



MUNICIPAL BOND CREDIT REPORT

Fourth Quarter 2017

RESEARCH REPORT

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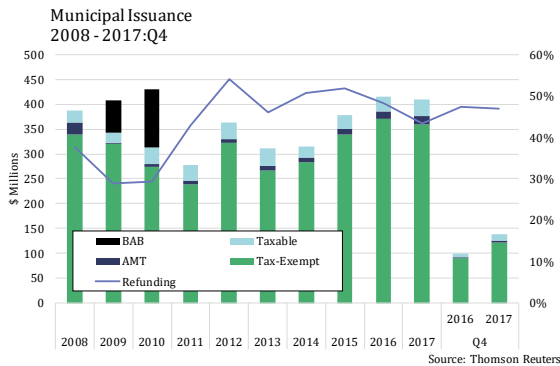
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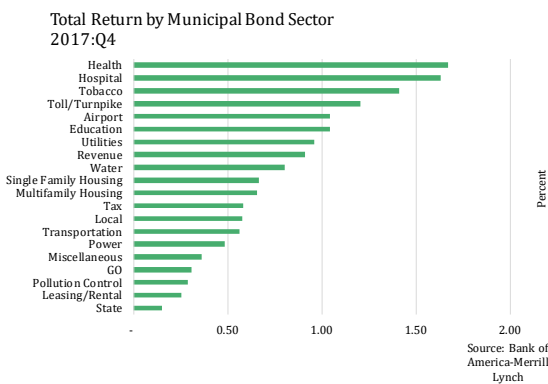
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MARKET SUMMARY

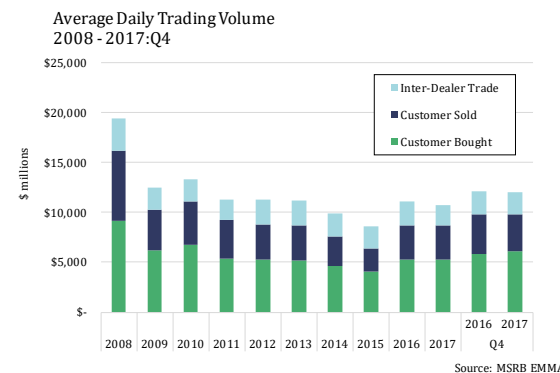


Municipal Issuance Overview – Primary Market

According to Thomson Reuters, long-term public municipal issuance volume totaled \$137.9 billion in the fourth quarter of 2017, an increase of 62.6 percent from the prior quarter (\$84.8 billion) and an increase of 38.1 percent year-over-year (y-o-y) (\$99.9 billion). For the full year, municipal issuance totaled \$410.0 billion, a decline of 1.1 percent from 2016 but still the third highest annual volume on record. Including private placements¹ (\$8.8 billion), long-term municipal issuance for 4Q'17 was \$146.7 billion, while the full year total was \$438.8 billion. Respondents to SIFMA's 2018 Municipal Issuance Survey ("SIFMA Survey") expect total issuance for 2018 to decline to \$322.5 billion.²



Tax-exempt issuance totaled \$120.9 billion in 4Q'17, an increase of 60.3 percent q-o-q and 33.2 percent y-o-y; for the full year, tax-exempt issuance was \$360.4 billion. Respondents to the SIFMA survey expect tax-exempt issuance for 2018 to fall to \$275.0 billion. Taxable issuance totaled \$11.5 billion in 4Q'17, an increase of 94.0 and 60.1 percent, respectively, q-o-q and y-o-y; for the full year, taxable issuance totaled \$34.2 billion. SIFMA Survey respondents expect taxable issuance to rise to \$47.5 billion. AMT issuance was \$5.4 billion in 4Q'17, an increase of 60.3 percent q-o-q and 33.2 percent y-o-y; for the full year, AMT volumes were \$15.4 billion.



By use of proceeds, general purpose led issuance totals in 4Q'17 (\$36.2 billion), followed by primary & secondary education (\$18.2 billion) and higher education (\$12.3 billion). For the full year, the rankings were still the same: general purpose (\$178.4 billion), primary & secondary education (\$126.2 billion), and higher education (\$70.4 billion). Refunding volumes rose slightly to comprise 47.0 percent of issuance in 4Q'17 from 43.4 percent in the prior quarter but declined from 47.4 percent from the fourth quarter of 2016.³ For the full year, refunding volumes comprised 43.3 percent of all issuance, down from 48.2 percent in 2016. Respondents to the SIFMA Survey expect the refunding proportion of issuance to fall sharply to 27.0 percent in 2018.

Yields, Inflows, and Total Return

Ratios of 10-year tax-exempt AAA GOs and similar-maturity Treasuries rose in the fourth quarter on a q-o-q basis, averaging 86.0 percent in 4Q'17 from 85.0 percent in 3Q'17. For the full year, the ratio was 89.0 percent.

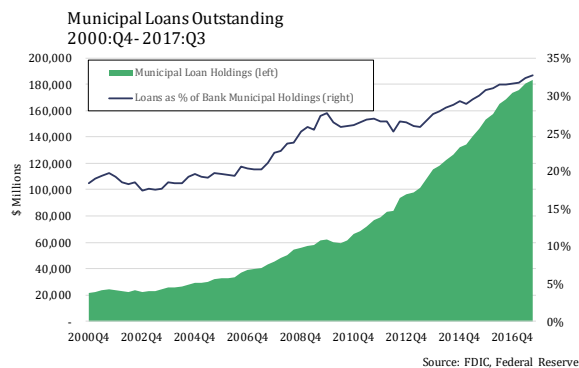
According to the Investment Company Institute (ICI), fourth quarter net flow into long-term tax-exempt funds was positive, with \$2.1 billion of net inflow in 4Q'17 compared to \$8.8 billion of inflow from 3Q'17 and \$27.1 billion of net outflow y-o-y.

According to Bank of America-Merrill Lynch indices, municipals gained 5.4 percent in the fourth quarter of 2017 and returned 5.7 percent for the full year. For the fourth quarter, health, hospital and tobacco bonds outperformed among the individual municipal sectors (1.7 percent, 1.6 percent and 1.4 percent respectively) in 4Q'17 while state, leasing/rental, and pollution control underperformed relative to other municipal sectors (0.2 percent, 0.3 percent and 0.3 percent total return, respectively). Build America Bonds

¹ Private placement figures are excluded in charts and tables.

² SIFMA, "2018 Municipal Issuance Survey," December 2017.

³ Percentages represent both full refundings and the half the dollar amount of deals that contain both refundings and new financing.



Source: FDIC, Federal Reserve

Broker-Dealers Dropping Municipal Business Lines, 2017

	Broker	Dealer
AKIN BAY COMPANY LLC	*	
BROWN, GIBBONS, LANG & COMPANY SECURITIES, INC.	*	
COUNTRY CLUB FINANCIAL SERVICES, INC.	*	*
CUSHMAN & WAKEFIELD SECURITIES, INC.	*	
D.H. HILL SECURITIES, LLLP	*	
DALMORE GROUP LLC	*	
DEARBORN CAPITAL MARKETS GROUP, LLC	*	
DETALUS SECURITIES, LLC	*	
DETWILER FENTON & CO.	*	
DEVENIR, LLC	*	
ENTREX CAPITAL MARKET, LLC	*	*
HP SECURITIES, INC.	*	
ICBA SECURITIES	*	*
KEYSTONE CAPITAL CORPORATION	*	
LAFISE SECURITIES CORPORATION	*	*
LCS SECURITIES, LLC	*	
MAINLINE WEST MUNICIPAL SECURITIES LLC	*	
MID ATLANTIC CLEARING & SETTLEMENT CORPORATION	*	
MM IGLOBAL INC.	*	
NAFA CAPITAL MARKETS, LLC	*	*
NORTHERN LIGHTS DISTRIBUTORS, LLC	*	*
PRUDENTIAL INVESTMENT MANAGEMENT SERVICES LLC	*	*
SESLIA SECURITIES	*	*
SIXTEEN SECURITIES, INC.	*	
SPENCER EDWARDS, INC.	*	*
STATE STREET GLOBAL ADVISORS FUNDS DISTRIBUTORS, LLC	*	*
SUTTER SECURITIES INCORPORATED	*	*
SWISS RE CAPITAL MARKETS CORPORATION	*	*
TEACHERS PERSONAL INVESTORS SERVICES, INC.	*	
TREASURE FINANCIAL CORP.	*	
TRIPOINT GLOBAL EQUITIES, LLC	*	
WILLIAM BLAIR & COMPANY L.L.C.	*	*

Broker-Dealers Adding Municipal Business Lines, 2017

	Broker	Dealer
ABEL NOSER, LLC.	*	*
AMERIVET SECURITIES, INC.	*	*
BAY CREST PARTNERS, LLC	*	
CALDWELL SUTTER CAPITAL, INC.	*	*
CAMDEN FINANCIAL SERVICES	*	
CARNES CAPITAL CORPORATION	*	
CASTLEOAK SECURITIES, LP	*	*
CREDITEX SECURITIES CORPORATION	*	*
DOUGHERTY & COMPANY LLC	*	*
JONES LANG LASALLE SECURITIES, LLC	*	*
MUNDIAL FINANCIAL GROUP, LLC	*	*
PEACHCAP	*	*
STONECREST CAPITAL MARKETS, INC.	*	*
THURSTON, SPRINGER, MILLER, HERD & TITAK, INC.	*	*
TRIBAL CAPITAL MARKETS, LLC	*	*
YR SECURITIES LLC	*	*

(BABs) gained 2.0 percent in 4Q'17, underperforming tax exempts bonds but outperforming similarly-rated corporate bonds (1.1 percent). For the full year, BABs returned 8.1 percent, outperforming both tax-exempts (5.7 percent) and similarly-rated corporates (5.4 percent)

Trading Activity

Trading activity rose q-o-q to \$12.0 billion daily in 4Q'17, a 28.8 percent increase from 3Q'17 (\$9.3 billion) but a 1.1 percent decline from 4Q'16 (\$12.1 billion). By number of trades, trading activity rose 6.1 percent on a q-o-q basis but fell 6.5 percent on a y-o-y basis. For the full year, trading activity averaged \$10.8 billion daily by dollar amount, down from \$11.1 billion daily in 2016.

Broker-Dealers and Holdings

As of the end of 2017, approximately 32 broker dealers exited either the municipal broker or dealer business, while 16 entered either business, not including firms newly registered in 2017.⁴ Including closures throughout the year, 1,200 broker-dealers registered with FINRA were involved in the municipal broker business line, a decline of 1.2 percent y-o-y, while 528 broker-dealers were involved in the municipal dealer business line, a slight increase of 1.5 percent, for a total of 1,273 broker-dealers involved in either business (a decline of 1.2 percent y-o-y). Figures echo the overall continuing trend of consolidation within the industry.

Year	Broker Dealers						
	2011	2012	2013	2014	2015	2016	2017
FINRA BD - Municipal Broker Business	1,582	1,514	1,453	1,350	1,289	1,214	1,200
FINRA BD - Municipal Dealer Business	653	629	605	569	538	520	528
FINRA BD - Both Business Lines	554	536	518	486	462	446	453
FINRA BD - Total	1,681	1,607	1,540	1,433	1,365	1,288	1,273
Addendum: MSRB BD & Bank Dealers (year ending October)	1,841	1,787	1,705	1,625	1,541	1,448	1,346

Bank holdings of municipal loans rose in 3Q'17 from the prior quarter to \$183.4 billion (from \$180.3 billion) while holdings of bonds fell slightly to \$376.9 billion (from \$377.0 billion).

