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# **MUNICIPAL BOND CREDIT REPORT**

Third Quarter 2015

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**RESEARCH REPORT**

## TABLE OF CONTENTS

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Table of Contents .....	i
Market Summary .....	2
Charts & Data.....	4
Long-Term Municipal State Issuance, 3Q'15 .....	4
Long-Term Municipal Issuance by General Use of Proceeds .....	6
Build America Bonds.....	7
Supply, Yield Curves, Total Return, Spreads & Ratios .....	7
Trading Summary .....	8
Municipal CDS .....	9
Outstanding Municipal Debt.....	10
A Description of the Terminology in the Municipal Bond Credit Report.....	13

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MARKET SUMMARY

Municipal Issuance Overview – Primary Market

According to Thomson Reuters, long-term public municipal issuance volume totaled \$86.0 billion in the third quarter of 2015, a decline of 22.4 percent from the prior quarter (\$110.9 billion) but an 18.9 percent increase year-over-year (y-o-y) (\$72.4 billion). Including private placements<sup>1</sup> (\$2.4 billion), long-term municipal issuance for 3Q'15 was \$88.4 billion.

Tax-exempt issuance totaled \$75.5 billion in 3Q'15, a decline of 24.7 percent q-o-q but an increase of 15.3 percent y-o-y. Taxable issuance totaled \$7.9 billion in 3Q'15, nearly unchanged q-o-q and a 68.5 percent increase y-o-y. AMT issuance was \$2.7 billion, a decline of 2.3 percent q-o-q but an increase of 21.0 percent y-o-y. Year-to-date, municipal issuance totaled \$301.0 billion, up 39.7 percent from last year and well above the 10-year average of \$271.2 billion.

By use of proceeds, general purpose led issuance totals in 3Q'15 (\$23.0 billion), followed by primary & secondary education (\$16.8 billion), and higher education (\$8.0 billion). Other notable sectors that saw an increase in issuance were mass transportation (\$4.1 billion, an increase of 124.5 percent and 56.7 percent q-o-q and y-o-y, respectively), civic and convention centers (\$1.1 billion, an increase of 370.9 percent and 583.9 percent q-o-q and y-o-y respectively), and single-family housing (\$2.4 billion, an increase of 70.7 percent and 113.7 percent q-o-q and y-o-y, respectively).

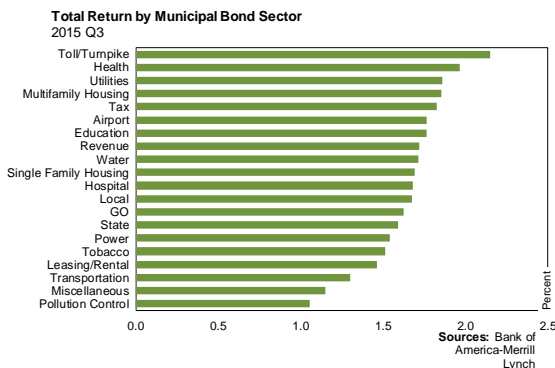
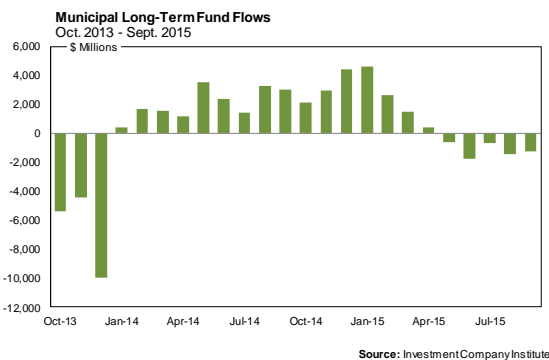
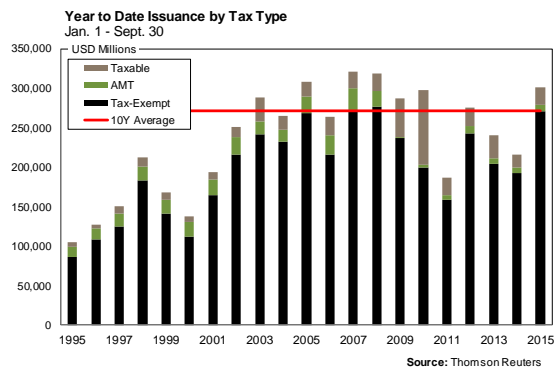
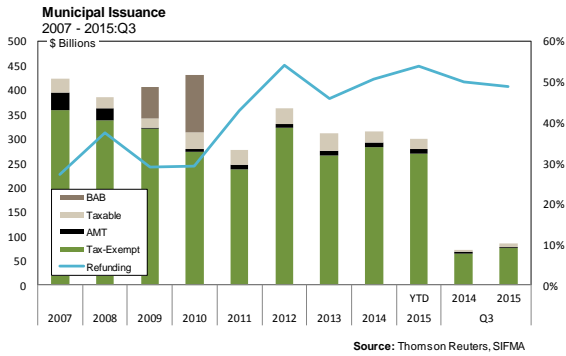
Refunding volumes as a percentage of issuance increased slightly from the prior quarter, with 48.9 percent of issuance attributable to refundings compared to 49.7 percent in 2Q'15 and 50.4 percent in 3Q'14.<sup>2</sup>

Yields, Inflows, and Total Return

Ratios of 10-year tax-exempt AAA GOs and similar-maturity Treasuries rose slightly in the third quarter on a q-o-q basis and a y-o-y basis, ending at 102.7 percent end-September from 100.9 percent end-June and 89.4 percent end-September 2014.

According to the Investment Company Institute (ICI), third quarter net flow into long-term municipal funds was negative and more severe than the quarter prior, with \$3.4 billion of outflow in 3Q'15 compared to \$2.0 billion of outflow from 2Q'15 and \$7.7 billion of inflow y-o-y.

According to Bank of America-Merrill Lynch indices, municipals returned 1.23 percent in the third quarter of 2015, outperforming most asset classes in what was a turbulent quarter. Build America Bonds (BABs) also returned 1.97 percent, performing better than similarly-rated corporates (1.70 percent). Year to date, municipals have outperformed both BABs and corporates, returning 1.80 percent compared to 0.27 percent (BABs) and 0.76 percent (corporates). Within the municipal asset class, toll/turnpike, health, and utilities had the greatest positive returns, while pollution control, transportation, and leasing/rental underperformed municipals generally in 3Q'15. Year to date, hospital, health, and tobacco lead returns within the municipal sector.



<sup>1</sup> Private placement figures are included in top line totals, but figures in charts and tables exclude this subset.  
<sup>2</sup> Percentages represent both full refundings and the half the dollar amount of deals that contain both refundings and new financing. For just refunding, refunding volumes represent 38.0 percent of issuance in 3Q'15, 38.8 percent in 2Q'15, and 40.1 percent in 3Q'14.

### Trading Activity and Broker-Dealers

Trading activity fell q-o-q to \$7.6 billion daily in 3Q'15, a 30.2 percent decline from 2Q'15 (\$10.9 billion) and 19.8 percent from 3Q'14 (\$9.5 billion). By number of trades, trading activity also declined on a q-o-q basis, falling 10.5 percent q-o-q but rising 6.8 percent y-o-y.

Holdings of municipal bonds by broker-dealers fell slightly to \$19.0 billion in 2Q'15, a decline of 7.8 percent but an increase of 4.4 percent y-o-y. A preliminary examination of primary dealer holdings in the third quarter suggest that holdings continued to decline q-o-q.

Bank holdings of municipal loans and bonds rose in 2Q'15 from the prior quarter, to \$140.6 billion (from \$134.2 billion) and \$336.0 billion (from \$331.0 billion), respectively. Of municipal securities, approximately \$30.3 billion are held to maturity (at amortized values), \$126.5 billion are available for sale (at amortized values), and the balance are on the trading book.

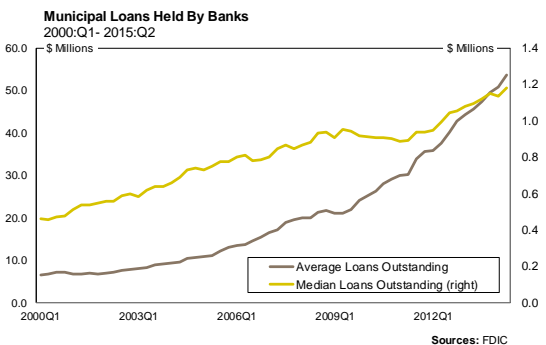
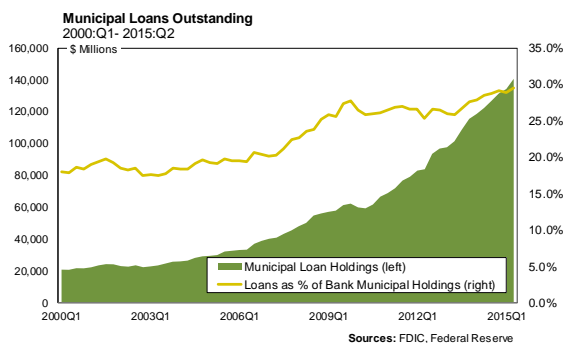
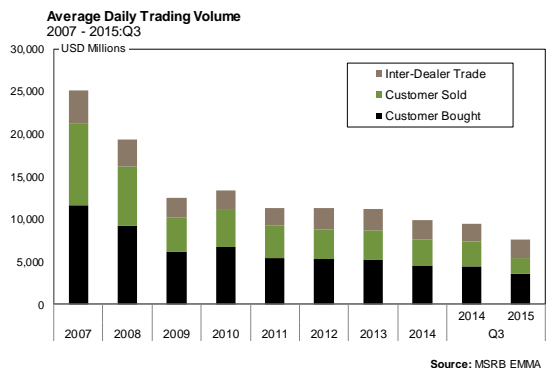
Call report data for the second quarter reveal that the top five banks with loans outstanding hold \$67.9 billion combined, or nearly half of all municipal loans (48.3 percent); the top ten hold \$97.2 billion combined (69.1 percent), although a little over 40 percent of all FDIC-insured institutions hold some form of loan, compared to 34.7 percent ten years ago. Average outstanding loan balances by bank as of 2Q'15 were \$53.5 million, although this figure is heavily skewed toward very large holdings among the larger banks; the median balance was \$1.2 million.

