When the Thin Bench Gets Thinner: Investment Bank Consolidation and Municipal Finance

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WashU Finance Brown Bag
April 2024

Background

- Security issuance is a pillar of the financial system
- In the U.S. in 2022, the total amounts of new issuance are
  - Corporate equity: $102 billion
  - Corporate bond: $883 billion
  - Municipal bond: $410 billion

- Has the security issuance market reached its full potential in serving the real economy?
  - Maybe not? Could high underwriting fees be a reason?
- How should we view the underwriting fees?
  - Rightfully compensated for the skills demanded and risks involved?
  - Or, do underwriters possess market power and earn economic profits?

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Background


FINANCIAL TIMES

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OECD criticises high fees and tacit collusion in IPO underwriting

Costs for European issues about half that paid by US and Japanese companies

OECD:

- "*(For corporate IPOs,) high levels of fees and parallel pricing (akin to tacit collusion) appear to have increased (in recent years)*"
- This could have contributed to the "*decline in the number of companies tapping the public equity markets over the past decade*"

Background

Short on financial knowledge, some school districts get bad deals on bonds

Districts can fall prey to financial firms that put their own interests first

by **SARAH BUTRYMOWICZ** and **NICHOLE DOBO**
April 22, 2019

Investigate Midwest:

- Issuers (school districts) can "*easily be taken advantage of—urged to issue needless or poorly structured bonds, pushed to accept high interest rates or duped into paying hundreds of thousands in unreasonable fees*"

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Background

- To study underwriters' market power, an instinctive strategy is to use M&As as a shifter of market power
- Empirical challenge in the setting of corporate securities underwriting
  - A national market $\Rightarrow$ Hard to find a valid control group
- The municipal bond underwriting market is much more geographically fragmented
- Moreover, it is a dynamic industry with ample consolidating activities in recent decades
  - $\Rightarrow$ A natural laboratory

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Background

Underwriter in CA	Market Share in CA	Underwriter in MA	Market Share in MA
Cowen	2.7%	JP Morgan	3.8%
JP Morgan	2.6%	Cowen	3.8%
Morgan Stanley	2.0%	Jefferies	3.1%
Jefferies	2.0%	HC Wainwright	2.9%
Roth Capital Partners	2.0%	Goldman Sachs	2.8%
Goldman Sachs	1.7%	Morgan Stanley	2.8%
HC Wainwright	1.7%	Canaccord Genuity	2.6%
Citigroup	1.7%	Barclays	2.0%
William Blair	1.5%	Oppenheimer	1.9%
Stifel Nicolaus	1.5%	Citigroup	1.8%

Table: Top Ten Corporate Equity Underwriters in 2010-2020 in CA and MA

Background

Underwriter in CA	Market Share in CA	Underwriter in MA	Market Share in MA
Bank of America Merrill Lynch	6.8%	JP Morgan	8.1%
JP Morgan	6.7%	Bank of America Merrill Lynch	6.3%
Morgan Stanley	4.8%	Barclays	4.5%
Citigroup	4.6%	Morgan Stanley	4.3%
Goldman Sachs	4.4%	Goldman Sachs	3.5%
Barclays	3.9%	Citigroup	3.1%
Deutsche Bank	3.2%	RBC Bank	2.3%
Wells Fargo Bank	2.8%	US Bank	1.7%
RBC Bank	2.4%	Deutsche Bank	1.7%
US Bank	2.2%	Wells Fargo Bank	1.6%

Table: Top Ten Corporate Bond Underwriters in 2010-2020 in CA and MA

Background

Underwriter in CA	Market Share in CA	Underwriter in MA	Market Share in MA
Stifel Nicolaus	14.9%	Eastern Bank	15.4%
Piper Sandler	11.8%	Century Bank	7.2%
Citigroup	7.1%	TD Bank	7.1%
RBC Bank	6.6%	Robert W Baird	5.9%
Morgan Stanley	5.6%	Jefferies	5.1%
Raymond James	5.4%	JP Morgan	4.6%
Stone & Youngberg	5.3%	Morgan Stanley	4.4%
Bank of America	4.8%	Bank of America	4.2%
De La Rosa	3.6%	Fidelity Capital Markets	3.9%
JP Morgan	3.4%	Janney Montgomery Scott	3.6%

Table: Top Ten Municipal Bond Underwriters in 2010-2020 in CA and MA

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Research Question

1. Do M&As among municipal bond underwriters lead to higher underwriting fees?
2. If so, can the evidence be viewed as municipal bond underwriters having market power?
3. Do these M&As lead to efficiency gains and better services that could offset the rise in fees from the standpoint of the issuers?
4. Do these M&As worsen the financial health of local governments?