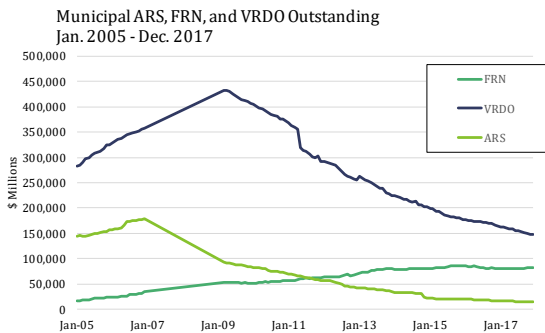
ARS, FRN and VRDO Update

Issuance of variable-rate demand obligations (VRDOs), puttable long-term municipal bonds with interest rates that reset periodically, continue to remain muted in the fourth quarter. A total of \$2.0 billion was issued in 4Q'17, an increase of 72.9 percent and 153.4 percent, respectively, q-o-q and y-o-y. For the full year, VRDO issuance totaled \$5.2 billion, down 28.6 percent from the prior year and a new low for VRDO issuance. Respondents to the SIFMA Survey expect VRDO issuance to remain largely unchanged at \$5.0 billion in 2018. Outstanding volumes continue to decline, with \$147.3 billion outstanding as of the end of December 2017, a decline of 2.5 percent q-o-q and 10.2 percent from December 2016.

The SIFMA Municipal Swap index, a seven-day high-grade market index comprised of tax-exempt VRDOs, ended December at 1.71 percent, averaging 1.05 percent throughout 4Q'17, 23 basis points wider than 3Q'17's average (0.82 percent) and 39 basis points wider than 4Q'16's average (0.66 percent).

As of the end of December 2017, \$37.9 billion of VRDO liquidity facilities were scheduled to expire in 2018 with an additional \$27.1 billion in 2019 for a total of \$65.0 billion of liquidity facilities on 2,716 CUSIPs, a manageable rate given the relative stability of liquidity providers in this space. VRDO

⁴ Figures do not include bank dealers or municipal advisors registered only with the MSRB.



Source: EMMA MSRB, Bloomberg

Bank Liquidity Provider Rankings	
Then...	12/31/2016
Bank	Percentage
JPM	12.6%
BOA	11.2%
WF	9.0%
US Bank	7.0%
TD	5.8%
Tokyo Mitsubishi UFJ	4.2%
RBC	4.2%
Sumitomo Mitsui	4.1%
Landesbank Hessen-Thrgrn	3.9%
PNC	3.9%
Citi	3.9%
Barclays	3.5%
State Street	3.4%
BMO Harris	3.2%
Mizuho	3.0%
Everyone Else	17.1%
# of Banks	143

...And Now	
Bank	12/31/2017
Bank	Percentage
BOA	10.7%
JPM	9.8%
WF	7.2%
TD	6.2%
US Bank	6.0%
Sumitomo Mitsui	4.4%
Tokyo Mitsubishi UFJ	4.3%
Barclays	3.9%
PNC	3.7%
Citi	3.6%
Landesbank Hessen-Thrgrn	3.5%
RBC	3.5%
BMO Harris	2.8%
State Street	2.8%
Mizuho	2.6%
Everyone Else	13.4%
# of Banks	141

liquidity facility renewals with the same liquidity provider on approximately 1,018 unique CUSIPs averaged 632.8 days from the original expiration date, rising from 645.9 days in 2Q'17. The median extension, however, continues to remain unchanged at 1 year (365 days). The average tenor of a liquidity facility of the entire universe of VRDOs was approximately 5.18 years, rising from the 4.98 average in 2Q'17. However, excluding self-liquidity deals (which typically have an expiration date set to the bond maturity date), the average remaining tenor of liquidity facilities in the entire VRDO universe was 4.04 years, up slightly from the 3.87 years in 2Q'17.

Floating rate bond issuance declined quarter over quarter with \$431.1 million issued in 4Q'17, a 67.9 percent decline q-o-q and a 67.2 percent decline y-o-y. For the full year, \$3.3 billion of floating rate bonds were issued, an increase from the \$1.8 billion issued in 2016. At end-December, \$82.2 billion of floating rate bonds were outstanding, an increase of 1.4 percent q-o-q and a 1.7 percent increase y-o-y. Both the LIBOR and SIFMA swap index remain popular benchmark indices for floating rate issuance.

Auction rate securities (ARS) continue to remain in run off mode, with \$14.3 billion of ARS outstanding end-December, a decline of 4.4 percent q-o-q and 14.5 percent y-o-y. Student loan ARS continues to remain an outsized portion (36 percent) of remaining ARS outstanding, followed by healthcare (20 percent).

Insured Municipal Bonds

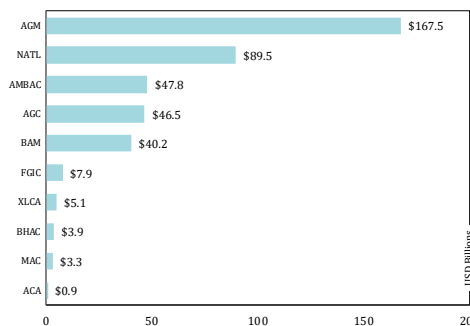
For the full year 2017, \$35.2 billion of municipal bonds issued were insured, representing approximately 7.9 percent of all issuance, down slightly from the \$37.0 billion insured in 2016 (representing 8.3 percent of issuance). As of the end of 2017, approximately \$410.8 billion of insured municipal bonds were outstanding, a decline of 0.7 percent q-o-q and 9.6 percent y-o-y.

Government & Rating Update

In mid-October, Moody's further downgraded Puerto Rico's GO bonds to Ca (from Caa3) after Hurricane Maria and upgraded Detroit's rating to B1 (from B2) to reflect recent fiscal changes and strong current economic performance. In late October and early November, Fitch Ratings downgraded Alaska's IDR rating to AA+ and upgraded Wisconsin's GO to AA+.

According to the Nelson A. Rockefeller Institute of Government, overall tax collections increased by 1.8 percent in the second quarter of 2017 with only eleven states reporting declines in revenue.⁵

Outstanding Insured Municipal Bonds by Insurer 2017:Q4



Source: Bloomberg

⁵SUNY Rockefeller Institute of Government, "State Revenue Report #109 State and Local Tax Revenue Growth Slows in Second Quarter of 2017," December 2017

CHARTS & DATA

LONG-TERM MUNICIPAL STATE ISSUANCE, 4Q'17⁶\$ Millions⁷

	Total	Bond Type		Tax Type			Funding Type			
		G.O.	Revenue	AMT	Tax-Exempt	Taxable	New Financing	Refinancing	Refunding & New Refunding	New Refunding
State										
Alabama	465.2	233.0	232.2	-	409.8	55.4	286.3	-	65.3	113.6
Alaska	518.5	459.8	58.7	-	309.8	208.7	518.4	-	-	-
American Samoa	0.0									
Arizona	3,284.2	378.2	2,906.0	190.9	3,031.3	62.0	1,172.8	-	1,040.9	1,070.5
Arkansas	412.8	227.2	185.6	-	406.6	6.2	140.1	-	144.6	128.1
California	17,562.8	5,951.9	11,610.9	766.4	13,321.2	3,475.2	6,874.0	-	2,964.2	7,724.6
Colorado	2,747.4	427.9	2,319.5	374.3	2,335.2	37.8	814.0	-	261.2	1,672.0
Connecticut	2,070.4	924.5	1,145.9	30.6	1,455.2	584.5	1,651.9	-	162.6	255.9
District of Columbia	715.8	521.7	194.1	-	715.8	-	587.3	-	128.5	-
Delaware	226.9	114.8	112.1	-	226.9	-	-	-	-	226.9
Florida	7,910.3	272.9	7,637.4	887.9	6,908.7	113.8	3,299.7	-	1,283.2	3,327.5
Georgia	1,652.8	222.8	1,430.0	-	1,488.8	164.0	957.2	-	204.1	491.5
Guam	256.3	-	256.3	-	256.3	-	-	-	-	256.3
Hawaii	162.8	24.0	138.8	-	133.5	29.3	52.1	-	81.5	29.3
Idaho	346.6	27.5	319.1	-	247.7	99.0	329.0	-	17.6	-
Illinois	12,436.5	8,448.8	3,987.7	-	11,675.1	761.5	8,394.4	-	623.4	3,418.8
Indiana	1,854.8	312.1	1,542.7	87.8	1,726.6	37.3	1,011.1	-	479.4	361.2
Iowa	866.5	185.7	680.8	-	858.2	8.3	388.6	-	360.2	117.7
Kansas	1,135.0	802.6	332.4	-	1,084.7	49.0	403.3	-	142.3	588.3
Kentucky	736.6	121.4	615.2	-	539.6	197.0	222.7	-	427.7	86.2
Louisiana	527.6	122.8	404.8	-	491.5	36.0	157.5	-	59.1	311.0
Maine	409.4	251.8	157.6	45.0	364.4	-	140.9	-	176.3	92.2
Maryland	3,125.2	2,395.3	729.9	-	2,937.8	187.5	896.2	-	432.9	1,796.1
Massachusetts	4,534.3	1,486.0	3,048.3	16.6	4,425.9	91.8	3,057.1	-	544.3	932.9
Michigan	1,615.4	585.8	1,029.6	3.5	1,486.6	125.3	373.0	-	186.0	1,056.4
Minnesota	1,634.0	792.5	841.5	47.0	1,500.2	86.9	905.2	-	263.0	465.8
Mississippi	612.4	230.0	382.4	9.7	487.7	115.0	370.6	-	24.1	217.7
Missouri	1,977.0	609.6	1,367.4	-	1,964.7	12.4	479.4	-	449.0	1,048.7
Montana	26.5	26.5	-	-	26.5	-	26.5	-	-	-
Nebraska	1,427.3	400.8	1,026.5	-	1,392.9	34.5	268.6	-	387.4	771.4
Nevada	1,278.1	926.3	351.8	-	1,278.1	-	451.5	-	561.4	265.2
New Hampshire	496.8	116.4	380.4	-	420.8	76.0	461.5	-	-	35.3
New Jersey	3,948.6	766.0	3,182.6	509.0	3,023.6	415.9	956.6	-	403.5	2,588.5
New Mexico	194.7	5.5	189.2	12.3	163.1	19.3	151.5	-	-	43.2
New York	15,184.0	2,355.9	12,828.1	53.1	13,737.8	1,393.2	8,767.9	-	536.3	5,879.8
North Carolina	1,157.7	316.3	841.4	-	1,098.8	59.0	398.3	-	91.4	668.0
North Dakota	526.4	54.4	472.0	-	526.4	-	463.2	-	-	63.2
Ohio	4,333.9	1,999.5	2,334.4	210.0	3,880.3	243.6	1,659.2	-	856.1	1,818.6
Oklahoma	1,063.2	102.9	960.3	-	1,036.1	27.1	327.4	-	628.5	107.3
Oregon	1,211.9	649.9	562.0	43.7	936.9	231.3	1,075.5	-	80.7	55.7
Pennsylvania	7,449.8	2,119.3	5,330.5	808.6	6,581.6	59.7	2,614.1	-	1,246.5	3,589.3
Puerto Rico	0.0									
Rhode Island	206.0	-	206.0	-	137.3	68.7	86.5	-	15.8	103.7
South Carolina	1,156.4	483.8	672.6	-	1,010.7	145.7	362.8	-	33.6	760.1
South Dakota	554.3	235.8	318.5	45.2	509.0	-	277.9	-	27.1	249.2
Tennessee	1,869.2	494.7	1,374.5	-	1,819.2	50.0	1,571.9	-	41.2	256.1
Texas	13,122.7	5,592.2	7,530.5	219.9	11,084.8	1,818.1	4,648.7	-	3,651.0	4,823.0
Utah	1,187.9	385.4	802.5	-	1,155.0	32.9	287.0	-	230.1	670.9
Vermont	69.6	12.8	56.8	6.6	56.7	6.4	47.2	-	-	22.5
Virgin Islands	0.0									
Virginia	4,132.1	1,023.8	3,108.3	737.0	3,360.2	35.0	1,476.7	-	841.1	1,814.3
Washington	3,415.8	2,352.1	1,063.7	3.6	3,321.6	90.6	742.8	-	466.8	2,206.2
West Virginia	470.8	-	470.8	-	470.8	-	228.7	-	64.1	178.1
Wisconsin	3,574.9	1,815.7	1,759.2	334.2	3,065.5	175.2	1,634.9	-	439.6	1,500.4
Wyoming	66.4	-	66.4	-	66.4	-	66.4	-	-	-
ALL	137,922.5	48,366.6	89,555.9	5,442.9	120,949.9	11,526.1	62,536.1	0.0	21,123.6	54,259.2
QoQ	62.6%	41.6%	76.6%	57.7%	60.3%	94.0%	59.4%	N/A	20.5%	93.3%
YoY	38.1%	21.1%	49.4%	191.0%	33.2%	60.1%	54.1%	N/A	-11.5%	53.2%

⁶ Issuance totals do not include private placements.⁷ 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.

