



MUNICIPAL BOND CREDIT REPORT

First Quarter 2017

RESEARCH REPORT

A large green graphic element in the bottom-left corner, consisting of a dark green triangle and a lighter green rectangle. A horizontal green bar is also present at the bottom of the page.

TABLE OF CONTENTS

Table of Contents	i
Market Summary	2
Charts & Data.....	4
Long-Term Municipal State Issuance, 1Q'17	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

The report is subject to the Terms of US applicable to SIFMA's website, available here: <http://www.sifma.org/legal/>

SIFMA is the voice of the U.S. securities industry. We represent the broker-dealers, banks and asset managers whose nearly 1 million employees provide access to the capital markets, raising over \$2.5 trillion for businesses and municipalities in the U.S., serving clients with over \$18.5 trillion in assets and managing more than \$67 trillion in assets for individual and institutional clients including mutual funds and retirement plans. SIFMA, with offices in New York and Washington, D.C., is the U.S. regional member of the Global Financial Markets Association (GFMA). For more information, visit <http://www.sifma.org>.

MARKET SUMMARY

Municipal Issuance Overview – Primary Market

According to Thomson Reuters, long-term public municipal issuance volume totaled \$86.5 billion in the first quarter of 2017, a decline of 13.4 percent from the prior quarter (\$99.9 billion) and a decline of 9.5 percent year-over-year (y-o-y) (\$95.5 billion). Volumes were generally in line with the 10-year average of \$82.6 billion. Including private placements¹ (\$3.0 billion), long-term municipal issuance for 1Q'17 was \$89.4 billion. Refunding volumes dropped sharply in the first quarter to \$33.5 billion, representing 38.7 percent of issuance.

Tax-exempt issuance totaled \$76.8 billion in 1Q'17, a decline of 15.4 percent q-o-q and a decline 12.9 percent y-o-y. Taxable issuance totaled \$6.9 billion in 1Q'17, a decline of 4.6 percent q-o-q but an increase of 5.0 percent y-o-y. AMT issuance was \$2.8 billion in 1Q'17, a sharp increase of 51.6 percent q-o-q and nearly triple volumes y-o-y.

By use of proceeds, general purpose led issuance totals in 1Q'17 (\$22.3 billion), followed by primary & secondary education (\$18.4 billion), and higher education (\$9.2 billion). Refunding volumes dipped sharply to comprise 38.7 percent of issuance in 1Q'17 from 47.7 percent in the prior quarter and 52.7 percent year-over-year.²

Yields, Inflows, and Total Return

Ratios of 10-year tax-exempt AAA GOs and similar-maturity Treasuries fell in the first quarter on a q-o-q basis, averaging 95.6 percent in 1Q'17 from 97.2 percent in 4Q'16.

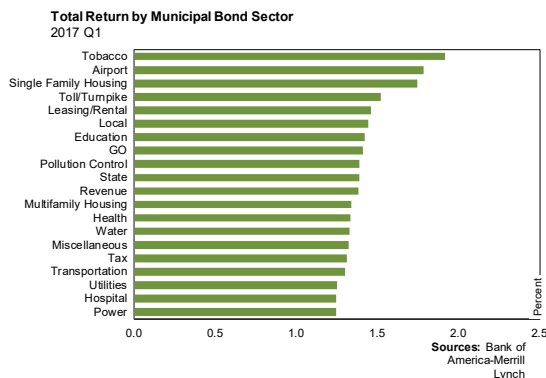
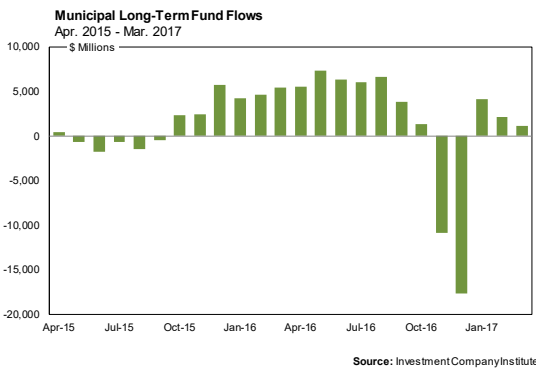
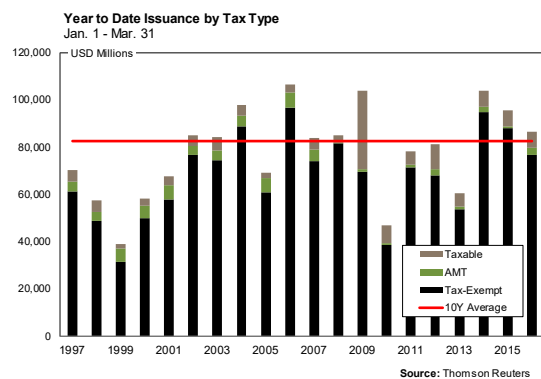
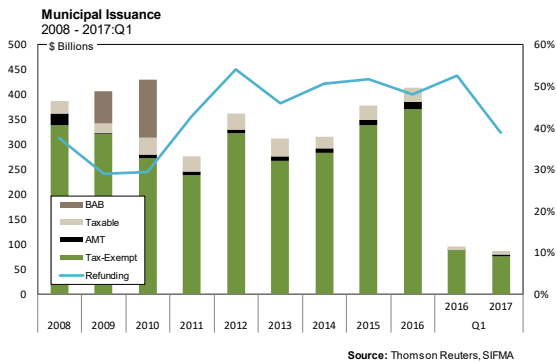
According to the Investment Company Institute (ICI), first quarter net flow into long-term tax-exempt funds was positive, with \$7.4 billion of net inflow in 1Q'17 compared to \$27.1 billion of outflow from 4Q'16 and \$14.4 billion of inflow y-o-y.

According to Bank of America-Merrill Lynch indices, municipals gained 1.4 percent in the first quarter of 2017. The tobacco sector, airport, and single-family (1.9 percent, 1.8 percent and 1.8 percent respectively) had the strongest performance within the individual municipal sectors in 1Q'17 while power, hospitals, and utilities underperformed (1.24 percent, 1.25 percent and 1.25 percent total return, respectively). Build America Bonds (BABs) gained 1.3 percent, underperforming tax exempts bonds but outperforming similarly-rated corporate bonds in 1Q'17 (which had a total return of 1.1 percent).

Trading Activity and Bank Holdings

Trading activity fell q-o-q to \$11.1 billion daily in 1Q'17, an 8.3 percent decrease from 4Q'16 (\$12.1 billion) but a 21.9 percent increase from 1Q'16 (\$9.1 billion). By number of trades, however, trading activity rose on a q-o-q and y-o-y basis, rising 2.9 percent and 14.4 percent y-o-y.

Bank holdings of both municipal loans and bonds rose in 4Q'16 from the prior quarter, to \$173.7 billion (from \$168.7 billion) and \$375.4 billion (from \$366.9 billion), respectively.



¹ Private placement figures are excluded in charts and tables.

