



Municipal Bond Credit Report

Third Quarter 2018

November 2018

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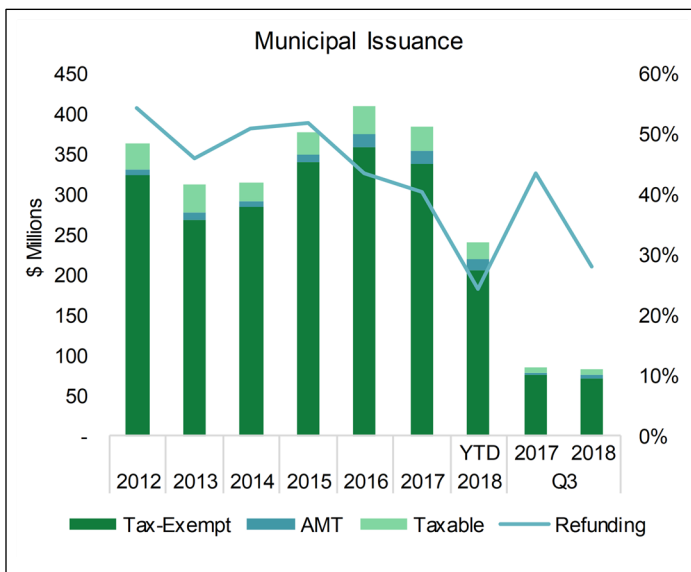
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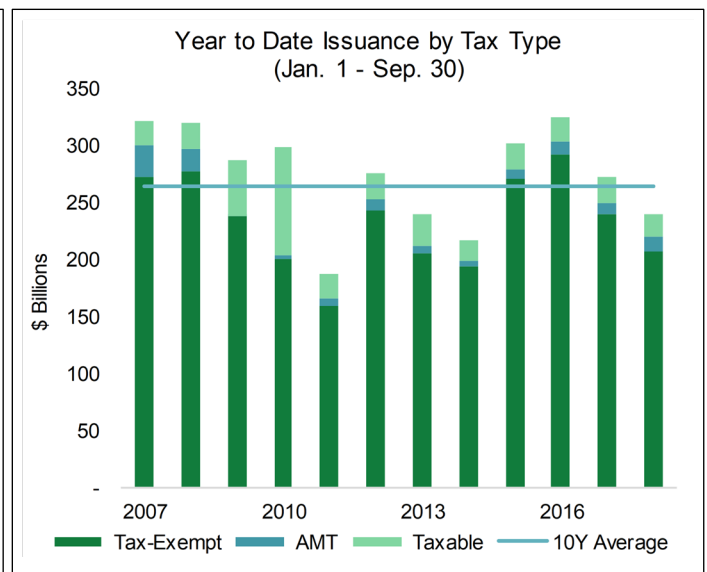
Market Summary

According to Refinitiv, long-term public municipal issuance volume totaled \$82.9 billion in the third quarter of 2018, a decrease of 12.0 percent from the prior quarter (\$94.2 billion) and a decline of 2.3 percent year-over-year (y-o-y) (\$84.8 billion). Including private placements,¹ long-term municipal issuance for 3Q'18 was \$85.8 billion. Year to date ending the third quarter, issuance volumes totaled \$238.9 billion, well under the 10-year average of \$263.7 billion in issuance in the first three quarters of the year.

Tax-exempt issuance totaled \$71.6 billion in 3Q'18, a decline of 10.1 percent q-o-q and 5.2 percent y-o-y. Year to date ending September, tax-exempt issuance totaled \$206.2 billion. Taxable issuance totaled \$7.2 billion in 3Q'18, a decline of 10.3 percent q-o-q but an increase of 21.8 percent y-o-y. Year to date ending September, taxable issuance totaled \$19.9 billion. AMT issuance was \$4.1 billion in 3Q'18, a decline of 10.1 percent q-o-q but an increase of 19.6 percent y-o-y. Year to date ending September, AMT issuance totaled \$12.8 billion.



Source: Refinitiv

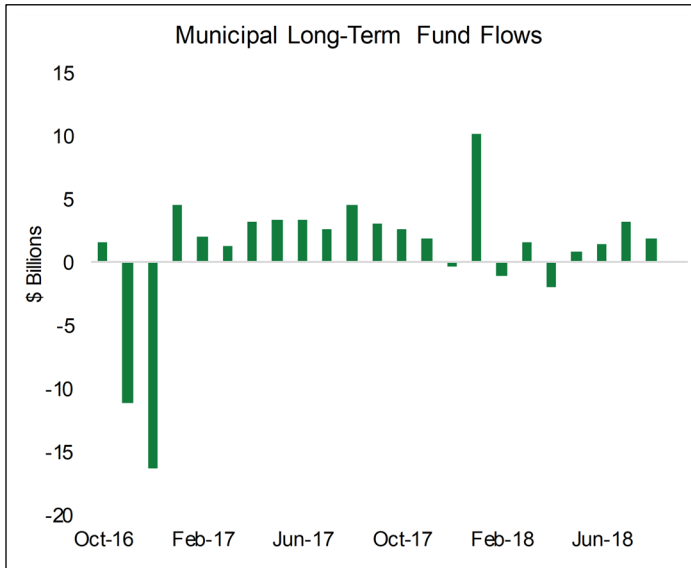


Source: Refinitiv

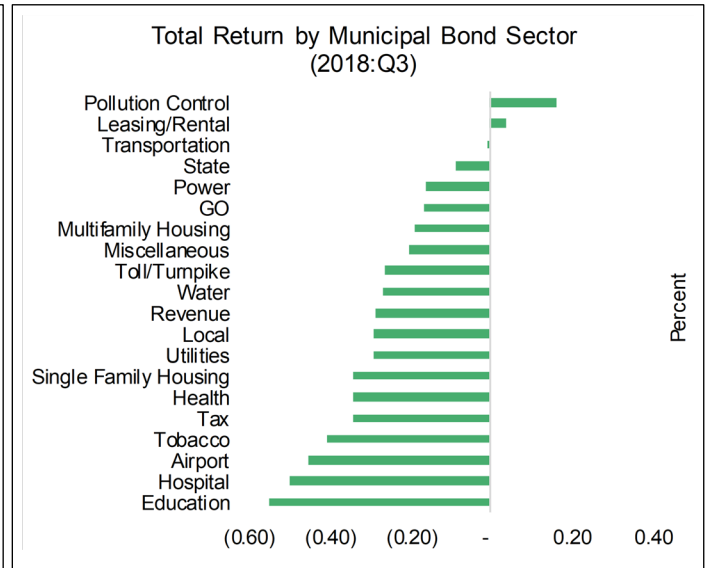
By use of proceeds, general purpose led issuance totals in 3Q'18 (\$21.2 billion), followed by primary & secondary education (\$13.0 billion), water & sewer facilities (\$8.8 billion), general acute care hospitals (\$6.3 billion), and airports (\$5.2 billion). Refunding volumes rose slightly to 27.9 percent of issuance in 3Q'18 from 24.1 percent in the prior quarter but remain well below the averages in prior years.²

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.



Source: ICI



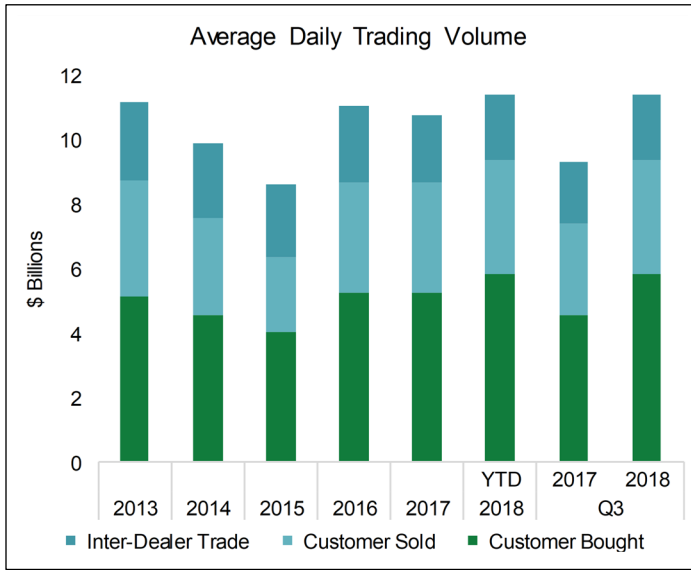
Source: ICE BAML

Yields, Inflows, and Total Return

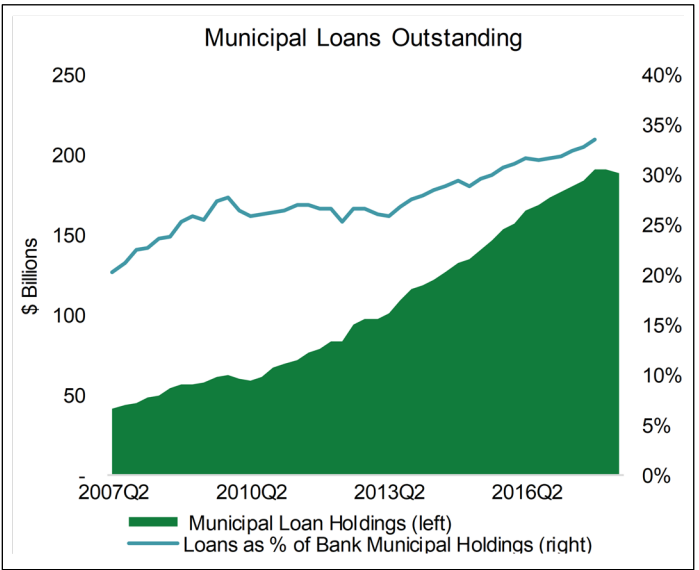
Ratios of 10-year tax-exempt AAA GOs and similar-maturity Treasuries rose slightly in the third quarter on a q-o-q basis, averaging 85.8 percent in 3Q'18 from 84.8 percent in 2Q'18.