### CDS Update

According to DTCC, \$2.1 billion of credit default swap contracts on municipal names were executed in the third quarter, an increase of 349.5 percent q-o-q but a 56.1 percent decline y-o-y. Illinois led state totals (\$508.2 million) in 3Q'15. At the end of the third quarter, \$2.97 billion net notional of municipal CDS contracts were outstanding, down slightly from the prior quarter.

### State & Government Update

According to Nelson A. Rockefeller Institute of Government, states reported growth in tax collections data for the first quarter of 2015.<sup>3</sup> Total state tax revenue grew by 5.8 percent y-o-y. Individual income and corporate income tax collections grew by 7.1 percent and 3.3 percent, respectively. Preliminary data for to the second quarter of 2015 indicate that states reported growth in preliminary tax revenues.



<sup>3</sup> Nelson A. Rockefeller Institute of Government, "States Enjoy Growth in Tax Revenues in the First Quarter of 2015," September 17, 2015.

## CHARTS &amp; DATA

LONG-TERM MUNICIPAL STATE ISSUANCE, 3Q'15<sup>4</sup>\$ Millions<sup>5</sup>

	Bond Type			Tax Type			Funding Type			
	Total	G.O.	Revenue	AMT	Tax-Exempt	Taxable	New Financing	Refinancing	Refunding & New Refinancing	New Refunding
State										
Alabama	695.4	192.9	502.5	-	625.0	6.6	251.3	-	66.3	314.0
Alaska	255.7	96.2	159.5	65.7	190.0	-	96.2	-	-	159.5
American Samoa	55.9	-	55.9	-	44.2	11.7	-	-	55.9	-
Arizona	662.4	161.1	501.3	-	559.8	75.0	157.5	-	-	477.3
Arkansas	440.1	171.3	268.8	-	389.9	50.2	158.3	-	58.4	223.4
California	12,560.3	5,144.2	7,416.1	66.1	11,437.9	618.7	2,059.7	-	3,694.8	6,368.2
Colorado	1,302.6	180.2	1,122.4	-	991.6	33.5	547.6	-	246.2	231.2
Connecticut	1,467.6	940.4	527.2	10.8	1,175.7	270.9	831.4	-	473.5	152.4
District of Columbia	519.4	-	519.4	-	374.0	145.4	145.4	-	-	374.0
Delaware	15.8	-	15.8	-	15.8	-	-	-	-	15.8
Florida	4,440.5	966.1	3,474.4	167.8	3,311.9	709.4	1,687.8	-	855.9	1,645.4
Georgia	1,220.3	264.5	955.8	3.9	668.8	458.8	996.3	-	15.2	120.0
Guam	410.5	-	410.5	-	410.5	-	-	-	-	410.5
Hawaii	865.2	-	865.2	-	692.9	172.3	-	-	630.4	234.9
Idaho	91.4	9.6	81.8	-	69.0	22.5	86.6	-	-	4.9
Illinois	3,947.0	2,005.4	1,941.6	-	3,053.4	866.0	2,000.2	-	1,052.0	867.2
Indiana	1,161.1	72.7	1,088.4	216.9	700.6	210.6	494.2	-	79.0	554.9
Iowa	547.0	222.7	324.3	59.0	381.6	37.3	220.4	-	192.0	65.6
Kansas	1,995.8	595.9	1,399.9	3.7	975.8	1,015.9	1,467.8	-	181.1	346.5
Kentucky	851.4	122.4	729.0	-	840.0	11.5	557.3	-	153.2	140.9
Louisiana	1,009.8	98.7	911.1	-	890.5	59.0	251.5	-	-	698.0
Maine	272.9	22.4	250.5	128.1	144.8	-	53.4	-	79.0	140.5
Maryland	844.6	516.9	327.7	-	769.8	50.0	575.4	-	178.6	65.9
Massachusetts	1,002.1	348.3	653.8	67.0	858.6	76.1	521.9	-	98.0	381.9
Michigan	2,774.6	1,018.8	1,755.8	520.1	1,850.4	214.7	240.7	-	1,572.0	772.5
Minnesota	2,613.0	1,846.4	766.6	61.3	2,498.2	44.2	1,635.0	-	211.0	757.7
Mississippi	430.0	117.7	312.3	-	428.0	-	312.2	-	-	115.9
Missouri	748.3	185.6	562.7	23.1	707.1	18.0	334.2	-	150.8	263.3
Montana	122.4	40.0	82.4	34.4	88.0	-	88.0	-	-	34.4
Nebraska	690.9	363.4	327.5	70.0	554.2	-	292.1	-	45.6	286.5
Nevada	263.0	228.8	34.2	-	182.5	11.1	38.0	-	21.7	133.9
New Hampshire	4.0	4.0	-	-	4.0	-	4.0	-	-	-
New Jersey	3,597.5	741.4	2,856.1	92.5	3,041.8	433.3	664.1	-	1,832.3	1,071.3
New Mexico	525.8	154.9	370.9	-	501.4	24.4	466.9	-	38.0	21.0
New York	9,652.2	2,374.3	7,277.9	85.0	9,142.0	408.3	3,343.0	-	905.0	5,387.3
North Carolina	1,782.5	116.2	1,666.3	-	1,148.3	445.4	232.6	-	408.5	952.6
North Dakota	193.1	150.0	43.1	-	191.8	1.2	106.1	-	16.2	70.8
Ohio	2,061.4	1,198.0	863.4	-	1,779.9	145.7	922.4	-	546.6	456.7
Oklahoma	766.6	45.2	721.4	4.9	644.2	117.6	654.1	-	58.3	54.3
Oregon	1,314.6	341.4	973.2	42.3	1,052.8	203.4	730.1	-	134.6	433.7
Pennsylvania	2,918.5	1,137.3	1,781.2	193.0	2,635.3	36.1	1,225.4	-	171.7	1,467.5
Puerto Rico	0.0	-	-	-	-	-	-	-	-	-
Rhode Island	401.9	219.4	182.5	22.2	379.7	-	75.8	-	77.0	249.2
South Carolina	709.5	151.6	557.9	-	691.6	10.4	384.2	-	204.5	113.3
South Dakota	55.1	46.1	9.0	-	55.1	-	24.5	-	-	30.5
Tennessee	1,079.9	547.7	532.2	43.1	1,020.6	16.3	569.3	-	404.6	106.0
Texas	11,605.9	7,315.1	4,290.8	218.9	10,834.5	477.7	5,097.4	-	2,208.9	4,224.8
Utah	371.6	155.3	216.3	-	274.7	43.9	185.1	-	33.8	99.7
Vermont	55.4	37.8	17.6	10.6	44.8	-	23.3	-	7.0	25.1
Virgin Islands	0.0	-	-	-	-	-	-	-	-	-
Virginia	1,340.6	436.2	904.4	-	1,243.9	41.3	660.0	-	326.9	298.2
Washington	4,005.3	1,373.8	2,631.5	257.9	3,520.5	175.5	2,001.0	-	1,108.7	844.1
West Virginia	188.0	31.0	157.0	40.1	142.7	2.4	69.0	-	33.6	82.6
Wisconsin	1,440.1	1,256.1	184.0	140.7	1,162.2	91.6	998.5	-	61.1	334.8
Wyoming	142.0	-	142.0	47.5	66.6	-	-	-	66.6	47.5
<b>ALL</b>	<b>88,488.5</b>	<b>33,765.4</b>	<b>54,723.1</b>	<b>2,696.6</b>	<b>75,458.9</b>	<b>7,863.9</b>	<b>34,537.2</b>	<b>0.0</b>	<b>18,754.5</b>	<b>32,728.1</b>
<b>QoQ</b>	<b>-24.0%</b>	<b>-31.2%</b>	<b>-18.8%</b>	<b>-2.3%</b>	<b>-24.7%</b>	<b>-1.1%</b>	<b>-20.8%</b>		<b>-22.7%</b>	<b>-23.9%</b>
<b>YoY</b>	<b>13.7%</b>	<b>14.3%</b>	<b>13.3%</b>	<b>21.0%</b>	<b>15.3%</b>	<b>68.5%</b>	<b>20.1%</b>		<b>26.4%</b>	<b>13.7%</b>

<sup>4</sup> Issuance totals do not include private placements.<sup>5</sup> Due to securities falling into more than one category within subcategories, state breakouts are not identical to other non-state-specific breakdowns, particularly related to coupon types (e.g., zeros are higher by dollar amount when broken out by state but would instead be assigned to the convertible or fixed rate categories when not broken out by state). This is a quirk of the SDC database.