² Percentages represent both full refundings and the half the dollar amount of deals that contain both refundings and new financing.

Green Bonds Update

Green bond issuance was \$1.5 billion in 1Q'17, rising 0.7 percent q-o-q and 7.1 percent y-o-y. By dollar amount, the majority of issuance came from New York and California; the two states collectively issued \$1.2 billion of green bond debt. Sectors were concentrated in water, sewer and gas facilities as well as transportation.

VRDO and FRN Update

Issuance of variable-rate demand obligations (VRDOs), puttable long-term municipal bonds with interest rates that reset periodically, fell again in the first quarter, with \$764.7 million issued in 1Q'17, a decline of 1.6 percent and 31.8 percent, respectively, q-o-q and y-o-y. Floating rate bonds also declined quarter over quarter with \$954.8 million in issuance, a 27.4 percent decline.

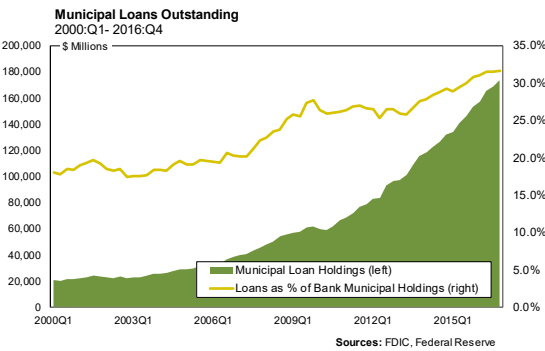
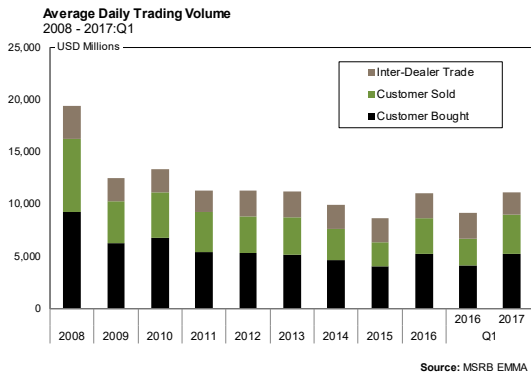
The SIFMA Municipal Swap index, a seven-day high-grade market index comprised of tax-exempt VRDOs, ended March at 0.91 percent, averaging 0.69 percent throughout 1Q'17, 3 basis points higher than than 4Q'16's average (0.66 percent) and 60 basis points higher than 1Q'16's average (0.08 percent).

Government Update

Moody's Investor Services cut New Jersey's rating at the end of March to A3, (from A2), on severe pension funding issues. Also in March, Standard and Poor's downgraded two states, Louisiana (to AA- from AA) and Oklahoma (to AA from AA+) on weak revenue and tax collections. Fitch downgraded the US Virgin Islands IDR rating to BB- from BB in January, with similar downgrades for the territory's revenue bonds.

According to the Nelson A. Rockefeller Institute of Government, preliminary figures for state tax revenue for the fourth quarter of 2016 appear to be quite soft, with growth of 0.4 percent y-o-y.³ Weak growth was reported for sales tax (1.7 percent growth) while outright declines were reported in corporate sales tax.

The weakness in tax revenue data appears to have come from multiple fronts: a weak commodities market in early 2016 impacted states reliant on commodities; discretionary spending continues to remain soft post-recession with little wage growth; and taxpayers may have pushed out income from 2016 to 2017 in anticipation of tax cuts from the Trump Administration.



³ The Nelson A. Rockefeller Institute of Government, "State Revenue Report #106, Weak Tax Revenue Growth in the Third and Fourth Quarters of 2016 Amid Uncertainty About Federal Tax Changes," March 2017.

CHARTS & DATA

LONG-TERM MUNICIPAL STATE ISSUANCE, 1Q'17⁴\$ Millions⁵

	Bond Type			Tax Type			Funding Type			
	Total	G.O.	Revenue	AMT	Tax-Exempt	Taxable	New Financing	Refinancing	Refunding & New Refinancing	New Refunding
State										
Alabama	541.6	122.1	419.5	123.8	271.0	146.9	73.5		80.4	387.8
Alaska	121.9	121.9		-	121.9	-	121.9			
American Samoa	0.0									
Arizona	850.0	542.9	307.1	-	847.3	2.6	528.7		78.6	242.7
Arkansas	228.0	142.9	85.1	-	226.3	1.8	79.8		10.9	137.3
California	16,499.4	7,536.9	8,962.5	989.2	14,361.3	1,148.9	7,025.4		6,537.1	2,936.9
Colorado	2,861.6	1,837.9	1,023.7	-	2,826.6	35.0	1,605.0		820.7	435.9
Connecticut	1,643.2	1,366.6	276.6	41.5	1,575.7	26.1	626.6		944.7	72.0
District of Columbia	601.6		601.6	-	601.6	-	300.0			301.6
Delaware	308.5	265.8	42.7	-	308.5	-	225.0			83.5
Florida	1,830.2	200.3	1,629.9	-	1,752.9	77.3	470.0		241.8	1,118.5
Georgia	1,375.8	687.3	688.5	-	1,193.4	182.4	760.8			615.0
Guam	0.0									
Hawaii	0.0									
Idaho	205.4	14.4	191.0	-	197.4	8.0	93.2		67.9	44.3
Illinois	2,899.2	2,023.2	876.0	-	2,470.3	428.8	1,333.7		1,137.8	427.7
Indiana	855.7	25.3	830.4	14.1	828.2	13.5	389.0		306.2	160.6
Iowa	514.0	331.9	182.1	-	484.9	29.1	245.9		14.1	253.9
Kansas	309.8	186.5	123.3	7.2	292.9	9.7	183.2		88.1	38.5
Kentucky	581.5	37.7	543.8	-	581.6	-	468.3			113.3
Louisiana	511.6	200.8	310.8	-	508.7	2.9	241.2		28.6	241.7
Maine	221.2	36.4	184.8	10.0	211.3	-	221.3			
Maryland	2,894.0	1,718.7	1,175.3	-	2,670.3	223.7	1,350.1		504.9	1,038.9
Massachusetts	1,541.7	635.3	906.4	72.4	1,433.0	36.3	673.0		441.5	427.1
Michigan	1,792.9	1,127.7	665.2	-	1,536.2	256.6	237.1		752.0	803.8
Minnesota	1,156.2	605.8	550.4	-	1,074.2	82.0	613.8		195.9	346.6
Mississippi	227.8	83.2	144.6	-	211.6	16.1	147.5		67.8	12.5
Missouri	876.6	222.0	654.6	-	845.1	31.6	458.3		44.0	374.4
Montana	196.9	78.5	118.4	11.4	185.5	-	174.3			22.6
Nebraska	685.7	176.5	509.2	52.8	527.9	105.0	444.6		15.8	225.2
Nevada	1,089.6	575.2	514.4	134.8	954.8	-	254.4		96.2	739.0
New Hampshire	102.9	102.9		-	97.3	5.5	71.1		31.7	
New Jersey	2,465.5	305.8	2,159.7	-	2,465.0	0.6	1,064.6		869.1	531.9
New Mexico	348.5	73.1	275.4	-	348.5	-	181.6		88.0	78.9
New York	9,894.1	1,484.9	8,409.2	29.0	8,703.2	1,161.9	2,260.2		4,991.1	2,642.8
North Carolina	1,133.3	528.0	605.3	115.2	1,018.1	-	606.2		195.0	332.1
North Dakota	56.3	28.5	27.8	-	39.8	16.6	34.8		3.2	18.3
Ohio	2,572.6	1,076.2	1,496.4	27.1	2,544.9	0.6	1,982.4		463.3	126.9
Oklahoma	1,538.1	514.2	1,023.9	-	1,471.6	66.6	838.9		482.9	216.4
Oregon	2,360.7	1,734.1	626.6	211.3	2,016.3	133.2	2,139.2		156.8	64.8
Pennsylvania	3,913.5	2,162.7	1,750.8	-	3,254.7	658.9	1,467.2		1,023.6	1,422.7
Puerto Rico	0.0									
Rhode Island	189.2	17.5	171.7	-	188.6	0.6	92.1			97.1
South Carolina	501.2	149.5	351.7	-	446.1	55.1	366.0		11.9	123.3
South Dakota	50.4	29.5	20.9	-	50.4	-	31.2			19.2
Tennessee	1,155.2	788.8	366.4	-	1,153.7	1.5	858.3		60.0	236.8
Texas	8,865.0	5,460.4	3,404.6	129.7	7,388.0	1,347.3	4,544.6		2,128.2	2,192.1
Utah	2,066.7	272.7	1,794.0	826.2	1,185.1	43.6	1,796.3		249.7	8.8
Vermont	77.1	8.0	69.1	11.4	64.6	1.0	61.8		15.2	
Virgin Islands	0.0									
Virginia	1,184.2	472.0	712.2	-	1,148.9	35.3	479.0		314.6	390.6
Washington	2,194.3	1,408.9	785.4	13.3	2,176.4	4.6	1,502.5		288.9	402.9
West Virginia	257.2	67.7	189.5	14.5	242.8	-	210.3			46.9
Wisconsin	2,162.6	1,179.9	982.7	-	1,692.5	470.1	980.3		296.4	885.9
Wyoming	0.0									
ALL	86,510.2	38,769.0	47,741.2	2,834.9	76,796.9	6,867.3	40,914.2	0.0	24,144.6	21,439.7
QoQ	-13.4%	-2.9%	-20.4%	51.6%	-15.4%	-4.6%	0.8%	-100.0%	1.2%	-39.5%
YoY	-9.5%	-14.6%	-4.7%	256.1%	-12.9%	5.0%	14.2%		28.5%	-47.6%