According to the Investment Company Institute (ICI), third quarter net flow into long-term tax-exempt mutual funds and exchange-traded funds (ETFs) were positive: there was \$5.0 billion of net inflow in 3Q'18 to mutual funds (from \$144 million in 2Q'18) and \$490 million of net inflow into ETFs (from \$2.0 billion in 2Q'18).

According to the ICE BofAML indices, municipals lost 0.2 percent in total return in the third quarter of 2018, down from the 1.2 percent gain in 3Q'17. For the third quarter, pollution control and leasing/rental sectors outperformed among the individual municipal sectors (a gain of 0.2 percent and 0.04 percent respectively) while education, hospital, and airport underperformed (a loss of 0.54 percent, 0.49 percent, and 0.45 percent, respectively). Build America Bonds (BABs) also lost 0.5 percent in 3Q'18, underperforming similarly-rated corporate bonds (total return of 0.7 percent).



Source: EMMA MSRB



Source: FDIC, Federal Reserve

Trading Activity

Trading activity rose q-o-q to \$11.4 billion daily in 3Q'18, a 4.8 percent decline from 2Q'18 (\$12.0 billion) and a 22.1 percent increase from 3Q'17 (\$9.3 billion). By number of trades, trading activity declined 6.2 percent on a q-o-q basis but rose 4.7 percent on a y-o-y basis.

Broker-Dealers and Holdings

Bank holdings of municipal loans declined slightly in 2Q'18 from the prior quarter to \$188.5 billion (from \$191.0 billion) while holdings of bonds also declined to \$355.1 billion (from \$363.4 billion). The second quarter marks the first decline in holdings of bank loans since 2010; tax reform coming into effect in early 2018 and gross-up provisions in bank loans have generally made the bank loan market less attractive compared to prior quarters.

FRN and VRDO Update

Issuance of variable-rate demand obligations (VRDOs), puttable long-term municipal bonds with interest rates that reset periodically, remained quiet in the third quarter. A total of \$1.9 billion was issued in 3Q'18, a decline of 12.2 percent q-o-q but an increase of 60.1 percent y-o-y. Year to date ending September, VRDO issuance totaled \$4.4 billion, on track to exceed 2017 volumes (\$4.9 billion).

The SIFMA Municipal Swap index, a seven-day high-grade market index comprised of tax-exempt VRDOs, ended September at 1.56 percent, averaging 1.35 percent throughout 3Q'18, 11 basis points wider than 2Q'18's average (1.46 percent) and 53 basis points wider than 3Q'17's average (0.82 percent).

Floating rate bond issuance rose quarter over quarter with \$1.5 billion issued in 3Q'18, a 4.4 percent increase q-o-q and a 15.3 percent increase y-o-y. Year to date, FRN issuance totaled \$3.9 billion, already exceeding 2017 volumes of \$3.7 billion.

Transition Away from Libor: Secured Overnight Financing Rate (SOFR) Issuance

Earlier this year in April, the Federal Reserve Bank of New York began publishing SOFR, measured as the cost of borrowing overnight collateralized by U.S. Treasury securities. In the third quarter, a handful of issuers in the U.S. debt capital markets began issuing floating rate bonds benchmarked to SOFR, marking the beginning of a transition away from LIBOR. In the municipal markets, New York's Triborough Bridge and Tunnel Authority remarketed a 2001 deal of \$107.3 million of general revenue, tax-exempt, variable rate bonds linked to SOFR on September 26th, shortly followed by a new-money deal of \$125 million, also linked to SOFR, on October 4th. Both bonds were rated Aa3 by Moody's, AA- by Fitch, AA by KBRA, and AA- by Standard and Poor's.

State and Government Update

Fewer states and cities experienced rating actions in the third quarter compared to the prior quarter.

On July 3, both Standard & Poor's and Fitch Ratings upgraded the District of Columbia's (DC) GO bond rating from AA to AA+. The upgrade was attributed to DC's strong financial performance and growing economy despite federal contraction. Moody's Investors Service followed Standard & Poor's and Fitch Ratings by upgrading DC to Aaa from Aa1 on July 12.

On July 23, Standard & Poor's upgraded Michigan's rating to AA from AA-, reflecting improvements in the state's economic and financial condition since the recession. The state's action in managing economic volatility by increasing its reserves, managing its budgets and adopting pension reforms was seen positively by the rating agency.

On July 25, Standard & Poor's raised its rating on Minnesota's general obligation (GO) debt to AAA from AA+ due to strong budget management and future reductions in pension liabilities due to the 2018 Omnibus Retirement Act. Moderate debt levels, with well-defined debt management guidelines, was also a contributing factor in upgrading the rating.

Among larger cities, Fitch Ratings upgraded Memphis, TN's GO rating to AA from AA- on July 19th, reflecting the city's operational stability, strong reserves, willingness to raise revenues to offset increasing costs, and sound plan for addressing pension liabilities. Standard & Poor's downgraded New Haven, CT's long-term bond rating to BBB- from A- on July 25th, reflecting their view of the city's structural fiscal imbalance. Shortly after the end of the quarter on October 11th, Moody's downgraded Jacksonville, FL's issuer rating to A2 from Aa2 due to the Vogtle nuclear power plant project dispute between Jacksonville's electric utility, JEA, and Municipal Energy of Georgia (MEAG).

