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Municipal Volume Falls in July

Variable Rate Market Update

Just How Risky Are Municipal Bonds?

Municipal Volume Falls in July

Municipal volume fell 20.1% in July, due largely to a significant decrease in refundings. Overall volume in July was $23.39 billion in 635 issues, compared to $29.29 billion in 1,014 issues the same month the year before. Continuing the trend we have now seen for several months, refundings decreased dramatically compared to month-over-month statistics. Refundings in July totaled only $6.13 billion in 157 issues, a 52.8% drop from the prior year's level. New money did increase in July compared to the year before, totaling $12.03 billion in 414 transactions. This slight 9.5% new money increase, however, was not enough to make-up for the significant drop in refundings.

The Municipal Market Data ("MMD") 'AAA' Muni Market 10 year yield ended July at 1.95%, 4 basis points ("bps") below where it stood at the end of June; the 30 year yield also fell, ending July at 2.74%, 5 bps lower than its level at the end of May.

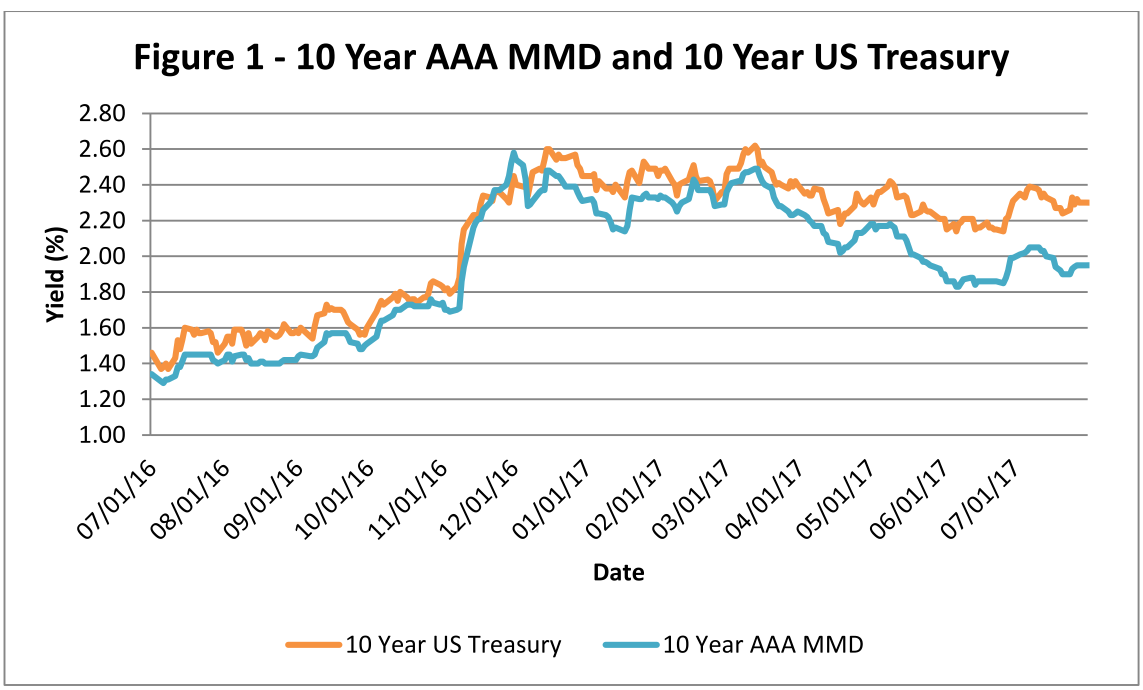


Figure 1 - 10 Year AAA MMD and 10 Year US Treasury

Source: Bloomberg

In July, the 10-year US Treasury yield decrease by only 1 basis point (bp) from 2.31% at the end of June to 2.30% at the end of July. The 30-year Treasury yield increased slightly, finishing July at 2.84%, up 5 basis points ("bps") from 2.84% on June 30th.

As of July 31st, the ratios of 'AAA' General Obligation municipal yields to Treasury yields were:

