POLITICAL CONNECTIONS IN THE MUNICIPAL BOND MARKET:

IS THERE A PAY-TO-STAY

by

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DISSERTATION ABSTRACT

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This paper investigates the impact of investment banks' political contributions on their underwriting business with local government officials. Using an original data set on municipal underwriting banks political contributions from 1994 to 2013, I find that political contributions are strongly associated with the likelihood that a contributing bank is hired, the bank's market share, and the bond issuance cost. Specifically, contributing underwriters receive 19.6% more business than non-contributing banks. Bonds underwritten by contributing banks incur 4% higher fees compared with their non-contributing peers. A contribution of $1,000 is associated with $1,270 higher total compensation for a contributing underwriter. These results continue to hold when controlling for underwriters characteristics and local economic factors. The evidence suggests that political connections still play a valuable role in the municipal bond market after the adoption of Rule G-37.

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CHAPTER I

INTRODUCTION

There has been a growing interest in studying the relationship between political connections and firm value. Cooper, Gulen, and Ovtchinnikov (2010) find that connections with political candidates are positively associated with firms' abnormal returns. Goldman, Rocholl, and So (2008) document a positive abnormal stock return following the announcement of the nomination of a connected board member. While prior research concentrates on the efficacy of political connections, the specific mechanism of how firm value is affected has not been well explored. This paper investigates the possible channels through which political donations affect the value of underwriting banks. It addresses the fundamental question: do political contributing firms enjoy preferential access to government contracts?

There are several motives for the contributing behavior. One hypothesis posits that political donations represent corporate investments (Snyder 1990). As Shleifer and Vishny (1993) point out, firms make donations to accommodate politicians' personal interest and expect favorable treatments as returns. Baron (1989) models political donations as a means to gain access to promising services. In his model, donors contribute in order to obtain access to elected officials and such access includes seeking government services. Political connections can have a considerable impact on the value of connected firms. Fisman (2001) constructs a credible index of political connections and measures the extent to which firms rely on political connections for their profitability. He finds that the value of politically dependent firms is more sensitive to political risk than that of politically independent firms.

An alternative hypothesis states that political donations may serve as an information-sharing channel between firms and governments. In Austen-Smith's (1995) model, donors seek a chance to tell their "story" to uninformed legislators. A firm may engage in politics to provide officials with valuable information about the firm's products and services (Bennedsen and Feldmann 2002; Bertrand, Bombardini, and Trebbi 2014). This implies that the public is better off from such political connection because it lowers government's search cost and improves the decision-making process.

The third hypothesis believes that political connections have no effects on government contract decisions. Coate (2004) suggests that donors are motivated to help their candidates win the election. Instead of buying policy favors, contributors help advertise the candidate's ideology and enhance the electoral prospects. In addition, public oversight and scrutiny would monitor government policies and result in an independent relationship between political connections and government contract allocations (Fama 1980).

If political connections have value, it should be most prevalent in industries where firms rely on government contracts and public policies. The municipal debt market, a market with $2.4 trillion[1] negotiated sales and $16 billion issue fees from 1994 to 2013, provides a perfect laboratory to examine how such political connection plays a role in government contract distributions. During this period, about 87% of the municipal bonds are placed through negotiated deals where issuer officials choose banks for the bond underwriting business. Among the largest 100 investment banks in the sample, 37% of the banks make political donations to local political parties every year. On average, municipal bonds from 53% of the U.S. states (including D.C.) are sold by contributing

[1] The total negotiated deals amount to 2,421.26 billion reported in Panel A of Table 1.

banks each year. Whether political connections play a role in the choice of the lead underwriter in a negotiated deal is thus an important question to address.

In the municipal bond market, underwriting banks are traditionally allowed to make political contributions to government officials. It has been contended that such contributions may influence the issuer official's choice of underwriters. On April 6, 1994, the SEC adopted Rule G-37[2], the first rule intended to end this *pay-to-play* practice. The enacted rule not only requires quarterly disclosure on political donations but also regulates the amount of donations made to government officials. For example, contributions made directly to issuer officials will result in a business prohibition between the contributing bank and the issuer for the next two years unless the contributor is an entitled voter and the contribution is under $250. In an unreported test, I find direct contributions to campaign candidates have no significant effect on an underwriter's bond business. This suggests the direct donation channel has been effectively blocked by the introduction of Rule G-37. Contributions to campaign candidates can no longer serve as a means to gain government bond contracts.

Although the regulation imposes severe restrictions on donations, contributors still find their way to circumvent the rule. For instance, if a donor makes contributions to a local political party, the donation will not trigger the two-year business ban as long as the party does not state that the money will be given to a particular candidate. This is a grey area that allows an underwriter to circumvent the regulation by donating money through the official's political party. Although the SEC requires underwriters to disclose

[2] The rule is proposed by the Municipal Securities Rulemaking Board (MSRB) on January 14, 1994 and approved by the SEC on April 6, 1994.

all donations made to political parties, no further actions have been adopted to close this "loophole".

In this paper, I examine whether underwriters use donations to parties as a means to continue the *pay-to-play* practice after the adoption of Rule G-37. Using donations to political parties as the proxy for political connections between underwriters and issuers[3], I analyze the connection's impact on an issuer's choice of underwriters. The finding shows political connections are positively associated with the likelihood that an underwriting bank is hired in a negotiated deal. Specifically, political contributing banks obtain 19.6% more business than banks that do not make contributions. The result holds when controlling for underwriter's relationship with the issuer, underwriter's location, and local economy factors. This finding lends supports to the political-investment hypothesis that views donation as a corporate investment.

Including the past business relation between an underwriter and an issuer in the regression, I find political influence is more notable for donations to issuers with pre-existing business history with the investment bank. This is inconsistent with the information-providing hypothesis that suggests donations are more valuable to unrelated issuers. Overall, the findings lend weight to the political-investment view that suggests underwriting banks may use political donations as a corporate investment to obtain access to government contracts.

Using gross spread as the measure of bond issuance cost[4], I find that bonds sold by contributing banks incur 4% more fees than non-contributing banks[5]. This continues

[3] The form includes all required donation information by underwriting banks. See Appendix A.
[4] Butler, Fauver, and Mortal (2009) believe that underwriting cost is an important indicator for the issuer's political integrity.
[5] On average, every $1,000 donation is associated with $1,390 higher underwriting fees.

to hold when controlling for issuer credit ratings, bond structures, and underwriter fixed effects. This economic distortion suggests that *quid pro quo* may still exist in the municipal bond market where official issuers pay extra fees as an exchange for banks' donations (Butler, Fauver, and Mortal 2009). This finding contradicts the information-sharing hypothesis that considers political donation an information-providing vehicle. That is, a more informed decision should result in a lead underwriter choice based on the bank's qualification and issuance costs.

In addition to the baseline tests, I analyze the characteristics of the donating underwriters. The finding shows investment banks that have an office in the local area are more likely to make donations to local officials. This is consistent with Butler's (2008) finding that local investment banks may have "soft" information about local issuers and politics. The analysis also shows that investment banks are more likely to donate money to issuers that have greater prospective business opportunities. This supports the political-investment motive that believes underwriters use contributions as a means to connect with bond issuers and obtain more underwriting business. Publicly traded banks and banks with good reputations[6] seem less likely to make political donations. This is consistent with Duchin and Sosyura's (2012) finding that firms with strong performance and good reputations tend to be more politically independent because they are less likely to rely on politically induced contracts.

Using close campaign election results in a regression discontinuity design, I study the differential impact on underwriting business between banks supporting elected candidates and banks supporting unelected candidates. I find that only donating money to a campaign winner is positively associated with an increase in a bank's underwriting

[6] A bank's nationwide market share is used to proxy for reputation.

business. The result lends further support to the value of political influence on the underwriter selection process in the municipal bond market.

To overcome the omitted variable bias, I use the number of state-level corruption convictions as an instrumental variable (IV) in a two-stage least square (2SLS) analysis. I find that corruption convictions are positively correlated with the likelihood of political donations. This suggests that political integrity plays a crucial role in the lead underwriter selection process (Butler, Fauver, and Mortal 2009). Moreover, the relation between an underwriter's market share and the predicted political donations stays positive and significant in the second stage regression. In a difference-in-differences test, I compare the effect of political connections on negotiated deals and competitive deals. If donations and the amount of business were co-determined by unobserved factors, it would likely affect both negotiated and competitive issues. The finding shows political donations are only associated with an increase in contributing banks' negotiated sales.

This study makes several contributions to the extant literature. First, while prior studies focus on the relationship between political connections and firm value (Fisman 2001; Faccio 2006; Akey 2015), I document a channel through which political donations are directly associated with underwriting banks revenues. Second, I analyze the characteristics of political donating banks and bond issuers. The finding sheds new light on the political relation between financial intermediaries and local governments. Last, while donations to individual campaign candidates are restricted to a great extent after the introduction of Rule G-37, I find that donations to political parties still have a material influence in the municipal bond market.

CHAPTER II

LITERATURE REVIEW

This paper is part of a number of studies pioneered by Shleifer and Vishny (1993) that study the dynamics of politics and firms (Fisman 2001; Faccio 2006; Julio and Yook 2012). Since political influence is hard to observe directly, many recent papers concentrate on the effect of political connections on firm market value. For example, Cooper, Gulen, and Ovtchinnikov (2010) find that relations with political candidates are associated with positive abnormal returns. Goldman, Rocholl, and So (2008) analyze the stock-price performance of politically connected firms and find a positive abnormal stock return following the announcement of the nomination of a connected board member. While these findings show that political connections have an impact on firm value, little is known about the specific channel that firms benefit from such political activities. This paper fills the gap by focusing on one of the mechanisms through which underwriting banks receive favorable treatment on government bond business.

Brown (2016) examines the support effect and the influence effect of underwriter campaign donations. According to the support effect, a contributing underwriter should exert greater effort to help issuers save bond issuance cost. On the other hand, a contributing bank should influence elected officials to tolerate more expensive issuance costs if the contribution is driven by the influence effect. Using relative contribution amount as the measure of political influence, he finds that donation amount is positively related with the degree of municipal bond underpricing. Using the geographic distance between the governor's birthplace and the average location of contributing underwriters,

he documents a positive relationship between the political support and the extent of municipal bond underpricing.

I provide new evidence on the outcome of political connections by examining an important decision the issuer is facing, whether contributing banks are more likely to be hired for a negotiated issue. This is a crucial aspect of political influence, because such relation allows contributor to take contracts away from otherwise qualified banks in the government bond market. Given that over 87% of the bond issues during 1994-2013 are placed through negotiated sales, whether political connections play a role in the choice of the lead underwriter is a critical question to address especially after the introduction of Rule G-37.

Butler, Fauver, and Mortal (2009) find that corruption and political connections have impact on municipal bond sales. They focus on the relationship between political integrity and credit risk and find that low corruption is associated with better bond ratings. They document that the market prices corruption into bond yields but they find no evidence that underwriters receive higher fees in highly corrupt states. Butler, Fauver, and Mortal (2009) show that negotiated deals issued during the *pay-to-play* period charged 12-14 basis points higher fees at the aggregate level. Using detailed donation data, I document that contributing underwriters are paid higher fees than non-contributing banks. This finding suggests that political connection still plays an important role in the municipal market after the introduction of Rule G-37.

Butler (2008) suggests that local investment banks have more "soft" information on issuers than non-local banks because they have access to firsthand knowledge on local economy. These banks can use their local networks to connect with key officials at the

issuing body. He shows that such advantage enables local investment banks to be more competitive for bond issues and that local dealers charge lower underwriting fees compared with national banks. He also discusses that local underwriters may have political connections that enable them to win underwriting contracts and capture economic rents. My study provides evidence to this hypothesis and shows local underwriting banks are more likely to establish political connections with municipal officials. This political relation allows them to obtain more business.

