



MUNICIPAL BOND CREDIT REPORT

Fourth Quarter 2015

RESEARCH REPORT

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MARKET SUMMARY

Municipal Issuance Overview – Primary Market

According to Thomson Reuters, long-term public municipal issuance volume totaled \$76.4 billion in the fourth quarter of 2015, a decline of 11.3 percent from the prior quarter (\$86.1 billion) and a decline of 23.0 percent year-over-year (y-o-y) (\$86.1 billion). Including private placements¹ (\$8.4 billion), long-term municipal issuance for 4Q'15 was \$84.7 billion. Despite the fourth quarter decline, full year issuance was \$377.6 billion, an increase of 19.9 percent from 2014 and just slightly above 10-year volume averages. According to the SIFMA Municipal Issuance Survey (“Survey”), respondents expect long-term municipal issuance in 2016 to decline slightly to \$388.5 billion.²

Tax-exempt issuance totaled \$67.4 billion in 4Q'15, a decline of 11.2 percent q-o-q and 24.9 percent y-o-y. For the full year, tax-exempt issuance was \$338.4 billion, an increase of 19.7 percent from the prior year; Survey respondents expect tax-exempt issuance to rise slightly to \$347.5 billion. Taxable issuance totaled \$5.2 billion in 4Q'15, a decline of 34.1 percent q-o-q and 22.8 percent y-o-y. For the full year, taxable issuance was \$27.8 billion, an increase of 21.2 percent from 2014; for 2016, Survey respondents expect taxable issuance to rise slightly to \$30.5 billion. AMT issuance was \$3.8 billion, an increase of 60.8 percent q-o-q and 42.3 percent y-o-y. For the full year, issuance was \$11.3 billion, 24.0 percent above 2014 volumes; Survey respondents expect 2016 volumes to be lower at \$10.5 billion.

By use of proceeds, general purpose led issuance totals in 4Q'15 (\$15.7 billion), followed by primary & secondary education (\$14.7 billion), and water & sewer (\$8.4 billion). For the full year, general purpose led issuance totals (\$91.2 billion), followed by primary & secondary education (\$82.5 billion), and higher education (\$36.6 billion).

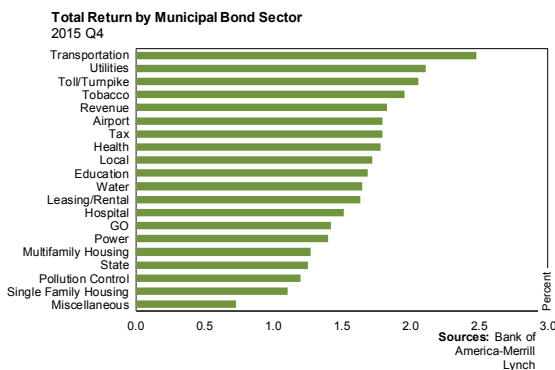
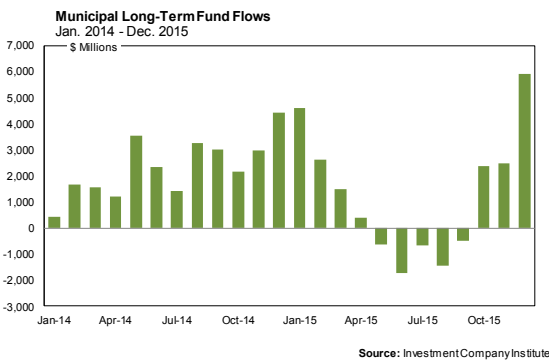
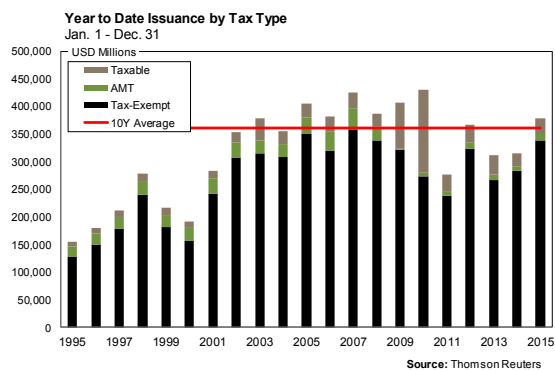
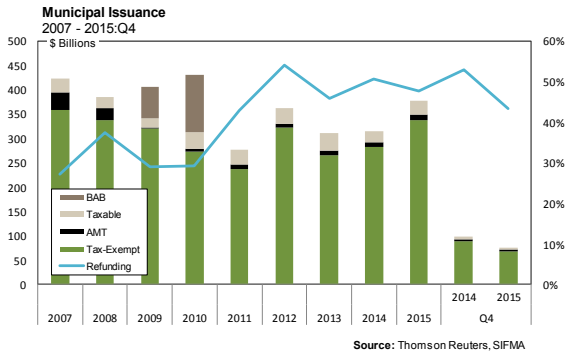
Notable sectors that saw increased q-o-q issuance were solid waste (\$152.3 million, an increase of 882.6 percent and 468.3 percent q-o-q and y-o-y, respectively), airports (\$4.1 billion, an increase of 36.3 percent and 232.4 percent q-o-q and y-o-y respectively), and single-family housing (\$2.4 billion, an increase of 3.2 percent and 28.4 percent q-o-q and y-o-y, respectively).