Recent Policy Discussion

- President Biden has shown support for major bank antitrust reforms (Reuters, 2021, 2023)
- A key aspect is for the Justice Department to work with bank regulators and heighten the scrutiny of bank M&A deals
- Prior research shows that bank mergers could cause branch closures (Nguyen, 2019), raise borrowing costs and fees (Garmaise and Moskowitz, 2006), reduce credit access (Fraisse et al., 2018; Ratnadiwakara and Yerramilli, 2022), and endanger communities' financial health and safety (Garmaise and Moskowitz, 2006)
- Investment banking activities are often neglected in bank antitrust scrutiny

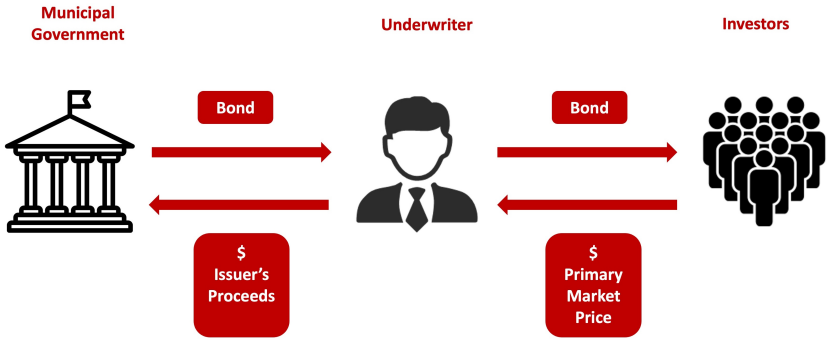
Related Literature

- Underwriter market power: Chen and Ritter (2000), Manconi et al. (2019), Cestau (2019), Cestau (2020), Garrett and Ivanov (2023)
- Financial institution M&As: Prager and Hannan (1998), Sapienza (2002), Focarelli and Panetta (2003), Garmaise and Moskowitz (2006), Erel (2011) Fraisse et al. (2018), Nguyen (2019), Ratnadiwakara and Yerramilli (2022)
- Municipal bond market: Butler et al. (2009), Cornaggia et al. (2017), Adelino et al. (2017), Gao et al. (2019), Dougal et al. (2019), Painter (2020), Goldsmith-Pinkham et al. (2023), Garrett (2023), and many more
- Competition and finance: Petersen and Rajan (1995), Boot and Thakor (2000), Hong and Kacperczyk (2010), Becker and Milbourn (2011), Gissler et al. (2020), Yannelis and Zhang (2023)

Data and Sample

- Municipal bond issuance
  - Source: SDC Platinum Global Public Finance Database
  - Variables:
    - Underwriting spread: The difference between the reoffering price to initial investors and the proceeds that the government receives, expressed as a fraction of the principal amount
- M&A sample:
  - I hand-collect M&As among municipal bond underwriters active in 1970-2022
  - I complement the sample with SDC Platinum M&A Database and SNL Financial M&A Database
  - 256 M&A deals, among which 160 have geographic overlaps

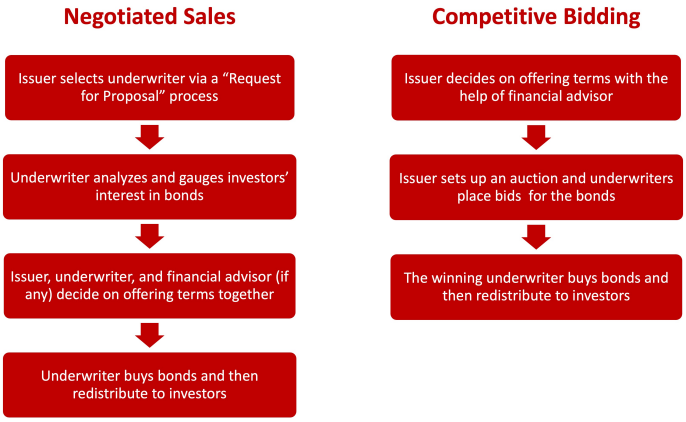
Data and Sample



Underwriting Spread ($) = Primary Market Price – Issuer's Proceeds

- Underwriters (1) assume inventory risks (2) exert marketing and distributing efforts

Data and Sample



- Negotiated sales: Underwriting spread largely determined in "Request for Proposal"
- Competitive bidding: Underwriting spread = Primary market price - Winning bid

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Data and Sample

- The municipal bond underwriting market is much more geographically fragmented compared to corporate securities underwriting
- Average cosine similarity of underwriters for a state-pair is
  - Corporate equity: 0.508
  - Corporate bond: 0.613
  - Municipal bond: 0.193
- Reasons for the highly fragmented form:
  - Local governments' favorism over local businesses
  - Local underwriters have better access to same-state investors, who are the prominent owners of municipal bonds due to tax advantages (Babina et al., 2020)
  - Accumulated, substantial experience in underwriting for nearby governments

Data and Sample

Treated: CSAs where M&As would lead to *predicted* Δ_{HHI} >= 100
$\Rightarrow$ 215 "local M&A episodes"