Charts & Data

Long-Term Municipal State Issuance, 3Q'18

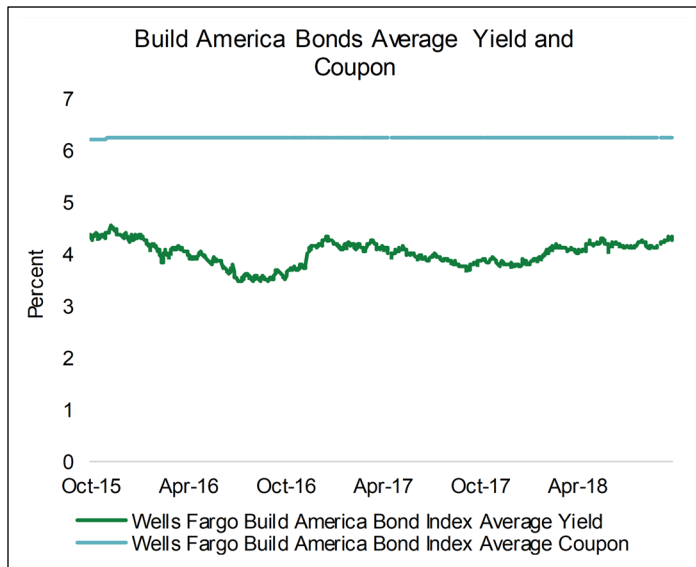
State	Bond Type			Tax Type			Funding Type			
	Total	G.O.	Revenue	AMT	Tax-Exempt	Taxable	New Financing	Refinancing	Refunding & New Refinancing	Refunding
Alabama	545.5	231.0	314.5	-	511.0	34.5	435.0	-	93.5	17.1
Alaska	167.8	-	167.8	-	167.8	-	167.8	-	-	-
American Samoa	0.0	-	-	-	-	-	-	-	-	-
Arizona	455.3	22.4	432.9	-	451.6	3.6	415.2	-	14.7	25.3
Arkansas	509.2	268.6	240.6	-	502.6	6.6	239.2	-	208.4	61.6
California	9,798.1	2,886.4	6,911.7	425.0	8,720.4	652.6	5,649.0	-	2,577.2	1,571.9
Colorado	4,806.6	664.1	4,142.5	2,341.7	2,353.6	111.4	1,766.7	-	116.1	2,923.8
Connecticut	1,693.1	1,456.3	236.8	36.0	1,212.8	444.4	1,014.1	-	165.8	513.3
District of Columbia	590.1	515.7	74.4	-	590.1	-	74.4	-	515.7	-
Delaware	19.9	4.2	15.7	-	19.9	-	4.2	-	-	15.7
Florida	3,460.2	452.5	3,007.7	57.6	2,548.9	853.6	2,012.9	-	430.2	1,017.0
Georgia	872.6	190.6	682.0	-	746.7	125.9	417.0	-	289.7	165.9
Guam	0.0	-	-	-	-	-	-	-	-	-
Hawaii	984.2	569.5	414.7	388.6	411.1	184.5	693.4	-	184.5	106.3
Idaho	451.1	-	451.1	-	300.8	150.3	61.9	-	165.5	223.7
Illinois	2,492.4	1,968.7	523.7	-	2,136.4	355.9	978.5	-	104.7	1,409.1
Indiana	1,286.3	104.0	1,182.3	-	1,254.9	31.4	902.9	-	10.3	373.1
Iowa	569.8	270.0	299.8	-	557.7	12.1	554.9	-	13.0	1.9
Kansas	736.8	442.4	294.4	-	732.1	4.6	673.1	-	59.7	4.0
Kentucky	1,686.6	121.0	1,565.6	17.9	1,448.1	220.6	1,471.4	-	63.2	152.0
Louisiana	358.8	72.3	286.5	-	335.3	23.5	129.6	-	109.0	120.1
Maine	421.5	143.7	277.8	-	394.1	27.4	418.2	-	-	3.3
Maryland	1,534.2	1,201.4	332.8	-	1,475.8	58.4	1,414.5	-	96.1	23.6
Massachusetts	1,741.5	1,071.0	670.5	9.0	1,724.2	8.3	933.5	-	726.6	81.5
Michigan	1,442.0	605.5	836.5	-	1,354.9	87.1	785.6	-	386.5	269.9
Minnesota	1,952.6	974.0	978.6	-	1,841.9	110.6	1,774.3	-	54.0	124.3
Mississippi	313.2	59.0	254.2	-	309.6	3.6	223.2	-	3.6	86.4
Missouri	399.1	146.8	252.3	-	379.9	19.2	353.5	-	8.6	37.0
Montana	439.8	103.9	335.9	-	385.9	53.9	300.6	-	65.3	73.8
Nebraska	660.6	113.9	546.7	-	660.6	-	600.0	-	7.0	53.6
Nevada	599.7	99.7	500.0	-	599.7	-	500.0	-	-	99.7
New Hampshire	281.6	29.5	252.1	102.4	179.2	-	29.5	-	-	252.1
New Jersey	2,174.0	529.4	1,644.6	6.9	2,112.3	54.8	930.0	-	5.8	1,238.2
New Mexico	198.3	119.8	78.5	-	198.3	-	194.8	-	-	3.5
New York	10,914.3	2,147.8	8,766.5	172.3	9,009.3	1,732.7	7,964.9	-	892.2	2,057.2
North Carolina	1,182.1	859.9	322.2	-	1,171.8	10.4	1,155.3	-	-	26.9
North Dakota	365.0	69.8	295.2	-	331.2	33.8	267.1	-	-	97.8
Ohio	1,461.6	373.4	1,088.2	103.6	1,293.0	64.9	1,104.8	-	166.4	190.4
Oklahoma	639.5	359.4	280.1	-	483.1	156.4	609.4	-	-	30.2
Oregon	773.5	649.0	124.5	-	767.4	6.1	749.7	-	23.8	-
Pennsylvania	2,827.2	550.6	2,276.6	23.5	2,551.3	252.5	1,352.7	-	209.0	1,265.6
Puerto Rico	0.0	-	-	-	-	-	-	-	-	-
Rhode Island	216.2	56.0	160.2	13.9	193.6	8.7	206.8	-	3.6	5.8
South Carolina	1,328.2	294.5	1,033.7	-	1,282.5	45.7	1,253.7	-	-	74.5
South Dakota	26.1	26.1	-	-	26.1	-	26.1	-	-	-
Tennessee	1,346.6	284.8	1,061.8	119.3	1,227.4	-	1,346.7	-	-	-
Texas	10,550.1	5,689.3	4,860.8	310.9	9,428.6	810.6	7,514.1	-	814.9	2,221.1
Utah	135.0	-	135.0	-	134.8	0.2	135.0	-	-	-
Vermont	39.9	33.2	6.7	-	39.9	-	39.9	-	-	-
Virgin Islands	0.0	-	-	-	-	-	-	-	-	-
Virginia	1,410.8	325.7	1,085.1	-	1,234.3	176.6	673.4	-	417.9	319.7
Washington	2,637.8	1,090.3	1,547.5	-	2,492.1	145.7	2,279.6	-	159.4	198.8
West Virginia	691.9	-	691.9	-	660.4	31.5	313.1	-	-	378.8
Wisconsin	2,652.4	939.1	1,713.3	1.1	2,533.1	118.3	1,775.5	-	455.7	421.3
Wyoming	74.6	-	74.6	-	74.6	-	74.6	-	-	-
ALL	82,915.3	29,186.2	53,729.1	4,129.7	71,552.7	7,232.9	54,961.3	0.0	9,617.6	18,336.8
QoQ	-12.0%	-27.5%	-0.4%	-36.2%	-10.1%	-10.3%	-15.5%	N/A	-25.3%	13.0%
YoY	-2.3%	-14.5%	6.0%	19.6%	-5.2%	21.8%	40.1%	N/A	-45.1%	-34.7%

State	Coupon Type							
	Total	Convertible	Fixed Rate	Linked Rate	Variable Rate Long	Variable Rate No Put	Variable Rate Short (VRDO)	Zero
Alabama	545.5	-	545.6	-	-	-	-	-
Alaska	167.8	-	167.8	-	-	-	-	-
American Samoa	0.0	-	-	-	-	-	-	-
Arizona	455.3	-	455.2	-	-	-	-	-
Arkansas	509.2	-	509.2	-	-	-	-	-
California	9,798.1	-	8,873.4	482.7	193.0	-	194.5	54.5
Colorado	4,806.6	-	4,519.1	-	-	-	199.0	88.5
Connecticut	1,693.1	-	1,647.3	-	-	-	45.9	-
District of Columbia	590.1	-	555.7	-	34.4	-	-	-
Delaware	19.9	-	19.9	-	-	-	-	-
Florida	3,460.2	-	3,460.1	-	-	-	-	-
Georgia	872.6	-	842.6	-	30.0	-	-	-
Guam	0.0	-	-	-	-	-	-	-
Hawaii	984.2	-	984.2	-	-	-	-	-
Idaho	451.1	-	377.3	-	-	-	73.8	-
Illinois	2,492.4	-	2,474.2	-	5.0	-	-	13.1
Indiana	1,286.3	-	1,282.5	-	3.8	-	-	-
Iowa	569.8	-	554.8	15.0	-	-	-	-
Kansas	736.8	-	736.8	-	-	-	-	-
Kentucky	1,686.6	-	720.7	-	966.0	-	-	-
Louisiana	358.8	-	358.8	-	-	-	-	-
Maine	421.5	-	421.5	-	-	-	-	-
Maryland	1,534.2	-	1,534.2	-	-	-	-	-
Massachusetts	1,741.5	-	1,726.5	15.0	-	-	-	-
Michigan	1,442.0	-	1,442.0	-	-	-	-	-
Minnesota	1,952.6	-	1,914.0	-	26.0	-	-	12.6
Mississippi	313.2	-	236.2	-	7.0	-	70.0	-
Missouri	399.1	-	399.1	-	-	-	-	-
Montana	439.8	-	354.7	19.8	-	-	65.3	-
Nebraska	660.6	-	614.0	-	-	-	46.6	-
Nevada	599.7	-	599.7	-	-	-	-	-
New Hampshire	281.6	-	199.1	82.5	-	-	-	-
New Jersey	2,174.0	-	2,098.3	-	75.7	-	-	-
New Mexico	198.3	-	198.3	-	-	-	-	-
New York	10,914.3	-	10,116.0	-	125.0	-	673.3	-
North Carolina	1,182.1	-	1,179.2	-	3.0	-	-	-
North Dakota	365.0	-	364.9	-	-	-	-	-
Ohio	1,461.6	-	1,129.0	-	217.7	-	113.7	1.1
Oklahoma	639.5	-	639.6	-	-	-	-	-
Oregon	773.5	-	717.3	-	-	-	-	56.2
Pennsylvania	2,827.2	-	2,692.8	134.4	-	-	-	-
Puerto Rico	0.0	-	-	-	-	-	-	-
Rhode Island	216.2	-	216.2	-	-	-	-	-
South Carolina	1,328.2	-	499.1	100.3	728.9	-	-	-
South Dakota	26.1	-	26.1	-	-	-	-	-
Tennessee	1,346.6	-	722.9	-	623.8	-	-	-
Texas	10,550.1	-	10,248.7	249.1	49.9	-	-	2.5
Utah	135.0	-	135.0	-	-	-	-	-
Vermont	39.9	-	39.9	-	-	-	-	-
Virgin Islands	0.0	-	-	-	-	-	-	-
Virginia	1,410.8	-	1,146.2	-	164.7	-	100.0	-
Washington	2,637.8	-	2,409.0	228.8	-	-	-	-
West Virginia	691.9	-	553.4	-	-	-	138.5	-
Wisconsin	2,652.4	-	2,134.6	199.4	191.0	-	127.5	-
Wyoming	74.6	-	54.6	20.0	-	-	-	-
ALL	82,915.3	0.0	75,847.3	1,547.0	3,444.9	0.0	1,848.1	228.5
QoQ	-12.0%	-100.0%	-12.8%	4.4%	0.5%	N/A	-12.2%	53.0%
YoY	-2.3%	N/A	-6.2%	15.3%	167.8%	N/A	60.1%	52.1%

