



January 10, 2017

• December Volume Finishes Strong in Record Setting Year

UPDATE

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December Volume Finishes Strong in Record Setting Year

Municipal volume totaled \$18.88 billion in 694 transactions in December, down 24.5% from the same period in 2015. Despite this drop, December capped off a record setting year in which municipal volume reached a new record total of \$488 billion. Overall, new money deals slipped 6.5% from the year prior to \$12.17 billion in 459 transactions. Refunding transactions also fell by a substantial 39.4% to \$4.77 billion in 195 transactions and \$7.86 billion in from 396

transactions in December 2015. Analysts predict that refundings will continue to dip with interest rates continuing to rise.

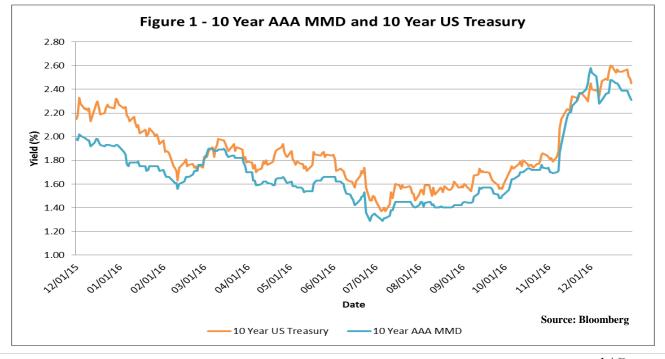
The market witnessed slowdown in issuance in the fourth quarter influenced primarily by rate increases after the presidential election, with a total volume of \$103.99 billion. This continued the downward trend in quarterly volume for the year as the previous two quarters totaled \$125.65 and \$115.28, respectively.

The Municipal Market Data ("MMD") 'AAA' Muni Market 10-year yield ended December at 2.31%, 21 basis points ("bps") below its level at the end of November. The 30-year yield also

decreased, ending December at 3.04%, 22 bps below its level at the end of November. The 10-year US Treasury yield ended December at 2.45%, 8 bps above 2.37% at the end of November. The 30-year Treasury yield also rose, ending December at 3.06%, 4 bps above the level at which it ended November. As of December 30th, the ratios of 'AAA' General Obligation municipal yields to Treasury yields were:

Year	Yield	% Yield		
1-Year	0.97 / 0.85	114.12%		
5-Year	1.79 / 1.93	92.75%		
10-Year	2.31 / 2.45	94.29%		
30-Year	3.04 / 3.06	99.35%		

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



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Variable Rate Market Update

UPDATE

The SIFMA Municipal Swap Index, an average of high-grade, taxexempt, variable rate bonds, ended December at .72%, 16 bps above the level at which it ended November. The 30-day LIBOR increased in December, ending the month at .77167%, up from .62367% at the end of November. Please refer to Figure 2 for historical SIFMA and LIBOR rates.

2016 - The Year in Review

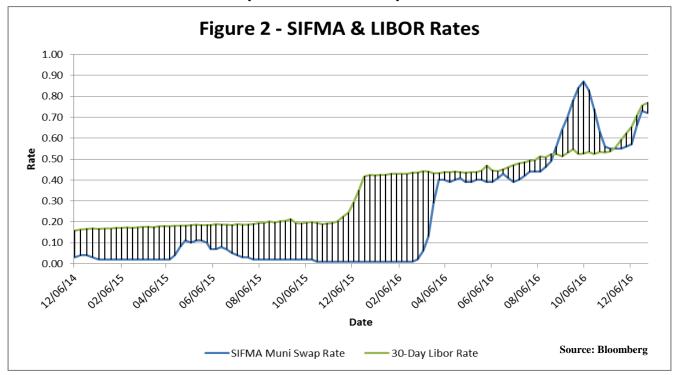
A look back at rates, issuance and other trends of the year.

Elections Causes-Rates to Fall and Rise

Interest rates began the year on the low but mostly stable path that has characterized the post-recessionary era at the behest of the Federal Reserve, but events would soon conspire to shake up the status quo. The first major economic tremor came as a result of the UK voting to leave the European Union on June 23rd. That surprise result created a flight to quality which drove the 10 year U.S. Treasury bond to 1.37 on July 8th from 1.74 on the day of the

vote. The 20 year AAA MMD also declined from a yield of 2.08 to 1.80 in the span of 8 days. The surprise election of Donald Trump as the next President of the United States showed that ballot box surprises can also drive interest rates up and did so quickly. The 10 year treasury went from 1.88 on Election Day to 2.60 on December 15th, while the 20 year MMD went from 2.39 to 3.20 on December 1st.

The response to the U.S. Presidential election was due to pronouncements by President-elect Trump during the campaign that he would propose aggressive infrastructure spending as well as tax cuts; a sign of impending deficit



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spending (i.e. increased borrowing) if followed through on. Rates have declined slightly in late December from their post-election highs but remain at an overall higher level.