Akey (2015) uses a regression discontinuity design in a sample of close congressional elections and compares firms connected with winning candidates and firms with losing candidates. He finds that connections to politicians are valuable to firms and such political networks have impact on firm sales. He suggests that indirect connections have a more significant effect than direct connections, because influential politicians are able to exert influence over their colleagues through an internal circle for political party resources that firms cannot access. Following Akey's (2015) argument on indirect donations, I choose donations made to political parties as my proxy for political connections. In an unreported analysis, I find direct donations made to campaign candidates have no significant impact on a contributing bank's bond business.

CHAPTER III

MUNICIPAL BOND MARKET AND RULE G-37

In the municipal debt market, bonds can be sold in one of three ways: negotiated sale, competitive sale, or private placement. Most of the issuers choose either negotiated method of competitive method to place their issues[7]. In a competitive sale, the issuer solicits bids from underwriting banks and chooses the best bidder as the underwriter. In this method, the issuer determines the essential characteristics of the issue. A financial advisor and bond counsel are often hired to assist the issuer in a competitive sale. In a negotiated deal, a lead underwriter is selected as the senior manager by the issuer before the bond terms are determined. This selected underwriter takes the lead role in structuring the bond and managing the syndicate. Instead of picking the lowest interest rate as in a competitive sale, a negotiated deal allows issuer to choose the underwriting bank. This lead underwriter and the issuer would have meetings and discussions during the pricing process. Due to the nature of the negotiated sale, the lead underwriter selection decision provides an appealing setting to study the influence of political connections. Therefore, this paper focuses on the lead underwriter choice in negotiated deals.

Underwriters have traditionally been permitted to make political donations to government officials. The practice is known as *pay-to-play*. In a typical *pay-to-play* system, underwriters use contributions as a means of political connections and obtain underwriting business from their connected issuer officials as a *quid pro quo*. Since the political contributions have been alleged to influence the official's choice of underwriters

[7] About 97% of all the issues during 1994-2013 are underwritten through either negotiated or competitive methods.

for bond business, the SEC adopts Rule G-37[8] to end this practice in 1994. According to the Municipal Securities Rulemaking Board (MSRB), the purpose of Rule G-37 (effective on April 25, 1994) is to "prevent fraudulent acts, protect investors, and maintain the integrity" in the municipal market. In addition to the donation disclosure requirement, the rule prohibits contributing banks from doing municipal business with the involved government for two years if the contribution exceeds $250[9]. To a great extent, the rule restricts underwriters from making direct political donations to campaign candidates. However, underwriters can still make contributions to local political parties as indirect donations to issuer officials. Industry practitioners are also aware of these different channels of donations (Carney and Hoffman 2016).

> Donations to the campaign of Donald Trump became an issue for Goldman because of vice presidential candidate Mike Pence, who is governor of Indiana… The new policy, though, doesn't affect donations by Goldman partners and other employees to groups such as the Republican National Committee, an option that remains open and that has been communicated informally within the bank, according to a person familiar with the matter.

According to Rule G-37, the pay-to-play ban does not prohibit donations made to local political parties as long as those local political parties do not state that the money will be given to a specific a campaign candidate. Due to the different standards for donations to campaign candidates and political parties, underwriting banks can still donate money to issuer officials through the channel of local parties. If banks use this channel to connect with local officials for the purpose of gaining future business,

[8] Please see details of Rule G-37 in Appendix E.
[9] Please see a violation case in Appendix F.

disclosed party donations would be a good source to investigate such political ties between banks and issuers. I choose the unlimited donations to political parties rather than the limited donations to individual candidate as the primary measure to proxy the political connection between an investment bank and a government official.

This measure has several advantages. First, since Rule G-37 largely restricts direct political contributions to campaign candidates, there is demand for alternative channels that allow underwriters to continue exerting political influence to obtain bond business. Since donations to political parties can serve the same purpose without breaching the pay-to-play rule, such indirect donations may become a substitute for underwriters to politically connect with bond issuers. Second, donations to political parties may help underwriters build connections with government officials more effectively because insiders within a political party are able to utilize the donation money more efficiently than underwriting banks. Akey (2015) shows that indirect connections are more valuable to donors than direct connections. He suggests that influential politicians can exert influence over their junior colleagues through an internal market for political party resource that firms cannot access. That is, political parties have better information and knowledge about a campaign candidate than investment banks. Third, searching and finding a good candidate can be costly for an outsider without professional knowledge and information. Choosing a wrong candidate would not just reduce the donation efficacy but also increase the bank's cost of acquiring underwriting business.

CHAPTER IV

SAMPLE SELECTION AND VARIABLE CONSTRUCTION

Data Source

I collect political contributions made by the largest 100 investment banks during 1994 - 2013 from the MSRB website[10]. Using the total underwriting amount as the size of underwriting banks, the largest 100 underwriters cover about 92% of the new issues over the sample period. In accordance with Rule G-37, all municipal bond underwriters are required to report their donations to political parties and campaign candidates on Form G-37[11] every quarter. The report includes State Name, County Name, or City Name for each political party (committee) or campaign candidate. It also includes contributor's information such as Bank Name, Bank Controlled PAC, Municipal Finance Professional, or non-MFP executive officers. In an unreported table, I find that 54% of party contributions are made by municipal finance professionals, 22% are from underwriting firms, 15% are from executive officers, 7% are from underwriter affiliated PACs, 2% are from other contributors. Table 1 summarizes the annual municipal bond issuance, political donation amount and the number of connected states, contributing underwriters and contribution-related bond issues over the sample period. On average, 53% of the U.S. states (including D.C.) are involved with political donations made by municipal underwriters every year. Among the largest 100 investment banks, 37% of them make political donations to local political parties during 1994-2013. Nearly 10% of bond issues are associated with political donations each year. I also report the statistics for top issuers, connected political parties, underwriting banks and donating banks in Appendix B.

[10] http://emma.msrb.org/MarketActivity/PoliticalContributions.aspx
[11] See an example of Form G-37 in Appendix A.

Table 1
Municipal Bond Market and Political Contributions (1994-2013)

Year	Bond Issue (BN $)	Total Underwriting Fees (MLN)	Political Donation		No. Connected States	Total No. States	No. Connected Underwriters	Total No. Underwriters	No. Connected Issues	Total No. Issues
			Mean ($)	Total ($)						
1994	64.75	440.52	1,572.29	143,078.34	15	51	12	95	27	682
1995	64.99	387.26	1,466.11	211,119.99	20	51	27	95	54	592
1996	73.20	372.12	1,268.86	244,890.50	32	51	37	96	88	666
1997	84.97	393.52	1,982.35	229,952.50	33	51	42	97	86	742
1998	114.35	581.54	2,327.85	272,357.92	33	51	46	97	163	986
1999	94.68	587.98	2,653.80	283,956.50	35	51	46	96	154	1,070
2000	90.93	460.92	3,429.03	408,055.00	35	51	49	95	157	830
2001	118.20	646.50	2,768.78	224,270.86	32	51	47	94	138	874
2002	144.74	559.14	4,166.53	545,815.00	31	51	44	91	159	936
2003	142.35	584.90	3,296.03	319,715.00	34	51	42	91	151	918
2004	142.32	695.12	3,912.28	352,105.57	33	51	38	90	128	1,012
2005	163.75	781.80	2,863.10	120,250.00	31	51	29	87	101	1,153
2006	140.43	789.77	4,010.59	164,434.09	31	51	28	85	123	1,222
2007	148.12	884.76	2,895.14	101,330.00	30	51	27	83	99	1,313
2008	175.56	878.13	4,874.72	219,362.54	25	51	25	77	78	1,365
2009	165.49	1,404.36	1,299.17	113,027.94	19	50	19	74	53	1,115
2010	156.01	1,482.06	5,232.87	225,013.52	20	51	18	70	51	1,199
2011	102.64	776.28	950.00	12,350.00	20	51	17	67	41	876
2012	131.76	919.52	5,336.76	181,450.00	18	51	17	66	40	1,031
2013	102.04	635.49	412.35	7,010.00	18	51	17	66	24	896

Table 1 presents the annual summary of local issue amount for negotiated deals, underwriting cost, political donations to local political parties, and politically connected states, underwriters, and bond issues. Bond issue amount is in billion dollars. Mean is the average donation amount for each year. Total is the summation of all donations for each year. The number of connected states, connected underwriters and connected issues is the number of states, underwriters and issues that are involved in political connections. The total number of states, underwriters and issues is the total number of states, underwriters and issues in the sample.

Municipal bond data used in this paper is from the *Mergent Database*. It includes bond issuance and underwriter information. For each bond issue, the *Mergent Database* provides bond CUSIP, dated date, underwriter names, issue size, credit rating, maturity date, coupon, and credit enhancement information. Bond gross spreads are collected from *SDC Platinum*. Bond feature variables from different sources are merged by bond CUSIP's. There are two main offering mechanisms[12] for a municipal bond issuance: competitive sale and negotiated sale. In a competitive sale, the issuer solicits bids from underwriting banks that want to underwrite and distribute the bonds. The bank that bids the best price will be hired as the underwriter for the bond issue. In the case of a negotiated sale, a lead underwriter is selected in advance. The issuer and the lead underwriter will engage in discussions regarding the offering terms and underwriting compensations. In this paper, I only include negotiated deals in the main empirical tests. In addition, competitive sales are exempt from the municipal business prohibitions by Rule G-37. It implies that the competitive bidding system is not likely to be affected by political contributions. Brown (2016) finds that issuance cost such as gross spread and bond underpricing in competitive deals are not affected by political connections.

For each negotiated sale, I use the lead underwriter as the managing bank that is taking the main responsibility for a bond pricing and placement. I collect the office location information from investment banks' websites and *Bloomberg*[13]. The state and local economy data is collected from *U.S. Bureau Economics of Analysis (BEA)*. I include

[12] There is an uncommon sale method called private placement. It is a method of sale by which the issuer sells bonds directly to a limited number of sophisticated investors without a public offering. Only 3% of all bond issues are conducted through private placement over the sample period.

[13] I follow the definition for local office in Butler (2008). If the investment bank has an office in the issuer's state, the underwriter is considered a local underwriter in that issue. The data only includes the most updated location information by the end of July 2015.

state, state authority, county, and city issuers in the sample because they are the main issuers in the municipal debt market. Compared with other issuers such as Universities, Education boards or Local agencies, these administration offices are more directly related to the study on political campaigns and donations. To filter out municipal entities that rarely issue any bonds, I remove local issuers with total offering amount less than $1 billion over 1994-2013 for county and city issuers. The final sample includes 50 states, D.C., 133 counties and 172 cities.

Variables and Empirical Design

I use donation dummy in the recent five years[14] as a proxy for political connection between an investment bank and a bond issuer. State names, county names, and city names are used as identifications for bond issuers and local parties that receive donations from underwriting banks. For instance, New York City as a city issuer is merged with donations made to NYC's Republican/Democrat Party. I match all states, counties, and cities with the 100 underwriters for each year. Each observation consists of a state, county, or city matched with an underwriter in a given year. Table 2 reports the summary statistics for the sample data from 1994 to 2013. Columns 2-6 include 1,353 underwriter-local-year observations with donations to political parties in the most recent 5 years. Columns 7-11 include 162,777 underwriter-local-year observations with no political donations in the recent 5 years.

[14] The recent five years include the present year and the past four years.