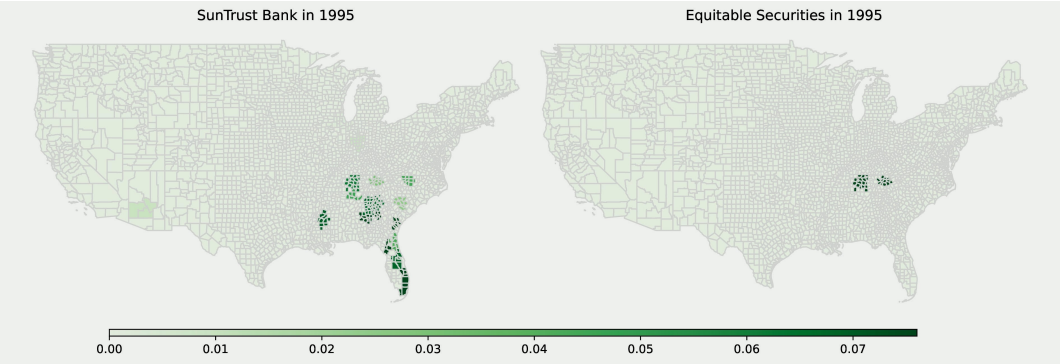
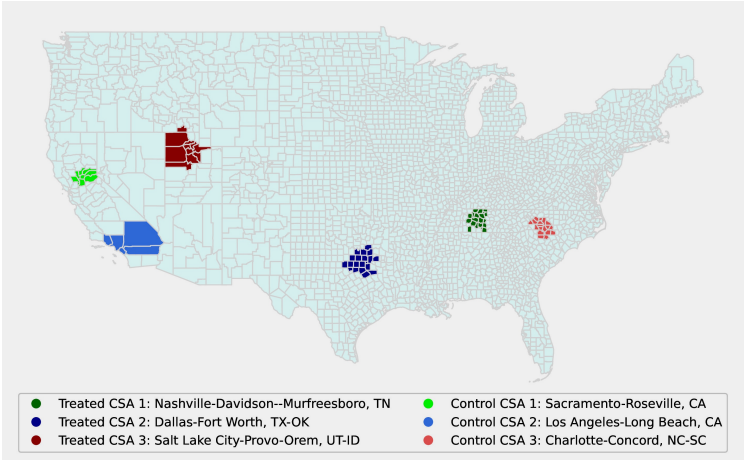


Figure: An Example of M&A and Local Market Share

Data and Sample

Control: One CSA that is closest in terms of population and income per capita, and not affected by within-market M&As during $[-4, +4]$



Main Results: Effects on Underwriting Spread

- I estimate

$$y_{d,c} = \beta_1 Treated_{a,c} + \beta_2 Post_{c,t} + \beta_3 Treated_{a,c} \times Post_{c,t} + \theta_i + \theta_t + e_{d,c}$$

  where
  - d is the subscript for each bond issue, i.e., each deal
  - a is the subscript for each Combined Statistical Area (CSA)
  - c is the subscript for each cohort of treated and control CSAs
  - i is the subscript for each issuer
  - t is the subscript for the calendar year

- Theoretically, the direction of the effect is unclear
  - M&As can bolster market power and raise underwriting spread
  - Alternatively, M&As could create synergies and reduce marginal cost

Main Results: Effects on Underwriting Spread

M&As that would lead to *predicted* Δ_{HHI} >= 100

$\Rightarrow$ A 5.3 bps. increase in underwriting spread from a sample mean of 103.0 bps.

	Predicted Δ_{HHI} >= 100	Market Share >= 5%	*Predicted* $\Delta_{Top\ 5\ Share}$ >= 5%
	(1)	(2)	(3)
	Underwriting Spread (bps.)	Underwriting Spread (bps.)	Underwriting Spread (bps.)
Treated × Post	5.307***	4.470***	4.536***
	(4.82)	(5.16)	(3.66)
Observations	89,636	170,254	82,928
Year FE	Yes	Yes	Yes
Issuer FE	Yes	Yes	Yes
Clustering	Issuer	Issuer	Issuer
Within R-squared	0.002	0.002	0.002