Refunding volumes as a percentage of issuance declined slightly from the prior quarter, with 43.4 percent of issuance attributable to refundings compared to 48.9 percent in 3Q'15 and 53.1 percent in 4Q'14.³

Yields, Inflows, and Total Return

Ratios of 10-year tax-exempt AAA GOs and similar-maturity Treasuries fell in the fourth quarter on a q-o-q basis and a y-o-y basis, ending at 88.1 percent end-December 2015 from 102.7 percent end-September 2015 and 96.9 percent end-December 2014.

According to the Investment Company Institute (ICI), fourth quarter net flow into long-term municipal funds was positive, with \$10.8 billion of inflow in 4Q'15 compared to \$2.5 billion of outflow from 3Q'15 and \$9.6 billion of inflow y-o-y. For the full year, approximately \$14.9 billion of inflow was rec-



¹ Private placement figures are excluded in charts and tables.

² SIFMA 2016 Municipal Issuance Survey, December 2015.

³ Percentages represent both full refundings and the half the dollar amount of deals that contain both refundings and new financing. For just refunding, refunding volumes represent 32.8 percent of issuance in 4Q'15, 38.0 percent in 3Q'15, and 42.4 percent in 4Q'14.

orded, down from the \$28.0 billion of inflow from the prior year.

According to Bank of America-Merrill Lynch indices, municipals returned 1.72 percent in the fourth quarter of 2015 and 3.55 percent in the full year. Build America Bonds (BABs), however, underperformed tax-exempts, returning 0.77 percent in 4Q'15 and 1.04 percent for the entire year. The sectors, however, outperformed similarly-rated corporates, which lost 0.09 in 4Q'15 and returned 0.67 percent for the full year. Within the municipal asset class, transportation, utilities, and tobacco had the greatest positive returns for the fourth quarter as well as full year 2015.

Trading Activity and Broker-Dealers

Trading activity fell q-o-q to \$6.7 billion daily in 4Q'15, a 9.5 percent decline from 3Q'15 (\$7.6 billion) and 27.2 percent from 4Q'14 (\$9.4 billion). By number of trades, trading activity declined on a q-o-q basis but rose y-o-y, falling 8.7 percent q-o-q but rising 1.5 percent y-o-y.

Holdings of municipal bonds by broker-dealers fell to \$15.9 billion in 3Q'15, a decline of 16.3 percent and 15.9 percent q-o-q and y-o-y. A preliminary examination of primary dealer holdings in the fourth quarter suggest that holdings rose slightly q-o-q.

As of the end of 2015, approximately 24 broker dealers exited either the municipal broker or dealer business, while 24 entered either business. Including closures throughout the year, 1,289 broker-dealers registered with FINRA were involved in the municipal broker business line, a decline of 4.5 percent y-o-y, while 538 broker-dealers were involved in the municipal dealer business line, a decline of 5.4 percent. Figures echo the overall continuing trend of consolidation within the industry.