	Total	Coupon Type						Zero
		Convertible	Fixed Rate	Linked Rate	Variable Rate Long	Variable Rate No Put	Variable Rate Short (VRDO)	
State								
Alabama	465.2	-	457.2	-	-	8.0	-	-
Alaska	518.5	-	368.4	-	-	-	150.0	-
American Samoa	0.0							
Arizona	3,284.2	-	3,184.2	-	-	-	100.0	-
Arkansas	412.8	-	402.3	-	10.5	-	-	-
California	17,562.8	13.5	16,930.1	171.5	111.9	-	199.1	136.7
Colorado	2,747.4	-	2,552.8	-	59.4	-	99.8	35.3
Connecticut	2,070.4	-	1,549.7	-	468.4	44.8	-	7.4
District of Columbia	715.8	-	715.8	-	-	-	-	-
Delaware	226.9	-	226.9	-	-	-	-	-
Florida	7,910.3	-	7,284.9	-	617.3	-	8.2	-
Georgia	1,652.8	-	1,371.4	-	21.5	199.9	60.0	-
Guam	256.3	-	256.3	-	-	-	-	-
Hawaii	162.8	-	162.8	-	-	-	-	-
Idaho	346.6	-	346.6	-	-	-	-	-
Illinois	12,436.5	-	12,044.0	-	168.5	-	-	224.1
Indiana	1,854.8	-	1,734.3	-	96.7	-	20.7	-
Iowa	866.5	-	666.8	-	-	49.7	150.0	-
Kansas	1,135.0	-	1,133.8	-	-	-	-	-
Kentucky	736.6	-	736.5	-	-	-	-	-
Louisiana	527.6	-	495.0	-	13.5	19.0	-	-
Maine	409.4	-	409.4	-	-	-	-	-
Maryland	3,125.2	-	2,955.2	-	-	-	170.0	-
Massachusetts	4,534.3	-	4,208.1	120.1	206.1	-	-	-
Michigan	1,615.4	-	1,595.8	-	19.7	-	-	-
Minnesota	1,634.0	-	1,512.5	-	58.1	-	56.9	6.5
Mississippi	612.4	-	583.4	-	5.5	-	23.5	-
Missouri	1,977.0	-	1,976.8	-	-	-	-	0.3
Montana	26.5	-	26.5	-	-	-	-	-
Nebraska	1,427.3	-	1,427.4	-	-	-	-	-
Nevada	1,278.1	-	1,278.1	-	-	-	-	-
New Hampshire	496.8	-	496.8	-	-	-	-	-
New Jersey	3,948.6	-	3,937.0	-	11.6	-	-	-
New Mexico	194.7	-	194.7	-	-	-	-	-
New York	15,184.0	-	14,589.2	39.8	126.0	-	229.0	200.0
North Carolina	1,157.7	-	1,065.7	-	92.0	-	-	-
North Dakota	526.4	-	498.1	-	-	-	28.3	-
Ohio	4,333.9	-	4,235.9	-	89.4	-	-	8.6
Oklahoma	1,063.2	-	1,063.2	-	-	-	-	-
Oregon	1,211.9	-	966.6	-	245.3	-	-	-
Pennsylvania	7,449.8	-	6,539.2	79.7	331.0	-	500.0	-
Puerto Rico	0.0							
Rhode Island	206.0	-	188.4	-	17.6	-	-	-
South Carolina	1,156.4	-	1,152.3	-	4.2	-	-	-
South Dakota	554.3	-	554.2	-	-	-	-	-
Tennessee	1,869.2	-	1,772.0	-	97.3	-	-	-
Texas	13,122.7	-	12,620.1	20.0	343.3	-	133.5	5.8
Utah	1,187.9	-	1,179.9	-	8.0	-	-	-
Vermont	69.6	-	69.6	-	-	-	-	-
Virgin Islands	0.0							
Virginia	4,132.1	-	4,084.6	-	47.6	-	-	-
Washington	3,415.8	-	3,402.5	-	7.4	-	6.0	-
West Virginia	470.8	-	470.8	-	-	-	-	-
Wisconsin	3,574.9	-	3,376.4	-	144.3	-	54.3	-
Wyoming	66.4	-	60.4	-	-	-	6.0	-
ALL	137,922.5	13.5	131,110.6	431.1	3,422.1	321.4	1,995.3	624.7
QoQ	62.6%		62.0%	-67.9%	166.0%	N/A	72.9%	304.1%
YoY	38.1%	575.0%	35.4%	-67.2%	490.9%	N/A	153.4%	78.0%

LONG-TERM MUNICIPAL STATE ISSUANCE, 2017⁸\$ Millions⁹

	Total	Bond Type		Tax Type			Funding Type			
		G.O.	Revenue	AMT	Tax-Exempt	Taxable	New Financing	Refinancing	Refunding & New Refinancing	New Refunding
State										
Alabama	3,840.4	692.6	3,147.8	123.8	3,446.4	270.2	1,549.7	-	806.0	1,484.7
Alaska	996.2	770.1	226.1	31.7	742.0	222.6	684.8	-	-	311.4
American Samoa	0.0									
Arizona	6,371.3	1,763.4	4,607.9	254.5	5,987.6	129.2	2,880.7	-	1,773.7	1,716.8
Arkansas	1,678.6	1,031.9	646.7	-	1,647.7	30.9	740.3	-	351.5	586.8
California	64,997.8	25,725.3	39,272.5	2,560.9	54,505.3	7,931.5	27,130.7	-	16,182.5	21,684.6
Colorado	8,787.1	3,016.3	5,770.8	654.8	7,910.2	222.0	3,895.5	-	1,743.7	3,147.9
Connecticut	5,440.7	2,930.9	2,509.8	185.3	4,642.7	612.7	3,769.5	-	710.0	961.1
District of Columbia	3,260.9	1,085.2	2,175.7	522.1	2,704.3	34.4	1,513.4	-	650.7	1,096.9
Delaware	753.1	491.3	261.8	-	753.1	-	225.0	-	217.8	310.4
Florida	16,131.4	1,900.2	14,231.2	2,223.1	13,118.3	790.0	6,740.3	-	1,978.9	7,412.2
Georgia	7,493.5	2,649.3	4,844.2	-	6,742.6	750.9	3,559.9	-	1,620.7	2,312.9
Guam	256.3	-	256.3	-	256.3	-	-	-	-	256.3
Hawaii	2,475.5	1,775.8	699.7	265.0	1,862.6	347.9	1,291.9	-	641.0	542.5
Idaho	1,297.1	272.5	1,024.6	-	896.6	400.5	974.0	-	85.5	237.6
Illinois	20,501.6	12,850.2	7,651.4	278.1	18,687.7	1,535.8	11,557.9	-	3,669.4	5,274.3
Indiana	4,511.4	491.9	4,019.5	117.6	4,221.5	169.1	2,386.4	-	1,083.8	1,038.0
Iowa	2,487.4	1,226.4	1,261.0	1.7	2,368.4	117.3	1,349.0	-	493.1	645.3
Kansas	2,754.7	1,604.6	1,150.1	10.3	2,652.6	90.6	1,203.0	-	657.3	893.2
Kentucky	3,594.9	342.5	3,252.4	40.0	3,262.7	292.1	1,601.5	-	909.9	1,083.5
Louisiana	3,962.4	855.4	3,107.0	269.5	3,540.2	152.6	1,828.4	-	509.3	1,624.6
Maine	1,373.9	565.4	808.5	55.0	1,145.8	173.1	781.3	-	206.6	386.0
Maryland	10,760.5	6,413.6	4,346.9	11.3	10,039.1	710.1	4,733.2	-	1,414.6	4,612.7
Massachusetts	10,380.4	4,762.4	5,618.0	463.4	9,781.3	135.7	5,985.1	-	2,104.7	2,290.7
Michigan	5,426.0	3,102.5	2,323.5	90.3	4,724.2	611.5	1,606.1	-	1,524.8	2,295.2
Minnesota	6,627.5	3,912.2	2,715.3	130.4	6,114.6	382.4	3,345.5	-	1,325.3	1,956.6
Mississippi	2,013.4	1,145.8	867.6	41.6	1,716.4	255.4	844.3	-	631.8	537.3
Missouri	5,007.0	1,524.8	3,482.2	170.1	4,414.4	422.5	2,072.4	-	997.8	1,936.8
Montana	705.1	436.2	268.9	23.3	680.6	1.2	549.2	-	59.2	96.6
Nebraska	2,882.3	1,090.5	1,791.8	94.6	2,647.5	140.3	1,010.0	-	436.9	1,435.6
Nevada	3,347.6	2,073.3	1,274.3	281.1	3,066.4	-	1,062.4	-	1,065.5	1,219.7
New Hampshire	1,018.4	357.9	660.5	-	859.0	159.4	875.4	-	31.7	111.2
New Jersey	12,131.4	2,759.5	9,371.9	806.8	10,647.6	677.1	3,807.1	-	3,037.0	5,287.4
New Mexico	1,725.0	615.4	1,109.6	12.3	1,580.8	131.9	651.2	-	809.2	264.6
New York	47,073.5	8,873.5	38,200.0	595.0	41,194.7	5,283.7	20,870.5	-	9,682.2	16,520.8
North Carolina	5,168.4	1,398.7	3,769.7	149.3	4,845.7	173.5	1,891.2	-	1,017.0	2,260.2
North Dakota	1,169.2	387.2	782.0	8.2	1,118.2	42.9	818.0	-	134.7	216.6
Ohio	12,536.9	5,031.9	7,505.0	237.2	11,856.6	443.1	5,758.2	-	2,783.3	3,995.3
Oklahoma	4,045.1	1,068.8	2,976.3	-	3,758.7	286.3	2,128.9	-	1,180.9	735.3
Oregon	6,630.4	4,469.0	2,161.4	326.8	5,715.4	588.2	4,911.9	-	980.9	737.6
Pennsylvania	19,714.3	6,559.1	13,155.2	980.0	17,377.0	1,357.3	6,118.4	-	6,037.3	7,558.7
Puerto Rico	0.0									
Rhode Island	1,186.9	196.0	990.9	50.3	1,044.6	92.2	473.1	-	348.6	365.3
South Carolina	3,495.9	1,610.3	1,885.6	-	3,168.7	327.3	1,921.6	-	152.7	1,421.6
South Dakota	1,485.7	328.4	1,157.3	75.5	1,368.6	41.6	474.3	-	184.9	826.4
Tennessee	5,400.7	1,886.2	3,514.5	23.1	5,222.5	155.0	4,009.5	-	411.2	979.9
Texas	40,647.5	22,822.5	17,825.0	379.2	35,940.0	4,316.0	18,821.5	-	9,798.2	12,015.5
Utah	4,265.1	970.3	3,294.8	826.2	2,870.5	556.6	2,624.6	-	825.8	802.8
Vermont	571.9	288.6	283.3	68.4	496.2	7.3	333.6	-	158.8	79.5
Virgin Islands	0.0									
Virginia	9,139.8	2,909.4	6,230.4	970.0	7,379.0	790.7	4,494.2	-	1,611.0	3,034.6
Washington	9,955.1	5,555.0	4,400.1	563.1	8,904.3	487.7	4,315.2	-	2,248.3	3,391.6
West Virginia	888.9	108.9	780.0	14.5	872.3	2.0	516.9	-	105.8	266.1
Wisconsin	11,449.6	5,206.7	6,242.9	403.2	9,711.8	1,334.7	6,119.1	-	1,656.5	3,674.1
Wyoming	147.1	3.5	143.6	24.3	122.8	-	69.9	-	65.3	12.0
ALL	409,962.8	159,909.3	250,053.5	15,412.9	360,334.1	34,187.0	188,875.7	0.0	87,113.3	133,945.3

⁸ Issuance totals do not include private placements.⁹ 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.