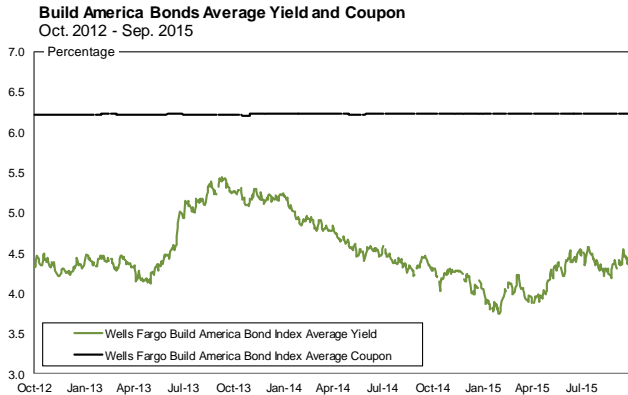
State	Total	Coupon Type						
		Convertible	Fixed Rate	Linked Rate	Variable Rate		Variable Rate	
					Long	No Put	Short (VRDO)	Zero
Alabama	695.4	-	631.5	-	-	-	-	-
Alaska	255.7	-	255.7	-	-	-	-	-
American Samoa	55.9	-	55.9	-	-	-	-	-
Arizona	662.4	-	559.8	-	-	-	75.0	-
Arkansas	440.1	-	400.1	-	-	-	40.0	-
California	12,560.3	38.6	11,830.1	109.3	-	-	7.0	137.7
Colorado	1,302.6	12.5	1,012.6	-	-	-	-	-
Connecticut	1,467.6	-	1,412.3	-	-	-	45.0	-
District of Columbia	519.4	-	519.4	-	-	-	-	-
Delaware	15.8	-	15.8	-	-	-	-	-
Florida	4,440.5	-	4,179.2	-	9.9	-	-	-
Georgia	1,220.3	-	1,126.0	-	5.4	-	-	-
Guam	410.5	-	410.5	-	-	-	-	-
Hawaii	865.2	-	865.2	-	-	-	-	-
Idaho	91.4	-	69.0	-	-	-	22.5	-
Illinois	3,947.0	-	3,895.4	-	-	-	-	24.0
Indiana	1,161.1	-	1,089.9	-	38.2	-	-	-
Iowa	547.0	-	437.9	-	-	-	40.0	-
Kansas	1,995.8	-	1,930.1	-	-	-	-	65.2
Kentucky	851.4	-	851.4	-	-	-	-	-
Louisiana	1,009.8	-	941.7	-	3.3	-	-	4.6
Maine	272.9	-	227.9	-	15.0	-	30.0	-
Maryland	844.6	-	819.8	-	-	-	-	-
Massachusetts	1,002.1	-	1,001.7	-	-	-	-	-
Michigan	2,774.6	-	2,585.1	-	-	-	-	-
Minnesota	2,613.0	-	2,583.7	-	-	-	18.2	1.7
Mississippi	430.0	-	428.0	-	-	-	-	-
Missouri	748.3	-	748.2	-	-	-	-	-
Montana	122.4	-	122.4	-	-	-	-	-
Nebraska	690.9	-	589.2	-	-	-	35.0	-
Nevada	263.0	-	193.6	-	-	-	-	-
New Hampshire	4.0	-	4.0	-	-	-	-	-
New Jersey	3,597.5	-	3,470.1	-	63.5	-	34.0	-
New Mexico	525.8	-	525.9	-	-	-	-	-
New York	9,652.2	-	8,209.4	-	123.6	-	1,302.4	-
North Carolina	1,782.5	-	1,593.7	-	-	-	-	-
North Dakota	193.1	-	193.0	-	-	-	-	-
Ohio	2,061.4	-	1,824.8	70.0	-	-	30.0	0.8
Oklahoma	766.6	-	762.7	-	4.0	-	-	-
Oregon	1,314.6	-	1,213.3	-	11.4	-	33.6	40.1
Pennsylvania	2,918.5	-	2,764.5	-	-	-	100.0	-
Puerto Rico	0.0	-	-	-	-	-	-	-
Rhode Island	401.9	-	387.0	15.0	-	-	-	-
South Carolina	709.5	-	702.0	-	-	-	-	-
South Dakota	55.1	-	55.1	-	-	-	-	-
Tennessee	1,079.9	-	1,036.9	-	15.0	28.0	-	-
Texas	11,605.9	-	11,260.3	-	135.8	-	130.4	4.6
Utah	371.6	-	318.6	-	-	-	-	-
Vermont	55.4	-	55.4	-	-	-	-	-
Virgin Islands	0.0	-	-	-	-	-	-	-
Virginia	1,340.6	-	1,285.1	-	-	-	-	-
Washington	4,005.3	-	3,652.2	250.0	-	-	51.6	-
West Virginia	188.0	-	185.2	-	-	-	-	-
Wisconsin	1,440.1	-	1,329.4	-	-	-	65.1	-
Wyoming	142.0	-	114.1	-	-	-	-	-
<b>ALL</b>	<b>88,488.5</b>	<b>51.1</b>	<b>82,731.8</b>	<b>444.3</b>	<b>425.1</b>	<b>28.0</b>	<b>2,059.8</b>	<b>278.7</b>
<b>QoQ</b>	<b>-24.0%</b>		<b>-21.8%</b>	<b>-81.5%</b>	<b>-39.6%</b>		<b>35.8%</b>	<b>-39.0%</b>
<b>YoY</b>	<b>13.7%</b>	<b>101.2%</b>	<b>27.5%</b>	<b>-84.0%</b>	<b>-82.4%</b>		<b>3.4%</b>	<b>5.3%</b>

## LONG-TERM MUNICIPAL ISSUANCE BY GENERAL USE OF PROCEEDS

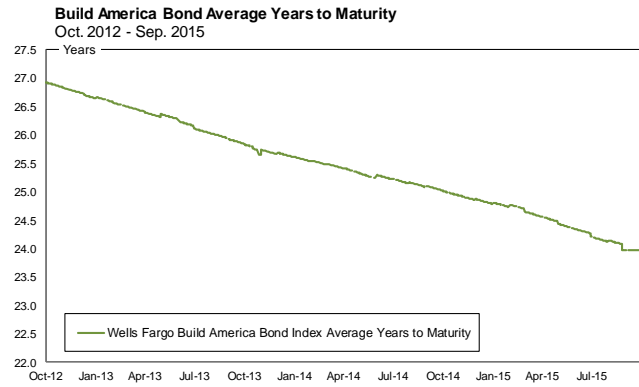
\$ Millions

Use of Proceeds	3Q'14	2Q'15	3Q'15	Q-o-Q	Y-o-Y
Agriculture	4.0				-100.0%
Airports	1,861.4	1,648.7	3,021.7	83.3%	62.3%
Assisted Living	107.1	42.5	121.0	184.7%	13.0%
Bridges	1,452.8	510.0	218.3	-57.2%	-85.0%
Childrens hospital	190.4	455.7	153.2	-66.4%	-19.5%
Civic & convention centers	161.6	234.7	1,105.2	370.9%	583.9%
Combined utilities	395.0	284.7	256.8	-9.8%	-35.0%
Cont Care Retirement Community	540.8	817.5	939.8	15.0%	73.8%
Correctional facilities	219.7	494.0	214.1	-56.7%	-2.5%
Economic development	1,778.2	3,565.8	2,394.9	-32.8%	34.7%
Fire stations & equipment	33.7	101.0	80.9	-19.9%	140.1%
Flood control	26.5	261.8	174.7	-33.3%	559.2%
Gas	1,049.2	41.2	326.9	693.4%	-68.8%
General acute care hospital	2,567.8	7,679.1	3,175.6	-58.6%	23.7%
General Medical	40.2	29.7	303.2	920.9%	654.2%
General purpose /publicimprovement	21,488.9	28,244.8	23,032.4	-18.5%	7.2%
Government buildings	236.6	209.4	378.2	80.6%	59.8%
Higher education	6,424.4	11,412.9	8,021.0	-29.7%	24.9%
Industrial development	100.3	275.6	103.5	-62.4%	3.2%
Libraries & museums	115.7	129.6	55.6	-57.1%	-51.9%
Mass transportation	2,609.7	1,821.0	4,088.9	124.5%	56.7%
Multi family housing	1,382.7	1,920.8	837.6	-56.4%	-39.4%
Nursing homes	154.7	151.5	15.5	-89.8%	-90.0%
Office buildings		113.3		-100.0%	
Other education	155.6	134.0	130.9	-2.3%	-15.9%
Other recreation	342.9	46.1	200.5	334.9%	-41.5%
Parking facilities	62.7	93.2	79.8	-14.4%	27.3%
Parks, Zoos & Beaches	56.0	266.2	288.4	8.3%	415.0%
Police stations & equipment	10.0	64.6	6.9	-89.3%	-31.0%
Pollution control	166.7	19.1	390.5	1944.5%	134.3%
Primary & secondary education	12,270.6	25,784.2	16,756.3	-35.0%	36.6%
Public power	1,867.8	5,552.4	3,114.2	-43.9%	66.7%
Sanitation	39.2	347.1	74.3	-78.6%	89.5%
Seaports /marine terminals	355.6	525.9	292.6	-44.4%	-17.7%
Single family housing	1,132.5	1,418.0	2,420.1	70.7%	113.7%
Single speciality hospital	137.1	78.5	37.3	-52.5%	-72.8%
Solid waste	23.2	378.5	15.5	-95.9%	-33.2%
Stadiums & sports complexes	326.3	659.3	478.1	-27.5%	46.5%
Student loans	277.0	932.1		-100.0%	-100.0%
Telecommunications	41.5	140.1	325.7	132.5%	684.8%
Theatres			41.6		
Toll roads, highways & streets	3,346.2	4,334.9	4,825.0	11.3%	44.2%
Water & sewer facilities	8,812.7	9,677.3	7,522.0	-22.3%	-14.6%
<b>ALL</b>	<b>72,365.0</b>	<b>110,896.8</b>	<b>86,018.7</b>	<b>-22.4%</b>	<b>18.9%</b>

