Discussion of

# Biased Expectations and Credit Risk in the Municipal Bond Market

(Tarun Chordia, Jinoug Jeung, Abinash Pati)

by

Johan Sulaeman


*ABFER*
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# Summary

- **Personal experiences and beliefs about rare disasters may have first order effects on asset prices**
  - Giglio et al. (2021); Choi and Robertson (2020)

- **This paper: Mass shooting**
  - A rare disaster event, specific to the location

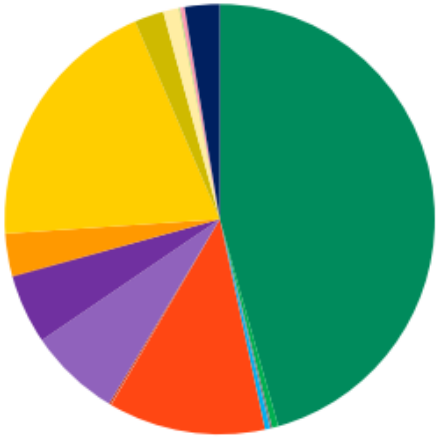
- Reduction in demand for assets associated with the location?
  - Default risk?
  - Liquidity risk?
  - Perception vs. reality?

- Higher yield for muni bonds issued by counties experiencing mass shooting events
  - Lasts for up to 2 years
  - Observed in primary + secondary markets

# Demand shock

**What is the slope of the demand curve for muni bonds?**

**Exhibit 1: Holders of Municipal Securities**

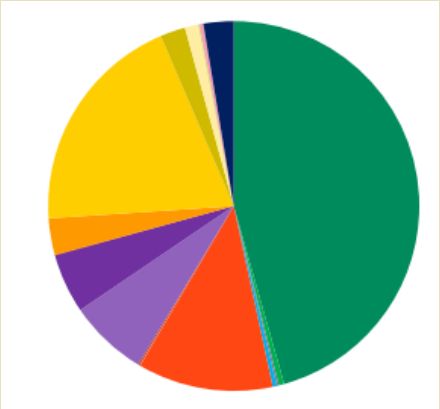


- Households and nonprofits **(46%)**
- Nonfinancial corporate business (0%)
- Nonfinancial noncorporate business (0%)
- State and local governments (0%)
- U.S.-chartered depository institutions **(12%)**
- Foreign banking offices in the U.S. (0%)
- Banks in U.S.-affiliated areas (0%)
- Credit unions (0%)
- Property-casualty insurance companies **(7%)**
- Life insurance companies **(5%)**
- Federal government retirement funds (0%)
- State and local government retirement funds (0%)
- Money market funds **(3%)**
- Mutual funds **(20%)**
- Closed-end funds **(2%)**
- Exchange-traded funds **(1%)**
- Government-sponsored enterprises (0%)
- Security brokers and dealers (0%)
- Rest of the world **(3%)**

Source: Federal Reserve, Financial Accounts of the United States, First Quarter (released Jun. 11, 2020), available at https://www.federalreserve.gov/releases/z1/20200611/z1.pdf. See table L.212 on Municipal Securities. Categories labeled hold 5% or more of outstanding securities.

# Demand shock

**What is the slope of the demand curve for muni bonds?**



- Did the slope change?
  - Retail investors are the marginal investors?
  - Muni bond ownership is local
  - Out-migration from the affected regions?

- Did the **<u>expectation</u>** regarding demand curve change?
  - Crucial due to <u>illiquidity</u> in this market.

- Aside: what about interacting local demographic characteristics with post dummy?
  - **Education** ~ biased belief/expectation?

# (Expectation of) Liquidity

**Default and/or liquidity risks**

- Authors rule out:
  - Change in actual default risk: looking at actual default rate, changes in fundamentals, etc.
  - Change in actual liquidity: price dispersion, trading volume

- What about expectation of default risk (authors' preferred channel) vs. expectation of liquidity risk?
  - Documenting the absence of actual liquidity change does not rule out the possibility that mass shooting affects investors' belief/expectation of liquidity risk
  - Peso problem

- Is it crucial to rule out "expectation/belief" of liquidity risk?

# Liquidity

## Default vs. liquidity risks

- What drives muni yield spread?
  - Breakdown of muni spreads into (1) credit, (2) liquidity, (3) tax components
    - Schwert (2017): default risk explains about 70% of the variation in muni spreads
    - Ang et al. (2014): liquidity matters the most in driving muni spreads
- Decompose the 6bps
  - Buyers in primary market care less about liquidity?
    - Hold to maturity?
- Stronger in low-credit rating sample
  - Correlated with low liquidity?

# Issuer analysis

**Effects are observed for bonds issued by school and special districts, but not for bonds issued by cities, towns and counties**

- "This suggests that investors perceive special district and school district bonds to be particularly riskier after mass shootings."
- How does this help in showing that default risk drives the result?
- These bonds are also less liquid?
  - If this analysis is crucial, we need to see more stats on them.
  - Special purpose districts are generally created through the county legislative authority to meet a specific need of the local community.
  - Special districts perform many functions including airports, ports, highways, mass transit, parking facilities, fire protection, libraries, parks, cemeteries, hospitals, irrigation, conservation, sewerage, wastewater treatment, solid waste, fiber optic systems, stadiums, water supply, electric power, and natural gas utility.

# Media Coverage

**Stronger effect when the shooting has a longer coverage (News Duration)**

- Not sure what we're testing here

- I don't know if we can rule out economic story – more intense coverage may lead to weaker economic performance
- You can verify or reject this conjecture

- What about news competition during the same period:
  - Economic news?
  - Political news?

# Supply

**Does this affect the issuance decisions of (potential) issuers of muni bonds?**

- Additional 5-6bps may not be enough deter suppliers
- The primary market sample is a selected sample
- If the actual effect is 25 bps, some potential issuers may decide not to issue

# General observations

**Interesting research**

- Results are consistent with my prior
  - Investors over-react to salient information
- Inference seems shaky
  - Do we need to rule out the (biased expectations of) liquidity effect

**Is this surprising?**

- 5-6bps don't seem much; my initial prior was stronger
- Perhaps look at "supply" effect?

**Differentiate sells vs. buys?**

- Is there any spike in volumes around the event?
- Daily data not feasible? Perhaps months around the event?

# Minor issues / suggestions

**Errors:** should be clustered by "event"?

**Table 6:**

- GO is included as a standalone variable, but not interacted with post and/or treatment?
- Run the regressions separately for each of the Muni, School, and Special District subsamples?

**Table 5:**

- Formal test of the differences across subsamples?

**Table IA.1:** Missing $R^2$

- There are many other important demographics:
  - Growth rate
  - House prices
- Post shooting estimate is incorrect?