FINRA Broker Dealers					
Year	2011	2012	2013	2014	2015
Municipal Broker Business	1,582	1,514	1,453	1,350	1,289
Municipal Dealer Business	653	629	605	569	538
Both Business Lines	554	536	518	486	462

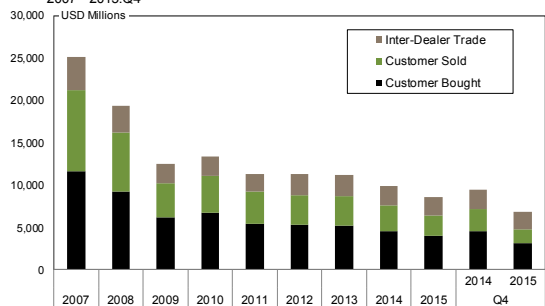
Bank holdings of both municipal loans and bonds rose in 4Q'15 from the prior quarter, to \$146.2 billion (from \$140.6 billion) and \$488.1 billion (from \$476.6 billion), respectively. Excluding municipal loans, the municipal bond market shrunk approximately 1.0 percent. The five sectors that grew the most y-o-y in municipal bonds outstanding were: intergovernmental lease (94.4 percent), guaranteed housing tax (30.3 percent), tobacco (26.3 percent), secondary education (16.6 percent), and lottery (15.3 percent). The five sectors that shrank the most y-o-y were: utilities (13.7 percent), water & sewer (13.1 percent), income tax (12.5 percent), tax increment financing (12.4 percent), and higher education (12.2 percent).

Survey respondents expect the trend of municipal bank loans to remain strong, expecting \$50.0 billion of direct placements/bank loans to be done in 2016.

CDS Update

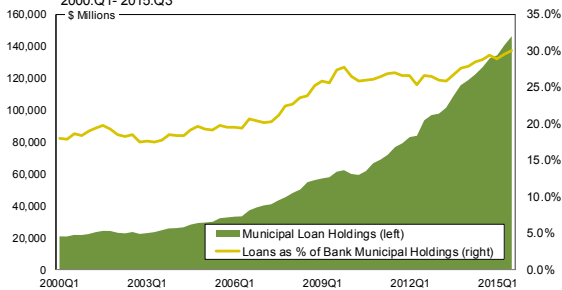
According to DTCC, \$306.5 million of credit default swap contracts on municipal names were executed in the fourth quarter, a decline of 85.6 percent q-o-q and 60.3 percent y-o-y. Illinois continued to lead state totals (\$85.0 million) in 4Q'15 and a new single-name muni was introduced to the top 1000 names in DTCC (South Carolina). At the end of the fourth quarter, \$2.95 billion net notional of municipal CDS contracts were outstanding, down slightly from the prior quarter (\$2.97 billion).