Table: Effects of M&As on Underwriting Spread

Main Results: Effects on Underwriting Spread

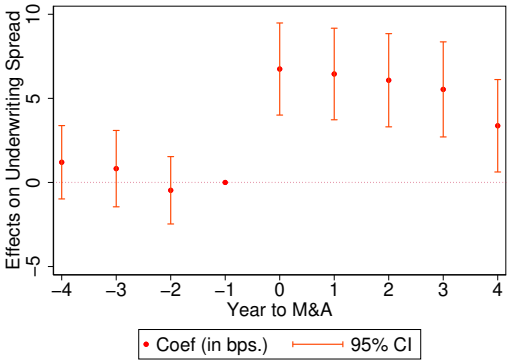


Figure: Underwriting Spread Around M&As that Lead to *Predicted* Δ_{HHI} >= 100

Main Results: Effects on Underwriting Spread

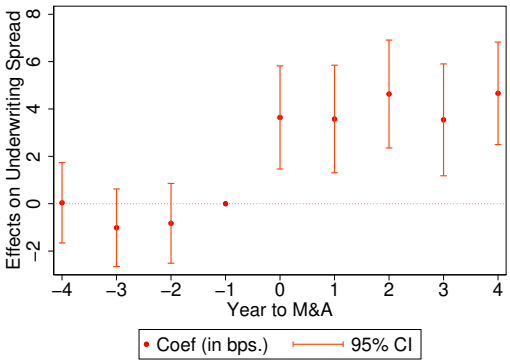


Figure: Local Market Shares >= 5%

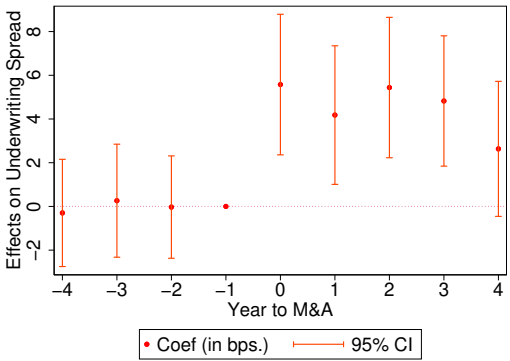


Figure: *Predicted* $\Delta_{Top\ 5\ Share}$ >= 5%

Main Results: Robustness Tests

- Include issuer $\times$ cohort fixed effects
- Include underwriter $\times$ calendar year fixed effects
- Include issuer-underwriter-match fixed effects
- Include fixed effects for each method of sale, taxable status, source of repayment, and their interactions with calendar years
- Control for the principal amount, length of maturity, and their squared terms
- Control for whether CBs are eligible to underwrite the bond issue by law
- Define the market at the finer CBSA level
- Use two or three matches

Main Results: Effects on Underwriting Spread

Going from 5 equal-sized underwriters to 4 equal-sized underwriters
$\Rightarrow$ A rise in the underwriting spread by 19.0 basis points

	(1) Underwriting Spread (bps.)	(2) HHI	(3) Underwriting Spread (bps.)
HHI	-0.001		0.038***
	(-1.60)		(4.60)
Treated × Post		139.342***	
		(3.10)	
Observations	89,636	89,636	89,636
Year FE	Yes	Yes	Yes
Issuer FE	Yes	Yes	Yes
Clustering	Issuer	CSA	Issuer
Within R-squared	0.000	0.013	

Table: Estimating the Elasticity of Underwriting Spread to HHI

Main Results: Effects on Underwriting Spread

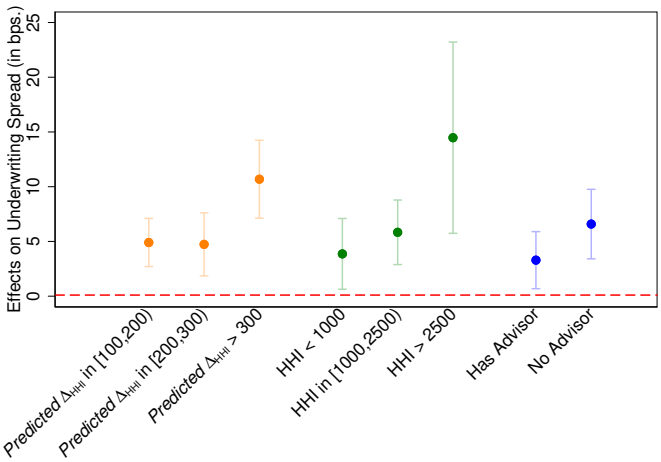
To study heterogeneity in treatment effects, I estimate

$$y_{d,c} = \sum_{g=1}^{G} \mathbb{1}_{\text{issue } d \text{ is in group } g} \times (\gamma_{0,g} + \gamma_{1,g} Treated_{a,c} + \gamma_{2,g} Post_{c,t} + \gamma_{3,g} Treated_{a,c} \times Post_{c,t}) + \theta_i + \theta_t + e_{d,c}$$

Main Results: Effects on Underwriting Spread

Consistent with increased market power

Figure: Cross-Sectional Heterogeneities in Effects



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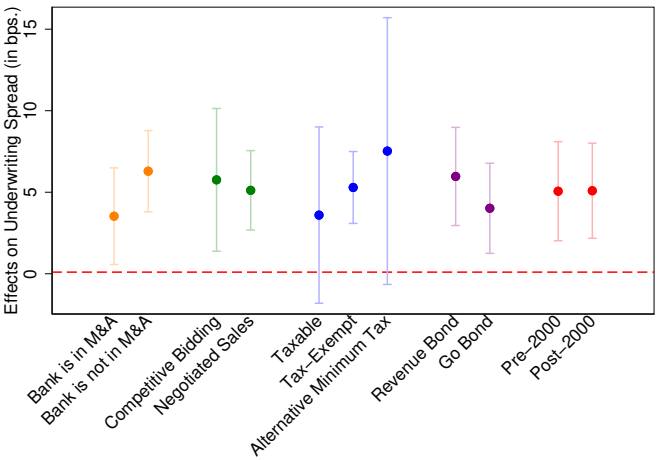
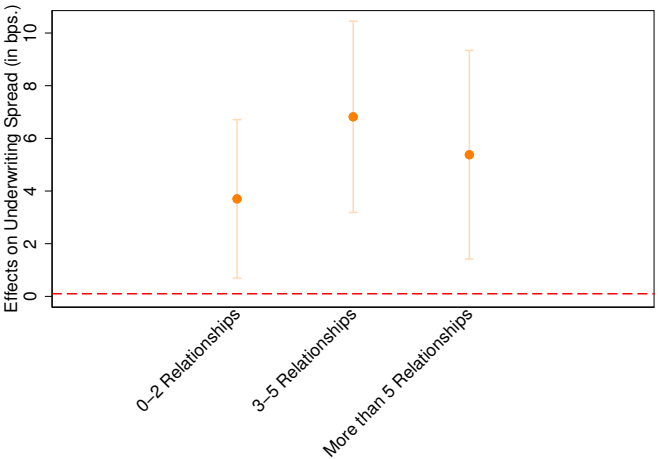