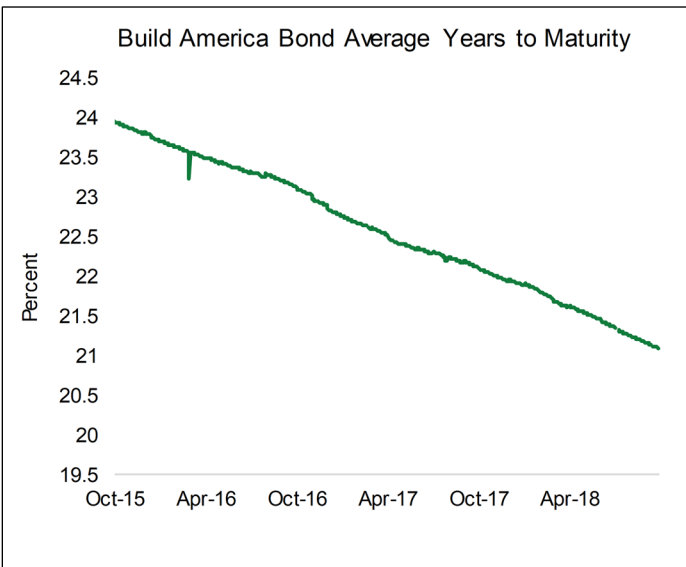
Long Term Municipal Issuance by General Use of Proceeds

Use of Proceeds	3Q'17	2Q'18	3Q'18	Q-o-Q	Y-o-Y
Agriculture	27.0				-100.0%
Airports	4,079.1	5,562.8	5,209.4	-6.4%	27.7%
Assisted Living	15.7	68.6	82.9	20.8%	428.0%
Bridges	2,243.0	416.5	908.4	118.1%	-59.5%
Childrens hospital	200.0				-100.0%
Civic & convention centers	157.5	91.0	2,329.1	2459.5%	1378.8%
Combined utilities	724.7	409.3	98.2	-76.0%	-86.4%
Cont Care Retirement Community	1,383.3	741.3	1,398.4	88.6%	1.1%
Correctional facilities	326.6	457.4	373.0	-18.5%	14.2%
Economic development	1,540.7	903.3	1,313.0	45.4%	-14.8%
Fire stations & equipment	126.5	106.6	63.2	-40.7%	-50.0%
Flood control	54.1	196.9	75.0	-61.9%	38.6%
Gas	291.2	2,724.0	2,365.0	-13.2%	712.2%
General acute care hospital	5,499.0	4,852.5	6,343.9	30.7%	15.4%
General Medical			138.1		
General purpose /public improvement	20,423.7	25,702.3	21,189.0	-17.6%	3.7%
Government buildings	346.8	255.7	375.4	46.8%	8.2%
Higher education	7,834.3	8,087.3	4,623.4	-42.8%	-41.0%
Industrial development		129.2	88.9	-31.2%	
Libraries & museums	72.0	168.2	329.6	96.0%	357.8%
Mass transportation	4,331.9	4,158.4	2,205.6	-47.0%	-49.1%
Multi family housing	1,252.2	2,498.2	987.3	-60.5%	-21.2%
Nursing homes	62.1	9.2	10.3	12.0%	-83.4%
Office buildings	105.7		302.4		186.1%
Other education	124.1	217.0	70.3	-67.6%	-43.4%
Other recreation	71.6	143.3	154.2	7.6%	115.4%
Parking facilities	135.0	38.5	230.9	499.7%	71.0%
Parks, Zoos & Beaches	151.2	119.3	207.3	73.8%	37.1%
Police stations & equipment	15.2	105.9	38.4	-63.7%	152.6%
Pollution control	133.6	280.9	334.6	19.1%	150.4%
Primary & secondary education	15,366.2	16,355.8	12,970.3	-20.7%	-15.6%
Public power	1,280.6	2,277.6	824.2	-63.8%	-35.6%
Sanitation	60.1	44.7	60.2	34.7%	0.2%
Seaports /marine terminals	34.2	1,064.4	1,143.0	7.4%	3242.1%
Single family housing	2,206.5	3,212.7	3,537.6	10.1%	60.3%
Single speciality hospital	71.2	50.0	568.7	1037.4%	698.7%
Solid waste	274.9	41.7	334.8	702.9%	21.8%
Stadiums & sports complexes	344.1	774.5	107.1	-86.2%	-68.9%
Student loans		750.9	95.0	-87.3%	
Telecommunications	11.8	152.7	32.4	-78.8%	174.6%
Theatres		74.9	8.6	-88.5%	
Toll roads, highways & streets	7,066.3	4,231.4	2,457.9	-41.9%	-65.2%
Veterans (excluding housing)			91.7		
Water & sewer facilities	6,389.4	6,698.0	8,838.2	32.0%	38.3%
ALL	84,833.1	94,172.9	82,914.9	-12.0%	-2.3%

Build America Bonds

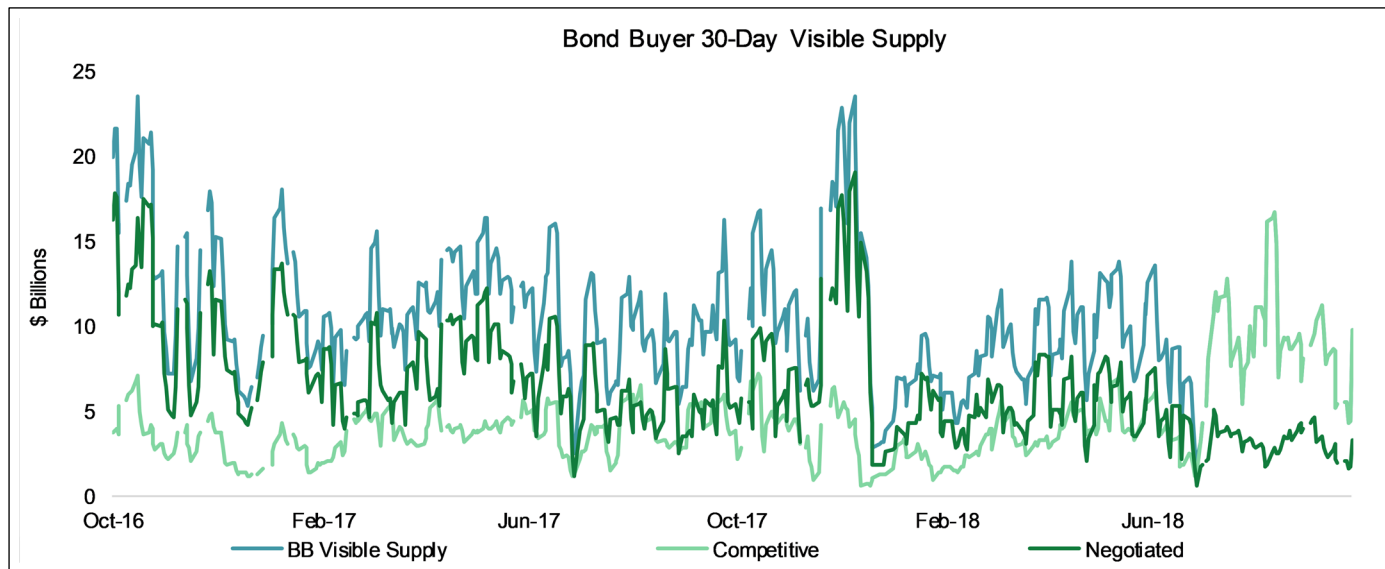


Source: Wells Fargo

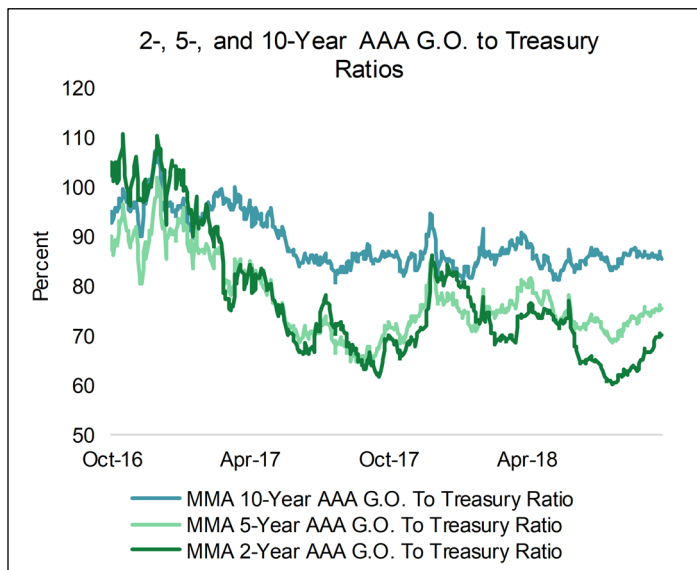


Source: Wells Fargo

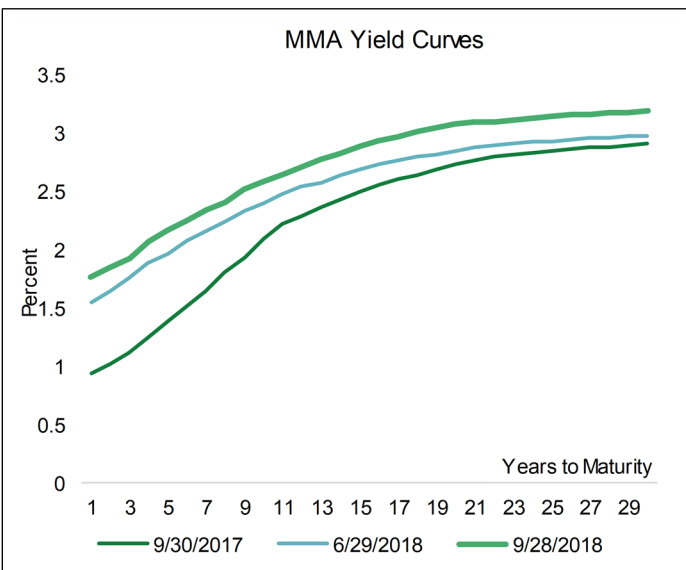
Supply, Yield Curves, Total Return, Spreads & Ratios