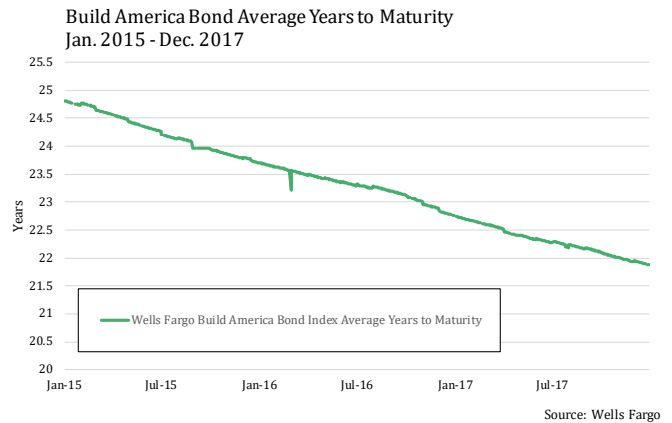
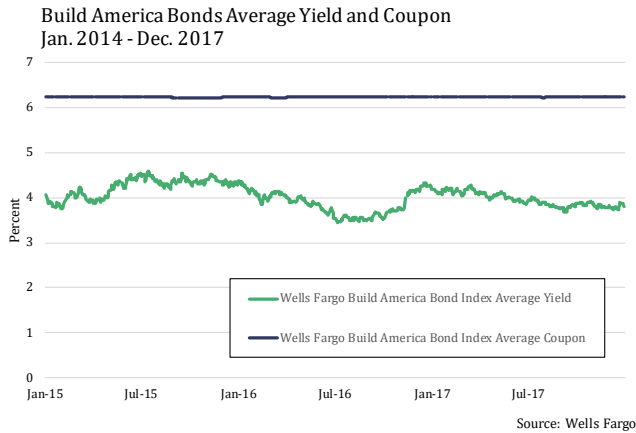
	Total	Coupon Type						
		Convertible	Fixed Rate	Linked Rate	Variable Rate Long	Variable Rate No Put	Variable Rate Short (VRDO)	Zero
Alabama	3,840.4	-	3,345.3	-	478.9	8.0	8.1	-
Alaska	996.2	-	846.2	-	-	-	150.0	-
American Samoa	0.0	-	-	-	-	-	-	-
Arizona	6,371.3	-	6,037.7	-	224.9	-	108.7	-
Arkansas	1,678.6	-	1,668.1	-	10.5	-	-	-
California	64,997.8	27.9	61,079.2	899.6	1,893.8	-	660.7	436.6
Colorado	8,787.1	-	8,053.0	138.6	335.5	-	224.6	35.3
Connecticut	5,440.7	-	4,426.5	-	873.9	44.8	88.0	7.4
District of Columbia	3,260.9	-	3,260.9	-	-	-	-	-
Delaware	753.1	-	753.1	-	-	-	-	-
Florida	16,131.4	-	15,354.9	-	768.3	-	8.2	-
Georgia	7,493.5	-	7,104.9	-	41.0	199.9	147.7	-
Guam	256.3	-	256.3	-	-	-	-	-
Hawaii	2,475.5	-	2,125.5	350.0	-	-	-	-
Idaho	1,297.1	-	1,204.4	-	-	-	92.7	-
Illinois	20,501.6	-	19,960.4	-	210.5	-	94.9	235.8
Indiana	4,511.4	-	4,357.7	-	104.9	-	43.7	2.0
Iowa	2,487.4	-	2,253.4	-	-	49.7	184.3	-
Kansas	2,754.7	-	2,753.5	-	-	-	-	-
Kentucky	3,594.9	-	3,424.6	-	170.3	-	-	-
Louisiana	3,962.4	71.2	3,845.1	-	13.5	19.0	-	13.6
Maine	1,373.9	-	1,219.3	-	-	-	154.6	-
Maryland	10,760.5	-	10,590.6	-	-	-	170.0	-
Massachusetts	10,380.4	-	9,983.0	120.1	277.4	-	-	-
Michigan	5,426.0	-	5,262.4	35.0	19.7	-	109.0	-
Minnesota	6,627.5	-	6,340.2	-	117.2	-	163.6	6.5
Mississippi	2,013.4	-	1,804.5	162.4	23.0	-	23.5	-
Missouri	5,007.0	-	5,004.1	-	-	-	-	2.9
Montana	705.1	-	685.1	-	-	-	20.0	-
Nebraska	2,882.3	-	2,838.2	-	-	-	44.2	-
Nevada	3,347.6	-	3,291.3	-	56.3	-	-	-
New Hampshire	1,018.4	-	1,018.4	-	-	-	-	-
New Jersey	12,131.4	-	11,525.4	579.4	26.7	-	-	-
New Mexico	1,725.0	-	1,664.6	-	60.3	-	-	-
New York	47,073.5	-	45,551.3	101.3	126.0	-	1,094.9	200.0
North Carolina	5,168.4	-	5,058.9	-	92.0	-	-	17.6
North Dakota	1,169.2	-	1,127.0	-	-	-	42.2	-
Ohio	12,536.9	-	12,125.2	250.0	133.6	-	13.5	14.5
Oklahoma	4,045.1	-	4,026.5	-	18.5	-	-	-
Oregon	6,630.4	159.9	5,732.8	-	245.3	-	67.3	425.1
Pennsylvania	19,714.3	-	18,421.2	79.7	406.0	-	807.5	-
Puerto Rico	0.0	-	-	-	-	-	-	-
Rhode Island	1,186.9	-	1,169.4	-	17.6	-	-	-
South Carolina	3,495.9	-	3,488.0	-	4.2	-	3.8	-
South Dakota	1,485.7	-	1,485.6	-	-	-	-	-
Tennessee	5,400.7	-	5,263.9	-	136.8	-	-	-
Texas	40,647.5	-	39,349.8	20.0	668.0	-	533.5	63.9
Utah	4,265.1	-	3,825.3	420.0	8.0	-	-	-
Vermont	571.9	-	572.0	-	-	-	-	-
Virgin Islands	0.0	-	-	-	-	-	-	-
Virginia	9,139.8	-	9,008.8	-	69.2	-	61.8	-
Washington	9,955.1	-	9,763.9	177.8	7.4	-	6.0	-
West Virginia	888.9	-	888.8	-	-	-	-	-
Wisconsin	11,449.6	-	11,244.8	-	146.3	-	58.6	-
Wyoming	147.1	-	141.1	-	-	-	6.0	-
ALL	409,962.8	259.0	391,582.1	3,333.9	7,785.5	321.4	5,191.6	1,461.2

LONG-TERM MUNICIPAL ISSUANCE BY GENERAL USE OF PROCEEDS

\$ Millions

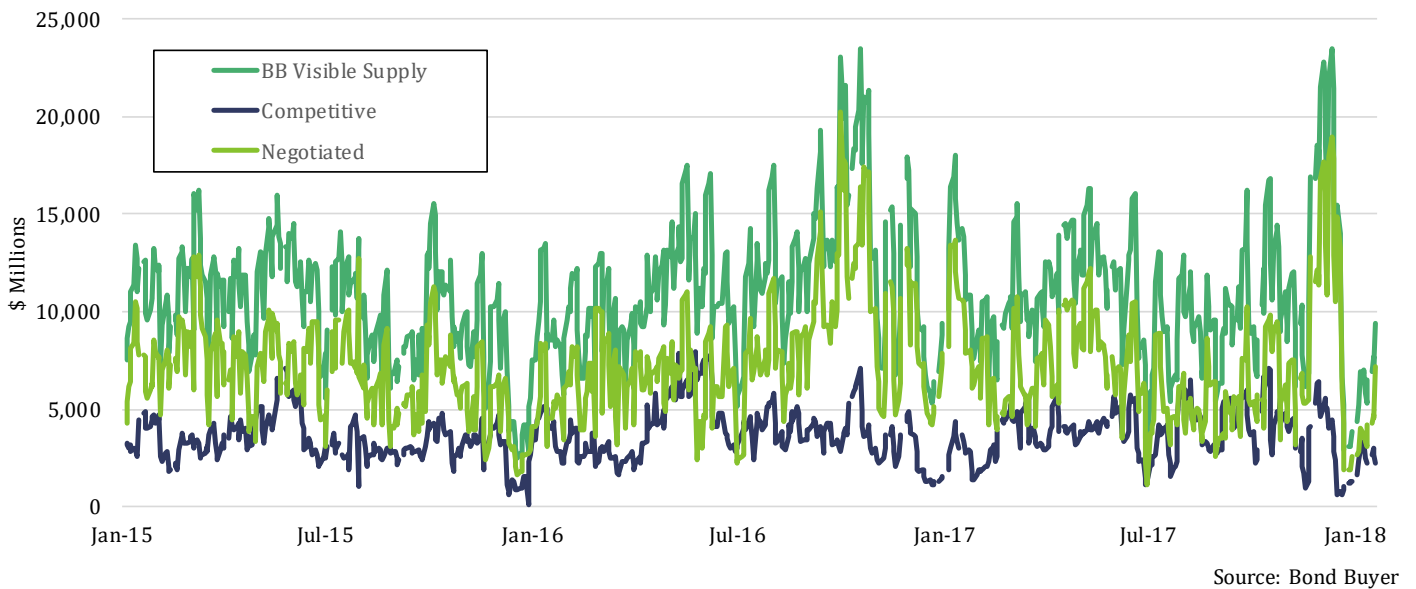
Use of Proceeds	4Q'16	3Q'17	4Q'17	Q-o-Q	Y-o-Y	2017
Agriculture		27.0		-100.0%		27
Airports	3,891.1	4,079.1	3,342.3	-18.1%	-14.1%	13500.1
Assisted Living	151.8		534.9		252.4%	622.3
Bridges	20.7	2,243.0	1,040.3	-53.6%	4925.6%	5865.2
Childrens hospital	181.0	200.0	870.6	335.3%	381.0%	2170.8
Churches Temples and Mosques	4.3				-100.0%	41.9
Civic & convention centers	322.7	157.5	749.1	375.6%	132.1%	2534.8
Combined utilities	852.0	724.7	403.5	-44.3%	-52.6%	1498.3
Cont Care Retirement Community	2,365.0	1,383.3	1,471.1	6.3%	-37.8%	4795.1
Correctional facilities	416.9	326.6	469.3	43.7%	12.6%	1300.1
Economic development	2,304.7	1,540.7	4,834.9	213.8%	109.8%	13304
Fire stations & equipment	95.3	126.5	65.2	-48.5%	-31.6%	374.4
Flood control	311.7	54.1	929.0	1617.2%	198.0%	1176.2
Gas	10.3	291.2	1,181.6	305.8%	11371.8%	1982.3
General acute care hospital	8,999.8	5,499.0	12,255.9	122.9%	36.2%	31192.8
General Medical			250.2			652.4
General purpose /public improvemen	21,783.4	20,423.7	36,206.6	77.3%	66.2%	99976.1
Government buildings	120.0	346.8	670.8	93.4%	459.0%	1555.4
Higher education	8,786.7	7,834.3	12,289.7	56.9%	39.9%	41508.1
Industrial development	85.1		787.9		825.9%	1052.9
Libraries & museums	162.6	72.0	255.5	254.9%	57.1%	563.5
Mass transportation	3,050.9	4,331.9	8,226.8	89.9%	169.7%	20251
Multi family housing	1,528.1	1,276.4	3,463.1	171.3%	126.6%	7748.3
Nursing homes	25.1	62.1		-100.0%	-100.0%	108.2
Office buildings		105.7				114.2
Other education	21.4	124.1	295.1	137.8%	1279.0%	686.3
Other recreation	393.4	71.6	49.9	-30.3%	-87.3%	236.6
Parking facilities	75.6	135.0	183.0	35.6%	142.1%	459.4
Parks, Zoos & Beaches	300.8	151.2	250.4	65.6%	-16.8%	833.7
Police stations & equipment		15.2	24.8	63.2%		179.8
Pollution control	120.0	133.6	280.6	110.0%	133.8%	1072.5
Primary & secondary education	19,702.2	15,370.6	18,201.0	18.4%	-7.6%	72933.2
Public power	2,609.3	1,280.6	4,125.8	222.2%	58.1%	9037.6
Sanitation	447.7	60.1	148.0	146.3%	-66.9%	315.7
Seaports /marine terminals	720.4	34.2	596.1	1643.0%	-17.3%	1421.1
Single family housing	2,298.7	2,206.5	3,436.6	55.7%	49.5%	10646.7
Single speciality hospital	51.9	71.2	312.2	338.5%	501.5%	1157.3
Solid waste	330.2	274.9	632.7	130.2%	91.6%	1039.7
Stadiums & sports complexes	11.3	344.1	725.1	110.7%	6316.8%	1358.9
Student loans	799.1		205.4		-74.3%	1223.6
Telecommunications	110.9	11.8	79.1	570.3%	-28.7%	130
Theatres	189.1		68.2		-63.9%	88.2
Toll roads, highways & streets	5,085.5	7,066.3	8,052.9	14.0%	58.4%	
Tunnels	321.5				-100.0%	19765.1
Veterans (excluding housing)	39.8				-100.0%	2.4
Water & sewer facilities	10,770.1	6,389.4	9,953.3	55.8%	-7.6%	33430.9
ALL	99,868.1	84,846.0	137,918.5	62.6%	38.1%	409,934.1