Main Results: Effects on Underwriting Spread

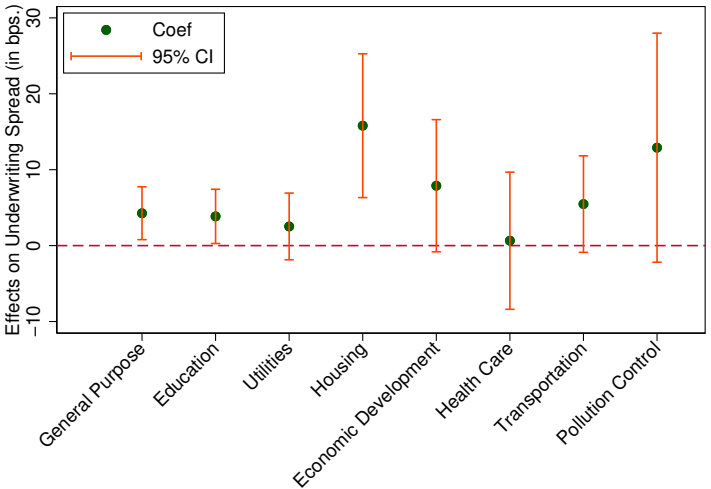
Source of market power: (a) tacit coordination ✓ (b) switching cost

Figure: Cross-Sectional Heterogeneities in Effects



Main Results: Effects on Underwriting Spread

Figure: Effects by the Main Use of Proceeds



Main Results: Establish Causality

- Main concern: Local economic dynamics drive both M&As among underwriters and the underwriting spread
- Effects hold when
  - #1: Consider only M&As for which the rationales, according to news reports, are orthogonal to the local economy
  - #2: Consider only scenarios where the M&A-affected areas account for a small fraction of the total businesses of the merging underwriters (Sunderam and Scharfstein, 2017)

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Main Results: Establish Causality

Example 1:

PNC Bank & Midlantic Bank, 1995

The Morning Call: *"The move, along with PNC Bank's pending acquisition of 84 branches of Chemical Bank New Jersey, will strengthen PNC Bank's position in the New Jersey and Philadelphia markets, placing it second in those areas."*

$\Rightarrow$ **The acquiror's desire to gain local/regional dominance**

Main Results: Establish Causality

Example 2:

RBC Bank & Dain Bosworth, 2000

The Wall Street Journal: *"The acquisition, which is subject to approval by regulators and Dain Rauscher shareholders, would give Royal Bank the toehold it has long sought in the U.S. wealth-management market."*

⇒ **The acquiror's desire to expand geographically**

Main Results: Establish Causality

Example 3:

Morgan Stanley & Dean Witter Reynolds, 1997

The New York Times: *"In recent years, as the securities markets have changed, however, both firms started to covet what the other had. Dean Witter's 9,300 brokers needed more products to sell to the firm's Main Street customers, specifically the initial public offering stocks and municipal bonds that Morgan Stanley frequently underwrites. Morgan Stanley, meanwhile, wanted to broaden its customer base beyond its corporate clients and large institutions to the individual investors who have been flocking to the market."*

$\Rightarrow$ **Synergy from combining different lines of business**

Main Results: Establish Causality

Example 4:

Stifel Nicolaus & City Securities, 2016

Indianapolis Business Journal: *" 'Post Dodd-Frank, one of the effects that it had on the entire industry was to lay a lot of additional regulatory costs on everybody—probably disproportionately on smaller firms,' Bosway (City Securities CEO Mike Bosway) said. 'So that was clearly a factor in considering this more so than we had in the past. The need for scale today, because of that, is greater than it ever had been.' "*

$\Rightarrow$ **Synergy from cost management**

Main Results: Establish Causality

Reason for M&A	Count
The acquiror's desire to gain local/regional dominance	24
The acquiror's desire to expand geographically	19
The acquiror's desire to gain industry-wide dominance	15
Synergy from combining different lines of business	14
Synergy from cost management	12
The acquiror's desire to diversify its revenue sources	12
Financial stress of the target (exposure to subprime mortgage)	5

Table: Top Reasons Behind M&As According to News Reports

Main Results: Establish Causality

	(1) Underwriting Spread (bps.)
Treated × Post	5.781***
	(3.23)
Observations	26,815
Year FE	Yes
Issuer FE	Yes
Clustering	Issuer
Within R-squared	0.002

Table: Using M&As Driven by Rationales Likely Orthogonal to Local Economic Dynamics

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Main Results: Establish Causality