⁴ Issuance totals do not include private placements.⁵ 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 Long	Variable Rate No Put	Variable Rate Short (VRDO)	Zero
Alabama	541.6		526.7		15.0			
Alaska	121.9		121.9					
American Samoa	0.0							
Arizona	850.0		849.9					
Arkansas	228.0		228.0					
California	16,499.4	14.4	15,663.9	156.9	418.5		107.7	138.1
Colorado	2,861.6		2,332.1	138.6	276.1		114.8	
Connecticut	1,643.2		1,594.9		10.4		38.0	
District of Columbia	601.6		601.6					
Delaware	308.5		308.5					
Florida	1,830.2		1,731.8			98.4		
Georgia	1,375.8		1,300.7				75.0	
Guam	0.0							
Hawaii	0.0							
Idaho	205.4		205.4					
Illinois	2,899.2		2,752.3		34.0		102.9	10.0
Indiana	855.7		855.7					
Iowa	514.0		508.5				5.5	
Kansas	309.8		309.8					
Kentucky	581.5		574.5		7.1			
Louisiana	511.6	71.2	426.8					13.6
Maine	221.2		221.3					
Maryland	2,894.0		2,894.0					
Massachusetts	1,541.7		1,531.3		10.4			
Michigan	1,792.9		1,792.8					
Minnesota	1,156.2		1,136.1		13.4		6.7	
Mississippi	227.8		227.8					
Missouri	876.6		874.9					1.8
Montana	196.9		176.9		20.0			
Nebraska	685.7		685.7					
Nevada	1,089.6		1,072.9		16.8			
New Hampshire	102.9		102.9					
New Jersey	2,465.5		2,465.5					
New Mexico	348.5		348.5					
New York	9,894.1		9,832.6	61.5				
North Carolina	1,133.3		1,115.7					17.6
North Dakota	56.3		56.3					
Ohio	2,572.6		2,545.6		12.7		13.5	0.8
Oklahoma	1,538.1		1,538.1					
Oregon	2,360.7	10.5	2,037.1					313.1
Pennsylvania	3,913.5		3,857.0			6.0	50.6	
Puerto Rico	0.0							
Rhode Island	189.2		189.2					
South Carolina	501.2		501.2					
South Dakota	50.4		50.4					
Tennessee	1,155.2		1,155.2					
Texas	8,865.0		8,551.5		60.2		250.0	3.3
Utah	2,066.7		1,634.8	420.0				
Vermont	77.1		77.1					
Virgin Islands	0.0							
Virginia	1,184.2		1,184.2					
Washington	2,194.3		2,016.5	177.8				
West Virginia	257.2		257.3					
Wisconsin	2,162.6		2,162.6					
Wyoming	0.0							
ALL	86,510.2	96.1	83,186.0	954.8	894.6	104.4	764.7	498.3
QoQ	-13.4%		-14.1%	-27.4%	54.5%		-1.6%	42.0%
YoY	-9.5%	750.4%	-10.7%	2902.5%	-18.8%		-31.8%	413.2%