BUILD AMERICA BONDS



SUPPLY, YIELD CURVES, TOTAL RETURN, SPREADS & RATIOS

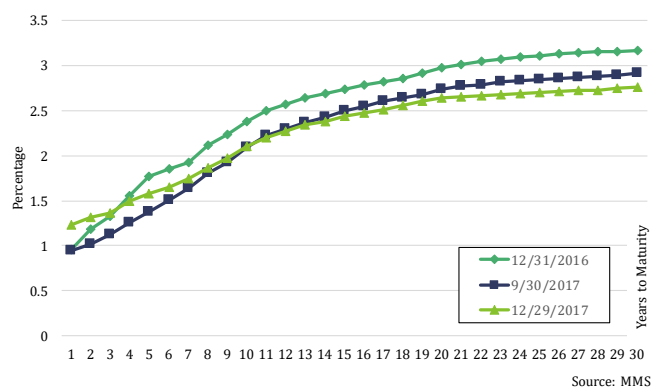
Bond Buyer 30-Day Visible Supply
Jan. 1, 2015 - Dec. 29, 2017

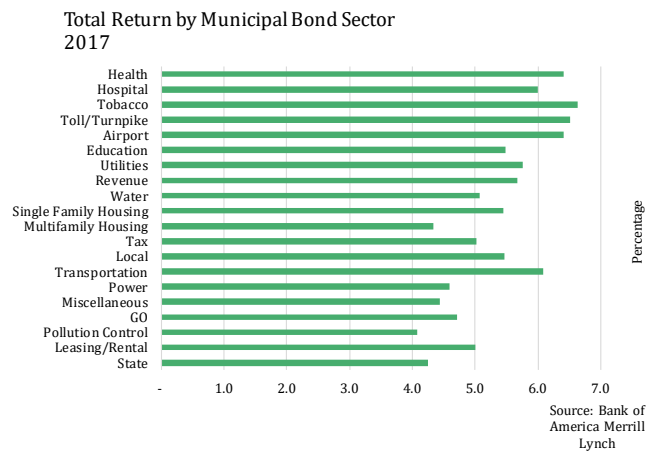
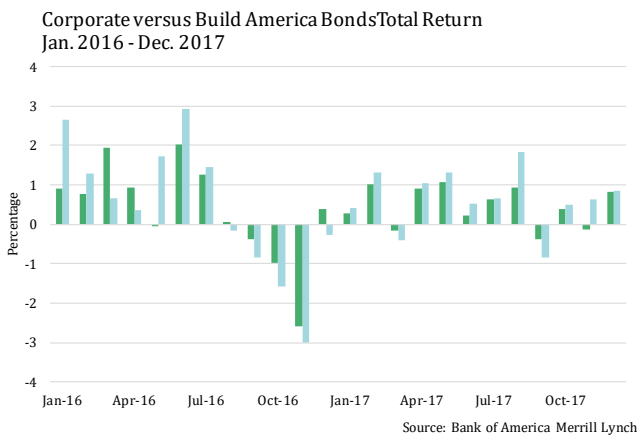
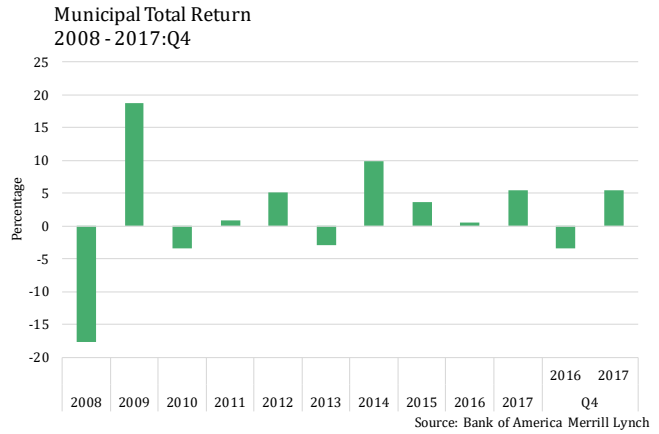
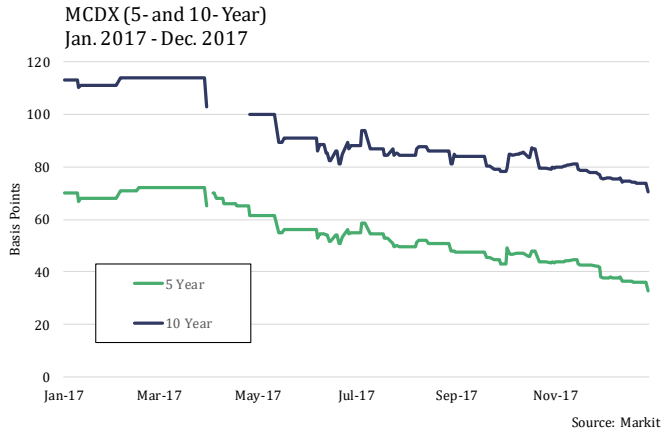


2-, 5-, and 10-Year AAA G.O. to Treasury Ratios
Jan. 2016 - Dec. 2017



MMA Yield Curves





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
2017:Q3	906,499	474,315	902,303	2,283,117	287,642	179,844	120,397	\$587,883
2017:Q4	958,373	542,705	922,019	2,423,097	382,671	235,811	138,386	\$756,868
%Change	6%	14%	2%	6%	33%	31%	15%	29%

# of Trades										
	# 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	1,000,000	1,000,000+	All Trades
2017:Q3	81%	13%	3%	4%	2,283,117	10%	13%	8%	69%	\$587,883
2017:Q4	79%	14%	3%	4%	2,423,097	9%	11%	7%	73%	\$756,868

Trades by Sector								
	Education	Health	Utility	Various Purpose	Transportation	Tax-Revenue	Other	Total (Millions)
2017:Q3	19%	10%	11%	12%	9%	9%	30%	\$587,883
2017:Q4	17%	12%	11%	12%	9%	10%	29%	\$756,868

Trades by Maturity						
	5+ Years to 10		10+ Years to 20		20+ Years	Total (Millions)
	1 Year or Less	1+ Year to 5 Years	Years	Years		
2017:Q3	5%	12%	15%	35%	32%	\$587,883
2017:Q4	6%	11%	15%	35%	32%	\$756,868

Trades by Source of Repayment					
	Revenue	General Obligation	Double Barrel	Not Available	Total (Millions)
2017:Q3	68%	29%	3%	0%	\$587,883
2017:Q4	70%	27%	2%	1%	\$756,868

Trades by Coupon Type					
	Fixed Rate	Variable Rate	Zero Coupon	Not Available	Total (Millions)
2017:Q3	64%	32%	3%	0%	\$587,883
2017:Q4	64%	34%	2%	0%	\$756,868

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	3,767,966	1,904,033	3,642,882	9,314,881	1,324,239	855,598	606,836	\$2,786,673
2017	3,920,928	2,102,913	3,821,367	9,845,208	1,319,730	857,224	523,759	\$2,700,713
%Change	4%	10%	5%	6%	0%	0%	-14%	-3%

# of Trades										
	# 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	1,000,000	1,000,000+	All Trades
2016	80%	13%	3%	4%	9,314,881	9%	11%	7%	73%	\$2,786,673
2017	81%	13%	3%	4%	9,845,208	10%	12%	7%	71%	\$2,700,713

Trades by Sector								
	Education	Health	Utility	Various Purpose	Transportation	Tax-Revenue	Other	Total (Millions)
2016	19%	11%	13%	11%	8%	9%	29%	\$2,786,673
2017	19%	11%	11%	11%	9%	9%	30%	\$2,700,713

Trades by Maturity						
	5+ Years to 10		10+ Years to 20		20+ Years	Total (Millions)
	1 Year or Less	1+ Year to 5 Years	Years	Years		
2016	5%	10%	15%	37%	34%	\$2,786,673
2017	5%	11%	15%	35%	33%	\$2,700,713

Trades by Source of Repayment					
	Revenue	General Obligation	Double Barrel	Not Available	Total (Millions)
2016	70%	28%	2%	0%	\$2,786,673
2017	69%	28%	2%	0%	\$2,700,713

Trades by Coupon Type					
	Fixed Rate	Variable Rate	Zero Coupon	Not Available	Total (Millions)
2016	61%	35%	4%	0%	\$2,786,673
2017	63%	33%	4%	0%	\$2,700,713

Source: MSRB EMMA

MUNICIPAL CDS

CDS Yield Curves for Single Name States and New York City (bps) as of December 29, 2017