**BUILD AMERICA BONDS**



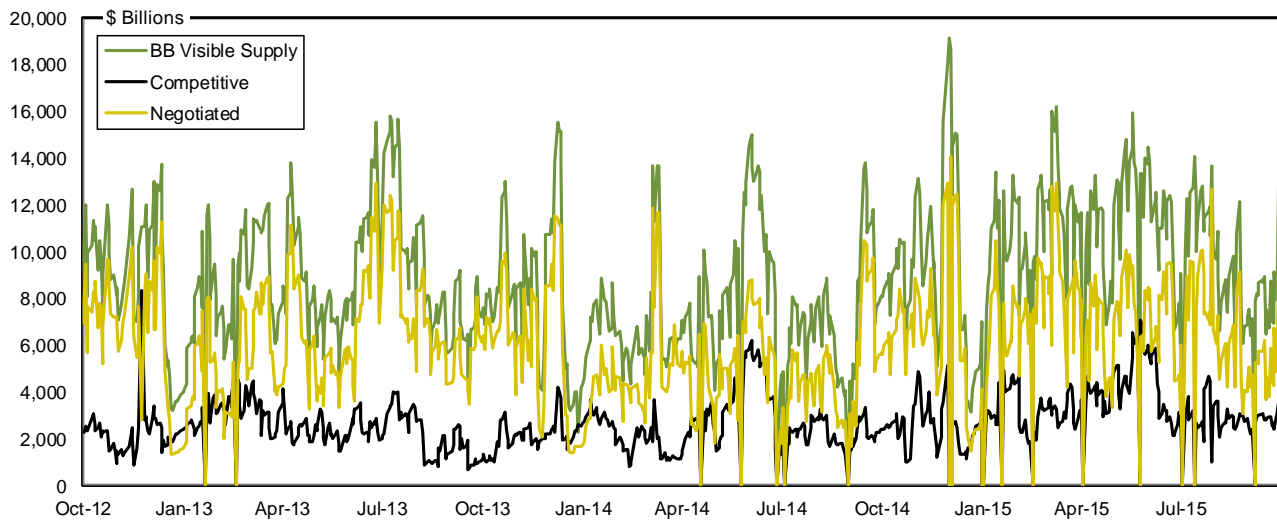
Source: Wells Fargo



Source: Wells Fargo

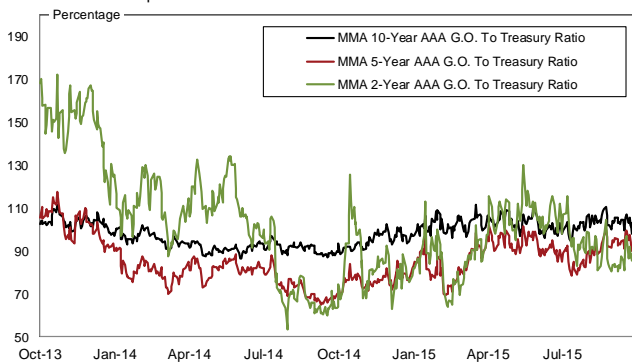
**SUPPLY, YIELD CURVES, TOTAL RETURN, SPREADS & RATIOS**

**Bond Buyer 30-Day Visible Supply**  
Oct. 1, 2012 - Sep. 30, 2015



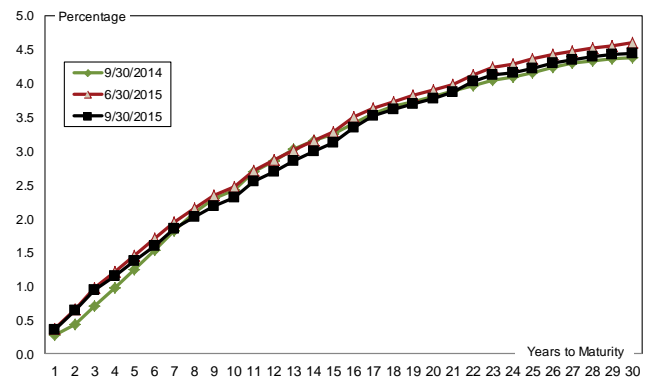
Source: Bond Buyer, Bloomberg

**2-, 5-, and 10-Year AAA G.O. to Treasury Ratios**  
Oct. 2013 - Sep. 2015



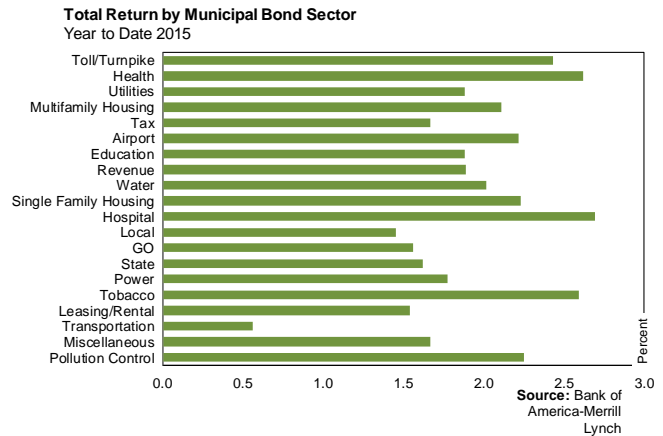
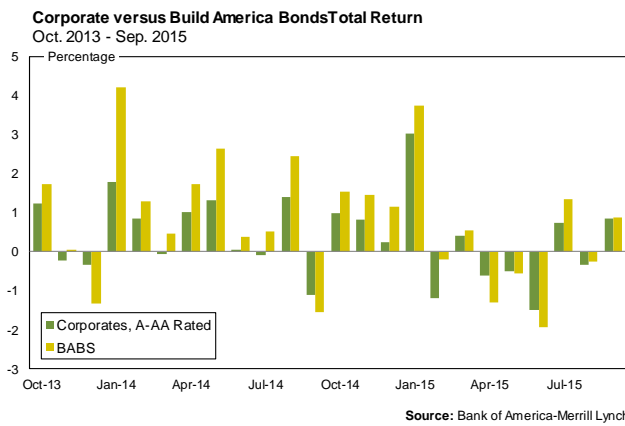
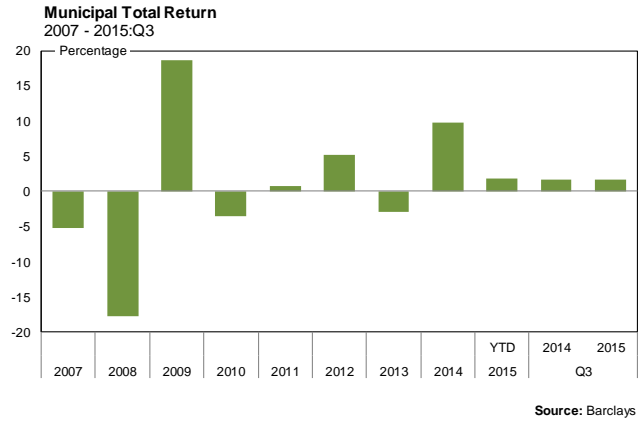
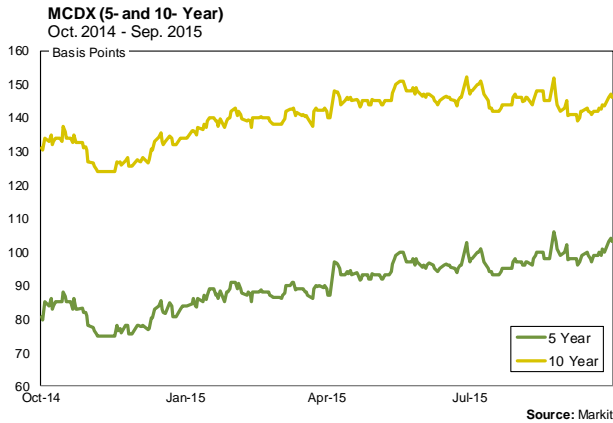
Source: Bloomberg

**MMA Yield Curves**



Source: MMA





**TRADING SUMMARY**

Total Number of Trades									
	# of Trades				Par Amount (Millions)				
	Customer Bought	Customer Sold	Inter-Dealer Trade	All Trades	Customer Bought	Customer Sold	Inter-Dealer Trade	All Trades	
2015:Q1	909,377	481,927	844,179	2,235,483	260,221	152,157	150,585	\$562,963	
2015:Q2	1,065,662	536,616	947,502	2,549,780	331,521	201,314	150,939	\$683,774	
%Change	17%	11%	12%	14%	27%	32%	0%	21%	

	# of Trades					Par Amount (Millions)				
	0 - 100,000	100,001 - 500,000	500,001 - 1,000,000	1,000,000+	All Trades	0 - 100,000	100,001 - 500,000	500,001 - 1,000,000	1,000,000+	All Trades
2015:Q1	84%	12%	2%	2%	2,235,483	13%	13%	7%	67%	\$562,963
2015:Q2	82%	12%	2%	3%	2,549,780	10%	11%	7%	72%	\$683,774

	Trades by Sector							Total (Millions)
	Education	Health	Utility	Various Purpose	Transportation	Tax-Revenue	Other	
2015:Q1	18%	10%	13%	13%	10%	9%	27%	\$562,963
2015:Q2	20%	10%	13%	11%	8%	9%	29%	\$683,774

	Trades by Maturity						Total (Millions)
	1 Year or Less	1+ Year to 5 Years	5+ Years to 10 Years	10+ Years to 20 Years	20+ Years		
2015:Q1	3%	11%	13%	29%	44%	\$562,963	
2015:Q2	4%	12%	14%	33%	37%	\$683,774	