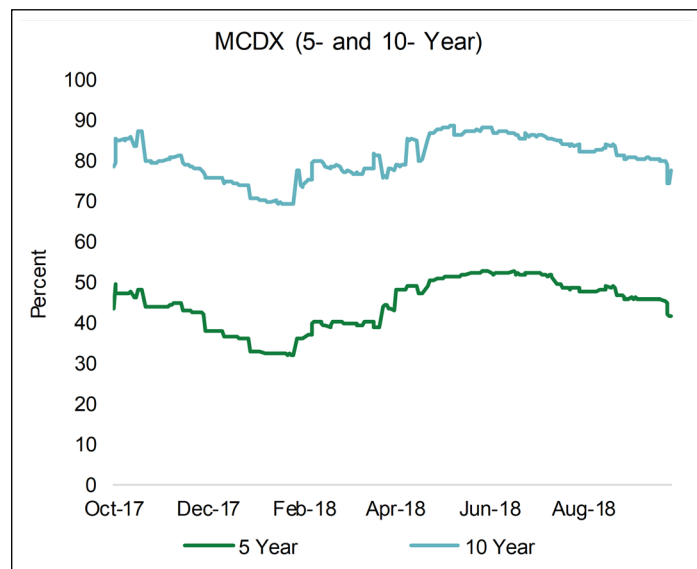
Source: Bond Buyer



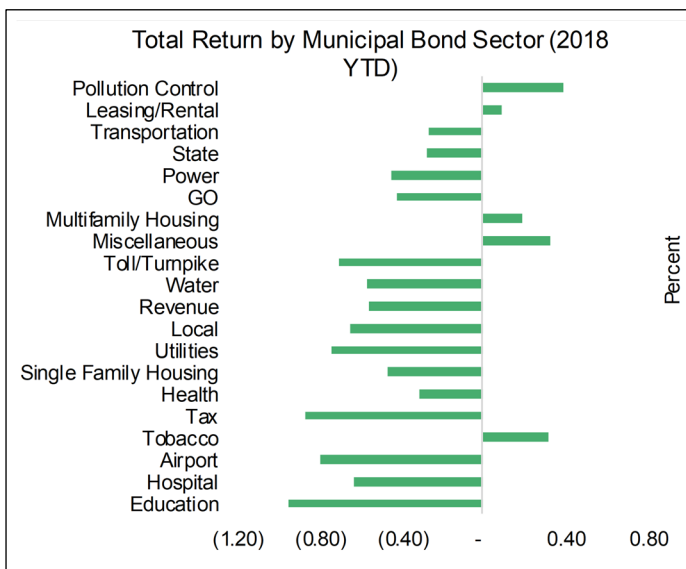
Source: MMA



Source MMA



Source: Markit



Source: ICE BAML

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
2018:Q2	1,002,456	588,227	998,839	2,589,522	\$376,773	\$249,981	\$139,485	\$766,239
2018:Q3	944,571	520,394	925,959	2,390,924	\$367,099	\$224,460	\$126,305	\$717,864
%Change	-6%	-12%	-7%	-8%	-3%	-10%	-9%	-6%

	# of Trades					Par Amount (Millions)					
	0 - 100,000		100,001 - 500,000	500,001 - 1,000,000	1,000,000+	All Trades	0 - 100,000	100,001 - 500,000	500,001 - 1,000,000	1,000,000+	All Trades
	2018:Q2	81%	13%	2%	4%	2,589,522	9%	11%	6%	74%	\$766,239
2018:Q3	81%	13%	2%	4%	2,390,924	9%	10%	6%	75%	\$717,864	

	Trades by Sector							Total (Millions)
	Education	Health	Utility	Various Purpose	Transportation	Tax-Revenue	Other	
2018:Q2	17%	10%	12%	11%	8%	9%	33%	\$766,239
2018:Q3	15%	10%	11%	10%	8%	9%	37%	\$717,864

	Trades by Maturity						Total (Millions)
	1 Year or Less		5+ Years to 10 Years		10+ Years to 20+ Years		
	1+ Year to 5 Years	Years	Years	Years	Years	Years	
2018:Q2	6%	11%	15%	34%	34%		\$766,239
2018:Q3	9%	12%	13%	32%	33%		\$717,864

	Trades by Source of Repayment					Total (Millions)
	Revenue	General Obligation	Double Barrel	Not Available		
2018:Q2	69%	26%	2%	2%		\$766,239
2018:Q3	67%	25%	2%	6%		\$717,864

	Trades by Coupon Type					Total (Millions)
	Fixed Rate	Variable Rate	Zero Coupon	Not Available		
2018:Q2	62%	36%	3%	0%		\$766,239
2018:Q3	64%	34%	2%	0%		\$717,864

Source: EMMA MSRB

Municipal CDS Yield Curve as of September 28, 2018

	6M	1Y	2Y	3Y	4Y	5Y	7Y	10Y	6/29/18 6M%	6/29/18 10Y%
									Change	Change
CA California	10.7	13.1	17.0	20.6	25.3	31.0	42.8	57.5	-28.7%	-0.7%
CT Connecticut	38.1	51.6	64.1	73.9	83.3	96.2	123.6	158.8	-2.1%	-7.2%
DE Delaware	17.2	18.3	22.9	24.8	26.7	29.3	37.6	49.4	-10.9%	-10.0%
FL Florida	6.4	9.8	15.4	22.3	28.9	35.0	46.8	58.8	-13.5%	-5.2%
MA Massachusetts	11.6	13.9	18.6	24.7	31.1	38.5	53.1	66.8	-42.6%	-1.6%
MD Maryland	7.5	10.2	15.5	23.0	31.0	37.9	47.3	55.7	74.4%	-3.3%
MI Michigan	5.3	7.6	12.8	20.1	28.5	38.2	56.5	71.9	-18.5%	6.7%
MN Minnesota	13.0	14.8	20.1	23.7	29.9	37.7	49.3	58.0	19.3%	13.1%
NC North Carolina	16.7	18.5	24.3	29.1	31.2	34.1	44.2	63.1	21.0%	-4.5%
NJ New Jersey	16.2	24.2	42.4	53.4	64.8	74.5	90.0	104.9	-21.7%	-9.4%
NV Nevada	16.2	18.9	24.6	30.1	34.6	41.2	52.9	62.0	-10.5%	-6.2%
NY New York	8.0	11.3	16.2	20.4	26.1	32.8	43.5	52.8	21.2%	2.5%
OH Ohio	12.3	14.6	20.1	27.5	33.1	38.8	50.0	60.5	19.4%	-9.6%
PA Pennsylvania	23.9	29.4	42.9	53.3	59.4	68.6	88.9	119.3	-25.1%	-19.0%
RI Rhode Island	10.1	16.6	28.6	35.8	38.6	44.7	64.1	89.0	21.7%	-10.4%
SC South Carolina	5.7	9.8	15.0	22.0	27.8	32.1	40.9	49.8	-3.4%	-4.0%
TX Texas	9.2	10.6	13.1	19.0	26.0	32.3	45.5	64.1	-22.0%	-11.5%
UT Utah	8.5	11.7	16.9	21.0	25.6	30.2	37.0	42.9	-19.8%	-10.6%
VA Virginia	19.6	21.3	24.2	26.9	29.1	31.7	39.7	55.2	84.9%	23.2%
WA Washington	11.2	14.6	20.8	28.8	35.5	40.4	50.5	61.5	49.3%	3.4%
WI Wisconsin	16.0	16.0	19.1	23.5	27.9	33.8	46.4	59.6	0.0%	-8.9%
New York City	10.5	15.4	22.4	28.6	35.9	44.2	56.9	66.8	5.0%	-5.9%
Los Angeles	6.7	10.0	15.6	22.5	29.7	36.8	48.5	60.7	34.0%	-18.6%
Chicago	77.3	93.1	121.1	153.7	179.7	198.5	235.8	287.4	-8.8%	-11.5%

Source: CMA Datavision

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	Aa2	AA	
Colorado				New York	Aa1	AA+	AA+
Connecticut	A1	A	A+	North Carolina	Aaa	AAA	AAA
District of Columbia	Aaa	AA+	AA+	North Dakota			
Delaware	Aaa	AAA	AAA	Ohio	Aa1	AA+	AA+
Florida	Aaa	AAA	AAA	Oklahoma	Aa2	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	AAA	AAA	Wisconsin	Aa1	AA	AA+
Mississippi	Aa2	AA	AA	Wyoming			
Missouri	Aaa	AAA	AAA				

