



April 7, 2016

- Despite New Money Surge, Municipal Volume Decreases Again
- Variable Rate Market Update
- First Quarter 2016 in Review
- Ohio State Uses "Shelf-Registration"

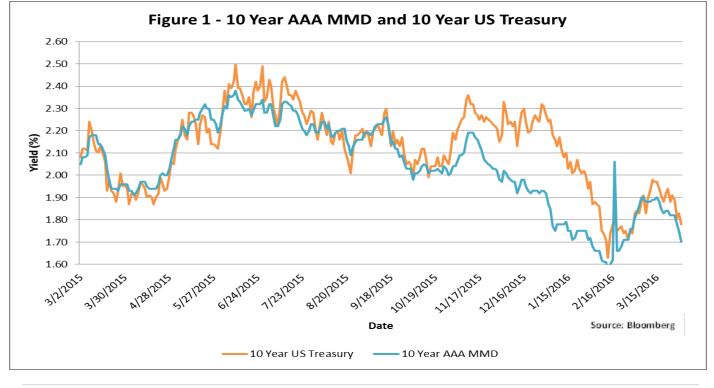
Despite New Money Surge, Municipal Volume Decreases Again

Municipal volume slipped for the seventh straight month in March, despite a 45% increase in new money deals. Overall, volume was down 13.8% for the same period in 2015. While refundings dropped 25.7% yearover-year, new money deals increased 45% from \$10.36 billion in March 2015 to \$15.06 in March of this year.

The Municipal Market Data ("MMD") 'AAA' Muni Market 10-year yield ended March at 1.70% - 6 basis points ("bps") below 1.76% at the end of February. The 30-year yield also decreased, ending March 11 bps lower than February at 2.69%. The 10-year US Treasury yield ended March at 1.78%, 5 bps lower than 1.83% at the end of February. The 30-year Treasury yield also fell, ending March at 2.61%, 9 bps below 2.70% at the end of February. As of March 31st, the ratios of 'AAA' General Obligation municipal yields to Treasury yields were:

Year	Yield	% Yield		
1-Year	0.55 / 0.59	93.22%		
5-Year	1.07 / 1.21	88.43%		
10-Year	1.7 / 1.78	95.51%		
30-Year	2.69/2.61	103.07%		

Sources: The Bond Buyer, Bloomberg, US Department of Treasury, US Federal Reserve



1 | Page

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April 7, 2016

Variable Rate Market Update

The Tax-Exempt VRDN market encountered some choppy water in March. SIFMA (an index based on an average of tax-exempt high-grade, shortterm, variable rate bonds) moved from 0.02 at the beginning of March to 0.29 at the end of the month. The circumstances that contributed to the rise are complex but seem related to short-term fund cash outflows traditionally associated with tax season and the merger/shutdown of a large

money fund group.

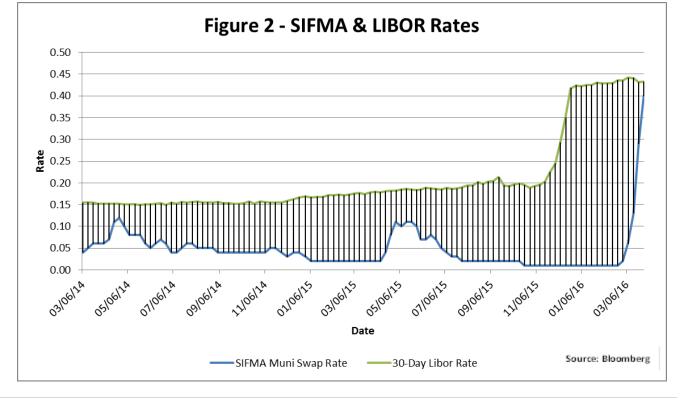
We expect rates and the pricing differences between deals with similar credits to stabilize and narrow over time as the market absorbs product. It will likely take several weeks for rates to stabilize.

The taxable VRDN marketplace remains relatively stable and rates remained range bound during March. Demand remained stable.

First Quarter 2016 in Review

The Federal Reserve gave it its best shot, but the modest

increase in short term rates it tried to spur last December was soon overwhelmed by a flight to quality which drove long term rates down over the course of the year's first quarter. The ten year Treasury bond began 2016 yielding 2.25% and global events drove it down to 1.64% by February 11th. A small rally in oil prices in late February and early March caused yields to rise to 1.79% by the quarter's end, but more than anything, the 1st guarter of 2016 demonstrated, yet again, that when all is said



2 | P a g e

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and done, the Federal Reserve has very limited control over the economy. Treasuries were not the only bonds that rallied in the year's first three months. Despite a lackluster guarter for new municipal bond issuance, the AAA MMD rate for 20 and 30 year muni bonds declined by 10 basis and 8 points, respectively. There was a modest tightening of spreads as the BAA MMD yields tightened relative to the AAA by 4 bps at ten years and 3bps at 30 years.

Overall, municipal issuance was down 12% for long term municipal bonds in the first quarter, declining to \$95.5 billion from \$108.5 billion for the 1Q15. There were some signs that issuers are starting to realize that this era of low interest rates can't last forever as new money borrowings increased by 27% and pure refunding financings decreased by the same amount. Education was the sector with the most issuances at \$33.6 billion, although that was down 15% from the year prior. Housing and Utilities were the sectors that ramped up the most to take advantage of lower borrowing costs posting 10 and 9 percent increases, respectively.

