)	2.50 (1.01)	-0.41 [0.682]
<u>(2) City Debt Characteristics:</u>			
Total Short-Term Debt (\$100 Million)	0.16 (0.23)	0.08 (0.12)	-2.32 [0.020]
Total Long-Term Debt (\$100 Million)	0.25 (0.46)	0.16 (0.23)	-1.40 [0.162]
Total Long-Term Debt: Bonds (\$100 Million)	0.10 (0.19)	0.06 (0.09)	-1.56 [0.120]
Total Long-Term Debt: Non-Bonds (\$100 Million)	0.15 (0.40)	0.10 (0.18)	-0.95 [0.344]
Average Standard and Poor's Debt Rating	4.14 (1.49)	4.04 (1.56)	-0.50 [0.618]
Debt Issuance Consultants Expenditure (\$ Million)	0.45 (2.26)	1.46 (4.73)	-1.95 [0.051]
City Management and Support Department Expenditure (\$ Million)	2.74 (3.81)	1.72 (2.38)	3.07 [0.002]
<u>(3) City Government Characteristics:</u>			
Total Expenditure (\$100 Million)	0.35 (0.43)	0.26 (0.28)	-1.68 [0.094]
Total Own Source Revenue (\$100 Million)	0.15 (0.18)	0.09 (0.09)	-2.29 [0.022]
Number of Public Services Provided	8.83 (3.98)	6.20 (2.25)	-4.87 [0.000]
Fraction with Directly Elected Mayors	0.25 (0.43)	0.20 (0.40)	-0.85 [0.395]
Fraction with Salary for Elected Officials	0.79 (0.41)	1 (0)	3.82 [0.000]
Fraction with Full-Time Elected Officials	0.02 (0.14)	0 (0)	-1.03 [0.303]
<u>(4) City Economic Characteristics:</u>			
City Population (ooo's)	36 (38)	24 (23)	-2.13 [0.034]
Per Capita Income (1990 \$)	13975 (6383)	11287 (3584)	-3.10 [0.002]
Unemployment Rate (%)	9.16 (5.73)	13.55 (8.02)	5.49 [0.000]
Fraction with a College Degree	0.17 (0.10)	0.10 (0.07)	-4.40 [0.000]
Fraction of Labor Force In Financial Services	0.06 (0.03)	0.05 (0.01)	-3.71 [0.000]

Notes: Source: Author's calculations using data from California CFTR, CDIAC, and CEDA data from 1996 to 2006, 1990 Decennial Census, and 1992 Census of Government data. The unit of observation is city-year. The main entries in column (1) present the mean of the selected variables for cities that do not marginally pass an appointive referendum. The main entries in column (2) present the mean of the selected variables for cities that do marginally pass an appointive referendum. The standard deviations of the selected variable are presented in parenthesis in columns (1) and (2). The main entries in column (3) present the test statistics for a test of differences in means between column (1) and (2), with the p-value of the test presented in square brackets. Sample includes all cities in California with a municipal government in the 1992 Census of Governments and positive interest expenses. All monetary values are expressed in 2000 \$ unless noted otherwise. See the notes to Table 2 for the definitions and sources for all of the variables.

TABLE 4: The Effect of Appointive City Treasurers on City Borrowing Costs

Dependent Variable = Log (Real Interest Rate Paid on Total Outstanding Debt)

	OLS	Marginal Referendum Pass	Any Referendum Pass
	(1)	(2)	(3)
Treasurer Appointed	-0.23*** (0.04)	---	--
Appointive Referendum Marginally Pass	--	-0.31*** (0.10)	--
Any Appointive Referendum Pass	--	--	-0.10 (0.15)
Other Controls	Yes	No	No
Year Fixed Effects	Yes	Yes	Yes
City Fixed Effects	No	Yes	Yes
Number of Observations	3121	1532	1532