Table 2
Summary Statistics for Bond Issues

Variable	With Donations					Without Donations				
	N	Mean	Std.	Min	Max	N	Mean	Std.	Min	Max
Hire - Negotiated	1,353	0.50	0.50	0.00	1.00	162,777	0.06	0.23	0.00	1.00
Market Share - Negotiated.	1,353	0.94	1.24	0.00	4.62	162,777	0.12	0.59	0.00	4.62
Market Share Growth - Negotiated	1,353	90.43	119.06	-69.31	461.51	162,777	13.29	59.65	-69.31	461.51
Dealer-Issuer History (Past10)	1,353	0.79	0.40	0.00	1.00	162,777	0.19	0.39	0.00	1.00
Local Office Dummy	1,353	0.63	0.48	0.00	1.00	162,777	0.20	0.40	0.00	1.00
Lagged Dealer Share (Log)	1,353	0.90	0.84	0.00	2.87	162,777	0.48	0.64	0.00	2.87
Lagged Local Share (Log)	1,353	0.67	0.48	0.00	1.80	162,777	0.28	0.30	0.00	1.80
Lagged Dealer-Local Share (Log)	1,353	0.89	1.11	0.00	3.87	162,777	0.10	0.47	0.00	4.60
Public Company	1,353	0.42	0.49	0.00	1.00	162,777	0.39	0.49	0.00	1.00
Dealer Age (Log)	1,353	4.01	0.88	0.69	5.31	162,777	3.73	0.93	0.00	5.37
State GDP (Log)	1,353	12.63	0.97	9.67	14.61	162,777	12.33	1.10	9.52	14.61
Local Employment (Log)	1,353	15.16	0.96	12.81	16.88	162,777	13.93	1.12	11.41	16.88
Local Income (Log)	1,353	10.40	0.23	9.80	11.18	162,777	10.39	0.27	9.72	11.18
Local Population (Log)	1,353	15.70	1.00	13.22	17.46	162,777	14.41	1.18	11.79	17.46
Local Establishment (Log)	1,353	12.13	0.98	9.43	14.14	162,777	10.86	1.16	7.89	14.14
State Interest Tax	1,353	4.42	2.09	0.00	10.47	162,777	4.36	2.53	0.00	11.98
Tax Outside State	1,353	0.87	0.33	0.00	1.00	162,777	0.77	0.42	0.00	1.00
Hire - Competitive	1,353	0.17	0.38	0.00	1.00	162,777	0.03	0.16	0.00	1.00
Market Share - Competitive	1,353	0.44	1.08	0.00	4.62	162,777	0.08	0.51	0.00	4.62
Market Share Growth - Competitive	1,353	46.67	110.38	-69.31	461.51	162,777	8.95	55.70	-69.31	461.51
Time Trend	1,353	9.16	4.80	1.00	20.00	162,777	9.78	5.61	1.00	20.00

This table presents the summary statistics for the group of observations with no donations and observations with political donations to local parties in the most recent five years [t-4, t]. Each local area and an investment bank in a year identify an observation. Columns 2-6 include observations with no political donations in the recent five years. Columns 7-11 include observations with donations to local parties in the recent five years. Variable definitions are reported in Appendix D.

To test the political connection's impact on underwriter selections, I use a dichotomous variable that equals 1 if the underwriter is hired and 0 otherwise as the dependent variable (*Hire*). To examine the impact of donations on an underwriter's market share, I use the underwriter's market share in an issuer's administrative division as the dependent variable. For each year, I calculate the total underwriting amount for an underwriter in an issuer's administrative division and divide it by the total offering amount of the issuer as the market share. As in Equation (1), each underwriter *u* has a market share in the issuer's administrative division *i* during a given year *t*.

$$Market\ Share_{u,i,t} = \frac{\sum Underwriting\ Amount_{u,i,t}}{\sum Local\ Issue\ Amount_{i,t}} \quad \textbf{(1)}$$

The logged market share variable used in empirical tests is computed as in Equation (2).

$$Ln\big(Market\ Share_{u,i,t}\big) = \log(1 + Market\ Share_{u,i,t}) \quad \textbf{(2)}$$

To test whether a contributing underwriter experiences a relative change in the market share, I take the first different of the logged underwriter's market share to calculate the share growth for each underwriter.

$$Ln(Share\ Growth_{u,i,t}) = 100 \times [\log\big(1 + Market\ Share_{u,i,t}\big) - \log(1 + Market\ Share_{u,i,t-1})] \quad \textbf{(3)}$$

To measure political connections, I use a dummy variable that equals 1 if the lead underwriter makes payments to local political parties in the most recent 5 years. Donations made to state-level, county-level, and city-level political parties are matched with state-level, county-level, and city-level political divisions and their local issuers. For example, Goldman Sachs is considered politically connected with New York City in year *t*, if Goldman Sachs makes donations to New York City Republican/Democrat Party in

the recent five years. As Equation (4) shows, a donation made by underwriter *u* to state, county, or city *i* in year *t* is a dummy variable equal to 1 if underwriter *u* makes contributions to the political party in issuer *i*'s administrative division from year *t-4* to year *t*.

$$Political\ Donation\ Dummy_{u,i,t} = \begin{cases} 1, if\ \sum_{t-4}^{t} donation\ amount_{u,i} > 0 \\ 0, if\ \sum_{t-4}^{t} donation\ amount_{u,i} = 0 \end{cases} \quad \textbf{(4)}$$

Empirical Test Results

Table 3 presents the Probit and OLS results for the impact of political donations on issuer's underwriter choice. I use a Probit model to test the impact of donations on an issuer's underwriter choice.

$$Prob(Hire\ Underwriter_{u,i,t}) = \alpha_{u,i,t} + \beta\ Political\ Donation_{u,i,t} + \gamma\ Controls_{u,i,t} + \varepsilon_{u,i,t} \quad \textbf{(5)}$$

As is shown in equation (5), the dependent variable is a dummy variable that equals 1 if underwriter *u* is hired as the lead underwriter by issuer *i* in year *t*. It equals 0 otherwise.

Table 3
Political Connection and Underwriter Selection

Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
Political Donation Dummy	**0.578*** **	**0.247***	**0.159*** **	**0.004**	**14.237*** **	**0.642**
	(8.497)	**(1.705)**	**(4.907)**	**(0.170)**	**(4.742)**	**(0.291)**
Dealer-Issuer History (Past10)	0.961***	0.955***	0.139***	0.137***	12.558***	12.374***
	(39.724)	(39.696)	(15.659)	(15.475)	(14.970)	(14.793)
Donation with History (Past10)		0.374**		0.196***		17.098***
		(2.464)		(5.033)		(4.701)
Local Office	0.451***	0.451***	0.035***	0.035***	4.328***	4.339***
	(14.685)	(14.740)	(4.734)	(4.743)	(6.336)	(6.355)
Lagged Dealer Share (Log)	0.636***	0.636***	0.121***	0.121***	12.595***	12.629***
	(19.502)	(19.483)	(13.188)	(13.244)	(13.578)	(13.640)
Lagged Local Share (Log)	0.883***	0.884***	0.025**	0.025**	2.555**	2.548**
	(8.518)	(8.526)	(2.123)	(2.123)	(2.468)	(2.475)
Lagged Dealer-Local Share	0.600***	0.599***	0.657***	0.656***	62.734***	62.634***

(Log)	(24.041)	(24.020)	(30.752)	(30.602)	(32.022)	(31.857)
Public Dummy	0.332**	0.339**	0.205***	0.206***	23.297***	23.441***
	(1.964)	(2.017)	(8.789)	(8.809)	(9.055)	(9.100)
Dealer Age (Log)	0.037	0.033	-0.008	-0.009*	-1.917***	-2.005***
	(0.769)	(0.707)	(-1.598)	(-1.703)	(-2.914)	(-3.101)
State GDP (Log)	0.097	0.097	0.032	0.032	4.232*	4.261*
	(0.525)	(0.525)	(1.375)	(1.387)	(1.950)	(1.972)
Local Employment (Log)	0.232	0.231	0.034	0.033	3.829	3.778
	(0.677)	(0.674)	(1.069)	(1.047)	(1.298)	(1.280)
Local Income (Log)	0.011	0.012	0.024	0.025	-0.018	-0.009
	(0.034)	(0.038)	(0.815)	(0.831)	(-0.007)	(-0.003)
Local Population (Log)	0.251	0.253	0.036	0.036	1.453	1.521
	(0.755)	(0.759)	(1.069)	(1.090)	(0.450)	(0.471)
Local Establishment (Log)	-0.371*	-0.372*	-0.068***	-0.068***	-5.189**	-5.192**
	(-1.686)	(-1.688)	(-2.905)	(-2.908)	(-2.342)	(-2.350)
State Interest Tax	0.015	0.015	0.002	0.002	0.268	0.266
	(1.233)	(1.231)	(1.055)	(1.039)	(1.183)	(1.168)
Tax Outside State	0.345***	0.344***	0.031***	0.031***	2.737***	2.693***
	(7.983)	(7.915)	(4.577)	(4.564)	(3.779)	(3.753)
Time Trend	-0.020*	-0.020*	-0.003***	-0.003***	-0.274**	-0.271**
	(-1.943)	(-1.933)	(-2.849)	(-2.848)	(-2.332)	(-2.307)
Constant	-7.469**	-7.476**	-1.101***	-1.108***	-87.759***	-88.073***
	(-2.487)	(-2.490)	(-3.501)	(-3.529)	(-2.962)	(-2.978)
Observations	145,213	145,213	146,955	146,955	118,716	118,716
Log Likelihood	-16,496	-16,493				
Pseudo R2 / Adj. R2	0.517	0.517	0.450	0.450	0.450	0.450
Year, State, Dealer Dummy	Yes	Yes	Yes	Yes	Yes	Yes

This table reports the Probit and OLS regression results for the impact of political donations on underwriter selections. The dependent variable for Models 1-2 is the categorical variable that equals 1 if the underwriter is hired. It equals 0 otherwise. The dependent variable for Models 3-4 is dealer's market share. The dependent variable for Models 5-6 is dealer's market share growth. The independent and control variables are defined in Appendix D. Models 2, 4 and 6 include an interaction term when donations are made to a government that the dealer has business with in the past 10 years. Year, Underwriter and State fixed effects are included. Standard errors are clustered by local political subdivisions. Robust z/t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

The dependent variable in Model (1) and (4) is a dichotomous variable that equals 1 if the underwriter *u* is hired as the lead underwriter by the local government *i* in that year *t*. It equals 0 if the underwriter is not selected in that year. The coefficient of *Political Donation Dummy* in Model (1) is 0.51 and significant at 1% level, suggesting that political connection is positively associated with an underwriter's probability of

being hired. The coefficient of *Dealer-Issuer History (Past 10)* is also significant. This indicates that an underwriter will more likely be hired if this bank has been hired as the lead underwriter in the past 10 years. This suggests the pre-existing relationship between an underwriter and a bond issuer increases the bank's chance of be hired again. Since both political connections and the existing business relations have significant impacts on the choice of underwriter, I include an interaction term for *Political Donation Dummy* and *Dealer-Issuer History (Past 10)* in the regression. Model (2) shows that the coefficient of this interaction term, *Donation with History (Past 10)*, is significantly positive. This finding goes along with the transaction cost hypothesis that existing business relationships can reduce cost of searching and facilitate contracting process with business partners (Board 2011). Donating money to officials in a new political division will increase the marginal cost of political connections for an investment bank. From an issuer's perspective, building mutual trust with new business partners usually takes extra time and effort (Furubotn and Richter 2010). Due to these aspects of transaction costs, both underwriters and issuers have incentives to stay with their well-acquainted business partners. More interestingly, political connections still play a significant role in increasing the amount of business for the previously hired underwriters.

Although *Deal-Issuer History (Past 10)* still has significant power, the significance of *Political Donation Dummy* has dropped to 10% level. This suggests that contributing to a former client has stronger effect on an underwriter's business, compared with contributing to a new client. Models (3) and (5) show the similar effect of political donations on whether an underwriter would be hired as the lead underwriter except that the dependent variables are market share and market share growth, respectively.