UPDATE

Muni Issuance Up Year Over Year

Bond issuance volume in 2016 can best be described as tumultuous. The year got off to an inauspicious start with the first four months of the year experiencing lower volume than the corresponding month for the year prior. That began to change in late spring/early summer and volume surged into the three months leading up to the election. August through October monthly volumes were up an average of 53% from 2015 levels. The period was so frenetic in fact that almost 32% of 2016 volume occurred in those three months. December again saw drastically decreased volume as higher rates and a pending change in government once again put the dampers on the market. Overall, volume in 2016 compared to the year before was up six months and down six months with 2016 having close to \$40 billion (9.8%) more par value issued than 2015.

As has often been the case during this decade, refundings made up more than 50% of issuances in 2016, albeit by a small margin of \$4.5 billion. The sectors with the largest increases were health care, housing, and utilities.

Green Bonds Gaining Traction

Another story that caught our attention this year was expansion of the Green Bond designation. In short, a Green Bond is an appellation that issuers can pay to have their bond issuances evaluated in a manner similar to a bond credit rating. Instead of commenting on the credit, however, the evaluator is measuring the proceeds of the bond issuance against an agreed upon list of criteria that are meant to be indicative of good environmental stewardship. Although they have not taken off as a market discriminant as quickly as its originators may have hoped, they did appear to gain some additional market acceptance in 2016. As of the end of the 3rd quarter, 2016 issuance stood at \$63.2 billion according to Moody's; up from \$27.2 billion for the same period in 2015 and on pace to exceed \$80 billion.

Sources: Moody's, The Bond Buyer, Thomson Reuters, Federal Reserve





Municipal Market UPDATE

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January 10, 2017 INVESTMENT BANK

		Dec	cember 2016 Selected	Bond Issues				
General Obli	gation and Es	sential Service Revenue						
Sale Date	Par (\$ mil)	Issuer	Project	Ratings	<u>Final</u> <u>Maturity</u>	Yield	Spread to MMD	Notes
12/05/2016	\$650.00	The City of New York, NY	General Obligation Bonds	/AA/AA	12/01/2043	3.640%	35	
12/05/2016	\$100.00	Rosemont, IL	General Obligation Bonds	A2/AA/	12/01/2046	4.470%	115	Insured
12/09/2016	\$39.82	Lucas County, OH	General Obligation Refunding Bonds	/AA/	10/01/2040	3.610%	55	BQ
11/30/2016	\$1.96	City of Morrison, IL	General Obligation Refunding Bonds	/AA/	12/15/2035	3.460%	38	
Education Se	ctor							
Sale Date	Par <u>(\$ mil)</u>	<u>Issuer</u>	<u>Project</u>	Ratings	<u>Final</u> <u>Maturity</u>	<u>Yield</u>	Spread to MMD	<u>Notes</u>
12/09/2016	\$142.72	New Jersey State Educational Facilities Authority	Revenue Bonds	/BBB+/A-	09/01/2036	5.050%	210	
12/08/2016	\$26.73	Pennsylvania State Finance Authority	College Revenue Refunding Bonds	/AA/	12/01/2031	3.800%	115	Insured
12/14/2016	\$25.53	Youngstown State University	Revenue Refunding Receipts	/A+/	12/15/2037	4.120%	108	
12/02/2016	\$45.05	California State Community College Financing Authority	Lease Revenue Refunding Bonds	/AA+/	06/01/2028	3.370%	68	
Water/Utility	Sector							
Sale Date	Par (\$ mil)	Issuer	Project	Ratings	<u>Final</u> Maturity	Yield	Spread to MMD	Notes
12/08/2016	\$150.00	Metropolitan Saint Louis Sewer District	Wastewater System Revenue Bonds	/AAA/AA+	05/01/2046	3.270%	18	
12/15/2016	\$70.00	California State Pollution Control Financing Authority	Water Utility Improvement Revenue Bonds	/A/	11/01/2046	4.750%	154	
12/05/2016	\$15.72	City of Coldwater, MI	Water Supply and Wastewater System Revenue Bonds	/AA/	08/01/2041	4.180%	91	Insured
12/14/2016	\$9.20	Mon Valley Sewage Authority	Sewer Revenue Bonds	/AA/	11/01/2045	4.130%	98	BQ
		Dec	cember 2016 Selected	Bond Issues				
Healthcare Se	ector							
Sale Date	Par <u>(\$ mil)</u>	<u>Issuer</u>	<u>Project</u>	Ratings	<u>Final</u> <u>Maturity</u>	<u>Yield</u>	Spread to MMD	Notes
12/08/2016	\$203.80	California Municipal Finance Authority	Hospital Revenue Bonds	/BBB-/	11/01/2047	4.910%	181	
12/09/2016	\$191.79	Akron Bath Copley Joint Township Hospital District	Hospital Revenue Refunding Bonds	//A-	11/15/2046	4.420%	130	Insured

Source: Bloomberg

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