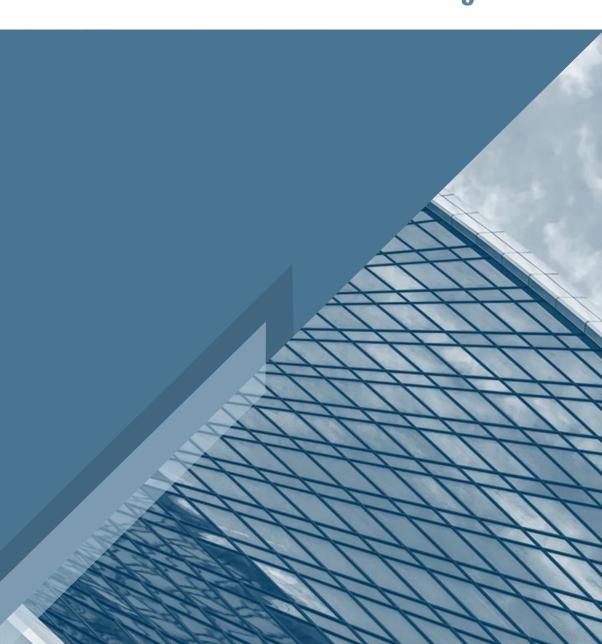
CreditSights

Do Municipal Bond ETFs Improve Market Quality?

A Discussion

Patrick Luby
Senior Municipal Strategist
CreditSights

Brookings Municipal Finance Conference July 14, 2020



Discussion Agenda:

- Introduction
- Where I Disagree with the Findings or the Assumptions
- Where I Agree
- What Surprised Me
- Questions for Further Study
- Thoughts on Implementation

Introduction

Liquidity

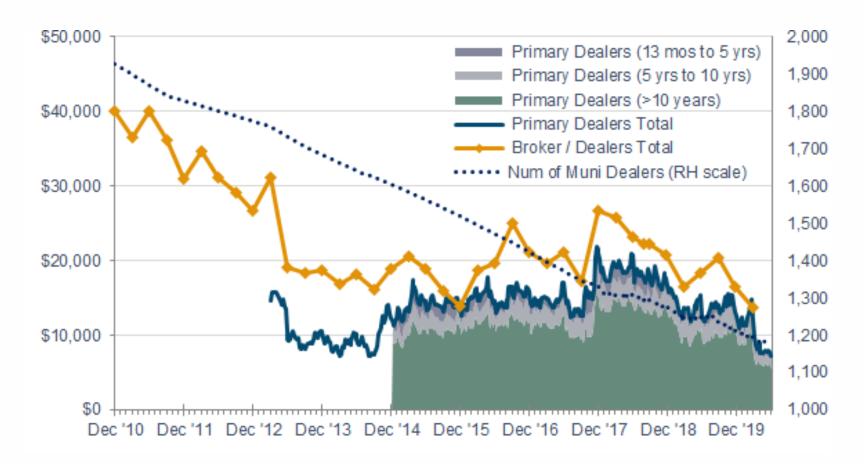
"We remain firm in our opinion that a greater source of risk to investor principal comes more from a decrease in liquidity than from an increase in defaults."

Liquidity affected by:

- Changes in dealer inventories
- The growing "professionalization" of the municipal bond market
- Increasing use of electronic trading platforms
- Proliferation of auto-bidders and algorithmic traders
- Increased use of muni ETFs for tactical and strategic exposure, hedging and access to bonds

Introduction: Liquidity Isn't Free

Dealer Positions in Municipal Bonds (mns) as of July 1, 2020



The Paper

This systematic analysis of muni ETFs and market liquidity is an important addition to the market literature

- Applying a rigorous analysis to the question confirms several points that many participants would say are obvious or intuitive
- Having a systematic view of the variations in liquidity provides insight into how and when to take advantage of those variations.

The Paper

An Enormous Undertaking

- 47,469 CUSIPs
- 2,895 Issuers
- 369,448 Quarterly Portfolio Observations
- 9,540,963 Trades

Disagree

The academic characterization of "informed" versus "uninformed" investors

ETFs draw participants to the market who have diverse objectives:

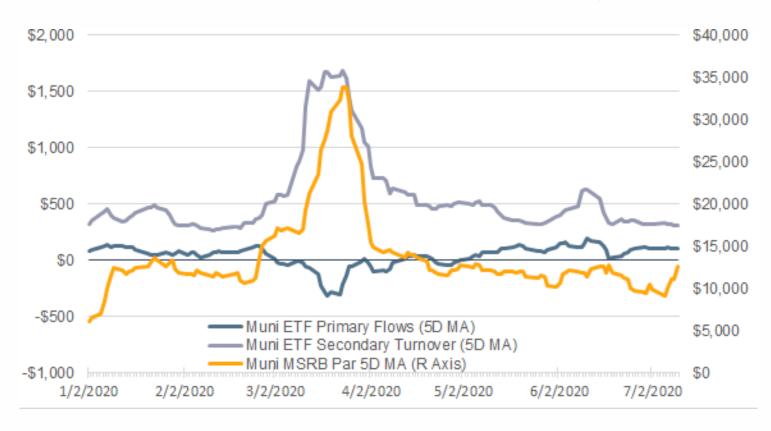
- Long-term buy and hold investors who may or may not also invest directly in muni bonds
- Investors who need short to intermediate exposure to the investment class
- Hedgers
- Speculators
- Arbitrageurs
- Odd-lot accumulators