Average Daily Trading Volume
2007 - 2015:Q4



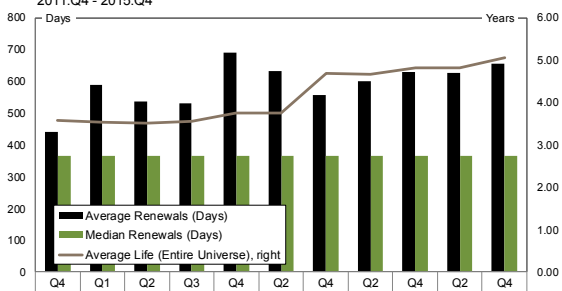
Source: MSRB, EMMA

Municipal Loans Outstanding
2000:Q1 - 2015:Q3



Sources: FDIC, Federal Reserve

Liquidity Facility Renewals by Same Liquidity Provider
2011:Q4 - 2015:Q4



Sources: EMMA, Bloomberg, SIFMA

Broker-Dealers Dropping Municipal Business Lines, 2015

Broker-Dealer	Broker	Dealer
THE DARCY GROUP LLC	*	
WEALTH MANAGEMENT RESOURCES, INC.	*	
SUNSET FINANCIAL SERVICES, INC.	*	
V. M. MANNING & CO., INC.		*
DOMINICK & DICKERMAN LLC	*	
KOONCE SECURITIES, LLC	*	
KEELEY INVESTMENT CORP.	*	
GIT INVESTMENT SERVICES, INC.		*
LEGACY ASSET SECURITIES, INC.		*
CHATSWORTH SECURITIES LLC		*
NANES, DELORME CAPITAL MANAGEMENT LLC	*	
SUMMIT EQUITIES, INC.	*	
CCM SECURITIES, LLC	*	
FUNDAMERICA SECURITIES	*	
FULCRUM SECURITIES, LLC	*	
FRIEDMAN, LUZZATTO & CO.	*	
NMS CAPITAL ADVISORS, LLC.	*	
EMERGING GROWTH EQUITIES, LTD.	*	*
U STOCKTRADE SECURITIES, INC.	*	*
MERRIMAN CAPITAL, INC.	*	*
SIMMONS FIRST INVESTMENT GROUP, INC.	*	*
ARCA CAPITAL INVESTMENTS, INC.	*	*
INTERACTIVE BROKERS CORP.	*	*
AOC SECURITIES, LLC	*	*

Broker-Dealers Adding Municipal Business Lines,
2015

	Broker	Dealer
TRIBAL CAPITAL MARKETS, LLC	*	
JOSEPH STONE CAPITAL L.L.C.	*	
GOVDESK, LLC	*	
J.A. GLYNN INVESTMENTS, LLC.	*	
HARTFORD FUNDS DISTRIBUTORS, LLC	*	
MERRION SECURITIES, LLC	*	
BRUDERMAN BROTHERS LLC	*	
CG CAPITAL MARKETS, LLC	*	*
MORETON CAPITAL MARKETS, LLC	*	
S F SENTRY SECURITIES, INC.	*	
SWBC INVESTMENT SERVICES, LLC	*	*
DORN & CO., INC.	*	
TIGRESS FINANCIAL PARTNERS, LLC	*	
LEGEND EQUITIES CORPORATION	*	
HEADLANDS GLOBAL MARKETS, LLC	*	*
B. RILEY & CO., LLC	*	*
CLEARVIEW TRADING ADVISORS, INC.	*	*
TELSEY ADVISORY GROUP LLC	*	*
MONROE FINANCIAL PARTNERS, INC.	*	*
CAPITAL ONE INVESTING, LLC	*	*
SG AMERICAS SECURITIES, LLC	*	*
MIZUHO SECURITIES USA INC.	*	*
R.W.PRESSPRICH & CO.	*	*
MATCH-POINT SECURITIES, LLC	*	*

Bank Liquidity Provider Rankings

Then...	12/31/2014
Bank	Percentage
JPM	16.6%
WF	11.1%
BOA	9.4%
US Bank	6.8%
TD	4.6%
RBC	4.4%
PNC	4.3%
State Street	3.3%
Barclays	3.1%
Tokyo Mitsubishi UFJ	3.0%
BNY	2.6%
Sumitomo Mitsui	2.6%
Landesbank Hessen-Thrgn	2.5%
Northern Trust	2.4%
Comerica	2.4%
Everyone Else	20.9%
# of Banks	162

...And Now	12/31/2015
Bank	Percentage
JPM	14.0%
BOA	10.3%
WF	10.0%
US Bank	7.1%
TD	5.3%
RBC	4.4%
PNC	4.1%
Tokyo Mitsubishi UFJ	3.9%
Sumitomo Mitsui	3.7%
State Street	3.5%
Citi	3.3%
Landesbank Hessen-Thrgn	3.1%
Barclays	3.1%
Mizuho	3.0%
Northern Trust	2.6%
Everyone Else	18.5%
# of Banks	151

VRDO, FRN, and ARS Update

Issuance of variable-rate demand obligations (VRDOs), puttable long-term municipal bonds with interest rates that reset periodically, fell in the fourth quarter, with \$1.6 billion issued in 4Q'15, a decline of 24.5 percent and 10.0 percent, respectively, q-o-q and y-o-y. For the full year, VRDO issuance totaled \$6.0 billion, reaching yet another low in VRDO issuance from 2014's \$6.7 billion. Despite these new lows, Survey respondents remain slightly optimistic for a slight rebound in VRDO issuance, expecting an uptick of \$8.0 billion of issuance in 2016.