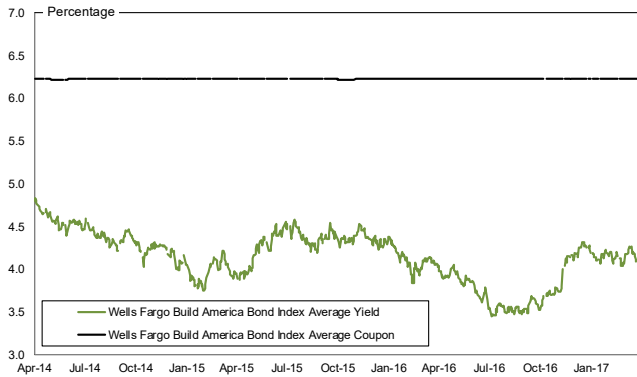
LONG-TERM MUNICIPAL ISSUANCE BY GENERAL USE OF PROCEEDS

\$ Millions

Use of Proceeds	1Q'16	4Q'16	1Q'17	Q-o-Q	Y-o-Y
Airports	582.8	3,891.1	3,039.0	-21.9%	421.4%
Assisted Living	27.3	151.8	40.5	-73.3%	48.4%
Bridges	658.8	20.7	2,511.2	12031.4%	281.2%
Childrens hospital	228.9	181.0	209.6	15.8%	-8.4%
Churches Temples and Mosques		4.3	41.9	874.4%	
Civic & convention centers	459.0	322.7	85.1	-73.6%	-81.5%
Combined utilities	271.2	852.0	214.4	-74.8%	-20.9%
Cont Care Retirement Community	255.4	2,365.0	635.5	-73.1%	148.8%
Correctional facilities	101.0	416.9	124.0	-70.3%	22.8%
Economic development	2,471.9	2,304.7	1,947.9	-15.5%	-21.2%
Fire stations & equipment	118.4	95.3	92.0	-3.5%	-22.3%
Flood control	132.0	312.5	69.3	-77.8%	-47.5%
Gas	618.9	10.3	58.9	471.8%	-90.5%
General acute care hospital	5,852.5	9,008.5	5,054.0	-43.9%	-13.6%
General Medical	200.3		402.1		100.7%
General purpose /public improvement	24,418.6	21,777.2	22,299.5	2.4%	-8.7%
Government buildings	293.0	120.0	189.7	58.1%	-35.3%
Higher education	9,212.8	8,786.7	11,950.7	36.0%	29.7%
Industrial development	26.3	85.1	6.1	-92.8%	-76.8%
Libraries & museums	211.5	162.6	146.7	-9.8%	-30.6%
Mass transportation	3,277.7	3,050.9	3,249.9	6.5%	-0.8%
Multi family housing	861.3	1,528.1	1,297.3	-15.1%	50.6%
Nursing homes	37.6	25.1	23.1	-8.0%	-38.6%
Office buildings	59.8		8.5		-85.8%
Other education	48.1	21.4	102.4	378.5%	112.9%
Other recreation	41.3	393.4	46.5	-88.2%	12.6%
Parking facilities	41.0	75.6	69.6	-7.9%	69.8%
Parks, Zoos & Beaches	205.5	300.8	143.4	-52.3%	-30.2%
Police stations & equipment	32.9		25.0		-24.0%
Pollution control	637.3	120.0	142.5	18.8%	-77.6%
Primary & secondary education	24,643.8	19,702.3	18,432.2	-6.4%	-25.2%
Public power	3,487.7	2,609.3	1,812.2	-30.5%	-48.0%
Sanitation	58.4	447.7	51.8	-88.4%	-11.3%
Seaports /marine terminals	171.8	720.4	286.1	-60.3%	66.5%
Single family housing	2,243.5	2,298.7	1,628.4	-29.2%	-27.4%
Single speciality hospital	35.3	51.9	200.6	286.5%	468.3%
Solid waste	17.9	330.2	157.2	-52.4%	778.2%
Stadiums & sports complexes	119.1	11.3	203.0	1696.5%	70.4%
Student loans		799.1	430.0	-46.2%	
Telecommunications		110.9	19.7	-82.2%	
Theatres		189.1	20.0	-89.4%	
Toll roads, highways & streets	3,189.3	5,085.5	2,247.6	-55.8%	-29.5%
Tunnels		321.5		-100.0%	
Veterans (excluding housing)		39.8		-100.0%	
Water & sewer facilities	10,181.1	10,770.1	6,783.0	-37.0%	-33.4%
ALL	95,531.0	99,871.5	86,498.1	-13.4%	-9.5%

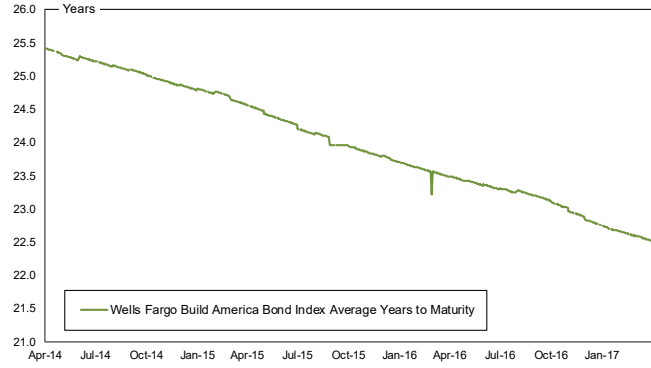
BUILD AMERICA BONDS

Build America Bonds Average Yield and Coupon
Apr. 2014 - Mar. 2017



Source: Wells Fargo

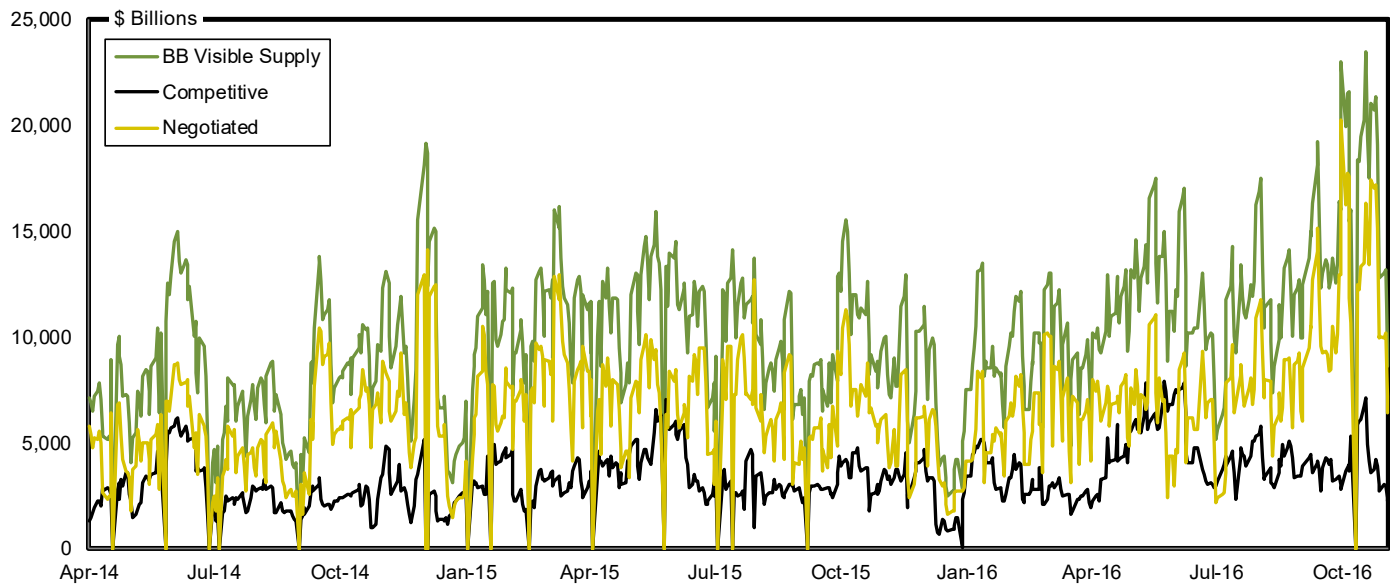
Build America Bond Average Years to Maturity
Apr. 2014 - Mar. 2017