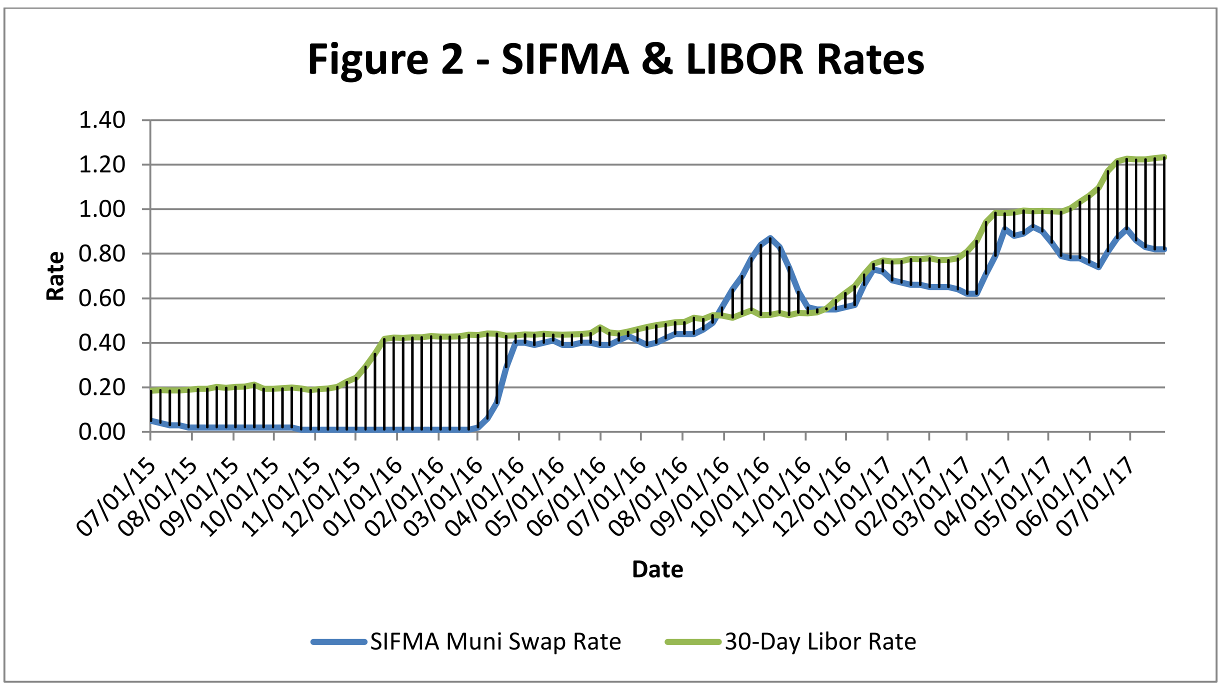
Year	Yield	% Yield
1 Year	0.85 / 1.23	69.11%
5 Year	1.21 / 1.84	65.76%
10 Year	1.95 / 2.3	84.78%
30 Year	2.74 / 2.89	94.81%

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

Variable Rate Market Update

The SIFMA Municipal Swap Index, an average of high-grade, tax-exempt, variable rate bonds, fell slightly from .86% on July 5th to .82% on July 26th. The 30-day LIBOR rose slightly in July, beginning the month at 1.22689% and ending at 1.23167%.

Sources: The Bond Buyer, Bloomberg, SIFMA



Source: Bloomberg

Just How Risky Are Municipal Bonds?

Casual consumers of mainstream news sources can be forgiven if they've come under the impression recently that municipal bonds are high risk investments. Since the end of the Great Recession nearly a decade ago, a flurry of headline grabbing municipal crises have sprung up on a consistent basis to reinforce a shift in perception about how risky muni bonds really are. From Jefferson County, AL to California, from Detroit to Puerto Rico, and now, the coverage of the looming pension mess, municipal bonds have made the front pages for all of the wrong reasons in recent years. As with most things that become a topic of conversation out of the blue, however, it is worthwhile to take a step back and examine just how much truth is behind the headlines.

Both Moody's and S&P, the two largest credit rating agencies, track the number of defaults among the universe of bonds which they rate, and have done so for decades. This provides investors with a tremendous amount of data on historical default rates for municipal bonds of all types. There is, however, one not insignificant drawback to this; the data only covers issues that they rated, not the entire universe of publicly (or privately) issued municipal bonds. Like other bonds, only muni bonds that are of a certain size and quality are likely to apply for a credit rating, so the pool is skewed towards those municipal bond issuers of a higher quality from the start. Still, it gives a useful snapshot of the aggregate long-term results that can be expected by muni bond investors that buy rated municipal bonds, which is the majority of the $3.7 trillion market.

The data compiled by Moody's and S&P is exhaustive, so we will select only certain statistics to discuss what we hope will convey the overall level of safety that is enjoyed by muni bond investors. For S&P, which began the data compilation used in its Annual Public Finance Default and Rating Transition reports (a transition is a migration from one rating to another), its data traces back to January 1st, 1986 and encompasses every bond rated by them since then. Following are observations from the most recent edition of the report, which runs through 2016. There have been 14 investment grade issuers that have defaulted since 1986 while there have been 89 speculative grade issuers that have defaulted during the same period. The mean default rates for each are .45 per year for investment grade and 2.87 for speculative grade. The 15-year default rate for a flat BBB rated bond has been .44, meaning that if you bought a random BBB rated bond at issuance, there was a less than one half of one percent chance it would default within 15 years. As you dig into the speculative grade ratings, however, those default rates rapidly accelerate. For example, a BB rated bond has a 5.87% chance of defaulting in 15 years and just two notches below that, a B+ rated bond, has a 23% chance.