Source: Moody's, Standard and Poor's, Fitch Ratings

Outstanding Municipal Debt

Outstanding by Type, Maturity and Security Type³

\$ Millions

State	Total Outstanding	G.O.	Revenue	Due in 13 Months	Long-Term	2018:Q2 Total Outstanding	% Change
AK Alaska	10,279.6	2,343.2	7,936.5	488.5	9,791.2	10,703.7	-4.0%
AL Alabama	37,757.3	6,990.1	30,767.2	1,534.6	36,222.7	38,334.0	-1.5%
AR Arkansas	14,600.0	6,592.8	8,007.1	668.5	13,931.5	14,311.6	2.0%
AS American Samoa	73.8		73.8		73.8	76.1	-3.0%
AZ Arizona	52,763.0	10,567.8	42,195.2	3,280.1	49,482.9	57,113.4	-7.6%
CA California	579,945.2	221,506.7	358,438.4	26,976.9	552,968.3	594,676.7	-2.5%
CO Colorado	70,669.8	17,220.5	53,449.4	3,098.8	67,571.0	65,829.1	7.4%
CT Connecticut	52,129.7	27,919.2	24,210.5	3,802.6	48,327.1	52,860.1	-1.4%
DC District of Columbia	32,206.5	4,831.7	27,374.8	863.8	31,342.7	32,518.4	-1.0%
DE Delaware	7,716.2	3,202.9	4,513.3	371.4	7,344.8	8,046.3	-4.1%
FL Florida	145,055.1	15,715.0	129,340.1	8,965.7	136,089.3	145,068.2	0.0%
GA Georgia	74,750.7	17,551.5	57,199.1	3,914.2	70,836.5	76,074.0	-1.7%
GU Guam	3,300.3	239.5	3,060.8	74.2	3,226.1	3,305.6	-0.2%
HI Hawaii	21,387.9	14,072.6	7,315.3	1,108.3	20,279.6	20,922.1	2.2%
IA Iowa	21,631.7	6,679.1	14,952.6	1,351.5	20,280.2	21,775.6	-0.7%
ID Idaho	7,335.8	2,095.9	5,239.9	779.8	6,556.0	7,929.0	-7.5%
IL Illinois	171,862.5	83,899.6	87,962.9	8,321.0	163,541.5	171,077.6	0.5%
IN Indiana	47,367.4	1,320.5	46,046.9	2,791.9	44,575.5	47,692.8	-0.7%
KS Kansas	26,470.9	12,549.8	13,921.2	2,064.7	24,406.2	27,156.2	-2.5%
KY Kentucky	36,273.0	2,046.6	34,226.4	2,358.6	33,914.4	35,737.1	1.5%
LA Louisiana	37,245.3	7,788.9	29,456.4	1,637.0	35,608.3	37,274.1	-0.1%
MA Massachusetts	106,678.0	42,588.1	64,089.8	8,137.8	98,540.1	107,623.7	-0.9%
MD Maryland	60,117.9	32,959.6	27,158.3	4,002.4	56,115.6	61,476.2	-2.2%
ME Maine	8,805.5	2,241.8	6,563.7	579.1	8,226.4	8,613.8	2.2%
MI Michigan	76,481.2	24,599.4	51,881.7	5,059.6	71,421.6	76,931.7	-0.6%
MN Minnesota	55,476.1	29,667.1	25,809.0	3,546.3	51,929.8	54,644.1	1.5%
MO Missouri	48,930.6	10,375.7	38,554.9	2,176.9	46,753.7	48,784.7	0.3%
MS Mississippi	17,486.1	6,664.8	10,821.3	943.9	16,542.2	17,434.8	0.3%
MT Montana	4,307.1	1,508.7	2,798.4	170.0	4,137.1	4,019.0	7.2%
NC North Carolina	52,517.7	12,431.2	40,086.5	3,043.1	49,474.6	52,298.3	0.4%
ND North Dakota	6,388.3	2,151.8	4,236.5	314.7	6,073.6	6,021.9	6.1%
NE Nebraska	20,626.2	6,185.8	14,440.5	1,119.7	19,506.5	20,500.2	0.6%
NH New Hampshire	8,174.7	2,316.6	5,858.1	536.0	7,638.7	8,318.9	-1.7%
NJ New Jersey	119,436.9	24,948.8	94,488.1	11,749.7	107,687.2	121,163.4	-1.4%
NM New Mexico	13,795.7	3,444.4	10,351.3	1,036.4	12,759.3	14,543.1	-5.1%
NV Nevada	26,186.6	13,773.7	12,412.9	1,124.0	25,062.6	26,730.2	-2.0%
NY New York	410,067.3	75,362.2	334,705.1	25,481.0	384,586.3	411,058.9	-0.2%
OH Ohio	112,619.6	33,710.1	78,909.5	5,763.9	106,855.7	112,526.7	0.1%
OK Oklahoma	21,856.6	4,184.0	17,672.6	1,851.3	20,005.3	22,385.1	-2.4%
OR Oregon	42,463.5	24,303.1	18,160.4	2,549.5	39,914.0	42,441.4	0.1%
OT Other Territories	10,899.1	50.0	10,849.2	1,864.1	9,035.0	11,024.3	-1.1%
PA Pennsylvania	138,288.7	47,028.2	91,260.5	6,478.0	131,810.7	139,724.6	-1.0%
PR Puerto Rico	99,022.7	12,117.8	86,904.9	5,151.7	93,871.0	99,558.4	-0.5%
RI Rhode Island	11,399.8	1,861.5	9,538.3	599.3	10,800.5	11,519.0	-1.0%
SC South Carolina	40,267.4	10,247.4	30,020.1	2,754.1	37,513.3	39,057.4	3.1%
SD South Dakota	5,690.7	1,203.9	4,486.8	211.5	5,479.2	5,803.6	-1.9%
TN Tennessee	43,636.4	16,422.4	27,214.0	2,727.3	40,909.1	43,264.2	0.9%
TT Trust Territories	105.0	71.2	33.7		105.0	105.0	0.0%
TX Texas	371,104.0	185,159.2	185,944.8	21,583.2	349,520.8	369,184.8	0.5%
UT Utah	24,519.0	6,585.9	17,933.1	1,187.4	23,331.6	25,263.0	-2.9%
VA Virginia	68,558.8	15,419.3	53,139.5	3,440.9	65,117.9	69,058.4	-0.7%
VI Virgin Islands	2,193.7		2,193.7	154.6	2,039.1	2,212.4	-0.8%
VT Vermont	4,431.7	767.8	3,663.9	168.7	4,263.0	4,465.2	-0.8%
WA Washington	92,170.0	46,215.2	45,954.8	4,323.2	87,846.8	93,048.8	-0.9%
WI Wisconsin	59,032.8	26,759.1	32,273.8	4,090.9	54,941.9	56,973.8	3.6%
WV West Virginia	12,002.7	1,461.0	10,541.6	530.5	11,472.1	11,443.0	4.9%
WY Wyoming	2,269.4	110.0	2,159.5	73.5	2,185.9	2,208.5	2.8%
TOTAL (9/30/2018)	3,648,829.0	1,190,030.4	2,458,798.6	208,976.2	3,439,852.8	3,669,912.1	-0.6%
TOTAL (6/30/2018)	3,669,912.1	1,202,759.5	2,467,152.5	209,923.7	3,459,988.3		
% Change	-0.6%	-1.1%	-0.3%	-0.5%	-0.6%		

³ Data prior to 1Q'17 excludes 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 by Tax Status and Coupon
\$ Millions