	Weight of CSA <= 10%	Weight of CSA <= 5%	Weight of CSA <= 3%
	(1)	(2)	(3)
	Underwriting Spread (bps.)	Underwriting Spread (bps.)	Underwriting Spread (bps.)
Treated × Post	9.401***	9.243***	10.369**
	(4.39)	(2.89)	(2.36)
Observations	19,942	8,619	5,086
Year FE	Yes	Yes	Yes
Issuer FE	Yes	Yes	Yes
Clustering	Issuer	Issuer	Issuer
Within R-squared	0.003	0.003	0.004

Table: Using Scenarios Where the M&A-Affected Areas Account for a Small Fraction of the Total Businesses of the Merging Underwriters

Main Results: Placebo Tests

Effects are absent for

- #1: Cross-market underwriter M&As
  - $\Rightarrow$ Results are not driven by factors that lead to M&A activities of underwriters in general
- #2: Within-market (purely) commercial bank M&As
  - $\Rightarrow$ Results are not driven by factors that lead to within-market consolidation of financial institutions in general
- #3: Within-market withdrawn underwriter M&As
  - $\Rightarrow$ Results are not driven by factors that lead to both successful and withdrawn M&As

Main Results: Placebo Tests

	Market Share >= 10%		Market Share >= 0%	
	(1)	(2)	(3)	(4)
	Underwriting Spread (bps.)	Underwriting Spread (bps.)	Underwriting Spread (bps.)	Underwriting Spread (bps.)
Treated × Post	-1.969	0.689	0.847	1.621
	(-1.00)	(0.33)	(0.72)	(1.12)
Observations	31,267	53,936	126,240	119,209
Year FE	Yes	Yes	Yes	Yes
Issuer FE	Yes	Yes	Yes	Yes
Clustering	Issuer	Issuer	Issuer	Issuer
If Similar Population	No	Yes	No	Yes
Within R-squared	0.001	0.001	0.002	0.001

Table: A Placebo Test Using Cross-Market Underwriter M&As

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Main Results: Placebo Tests

Trace out geographic distribution of CBs using Summary of Deposits (Cetorelli and Strahan, 2006; Kundu, Park, and Vats, 2022)

	Predicted $\Delta_{CB\ HHI}$ >= 100	*Predicted* $\Delta_{CB\ HHI}$ >= 50
	(1)	(2)
	Underwriting Spread (bps.)	Underwriting Spread (bps.)
Treated × Post	1.027	2.638
	(0.52)	(1.56)
Observations	12,035	18,380
Year FE	Yes	Yes
Issuer FE	Yes	Yes
Clustering	Issuer	Issuer
Within R-squared	0.001	0.001

Table: A Placebo Test Using (Purely) Commercial Bank M&As

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Main Results: Offering Terms

Outcome variables:

- Reoffering Yield: Yield based on the price that initial investors pay to underwriters
- Yield Spread: Spread between municipal bond and U.S. treasury securities
- Initial Underpricing: Day 15-30 trading price minus initial trading price
- If Callable: Whether the issuer can retire the bond prior to the maturity

Main Results: Offering Terms

	(1) Reoffering Yield (bps.)	(2) Yield Spread (bps.)	(3) Initial Underpricing	(4) If Callable
Treated × Post	-2.529	-0.306	0.075**	-0.018***
	(-1.54)	(-0.33)	(2.14)	(-3.38)
Observations	170,112	157,873	36,334	259,753
Year FE	Yes	Yes	Yes	Yes
Issuer FE	Yes	Yes	Yes	Yes
Clustering	Issuer	Issuer	Issuer	Issuer
Within R-squared	0.000	0.000	0.000	0.000

Table: Effects of M&As on Offering Terms

Main Results: Efficiency Gains

- Two major themes of M&A research: Market power and efficiency gains
- Are there efficiency gains to underwriter M&As?
  - Do issuers enjoy benefits that could compensate for the rise in the underwriting spread?
- Outcome variables:
  - If using bond insurance (mean = 18.7%, average cost = 80.4 bps.)
  - If using credit ratings (mean = 15.4%, average cost = 12.4 bps.)
  - If using financial advisors (mean = 49.2%, average cost = 49.8 bps.)
- Can observe *if* using these for the whole sample, but costs are only available for California (California Debt and Investment Advisory Commission)

Main Results: Efficiency Gains

	(1) Has Rating	(2) Insured Ratio	(3) Has Advisor
Treated × Post	-0.021***	-0.014***	-0.021***
	(-4.30)	(-2.76)	(-3.66)
Observations	259,753	259,753	259,753
Controls	No	No	No
Year FE	Yes	Yes	Yes
Issuer FE	Yes	Yes	Yes
Clustering	Issuer	Issuer	Issuer
Within R-squared	0.000	0.000	0.000

Table: Effects of M&As on the Use of Credit Rating, Insurance, and Financial Advisor

Main Results: Efficiency Gains

Total issuing cost is the sum of the underwriting spread, credit rating fee (imputed), insurance fee (imputed), and financial advisor fee (imputed)