Moody's data extends back even longer into the past, to 1970. It also shows that compared to other types of non-governmental investments, municipal bonds are exceedingly safe, however, there has been a recent increase in defaults compared to historical norms. Moody's points out that 45 of the 103 defaults that have occurred since they began tracking have occurred since 2007. Other interesting breakouts from Moody's annual study is that since 1970 there have been more hospitals that have defaulted than total general government obligation issuers (23 to 21) and there have been more housing bond defaults than any other sector, 45 of the previously mentioned 103.

Taken together, both studies show that as an investment, municipal bonds are probably the safest principal protection instrument widely available with the exception of U.S. Treasuries, if held to maturity (i.e., negating interest rate risk, a different topic altogether). The historical odds of losing principal in a municipal bond investment has been near nil. Although their status as a low risk investment is likely to persist into the foreseeable future, the risks noted at the top are not insignificant. The threat that underfunded pensions pose to the financial viability of governments and subdivisions such as school districts cannot be overstated in our opinion. And as with so much of what occurs in financial markets, perception eventually becomes reality. If investors continue to be bombarded with headlines of pension insolvency and structural operating deficits, municipal bond issuers will eventually see their interest rates rise, regardless of what the historical default statistics have to say about the historical level of risk.

Sources: *Moody's Investors Services, Standard & Poor's*

July 2017 Selected Bond Issues									
General Obligation									
Date	**Par ($ mil)**	**Issuer**	**Project**	**Ratings**	**Final Maturity**	**Coupon**	**Yield**	**Spread to MMD**	**Notes**
7/31/2017	$180.16	City of San Antonio, TX	General Obligation Limited Bonds	Aaa/AAA/AAA	8/1/2037	4.000%	3.060%	48	
7/12/2017	$331.62	City of Philadelphia, PA	General Obligation Refunding Bonds	A2/A+/A-	8/1/2037	5.000%	3.530%	85	
7/27/2017	$898.97	City of New York, NY	General Obligation Refunding Bonds	Aa2/AA/AA	8/1/2028	5.000%	2.290%	23	
7/24/2017	$37.34	County of Middlesex, NJ	General Obligation Refunding Bonds	/AAA/	1/15/2031	4.000%	2.730%	53	
Education Sector									
Date	**Par ($ mil)**	**Issuer**	**Project**	**Ratings**	**Final Maturity**	**Coupon**	**Yield**	**Spread to MMD**	**Notes**
7/13/2017	$95.81	University of Arkansas	University & College Improvements	Aa2/ /	11/1/2047	5.000%	3.140%	31	
7/31/2017	$28.61	Cleveland County Educational Facilities Authority	Lease Revenue Refunding Bonds	/A/	9/1/2031	5.000%	2.940%	62	
7/31/2017	$11.53	Kettering City School District	School Improvement Lease Revenue Bonds	Aa3/ /	12/1/2046	3.375%	3.560%	83	
7/12/2017	$73.56	Bowling Green State University	Student Housing Refunding Bonds	A1/A+/	6/1/2045	5.000%	3.340%	53	
Water/Utility Sector									
Date	**Par ($ mil)**	**Issuer**	**Project**	**Ratings**	**Final Maturity**	**Coupon**	**Yield**	**Spread to MMD**	**Notes**
7/12/2017	$171.54	City of Dallas, TX	Water Revenue Refunding Bonds	AAA/ /AA+	10/1/2046	5.000%	3.130%	31	
7/27/2017	$90.69	City of Greensboro, NC	Water Utility Refunding Bonds	Aa1/AAA/AAA	6/1/2047	4.000%	3.190%	45	
7/31/2017	$31.81	Contra Costa Water District	Water Revenue Refunding Bonds	/AA+/AA	10/1/2029	5.000%	2.240%	8	
7/10/2017	$18.36	City of Athens, AL	Water & Sewer Revenue Bonds	A2/AA/	5/1/2036	3.500%	3.610%	92	Insured
Healthcare Sector									
Date	**Par ($ mil)**	**Issuer**	**Project**	**Ratings**	**Final Maturity**	**Coupon**	**Yield**	**Spread to MMD**	**Notes**
7/14/2017	$568.38	Cobb County Hospital Authority	Hospital Revenue Refunding Bonds	A2/ /	4/1/2047	5.000%	3.590%	80	
7/28/2017	$57.21	Wisconsin Health & Educational Facilities Authority	Hospital Revenue Refunding Bonds	A2/ /	7/1/2047	4.000%	3.860%	112	
7/31/2017	$265.00	New Jersey Health Care Facilities Financing Authority	Hospital Revenue Bonds	A2/ /A	7/1/2047	4.000%	3.770%	103	

Source: Bloomberg