State	Total Outstanding	Tax-Exempt	BQ	AMT	Taxable	Fixed	Zero	Other
AK Alaska	10,279.6	8,650.8	36.8	359.6	1,232.6	7,980.4	157.4	2,141.9
AL Alabama	37,757.3	29,837.0	3,656.7	777.7	3,486.0	28,182.4	956.7	8,618.2
AR Arkansas	14,600.0	10,077.2	3,190.1	264.2	1,068.5	13,478.3	240.1	881.5
AS American Samoa	73.8	44.2			29.6	73.8		-
AZ Arizona	52,763.0	47,108.3	782.9	1,197.7	3,674.1	47,029.6	29.8	5,703.6
CA California	579,945.2	464,387.3	9,521.5	20,139.9	85,896.4	441,976.4	67,401.6	70,567.2
CO Colorado	70,669.8	54,728.7	2,729.1	4,795.7	8,416.3	57,101.9	5,957.9	7,610.0
CT Connecticut	52,129.7	40,642.5	1,417.9	1,314.9	8,754.4	44,043.1	454.9	7,631.7
DC District of Columbia	32,206.5	25,223.0	2.0	3,699.9	3,281.5	22,549.8	5,582.2	4,074.5
DE Delaware	7,716.2	5,864.2	62.3	184.6	1,605.1	6,379.8		1,336.4
FL Florida	145,055.1	117,517.4	919.7	11,985.2	14,632.8	125,364.8	3,019.2	16,671.0
GA Georgia	74,750.7	59,907.3	1,246.2	2,891.2	10,706.0	57,111.8	1,975.4	15,663.4
GU Guam	3,300.3	3,300.3		195.5	43.5	3,184.8	115.5	-
HI Hawaii	21,387.9	17,129.1		1,393.9	2,864.8	20,622.1	6.5	759.3
IA Iowa	21,631.7	14,613.9	4,511.4	613.3	1,893.1	18,335.0	551.8	2,744.9
ID Idaho	7,335.8	5,749.1	296.3	183.1	1,107.3	6,653.7	32.8	649.3
IL Illinois	171,862.5	121,634.9	10,971.9	4,869.2	34,386.4	138,700.0	20,709.1	12,453.4
IN Indiana	47,367.4	35,809.9	3,159.2	3,367.1	5,031.2	38,167.6	773.4	8,426.4
KS Kansas	26,470.9	18,737.6	3,884.6	297.2	3,551.5	25,357.1	265.6	848.3
KY Kentucky	36,273.0	26,490.3	3,766.2	1,285.6	4,730.9	30,085.4	360.3	5,827.2
LA Louisiana	37,245.3	30,219.6	1,497.0	1,976.2	3,552.6	30,742.5	1,053.7	5,449.1
MA Massachusetts	106,678.0	91,234.3	3,428.5	3,522.4	8,492.8	92,998.8	1,009.3	12,669.9
MD Maryland	60,117.9	51,518.9	186.9	1,533.8	6,878.3	54,999.9	118.8	4,999.2
ME Maine	8,805.5	6,915.1	589.8	451.0	849.7	8,344.5		461.0
MI Michigan	76,481.2	58,201.4	4,354.4	2,470.1	11,455.3	58,917.2	6,735.0	10,828.9
MN Minnesota	55,476.1	41,667.0	7,343.0	1,164.8	5,301.3	49,725.0	947.2	4,803.9
MO Missouri	48,930.6	32,956.0	5,216.9	739.1	10,018.6	38,170.6	784.4	9,975.7
MS Mississippi	17,486.1	12,371.9	1,569.5	195.7	3,349.0	13,209.9	3.0	4,273.2
MT Montana	4,307.1	3,181.3	569.2	146.6	410.0	3,627.5	8.9	670.7
NC North Carolina	52,517.7	44,763.0	279.2	939.9	6,535.6	45,037.9	274.6	7,205.1
ND North Dakota	6,388.3	4,805.4	935.5	156.2	491.2	6,097.8		290.5
NE Nebraska	20,626.2	14,975.5	3,535.6	524.6	1,590.4	19,063.4	5.9	1,557.0
NH New Hampshire	8,174.7	5,965.9	290.1	520.6	1,398.2	6,780.1	61.7	1,332.9
NJ New Jersey	119,436.9	92,470.2	5,777.9	5,669.0	15,519.8	101,085.4	11,615.7	6,735.8
NM New Mexico	13,795.7	11,479.2	788.4	306.1	1,222.0	11,695.8	5.5	2,094.3
NV Nevada	26,186.6	21,747.4	200.4	1,472.8	2,766.0	21,871.2	1,278.1	3,037.3
NY New York	410,067.3	331,013.8	6,807.2	19,148.3	53,098.0	342,774.9	15,507.7	51,784.8
OH Ohio	112,619.6	85,588.4	6,480.2	2,307.7	18,243.3	88,846.5	8,489.6	15,283.6
OK Oklahoma	21,856.6	16,391.4	1,547.1	736.9	3,181.2	20,462.0	45.5	1,349.1
OR Oregon	42,463.5	30,318.2	1,313.2	1,165.7	9,666.4	36,434.4	3,882.1	2,146.9
OT Other Territories	10,899.1	5,540.8		5,311.1	47.3	909.4		9,989.8
PA Pennsylvania	138,288.7	107,366.0	11,973.5	4,963.8	13,985.4	117,789.1	3,880.5	16,619.1
PR Puerto Rico	99,022.7	81,461.7		203.9	17,357.1	55,183.0	37,196.1	6,643.7
RI Rhode Island	11,399.8	9,590.4	215.3	613.9	980.3	8,984.4	1,542.3	873.2
SC South Carolina	40,267.4	34,277.5	598.0	1,217.3	4,174.7	33,510.4	2,385.8	4,371.2
SD South Dakota	5,690.7	3,960.0	798.8	131.5	800.4	5,393.0		297.7
TN Tennessee	43,636.4	34,638.7	2,537.4	982.7	5,477.6	35,676.3	1,905.1	6,055.0
TT Trust Territories	105.0	71.2		33.7	-	105.0		-
TX Texas	371,104.0	289,999.0	25,162.3	15,564.3	40,378.4	312,696.8	14,975.8	43,431.5
UT Utah	24,519.0	18,144.7	627.8	989.8	4,756.7	20,279.6	110.3	4,129.1
VA Virginia	68,558.8	56,419.4	222.4	2,703.2	9,213.8	62,364.0	1,432.0	4,762.7
VI Virgin Islands	2,193.7	2,068.3		23.0	102.3	2,145.5	48.1	-
VT Vermont	4,431.7	3,291.6	20.8	379.1	740.1	3,663.8		767.9
WA Washington	92,170.0	74,439.1	3,179.0	4,186.9	10,365.1	85,956.9	1,637.9	4,575.2
WI Wisconsin	59,032.8	41,738.7	7,693.2	1,746.3	7,854.6	53,481.7	1,235.3	4,315.8
WV West Virginia	12,002.7	7,682.3	335.2	631.1	3,354.1	8,505.9	2,049.5	1,447.3
WY Wyoming	2,269.4	1,668.6	54.2	400.5	146.2	1,571.6		697.8
TOTAL (9/30/2018)	3,648,829.0	2,867,355.9	156,282.3	145,045.2	480,145.5	2,991,479.6	228,815.3	428,534.1
TOTAL (6/30/2018)	3,669,912.1	2,886,406.7	158,488.1	144,542.7	480,474.6	3,009,759.9	231,884.4	
% Change	-0.6%	-0.7%	-1.4%	0.3%	-0.1%	-0.6%	-1.3%	N/A

Addendum Tables –Build America Bonds, Prerefunded, Derivatives and Insured
\$ Millions

State	Total Outstanding	BAB Only	Prerefunded Only	All Refunded	Derivatives Only	Insured
AK Alaska	10,279.6	346.7	641.8	829.0	130.9	472.3
AL Alabama	37,757.3	546.3	2,032.8	2,510.6	637.6	6,498.8
AR Arkansas	14,600.0	23.6	459.4	618.4		1,705.3
AS American Samoa	73.8					
AZ Arizona	52,763.0	1,860.5	3,793.9	5,593.4	1,171.3	5,801.3
CA California	579,945.2	37,160.4	34,900.6	57,286.5	17,438.7	79,185.0
CO Colorado	70,669.8	3,950.4	4,074.6	8,361.9	3,479.5	6,399.0
CT Connecticut	52,129.7	1,806.7	1,296.1	2,139.9	1,173.8	3,316.0
DC District of Columbia	32,206.5	1,835.6	1,337.5	1,704.9	1,345.8	2,493.7
DE Delaware	7,716.2	485.6	583.8	906.4	410.4	118.3
FL Florida	145,055.1	5,330.8	10,563.2	15,464.5	5,230.7	15,135.6
GA Georgia	74,750.7	3,639.0	5,206.5	7,781.9	1,765.3	6,144.4
GU Guam	3,300.3		646.8	660.6	29.0	410.9
HI Hawaii	21,387.9	1,130.8	2,913.6	4,015.6	310.5	169.0
IA Iowa	21,631.7	429.8	1,497.7	1,789.5	447.7	1,264.2
ID Idaho	7,335.8	154.9	451.9	549.7	91.3	240.7
IL Illinois	171,862.5	9,288.6	7,605.3	18,349.5	6,705.6	30,998.3
IN Indiana	47,367.4	1,729.8	2,743.6	4,436.1	1,113.9	3,627.9
KS Kansas	26,470.9	1,382.4	1,761.7	3,028.4	346.5	2,944.0
KY Kentucky	36,273.0	1,875.5	2,336.3	2,841.6	398.6	3,619.7
LA Louisiana	37,245.3	585.0	3,117.9	5,343.4	584.3	5,683.0
MA Massachusetts	106,678.0	4,786.7	8,574.5	10,309.4	3,827.5	6,845.1
MD Maryland	60,117.9	3,167.3	5,161.7	6,554.6	964.0	832.0
ME Maine	8,805.5	64.5	460.4	922.4	20.0	436.3
MI Michigan	76,481.2	1,367.4	2,458.4	3,954.2	2,116.6	10,362.2
MN Minnesota	55,476.1	870.9	2,856.3	4,960.4	584.7	1,539.4
MO Missouri	48,930.6	2,720.6	1,671.5	3,235.6	1,308.7	2,923.6
MS Mississippi	17,486.1	764.9	1,579.1	1,645.6	103.2	1,563.9
MT Montana	4,307.1	26.7	109.9	119.4	256.6	80.2
NC North Carolina	52,517.7	1,818.2	5,651.8	7,160.1	1,032.9	2,622.9
ND North Dakota	6,388.3	18.2	128.0	153.2	83.4	566.7
NE Nebraska	20,626.2	886.3	1,378.3	2,161.9	477.8	319.9
NH New Hampshire	8,174.7	343.4	954.6	968.5	110.9	391.9
NJ New Jersey	119,436.9	6,491.7	6,473.5	10,131.5	4,144.1	22,430.4
NM New Mexico	13,795.7	234.0	508.8	731.6	299.6	417.1
NV Nevada	26,186.6	2,106.4	738.8	1,345.0	901.3	1,980.7
NY New York	410,067.3	20,350.9	18,525.7	32,418.9	13,568.6	23,141.8
OH Ohio	112,619.6	6,533.7	7,494.3	9,164.6	2,335.0	6,557.5
OK Oklahoma	21,856.6	502.7	841.8	941.7	248.7	867.5
OR Oregon	42,463.5	921.9	2,800.7	3,049.0	254.8	4,958.6
OT Other Territories	10,899.1				7,337.4	100.0
PA Pennsylvania	138,288.7	4,781.0	11,873.5	15,223.9	5,098.3	26,701.6
PR Puerto Rico	99,022.7	1,013.0	12.9	3,428.1	1,084.8	22,265.1
RI Rhode Island	11,399.8		735.6	983.1	59.5	1,416.0
SC South Carolina	40,267.4	822.6	3,100.8	4,153.3	1,298.3	2,186.9
SD South Dakota	5,690.7	273.5	302.7	523.5	98.5	121.4
TN Tennessee	43,636.4	1,744.4	2,314.1	5,003.1	774.3	2,537.3
TT Trust Territories	105.0					
TX Texas	371,104.0	16,371.9	22,860.7	31,737.0	6,436.4	30,877.0
UT Utah	24,519.0	2,816.9	1,773.8	2,917.8	748.5	1,664.3
VA Virginia	68,558.8	3,350.8	7,259.8	9,581.0	1,020.3	1,007.9
VI Virgin Islands	2,193.7	37.3		2.2		289.1
VT Vermont	4,431.7	115.4	217.7	222.3	16.6	122.3
WA Washington	92,170.0	5,713.8	7,290.0	8,271.5	1,947.2	3,370.3
WI Wisconsin	59,032.8	1,492.2	5,367.5	7,706.6	1,679.2	3,455.2
WV West Virginia	12,002.7	88.2	493.5	566.9	59.0	708.5
WY Wyoming	2,269.4	121.6	84.3	99.5	20.0	94.9
TOTAL (9/30/2018)	3,648,829.0	166,281.0	220,019.7	334,559.0	103,127.7	361,980.5
TOTAL (6/30/2018)	3,669,912.1	167,170.1	248,962.8	330,491.4	98,910.7	381,438.2
% Change	-0.6%	-0.5%	-11.6%	1.2%	4.3%	-5.1%

