Limits of Disclosure Regulation in the Municipal Bond Market

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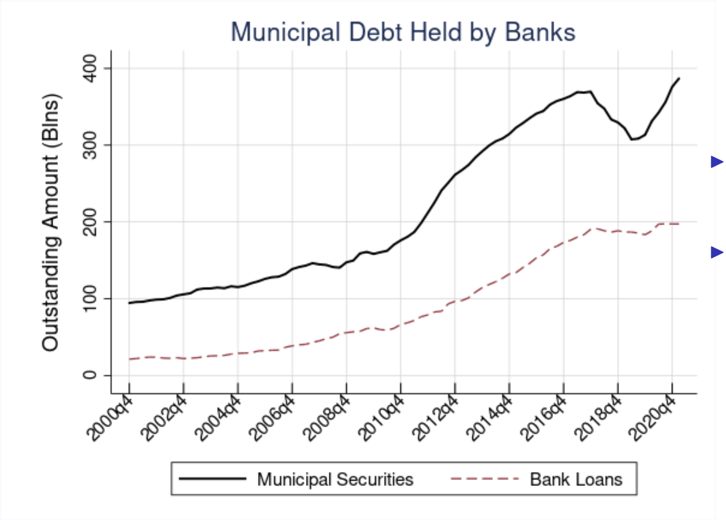
*The views stated herein are those of the authors and are not necessarily the views of the Federal Reserve Board or the Federal Reserve System.

Outline

Increased reliance of governments on private debt



- State and local governments more reliant on private debt.
- Why is this important?
  - Adding private debt to municipal debt structure likely to affect municipal bond investors.

Are risks to bond investors still high?

- Municipal private debt may be more senior than bonds of the same issuer (Ivanov and Zimmermann 2021):
  - Bank loans have significantly shorter maturities than bonds of the same issuer.
  - Private debt secured by specific revenue streams.
- No disclosure requirements until 2019.
- Recent SEC disclosure regulation attempts to remedy such concerns.
- Is the regulation effective?

Our results suggest the regulation has limited effectiveness

- Roughly 50% of municipal issuers are now required to report private debt.
- Whenever disclosures occur, their information content varies widely.
- Confidential data reveal only about 20%-46% of private debt events are disclosed.
- Private debt remains a significant source of risk for bond investors.

Outline

Amendments to SEC Rule 15c2-12

- Finalized in August 2018 and implemented on February 27^{th} 2019
- Require disclosure of private debt events within 10 business days:

  "Incurrence of a financial obligation . . . or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the issuer or obligated person, any of which affect security holders, if material . . ."

  ". . . modification of terms . . . of a financial obligation of the obligated person, any of which reflect financial difficulties."

- Extent which the rule captures the economic activity in private debt markets is unclear:
  - Ambiguity as to whether rule applies to originations, renegotiations, or both.
  - Renegotiation of private debt is frequent and changes contract terms significantly.

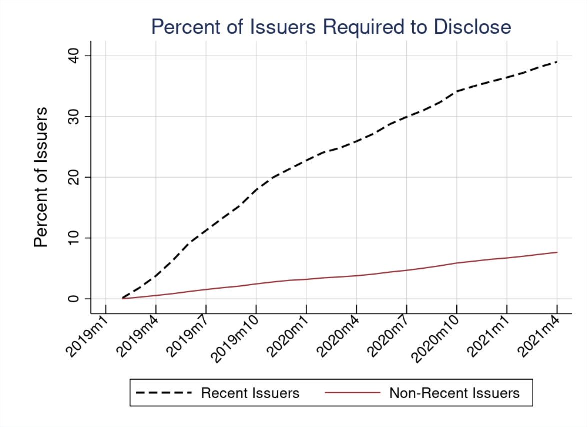
Amendments to SEC Rule 15c2-12 (continued)

- Events triggering requirements to disclose private debt:
  - Issue bonds with principal amount of at least $1 million since the rule's implementation
  - **Exempts** issues sold to less than 35 sophisticated investors in denominations of $100,000 or more.
  - **Exempts** issues with maturity of $\leq$ 9 months and in denominations of $100,000 or more.
- The underwriter in a bond offering triggering CD has to ensure regulation compliance:
  - The underwriter enters into a CD agreement with the issuer.
  - The issuer then reports all agreements to material private debt contracts