	6M	1Y	2Y	3Y	4Y	5Y	7Y	10Y
CA California	16.2	18.3	26.0	35.0	46.0	57.3	77.6	97.3
CT Connecticut	18.8	22.7	36.4	45.8	54.8	64.4	74	100.8
DE Delaware	11.6	14.7	18.9	21.2	26.0	29.2	39.4	56.7
FL Florida	7.0	9.2	18.5	27.7	40.2	47.3	63	77.4
IL Illinois	110.2	116.2	147.9	196.7	240.8	267.6	294.0	311
MA Massachusetts	22.8	25.8	32.1	54.1	61.3	72.8	99.2	107.8
MD Maryland	11.9	18.5	22.7	34.7	42.3	49.0	63.2	83.4
MI Michigan	6.3	6.7	11.4	19.0	28.1	37.1	55.3	69.9
MN Minnesota	8.9	10.8	15.2	20.0	25.1	32.3	46.7	57.4
NC North Carolina	10.1	14.5	17.4	23.8	27.5	32.0	36.8	61.4
NJ New Jersey	26.5	28.9	51.0	77.9	95.4	114.0	136.4	154.3
NV Nevada	8.3	9.3	13.2	18.0	20.7	24.4	35.5	44.3
NY New York	5.1	6.4	13.1	16.9	23.7	30.0	43.0	52.4
OH Ohio	7.3	10.5	14.3	21.6	31.6	37.6	51.8	65.2
PA Pennsylvania	21.8	25.5	34.2	54.7	61.7	65.8	75.9	113.5
RI Rhode Island	6.1	11.4	21.7	35.6	38.8	42.5	61.5	92.1
SC South Carolina	4.6	4.9	9.7	15.0	24.0	28.5	37.8	47.6
TX Texas	7.7	8.6	13.7	24.0	33.3	39.3	57.1	72.4
UT Utah	6.5	7.4	15.5	21.2	27.7	34.9	52.5	58.1
VA Virginia	8.1	10.9	14.5	18.2	21.0	22.7	28.1	42.2
WA Washington	3.1	5.1	11.0	18.6	28.3	37.5	50.0	64.1
WI Wisconsin	20.6	26.5	36.0	38.7	48.3	53.9	64.0	73.0
NYC New York City	6.3	7.8	16.1	20.7	29.2	36.8	51.8	61.8

CURRENT STATE GO RATING

State	Moody's	S&P	Fitch	State	Moody's	S&P	Fitch
Alabama	Aa1	AA	AA	Montana	Aa1	AA	AA+
Alaska	Aa3	AA	AA	Nebraska			
American Samoa				Nevada	Aa2	AA	AA+
Arizona				New Hampshire	Aa1	AA	AA+
Arkansas	Aa1	AA		New Jersey	A3	A-	A
California	Aa3	AA-	AA-	New Mexico	Aa1	AA	
Colorado				New York	Aa1	AA+	AA+
Connecticut	A1	A+	A+	North Carolina	Aaa	AAA	AAA
District of Columbia	Aa1	AA	AA	North Dakota			
Delaware	Aaa	AAA	AAA	Ohio	Aa1	AA+	AA+
Florida	Aa1	AAA	AAA	Oklahoma	Aa2	AA	AA
Georgia	Aaa	AAA	AAA	Oregon	Aa1	AA+	AA+
Guam		BB-		Pennsylvania	Aa3	A+	AA-
Hawaii	Aa1	AA+	AA	Puerto Rico	Ca	D	D
Idaho				Rhode Island	Aa2	AA	AA
Illinois	Baa3	BBB-	BBB	South Carolina	Aaa	AA+	AAA
Indiana				South Dakota			
Iowa				Tennessee	Aaa	AAA	AAA
Kansas				Texas	Aaa	AAA	AAA
Kentucky	Aa3	A+		Utah	Aaa	AAA	AAA
Louisiana	Aa3	AA-	AA-	Vermont	Aaa	AA+	AAA
Maine	Aa2	AA		Virgin Islands			
Maryland	Aaa	AAA	AAA	Virginia	Aaa	AAA	AAA
Massachusetts	Aa1	AA	AA+	Washington	Aa1	AA+	AA+
Michigan	Aa1	AA-	AA	West Virginia	Aa2	AA-	AA
Minnesota	Aa1	AA+	AAA	Wisconsin	Aa1	AA	AA+
Mississippi	Aa2	AA	AA	Wyoming			
Missouri	Aaa	AAA	AAA				

OUTSTANDING MUNICIPAL DEBT

Outstanding by Type, Maturity, and Security Type¹⁰

\$ Millions

State	Total Outstanding	G.O.	Revenue	Due in 13 Months	Long-Term	2017:Q3 Total Outstanding	% Change
AK Alaska	10,540.9	2,566.6	7,974.3	525.0	10,015.9	10,352.6	1.8%
AL Alabama	36,084.7	6,988.6	29,096.0	1,141.1	34,943.6	36,886.0	-2.2%
AR Arkansas	14,376.9	6,624.9	7,752.0	612.1	13,764.9	14,433.7	-0.4%
AS American Samoa	76.1		76.1		76.1	76.1	0.0%
AZ Arizona	57,680.2	11,435.9	46,244.3	2,765.6	54,914.6	54,869.4	5.1%
CA California	585,234.4	221,994.7	363,239.7	24,447.1	560,787.3	580,317.4	0.8%
CO Colorado	64,736.4	15,790.8	48,945.7	2,925.2	61,811.2	64,547.1	0.3%
CT Connecticut	51,472.7	27,769.4	23,703.3	4,295.3	47,177.4	50,059.0	2.8%
DC District of Columbia	31,596.6	4,385.4	27,211.3	667.1	30,929.6	31,512.3	0.3%
DE Delaware	7,598.9	3,216.3	4,382.5	368.3	7,230.5	7,225.2	5.2%
FL Florida	145,487.2	16,708.1	128,779.1	6,995.8	138,491.4	141,508.4	2.8%
GA Georgia	74,962.8	17,839.0	57,123.7	4,259.2	70,703.6	75,076.7	-0.2%
GU Guam	3,241.7	239.5	3,002.2	58.7	3,183.0	3,159.6	2.6%
HI Hawaii	20,156.3	13,100.4	7,056.0	940.5	19,215.8	21,516.0	-6.3%
IA Iowa	22,048.5	6,560.6	15,487.9	1,376.1	20,672.3	21,435.8	2.9%
ID Idaho	7,374.7	2,016.4	5,358.2	692.9	6,681.8	7,104.9	3.8%
IL Illinois	176,392.4	85,391.4	91,001.0	9,636.8	166,755.6	167,392.9	5.4%
IN Indiana	49,677.8	1,302.1	48,375.8	3,484.9	46,192.9	47,608.9	4.3%
KS Kansas	26,337.7	12,449.1	13,888.5	1,631.3	24,706.3	26,212.7	0.5%
KY Kentucky	35,546.1	2,075.9	33,470.2	1,969.6	33,576.5	35,424.8	0.3%
LA Louisiana	38,138.4	8,223.1	29,915.3	1,610.9	36,527.5	38,420.1	-0.7%
MA Massachusetts	106,426.5	41,156.4	65,270.1	7,484.7	98,941.8	104,255.1	2.1%
MD Maryland	60,930.8	32,606.0	28,324.9	3,524.8	57,406.0	59,227.4	2.9%
ME Maine	8,445.4	2,010.2	6,435.3	525.8	7,919.7	8,362.0	1.0%
MI Michigan	78,648.0	25,409.8	53,238.1	4,429.8	74,218.1	79,303.0	-0.8%
MN Minnesota	54,429.1	28,565.1	25,864.0	3,316.8	51,112.4	54,481.6	-0.1%
MO Missouri	49,881.0	10,795.3	39,085.7	2,221.7	47,659.3	48,956.9	1.9%
MS Mississippi	17,827.2	6,779.4	11,047.8	786.1	17,041.2	17,902.1	-0.4%
MT Montana	4,224.4	1,678.3	2,546.1	273.0	3,951.4	4,275.9	-1.2%
NC North Carolina	54,133.5	12,739.0	41,394.4	3,268.9	50,864.5	54,076.9	0.1%
ND North Dakota	6,005.1	2,106.6	3,898.5	276.3	5,728.8	5,617.9	6.9%
NE Nebraska	21,007.9	6,190.4	14,817.5	1,278.9	19,729.0	20,199.1	4.0%
NH New Hampshire	8,596.2	2,450.0	6,146.2	493.6	8,102.6	8,057.2	6.7%
NJ New Jersey	124,107.4	25,248.4	98,859.1	11,150.6	112,956.8	124,510.6	-0.3%
NM New Mexico	14,258.7	3,519.1	10,739.6	1,005.4	13,253.3	14,072.0	1.3%
NV Nevada	26,424.2	14,390.5	12,033.7	1,291.3	25,132.9	26,495.8	-0.3%
NY New York	407,282.2	77,265.4	330,016.8	22,663.3	384,618.9	402,807.2	1.1%
OH Ohio	112,856.4	32,879.8	79,976.5	5,608.3	107,248.0	112,468.9	0.3%
OK Oklahoma	21,399.5	4,059.7	17,339.8	1,824.7	19,574.8	20,592.1	3.9%
OR Oregon	42,862.3	24,121.6	18,740.7	2,440.9	40,421.4	42,765.9	0.2%
OT Other Territories	10,420.5	50.0	10,370.5	1,619.1	8,801.3	10,475.0	-0.5%
PA Pennsylvania	137,119.0	47,048.1	90,070.9	6,416.1	130,702.9	135,290.9	1.4%
PR Puerto Rico	99,663.5	12,191.7	87,471.8	3,530.9	96,132.6	99,713.6	-0.1%
RI Rhode Island	11,514.0	1,836.9	9,677.1	474.6	11,039.5	11,556.3	-0.4%
SC South Carolina	39,953.4	10,348.1	29,605.4	2,629.2	37,324.3	39,655.5	0.8%
SD South Dakota	5,886.6	1,216.3	4,670.3	243.3	5,643.2	5,645.2	4.3%
TN Tennessee	44,687.7	17,064.6	27,623.1	2,657.9	42,029.7	43,464.0	2.8%
TT Trust Territories	110.5	74.5	36.0		110.5	110.5	0.0%
TX Texas	371,816.1	188,814.4	183,001.7	18,425.3	353,390.8	363,142.5	2.4%
UT Utah	24,893.9	6,727.5	18,166.5	1,024.8	23,869.1	24,180.0	3.0%
VA Virginia	68,725.2	15,400.3	53,325.0	3,335.0	65,390.3	65,443.1	5.0%
VI Virgin Islands	2,213.3		2,213.3	104.5	2,108.8	2,213.3	0.0%
VT Vermont	4,556.8	804.9	3,751.9	157.4	4,399.4	4,726.7	-3.6%
WA Washington	92,194.1	46,591.5	45,602.6	5,024.7	87,169.4	92,397.7	-0.2%
WI Wisconsin	57,029.3	26,690.4	30,338.9	3,735.2	53,294.1	55,088.7	3.5%
WV West Virginia	10,666.0	727.6	9,938.5	382.3	10,283.7	10,396.7	2.6%
WY Wyoming	2,342.4	131.9	2,210.5	133.7	2,208.8	2,322.1	0.9%
TOTAL (12/31/2017)	3,662,299.6	1,196,367.4	2,465,932.1	194,162.2	3,468,137.4	3,609,388.9	1.5%
TOTAL (9/30/2017)	3,609,388.9	1,178,807.6	2,430,581.3	341,318.1	3,268,070.8		
% Change	1.5%	1.5%	1.5%	-43.1%	6.1%		

¹⁰ 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.