On net, VRDO outstandings also continued to decline, ending 4Q'15 at \$177.6 billion, a decline of 2.4 percent from 3Q'15 and 12.3 percent from end-December 2014. Declines y-o-y were led by student loans (55.9 percent), nursing (29.2 percent), and education (25.8 percent).

As of end-December, \$29.6 billion of VRDO liquidity facilities were scheduled to expire in 2016, with an additional \$12.2 billion in 2017, for a total of \$41.8 billion of liquidity facilities on 1,291 CUSIPs within two years. VRDO liquidity facility renewals with the same liquidity provider on approximately 1,480 unique CUSIPs averaged 655.7 days from the original expiration date, rising from 627.5 days in 2Q'15. The median extension, however, continues to remain unchanged at 1 year (366 days). The average life of a liquidity facility of the entire universe of VRDOs is approximately 5.0 years, rising slightly from 2Q'15. However, even excluding self-liquidity deals, the average remaining tenor of liquidity facilities in the entire VRDO universe averaged 4.04 years, up slightly from the 3.84 years in 2Q'15.

While large banks continue to maintain their presence in the municipal VRDO market as liquidity providers, the number of banks in the market continue to dwindle in response to the continued decline in VRDOs outstanding. As of the end of December 2015, 151 banks were providing liquidity, down slightly from 162 at the end of 2014. Japanese banks continue to maintain or grow their presence as liquidity providers while US banks continue to reduce market share, with the notable exception of Citigroup.

The SIFMA Municipal Swap index, a seven-day high-grade market index comprised of tax-exempt VRDOs, ended December at 0.01 percent, averaging 0.01 percent throughout 4Q'15, a single basis point lower than 3Q'15's average (0.02 percent) and 3 basis points lower than 3Q'14's average (0.04 percent).

Issuance of floating rate notes ("FRN") (both LIBOR- and SIFMA- indexed, among others) declined in the fourth quarter, with issuance of \$298.0 million, a 32.9 percent and 90.3 percent decline, respectively, q-o-q and y-o-y. For the full year, FRN issuance totaled \$5.1 billion, down from the \$8.9 billion from the prior year. Survey respondents remain optimistic about the municipal FRN market, expecting more than double 2015's volume (\$12.5 billion) in 2016. As of end-December, \$72.3 billion of FRNs were outstanding, a decline of 0.2 percent q-o-q but an increase of 4.7 percent y-o-y. While LIBOR remains a popular index for FRNs and represents approximately 58 percent of existing municipal FRNs (unchanged from end-December 2014), the SIFMA swap index has become more prevalent among new deals, and currently represents 34 percent of outstanding volume end-December, up

from 33 percent end-December 2014.

Auction rate securities (ARS) continue to steadily decline as they remain in run-off mode for the eighth consecutive year, with approximately \$20.0 billion outstanding at the end of December 2015,

a decline of 2.3 percent and 10.6 percent, respectively, q-o-q and y-o-y.

State & Government Update

According to Nelson A. Rockefeller Institute of Government, states reported slight but soft growth in tax collections data for the third quarter of 2015.⁴ Preliminary total state tax revenue grew by 4.3 percent y-o-y in the third quarter, down from 6.8 percent from the prior quarter. Individual income and corporate income tax collections grew by 6.1 percent and 1.3 percent, respectively.

⁴ Nelson A. Rockefeller Institute of Government, "[Another Strong Tax Quarter for the States, But Less Promising Forecasts for Fiscal 2016](#)," November 2015.