Source: Wells Fargo

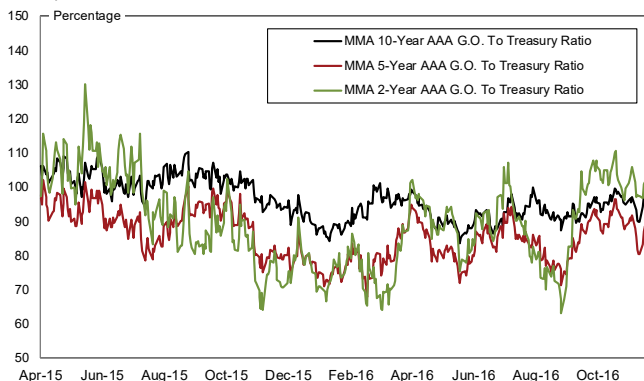
SUPPLY, YIELD CURVES, TOTAL RETURN, SPREADS & RATIOS

Bond Buyer 30-Day Visible Supply
Apr. 1, 2014 - Mar. 31, 2017



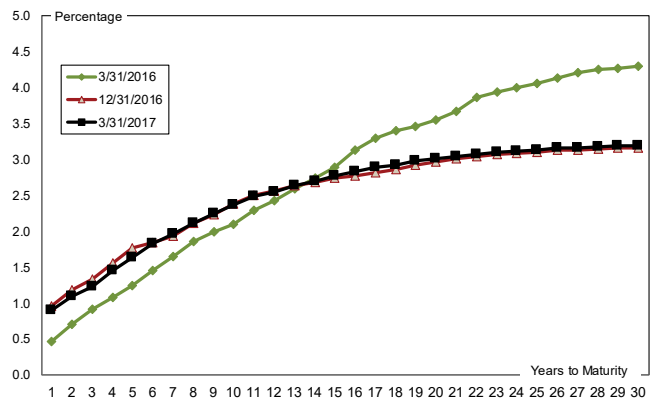
Source: Bond Buyer, Bloomberg

2-, 5-, and 10-Year AAA G.O. to Treasury Ratios
Apr. 2015 - Mar. 2017

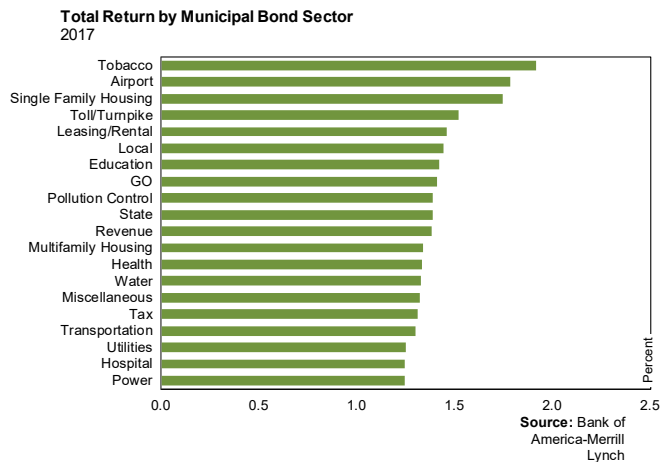
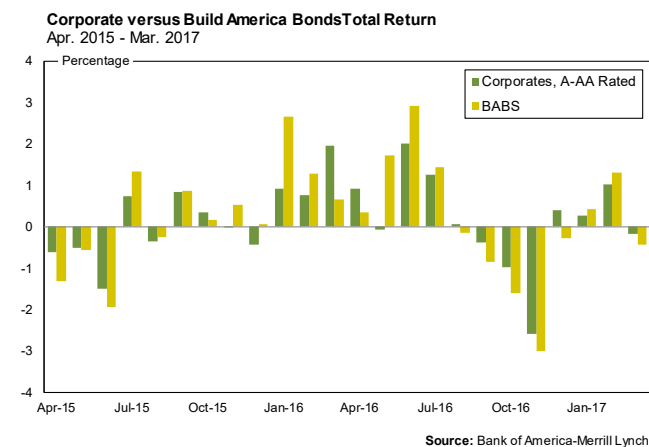
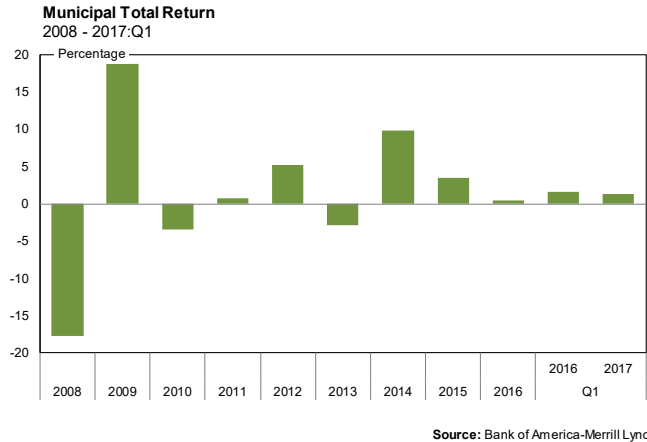
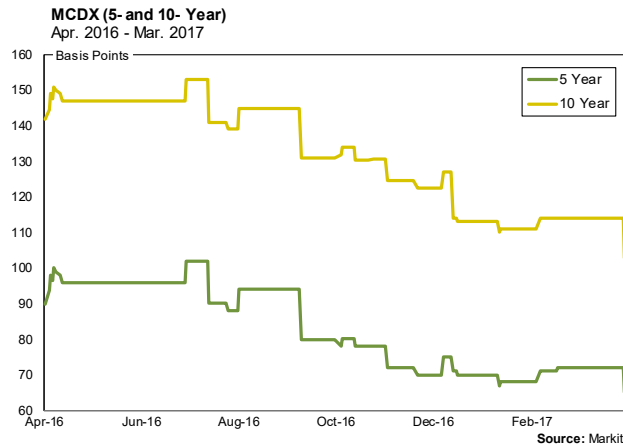


Source: Bloomberg

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	
2016:Q4	1,066,458	529,930	994,432	2,590,820	368,199	250,392	146,826	\$765,417	
2017:Q1	1,061,056	543,704	1,017,805	2,622,565	325,821	229,060	135,574	\$690,455	
%Change	-1%	3%	2%	1%	-12%	-9%	-8%	-10%	

# of Trades										
	# of Trades				All Trades	Par Amount (Millions)				
	0 - 100,000	100,001 - 500,000	500,001 - 1,000,000	1,000,000+		0 - 100,000	100,001 - 500,000	500,001 - 1,000,000	1,000,000+	All Trades
2016:Q4	81%	13%	2%	4%	2,590,820	9%	11%	6%	74%	\$765,417
2017:Q1	82%	12%	2%	4%	2,622,565	10%	11%	7%	71%	\$690,455