I use an OLS regression to test the donation's impact on an underwriter's market share. In Equation (6), the dependent variable is logged underwriter's market share. The independent variable of interest, Political donation, is a dummy variable that equals 1 if the lead underwriter makes payments to the issuer official's political party in the most recent 5 years. β captures the impact of political connections on an underwriter's local market share.

$$Log(Market\ Share_{u,i,t}) = \alpha_{u,i,t} + \beta\ Political\ Donation_{u,i,t} + \gamma\ Controls_{u,i,t} + \varepsilon_{u,i,t} \quad \textbf{(6)}$$

I use market share growth to measure the relative change in an underwriter's market share. Equation (7) shows the test on contributions' effect on a contributing underwriter's market share change.

$$Share\ Growth_{u,i,t} = \alpha_{u,i,t} + \beta\ Political\ Donation_{u,i,t} + \gamma\ Controls_{u,i,t} + \varepsilon_{u,i,t} \quad \textbf{(7)}$$

Models (3) - (6) report the regression result for the rests. For example, politically connected banks are associated with 19.6%[15] more business in their underwriting market share as shown in Model (3). By including the interaction term *Donation with History (Past 10)*, Models (4) and (6) show that the interaction term is significantly positive but T-values of *Political Donation Dummy* drop to 0.170 and 0.291. This is consistent with Model (2). It suggests that contributing to an unfamiliar issuer has no effects on the contributing bank's business.

Taken together, the finding in Table 3 suggests that contributing banks obtain more underwriting business than non-contributing banks. This effect is mainly driven by

[15] On average, contributing banks' market share is 33.59% while non-contributing banks' share are 13.99%.

contributions made to officials having pre-existing business relations with the contributing underwriter in the past.

To test the economic outcome of political donations on bond issuance cost, I use underwriting fees as the dependent variable in the analysis. β in Equation (8) captures the impact of political donations on bond issuance costs.

$$Log(Issuance\ Cost_{u,i,t}) = \alpha_{u,i,t} + \beta\ Political\ Donation_{u,i,t} + \gamma\ Controls_{u,i,t} + \varepsilon_{u,i,t} \quad \textbf{(8)}$$

Underwriter's fee, also referred to as gross spread, is a major part of the municipal bond issuance cost[16]. Joffe (2015) documents that underwriting fees cover 46.03% of the overall issuance cost on average. Butler, Fauver, and Mortal (2009) use underwriting fees in their test for the importance of an issuer's political integrity. While they don't find that corrupt states are associated with higher underwriter's fees, they document that underwriter's fees have significantly dropped since the introduction of Rule G-37. They suggest: "campaign contributions might generate a *quid pro quo* in the form of higher fees for underwriting services". Inspired by Butler, Fauver, and Mortal's (2009) study, I use lead underwriter's fees as the measure of cost of bond issuance.

Table 4 presents the OLS results for donation's impact on underwriting fees. The dependent variable is logged underwriting fee for each bond issue. Due to the data availability issue (Brown 2016), 19,478 issues have available gross spread data out of the total 26,512 bond issues during 1994-2013. After cleaning out the outliers, there are 18,164 bond issues included in the regression analysis[17]. The independent variable of interest in Models (1) and (2) is *Political Donation Dummy*. It equals 1 if the lead

[16] See MSRB's definition of gross spread on http://msrb.org/msrb1/pdfs/Understanding-Gross-Spread.pdf
[17] There are about 31% of gross spreads in the bond issue sample are not available to the empirical study, which may result in a missing value bias. See summary statistics on gross spreads in Appendix C.

underwriter has made political contributions to the issuer in the recent 5 years. It equals 0 otherwise.

Table 4
Political Connection and Issuance Cost

Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Political Donation Dummy	0.016	0.040**			
	(0.691)	(2.313)			
Donation Amount (100K)			0.011	0.035**	
			(0.799)	(2.378)	
Donation Amount ($1,000)					1,269.759***
					(3.102)
Dealer Issuer History	0.014	-0.005	0.014	-0.003	-17,013.117
	(1.112)	(-0.412)	(1.186)	(-0.260)	(-0.552)
Local Office	-0.010	-0.010	-0.010	-0.009	20,246.916
	(-0.818)	(-0.902)	(-0.764)	(-0.796)	(0.638)
Investment Grade	-0.111***	-0.100***	-0.111***	-0.099***	-232,613.125
	(-3.341)	(-2.975)	(-3.332)	(-2.960)	(-1.369)
Rating Missing	-0.026	-0.054	-0.025	-0.053	-44,462.648
	(-0.571)	(-1.253)	(-0.563)	(-1.236)	(-0.239)
Maturity (Log)	0.209***	0.197***	0.209***	0.197***	175,160.875***
	(13.250)	(12.452)	(13.218)	(12.394)	(8.816)
Coupon (Log)	0.275***	0.263***	0.275***	0.263***	-25,285.889
	(35.089)	(32.931)	(35.077)	(32.904)	(-0.470)
Issue Size (Log)	-0.149***	-0.144***	-0.149***	-0.144***	
	(-20.103)	(-19.730)	(-20.089)	(-19.741)	
G.O. Bond	-0.096***	-0.097***	-0.096***	-0.098***	81,980.531
	(-3.600)	(-4.043)	(-3.575)	(-4.052)	(0.952)
Lagged Dealer Share (Log)	-0.068***	-0.006	-0.068***	-0.008	25,430.686
	(-4.647)	(-0.418)	(-4.849)	(-0.606)	(0.479)
Lagged Local Share (Log)	0.059	0.056	0.057	0.052	-112,991.023
	(1.168)	(1.215)	(1.101)	(1.104)	(-0.610)
Lagged Dealer-Local Share	0.023	-0.010	0.025	-0.004	363,932.688***
(Log)	(0.331)	(-0.250)	(0.369)	(-0.087)	(3.414)
Public Dummy	-0.002	0.200	-0.002	0.168	-15,827.184
	(-0.176)	(1.383)	(-0.218)	(1.131)	(-0.051)
Dealer Age (Log)	0.030***	0.028	0.030***	0.038	154,035.547
	(3.777)	(0.670)	(4.106)	(0.860)	(1.328)
Advisor	-0.044***	-0.033**	-0.043***	-0.033**	66,867.133
	(-3.024)	(-2.359)	(-3.008)	(-2.330)	(1.564)
No. Managers	0.018***	0.020***	0.018***	0.020***	258,434.609***
	(7.576)	(8.724)	(7.563)	(8.718)	(5.448)
Tax Exempt	-0.065***	-0.062***	-0.065***	-0.062***	-17,006.934
	(-5.128)	(-5.432)	(-5.140)	(-5.454)	(-0.198)
Insured	0.031**	0.033***	0.031**	0.033***	83,810.703**
	(2.307)	(2.780)	(2.297)	(2.717)	(2.310)
Guaranteed	0.069	0.072	0.070	0.074	813,255.000*
	(1.061)	(1.257)	(1.087)	(1.287)	(1.985)
Letter Credit	-0.039*	-0.047**	-0.038	-0.046**	-200,323.250**
	(-1.688)	(-2.181)	(-1.656)	(-2.153)	(-2.316)
State GDP (Log)	-0.042	-0.035	-0.038	-0.029	-912,666.125*
	(-0.344)	(-0.310)	(-0.313)	(-0.255)	(-1.733)

Local Employment (Log)	0.100	0.174	0.093	0.167	-825,478.125
	(0.307)	(0.535)	(0.284)	(0.513)	(-0.562)
Local Income (Log)	0.005	0.022	0.002	0.014	1364468.875
	(0.020)	(0.087)	(0.007)	(0.056)	(0.964)
Local Population (Log)	0.062	-0.019	0.072	-0.002	934,901.875
	(0.190)	(-0.058)	(0.219)	(-0.006)	(0.550)
Local Establishment (Log)	0.003	-0.015	-0.000	-0.022	577,506.750*
	(0.025)	(-0.142)	(-0.000)	(-0.211)	(1.706)
State Interest Tax	0.008	0.006	0.008	0.005	26,546.957
	(1.495)	(1.106)	(1.482)	(1.043)	(1.111)
Tax Outside State	0.059**	0.070**	0.061**	0.075**	141,691.703***
	(2.257)	(2.362)	(2.345)	(2.465)	(3.234)
Time Trend	-0.006	-0.009	-0.006	-0.009	744.014
	(-0.798)	(-1.291)	(-0.799)	(-1.316)	(0.024)
Constant	1.662	1.683	1.637	1.601	-1.324e+07
	(0.581)	(0.580)	(0.572)	(0.553)	(-0.914)
Observations	18,164	18,164	18,164	18,164	18,164
Adjusted R-square	0.557	0.586	0.557	0.586	0.478
Year, Issuer Dummy	Yes	Yes	Yes	Yes	Yes
Underwriter FE	No	Yes	No	Yes	Yes

This table reports the OLS regression results for the impact of political donations on bond issuance costs. The dependent variable is logged underwriting fees for a bond issue. The independent and control variables are defined in Appendix D. Year and Issuer fixed effects are included. Standard errors are clustered by local political subdivisions. Underwriter fixed effect is included in Models (2), (4), and (5). Robust t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Without controlling for underwriters' fixed effect, the coefficient of *Political Donation Dummy* in Model (1) is positive but insignificant. Butler, Fauver, and Mortal (2009) suggest underwriters may have with-in group effect on underwriting fees they charge. It is important to control for underwriters' fixed effect in the regression. By including underwriters' fixed effect, the coefficient of *Political Donation Dummy* in Model (2) is 0.04 and significantly positive. That is, when an underwriter is selling bonds for a connected issuer, the underwriting fee is 4%[18] higher than if the same underwriter is selling bonds for an unconnected issuer. This is consistent with Brown's (2016) finding that contributing banks charge 2.9% higher fees than non-contributing banks in his sample of 24 states.

[18] On average, the underwriting fee for a contributing underwriter is $6.90 per $1,000 bond while the underwriting fee for a noncontributing underwriter is $7.18 per $1,000 bond.

To examine whether the amount fees are correlated with the amount of political donations, I use the total amount of payments to proxy the extent of political connection between an underwriter and a government official. In Equation (9), I use the total amount of payments made by underwriter *u* to issuer official *i*'s political party over the recent 5 years as *Donation Amount.*

$$Political\ Donation\ Amount_{u,i,t} = \sum_{t-4}^{t} Political\ Donation_{u,i,t} \quad \textbf{(9)}$$

The independent variable of interest in Models (3) and (4) is the total amount of political donations in the recent 5 years. The coefficient of *Donation Amount (100K)* is 0.035 and significantly positive. This suggests the amount of donations is also positively associated with underwriting fees. The dependent variable of Model (5) is the product of gross spread and total offer amount of each bond issue. It measures the total amount of underwriting fee an issuer pays for the underwriting service. The independent variable of interest is *Donation Amount (K)*. It measures the effect of a $1,000 donation on total underwriting fees. The coefficient is 1,270 and statistically significant. That is, a donation of $1,000 is associated with $1,270 higher total compensation for a contributing underwriter.

Overall, the results in Table 4 suggest that hiring contributing banks is associated with higher issuance cost for municipal issuers. The amount of the political contribution is positively related with the amount of compensation an underwriter receives.

CHAPTER V

IDENTIFICATION AND ROBUSTNESS TESTS

Political Party Connections

To further study the political impact on underwriting banks' business, I test the effect of donations that exclusively made to only one of the two political parties. I define a contribution a *Republican Donation* when the amount of an underwriter's donations to the Republican Party is at least twice as much as the amount to the Democrat Party. A contribution is defined as a *Democrat Donation* when the amount of an underwriter's donations to the Democrat Party is at least twice as much as the amount to the Republican Party. Similarly, if a bond is from a year when the Republican Party dominates the state's administration office (including governor, lieutenant governor, state senate and state house), I define the bond issue a *Republican Issue*. A *Democrat Issue* is defined for an issue in the opposite case. With a subsample of state-level issuers, I keep bonds that are either *Republican Issues* or *Democrat Issues*.