CHARTS & DATA

LONG-TERM MUNICIPAL STATE ISSUANCE, 4Q'15⁵\$ Millions⁶

	Total	Bond Type		Tax Type			Funding Type			
		G.O.	Revenue	AMT	Tax-Exempt	Taxable	New Financing	Refinancing	Refunding & New Refinancing	New Refunding
State										
Alabama	461.1	132.7	328.4	-	437.1	24.0	305.1	-	110.0	46.0
Alaska	464.2	408.6	55.6	-	464.2	-	95.3	-	313.3	55.6
American Samoa	0.0									
Arizona	1,115.5	158.9	956.6	-	1,113.5	1.9	630.0	-	96.8	388.6
Arkansas	702.7	498.3	204.4	-	689.0	13.7	182.5	-	142.7	377.6
California	9,088.3	4,087.2	5,001.1	587.3	7,639.0	863.8	3,109.6	-	1,590.0	4,390.4
Colorado	1,455.2	415.9	1,039.3	-	1,386.7	68.5	516.5	-	566.1	372.7
Connecticut	1,872.6	1,002.7	869.9	-	1,861.6	11.0	948.0	-	-	924.6
District of Columbia	395.3	-	395.3	-	395.3	-	395.3	-	-	-
Delaware	251.9	39.4	212.5	-	252.0	-	252.0	-	-	-
Florida	3,326.4	-	3,326.4	697.1	2,480.9	148.4	1,007.2	-	875.2	1,444.0
Georgia	1,120.4	62.1	1,058.3	61.6	879.4	179.4	494.5	-	345.9	280.0
Guam	0.0									
Hawaii	1,120.5	806.6	313.9	282.1	810.9	27.3	304.3	-	82.8	733.4
Idaho	118.8	-	118.8	-	115.8	3.0	81.6	-	21.7	15.5
Illinois	4,560.4	659.7	3,900.7	624.3	3,779.5	156.6	762.5	-	2,034.5	1,763.4
Indiana	1,034.3	120.1	914.2	146.2	861.9	18.3	533.9	-	53.6	438.9
Iowa	267.3	162.4	104.9	-	218.1	49.2	119.3	-	67.6	80.4
Kansas	1,051.0	495.2	555.8	-	1,037.6	13.4	697.5	-	88.4	265.1
Kentucky	952.7	156.2	796.5	-	914.5	38.2	563.2	-	196.4	193.1
Louisiana	495.8	83.9	411.9	-	460.9	34.9	134.0	-	154.9	207.0
Maine	252.6	92.7	159.9	8.8	243.8	-	169.5	-	-	83.1
Maryland	1,714.0	989.2	724.8	-	1,589.8	124.2	1,476.4	-	92.3	145.3
Massachusetts	3,219.6	966.8	2,252.8	26.5	3,065.0	128.0	1,653.9	-	711.4	854.3
Michigan	1,523.0	755.3	767.7	-	1,239.1	283.9	138.7	-	474.8	909.6
Minnesota	1,512.4	906.7	605.7	96.9	1,381.6	33.9	693.8	-	242.8	575.8
Mississippi	674.1	396.1	278.0	-	520.0	154.1	401.6	-	9.0	263.6