- Imputation is based on a statistical model estimated using California data

	Predicted Δ_{HHI} >= 100	Market Share >= 5%	*Predicted* $\Delta_{Top\ 5\ Share}$ >= 5%
	(1)	(2)	(3)
	Total Issuing Cost (bps.)	Total Issuing Cost (bps.)	Total Issuing Cost (bps.)
Treated × Post	4.987***	3.631***	4.696***
	(3.93)	(3.60)	(3.34)
Observations	88,419	167,656	81,953
Year FE	Yes	Yes	Yes
Issuer FE	Yes	Yes	Yes
Clustering	Issuer	Issuer	Issuer
Within R-squared	0.002	0.001	0.002

Table: Effects of M&As on Total Issuing Costs

Main Results: Local Government Finances

- Data: The Annual Survey of State and Local Government Finances conducted by the U.S. Census Bureau
- 3,386 counties, 12,282 townships, 18,584 municipalities, and 23,045 school districts from 1970 to 2022
- Motivation:
  - Validate findings from issuance outcomes
  - Fully quantify the total effects of M&As on local government finances
    - Municipal bond issues can have complex features beyond the underwriting spread and reoffering yield (Brancaccio and Kang, 2023)
    - Potential indirect effects through local fiscal multiplier (Suárez Serrato and Wingender, 2016)

Main Results: Local Government Finances

- Outcome variables:
  - Interest Paid/Total Expenditures
  - New Issuance/Total Expenditures
  - Inter-Governmental Transfer/Total Expenditures
  - Total Taxes/Total Expenditures
  - Property Tax/Total Expenditures
  - Surplus Ratio $= \frac{\text{Total Revenue}}{\text{Total Expenditure}} - 1$
- Findings are robust to using per-capita/per-student amounts or logged amounts

Main Results: Local Government Finances

I estimate

$$y_{l,t,c} = \beta_1 Treated_{a,c} + \beta_2 Post_{c,t} + \beta_3 Treated_{a,c} \times Post_{c,t} + \theta_l + \theta_t + e_{l,t,c},$$

where

- l is the subscript for each local government
- a is the subscript for each Combined Statistical Area (CSA)
- c is the subscript for each cohort of treated and control CSAs
- t is the subscript for the calendar year

Main Results: Local Government Finances

Annually, a median county impacted by consolidation

- Incurs \$0.15 million more in interest payment
- Cuts new issuance by \$1.06 million

	(1) Interest Paid/ Exp. (in %)	(2) New Issuance/ Exp. (in %)	(3) Inter-Gov. Trans./ Exp. (in %)	(4) Total Taxes/ Exp. (in %)	(5) Property Tax/ Exp. (in %)	(6) Surplus Ratio (in %)
Treated × Post	0.074**	-0.514***	-2.196***	1.424***	1.452***	-1.017***
	(2.05)	(-2.68)	(-5.88)	(3.42)	(3.56)	(-2.98)
Observations	342,378	342,378	342,378	342,378	342,378	342,378
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Government FE	Yes	Yes	Yes	Yes	Yes	Yes
Clustering	County	County	County	County	County	County
Within R-squared	0.000	0.000	0.003	0.001	0.002	0.000

Table: Effects of M&As on Local Government Finances

Evidence from State Government Finances

Main Results: Local Government Finances

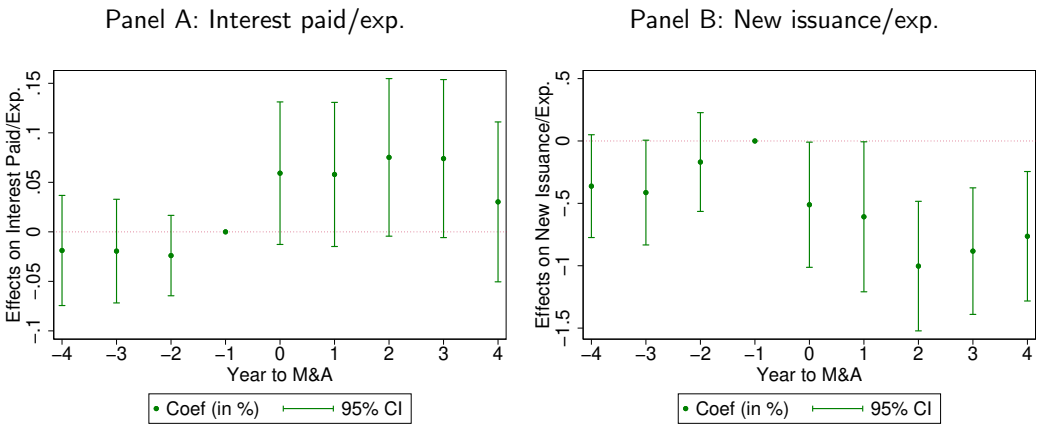
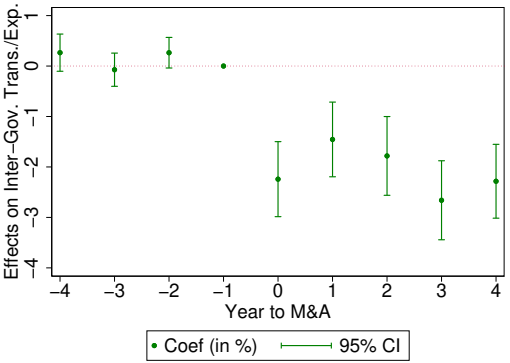


Figure: Effects of M&As on the Local Government Finances

Main Results: Local Government Finances

Panel C: Inter-gov. trans./exp.