Table 5 reports the effect of different political party connections. It includes a subsample of bond issues either from a republican-dominated state-year or from a democrat-dominated state-year.

Table 5
Political Party Connection and Underwriter Market Share

Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
Same Party Connection	**0.519*** **	**0.152*** **	**14.169*** **			
	(4.977)	**(2.821)**	**(2.801)**			
Opposite Party Connection				**0.233**	**-0.075**	**-9.401**
				(1.047)	**(-1.005)**	**(-1.205)**
Dealer Issuer History (Past10)	0.970***	0.132***	11.674***	0.966***	0.130***	11.468***
	(22.459)	(10.795)	(10.351)	(22.568)	(10.599)	(10.124)
Local Office	0.440***	0.063***	6.393***	0.432***	0.066***	6.610***
	(7.812)	(5.407)	(5.727)	(7.702)	(5.621)	(5.997)
Lagged Dealer Share (Log)	0.630***	0.157***	14.788***	0.626***	0.158***	14.843***

	(11.574)	(8.359)	(8.237)	(11.549)	(8.276)	(8.248)
Lagged Local Share (Log)	0.520**	0.048	6.690*	0.491**	0.036	5.612
	(2.532)	(1.470)	(1.791)	(2.268)	(1.138)	(1.586)
Lagged Dealer-Local Share (Log)	0.645***	0.688***	65.127***	0.638***	0.685***	64.915***
	(19.369)	(24.029)	(24.405)	(19.360)	(23.743)	(24.223)
Public Dummy	0.663***	0.226***	24.990***	0.603**	0.217***	24.266***
	(2.618)	(4.371)	(4.769)	(2.484)	(4.133)	(4.699)
Dealer Age (Log)	0.037	-0.019**	-2.660**	0.043	-0.020**	-2.933**
	(0.394)	(-2.257)	(-2.418)	(0.475)	(-2.358)	(-2.653)
State GDP (Log)	0.500	0.066	2.470	0.472	0.054	1.331
	(0.798)	(0.837)	(0.319)	(0.749)	(0.710)	(0.175)
Local Employment (Log)	-1.307	-0.104	-5.095	-1.117	-0.144	-6.378
	(-1.049)	(-0.528)	(-0.239)	(-0.873)	(-0.763)	(-0.332)
Local Income (Log)	1.131	0.159	18.191	1.068	0.185	19.265
	(0.971)	(1.046)	(1.147)	(0.944)	(1.261)	(1.241)
Local Population (Log)	1.104	0.086	7.016	0.988	0.145	10.540
	(0.807)	(0.445)	(0.325)	(0.723)	(0.782)	(0.514)
Local Establishment (Log)	0.021	-0.045	-7.429	-0.037	-0.051	-8.018
	(0.052)	(-0.689)	(-1.114)	(-0.090)	(-0.808)	(-1.329)
State Interest Tax	0.026	0.007**	0.756**	0.026	0.006*	0.658**
	(1.300)	(2.233)	(2.313)	(1.246)	(1.998)	(2.084)
Tax Outside State	0.310***	0.027***	3.208***	0.320***	0.027***	3.062***
	(5.420)	(2.938)	(3.147)	(5.875)	(2.809)	(3.267)
Time Trend	-0.086***	-0.011**	-0.856*	-0.083***	-0.011***	-0.817*
	(-2.847)	(-2.661)	(-1.951)	(-2.816)	(-2.845)	(-1.922)
Constant	-18.410	-1.801	-178.073	-17.774	-2.150	-200.886
	(-1.337)	(-0.988)	(-0.926)	(-1.302)	(-1.210)	(-1.051)
Observations	33,876	35,137	33,282	33,717	34,980	33,125
Log Likelihood	-5,377			-5,310		
Pseudo R2/ Adj. R2	0.506	0.551	0.535	0.503	0.548	0.533
Year, State, Dealer Dummy	Yes	Yes	Yes	Yes	Yes	Yes

This table reports the Probit and OLS regression results for the impact of political party connection on underwriters market share. The dependent variable in Models (1) and (4) is the categorical variable that equals 1 if the underwriter is hired as the lead underwriter. It equals 0 otherwise. The dependent variable for Models (2) and (4) is underwriter's market share. The dependent variable for Models (3) and (6) is underwriter's market share growth. The independent and control variables are defined in Appendix D. Year, Underwriter and State fixed effects are included. Standard errors are clustered by local political subdivisions. Robust z/t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

The dependent variable includes the probability of an underwriter being hired, an underwriter's logged market share and the logged change in market share. The independent variable of interest in Models (1) - (3) is a dummy variable *Same Party*

Connection that equals 1 if the underwriter has been party A's exclusive contributor and party A also dominates the state's legislature in that year. It equals 0 otherwise. The independent variable of Models (4) - (6) is *Opposite Party Connection* that represents the opposite scenario as in Models (1) - (3).

The coefficients of *Same Party Connection* in Models (1) - (3) are significantly positive, suggesting that donating to the right political party is positively associated with more business for an underwriting bank. The coefficients of *Opposite Party Connection* in Models (4) - (6) become insignificant. This finding suggests contributing to the opposite party has no effects on the amount of an underwriter's bond business from a single-party-dominated state.

The finding of Table 5 suggests only donating to the right party is associated with more underwriting business for contributing underwriters. Donating money to the opposite party has no significant effects on an underwriter's bond business, compared with non-contributing banks. Further, the finding indicates that the donation effect in Table 3 is mainly driven by contributions made to the right party.

Close Gubernatorial Elections

To overcome the endogeneity challenge, I employ a Regression Discontinuity Design (RDD) using gubernatorial elections. With a threshold of 10% for voting results, I compare the market share change of underwriters connected with winning candidates and that of underwriters connected with unelected candidates. This design allows me to utilize the randomness of close election outcome to verify the causal effect of political connections on underwriters' market share. For close elections, it's difficult to predict the election outcome or pre-determine a winner that will have the political power in the

office. I assume contributors in these elections are randomly assigned and the ex post change in their market share is most likely caused by the election result.

The dependent variable in Table 6 is logged market share change between the year after the election and the election year. This variable captures any change in a contributing underwriter's market share after the election. Models (1) - (3) include underwriting banks that only support one candidate. The coefficient of *Won* in Model (1) is positive and significant at 10%, suggesting that underwriters contributing to the candidate who wins the election would experience an increase in their market share after the election.

Table 6
Political Connection's Effect after Close Elections

Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
	RDD	Rep	Dem	Hedge	Hedge-Rep	Hedge-Dem
Won	**0.664***	**1.109****	**0.260**			
	(1.688)	**(2.123)**	**(0.441)**			
Vote Share	-11.929*	-17.653**	-4.363	-0.000	-2.341	2.341
	(-1.756)	(-2.032)	(-0.408)	(-0.000)	(-0.759)	(0.686)
Won-Vote Share	16.300**	13.871	15.508			
	(1.988)	(1.295)	(1.227)			
Donated-Won				**0.664***	**1.109****	**0.260**
				(1.704)	**(2.081)**	**(0.455)**
Donated				-0.471	-0.613	-0.346
				(-1.462)	(-1.393)	(-0.730)
Donated Vote Share				-11.929*	-15.312	-6.704
				(-1.679)	(-1.631)	(-0.615)
Donated-Won-Vote Share				16.300**	13.871	15.508
				(2.007)	(1.269)	(1.268)
Constant	-1.644***	-1.768***	-1.502***	-1.173***	-1.156***	-1.156***
	(-5.579)	(-4.520)	(-3.397)	(-8.610)	(-6.263)	(-5.661)
Observations	150	79	71	230	119	111
Adjusted R-square	0.0357	0.0287	0.0567	0.0223	0.0140	0.0328

This table reports the result of regression discontinuity design for the impact of close governor election on underwriter's market share growth. The dependent variable is the underwriter's market share growth. The threshold used for *RDD* is 10%. The independent and control variables are defined in Appendix D. Robust t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

The interaction term *Won-Vote Share* is the product of *Won* and *Vote Share*. The coefficient is significantly positive at 5% level. This suggests that the more votes a winning candidate receives, the more business the contributing underwriter will receive after the election. Models (2) and (3) include campaign candidates from the Republican Party and the Democratic Party separately. The results indicate that the impact of political contributions is only significant for candidates from the Republican Party. This is consistent with the finding of Gimpel, Lee, and Parrott (2014) that more than one third of economic sectors have a clear party tilt leaning toward to Republicans than to Democrats. They show that many firms from finance and insurance sectors slant toward the Republican Party rather than the Democratic Party. This lends support to the statistics in Appendix B where I find the total donations made to the Republican Party are significantly more than donations to the Democratic Party. This finding is consistent with Birnbaum's (2004) view that "American corporates are growing less and less evenhanded and more and more Republican".

Models (4) - (6) include underwriters that make contributions to more than one candidate in a gubernatorial campaign. The variable of interest *Donated-Won* has consistent coefficient and significance level with *Won* in Models (1) - (3). The positive effect suggests that only contributions to the candidate who wins the election are associated with more business for an underwriting bank.

State-level Corruption Convictions

To alleviate the concern of omitted variables, I apply a two-stage regression design using state-level corruption convictions as the instrumental variable. According to Butler, Fauver, and Mortal (2009), corruption plays an important role in municipal bond

issues. They find highly corrupt states experience political integrity issues that can raise the default risk of the underlying bonds. In Table 7, I construct the annual corruption index using the number of state-level corruption convictions. The corruption index is defined as the lagged three-year moving average of corruption convictions per 1,000 people in each state in a given year. In the first stage, I run the Probit regression to estimate how this state-level corruption affects the likelihood an underwriter pays donations to local political parties.

Table 7
Two-stage Regressions for Market Share and Issuance Cost

Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Corruption [t-3, t-1]	**7.896***				
	(1.834)				
Predicted Donation		**1.655*** **	**0.501*** **	**44.596*** **	**0.101** **
		(6.255)	**(4.027)**	**(4.028)**	**(2.284)**
Dealer Issuer History (Past10)	0.722***	0.862***	0.165***	15.117***	-0.003
	(10.125)	(36.728)	(19.719)	(17.671)	(-0.233)
Local Office	0.803***	0.361***	0.038***	3.728***	-0.023*
	(11.104)	(12.485)	(6.067)	(6.005)	(-1.936)
Lagged Dealer Share (Log)	-0.175***	0.545***	0.077***	9.630***	0.007
	(-2.726)	(19.487)	(13.114)	(14.064)	(0.390)
Lagged Local Share (Log)	0.429**	0.848***	-0.006	-0.155	0.008
	(2.555)	(10.958)	(-0.514)	(-0.147)	(0.159)
Lagged Dealer-Local Share (Log)	0.243***	0.592***	0.673***	63.870***	-0.048
	(8.002)	(27.238)	(31.300)	(32.974)	(-0.996)
Public Dummy	-0.607	0.578***	0.138***	15.503***	-0.029
	(-1.085)	(3.014)	(6.682)	(6.178)	(-0.185)
Dealer Age (Log)	0.147	-0.115	-0.017*	-2.724**	0.099
	(1.157)	(-1.461)	(-1.743)	(-2.220)	(1.611)
State GDP (Log)	-0.307***	0.079	0.032	4.089*	-0.045
	(-5.712)	(0.491)	(1.357)	(1.657)	(-0.372)
Local Employment (Log)	-0.529	-0.252*	0.001	1.701	0.025
	(-1.436)	(-1.707)	(0.095)	(1.069)	(0.096)
Local Income (Log)	0.781***	0.038	-0.000	-1.853	0.120
	(2.687)	(0.213)	(-0.030)	(-0.965)	(0.293)
Local Population (Log)	0.658	0.362***	0.017	-0.313	0.001
	(1.583)	(2.795)	(1.161)	(-0.202)	(0.002)
Local Establishment (Log)	0.204	-0.004	-0.014	-0.995	-0.012
	(0.771)	(-0.026)	(-0.876)	(-0.576)	(-0.099)
State Interest Tax	-0.083***	0.013	0.000	-0.046	0.006
	(-3.411)	(0.926)	(0.226)	(-0.203)	(0.672)
Tax Outside State	0.459***	-0.037	-0.014	-1.517	0.095***
	(3.155)	(-0.307)	(-0.974)	(-1.072)	(6.797)
Time Trend	-0.069***	-0.029***	-0.002**	-0.197	-0.005
	(-6.701)	(-3.056)	(-2.075)	(-1.481)	(-0.600)
Investment Grade					-0.076*