	Trades by Source of Repayment					Total (Millions)
	Revenue	General Obligation	Double Barrel	Not Available		
2015:Q1	68%	31%	1%	0%	\$562,963	
2015:Q2	69%	28%	3%	0%	\$683,774	

	Trades by Coupon Type					Total (Millions)
	Fixed Rate	Variable Rate	Zero Coupon	Not Available		
2015:Q1	56%	38%	6%	0%	\$562,963	
2015:Q2	62%	35%	3%	0%	\$683,774	

Source: MSRB EMMA

## MUNICIPAL CDS

Market Risk Activity of Single-Name Municipal CDS (\$ millions) <sup>6</sup>

State	California	Connecticut	Florida	Illinois	Michigan	Nevada	New Jersey	New York	Ohio	Texas	New York City	Massachusetts	TOTAL	Average Contract Size
Jul-14	138.5		160.0	4.0	4.0		49.0		25.0	150.0	186.6		717.1	12.8
Aug-14	1,745.0		230.0	95.0	55.0		265.3	202.3	251.2	390.0	450.0	308.0	3,991.7	14.4
Sep-14	85.0		50.0	10.0			0.4				10.0		155.4	19.4
Oct-14	61.6			94.6	7.0		44.2		12.0	1.4	30.0	10.0	260.8	5.1
Nov-14	25.0		75.0	30.1	65.0			1.1	10.0	30.0	55.8	85.0	377.0	4.8
Dec-14	25.0			39.7	10.0		10.0		5.0		45.0		134.7	7.5
Jan-15	37.2		5.0	27.4			14.7			20.0			104.3	3.4
Feb-15			10.0	10.0	10.0		10.0			10.0			40.0	2.5
Mar-15		10.0		43.7			0.3			0.3			54.3	2.0
Apr-15				1.1			0.1			0.2			1.4	0.5
May-15				28.0			6.0			1.0			43.0	2.7
Jun-15	171.9		26.0	73.0	25.0		98.6	0.5			15.2	20.0	430.2	6.1
Jul-15	200.5	16.2	135.0	219.2	80.0	20.0	117.5	45.0	40.0	30.0	51.5	13.0	967.9	7.2
Aug-15	306.5	10.0	40.0	289.0	70.0		242.7	10.0	35.0	1.9	85.0		1,090.1	5.4
Sep-15								55.0			20.0		75.0	18.8
<b>3Q15</b>	<b>507.0</b>	<b>26.2</b>	<b>175.0</b>	<b>508.2</b>	<b>150.0</b>		<b>360.2</b>	<b>10.0</b>	<b>75.0</b>	<b>31.9</b>	<b>156.5</b>	<b>13.0</b>	<b>2,133.0</b>	<b>6.3</b>
Q-o-Q	181.8%		573.1%	397.7%	500.0%		244.2%	21900.0%		2558.3%	929.6%	-35.0%	349.5%	
Y-o-Y	-74.2%		-60.2%	366.2%	154.2%		14.5%	-45.6%	-72.8%	-94.1%	-75.8%	-95.8%	-56.1%	

Source: DTCC

CDS Yield Curves for Single Name States and New York City (bps)

	6M	1Y	2Y	3Y	4Y	5Y	7Y	10Y
CA California	38.9	32.5	53.7	72.5	79.0	86.0	118.5	140.6
CT Connecticut	39.9	40.3	76.3	98.8	113.8	125.2	139.1	190.7
DE Delaware	21.8	23.8	31.9	37.8	39.2	39.5	48.7	69.2
FL Florida	22.3	23.3	36.9	48.1	49.3	50.6	56.4	100.6
IL Illinois	102.3	111.2	156.7	213.8	258.1	266.8	308.6	332.5
MA Massachusetts	22.4	24.1	31.8	55.9	57.9	60.7	66.6	110.2
MD Maryland	15.9	21.6	30.7	39.5	42.7	45.5	56.5	90.5
MI Michigan	29.7	31.6	40.4	49.8	57.7	67.7	87.6	110.3
MN Minnesota	13.3	15.4	21.9	30.6	36.9	41.9	54.3	69.1
NC North Carolina	22.7	23.3	26.1	32.8	37.1	40.3	42.9	74.8
NJ New Jersey	57.7	62.3	98.1	134.1	164.5	173.9	186.8	238.1
NV Nevada	38.4	39.0	49.6	57.9	58.2	59.3	69.2	110.9
NY New York	19.2	20.4	31.9	45.9	47.5	50.6	55.6	100.7
OH Ohio	32.8	33.3	43.6	56.5	61.7	66.1	80.3	122.9
PA Pennsylvania	50.8	52.5	62.2	91.9	103.7	111.8	119.5	185.8
PR Puerto Rico	2,061.1	2,152.7	2,275.2	2,195.6	2,126.9	2,071.4	1,982.9	1,919.5
TX Texas	24.3	27.2	35.0	36.9	41.1	43.7	57.7	81.5
VA Virginia	23.4	27.3	30.9	35.7	36.8	38.1	43.3	61.2
WA Washington	16.5	17.1	21.0	23.4	29.9	45.5	51.9	75.3
WI Wisconsin	10.4	10.4	15.3	24.0	29.4	35.1	47.6	68.9
NYC New York City	36.3	37.1	61.1	67.3	72.0	73.9	90.9	130.3

<sup>6</sup> "Market risk activity" (as defined by DTCC): The gross notional and contract counts include transaction types of new trades between two parties, a termination of an existing transaction, or the new leg of an assignment representing the trade between the step-in party and the remaining party. Excludes transactions which do not result in a change in the market risk position of the market participants, and are not market activity. For example, central counterparty clearing, and portfolio compression both terminate existing transactions and re-book new transactions or amend existing transactions. These transactions still maintain the same risk profile and consequently are not included as "market risk transfer activity."

## OUTSTANDING MUNICIPAL DEBT

Outstanding by Type, Maturity, and Security Type<sup>7</sup>

\$ Millions

State	Total Outstanding	G.O.	Revenue	Due in 13 Months	Long-Term	2015:Q2 Total Outstanding	% Change
AK Alaska	10,170.8	2,481.9	7,689.0	730.2	9,440.6	10,480.9	-3.0%
AL Alabama	31,295.7	6,008.8	25,286.9	1,054.5	30,241.1	31,502.5	-0.7%
AR Arkansas	13,851.6	6,024.0	7,827.5	560.5	13,291.0	13,827.0	0.2%
AS American Samoa	55.9		55.9				
AZ Arizona	50,407.7	11,184.3	39,223.4	2,497.9	47,909.8	53,472.9	-5.7%
CA California	521,120.4	197,414.9	323,705.5	21,295.2	499,825.2	527,229.0	-1.2%
CO Colorado	54,227.4	11,981.1	42,246.3	2,953.1	51,274.3	53,597.0	1.2%
CT Connecticut	46,045.1	25,406.7	20,638.3	3,762.7	42,282.3	46,261.3	-0.5%
DC District of Columbia	29,574.5	3,206.5	26,368.1	763.3	28,811.3	29,506.3	0.2%
DE Delaware	6,960.4	2,548.2	4,412.1	430.2	6,530.1	7,123.0	-2.3%
FL Florida	139,388.2	16,105.4	123,282.8	8,449.4	130,938.8	139,622.4	-0.2%
GA Georgia	66,974.2	15,708.0	51,266.2	3,965.2	63,009.0	67,392.5	-0.6%
GU Guam	2,516.1	24.0	2,492.1	58.9	2,457.2	2,490.6	1.0%
HI Hawaii	15,707.0	9,567.1	6,139.9	757.1	14,950.0	16,058.9	-2.2%
IA Iowa	20,285.7	6,011.7	14,274.1	1,183.1	19,102.6	20,211.9	0.4%
ID Idaho	6,297.5	1,770.8	4,526.6	704.2	5,593.3	6,587.9	-4.4%
IL Illinois	153,742.6	80,261.1	73,481.5	6,706.1	147,036.5	151,665.6	1.4%
IN Indiana	48,219.8	1,070.1	47,149.6	2,825.4	45,394.4	48,956.9	-1.5%
KS Kansas	23,358.9	10,074.7	13,284.2	1,880.5	21,478.4	22,430.9	4.1%
KY Kentucky	33,037.7	1,658.0	31,379.7	2,083.4	30,954.3	33,199.7	-0.5%
LA Louisiana	33,695.4	6,893.5	26,801.8	1,054.7	32,640.7	34,140.4	-1.3%
MA Massachusetts	92,407.2	35,031.8	57,375.3	6,767.1	85,640.1	94,329.9	-2.0%
MD Maryland	48,939.0	24,605.8	24,333.3	2,933.5	46,005.6	49,536.3	-1.2%
ME Maine	7,706.0	1,763.4	5,942.6	529.3	7,176.7	7,729.3	-0.3%
MI Michigan	76,138.9	24,650.4	51,488.6	3,886.1	72,252.8	75,972.4	0.2%
MN Minnesota	48,441.7	25,021.5	23,420.2	3,142.7	45,299.0	48,042.7	0.8%
MO Missouri	46,403.6	9,254.0	37,149.6	1,973.3	44,430.3	46,059.4	0.7%
MS Mississippi	16,628.2	6,343.4	10,284.8	902.2	15,726.0	16,599.2	0.2%
MT Montana	4,068.4	1,256.4	2,812.0	233.0	3,835.4	4,062.9	0.1%
NC North Carolina	49,334.0	12,134.8	37,199.2	2,502.0	46,832.0	50,896.1	-3.1%
ND North Dakota	4,675.2	1,626.4	3,048.7	286.0	4,389.1	4,563.7	2.4%
NE Nebraska	18,054.3	5,492.6	12,561.7	918.1	17,136.2	17,797.2	1.4%
NH New Hampshire	8,298.6	2,294.4	6,004.2	495.8	7,802.7	8,908.6	-6.8%
NJ New Jersey	115,585.5	25,413.9	90,171.6	10,406.1	105,179.4	116,924.2	-1.1%
NM New Mexico	13,568.3	3,289.1	10,279.2	960.1	12,608.2	13,748.0	-1.3%
NV Nevada	24,545.0	12,400.8	12,144.2	1,097.9	23,447.0	25,413.0	-3.4%
NY New York	371,137.0	75,859.8	295,277.2	20,762.4	350,374.6	370,342.2	0.2%
OH Ohio	103,787.7	29,435.5	74,352.2	5,824.5	97,963.2	103,560.5	0.2%
OK Oklahoma	18,694.7	3,698.3	14,996.4	1,555.1	17,139.6	18,631.9	0.3%
OR Oregon	35,527.4	19,736.6	15,790.8	2,360.1	33,167.2	34,251.7	3.7%
OT Other Territories	9,941.4	50.0	9,891.4	317.0	9,624.4	9,664.4	2.9%
PA Pennsylvania	123,391.4	43,937.5	79,453.9	7,222.2	116,169.2	125,267.1	-1.5%
PR Puerto Rico	101,816.2	12,801.0	89,015.1	2,069.9	99,746.3	103,264.5	-1.4%
RI Rhode Island	11,020.3	1,700.4	9,320.0	540.7	10,479.6	11,101.0	-0.7%
SC South Carolina	35,514.6	8,607.6	26,907.0	2,310.0	33,204.5	34,954.5	1.6%
SD South Dakota	4,754.0	933.1	3,821.0	191.3	4,562.7	4,865.3	-2.3%
TN Tennessee	36,996.3	14,072.8	22,923.5	1,973.9	35,022.3	36,933.4	0.2%
TT Trust Territories	264.8	84.7	180.2	140.0	124.8	264.8	0.0%
TX Texas	305,425.0	152,745.5	152,679.5	11,635.6	293,789.4	310,635.4	-1.7%
UT Utah	20,217.4	6,069.1	14,148.4	1,138.9	19,078.5	20,757.1	-2.6%
VA Virginia	58,989.6	13,017.9	45,971.7	3,101.0	55,888.5	59,502.2	-0.9%
VI Virgin Islands	2,345.9		2,345.9	106.3	2,239.7	2,362.1	-0.7%
VT Vermont	4,846.1	634.7	4,211.4	143.8	4,702.2	4,927.5	-1.7%
WA Washington	79,452.3	37,743.9	41,708.4	3,871.3	75,581.0	79,095.0	0.5%
WI Wisconsin	43,260.6	21,732.9	21,527.7	3,694.0	39,566.6	43,036.9	0.5%
WV West Virginia	10,294.8	782.6	9,512.2	265.7	10,029.1	10,350.7	-0.5%
WY Wyoming	2,711.3	152.9	2,558.4	117.0	2,594.3	2,744.4	-1.2%
TOTAL (9/30/2015)	3,262,114.9	1,049,775.9	2,212,338.9	170,089.9	3,091,969.0	3,282,853.4	-0.6%
TOTAL (6/30/2015)	3,282,853.4	1,061,920.2	2,220,933.2	177,367.1	3,105,486.3		
% Change	-0.6%	-1.1%	-0.4%	-4.1%	-0.4%		