Notes: Source: Author's calculations using data from California City Financial Transactions Reports, and CEDA data from 1996 to 2006, and 1992 Census of Government data. The sample in column (1) includes all cities in the sample with positive interest expenses. The sample in column (2) and (3) includes all cities with an elected treasurer in the 1992 census of governments with positive interest expenses. The variable *Treasurer Appointed* takes a value of one if the treasurer is appointed in city *i* in year *t*. The variable *Appointive Referendum Marginally Pass* takes a value of one if a local treasurer appointive referendum passed in a prior year by less than 5% in city *i* in year *t*. The variable *Any Appointive Referendum Pass* takes a value of one if a local treasurer appointive referendum passed in a prior year in city *i* in year *t*. The unit of observation is city-year. Each column presents the results from one regression specification. The main entries are coefficient estimates. The entries in parentheses are standard errors (clustered at the city level in columns (2) and (3)). The model in column (1) includes city characteristics: *Total Expenditure*, *Total Own Source Revenue*, *Number of Public Services Provided*, *Directly Elected Mayor*, *Salary for Elected Official*, *Full-Time Elected Official*, *City Population*, *Per Capita Income*, *Unemployment Rate*, *Fraction with a College Degree*, and *Fraction of Labor Force In Financial Services*. * indicates significantly different from zero at the 10% level of significance; ** indicates significantly different from zero at the 5% level of significance; *** indicates significantly different from zero at 1% level of significance.

TABLE 5: The Effect of Appointive City Treasurers on City Borrowing Costs: Alternative Referendum Specifications

Dependent Variable = Log (Real Interest Rate Paid on Total Outstanding Debt)

	Prior-trends	All Referendums	Referendum Cities Only
	(1)	(2)	(3)
Appointive Referendum Marginally Pass	-0.37*** (0.10)	-0.30*** (0.12)	-0.22* (0.12)
Appointive Referendum Marginally Pass (t-1)	-0.09 (0.17)	--	--
Appointive Referendum Marginally Pass (t-2)	-0.02 (0.09)	--	--
Appointive Referendum Marginally Pass (t-3)	0.05 (0.06)	--	--
Appointive Referendum Resoundingly Pass	--	0.08 (0.19)	--
Appointive Referendum Marginally Fail	--	-0.25 (0.29)	--
Appointive Referendum Resoundingly Fail	--	-0.14 (0.16)	--
Year Fixed Effects	Yes	Yes	Yes
City Fixed Effects	No	Yes	Yes
Sample	Full	Full	Referendum Cities Only
Number of Observations	1390	1532	359

Notes: Source: Author's calculations using data from California City Financial Transactions Reports, and CEDA data from 1996 to 2006, and 1992 Census of Government data. The sample in column (1) and (2) includes all cities in the sample with an elected treasurer in the 1992 census of governments from 1996 to 2006. The sample in column (3) includes all cities in the sample with an elected treasurer in the 1992 census of governments that have an appointive treasurer referendum voted on from 1996 to 2006. The variable *Appointive Referendum Marginally Pass* takes a value of one if a local appointive treasurer referendum passed in a prior year by less than 5% in city i in year t . The variables *Appointive Referendum Marginally Pass (t-x)* takes a value of one if a local appointive treasurer referendum passed in a prior year by less than 5% in city i in year $t-x$. The variable *Appointive Referendum Marginally Fail* takes a value of one if a local appointive treasurer referendum failed to pass in a prior year by less than 5% in city i in year t . The variable *Appointive Referendum Resoundingly Pass* takes a value of one if a local appointive treasurer referendum passed in a prior year by more than 5% in city i in year t . The variable *Appointive Referendum Resoundingly Fail* takes a value of one if a local appointive treasurer referendum failed to pass in a prior year by more than 5% in city i in year t . The unit of observation is city-year. Each column presents the results from one regression specification. The main entries are coefficient estimates. The entries in parentheses are standard errors clustered at the city level. * indicates significantly different from zero at the 10% level of significance; ** indicates significantly different from zero at the 5% level of significance; *** indicates significantly different from zero at 1% level of significance.