					(-1.918)
Rating Missing					-0.029
					(-0.576)
Maturity (Log)					0.196***
					(12.000)
Coupon (Log)					0.249***
					(28.135)
Issue Size (Log)					-0.145***
					(-19.674)
G.O. Bond					-0.104***
					(-4.302)
Advisor					-0.030**
					(-2.153)
No. Managers					0.021***
					(8.074)
Tax Exempt					-0.061***
					(-5.519)
Insured					0.044***
					(3.077)
Guaranteed					0.071
					(1.135)
Letter Credit					-0.068***
					(-2.837)
Constant	-11.973***	-5.387**	-0.554*	-42.276	2.035
	(-3.648)	(-2.336)	(-1.759)	(-1.222)	(0.635)
Observations	314,531	207,394	211,477	144,943	14,318
Pseudo R2 / Adj. R2	0.393	0.492	0.329	0.349	0.581
Log Likelihood	-5,338	-18,727			
Year, State, Dealer Dummy	Yes	Yes	Yes	Yes	Yes

This table reports the two-stage least square results for the impact of political donations on underwriters' market share and bond issuance costs. The dependent variable in Model (1) is the dichotomous variable that equals 1 if there is a donation during the recent five years. It equals 0 otherwise. Corruption measures the percentage of corruption convictions per 1,000 people in a state each year. The other independent variables are defined in Appendix D. The dependent variable in Model (2) is the categorical variable that equals 1 if the underwriter is hired. It equals 0 otherwise. The dependent variable of Model (3) is logged dealer market share in the local area each year. Model (4) includes the market share growth as the dependent variable. The dependent variable of Model (5) is logged underwriting fees for a bond issue. Year and Underwriter fixed effects are included in Model (1). Year, Underwriter and State/Issuer fixed effects are included in Models (2)-(5). Standard errors are clustered by local political subdivisions. Robust z/t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Model (1) in Table 7 presents the result of the first-stage regression. Corruption level is positively associated with the probability that an underwriter makes donations. This meets the assumption that the IV is significantly correlated with the likelihood of donations. Since high corruption convictions do not necessarily result in high market share for contributing banks, I assume that there are no direct causal relations between

the IV and the unexplained residual term in the original models[19]. Models (2) - (5) present the second-stage regression[20] results using the predicted likelihood of paying donations as the instrumental variable. The finding shows that the previous findings still hold in the two-stage. The number of corruption convictions has explanatory power for contributing banks' market share through political contributions.

In the first-stage analysis, there are several factors also playing an important role in explaining the likelihood of making donations. For example, *Local Office* is a dummy variable that equals 1 if the underwriter has local office in the issuer's state. It equals 0 otherwise. Model (1) shows the coefficient of *Local Office* is significantly positive. This indicates that an underwriter with an office in the local area is more likely to donate money to local officials. This is consistent with the point of Butler, Fauver, and Mortal (2009) that a local office can help the investment bank gather "soft" information on local politics and economy. The coefficient of *Lagged Dealer Share* is significantly negative, suggesting that investment banks with good reputation are less likely to make political donations. This is consistent with the point of Duchin and Sosyura (2012) that firms with good performance are not likely to rely on political connections. *Lagged Local Share* has significantly positive impact on the presence of political donations. This suggests that investment banks are more likely to make donations to issuers with recent large bond offerings. A possible explanation is that contributing banks are more likely to target at issuers with greater potential business opportunities. The coefficient of *Lagged Dealer-Local Share* is significantly positive, suggesting investment banks are more likely to

[19] The two conditions for a valid instrumental variable Z: $Cov(Z, X)\neq 0$ and $Cov(Z, \varepsilon)=0$.
[20] Technically, it is a three-stage procedure because in I regress y on y-hat in the second stage and include the fitted y from the second stage in the third stage. There are several advantages, as discussed in Adams, Almeida, and Ferreira (2009) and Wooldridge (2002), for this procedure compared with a "pseudo-IV" procedure and alternative tests show that the results are essentially the same using either method.

make donations to issuers that they have businesses with before. This is consistent with the finding of Table 3 that donations made to a new issuer client have a weak impact on underwriters' business.

Negotiated and Competitive Deals

To isolate the effect of donation on investment banks' underwriting business, I use competitive deals as a benchmark in a difference-in-differences design in Table 8. A competitive deal is a type of municipal bond offering method where an underwriter submits a sealed bid to the issuer and the issuer awards the underwriting contract to the bidder with the best price. The competitive sale is usually preferred when the municipal bond is relatively less complex to price (Marlowe 2009). Since the competitive deal is an auction-based offering method, the underwriter selection process is unlikely to be affected by an investment bank's political connections. Due to this advantage of a competitive deal, rule G-37 does not include competitive deals in the business prohibition section[21]. Brown (2016) also shows there is no significant relation between a lead underwriter's contribution and the issuance cost for a competitive sale. While the offering process is not perfectly identical for a competitive deal and a negotiated deal, the amount of competitive sales can reflect the market share that an underwriter may otherwise receive without any political impact. If some unobserved factors cause both political donations and the amount of business between an underwriter and an issuer, it would likely affect both negotiated and competitive sales. This strategy can help control for unobserved factors that could pre-determine the business relation between an investment bank and an issuer.

[21] See Section (g): xii of MSRB's Rule G-37. http://www.msrb.org/Rules-and-Interpretations/MSRB-Rules/General/Rule-G-37.aspx

Table 8
Difference-in-differences Analyses for Negotiated and Competitive Deals

Variables	Model (1)	Model (2)	Model (3)	Model (4)
Political Donation Dummy	-0.097	-0.145***	-14.871***	-0.108***
	(-0.959)	(-3.251)	(-3.145)	(-2.924)
Negotiated Dummy	0.537***	0.045***	4.247***	0.103***
	(6.891)	(5.527)	(5.718)	(3.233)
Negotiated-Donation	**0.821*** **	**0.473*** **	**43.024*** **	**0.152*** **
	(5.147)	**(6.616)**	**(5.968)**	**(3.448)**
Dealer Issuer History (Past10)	0.845***	0.097***	9.190***	-0.016
	(35.246)	(12.987)	(11.652)	(-1.229)
Local Office	0.350***	0.028***	3.394***	-0.013
	(16.448)	(7.572)	(8.106)	(-0.991)
Lagged Dealer Share (Log)	0.610***	0.133***	14.244***	-0.006
	(23.386)	(18.131)	(18.273)	(-0.462)
Lagged Local Share (Log)	0.468***	0.007	-0.620	0.072
	(6.916)	(0.967)	(-0.774)	(1.430)
Lagged Dealer-Local Share (Log)	0.427***	0.474***	47.652***	-0.021
	(33.987)	(41.413)	(38.726)	(-0.458)
Public Dummy	0.023	0.050**	9.409***	-0.029
	(0.187)	(2.468)	(4.384)	(-0.290)
Dealer Age (Log)	0.073*	-0.006*	-1.262***	0.021
	(1.718)	(-1.926)	(-2.671)	(0.548)
State GDP (Log)	-0.026	0.021	2.762	-0.044
	(-0.191)	(1.333)	(1.575)	(-0.423)
Local Employment (Log)	-0.255	0.001	-2.080	0.113
	(-1.020)	(0.110)	(-0.727)	(0.362)
Local Income (Log)	0.109	0.008	1.861	0.070
	(0.775)	(0.754)	(0.988)	(0.334)
Local Population (Log)	0.196	0.013	2.719	0.090
	(1.115)	(0.935)	(1.115)	(0.312)
Local Establishment (Log)	0.119	-0.013	-0.718	-0.026
	(0.927)	(-1.139)	(-0.485)	(-0.228)
State Interest Tax	0.013	0.002	0.077	0.004
	(1.466)	(1.415)	(0.582)	(0.804)
Tax Outside State	0.164***	-0.002	0.570	0.055*
	(6.868)	(-0.447)	(0.406)	(1.817)
Time Trend	-0.021***	-0.003***	-0.344***	-0.010
	(-2.734)	(-3.254)	(-3.242)	(-1.484)
Investment Grade				-0.083**
				(-2.213)

Rating Missing				-0.039
				(-0.877)
Maturity (Log)				0.231***
				(17.129)
Coupon (Log)				0.261***
				(33.433)
Issue Size (Log)				-0.147***
				(-22.223)
G.O. Bond				-0.109***
				(-5.084)
Advisor				-0.041***
				(-3.234)
No. Managers				0.022***
				(9.335)
Tax Exempt				-0.057***
				(-5.080)
Insured				0.055***
				(4.412)
Guaranteed				0.073
				(1.207)
Letter Credit				-0.040*
				(-1.868)
Constant	-4.745***	-0.453**	-60.043**	0.567
	(-2.716)	(-2.125)	(-2.164)	(0.245)
Observations	293,910	293,910	221,409	20,719
Pseudo R2 / Adj. R2	0.438	0.304	0.314	0.569
Log Likelihood	-30,381			
Year, State, Dealer Dummy	Yes	Yes	Yes	Yes

This table reports the difference-in-differences analysis results for political connection's impact on underwriters' market share and bond issuance costs. The sample includes both negotiated deals and competitive deals. The dependent variables in Models (1) - (4) are dummy variable of being hired, underwriter's market share, underwriter's market share growth, and underwriting fees. Political Donation Dummy equals 1 if there is a donation during the recent five years. It equals 0 otherwise. Negotiated Dummy equals 1 if an issue is a negotiated deal. It equals 0 otherwise. Negotiated-Donation is an interaction term of Political Donation Dummy and Negotiated Dummy. The independent variables are defined in Appendix D. Year, Underwriter and State/Issuer fixed effects are included. Standard errors are clustered by local political subdivisions in Models (1) - (3) and by issuer in Model (4). Robust z/t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table 8 presents the results for the diff-in-diff regression. The dependent variable in Model (1) is a dichotomous variable that equals 1 if the underwriter is hired. It equals 0

otherwise[22]. The coefficient of the interaction term *Negotiated-Donation* in Model (1) is significantly positive. This means political donations are associated with an underwriter's chance of being hired for a negotiated sale after controlling for the underwriter choice of a competitive deal. The dependent variable in Model (2) is logged dealer market share and the coefficient of *Negotiated-Donation* is also significantly positive. This means an investment bank's political donations are positively associated with its market share on negotiated deals even after controlling for the market share of competitive deals between the issuer and the underwriter. The reported result in Model (3) is consistent with the baseline results. *Negotiated Dummy* in Model (4) has a positive coefficient of 0.103, which lends support to the finding of Brown (2016) that gross spread of negotiated deals is significantly higher than that of competitive deals due to the complexity of negotiated sales. After controlling for the gross spread difference between a negotiated deal and a competitive deal, it is still more expensive to sell bonds through contributing banks.

Rewarding Behavior Analysis

Table 9 presents the robustness test for the possible reversed effect between market share change and an underwriter's future donation.