<sup>7</sup> Outstanding includes both short- and long-term municipal debt, including certain preferred fund shares (e.g., VRDPS). "Due in 13 months" looks at original maturity and will not include securities with short puts unless original maturity is within 13 months. Outstanding does not include refunded (inclusive of prerefunded) debt and derivatives. See additional tables for prerefunded and derivatives debt. The chart replaces "Outstanding by Insurance" from prior municipal reports. For comparability against Federal Reserve's Flow of Funds, aggregate prerefunded with outstanding but not derivatives; differences between the two aggregates afterward are due to underlying database differences (Fed: Mergent; these tables: Bloomberg). Those CUSIPs unverified by Bloomberg are not included in the total; this affects approximately \$100 million outstanding.

Outstanding and by Tax Status, Coupon, Use of Proceeds, Industry<sup>8</sup>

\$ Millions

State	Total Outstanding	Tax-Exempt	AMT	Taxable	Fixed	Zero	Other	Industry	Total Outstanding
AK Alaska	10,170.8	8,476.2	532.2	1,162.4	7,808.5	165.4	2,197.0	Airport	85,698.6
AL Alabama	31,295.7	24,007.4	1,110.6	6,177.7	24,065.4	1,017.5	6,212.8	Development	107,244.6
AR Arkansas	13,851.6	8,848.0	351.7	4,651.8	12,319.0	259.3	1,273.3	Education	682,653.7
AS American Samoa	55.9	44.2	-	-	55.9	-	-	GO	650,563.9
AZ Arizona	50,407.7	43,992.4	1,229.9	5,185.4	45,348.0	31.9	5,027.8	Healthcare	255,112.5
CA California	521,120.4	414,212.7	18,166.7	88,741.0	378,325.9	66,703.1	76,091.3	Housing	129,199.9
CO Colorado	54,227.4	39,959.2	2,992.8	11,275.4	44,303.1	3,168.9	6,755.3	Other	649,416.2
CT Connecticut	46,045.1	35,241.4	1,202.7	9,601.0	38,509.7	457.2	7,078.2	Public Facilities	13,723.4
DC District of Columbia	29,574.5	22,299.4	3,734.4	3,540.8	19,499.0	5,622.8	4,452.7	Student Loan	31,365.0
DE Delaware	6,960.4	5,130.7	315.9	1,513.8	5,468.1	12.0	1,480.3	Transportation	231,475.5
FL Florida	139,388.2	114,889.8	11,603.4	12,895.1	116,414.7	3,112.8	19,860.7	Utilities	425,659.4
GA Georgia	66,974.2	52,432.3	3,349.8	11,192.1	53,534.7	143.7	13,295.8	TOTAL	3,262,112.9
GU Guam	2,516.1	2,265.8	196.1	54.2	2,400.7	115.5	-		
HI Hawaii	15,707.0	12,211.2	1,041.3	2,454.5	15,227.8	26.0	453.3		
IA Iowa	20,285.7	13,029.2	611.1	6,645.4	17,569.9	554.4	2,161.5		
ID Idaho	6,297.5	4,656.7	434.0	1,206.8	5,084.6	103.4	1,109.5		
IL Illinois	153,742.6	100,285.7	5,285.1	48,171.8	122,613.9	15,902.1	15,226.6		
IN Indiana	48,219.8	34,488.6	4,097.5	9,633.7	36,667.1	1,044.4	10,508.3		
KS Kansas	23,358.9	15,029.2	465.7	7,864.0	21,812.1	373.8	1,173.0		
KY Kentucky	33,037.7	21,970.0	1,815.7	9,252.0	26,708.9	486.3	5,842.5		
LA Louisiana	33,695.4	25,840.2	2,001.7	5,853.5	27,206.1	232.0	6,257.3		
MA Massachusetts	92,407.2	76,279.6	3,711.4	12,416.2	76,447.5	1,133.9	14,825.7		
MD Maryland	48,939.0	40,609.6	1,870.5	6,458.9	42,569.1	148.7	6,221.3		
ME Maine	7,706.0	5,483.9	699.8	1,522.3	6,961.3	-	744.7		
MI Michigan	76,138.9	56,361.6	3,101.4	16,675.8	55,719.5	7,404.1	13,015.2		
MN Minnesota	48,441.7	34,276.2	1,767.4	12,398.1	41,990.3	824.9	5,626.5		
MO Missouri	46,403.6	30,457.4	1,070.3	14,875.9	34,347.3	863.6	11,192.8		
MS Mississippi	16,628.2	11,124.0	353.4	5,150.8	11,952.9	3.0	4,672.3		
MT Montana	4,068.4	2,237.1	318.0	1,513.3	2,867.0	10.2	1,191.3		
NC North Carolina	49,334.0	41,045.8	1,320.6	6,967.5	39,167.1	257.3	9,909.5		
ND North Dakota	4,675.2	3,148.3	239.7	1,287.2	4,276.5	-	398.6		
NE Nebraska	18,054.3	12,688.8	478.6	4,886.8	16,299.2	-	1,755.1		
NH New Hampshire	8,298.6	5,378.3	634.5	2,285.7	6,130.3	80.9	2,087.3		
NJ New Jersey	115,585.5	85,458.7	6,449.9	23,676.9	90,063.0	14,496.4	11,026.1		
NM New Mexico	13,568.3	10,968.6	462.3	2,137.4	11,117.7	9.9	2,440.7		
NV Nevada	24,545.0	19,610.6	1,970.2	2,964.2	20,025.8	929.2	3,590.0		
NY New York	371,137.0	298,665.1	19,605.8	52,866.2	299,139.9	14,580.8	57,416.4		
OH Ohio	103,787.7	74,326.9	2,470.8	26,989.9	76,686.4	8,722.1	18,379.2		
OK Oklahoma	18,694.7	13,503.9	1,001.1	4,189.7	16,544.6	85.4	2,064.7		
OR Oregon	35,527.4	22,932.7	1,200.5	11,394.1	30,257.3	3,067.4	2,202.7		
OT Other Territories	9,941.4	2,261.5	7,638.6	41.3	923.1	-	9,018.3		
PA Pennsylvania	123,391.4	91,826.4	5,912.5	25,652.5	96,883.9	6,141.9	20,365.6		
PR Puerto Rico	101,816.2	83,632.9	374.4	17,808.9	57,045.5	37,335.0	7,435.6		
RI Rhode Island	11,020.3	8,689.0	925.3	1,406.0	8,066.8	1,754.4	1,199.1		
SC South Carolina	35,514.6	29,364.3	773.8	5,376.5	29,249.7	2,434.2	3,830.7		
SD South Dakota	4,754.0	2,840.8	320.6	1,592.6	4,156.9	8.5	588.7		
TN Tennessee	36,996.3	28,499.0	1,204.3	7,293.0	30,446.3	680.6	5,869.3		
TT Trust Territories	264.8	224.7	40.2	-	124.8	-	140.0		
TX Texas	305,425.0	230,745.4	15,235.9	59,443.6	244,678.3	16,754.4	43,992.3		
UT Utah	20,217.4	13,663.2	297.1	6,257.1	15,846.2	83.1	4,288.1		
VA Virginia	58,989.6	46,618.2	2,661.0	9,710.3	51,982.9	1,621.4	5,385.4		
VI Virgin Islands	2,345.9	2,181.1	46.5	118.4	2,297.8	48.1	-		
VT Vermont	4,846.1	2,953.9	495.2	1,397.0	3,067.0	-	1,779.1		
WA Washington	79,452.3	61,152.7	3,775.4	14,524.3	72,003.0	2,202.2	5,247.1		
WI Wisconsin	43,260.6	28,046.3	1,588.9	13,625.4	38,140.7	349.7	4,770.2		
WV West Virginia	10,294.8	5,668.6	801.7	3,824.6	6,518.9	2,091.9	1,684.0		
WY Wyoming	2,711.3	1,728.4	682.9	300.1	1,773.1	1.0	937.2		
TOTAL (9/30/2015)	3,262,114.9	2,483,964.0	152,038.5	626,100.7	2,566,710.5	223,656.5	471,747.9		
TOTAL (6/30/2015)	3,282,853.4	2,505,741.8	153,309.0	623,802.6	2,581,349.4	226,840.2	396,314.3		
% Change	-0.6%	-0.9%	-0.8%	0.4%	-0.6%	-1.4%	19.0%		