Outstanding and by Tax Status, Coupon¹¹

\$ Millions

State	Total Outstanding	Tax-Exempt	BQ	AMT	Taxable	Fixed	Zero	FRN	Other
AK Alaska	10,540.9	8,889.7	43.1	390.0	1,218.1	8,253.1	159.9	394.7	1,733.1
AL Alabama	36,084.7	27,943.1	3,863.9	873.7	3,403.9	28,531.1	963.6	419.9	6,170.1
AR Arkansas	14,376.9	9,683.2	3,276.6	272.0	1,145.2	13,229.5	240.1	528.2	379.1
AS American Samoa	76.1	44.2			31.9	76.1			-
AZ Arizona	57,680.2	51,817.6	833.6	1,142.0	3,887.0	51,876.4	29.6	706.4	5,067.8
CA California	585,234.4	473,090.2	9,859.6	18,341.0	83,943.6	444,428.6	69,512.5	9,506.7	61,786.6
CO Colorado	64,736.4	51,488.7	2,620.9	2,607.4	8,019.4	51,555.5	5,856.6	1,549.1	5,775.2
CT Connecticut	51,472.7	40,230.7	1,517.8	1,285.6	8,438.7	43,251.9	457.2	2,184.5	5,579.2
DC District of Columbia	31,596.6	25,165.2	2.0	3,098.8	3,330.7	22,221.9	5,586.4	199.9	3,588.5
DE Delaware	7,598.9	5,958.4	60.9	214.9	1,364.6	6,254.2	0.4		1,344.3
FL Florida	145,487.2	118,033.9	949.7	12,155.2	14,348.3	125,285.7	3,065.5	2,102.4	15,033.6
GA Georgia	74,962.8	60,033.9	1,361.5	2,987.7	10,579.8	59,462.7	1,977.7	2,317.8	11,204.7
GU Guam	3,241.7	3,038.2		172.4	31.1	3,126.3	115.5		-
HI Hawaii	20,156.3	16,294.4		1,159.8	2,702.1	19,376.3	13.0	464.7	302.4
IA Iowa	22,048.5	14,565.9	4,886.5	630.2	1,965.9	19,155.3	551.8	592.2	1,749.2
ID Idaho	7,374.7	5,816.2	357.1	248.9	952.3	6,424.2	103.4	434.4	412.6
IL Illinois	176,392.4	125,602.9	11,048.1	4,935.0	34,806.4	142,961.2	20,971.5	2,315.8	10,143.9
IN Indiana	49,677.8	37,377.7	3,382.0	3,469.2	5,448.9	39,971.7	875.5	1,159.5	7,671.2
KS Kansas	26,337.7	18,249.2	4,150.4	300.8	3,637.3	25,165.4	269.9	249.1	653.2
KY Kentucky	35,546.1	25,456.0	3,939.5	1,385.2	4,765.4	30,888.6	376.1	1,695.4	2,586.1
LA Louisiana	38,138.4	30,651.6	1,646.7	1,998.8	3,841.2	31,470.0	1,043.5	1,581.4	4,043.5
MA Massachusetts	106,426.5	90,921.3	3,449.0	3,557.3	8,498.9	92,147.4	1,087.0	2,601.4	10,590.8
MD Maryland	60,930.8	52,151.6	209.4	1,605.4	6,964.4	55,478.9	121.2	419.1	4,911.6
ME Maine	8,445.4	6,529.3	572.6	460.1	883.4	7,847.9		15.0	582.6
MI Michigan	78,648.0	59,452.4	4,555.0	2,600.8	12,039.7	60,405.6	6,798.9	2,526.4	8,917.1
MN Minnesota	54,429.1	40,089.4	7,507.7	1,353.1	5,478.9	48,516.6	898.5	900.8	4,113.3
MO Missouri	49,881.0	33,271.9	5,557.2	917.5	10,134.4	39,188.9	833.7	3,817.5	6,040.9
MS Mississippi	17,827.2	12,507.7	1,649.9	236.2	3,433.4	13,510.3	3.0	213.1	4,100.8
MT Montana	4,224.4	2,835.3	617.6	160.0	611.6	3,279.4	10.2	508.7	426.1
NC North Carolina	54,133.5	46,096.2	305.2	1,009.7	6,722.4	46,288.0	283.1	2,820.6	4,741.8
ND North Dakota	6,005.1	4,455.1	929.5	174.4	446.0	5,695.3		87.7	222.1
NE Nebraska	21,007.9	15,357.2	3,495.3	479.7	1,675.8	19,412.1	-	205.9	1,390.0
NH New Hampshire	8,596.2	6,163.1	312.5	442.4	1,678.2	6,978.9	66.8	762.2	788.3
NJ New Jersey	124,107.4	96,094.6	5,964.6	5,924.6	16,123.6	103,709.7	13,128.4	2,355.0	4,914.3
NM New Mexico	14,258.7	11,761.7	874.5	330.6	1,291.9	11,959.2	7.5	1,128.6	1,163.5
NV Nevada	26,424.2	21,854.0	217.1	1,546.6	2,806.4	22,065.0	977.5	125.7	3,256.0
NY New York	407,282.2	329,736.3	7,335.2	18,741.3	51,469.4	338,267.7	15,606.9	5,733.6	47,673.9
OH Ohio	112,856.4	85,390.4	6,478.7	2,234.8	18,752.5	88,289.0	8,485.1	963.1	15,119.2
OK Oklahoma	21,399.5	16,486.7	1,653.0	756.9	2,502.9	19,738.0	45.5	760.7	855.3
OR Oregon	42,862.3	30,113.7	1,383.4	1,049.7	10,315.6	36,794.0	3,690.3	457.4	1,920.7
OT Other Territories	10,420.5	4,139.7		6,241.9	38.9	785.8			9,634.7
PA Pennsylvania	137,119.0	105,528.9	12,184.8	5,496.5	13,908.9	115,305.4	4,140.3	5,845.3	11,828.0
PR Puerto Rico	99,663.5	81,448.2		203.9	18,011.4	55,768.0	37,222.6	1,677.3	4,995.6
RI Rhode Island	11,514.0	9,773.0	227.2	595.4	918.5	9,056.4	1,542.3	570.8	344.6
SC South Carolina	39,953.4	33,647.4	648.8	908.7	4,748.5	33,430.6	2,404.5	2,361.3	1,757.1
SD South Dakota	5,886.6	4,070.4	826.5	149.6	840.1	5,584.1		136.5	166.0
TN Tennessee	44,687.7	35,058.1	2,769.6	931.3	5,928.6	36,936.3	1,927.6	749.0	5,074.7
TT Trust Territories	110.5	74.5		36.0	-	110.5			-
TX Texas	371,816.1	289,184.1	26,593.3	15,648.7	40,389.9	312,104.9	16,169.1	10,471.0	33,071.0
UT Utah	24,893.9	18,205.9	716.3	1,016.1	4,955.5	20,762.5	114.2	2,108.6	1,908.6
VA Virginia	68,725.2	56,309.6	238.2	2,809.8	9,367.6	62,487.6	1,618.1	131.3	4,488.2
VI Virgin Islands	2,213.3	2,082.4		24.9	106.0	2,165.1	48.1		-
VT Vermont	4,556.8	3,402.8	12.4	379.6	762.0	3,713.5		1,343.7	(500.4)
WA Washington	92,194.1	74,338.1	3,183.9	3,770.0	10,902.1	85,792.3	1,792.9	930.9	3,678.1
WI Wisconsin	57,029.3	39,289.8	7,744.5	1,782.0	8,213.1	52,598.8	519.2	998.4	2,912.9
WV West Virginia	10,666.0	6,400.5	340.2	604.5	3,320.9	7,265.0	2,056.3	50.2	1,294.6
WY Wyoming	2,342.4	1,689.2	75.3	420.5	157.5	1,632.9			709.5
TOTAL (12/31/2017)	3,662,299.6	2,875,341.6	162,428.2	142,269.2	482,260.6	2,998,037.1	233,768.1	82,178.6	348,315.8
TOTAL (9/30/2017)	3,609,388.9	2,830,326.9	163,278.7	140,023.4	475,759.9	2,945,782.5	232,993.3	81,047.7	349,565.4
% Change	1.5%	1.6%	-0.5%	1.6%	1.4%	1.8%	0.3%	1.4%	-0.4%

¹¹ 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.

Addendum Tables –Build America Bonds, Prerefunded, Derivatives and Insured¹²

\$ Millions

State	Total Outstanding	BAB Only	VRDO Only	ARS Only	Prerefunded Only	All Derivatives Refunded	Insured Only
AK Alaska	10,540.9	354.3	1,549.2		692.6	746.5	131.0
AL Alabama	36,084.7	603.1	2,342.8	482.6	2,787.2	3,024.1	583.7
AR Arkansas	14,376.9	25.1	262.5		571.5	670.8	
AS American Samoa	76.1						
AZ Arizona	57,680.2	1,896.7	1,942.6	89.7	7,278.4	9,051.2	1,302.0
CA California	585,234.4	37,207.2	19,751.2	1,260.0	43,801.0	58,575.7	17,167.0
CO Colorado	64,736.4	3,965.5	2,415.9	104.0	4,215.9	8,027.0	3,389.4
CT Connecticut	51,472.7	1,838.6	1,905.8	337.9	1,886.1	2,248.7	1,093.5
DC District of Columbia	31,596.6	1,851.9	1,260.6	281.5	1,550.4	1,637.4	1,386.5
DE Delaware	7,598.9	485.6	490.8	2,290.9	682.2	908.6	420.9
FL Florida	145,487.2	5,390.3	5,067.2	370.5	10,323.5	12,454.0	5,026.6
GA Georgia	74,962.8	3,642.5	2,757.5		6,875.6	8,774.4	2,048.4
GU Guam	3,241.7				646.8	660.6	29.0
HI Hawaii	20,156.3	1,161.1	19.8		2,458.6	2,743.1	231.0
IA Iowa	22,048.5	482.6	1,649.2	88.4	1,889.8	2,326.7	399.6
ID Idaho	7,374.7	159.9	298.9		576.7	624.8	91.3
IL Illinois	176,392.4	9,512.2	6,292.1	41.4	10,155.5	18,121.1	6,234.3
IN Indiana	49,677.8	1,773.7	2,457.5	220.0	3,526.9	4,314.0	1,112.8
KS Kansas	26,337.7	1,401.7	379.8	121.9	1,824.3	2,786.1	228.8
KY Kentucky	35,546.1	1,881.1	1,243.4		3,563.2	3,770.6	400.0
LA Louisiana	38,138.4	590.2	2,996.5	265.3	3,648.4	5,139.3	445.4
MA Massachusetts	106,426.5	4,790.4	4,874.1	1,024.5	9,852.5	10,777.7	3,424.4
MD Maryland	60,930.8	3,181.8	1,836.9	13.4	6,666.9	7,628.0	729.0
ME Maine	8,445.4	74.7	408.1		619.9	755.6	20.4
MI Michigan	78,648.0	1,678.0	3,361.7		4,454.6	5,378.7	2,185.6
MN Minnesota	54,429.1	942.4	1,665.3	125.5	3,557.4	4,705.1	605.3
MO Missouri	49,881.0	2,784.3	1,980.1	803.5	2,407.6	3,608.7	1,226.3
MS Mississippi	17,827.2	764.9	3,116.2		1,700.2	1,732.8	73.5
MT Montana	4,224.4	27.1	84.9		181.6	199.7	276.5
NC North Carolina	54,133.5	1,572.2	2,646.2	45.6	7,198.3	8,220.4	1,034.3
ND North Dakota	6,005.1	18.9	190.4		218.9	262.2	78.0
NE Nebraska	21,007.9	893.4	632.3		1,937.6	2,680.0	423.3
NH New Hampshire	8,596.2	352.4	470.6	153.7	895.1	904.6	118.3
NJ New Jersey	124,107.4	6,505.2	2,024.9	129.5	8,198.7	10,670.6	5,703.5
NM New Mexico	14,258.7	238.7	421.0		972.6	1,173.6	309.6
NV Nevada	26,424.2	2,122.1	1,938.9		2,216.7	2,710.3	934.7
NY New York	407,282.2	20,443.4	33,475.3	2,850.0	21,968.6	30,276.3	11,506.1
OH Ohio	112,856.4	6,623.7	4,278.0	425.2	8,518.4	9,123.1	1,748.8
OK Oklahoma	21,399.5	551.4	429.8	66.9	1,799.8	1,931.1	164.6
OR Oregon	42,862.3	928.0	1,030.5	235.0	3,786.7	3,973.7	227.5
OT Other Territories	10,420.5						7,219.1
PA Pennsylvania	137,119.0	4,809.8	5,141.1	22.5	13,801.1	15,842.5	4,826.9
PR Puerto Rico	99,663.5	1,013.0			13.0	667.0	1,174.9
RI Rhode Island	11,514.0		460.5	30.0	944.0	1,235.6	25.0
SC South Carolina	39,953.4	839.4	514.6		3,029.0	3,410.0	893.1
SD South Dakota	5,886.6	288.2	169.1	10.0	340.4	550.5	98.5
TN Tennessee	44,687.7	1,768.8	2,205.9	2.5	4,039.0	6,225.8	591.7
TT Trust Territories	110.5						
TX Texas	371,816.1	16,368.4	11,250.6	1,929.9	35,936.1	39,477.4	5,146.5
UT Utah	24,893.9	2,848.5	1,351.7	391.1	2,683.8	3,438.7	763.5
VA Virginia	68,725.2	3,450.1	1,707.4	15.1	8,303.6	9,009.9	863.1
VI Virgin Islands	2,213.3	37.3				2.2	
VT Vermont	4,556.8	119.7	147.9		349.0	354.1	29.3
WA Washington	92,194.1	5,792.4	1,875.2		10,377.3	11,074.7	1,733.6
WI Wisconsin	57,029.3	1,531.8	1,221.0		5,837.8	7,482.0	1,323.1
WV West Virginia	10,666.0	88.2	679.1	77.3	399.0	432.7	50.2
WY Wyoming	2,342.4	124.0	608.7		155.0	161.6	
TOTAL (12/31/2017)	3,662,299.6	167,795.7	147,280.9	14,227.9	282,315.1	352,681.7	97,249.0
TOTAL (9/30/2017)	3,609,388.9	168,297.8	151,121.6	14,970.7	255,000.1	347,660.9	92,762.6
% Change	1.5%	-0.3%	-2.5%	-5.0%	10.7%	1.4%	4.8%