TABLE 6: The Effect of Appointive City Treasurers on City Borrowing Costs: Other Event Controls

Dependent Variable = Log (Real Interest Rate Paid on Total Outstanding Debt)

	Treasurer Election Controls	Bond Referendum Controls	Appointive Clerk Referendum	Local Economy Controls
	(1)	(2)	(3)	(4)
Appointive Referendum Marginally Pass	-0.33*** (0.10)	-0.31*** (0.10)	-0.37* (0.19)	-0.31*** (0.10)
Treasurer Election Not-Competitive	0.00 (0.11)	--	--	--
Treasurer Election Competitive	-0.09 (0.11)	--	--	--
Incumbent Treasurer Re-Elected	0.02 (0.10)	--	--	--
Bond Referendum Pass (x 100)	--	0.01 (0.03)	--	--
Bond Referendum Pass x Bond Principal	--	-0.58 (0.63)	--	--
Clerk Appointive Referendum Marginally Pass	--	--	0.08 (0.23)	--
City Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Annual Tax Revenue and Population Controls	No	No	No	Yes
Number of Observations	1532	1532	1532	1532

Notes: Source: Author's calculations using data from California City Financial Transactions Reports, and CEDA data from 1996 to 2006, and 1992 Census of Government data. The sample includes all sample cities with an elected treasurer in the 1992 census of governments with positive interest expenditure. The variable *Appointive Referendum Marginally Pass* takes a value of one if a local appointive treasurer referendum passed in a prior year by less than 5% in city i in year t . The model in column (4) includes controls for annual city characteristics: *Total Own Source Revenue* and *City Population*. Definition of the variables:

Treasurer Election Not-Competitive indicates a treasurer election with only one candidate; *Treasurer Election Competitive* indicates a treasurer election with more than one candidate; *Incumbent Treasurer Reelected* indicates that the incumbent treasurer is reelected; *Bond Referendum Pass* indicates that a referendum passes; and *Bond Referendum Pass x Bond Principal* is the value of the bond principal for bond measures that pass. The variable *Appointive Clerk Referendum Marginally Pass* takes a value of one if a local appointive clerk referendum passed in a prior year by less than 5% in city *i* in year *t*. The unit of observation is city-year. Each column presents the results from one regression specification. The main entries are coefficient estimates. The entries in parentheses are standard errors clustered at the city level. * indicates significantly different from zero at the 10% level of significance; ** indicates significantly different from zero at the 5% level of significance; *** indicates significantly different from zero at 1% level of significance.

TABLE 7: The Effect of Appointive City Treasurers on City Borrowing Costs: Debt Level and Mix Controls

Dependent Variable = Log (Real Interest Rate Paid on Total Outstanding Debt)

	Total Long Term Debt: Bond (1)	Total Long Term Debt: Non -Bond (2)	Short Term Debt (3)	All Debt (4)
Appointive Referendum Marginally Pass	-0.33*** (0.10)	-0.28*** (0.10)	-0.29*** (0.10)	-0.27** (0.11)
Log (Total Long Term Debt: Bond)	0.07 (0.05)	--	--	0.07 (0.05)
Log (Total Long-Term Debt: Non-Bond)	--	-0.01 (0.04)	--	0.00 (0.03)
Log (Total Short-Term Debt)	--	--	-0.05 (0.04)	-0.07 (0.05)
City Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Number of Observations	1532	1532	1532	1532

Notes: Source: Author's calculations using data from California City Financial Transactions Reports, and CEDA data from 1996 to 2006, and 1992 Census of Government data. The sample includes all sample cities with an elected treasurer in the 1992 census of governments and positive interest expenditure. The variable *Appointive Referendum Marginally Pass* takes a value of one if a local appointive treasurer referendum passed in a prior year by less than 5% in city i in year t . The unit of observation is city-year. Each column presents the results from one regression specification. The main entries are coefficient estimates. The entries in parentheses are standard errors clustered at the city level. * indicates significantly different from zero at the 10% level of significance; ** indicates significantly different from zero at the 5% level of significance; *** indicates significantly different from zero at 1% level of significance.

TABLE 8: The Effect of Appointive City Treasurers on Debt Issuance and Management Costs

Dependent Variable = Log (Real Expenditure on x)

<u>Outcome Variable=</u>	Debt Issuance Consultant Expenditure		Management and Support Department
	(1)	(2)	(3)
Appointive Referendum Marginally Pass	-0.39 (0.47)	1.63*** (0.49)	0.00 (0.26)
Other Controls	Yes	Yes	No
Year Fixed Effects	Yes	Yes	Yes
City Fixed Effects	No	No	Yes
Sample	Full	Positive Expenditure Only	Full
Number of Observations	1532	172	1532

Notes: Source: Author's calculations using data from California City Financial Transactions Reports, and CEDA data from 1996 to 2006, and 1992 Census of Government data. The sample includes all sample cities with an elected treasurer in the 1992 census of governments and positive interest expenditure. The sample in column (2) includes only those observations with positive expenditure on debt issuance consultants. The variable *Appointive Referendum Marginally Pass* takes a value of one if a local appointive treasurer referendum passed in a prior year by less than 5% in city i in year t . The unit of observation is city-year. Each column presents the results from one regression specification. The main entries in the first row are coefficient estimates. The entries in the first row in parentheses are standard errors clustered at the city level. * indicates significantly different from zero at the 10% level of significance; ** indicates significantly different from zero at the 5% level of significance; *** indicates significantly different from zero at 1% level of significance.