<sup>8</sup> Outstanding does not include refunded (inclusive of prerefunded) debt and derivatives. See additional tables for prerefunded and derivatives debt. The chart replaces "Outstanding by Insurance" from prior municipal reports. For comparability against Federal Reserve's Flow of Funds aggregate prerefunded with outstanding but not derivatives; differences between the two aggregates afterward are due to underlying database differences (Fed: Mergent; these tables: Bloomberg) as well as the growth of the municipal direct loan market, which is largely not CUSIP-based. Fixed rate debt does not include those multimodal bonds that are currently in long-term fixed rate mode.

Addendum Tables –Build America Bonds, Prerefunded, Derivatives, and Rating<sup>9</sup>

\$ Millions

State	Total Outstanding	BAB Only	Prerefunded Only	Derivatives Only	AAA	AA	A	BBB	HY
AK Alaska	10,170.8	357.7	507.3	229.5	1,253.1	5,521.7	2,385.4	85.7	471.8
AL Alabama	31,295.7	585.3	3,360.3	692.7	890.8	14,782.5	8,744.0	1,019.4	729.4
AR Arkansas	13,851.6	31.1	698.2	1.6	411.2	8,425.9	2,399.9	474.2	22.0
AS American Samoa	55.9	-	-	-	-	-	-	-	-
AZ Arizona	50,407.7	1,954.7	4,199.8	1,434.6	3,163.8	29,040.7	10,675.9	3,364.0	844.6
CA California	521,120.4	37,486.4	27,909.0	19,589.4	9,034.4	222,539.0	201,933.8	20,030.4	19,969.1
CO Colorado	54,227.4	4,043.2	5,183.0	2,231.4	3,184.2	26,184.0	12,689.1	6,052.4	466.8
CT Connecticut	46,045.1	1,884.2	2,196.7	903.7	9,087.0	27,714.3	6,438.8	490.4	279.8
DC District of Columbia	29,574.5	1,891.2	1,172.7	1,210.2	274.5	11,605.6	9,227.5	2,508.4	3,499.3
DE Delaware	6,960.4	519.3	430.3	222.4	2,446.7	2,788.2	970.7	465.0	75.0
FL Florida	139,388.2	5,504.5	9,654.1	7,567.5	2,739.7	57,616.6	57,426.4	4,249.3	716.6
GA Georgia	66,974.2	3,689.1	3,941.1	1,431.1	14,644.7	18,958.5	21,942.1	2,613.6	254.0
GU Guam	2,516.1	-	381.0	-	-	-	950.2	1,305.9	227.8
HI Hawaii	15,707.0	1,232.0	1,736.6	426.1	176.1	11,927.3	2,568.3	531.6	100.3
IA Iowa	20,285.7	640.5	591.6	109.2	1,647.0	8,076.3	5,306.0	294.9	2,307.1
ID Idaho	6,297.5	152.1	686.0	173.2	660.1	2,166.9	2,024.1	138.9	118.7
IL Illinois	153,742.6	10,085.5	7,029.3	6,447.8	5,867.2	45,020.9	59,574.1	21,560.6	5,771.2
IN Indiana	48,219.8	1,857.6	3,502.2	1,768.2	2,219.5	21,503.5	14,209.0	3,081.9	392.6
KS Kansas	23,358.9	1,519.1	1,321.7	180.8	1,737.2	13,439.4	5,463.3	116.7	127.7
KY Kentucky	33,037.7	2,112.8	1,778.6	377.8	1,479.0	13,992.8	13,018.3	2,623.4	103.4
LA Louisiana	33,695.4	642.1	4,140.7	535.2	2,776.8	13,006.2	11,010.6	4,839.3	185.3
MA Massachusetts	92,407.2	4,830.8	5,479.7	4,159.5	12,785.6	60,365.8	10,652.6	1,940.8	321.2
MD Maryland	48,939.0	3,380.9	5,599.6	676.5	20,140.5	17,739.9	5,069.0	1,779.1	448.1
ME Maine	7,706.0	88.1	432.4	117.1	95.4	4,633.9	2,381.2	176.6	77.5
MI Michigan	76,138.9	2,076.0	3,549.9	2,508.2	6,400.2	33,442.6	15,866.3	5,454.2	9,476.0
MN Minnesota	48,441.7	1,116.8	2,754.6	644.7	5,866.0	31,660.1	5,682.9	990.3	317.8
MO Missouri	46,403.6	2,885.0	4,075.6	923.1	4,473.0	23,023.5	10,314.6	1,674.0	167.0
MS Mississippi	16,628.2	764.9	1,413.9	202.3	389.3	10,833.9	2,345.6	1,214.4	44.2
MT Montana	4,068.4	29.2	132.8	6.7	345.9	1,743.4	1,235.1	19.3	-
NC North Carolina	49,334.0	1,597.0	5,421.2	1,147.3	13,493.8	22,970.6	9,513.1	1,225.0	52.4
ND North Dakota	4,675.2	27.6	134.4	49.3	284.4	2,603.7	963.2	297.3	10.6
NE Nebraska	18,054.3	943.0	1,881.9	407.0	377.7	8,946.4	4,796.4	845.0	37.9
NH New Hampshire	8,298.6	354.9	433.5	192.5	199.7	5,006.0	2,170.7	379.2	111.4
NJ New Jersey	115,585.5	6,573.3	5,228.0	6,679.4	7,328.4	20,588.7	70,946.1	5,362.1	4,411.1
NM New Mexico	13,568.3	247.4	818.3	330.7	1,039.2	10,364.3	1,058.7	669.7	77.0
NV Nevada	24,545.0	2,153.9	1,757.0	1,234.1	237.8	13,520.6	7,348.3	472.6	316.4
NY New York	371,137.0	20,576.0	11,616.8	10,849.3	17,617.0	237,542.6	66,831.7	11,431.3	8,951.5
OH Ohio	103,787.7	6,882.8	6,403.9	1,907.9	7,608.9	45,560.9	21,848.5	4,331.2	12,631.5
OK Oklahoma	18,694.7	637.9	568.1	430.4	2,063.5	7,983.1	5,706.2	632.4	185.5
OR Oregon	35,527.4	965.6	3,739.4	162.4	1,171.9	27,576.9	3,497.9	1,574.5	30.6
OT Other Territories	9,941.4	-	-	6,054.7	1,050.9	7,038.1	48.9	370.1	-
PA Pennsylvania	123,391.4	4,876.6	6,302.9	4,068.9	2,863.3	49,348.3	56,108.2	6,566.8	1,687.5
PR Puerto Rico	101,816.2	1,013.0	777.6	1,888.3	180.3	170.4	4,193.0	397.7	83,181.4
RI Rhode Island	11,020.3	-	683.4	211.0	910.6	4,617.7	2,348.0	1,114.3	1,756.6
SC South Carolina	35,514.6	948.1	3,678.6	792.9	1,706.0	14,121.5	13,594.9	1,499.8	318.0
SD South Dakota	4,754.0	313.3	151.0	148.6	231.3	2,639.1	1,474.2	27.3	-
TN Tennessee	36,996.3	1,802.3	3,276.2	644.9	1,211.4	22,537.0	8,424.2	1,619.5	-
TT Trust Territories	264.8	-	-	-	-	-	-	-	40.2
TX Texas	305,425.0	16,492.8	30,060.1	7,672.8	117,038.6	96,897.0	50,541.3	16,647.4	2,550.7
UT Utah	20,217.4	2,883.7	2,324.2	845.3	7,004.3	9,169.9	2,279.0	90.3	88.9
VA Virginia	58,989.6	3,710.5	6,146.8	1,089.2	15,692.2	32,161.1	3,703.5	1,865.9	2,159.1
VI Virgin Islands	2,345.9	37.3	-	-	-	-	26.2	2,037.2	138.2
VT Vermont	4,846.1	123.8	203.9	15.5	38.6	3,174.7	1,216.7	183.9	31.2
WA Washington	79,452.3	5,993.2	10,409.1	2,285.8	1,570.6	64,276.6	10,176.5	886.5	139.5
WI Wisconsin	43,260.6	1,703.1	2,706.1	1,186.4	1,727.4	29,022.5	7,244.6	1,155.3	262.7
WV West Virginia	10,294.8	88.2	125.6	42.7	415.2	1,978.2	3,540.1	789.4	2,606.4
WY Wyoming	2,711.3	133.8	8.3	9.8	232.0	1,098.2	1,132.9	194.3	-
TOTAL (9/30/2015)	3,262,114.9	172,439.1	208,714.8	105,117.2	317,483.7	1,478,667.4	863,237.5	151,761.0	169,290.6
TOTAL (6/30/2015)	3,282,853.4	172,794.2	208,983.2	105,102.1	319,741.7	1,484,750.6	874,669.2	148,441.2	164,133.0
% Change	-0.6%	-0.2%	-0.1%	0.0%	-0.7%	-0.4%	-1.3%	2.2%	3.1%