Panel D: Total taxes/exp.

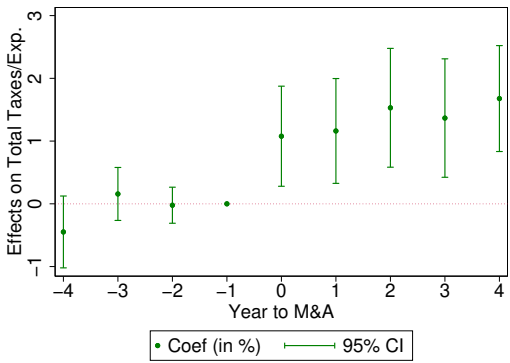
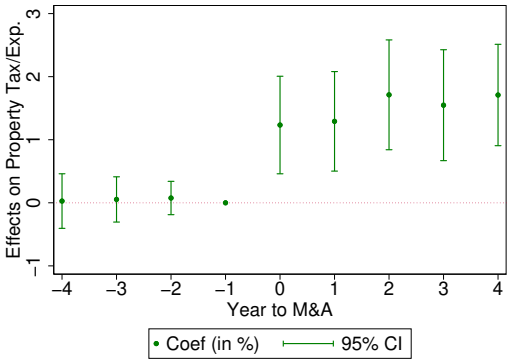


Figure: Effects of M&As on the Local Government Finances

Main Results: Local Government Finances

Panel E: Property tax/exp.



Panel F: Surplus ratio

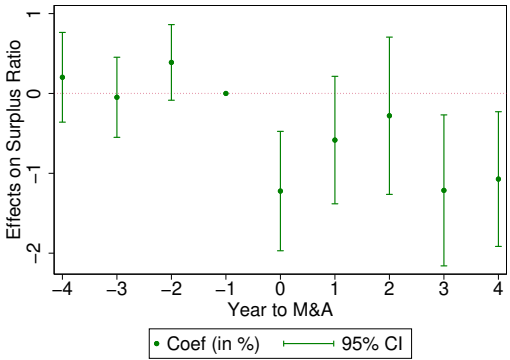


Figure: Effects of M&As on the Local Government Finances

Main Results: Local Government Finances

- School District: Reduced issuance, raised taxes, and no effect on budget surplus
- Municipality/Township/County: No issuance reduction, higher interest cost, no tax raise, and negative effects on budget surplus

	(1) Interest Paid/ Exp. (in %)	(2) New Issuance/ Exp. (in %)	(3) Inter-Gov. Trans./ Exp. (in %)	(4) Total Taxes/ Exp. (in %)	(5) Property Tax/ Exp. (in %)	(6) Surplus Ratio (in %)
Treated × Post × Is School Dist.	-0.020	-1.138***	-4.242***	3.734***	3.836***	-0.080
	(-0.45)	(-3.70)	(-5.30)	(4.19)	(4.48)	(-0.22)
Treated × Post × Is Other Gov.	0.140**	-0.061	-0.706***	-0.286	-0.339	-1.755***
	(2.46)	(-0.30)	(-2.81)	(-1.10)	(-1.45)	(-3.88)
Observations	342,378	342,378	342,378	342,378	342,378	342,378
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Government FE	Yes	Yes	Yes	Yes	Yes	Yes
Clustering	County	County	County	County	County	County
Within R-squared	0.001	0.000	0.009	0.005	0.008	0.001

Table: School District Versus Municipality/Township/County

Conclusion

- The underwriting spread for municipal bonds rises after M&As among underwriters
- Results are consistent with a market power interpretation
- Despite some efficieny gains, the issuers are hurt overall
- The findings provide a novel perspective on bank antitrust regulations that traditionally focus on deposit-taking and lending activities
- Can the conclusion be generalized to corporate securities underwriting?
  - CFOs and other financing staffs in corporations might have more specialized or effective financial training and are less susceptible to market power
  - On the other hand, potential collusive benefits per-deal is greater, which can give more incentive for coordination
  - Future research that builds on the contribution of Chen and Ritter (2000) and Manconi et al. (2019) will give a more complete answer

Main Results: Local Government Finances

	(1) Total Trans. to Local/Exp. (%)	(2) Total Construction /Exp. (%)	(3) Total Capital Outlay/Exp. (%)	(4) Total Current Operation/Exp. (%)	(5) Interest Paid /Exp. (%)	(6) New Issuance /Exp. (%)
Treated × Post	-0.953**	0.419*	0.301	-0.419	0.575	0.168
	(-2.05)	(1.86)	(1.14)	(-0.74)	(1.41)	(1.48)
Observations	1,079	1,079	1,079	1,079	1,079	1,079
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Clustering	State	State	State	State	State	State
Within R-squared	0.073	0.014	0.013	0.012	0.011	0.009

Table: Effects of M&As on State Government Finances

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