TABLE 9: The Effect of Appointive City Treasurers on City Debt Issuance Policies

<u>Dependent Variable=</u>	Competitive Sale	Log(Market Interest Rate in Week of Issue)	High Quality Financial Advisor	High Quality Underwriter
	(1)	(2)	(3)	(4)
Appointive Referendum Marginally Pass	0.115** (0.045)	-0.024* (0.014)	-0.044 (0.149)	-0.052 (0.158)
City Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Debt Type and Payment Source Fixed Effects	Yes	Yes	Yes	Yes
Number of Observations	626	626	626	626
<u>Mean of Dependent Variable (in levels) =</u>	0.09	4.87	0.34	0.33
[Standard Deviation]	[0.29]	[0.49]	[0.47]	[0.47]

Notes: Source: Author's calculations using data from California City Financial Transactions Reports, California Debt and Investment Advisory Commission, and CEDA data from 1996 to 2006, and 1992 Census of Government data. The sample includes all sample cities with an elected treasurer in the 1992 census of governments and positive interest expenditure. All refinancing issues are included in the sample. The unit of observation is debt issue-year. The variable *Appointive Referendum Marginally Pass* takes a value of one if a local appointive treasurer referendum passed in a prior year by less than 5% in city i in year t . Each column presents the results from one regression specification. The main entries are coefficient estimates. The entries in parentheses are standard errors clustered at the city level. The variable *Market Interest Rate on Week of Issue* is based on data from the Global Financial Database – US Municipal Government Bond Yields. The variables *Competitive Sale*, *High Quality Financial Advisor*, and *High Quality Underwriter* are based on California Debt and Investment Advisory Commission data. Definition of the variables: *Market Interest Rate on Week of Issue* is the bond yield for the 20 year AAA municipal bond in the week of the city debt issue; *Competitive Sale* is an indicator variable that takes a value of one if the debt issue is sold in a competitive sale and zero otherwise; *High Quality Financial Advisor* is an indicator variable that takes a value of one if a financial advisor on an issue has a below median interest rate fixed effect (see text for details); *High Quality Underwriter* is an indicator variable that takes a value of one if a underwriter on an issue has a below median interest rate fixed effect (see text for details). * indicates significantly different from zero at the 10% level of significance; ** indicates significantly different from zero at the 5% level of significance; *** indicates significantly different from zero at 1% level of significance.

TABLE 10: The Effect of Appointive City Treasurers on City Financial Management Policy and Debt Issue Characteristics

<u>Dependent Variable=</u>	Standard and Poor's Debt Rating	Log (Principal)	Log(Term Length)	Variable Interest Rate
	(1)	(2)	(3)	(4)
Appointive Referendum Marginally Pass	0.121 (0.193)	0.288 (0.545)	-0.070 (0.051)	0.198 (0.129)
City Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Debt Type and Payment Source Fixed Effects	Yes	Yes	Yes	Yes
Number of Observations	348	626	626	626
<u>Mean of Dependent Variable (in levels) =</u>	1.33	1.38	24.47	0.10
[Standard Deviation]	[0.84]	[1.70]	[13.48]	[0.31]