¹² 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.

Addendum Tables –Rating and Industry¹³

\$ Millions

State	Total Outstanding	Rated	AAA	AA	A	BBB	HY	Industry	Amount
AK Alaska	10,540.9	9,268.3	265.4	5,606.2	2,734.1	344.7	318.0	Other	551.5
AL Alabama	36,084.7	30,863.5	725.6	15,782.6	10,706.4	855.2	2,793.7	Appropriations	114,253.6
AR Arkansas	14,376.9	11,904.6	186.9	8,740.6	2,263.3	660.5	53.3	Airport	97,641.7
AS American Samoa	76.1	76.1	-	-	-	-	-	Airport Tax-Guaranteed	86.5
AZ Arizona	57,680.2	44,063.1	2,237.2	28,077.1	9,700.9	2,645.5	1,402.5	Assisted Living	1,959.9
CA California	585,234.4	474,613.2	14,617.8	309,009.4	113,811.2	23,395.8	13,779.0	Ad Valorem Backed Lease Revenue	7,026.5
CO Colorado	64,736.4	48,675.9	2,818.6	28,111.5	10,117.0	6,953.2	675.5	Bond Bank	12,862.7
CT Connecticut	51,472.7	46,811.0	10,250.6	5,866.6	28,769.8	1,379.0	545.0	Continuing Care Retirement	31,219.2
DC District of Columbia	31,596.6	24,060.2	298.2	15,709.2	4,966.0	2,696.3	390.5	Community Development	6,844.4
DE Delaware	7,598.9	6,562.3	2,468.5	2,295.0	897.6	821.7	79.3	Charter Schools	14,420.3
FL Florida	145,487.2	115,631.5	2,545.0	49,964.5	57,285.3	4,429.6	1,407.1	Community College District	40,567.9
GA Georgia	74,962.8	55,803.5	14,089.2	18,140.4	21,074.3	2,125.0	374.6	Other	7.2
GU Guam	3,241.7	2,437.9	-	(431.6)	909.8	1,876.5	83.2	Economic/Industrial Development	87,949.7
HI Hawaii	20,156.3	17,045.8	146.8	13,899.5	2,300.7	587.4	111.4	Secondary Education	28,321.5
IA Iowa	22,048.5	17,562.8	2,261.6	6,855.3	5,682.8	356.7	2,406.4	Secondary Education - Lease Backed	54,586.0
ID Idaho	7,374.7	5,403.1	535.6	2,501.0	2,151.9	99.9	114.8	Gas Contract	19,689.5
IL Illinois	176,392.4	151,723.1	5,344.3	33,648.3	41,100.5	46,212.7	25,417.2	General Obligation	694,816.4
IN Indiana	49,677.8	39,209.1	4,182.6	18,973.6	13,557.4	1,911.4	584.1	General Obligation Districts (Other)	26,623.4
KS Kansas	26,337.7	21,353.1	1,647.0	12,008.9	7,368.6	137.3	191.3	General Obligation Hospital	7,376.1
KY Kentucky	35,546.1	29,850.4	1,079.7	5,203.6	19,977.3	3,433.0	156.7	Government Paid Lease	86,022.4
LA Louisiana	38,138.4	30,206.7	1,230.4	10,766.6	15,197.8	2,491.0	520.8	General Revenue Tax-Guaranteed	16,517.0
MA Massachusetts	106,426.5	89,518.2	10,922.3	64,824.9	9,383.6	3,758.5	628.8	Higher Education	246,207.6
MD Maryland	60,930.8	48,885.1	23,687.3	15,764.9	6,088.8	2,932.1	412.0	Healthcare (General) Tax-Guaranteed	1,992.1
ME Maine	8,445.4	7,492.8	120.0	4,507.4	2,139.0	52.0	674.4	Hospital	263,015.0
MI Michigan	78,648.0	62,232.8	5,544.4	32,247.7	19,745.9	1,834.7	2,860.2	Hotel Occupancy	5,343.2
MN Minnesota	54,429.1	45,450.4	7,831.0	29,704.2	6,523.2	859.0	533.1	Housing Tax- Guaranteed	1,152.0
MO Missouri	49,881.0	39,844.9	3,151.6	24,039.4	10,672.9	1,673.3	307.6	Intergovernmental Lease	5,440.7
MS Mississippi	17,827.2	14,401.4	236.4	10,681.3	1,928.8	1,446.3	108.8	Income Tax	73,241.9
MT Montana	4,224.4	3,461.1	119.1	1,647.0	1,679.3	15.7	-	Independent Living	8.1
NC North Carolina	54,133.5	43,093.0	13,284.0	18,855.8	9,371.0	1,559.5	22.7	Correctional Facilities	2,655.7
ND North Dakota	6,005.1	5,086.3	231.0	2,862.0	1,300.3	627.2	65.6	Local multifamily housing	34,737.8
NE Nebraska	21,007.9	15,460.7	363.3	8,322.3	5,156.9	1,563.2	55.1	Loan Pool	13,557.0
NH New Hampshire	8,596.2	7,302.7	507.6	4,440.2	1,739.0	538.2	77.8	Lottery	4,820.3
NJ New Jersey	124,107.4	106,628.9	7,918.9	16,214.4	35,025.2	42,955.0	4,515.4	Local Single family housing	2,354.1
NM New Mexico	14,258.7	12,749.9	1,039.2	9,103.3	1,906.8	696.1	4.5	Metro Development	4,772.9
NV Nevada	26,424.2	20,688.6	274.6	11,733.4	7,282.6	919.4	478.6	Melloroos	12,093.1
NY New York	407,282.2	343,633.2	23,267.7	234,868.7	68,705.0	13,401.3	3,390.6	Miscellaneous	41,994.1
OH Ohio	112,856.4	86,374.6	8,960.4	43,203.5	23,116.5	3,675.6	7,418.6	Miscellaneous Tax	67,751.6
OK Oklahoma	21,399.5	17,351.2	2,369.9	8,167.8	5,483.7	1,102.8	227.0	Mobile Home	739.0
OR Oregon	42,862.3	36,742.3	2,990.0	28,846.9	4,352.4	523.3	29.7	Tobacco	85,954.1
OT Other Territories	10,420.5	9,086.7	2,489.6	6,405.9	27.7	163.5	-	Municipal Utilities	62,164.2
PA Pennsylvania	137,119.0	113,760.3	2,699.9	30,031.7	71,058.3	6,683.0	3,287.3	Not for Profit Cultural	7,730.3
PR Puerto Rico	99,663.5	82,352.0	150.9	(366.3)	3,385.1	92.8	79,089.5	Not for Profit Foundation	1,065.9
RI Rhode Island	11,514.0	9,846.7	808.0	4,242.4	2,199.5	866.2	1,730.6	Not for Profit Human Service Provider	4,113.8
SC South Carolina	39,953.4	31,598.2	2,184.3	11,964.3	16,581.7	859.5	8.3	Not for Profit Membership Organization	530.2
SD South Dakota	5,886.6	5,082.7	1,240.2	1,890.5	1,881.7	18.8	51.5	Not for Profit Research	3,284.8
TN Tennessee	44,687.7	34,989.5	3,149.9	21,168.1	6,698.7	3,930.2	42.7	Non-Toll Highway	39,097.1
TT Trust Territories	110.5	36.0	-	-	-	-	36.0	Nuclear Power	16,984.5
TX Texas	371,816.1	303,633.3	135,071.2	92,639.8	56,019.7	15,403.9	4,498.7		2,632.5
UT Utah	24,893.9	19,848.0	6,321.5	9,969.8	3,235.8	211.3	109.5	Nursing Home	0.1
VA Virginia	68,725.2	55,751.4	15,273.5	31,877.7	2,899.9	3,434.8	2,265.5	Pension	18,727.7
VI Virgin Islands	2,213.3	1,635.1	-	-	293.5	-	1,341.6	Payment in Lieu of Taxes	8,067.1
VT Vermont	4,556.8	3,896.1	52.7	2,230.0	1,410.3	187.1	16.0	Parking Facility	3,180.3
WA Washington	92,194.1	78,632.1	4,939.3	62,236.8	9,386.4	1,940.2	129.3	Parking Facility - Guaranteed	1,173.1
WI Wisconsin	57,029.3	43,133.1	2,081.7	30,665.3	8,515.3	1,274.2	596.5	Port/Marinas	39,731.6
WV West Virginia	10,666.0	9,125.7	259.7	713.3	4,459.4	974.2	2,719.1	Public Power Systems	85,240.8
WY Wyoming	2,342.4	2,155.6	196.8	827.0	1,037.8	94.0	-	Public Transportation	37,365.8
TOTAL (12/31/2017)	3,662,299.6	2,994,085.7	356,668.9	1,467,259.9	781,264.4	219,679.4	169,137.0	Private Religious School	2,648.1
TOTAL (9/30/2017)	3,609,388.9	2,958,630.2	350,354.4	1,441,540.0	788,487.0	213,569.1	164,603.6	Sales	107,314.2
% Change	1.5%	1.2%	1.8%	1.8%	-0.9%	2.9%	2.8%	School Districts	412,817.6
								Self Appropriation	10,774.5
								Shell Record	1,110.1
								State Multifamily Housing	39,024.9
								Solid Waste	4,591.2
								Special Assessment	5,255.9
								State Single-family Housing	42,492.6
								Student Housing	10,586.6
								Student Loan Revenue	24,524.6
								Telecom	1,065.6
								Tax Increment Financing	32,322.8
								Toll Roads	133,289.9
								Indian Tribal	1,377.5
								Municipal Utility District	10,102.7
								Water & Sewer Guaranteed	3,426.4
								Water & Sewer	271,310.6
								Total	3,662,299.6

¹³ 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. 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. 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

Daniel Konstantionovsky, Intern

Emily Losi, Intern

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