Trades by Sector								
	Education	Health	Utility	Various Purpose	Transportation	Tax-Revenue	Other	Total (Millions)
2016:Q4	18%	13%	13%	10%	9%	9%	28%	\$765,417
2017:Q1	21%	10%	11%	12%	9%	9%	28%	\$690,455

Trades by Maturity							
	1 Year or Less		5+ Years to 10 Years		10+ Years to 20+ Years		Total (Millions)
	1 Year or Less	1+ Year to 5 Years	5+ Years to 10 Years	10+ Years to 20+ Years	20+ Years	Total (Millions)	
2016:Q4	4%	9%	15%	38%	33%	\$765,417	
2017:Q1	4%	11%	15%	36%	35%	\$690,455	

Trades by Source of Repayment					
	Revenue	General Obligation	Double Barrel	Not Available	Total (Millions)
2016:Q4	72%	26%	2%	0%	\$765,417
2017:Q1	69%	28%	2%	0%	\$690,455

Trades by Coupon Type					
	Fixed Rate	Variable Rate	Zero Coupon	Not Available	Total (Millions)
2016:Q4	61%	36%	3%	0%	\$765,417
2017:Q1	62%	32%	5%	0%	\$690,455

Source: MSRB EMMA

MUNICIPAL CDS

CDS Yield Curves for Single Name States and New York City (bps) as of March 31, 2017

	6M	1Y	2Y	3Y	4Y	5Y	7Y	10Y
CA California	14.0	45.2	27.6	40.3	47.2	54.6	80.7	98.6
CT Connecticut	20.7	22.6	42.9	58.3	71.6	82.8	94.7	128.9
DE Delaware	19.7	22.1	30.1	35.3	33.6	33.1	41.8	62.7
FL Florida	14.9	16.8	34.0	49.7	45.4	43.3	48.8	91.1
IL Illinois	149.2	161.8	224.9	316.6	391.2	409.9	467.1	503.6
MA Massachusetts	17.9	19.5	27.3	50.8	50.2	51.6	58.5	101.0
MD Maryland	11.6	15.0	20.7	31.6	35.6	38.2	53.1	90.9
MI Michigan	9.1	9.3	23.7	37.7	47.2	52.9	76.9	94.2
MN Minnesota	11.6	13.1	20.2	28.4	31.3	35.8	50.3	66.9
NC North Carolina	19.8	21.1	24.0	31.6	33.1	34.7	38.6	69.0
NJ New Jersey	45.7	47.5	93.3	139.4	174.8	183.6	200.6	251.1
NV Nevada	19.1	20.1	25.9	31.3	34.2	35.7	47.6	80.0
NY New York	17.3	21.4	31.6	36.5	40.1	42.8	56.4	83.1
OH Ohio	14.8	17.7	23.4	31.2	35.8	40.6	53.5	87.2
PA Pennsylvania	27.5	30.1	43.4	71.7	83.4	88.7	100.5	149.3
RI Rhode Island	10.7	18.8	30.9	47.4	46.1	46.4	62.6	103.0
SC South Carolina	6.0	6.4	11.7	18.1	28.7	34.0	50.5	69.1
TX Texas	18.0	19.8	26.0	36.6	48.5	55.8	74.7	89.2
UT Utah	12.6	13.2	25.6	36.7	42.7	49.7	73.8	91.0
VA Virginia	16.3	21.7	27.3	33.2	32.6	33.4	37.8	53.8
WA Washington	4.2	6.8	13.4	22.3	33.4	44.2	58.7	71.4
WI Wisconsin	19.7	24.5	33.2	37.7	47.1	56.2	68.5	78.4
NYC New York City	25.0	31.0	45.1	51.7	56.6	60.4	77.1	107.9

OUTSTANDING MUNICIPAL DEBT

Outstanding by Type, Maturity, and Security Type⁶

\$ Millions

State	Total Outstanding	G.O.	Revenue	Due in 13 Months	Long-Term
AK Alaska	10,734.3	2,945.1	7,789.2	692.9	10,041.4
AL Alabama	36,475.4	7,133.5	29,341.9	1,151.4	35,324.0
AR Arkansas	14,743.2	6,488.0	8,255.3	666.2	14,077.0
AS American Samoa	78.1		78.1		78.1
AZ Arizona	58,065.5	12,418.2	45,647.3	2,577.4	55,488.1
CA California	586,730.8	229,077.9	357,653.0	22,645.5	564,085.3
CO Colorado	64,008.3	16,049.3	47,958.9	3,406.9	60,601.3
CT Connecticut	51,502.8	28,021.6	23,481.2	3,844.5	47,658.3
DC District of Columbia	31,868.5	4,104.8	27,763.7	966.1	30,902.4
DE Delaware	7,460.0	2,996.8	4,463.2	360.8	7,099.2
FL Florida	149,182.5	16,637.4	132,545.1	6,718.7	142,463.7
GA Georgia	73,143.3	17,566.9	55,576.4	3,465.2	69,678.1
GU Guam	3,184.3	396.2	2,788.1	46.2	3,138.0
HI Hawaii	20,068.9	13,171.8	6,897.2	945.5	19,123.4
IA Iowa	22,448.2	6,962.6	15,485.6	1,213.3	21,234.9
ID Idaho	6,916.8	1,945.9	4,971.0	733.5	6,183.4
IL Illinois	166,558.3	80,050.4	86,507.9	8,376.3	158,182.0
IN Indiana	48,459.8	1,131.9	47,327.9	2,690.4	45,769.4
KS Kansas	26,256.9	12,266.7	13,990.2	1,680.6	24,576.3
KY Kentucky	36,323.6	1,898.2	34,425.4	2,423.2	33,900.4
LA Louisiana	37,154.2	7,966.3	29,187.9	1,483.0	35,671.3
MA Massachusetts	107,012.2	40,315.3	66,696.9	7,013.4	99,998.8
MD Maryland	58,689.4	30,319.4	28,370.0	3,658.7	55,030.8
ME Maine	8,131.4	1,908.1	6,223.3	518.6	7,612.8
MI Michigan	82,302.5	27,060.7	55,241.7	3,669.8	78,632.6
MN Minnesota	53,009.1	27,518.7	25,490.5	3,215.1	49,794.0
MO Missouri	48,973.7	9,690.7	39,283.1	2,192.6	46,781.1
MS Mississippi	17,559.9	6,860.3	10,699.6	1,031.9	16,528.0
MT Montana	4,166.1	1,481.9	2,684.2	268.5	3,897.6
NC North Carolina	54,722.0	12,952.3	41,769.7	2,779.0	51,943.1
ND North Dakota	5,475.6	2,046.3	3,429.2	288.3	5,187.3
NE Nebraska	20,335.7	5,870.0	14,465.8	1,138.9	19,196.8
NH New Hampshire	8,246.0	2,504.7	5,741.3	412.1	7,833.9
NJ New Jersey	125,291.0	25,017.7	100,273.4	11,813.4	113,477.7
NM New Mexico	14,381.4	3,465.4	10,916.0	1,003.1	13,378.3
NV Nevada	28,211.6	15,102.2	13,109.5	1,444.9	26,766.7
NY New York	401,129.2	78,060.2	323,068.9	23,429.3	377,699.9
OH Ohio	110,543.1	32,547.8	77,995.2	5,601.9	104,941.2
OK Oklahoma	21,052.9	4,162.0	16,891.0	1,709.2	19,343.7
OR Oregon	42,093.8	23,686.7	18,407.1	2,356.8	39,736.9
OT Other Territories	10,793.3	50.0	10,743.4	238.4	10,555.0
PA Pennsylvania	134,559.2	48,807.1	85,752.1	6,816.9	127,742.3
PR Puerto Rico	100,647.6	12,378.8	88,268.8	2,764.4	97,883.2
RI Rhode Island	11,830.7	1,930.2	9,900.5	532.4	11,298.2
SC South Carolina	38,604.9	9,171.0	29,434.0	2,131.2	36,473.8
SD South Dakota	5,093.7	1,087.2	4,006.5	214.0	4,879.7
TN Tennessee	43,753.4	17,366.5	26,387.0	2,606.5	41,147.0
TT Trust Territories	115.0	79.0	36.0	0.8	114.3
TX Texas	354,392.4	180,374.3	174,018.1	13,129.6	341,262.8
UT Utah	25,099.4	6,810.7	18,288.7	1,330.3	23,769.2
VA Virginia	65,657.4	14,986.2	50,671.2	3,122.4	62,535.1
VI Virgin Islands	2,296.7		2,296.7	75.4	2,221.4
VT Vermont	4,658.9	754.7	3,904.2	145.5	4,513.4
WA Washington	92,702.6	46,583.4	46,119.2	4,200.4	88,502.2
WI Wisconsin	51,659.3	24,940.8	26,718.6	3,921.8	47,737.6
WV West Virginia	10,582.2	769.4	9,812.8	369.8	10,212.4
WY Wyoming	2,394.6	140.1	2,254.5	158.3	2,236.3
TOTAL (3/31/2017)	3,617,532.0	1,186,028.9	2,431,503.1	181,391.3	3,436,140.8