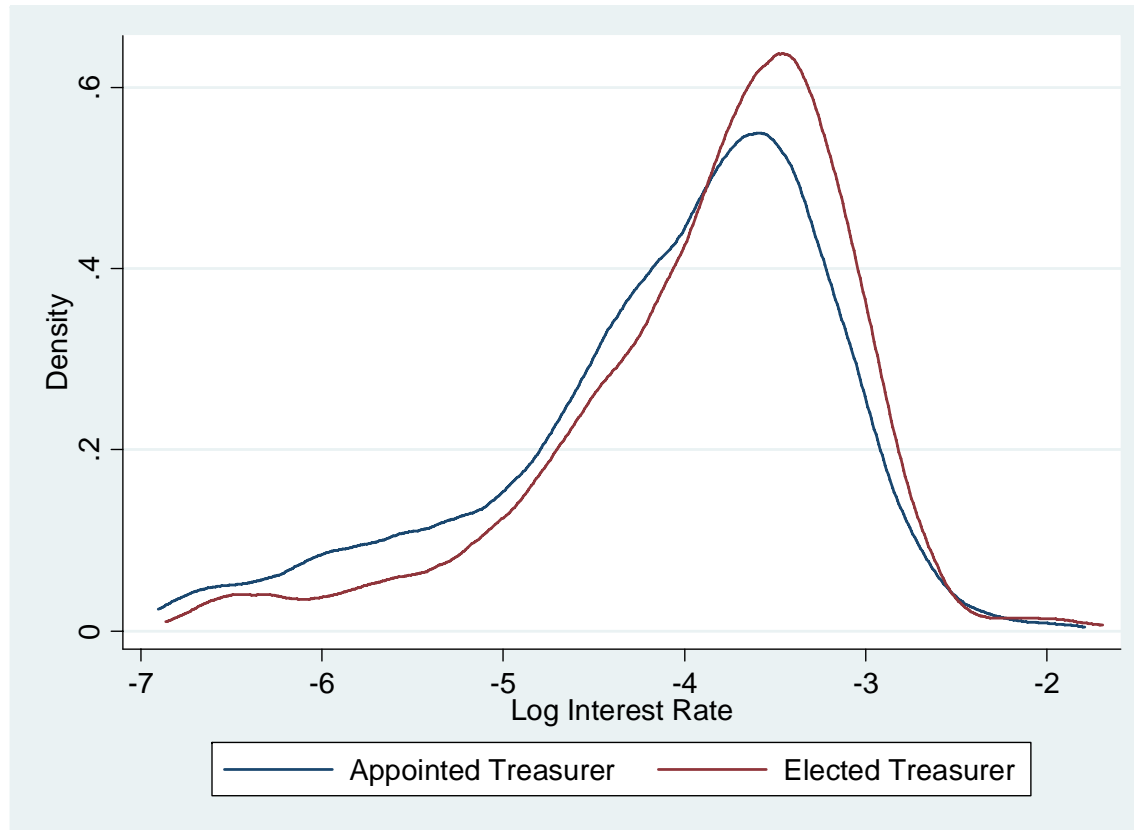
Notes: Source: Author's calculations using data from California City Financial Transactions Reports, California Debt and Investment Advisory Commission, and CEDA data from 1996 to 2006, and 1992 Census of Government data. The sample includes all sample cities with an elected treasurer in the 1992 census of governments and positive interest expenditure. All refinancing issues are included in the sample. The unit of observation is debt issue-year. The variable *Appointive Referendum Marginally Pass* takes a value of one if a local appointive treasurer referendum passed in a prior year by less than 5% in city *i* in year *t*. Each column presents the results from one regression specification. The main entries are coefficient estimates. The entries in parentheses are standard errors clustered at the city level. The variables *Standard and Poor's Debt Rating*, *Principal*, *Term Length*, and *Variable Interest Rate* are based on California Debt and Investment Advisory Commission data. Definition of the variables: *Standard and Poor's Debt Rating* takes a value of one to five, with one being the highest debt rating (AAA or equivalent), and four being the lowest debt rating (BBB or lower and equivalents); *Principal* measures the total principal of debt issue (in \$2000), *Term Length* is the term length of the issue, and *Variable Interest Rate* is an indicator variable taking a value of one if the debt issue has a variable interest rate and zero otherwise. * indicates significantly different from zero at the 10% level of significance; ** indicates significantly different from zero at the 5% level of significance; *** indicates significantly different from zero at 1% level of significance.