Table 9
Rewarding Effect on Future Political Donations

Variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
Market Share	**7.745**	**11.470**	**30.744***			
	(1.208)	**(1.030)**	**(1.669)**			
Market Share Growth (Log)				**0.130**	**0.187**	**0.369**
				(1.412)	**(1.164)**	**(1.556)**
Dealer-Issuer History (Past10)	-7.396	-27.542	-37.062	-12.471	-36.767	-48.844
	(-0.289)	(-0.542)	(-0.510)	(-0.441)	(-0.661)	(-0.615)
Past Donation Dummy [t-2,t]	3,056.038***	6,697.117***	9,293.694***	3,225.976***	7,021.249***	9,682.668***
	(4.162)	(4.662)	(4.468)	(4.355)	(4.825)	(4.590)

[22] In an unreported test, coefficient of *Donation Dummy* is not significant for competitive deals. It suggests that political donations have no impact on an underwriter's market share of competitive deals.

Local Office	25.152**	36.501*	59.578**	29.670**	42.125*	73.156**
	(2.394)	(1.921)	(2.146)	(2.515)	(1.920)	(2.228)
Lagged Dealer Share (Log)	-23.857**	-50.693**	-75.913**	-26.705**	-58.731**	-89.952**
	(-2.134)	(-2.152)	(-2.171)	(-2.174)	(-2.183)	(-2.222)
Lagged Local Share (Log)	135.045***	269.583***	420.145***	153.352***	308.266***	485.114***
	(4.317)	(4.406)	(4.228)	(5.764)	(5.799)	(5.577)
Lagged Dealer-Local (Log)	76.278**	136.850**	191.111**	75.861**	136.016**	191.960**
	(2.460)	(2.314)	(2.293)	(2.336)	(2.201)	(2.227)
Public Dummy	37.753	62.774	75.057	39.418	70.807	87.009
	(0.885)	(0.747)	(0.638)	(0.706)	(0.628)	(0.526)
Dealer Age (Log)	-9.166	-11.452	-8.077	-3.752	-6.428	-4.286
	(-0.585)	(-0.370)	(-0.173)	(-0.148)	(-0.125)	(-0.055)
State GDP (Log)	-30.873	-53.478	-36.559	-15.688	-35.466	1.991
	(-0.570)	(-0.502)	(-0.230)	(-0.285)	(-0.317)	(0.012)
Employment (Log)	88.663	152.102	223.021	209.446**	372.177**	541.841**
	(1.354)	(1.325)	(1.331)	(2.523)	(2.497)	(2.355)
Local Income (Log)	24.603	57.703	101.361	-28.093	-35.864	-26.978
	(0.353)	(0.459)	(0.561)	(-0.402)	(-0.276)	(-0.136)
Local Population (Log)	-40.679	-64.608	-87.635	-139.006	-242.028	-333.532
	(-0.458)	(-0.400)	(-0.377)	(-1.521)	(-1.391)	(-1.246)
Establishment (Log)	-54.848	-106.077	-164.631	-73.964	-143.172	-231.138
	(-0.732)	(-0.791)	(-0.859)	(-0.805)	(-0.868)	(-0.967)
State Interest Tax	-3.345	-7.493	-7.612	-5.500	-12.465	-12.676
	(-0.799)	(-0.908)	(-0.637)	(-0.885)	(-1.021)	(-0.723)
Tax Outside State	9.834	21.471	35.529	10.099	25.078	42.569
	(0.567)	(0.623)	(0.705)	(0.534)	(0.663)	(0.759)
Time Trend	1.004	1.244	-1.589	1.772	3.463	0.622
	(0.512)	(0.378)	(-0.344)	(0.753)	(0.824)	(0.096)
Constant	22.205	-78.584	-821.515	291.178	513.703	-192.637
	(0.037)	(-0.083)	(-0.647)	(0.441)	(0.480)	(-0.130)
Observations	148,389	148,389	148,389	120,054	120,054	120,054
Adjusted R2	0.0681	0.109	0.116	0.0717	0.114	0.120
Year, State, Dealer Dummy	Yes	Yes	Yes	Yes	Yes	Yes

This table reports the reversed impact of underwriter's market share growth on underwriter's future political donations. The dependent variable is the cumulative amount of political donations an underwriter makes in the future 1 through 3 years. Market Share (Log) is logged underwriter's market share. Market share growth (Log) is the change of logged underwriter's local market share. The independent variables are defined in Appendix D. Year, Underwriter and State/Issuer fixed effects are included. Standard errors are clustered by local political subdivisions. Robust t-statistics are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Dependent variables in Models (1) - (3) and Models (4) - (6) are political donation amounts for the next 1 through 3 years. The independent variable of interest in the first

three columns is logged market share. The coefficients are all positive but Model (3) has a significant T value at 10% level. This suggests an underwriter's current market share is positively associated with the bank's future donation but this rewarding effect is not strongly significant. The independent variable interest in Models (4) - (6) is logged market share growth. Their T values are not significant, suggesting an underwriter that experiences an increase in the market share is not likely to make donations to reward the bond issuer.

Dealer-Issuer History (Past 10) has insignificant T values in Table 9. This suggests the past business relation cannot predict future donations. *Past Donation Dummy* has strong and positive T values in predicting underwriters' future donations. This suggests that past contributors are more likely to continue donating in the future. In an unreported table, I use a subsample of underwriters with positive market share to examine the rewarding pattern and similar results are found as in Table 9.

Overall, the finding in Table 9 suggests that banks with high market share do not reward the bond issuers by making more donations. Banks experiencing an increase in their market share do not tend to make more donations in the future either.

CHAPTER VI

CONCLUSION

A growing body of recent research investigates the incentive and the value of corporate political connections. There are two opposite views on such political contributing behavior: (1) firms use political donations as a corporate investment in order to receive government contracts; (2) firms use political donation as a means to provide valuable information to government which could improve the decision-making process. This paper uses an original data set on investment banks' donations over two decades and investigates the question: whether political contributing banks obtain more government bond business than non-contributing banks.

First, I focus on the impact of political donations on negotiated deals between investment banks and local government issuers. The finding shows political connections have a strong impact on the underwriter selection process for negotiated deals. On average, making donations to local government officials is associated with 19.6% more business after controlling for underwriter's past relationship with the issuer, underwriter's reputation, location, and local economy factors. The result continues to hold after including underwriters' fixed effects. This finding lends support to the political-investment hypothesis. It documents a direct cash flow channel through which political connections are valuable to underwriting banks.

The second focus of the paper is the economic implication of political donations on bond issuers. Using gross spread as a measure of bond issuance cost, I find that hiring a contributing bank as the lead underwriter is associated with 4% higher issuance expense, compared with bonds sold by non-contributing banks. This result remains robust

after controlling for issuer credit ratings, bond structures, and underwriter characteristics. The evidence is inconsistent with the information-sharing hypothesis that believes political donations provide valuable information to the issuer official. This economic distortion provides evidence on *quid pro quo* arrangements in the municipal bond market where donating investment banks receive higher fees from their connected issuers.

Using close campaign election results in a RDD analysis, I study the effect on underwriting business between banks supporting elected candidates and banks supporting unelected candidates. The finding shows donations made to winning candidate are positively associated with an investment bank's underwriting business, compared with donating to an unelected candidate. The results lend further support to the value of political influence on the underwriter selection process in the municipal bond market.

In a two-state regression analysis, I use state-level corruption convictions as an instrumental variable. The results are robustly consistent with the baseline models. Among factors determining an underwriter's donating choice, I find investment banks that have an office in the local area are more likely to make political donations to local officials (Butler, Fauver, and Mortal 2009). The finding also shows investment banks are more likely to donate money to prospective bond issuers. This is consistent with the political-investment hypothesis that suggests donating banks have more incentives to connect with issuers with greater business opportunities. I find that banks with good reputation are less likely to make donations. This is consistent with Duchin and Sosyura's (2012) finding that firms with good performance are more politically independent because their survival is less likely to rely on their political relationship with the government. In a difference-in-differences analysis, I compare the political effect

between negotiated deals and competitive deals. After controlling for donation's effect on competitive deals, political contributions are strongly associated with more negotiated contracts. Using the amount of future donations as dependent variable, I find that underwriters' current relative market share and the growth of their market share are positively associated with the amount of donations they are going to make in the next 3 years. But this predictive effect appears to be statistically insignificant.

Overall, this paper sheds light on the debate: whether political contributing banks are favorably treated in the government bond market? The finding shows that not only political contributing underwriters are more likely to be hired in negotiated deals, but they are also paid higher fees in the primary bond market. This finding suggests that political donations are still valuable to municipal underwriters even after the introduction of Rule G-37, a rule intends to cease the business soliciting practice in the municipal bond market. While donations to individual candidates are restricted to a great extent, donations to political parties still have a strong influence on investment banks' bond business with local officials. More rigorous regulations on such donation channel should be considered in order to completely terminate the *pay-to-play* practice in the municipal bond market.

APPENDIX A

A SAMPLE OF FORM G-37

A0844-38

FORM G-37/G-38

MSRB

Name of dealer: Kirkpatrick, Pettis, Smith, Polian Inc.

Report period: January 1, 2001 – March 31, 2001

I. CONTRIBUTIONS made to issuer officials (list by state)

State	Complete name, title (including any city/county/state or other political subdivision) of issuer official	Contributions by each contributor category *(i.e.,* dealer, dealer controlled PAC, municipal finance professional controlled PAC, municipal finance professionals and executive officers). For each contribution, list contribution amount and contributor category (For example, $500 contribution by executive officer)
Nebraska	**Marc Kraft – City Council, City of Omaha**	**$250.00 – Municipal Finance Professional**
Nebraska	**Hal Daub – Mayor, City of Omaha**	**$250.00 – Municipal Finance Professional**

II. PAYMENTS made to political parties of states or political subdivisions (list by state)

State	Complete name (including any city/county/state or other political subdivision) of political party	Payments by each contributor category *(i.e.,* dealer, dealer controlled PAC, municipal finance professional controlled PAC, municipal finance professionals and executive officers). For each payment, list payment amount and contributor category (For example, $500 payment by executive officer)
Nebraska	**Nebraska Republican Party, Victory 2002**	**$2,500.00 by Corporation**
Nebraska	**Nebraska Democratic Party, Victory 2001**	**$2,500.00 by Corporation**

Source: https://emma.msrb.org/MarketActivity/PoliticalContributions.aspx

APPENDIX B

TOP ISSUERS AND CONTRIBUTORS

Local	Top Issuers		Top Connected States/Counties/Cities		Top Connected Political Parties/Committees		Top Underwriting Banks		Top Donating Banks	
	Local Name	Issue (Billion $)	Local Name	Total ($)	Local Party	Total ($)	Underwriter	Issue (Billion $)	Underwriter	Total ($)
State	NY	359.38	NY	945,467	State Republican Party	1,304,0	J.P. Morgan Securities	391.8	Goldman, Sachs	596,000
	CA	270.92	FL	636,213	State Democratic Party	744,64	Citigroup Global Markets	369.83	William R Hough	385,950
	CT	244.22	IL	574,275	State Republican Committee	637,84	Goldman, Sachs	313.5	Citigroup Global Markets	362,982
	MA	211.06	CA	349,417	State Democratic Committee	459,27	UBS Securities	288.66	Mesirow Financial	297,900
	NJ	129.08	MO	256,175	Public Securities Association	153,31	Merrill Lynch	256.27	Raymond James	280,406
County	Nassau (NY)	24.61	New York (NY)	113,000	County Republican Committee	291,11	Citigroup Global Markets	51.14	Goldman, Sachs	101,500
	Harris (TX)	19.14	Bucks (PA)	54,350	County Republican Party	91,928	J.P. Morgan Securities	30.01	First Union Capital Markets	76,030
	Miami-Dade (FL)	15.61	Delaware (PA)	28,463	School District	72,000	UBS Securities	20.45	Janney Montgomery Scott	73,295
	Clark (NY)	12.26	Cook (IL)	27,265	County Democratic Party	66,200	Goldman, Sachs	18.28	Ej De La Rosa	72,000
	Suffolk (NY)	11.3	Burlington (NJ)	23,900	County Democratic Committee	57,115	Lehman Brothers	18.1	Broadpoint Capital	33,630
City	New York (NY)	122.01	Philadelphia (PA)	9,000	Local Republican Committee	15,010	J.P. Morgan Securities	86.64	William Blair	9,470
	Chicago (IL)	59.62	New Trier (IL)	6,470	Local Republican Party	10,030	Citigroup Global Markets	77.2	First Union Capital Markets	9,090
	Los Angeles (CA)	35.47	Bridgeport (CT)	5,000	Local Democratic Party	5,800	Goldman, Sachs	62.2	Roosevelt & Cross	5,580
	Houston (TX)	23.69	Easthampton (NY)	5,000	City Democratic Committee	5,280	UBS Securities	47.09	Legg Mason Wood Walker	5,425
	San Antonio (TX)	21.65	Long Beach (NY)	3,830	City Republican Committee	3,550	Merrill Lynch	41.08	Morgan Stanley	5,000

This table presents the summary statistics of bond issue, underwriting amount, political donation to local parties for the top five investment banks in states, counties and cities. Underwriting amount is the total amount underwritten by the underwriter in each state, county and city. Total donation is the total amount of political donations in each state, county and city. Count is the number of political donations in each state, county and city.