Municipal financing data

- Disclosure data from MSRB's Continuing Disclosure Feeds.
- Loan-level municipal bank loans data from the Federal Reserve's Y-14 Collection:
  - Loans extended since 2011 by the 37 largest banks in the U.S
  - Loan amounts, maturities, interest rates, contractual provisions
- Identify all governments required to disclose private debt (Mergent):
  - Detail on the timing/specifics of public bond issues
- MSRB secondary market data
- Balance sheet data from the Census of Governments

Outline

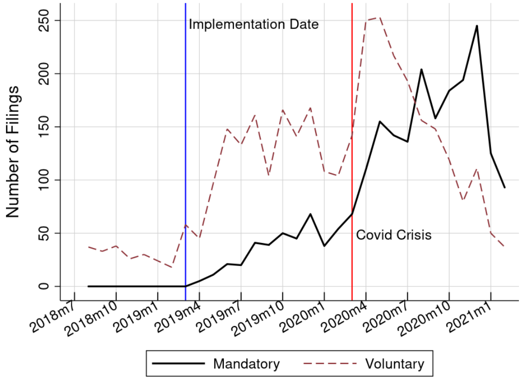


- Roughly half of municipal issuers are now required to disclose private debt.
- Larger governments with greater reliance on borrowing more likely to have to disclose.

Outline

Disclosures over time

- A total of 5,797 disclosure filings since the implementation of the rule.
- The majority of disclosures are voluntary, pattern reverses after the onset of Covid.



- Only 2,209 mandatory filings relative to the roughly 13,000 issuers required to disclose.

Substantial heterogeneity in information content

- We hand collect contract information by manually reading nearly 2,300 disclosure filings.
- Most filings detail obligation amounts but other information missing or difficult to process:
  - About a third of filings do not detail debt maturity or interest rates.
  - The majority of filings do not contain term sheets (summaries)
  - Yet, many contracts exceed hundreds of pages of legal text.
- "Plain English, please!" former SEC chairman Arthur Levitt

A disclosure example (best case scenario)

Dear Vicki:

Pursuant to your interest in obtaining financing for **West Lampeter Township,** S&T Bank is proposing the following terms and conditions:

Borrower:	West Lampeter Township
Amount:	$2,000,000
Rate:	3.35% (tax-free) fixed for the duration of the loan; the taxable equivalent rate would be 4.18%.
Commitment Fee:	$3,000; to include all attorney's fees.
Repayment:	Interest only for the 1st year, followed by principal and interest per month
Amortization:	1 year interest only; followed by a 4 year amortization
Term:	5 years
Security:	Full faith, credit, and available taxing power of West Lampeter Township.
Guarantors:	None.
Purpose:	To establish a Series 2019 note for the purposes of renovating Village Park.

Disclosure informativeness

- The bond market reaction to disclosure events reveals the extent to which disclosure is informative.
- Estimate abnormal returns around disclosure events:
  - Construct municipal bond indexes based on 6 maturity and 4 rating categories.
  - Arrive at average abnormal returns relative to the index returns.
- Sample splits:
  - *Before* and *after* the onset of Covid-19.
  - Mandatory vs. voluntary disclosures.

Abnormal bond returns

	Mandatory			Voluntary		
	All	Pre-Covid	Post-Covid	All	Pre-Covid	Post-Covid
Abn. Bond Returns	0.095	-0.365**	0.192**	0.011	-0.065	0.058
	(0.076)	(0.152)	(0.075)	(0.085)	(0.083)	(0.113)
Observations	65,435	11,450	53,985	74,169	28,059	46,110
Number of Events	3,200	655	2,545	2,973	1,538	1,435

- Mandatory filings associated with significant abnormal bond returns.
- Incurring private debt has large adverse effects on bond valuations!
- Obtaining financing after the onset of Covid represents positive news (liqudity channel).