FIGURE 1: Weekly Municipal Bond and Note Market Interest Rates, 1996-2006



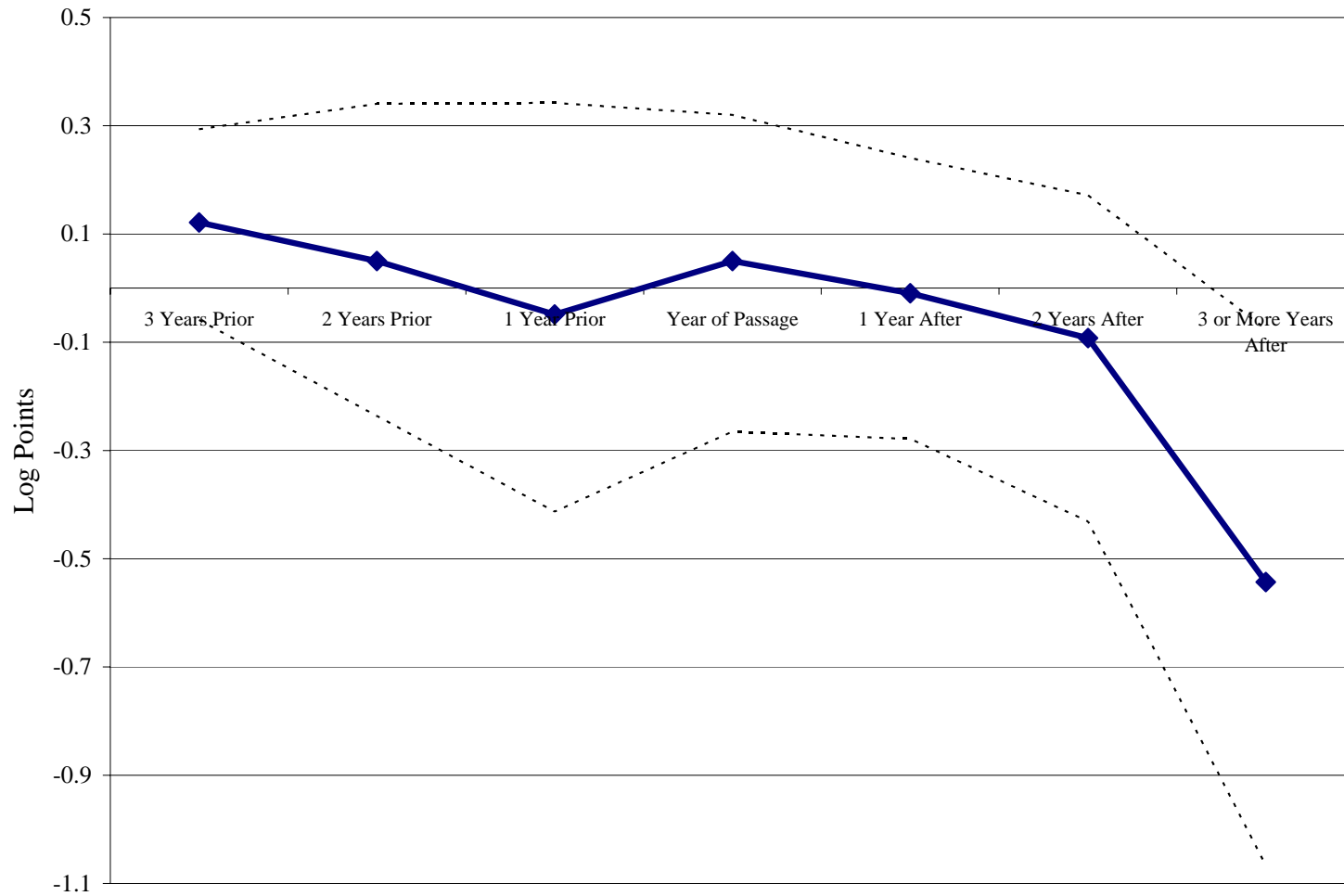
Notes: Source: Author's calculations using data from Global Financial Database – US Municipal Government Bond Yields.

FIGURE 2: City Interest Rate Distribution, by City Treasurer Appointive Status



Notes: Source: Author's calculations using California City Financial Transactions Reports, CEDA and 1992 Census of Government data.

FIGURE 3: Dynamic Response of City Interest Rates Following Marginal Passage of Appointive Treasurer Referendum



Notes: Figure based on equation (2) in the text with three lead and lag terms of the marginal passage of the referendum added. I plot the estimated coefficients on the lagged and lead terms in (2) along with accompanying 95% confidence intervals (dotted line).