APPENDIX C

DESCRIPTIVE STATISTICS FOR BOND ISSUES

Variable	Issues with Donations					Issues without Donations				
	N	Mean	Std.	Min	Max	N	Mean	Std.	Min	Max
Underwriting Fee	1,915	7.38	4.14	0.38	27.50	17,563	6.87	4.41	0.38	27.50
Underwriting Fee (Log)	1,915	2.01	0.49	0.32	3.35	17,563	1.92	0.54	0.32	3.35
Donation Amount ($1,000)	1,915	31.46	52.21	0.03	315.75	17,563	0.00	0.00	0.00	0.00
Dealer-Issuer History (Past10)	1,915	0.96	0.19	0.00	1.00	17,563	0.90	0.30	0.00	1.00
Local Office	1,915	0.76	0.43	0.00	1.00	17,563	0.39	0.49	0.00	1.00
Investment Grade	1,915	0.87	0.34	0.00	1.00	17,563	0.88	0.32	0.00	1.00
Rating Missing	1,915	0.13	0.33	0.00	1.00	17,563	0.11	0.31	0.00	1.00
Maturity (Log)	1,915	3.12	0.54	0.21	4.61	17,563	3.07	0.63	0.01	4.61
Coupon (Log)	1,915	1.23	0.85	0.00	2.32	17,563	1.27	0.83	0.00	5.48
Issue Size (Log)	1,915	17.61	1.57	12.75	21.58	17,563	17.87	1.45	11.57	22.71
G.O. Bond	1,915	0.04	0.20	0.00	1.00	17,563	0.12	0.33	0.00	1.00
Lagged Dealer Share (Log)	1,915	1.41	0.90	0.00	2.87	17,563	1.66	0.91	0.00	2.87
Lagged Local Share (Log)	1,915	0.97	0.53	0.02	1.80	17,563	0.61	0.42	0.00	1.80
Lagged Dealer-Local Share (Log)	1,915	0.19	0.23	0.00	0.93	17,563	0.10	0.14	0.00	0.87
Advisor	1,915	0.51	0.50	0.00	1.00	17,563	0.58	0.49	0.00	1.00
No. Managers	1,915	2.83	2.85	1.00	36.00	17,563	2.93	2.63	1.00	56.00
Tax Exempt	1,915	0.68	0.47	0.00	1.00	17,563	0.69	0.46	0.00	1.00
Insurance	1,915	0.32	0.47	0.00	1.00	17,563	0.25	0.43	0.00	1.00
Guarantee	1,915	0.00	0.06	0.00	1.00	17,563	0.00	0.06	0.00	1.00
Letter Credit	1,915	0.19	0.39	0.00	1.00	17,563	0.14	0.35	0.00	1.00
State GDP (Log)	1,915	12.99	0.92	10.00	14.61	17,563	12.47	1.07	9.52	14.61
Local Income (Log)	1,915	10.43	0.22	9.88	11.05	17,563	10.46	0.25	9.72	11.18
Local Employment (Log)	1,915	15.61	0.79	12.83	16.88	17,563	14.89	1.08	11.57	16.88
Local Population (Log)	1,915	16.18	0.82	13.24	17.46	17,563	15.41	1.13	11.80	17.46
Local Establishment (Log)	1,915	12.62	0.83	9.82	14.14	17,563	11.88	1.10	7.89	14.14
State Interest Tax	1,915	5.19	1.87	0.00	10.47	17,563	4.74	2.26	0.00	11.98
Tax Outside State	1,915	0.95	0.22	0.00	1.00	17,563	0.84	0.36	0.00	1.00
Time Trend	1,915	9.45	4.51	1.00	20.00	17,563	11.48	5.48	1.00	20.00

This table presents the summary statistics for the group of observations with political donations to local parties, political donations to campaign candidates, and observations with no donations in the most recent five years [t-4, t]. Each bond issue identifies an observation. Columns 2-6 include observations with political donations to local parties in the recent five years. Columns 7-11 include observations with no donations in the recent five years. Variable definitions are reported in Appendix D.

APPENDIX D

VARIABLE DEFINITIONS

Variables	Definition
Political Donation Dummy	Political payment to local political parties [t-4, t].
Donation Amount ($)	Total payment amount over the recent 5 years [t-4, t].
Hire	Equals 1 if an investment bank is hired. 0 otherwise.
Market Share (Log)	Investment bank's market share over local total issue amount in percentage.
Market Share Growth	First order difference of Market Share [t-1, t].
Underwriting Fee	Underwriter's discount per $1,000 bond. (Logged)
Local Office	Equals 1 if the underwriter has an office in the issuer's state. 0 otherwise.
Dealer-Issuer History (Past10)	Equals 1 if the underwriter and the issuer have business in the past 10 years. 0 otherwise.
Donation with History (Past10)	Interaction of Political Donation Dummy and Dealer-Issuer History (Past10).
Past Donation [t-4, t]	Equals 1 if the underwriter has made a donation in the recent 5 years [t-4, t].
Investment Grade	Equals 1 if the bond has a investment grade rating. 0 otherwise.
No Ratings	Equals 1 if the bond has no ratings. 0 otherwise.
Coupon (Log)	Logged bond coupon.
Maturity (Log)	Logged years to maturity.
Issue Size (Log)	Logged offering amount per bond issue.
Lagged Local Share (Log)	Local issue amount over the nation's total issue amount over the past 3 years.
Lagged Dealer Share (Log)	An underwriter's business over the nation's total issue amount over the past 3 years.
Lagged Dealer-Local Share (Log)	An underwriter's local market share over the local issue amount over the past 3 years.
General Obligation (G.O)	Equals 1 if the bond is a general obligation bond. 0 otherwise.
Negotiated Dummy	Equals 1 if the bond issue is a negotiated deal. 0 otherwise.
Negotiated-Donation	Interaction of Negotiated Dummy and Political Donation Dummy.
Insured Bond	Equals 1 if the bond is insured. 0 otherwise.
Enhancement	Equals 1 if the bond has credit enhancement. 0 otherwise.
Guaranteed	Equals if the bond has a guarantee provision. 0 otherwise.
Letter Credit	Equals 1 if the bond has a credit letter. 0 otherwise.
Advisor	Equals 1 if an advisor is present in a bond issue. 0 otherwise.
No. Managers	The number managers for a bond issue.
State Tax Exempt	Equals 1 if the bond is state tax exempt.
State Interest Tax	State interest tax.
Tax Outside State	Equals 1 if a state taxes investors from a different state.
GDP (Log)	Logged Gross Domestic Product in a state.
Income (Log)	Logged income in a state (county).
Establishment (Log)	Logged number of business establishments in a state (county).
Employment (Log)	Logged employment in a state (county).
Population (Log)	Logged state (county) population.
Public Company	Equals 1 if the bank is a public company. 0 otherwise.
Dealer Age (Log)	Logged investment bank's age.

Same Party Connection	Equals 1 if the dealer supports the incumbent party. 0 otherwise.
Opposite Party Connection	Equals 1 if the dealer supports the party that is not in office. 0 otherwise.
Won	Equals 1 if the supporting candidate is elected. 0 otherwise.
Vote Share	The candidate's vote share minus 50%.
Won-Vote Share	Interaction of Won and Vote Share.
Donated	Equals 1 if the dealer supports only on party.
Donated-Won	Interaction of Donated and Won.
Donated Vote Share	Interaction of Donated and Vote Share.
Donated-Won-Vote Share	Interaction of Donated, Won and Vote Share.
Corruption [t-3, t-1] (K)	Logged convictions per million populations for a state.
Predicted Donation	Predicted probability of making a donation during the recent 5 years [t-4, t].
Time Trend	Equals 1 to 20 for year 1994 to year 2013.

APPENDIX E

RULE G-37

The rule includes four general parts: (1) the business prohibition provision; (2) the solicitation restriction; (3) the indirect clause provision; and (4) the disclosure and record keeping requirements[23].

Practically, the Rule G-37 prevents underwriters from doing business with a municipal entity within two years after a contribution is made to an official[24] and requires underwriters to disclose both contributions to the campaign candidates and payments to the local political parties. Even though the rule restricts the *pay-to-play* practice to some extent[25], investment banks could still find grey areas to make contributions to individual candidates through political parties without being banned from bond businesses. The two-year business ban only regulates contributions used for specific campaign candidates. In other words, underwriters can still contribute to political parties, without triggering the prohibition, as long as the political parties do not state that they will give the money to a specific candidate.[26] For instance, an investment bank will be banned from doing business with the issuer if the bank makes a contribution of $10,000 to a republican candidate for the governor campaign. But the investment bank can circumvent the rule by giving $10,000 to the state's republican party. This "loophole" indirectly permits underwriters to build political connections with government officials so that they can continue the *pay-to-play* practice.

[23] See Original Rule G-37. http://www.msrb.org/Rules-and-Interpretations/MSRB-Rules/General/Rule-G-37.aspx
[24] The exemption would only be granted in limited circumstances such as a contribution not exceeding the de minimis limit of $250 per election when the contributor is entitled to vote for the official.
[25] Butler, Fauver, and Mortal (2009) compare the underwriting fees before and after the adoption of the Rule G-37 and find that investment-banking fees for negotiated deals significantly dropped after 1994.

[26] The Rule G-37 states underwriters should inquire of the political party how the donation would be used.

APPENDIX F

VIOLATION CASES

A Case of Business Prohibition

On March 18, 1996, a municipal finance employee of Merrill Lynch made a $1,000 donation to Lt. Governor Candidate of Indiana (Frank O'Brannon). This donation caused a two-year ban on the companies' muni business with the state of Indiana. The prohibition forced the firm to withdraw as co-underwriter of a $35 million muni business in April by the Indiana Housing Finance Authority[27].

A Case of G-37 Violation

A former Southwest Securities Inc. municipal finance employee, Mr. Kendrick, contributed $1,625 to Timothy Cahill, the treasurer of the Commonwealth of Massachusetts during 2003-2008. Timothy is responsible for selecting dealers for municipal bond business for the state. According to Rule G-37, any contribution exceeding $250 would trigger a two-year ban on the bank's muni business with the issuer.

Within two years after the contribution, Southwest Securities Inc., with the knowledge of the political contribution, participated as co-manager for 19 negotiated underwritings by the issuer. The total underwriting amount is approximate $14 billion. This breached Section 15B-(c)-(1) of the Exchange Act, MSRB Rule G-37 (b) and MSRB Rule G-37 (c). Kendrick had to pay $10,000 fine to settle the action.

[27] Merrill Executive's Political Donation in Indiana Curbs Firm's Business There, the *Wall Street Journal*, May 24, 1996, A4.

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