⁶ As of the first quarter 2017, outstanding totals includes both short- and long-term municipal debt and now includes all refunded (inclusive of prereduced) debt, but does not include municipal derivatives. Data prior to 1Q'17 excluded refunded debt from general totals. "Due in 13 months" looks at original maturity and will not include securities with short puts unless original maturity is within 13 months. Differences between this data and the Federal Reserve Flow of Funds are due to underlying database differences (Fis: Mergent; these tables: Bloomberg) as well as the growth of the municipal direct loan market. Fixed rate debt does not include those multimodal bonds that are currently in long-term fixed rate mode.

Outstanding and by Tax Status, Coupon, Use of Proceeds⁷

\$ Millions

State	Total Outstanding	Tax-Exempt	AMT	Taxable	Fixed	Zero	Other
AK Alaska	10,734.3	9,241.5	426.4	1,066.5	8,524.5	159.9	2,049.9
AL Alabama	36,475.4	28,124.7	1,045.0	7,305.7	28,826.4	978.0	6,671.1
AR Arkansas	14,743.2	9,975.2	298.4	4,469.6	13,540.7	255.8	946.7
AS American Samoa	78.1	44.2		33.9	78.1		-
AZ Arizona	58,065.5	52,068.1	950.7	5,046.7	52,490.2	30.0	5,545.3
CA California	586,730.8	476,853.0	18,881.2	90,996.6	441,405.4	72,420.2	72,905.2
CO Colorado	64,008.3	50,384.5	2,638.5	10,985.2	50,832.5	6,052.3	7,123.5
CT Connecticut	51,502.8	40,499.2	1,345.1	9,658.5	43,876.9	457.2	7,168.7
DC District of Columbia	31,868.5	25,050.2	3,459.8	3,358.5	22,194.8	5,596.6	4,077.2
DE Delaware	7,460.0	5,726.2	285.6	1,448.2	6,035.9	0.8	1,423.3
FL Florida	149,182.5	123,114.6	11,243.7	14,824.1	128,470.5	3,204.5	17,507.4
GA Georgia	73,143.3	58,615.7	3,025.9	11,501.7	58,348.0	1,697.7	13,097.6
GU Guam	3,184.3	2,969.2	180.6	34.5	3,068.8	115.5	-
HI Hawaii	20,068.9	16,371.0	1,119.7	2,578.3	19,617.9	19.5	431.6
IA Iowa	22,448.2	14,454.1	510.0	7,484.0	19,846.9	551.8	2,049.5
ID Idaho	6,916.8	5,474.6	290.5	1,151.7	5,930.4	103.4	883.1
IL Illinois	166,558.3	115,867.4	4,929.1	45,761.8	132,907.6	19,949.1	13,701.6
IN Indiana	48,459.8	35,828.0	3,667.6	8,964.2	39,234.4	920.7	8,304.7
KS Kansas	26,256.9	17,775.4	346.1	8,135.4	25,132.9	274.7	849.3
KY Kentucky	36,323.6	25,806.4	1,402.7	9,114.5	31,067.3	398.5	4,857.8
LA Louisiana	37,154.2	29,735.0	1,780.6	5,638.6	30,282.4	1,083.6	5,788.3
MA Massachusetts	107,012.2	91,220.2	3,614.5	12,177.5	92,223.2	1,467.8	13,321.2
MD Maryland	58,689.4	49,870.9	1,836.1	6,982.5	52,817.9	132.0	5,739.5
ME Maine	8,131.4	6,164.6	447.4	1,519.4	7,527.1		604.3
MI Michigan	82,302.5	62,027.9	2,861.7	17,412.9	63,382.1	6,901.8	12,018.5
MN Minnesota	53,009.1	39,037.9	1,489.0	12,482.2	46,907.9	881.2	5,220.0
MO Missouri	48,973.7	32,735.3	983.7	15,254.7	38,029.6	873.0	10,071.2
MS Mississippi	17,559.9	12,042.7	252.5	5,264.7	13,288.2	3.0	4,268.7
MT Montana	4,166.1	2,443.8	193.3	1,528.9	3,080.9	10.9	1,074.3
NC North Carolina	54,722.0	46,475.2	1,197.4	7,049.4	45,856.8	291.5	8,573.7
ND North Dakota	5,475.6	3,866.8	192.7	1,416.1	5,190.5		285.1
NE Nebraska	20,335.7	14,698.7	447.1	5,190.0	18,690.2	-	1,645.6
NH New Hampshire	8,246.0	5,811.4	466.7	1,967.9	6,540.1	68.8	1,637.0
NJ New Jersey	125,291.0	96,816.3	6,178.3	22,296.5	102,704.8	13,479.9	9,106.4
NM New Mexico	14,381.4	11,885.8	357.1	2,138.5	12,047.6	8.6	2,325.3
NV Nevada	28,211.6	23,341.5	1,774.9	3,095.2	23,706.2	983.0	3,522.4
NY New York	401,129.2	325,343.4	19,529.6	56,256.1	330,310.9	15,465.5	55,352.7
OH Ohio	110,543.1	82,190.1	2,320.5	26,032.5	85,787.8	8,554.3	16,200.9
OK Oklahoma	21,052.9	15,905.7	866.6	4,280.6	19,119.5	56.6	1,876.9
OR Oregon	42,093.8	29,531.3	1,090.2	11,472.3	36,208.6	3,838.8	2,046.5
OT Other Territories	10,793.3	4,317.7	6,434.5	41.1	851.4		9,941.9
PA Pennsylvania	134,559.2	102,412.7	5,160.2	26,986.2	112,209.9	4,532.4	17,816.9
PR Puerto Rico	100,647.6	82,414.1	203.9	18,029.6	56,467.1	37,384.0	6,796.5
RI Rhode Island	11,830.7	10,035.4	634.5	1,160.8	9,132.0	1,754.4	944.3
SC South Carolina	38,604.9	32,339.5	905.5	5,360.0	31,823.1	2,408.7	4,373.1
SD South Dakota	5,093.7	3,222.2	204.5	1,667.0	4,670.9		422.8
TN Tennessee	43,753.4	33,969.3	996.7	8,787.4	36,509.4	1,947.5	5,296.6
TT Trust Territories	115.0	79.0	36.0	-	115.0		-
TX Texas	354,392.4	274,201.2	15,791.2	64,400.0	292,498.3	17,246.4	44,647.7
UT Utah	25,099.4	18,540.8	1,026.6	5,532.1	20,199.9	510.2	4,389.2
VA Virginia	65,657.4	54,218.1	2,234.8	9,204.6	59,286.7	1,620.8	4,750.0
VI Virgin Islands	2,296.7	2,158.6	26.7	111.4	2,248.6	48.1	-
VT Vermont	4,658.9	3,374.1	437.5	847.4	3,576.6		1,082.3
WA Washington	92,702.6	75,000.8	3,447.5	14,254.3	85,654.1	1,957.0	5,091.5
WI Wisconsin	51,659.3	34,999.3	1,507.9	15,152.1	47,273.4	551.7	3,834.2
WV West Virginia	10,582.2	6,106.4	734.9	3,740.9	7,080.4	2,070.2	1,431.6
WY Wyoming	2,394.6	1,665.6	482.6	246.5	1,625.9		768.7
TOTAL (3/31/2017)	3,617,532.0	2,834,442.4	144,191.9	638,897.7	2,936,355.0	239,317.9	441,859.2