Missouri	1,299.5	117.6	1,181.9	-	1,259.2	40.4	346.3	-	424.3	528.9
Montana	31.4	31.4	-	-	31.4	-	25.6	-	5.8	-
Nebraska	537.5	235.2	302.3	-	522.9	14.5	156.9	-	267.6	112.9
Nevada	1,194.7	1,046.3	148.4	-	1,194.7	-	299.8	-	885.5	9.4
New Hampshire	113.5	42.9	70.6	20.6	45.0	48.0	59.7	-	5.8	48.0
New Jersey	2,672.7	505.4	2,167.3	13.1	2,657.1	2.6	1,844.4	-	316.1	512.3
New Mexico	146.1	44.9	101.2	-	124.8	21.2	40.0	-	94.6	11.5
New York	10,401.4	1,032.8	9,368.6	512.9	8,690.8	1,197.7	5,140.1	-	2,327.8	2,933.5
North Carolina	808.0	82.5	725.5	-	723.7	84.2	141.6	-	493.6	172.8
North Dakota	439.0	201.8	237.2	11.8	392.0	35.2	264.6	-	9.4	165.0
Ohio	1,894.8	779.7	1,115.1	8.5	1,800.9	96.3	1,146.2	-	167.5	591.9
Oklahoma	319.9	125.3	194.6	-	312.0	7.9	266.7	-	-	53.2
Oregon	86.0	79.3	6.7	-	85.4	0.5	40.9	-	5.3	39.8
Pennsylvania	2,086.9	858.0	1,228.9	141.2	1,891.7	54.0	1,538.2	-	237.8	310.8
Puerto Rico	0.0									
Rhode Island	94.5	14.1	80.4	-	92.6	1.9	63.4	-	-	31.2
South Carolina	1,359.1	318.0	1,041.1	294.0	1,016.0	38.3	1,013.5	-	5.8	328.9
South Dakota	350.5	24.1	326.4	-	350.2	0.3	99.6	-	176.3	74.6
Tennessee	1,114.8	662.3	452.5	-	1,114.9	-	698.0	-	110.7	306.2
Texas	7,645.6	4,309.0	3,336.6	150.0	6,787.5	709.3	3,489.8	-	1,301.5	2,855.5
Utah	363.7	68.9	294.8	52.7	286.2	24.9	258.8	-	-	104.9
Vermont	203.9	122.6	81.3	-	193.4	10.4	64.4	-	87.1	52.4
Virgin Islands	89.9	89.9	-	-	89.9	-	89.9	-	-	-
Virginia	962.0	194.8	767.2	-	741.1	220.9	521.1	-	217.5	223.4
Washington	2,167.1	1,371.7	795.4	56.3	1,990.5	120.3	1,050.2	-	665.4	451.5
West Virginia	85.0	6.7	78.3	-	85.0	-	6.7	-	-	78.3
Wisconsin	1,208.5	584.5	624.0	25.2	1,100.5	82.8	810.4	-	130.5	267.6
Wyoming	10.3	-	10.3							
ALL	76,436.4	26,346.4	50,090.0	3,817.1	67,416.6	5,187.3	35,143.0	0.0	16,206.1	25,072.5
QoQ	-11.3%	-20.7%	-5.3%	60.8%	-11.2%	-34.1%	2.4%	-	-14.8%	-23.5%
YoY	-23.0%	-32.2%	-17.0%	42.3%	-24.9%	-22.8%	-2.3%	-	-23.4%	-40.4%