<sup>9</sup> Rating based on the lowest long-term rating assigned to the bond by Fitch Ratings, Moody's Investor Services, or Standard and Poor's; split-rated debt are therefore included in the HY category.

## A DESCRIPTION OF THE TERMINOLOGY IN THE MUNICIPAL BOND CREDIT REPORT

**Long-Term Municipal Issue:** municipal securities with a maturity of 13 months or longer at the time the municipal security is issued.<sup>10</sup>

**General Obligation (G.O.) Bonds:** bonds issued by state or local units of government. The bonds are secured by the full faith, credit and taxing power of the municipal bond issuer. Such bonds constitute debts by the issuer and often require approval by election prior to issuance. In the event of default, bondholders of G.O. bonds have the right to compel a tax levy or legislative appropriation to cover debt service.

**Revenue Bonds:** bonds payable from a specific source of revenue and to which the full faith and credit of an issuer and its taxing power are not pledged. Revenue bonds are payable from identified sources of revenue and do not permit the bondholders to compel taxation or legislative appropriation of funds not pledged for payment of debt service. Pledged revenues may be derived from sources such as the operation of the financed project, grants or a dedicated specialized tax. Generally, no voter approval is required prior to issuance of such obligations.

**Ratings:** are evaluations of the credit quality of bonds and other debt financial instruments made by rating agencies. Ratings are intended to measure the probability of the timely repayment of principal and interest on municipal securities. Ratings are typically assigned upon initial bond issuance. Ratings are periodically reviewed and may be amended to reflect changes in the issue or issuer's credit position. The ratings may be affected by the credit worthiness of the issuer itself or from a credit enhancement feature of the security such as guarantor, letter of credit provider, and bond insurer. Some rating agencies provide both long-term and short-term ratings on variable rate demand obligations. The ratings described herein are "long-term" ratings – that is, ratings applied to municipal bond issues with original maturity of 13 months or longer.

**State Rating:** indicates the G.O. credit rating a rating agency may apply to a state. The rating on a specific municipal bond issue or issuer located with the state may differ from the state rating.

**Rating Agency:** is a company that provides ratings that indicate the relative credit quality or liquidity characteristics of municipal securities as well as other debt securities. Moody's Investors Service ("Moody's") and Standard and Poor's are the largest agencies in terms of municipal securities rated, followed by Fitch Ratings.

### **Moody's Ratings**<sup>11</sup>

Moody's describes its municipal credit ratings as "opinions of the investment quality of issuers and issues in the U.S. municipal and tax-exempt markets. These ratings incorporate a rating agency's assessment of the probability of default and loss severity of issuers and issues."

Moody's ratings are based upon the analysis of four primary factors relating to municipal finance: economy, debt, finances and administrative/management strategies. The rating classifications are defined as:

**Aaa:** obligations rated Aaa are judged to be of the highest quality, with minimal credit risk.

**Aa:** obligations rated Aa are judged to be of high quality and are subject to very low credit risk.

**A:** obligations rated A are considered upper-medium grade and are subject to low credit risk.

**Baa:** obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess certain speculative characteristics.

**Ba:** obligations rated Ba are judged to have speculative elements and are subject to substantial credit

<sup>10</sup> Authors' own definition.

<sup>11</sup> Moodys.com, "Ratings Definitions."

risk.

B: obligations rated B are considered speculative and are subject to high credit risk.

Caa: obligations rated Caa are judged to be of poor standing and are subject to very high credit risk.

Ca: obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of recovery of principal and interest.

C: obligations rated C are the lowest rated class of bonds and are typically in default, with little prospect for recovery of principal or interest.<sup>12</sup>

### Standard and Poor's Ratings<sup>13</sup>

Standard and Poor's describes a municipal issue credit rating as "a current opinion of the credit worthiness with respect to a specific financial obligation(s) or a specific program. It takes into consideration the credit worthiness of credit enhancement on the obligation."

Long-term issue credit ratings are based on:

- Likelihood of payment—capacity and willingness to meet the financial commitment in accordance with the terms of the obligation;
- Nature of and provisions of the obligation; and
- Protection afforded by, and relative position of, the obligation in the event of bankruptcy, reorganization, or other arrangement under the laws of bankruptcy and other laws affecting creditors' rights.

AAA: extremely strong capacity to meet its financial commitments – the highest rating category.

AA: very strong capacity to meet financial commitments.

A: strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in the higher rated categories.

BBB: adequate capacity to meet its financial commitments though adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to meet financial commitments.

Rating "BB", "B", "CCC", and "CC" are regarded as having significant speculative characteristics. 'BB' indicates the least degree of speculation and 'CC' the highest.

BB: less vulnerable in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions which could lead to inadequate capacity to meet its financial commitments.

B: an obligation rated 'B' is more vulnerable to nonpayment than obligations rated 'BB', but the capacity to meet its financial commitment. Adverse business, financial, or economic conditions will likely impair the capacity or willingness to meet financial obligations.

CCC: currently vulnerable, and is dependent upon favorable business, financial, and economic conditions to meet financial commitments.

CC: highly vulnerable and is dependent upon favorable business, financial and economic conditions.

### Fitch Ratings

Fitch Ratings provides an opinion on the ability of an entity or a securities issue to meet financial commitments such as interest, preferred dividends, or repayment of principal, on a timely basis.

Credit ratings are used by investors as indications of the likelihood of repayment in accordance

<sup>12</sup>The lowest rating is a "D" at both Moody's and Standard and Poor's.

<sup>13</sup>Standardandpoors.com "Long-Term Issue Credit Ratings," May 17, 2002.

with the terms on which they invested. Thus, the use of credit ratings defines their function: "investment grade" ratings (long-term 'AAA' - 'BBB' categories) indicate a relatively low probability of default, while those in the "speculative" or "non-investment grade" categories (international long-term 'BB' - 'D') may signal a higher probability of default or that a default has already occurred. Entities or issues carrying the same rating are of similar but not necessarily identical credit quality since the rating categories do not fully reflect small differences in the degrees of credit risk.

The ratings are based on information obtained directly from issuers, other obligors, underwriters, their experts, and other sources Fitch believes to be reliable. Fitch does not audit or verify the truth or accuracy of such information. Ratings may be changed or withdrawn as a result of changes in, or the unavailability of, information or for any other reasons.

Credit ratings do not directly address any risk other than credit risk. In particular, these ratings do not deal with the risk of loss due to changes in interest rates and other market considerations.

Note: "Not rated" refers to municipal bonds that were not rated by one of the major rating agencies listed above.

**General Use of Proceeds:** Refers to the type of project the proceeds or funds received from bond issuance are used. In the Municipal Bond Credit Report, the use of proceed classifications are general government use, education, water, sewer and gas, health care and a miscellaneous category, "other."<sup>14</sup>

**Municipal G.O. to Treasury Ratio:** is a common measure of credit risk of municipal bonds relative to risk-free securities, Treasuries. It is a measure comparable to the "spread to Treasury" measure in the taxable markets. Typically the municipal yield is typically less than 100 percent of the Treasury yield due to the tax-free nature of municipal securities.

**Credit Enhancement:** is the use of the credit of an entity other than the issuer to provide additional security in a bond. The term is usually used in the context of bond insurance, bank letters of credit state school guarantees and credit programs of federal and state governments and federal agencies but also may apply more broadly to the use of any form of guaranty secondary source of payment or similar additional credit-improving instruments.

**Bond Insurance:** is a guaranty by a bond insurer of the payment of principal and interest on municipal bonds as they become due should the issuer fail to make required payments. Bond insurance typically is acquired in conjunction with a new issue of municipal securities, although insurance also is available for outstanding bonds traded in the secondary market.

**Letter of Credit:** a commitment, usually made by a commercial bank, to honor demands for payment of a debt upon compliance with conditions and/or the occurrence of certain events specified under the terms of the commitment. In municipal financings, bank letters of credit are sometimes used as additional sources of security with the bank issuing the letter of credit committing to in the event the issuer is unable to do so.

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<sup>14</sup>Authors' own definition.



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