Although only the first two months of 2016 have been received, the Securities Industry and Financial Markets Association data on trading volume contained mixed messages. January and February of 2016 each averaged \$9.1 billion of trading volume per day. Although this is above all of the last five months of 2015, it is a good sign for liquidity. However, it was also below the \$9.1 billion recorded in January and February of 2015, so whether it was a true interruption of the long term downward trend in secondary activity or actually another continuation of it, remains to be seen.

Ohio State Uses "Shelf-Registration"

In other March news, Ohio State University filed a \$1 billion shelf registration similar to the ones used in the corporate finance market in what the Bond Buyer says it believes to be the first use of a shelf registration in the muni market. Filing а shelf registration means issuing base documents that are good for a period of time (16 months in this case) and it will apply to all issuances issued under that shelf. The borrower can then

come to market in a matter of days by filing a supplemental offering document (supplemental prospectus for a corporate and supplemental OS for a muni) which will delineate the differences among the issues (typically interest rate and seniority, but in this case it differentiate between can taxable and tax-exempt). Ohio State took down \$600mm taxable and \$30mm tax free this week using the shelf registration.

Corporations that frequently issue debt often utilize these types of shelf registrations. It allows them to better take advantage of a short term decline in interest rates because the timeframe from initiation to pricing is condensed to just a matter of days instead of a matter of weeks. It will be interesting to see if going forward there are additional municipal bond issuers who attempt to use a shelf style registration. It would likely be of great benefit to issuers who are frequently in the market raising large amounts of capital as it would allow them to enter quicker and is likely to help keep costs of issuance down.

Sources: Thomson-Reuters, SIFMA, Bond Buyer, Moody's

3 | P a g e

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INVESTMENT BANKING SINCE 1917

April 7, 2016

Municipal Market

UPDATE

March 2016 Selected Bond Issues General Obligation and Essential Service Revenue										
	Par				<u>Final</u>		Spread to			
Sale Date	<u>(\$ mil)</u>	Issuer	Project	Ratings	<u>Maturity</u>	Yield	<u>MMD</u>	<u>Notes</u>		
3/2/2016	\$82.84	City of Bridgeport, CT	General Obligation Bonds	A2/AA/	8/15/2035	3.540%	100	Insured		
3/2/2016	\$19.07	City of Peoria, IL	General Obligation Refunding Bonds	Aa3/AA-/	1/1/2028	3.150%	110			
3/10/2016	\$23.99	City of Birmingham, AL	General Obligation Refunding Bonds	Aa2/AA/AA	4/1/2023	2.240%	80			
3/24/2016	\$45.74	State of Texas	Water Utility Improvements	Aaa/AAA/AA	8/1/2035	2.900%	41			
Education Se	ctor									
Sale Date	Par <u>(\$ mil)</u>	<u>Issuer</u>	<u>Project</u>	<u>Ratings</u>	<u>Final</u> Maturity	<u>Yield</u>	Spread to <u>MMD</u>	Notes		
3/3/2016	\$21.58	University of North Carolina at Greensboro	Revenue Refunding Bonds	Aa3/A+/	4/1/2034	3.250%	74			
3/3/2016	\$100.00	CA State Educational Facilities Authority	Revenue Refunding Bonds (Pepperdine University Project)	Aa3/AA/AA	10/1/2049	3.090%	21			
3/10/2016	\$17.65	CT State Health & Educational Facilities Authority	Revenue Refunding Bonds (Fairfield University)	A3/A-/	7/1/2034	3.490%	97			
3/24/2016	\$35.52	MA State Development Finance Agency	Revenue Refunding Bonds (College of the Holy Cross)	Aa3/AA-/	9/1/2046	3.030%	27			
Vater/Utility	Sector									
	Par				Final		Spread to			
Sale Date	<u>(\$ mil)</u>	Issuer	Project	Ratings	Maturity	Yield	MMD	Notes		
3/4/2016	\$10.81	Meriwether County GA Water & Sewerage Authority	Water & Sewer Revenue Refunding Bonds	Baa1/AA/	7/1/2040	3.620%	81	Insured		
3/28/2016	\$32.52	Cleveland OH Water Pollution Control	Revenue Green Bonds	Aa3/A+/	11/15/2045	3.190%	43	Insured		
3/21/2016	\$15.79	City of Mesquite, TX	Water & Sewer Revenue Bonds	Aa2/AA/	3/1/2036	3.320%	76			
3/10/2016	\$7.40	Fort Payne AL Water Works Board	Water Revenue Refunding Bonds	/AA-/	7/1/2034	2.780%	26			
Iealthcare Se	ector									
	Par				Final		Spread to			
Sale Date	<u>(\$ mil)</u>	Issuer	Project	Ratings	Maturity	Yield	MMD	Notes		
3/28/2016	\$12.55	Troy, AL Hospital & Healthcare Authority	Hospital Revenue Refunding Bonds	/A/	3/1/2041	3.720%	102			
4/4/2016	\$73.21	Centre County PA Hospital Authority	Revenue Refunding Bonds	/A/A	11/15/2046	3.230%	55			

4 | Page

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