⁷ As of the first quarter 2017, outstanding totals includes both short- and long-term municipal debt and now includes all refunded (inclusive of prereduced) debt, but does not include municipal derivatives. Data prior to 1Q'17 excluded refunded debt from general totals. "Due in 13 months" looks at original maturity and will not include securities with short puts unless original maturity is within 13 months. Differences between this data and the Federal Reserve Flow of Funds are due to underlying database differences (Fed: Mergent; these tables: Bloomberg) as well as the growth of the municipal direct loan market. Fixed rate debt does not include those multimodal bonds that are currently in long-term fixed rate mode.

Addendum Tables –Industry⁹

\$ Millions

Industry	Amount
Other	526.3
Appropriations	106,573.3
Airport	95,843.2
Airport Tax-Guaranteed	100.1
Assisted Living	1,581.3
Ad Valorem Backed Lease Revenue	5,763.7
Bond Bank	12,585.0
Continuing Care Retirement	28,683.5
Community Development	6,946.9
Charter Schools	12,074.6
Community College District	41,513.8
Other	7.2
Economic/Industrial Development	90,253.4
Secondary Education	34,115.2
Secondary Education - Lease Backed	54,438.6
Gas Contract	18,779.4
General Obligation	691,997.2
General Obligation Districts (Other)	26,088.3
General Obligation Hospital	7,770.4
Government Paid Lease	85,484.3
General Revenue Tax-Guaranteed	17,437.2
Higher Education	242,855.1
Healthcare (General) Tax-Guaranteed	2,258.6
Hospital	253,108.5
Hotel Occupancy	5,163.7
Housing Tax- Guaranteed	1,059.0
Intergovernmental Lease	5,511.3
Income Tax	67,334.1
Independent Living	8.1
Correctional Facilities	2,635.4
Local multifamily housing	33,200.7
Loan Pool	9,864.4
Lottery	5,181.6
Local singlefamily housing	2,764.9
Metro Development	4,589.7
Melloroso	12,709.1
Miscellaneous	48,379.3
Miscellaneous Tax	79,843.9
Mobile Home	663.1
Tobacco	88,079.5
Municipal Utilities	65,970.2
Not for Profit Cultural	8,315.6
Not for Profit Foundation	879.4
Not for Profit Human Service Provider	3,932.5
Not for Profit Membership Organization	544.5
Not for Profit Research	2,418.0
Non-Toll Highway	38,026.0
Nuclear Power	14,126.3
Nursing Home	3,117.1
Pension	19,627.7
Payment in Lieu of Taxes	6,978.0
Parking Facility	3,307.0
Parking Facility - Guaranteed	1,176.3
Port/Marinas	39,181.9
Public Power Systems	84,916.8
Public Transportation	32,313.0
Private Religious School	3,017.0
Sales	104,433.7
School Districts	404,626.5
Shell Record	1,395.7
State Multifamily Housing	38,445.6
Solid Waste	4,870.5
Special Assessment	4,724.1
State Single-family Housing	40,929.9
Student Housing	9,839.8
Student Loan Revenue	27,497.4
Telecom	1,013.2
Tax Increment Financing	31,245.7
Toll Roads	125,151.1
Indian Tribal	1,884.6
Municipal Utility District	9,493.1
Water & Sewer Guaranteed	4,061.8
Water & Sewer	276,299.1
Total	3,617,532.0

⁹ As of the first quarter 2017, outstanding totals includes both short- and long-term municipal debt and now includes all refunded (inclusive of prerefunded) debt, but does not include municipal derivatives. Data prior to 1Q'17 excluded refunded debt from general totals. "Due in 13 months" looks at original maturity and will not include securities with short puts unless original maturity is within 13 months. Differences between this data and the Federal Reserve Flow of Funds are due to underlying database differences (Fed: Mergent; these tables: Bloomberg) as well as the growth of the municipal direct loan market. Fixed rate debt does not include those multimodal bonds that are currently in long-term fixed rate mode.

Kyle Brandon
Managing Director, Director of Research

SIFMA RESEARCH

Sharon Sung – Assistant Vice President, Research
ssung@sifma.org

General Research Contact: research@sifma.org

MUNICIPAL DIVISION

Leslie Norwood
Managing Director, Associate General Counsel, Co-Head of the Municipal Division

Michael Decker
Managing Director, Co-Head of the Municipal Division