That "noise traders" increase trading but do not improve liquidity (page 12)

Every bidder improves liquidity, even if there is not an increase in trading of the underlying bonds

Disagree

Daily Municipal Bond & ETF Primary and Secondary Market Volumes as of July 10, 2020



Agree

I concur with the overall conclusions but want to emphasize these two points:

- Fixed income ETFs are especially efficient as a price discovery mechanism (page 6)
- CUSIPs in ETFs trade better (less price dispersion) in rising markets but fell faster in falling markets (page 4)

I believe that these price behaviors are because ETF demand—as revealed by price changes—are a leading indicator of demand (or lack thereof) and therefore pricing

Because ETFs lead the way in price discovery, the prices of the bellwether muni ETFs move before the pricing services can adjust the prices of the million CUSIPs that determine NAV

Muni ETFs and Price Discovery

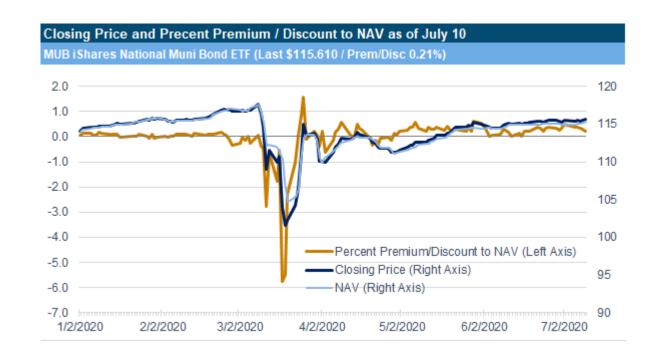
"We believe that too much emphasis is placed on the NAV as the most accurate and reliable gauge of value—especially in volatile market conditions and exactly because there is more trading in the ETFs than in the underlying bonds in the portfolios or the indices that the ETFs are tracking."

"The thousands of daily trades in the large and actively traded fixed income ETFs provide real-time insight into the collective market sentiment—much more so than the thousands of evaluations that go into the NAV calculations and which can lag behind the prices of the ETFs."

Muni ETFs and Price Discovery

For example:

- MUB holds 4,232 positions, of which the top 10 holdings make up 3% of the market value of the portfolio
- In the two-week period from March 16 to 27, of the nine long term bonds in the top 10 there were a total of 164 trades in matching bonds (with a combined total face amount of \$69.3 mn); that's an average of 18 trades and \$7.7 mn per CUSIP
- Over the same period of time there were over 160,000 trades in MUB with a total market value traded of \$4.5 bn.



Surprise

ETFs are purchasing less-liquid bonds and making them more liquid (page 20)

The liquidity benefits of ETF ownership are especially strong in lower credit quality bonds (page 21)

Questions for Further Study:

- Compare CUSIPs from transparent vs semi-transparent ETFs
 For example, MUB which reports daily and VTEB that reports monthly
- Compare CUSIPs from indexed versus actively managed ETFs
 - Do smaller issues also benefit from ETF ownership?

 If so, do they become as liquid as larger "index eligible" bonds?

Thoughts on Implementation

Portfolios should include a liquidity budget

- Can be allocated to ETFs or to bonds that are held in the large and liquid ETFs
- The portion of portfolios that does not need to be liquid can then seek out those bonds that do not benefit from the ETF-boost...but the willingness to accept a less liquid bond should be compensated

Legal Disclaimer

All rights reserved. The information in this report has been obtained from sources believed to be reliable; however, neither its accuracy, nor completeness, nor the opinions based thereon are guaranteed. If you have any questions regarding the contents of this report contact CreditSights at legal@creditsights.com. CreditSights Risk Products, including its ratings products and related information, are provided by CreditSights Analytics, LLC. CreditSights Limited is authorised and regulated by the Financial Conduct Authority (FCA). This product is not intended for use in the UK by retail clients, as defined by the FCA.

Certain data appearing herein is owned by, and used under license from, certain third parties. Please see <u>Legal Notices</u> for important information and limitations regarding such data. For terms of use, see <u>Terms & Conditions</u>.

COPYRIGHT CREDITSIGHTS 2020

CreditSights | Know More. Risk Better.

Patrick Luby

Senior Municipal Strategist

For more Information contact:

pluby@creditsights.com

CreditSights New York

2 Park Avenue, 24th Floor

New York, NY 10016