Abnormal bond returns and issuer credit risk

	Pre-Covid			Post-Covid		
	AAA-AA	A	BBB & Lower	AAA-AA	A	BBB & Lower
Bond Return	-0.088	-0.650**	-1.031***	0.258***	0.058	0.244**
	(0.141)	(0.281)	(0.281)	(0.081)	(0.100)	(0.121)
Observations	6,856	3,044	1,550	30,091	17,221	6,673
Number of Events	435	158	56	1,676	761	254

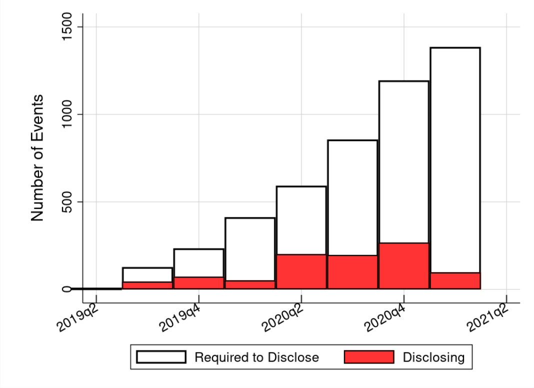
- Adverse effects concentrated among lower credit quality issuers.
- Obtaining financing after the onset of Covid benefit issuers across the credit spectrum.

Outline

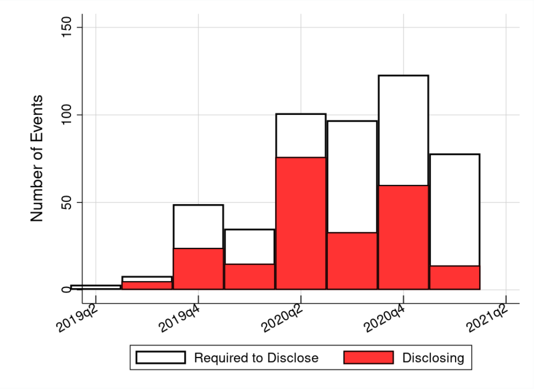
Do issuers underreport private debt?

- Gain insight into this question using Y-14 data.
- Identify loan events as originations or significant renegotiations of prior loan agreements:
  - Renegotiations: loans with changes in maturity, amount, and interest rates (Roberts and Sufi 2009; Roberts 2015).
  - Study originations separately.
- Sample size:
  - A total of 3,103 governments with 25,246 loan events since 2019Q1:
  - 955 governments, subject to disclosure requirements, with 4,813 bank loan events since 2019Q1.

Significant underreporting of private debt



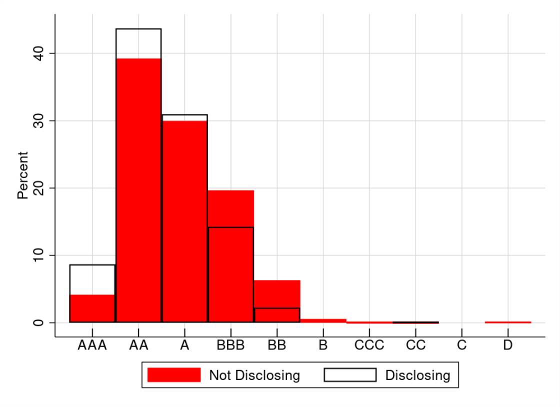
All events



Originations

Differences between disclosers and non-disclosers

- Non-disclosers are smaller and significantly riskier than disclosers.



Reasons for low compliance

- Private debt agreements material relative to public bonds of the same issuer.
- Low compliance due to low sophistication/familiarity with the rule.
- Over 80% of offerings triggering continuing disclosure underwritten by the 30 largest institutions.
- Rule ambiguity together with low issuer sophistication most likely to explain low compliance.

Outline

Conlusion

- Shed light on the effectiveness and market impact of recent disclosure regulation in the muni market
- Whenever disclosure occurs, it is on average informative to market participants
- Issuers significantly underreport private debt
- Private debt is still a significant source of risk for municipal bond investors

Ivanov, Ivan T., and Tom Zimmermann, 2021, The "privatization" of municipal debt, Working paper.

Roberts, Michael R., 2015, The role of dynamic renegotiation and asymmetric information in financial contracting, *Journal of Financial Economics* 116, 61–81.

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