Addendum Tables –Rating⁴
\$ Millions

State	Total Outstanding	Rated	AAA	AA	A	BBB	HY
AK Alaska	10,279.6	8,924.7	255.1	5,500.1	2,452.6	434.5	282.4
AL Alabama	37,757.3	33,190.3	786.6	17,050.3	11,601.3	1,044.5	2,707.6
AR Arkansas	14,600.0	12,231.6	224.8	9,082.0	2,320.8	551.7	52.3
AS American Samoa	73.8	73.8	-	-	-	-	-
AZ Arizona	52,763.0	43,030.1	1,980.3	28,178.1	9,334.1	2,144.7	1,393.0
CA California	579,945.2	468,853.0	16,003.5	311,328.9	100,579.0	29,519.7	11,421.9
CO Colorado	70,669.8	53,661.9	2,946.6	30,820.0	11,972.9	7,282.0	640.5
CT Connecticut	52,129.7	48,014.8	10,422.8	5,727.4	29,254.5	2,350.8	259.3
DC District of Columbia	32,206.5	24,042.3	273.7	16,236.8	4,648.6	2,493.2	390.0
DE Delaware	7,716.2	6,688.6	2,422.1	2,390.5	883.3	913.5	79.3
FL Florida	145,055.1	111,820.7	12,453.9	38,836.9	54,232.3	5,016.2	1,281.4
GA Georgia	74,750.7	56,813.6	14,936.8	20,487.4	17,048.9	4,160.2	180.3
GU Guam	3,300.3	2,496.5	-	-	471.2	1,942.8	82.6
HI Hawaii	21,387.9	16,974.1	136.9	13,627.8	2,637.6	462.0	109.8
IA Iowa	21,631.7	17,852.6	2,341.6	7,364.4	5,227.9	617.4	2,301.3
ID Idaho	7,335.8	7,335.8	5,506.2	2,598.2	2,117.3	165.3	64.6
IL Illinois	171,862.5	146,986.2	5,609.1	33,270.3	39,052.1	44,402.6	24,652.2
IN Indiana	47,367.4	37,232.7	4,039.2	18,332.7	12,418.6	1,862.1	580.0
KS Kansas	26,470.9	21,184.1	2,023.7	11,721.6	6,872.8	381.4	184.5
KY Kentucky	36,273.0	31,622.4	1,012.5	5,817.1	20,496.9	3,113.5	1,182.4
LA Louisiana	37,245.3	29,316.6	1,145.5	9,856.8	15,045.1	2,658.0	611.2
MA Massachusetts	106,678.0	89,622.3	10,975.8	65,797.5	7,599.7	4,798.9	450.3
MD Maryland	60,117.9	49,275.2	23,879.0	16,469.0	5,819.6	2,711.4	396.2
ME Maine	8,805.5	7,757.2	113.2	4,803.7	2,102.2	50.2	687.9
MI Michigan	76,481.2	61,630.1	4,914.2	36,758.8	16,334.0	1,050.4	2,572.8
MN Minnesota	55,476.1	46,142.3	11,536.9	26,755.1	6,382.6	956.9	510.9
MO Missouri	48,930.6	39,252.2	2,837.9	24,120.4	10,379.9	1,551.2	362.8
MS Mississippi	17,486.1	14,193.3	232.9	10,590.1	1,859.3	1,324.4	186.5
MT Montana	4,307.1	3,881.7	119.1	1,841.4	1,761.7	159.5	-
NC North Carolina	52,517.7	42,344.6	13,225.7	18,725.1	8,643.2	1,728.0	22.6
ND North Dakota	6,388.3	5,481.2	359.6	3,105.9	1,310.1	643.2	62.3
NE Nebraska	20,626.2	15,548.8	349.6	9,532.3	4,095.7	1,547.4	23.8
NH New Hampshire	8,174.7	6,786.6	648.3	3,637.3	1,729.1	529.7	242.3
NJ New Jersey	119,436.9	101,500.3	7,448.2	17,175.3	31,847.9	42,886.6	2,142.2
NM New Mexico	13,795.7	12,757.1	1,182.1	9,742.2	1,191.2	641.5	-
NV Nevada	26,186.6	21,409.9	198.3	12,698.3	7,225.4	770.5	517.4
NY New York	410,067.3	343,227.2	22,120.9	235,998.9	66,004.3	15,977.1	3,126.0
OH Ohio	112,619.6	85,745.3	9,045.1	43,718.0	22,668.4	4,384.1	5,929.7
OK Oklahoma	21,856.6	18,674.3	2,507.8	8,336.4	5,325.4	995.4	1,509.4
OR Oregon	42,463.5	37,468.4	3,297.3	29,361.2	4,168.7	570.1	71.1
OT Other Territories	10,899.1	9,322.5	2,405.9	6,725.5	27.7	163.4	-
PA Pennsylvania	138,288.7	115,947.0	3,033.0	29,709.0	73,293.5	6,699.3	3,212.3
PR Puerto Rico	99,022.7	77,700.9	147.0	148.3	-	-	77,405.6
RI Rhode Island	11,399.8	9,989.8	829.7	4,502.7	2,116.9	819.2	1,721.3
SC South Carolina	40,267.4	30,875.7	1,778.6	11,689.4	16,718.8	680.8	8.2
SD South Dakota	5,690.7	4,922.6	1,243.6	1,833.2	1,778.1	16.4	51.3
TN Tennessee	43,636.4	35,155.4	3,287.8	20,988.2	6,821.6	4,022.1	35.6
TT Trust Territories	105.0	33.7	-	-	-	-	33.7
TX Texas	371,104.0	308,582.4	141,312.4	92,888.9	54,088.7	16,201.0	4,091.5
UT Utah	24,519.0	20,074.8	6,478.6	9,987.5	3,222.8	300.1	85.8
VA Virginia	68,558.8	55,688.5	15,292.6	31,417.1	2,756.7	3,737.2	2,485.0
VI Virgin Islands	2,193.7	1,615.5	-	-	95.9	193.2	1,326.3
VT Vermont	4,431.7	3,896.4	48.4	2,323.7	1,320.3	187.9	16.0
WA Washington	92,170.0	81,290.3	4,786.6	64,013.5	10,267.0	2,082.8	140.4
WI Wisconsin	59,032.8	43,612.0	2,081.2	31,132.4	8,123.3	1,598.1	677.1
WV West Virginia	12,002.7	10,443.8	263.7	1,642.3	4,635.0	1,337.4	2,565.5
WY Wyoming	2,269.4	2,156.2	196.8	975.5	912.5	44.6	26.8
TOTAL (9/30/2018)	3,648,829.0	2,990,522.3	377,753.3	1,477,371.3	741,294.5	232,876.2	161,153.2
TOTAL (6/30/2018)	3,669,912.1	3,018,413.8	366,362.9	1,495,788.4	759,279.1	231,461.6	165,445.8
% Change	-0.6%	-0.9%	3.1%	-1.2%	-2.4%	0.6%	-2.6%

⁴ 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.

Credits

SIFMA Research

Kyle Brandon

Managing Director, Head of Research

Sharon Sung

Vice President, Research

Sotirios Nonas

Intern, Research

SIFMA Municipal

Leslie Norwood

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

Michael Decker

Managing Director, Co-Head of the Municipal Division