⁵ Issuance totals do not include private placements.⁶ 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		Variable Rate		Zero
					Long	No Put	Short (VRDO)		
State									
Alabama	461.1	38.1	423.1	-	-	-	-	-	
Alaska	464.2	-	464.2	-	-	-	-	-	
American Samoa	0.0	-	-	-	-	-	-	-	
Arizona	1,115.5	-	914.1	-	-	-	201.3	-	
Arkansas	702.7	-	702.8	-	-	-	-	-	
California	9,088.3	-	8,537.5	128.0	89.8	-	-	334.8	
Colorado	1,455.2	-	1,443.7	-	-	-	-	11.5	
Connecticut	1,872.6	-	1,872.6	-	-	-	-	-	
District of Columbia	395.3	-	350.0	-	-	-	45.3	-	
Delaware	251.9	-	252.0	-	-	-	-	-	
Florida	3,326.4	-	3,211.3	-	-	-	115.1	-	
Georgia	1,120.4	-	929.4	-	3.8	-	177.1	10.1	
Guam	0.0	-	-	-	-	-	-	-	
Hawaii	1,120.5	-	1,120.4	-	-	-	-	-	
Idaho	118.8	-	118.8	-	-	-	-	-	
Illinois	4,560.4	-	4,554.7	-	5.7	-	-	-	
Indiana	1,034.3	-	857.5	-	168.9	-	-	-	
Iowa	267.3	-	267.3	-	-	-	-	-	
Kansas	1,051.0	-	1,051.0	-	-	-	-	-	
Kentucky	952.7	-	931.5	-	-	-	21.2	-	
Louisiana	495.8	-	495.9	-	-	-	-	-	
Maine	252.6	-	252.6	-	-	-	-	-	
Maryland	1,714.0	-	1,714.0	-	-	-	-	-	
Massachusetts	3,219.6	-	3,140.3	21.0	25.0	-	33.3	-	
Michigan	1,523.0	-	1,513.5	-	-	-	9.5	-	
Minnesota	1,512.4	-	1,473.2	-	-	-	39.2	-	
Mississippi	674.1	-	674.1	-	-	-	-	-	
Missouri	1,299.5	-	1,299.5	-	-	-	-	-	
Montana	31.4	-	31.4	-	-	-	-	-	
Nebraska	537.5	-	537.4	-	-	-	-	-	
Nevada	1,194.7	-	1,194.7	-	-	-	-	-	
New Hampshire	113.5	-	113.5	-	-	-	-	-	
New Jersey	2,672.7	-	2,628.8	-	42.2	-	-	1.8	
New Mexico	146.1	-	146.1	-	-	-	-	-	
New York	10,401.4	-	9,534.9	149.0	224.0	-	493.5	-	
North Carolina	808.0	-	800.1	-	7.8	-	-	-	
North Dakota	439.0	-	414.0	-	-	-	25.0	-	
Ohio	1,894.8	-	1,868.9	-	29.4	-	-	7.3	
Oklahoma	319.9	-	319.8	-	-	-	-	-	
Oregon	86.0	-	60.8	-	-	-	25.1	-	
Pennsylvania	2,086.9	-	2,030.3	-	16.0	-	40.5	-	
Puerto Rico	0.0	-	-	-	-	-	-	-	
Rhode Island	94.5	-	94.6	-	-	-	-	-	
South Carolina	1,359.1	-	1,330.3	-	-	-	18.0	-	
South Dakota	350.5	-	350.5	-	-	-	-	-	
Tennessee	1,114.8	-	964.9	-	-	-	150.0	-	
Texas	7,645.6	-	7,204.0	-	362.8	-	55.5	24.5	
Utah	363.7	-	363.7	-	-	-	-	-	
Vermont	203.9	-	203.9	-	-	-	-	-	
Virgin Islands	89.9	-	89.9	-	-	-	-	-	
Virginia	962.0	4.4	957.6	-	-	-	-	-	
Washington	2,167.1	-	2,067.1	-	-	-	100.0	-	
West Virginia	85.0	-	85.0	-	-	-	-	-	
Wisconsin	1,208.5	-	1,196.9	-	5.7	-	6.0	-	
Wyoming	10.3	-	-	-	-	-	-	-	
ALL	76,436.4	42.5	73,154.1	298.0	981.1	0.0	1,555.6	390.0	
QoQ	-11.3%	-16.8%	-11.7%	-32.9%	130.8%	-100.0%	-24.5%	40.1%	
YoY	-23.0%		-21.1%	-90.3%	-33.9%		-10.0%	77.7%	

LONG-TERM MUNICIPAL STATE ISSUANCE, FULL YEAR 2015⁷\$ Millions⁸

State	Total	Bond Type		Tax Type			Funding Type			
		G.O.	Revenue	AMT	Tax-Exempt	Taxable	New	Refinancing	Refunding & New	Refunding
							Financing		Refinancing	
Alabama	3,632.6	900.5	2,732.1	-	3,291.9	71.9	1,786.6	-	522.3	1,054.9
Alaska	1,530.8	1,036.4	494.4	91.1	1,439.7	-	356.9	-	516.4	657.5
American Samoa	55.9	-	55.9	-	44.2	11.7	-	-	55.9	-
Arizona	6,760.2	1,693.4	5,066.8	15.0	6,135.4	199.3	1,527.6	-	2,265.7	2,556.5
Arkansas	2,527.8	1,192.7	1,335.1	-	2,304.7	70.9	681.9	-	377.8	1,316.0
California	54,248.5	21,819.3	32,429.2	1,156.8	46,745.1	4,748.7	12,547.9	-	13,624.0	26,478.7
Colorado	6,259.7	1,542.4	4,717.3	-	4,405.9	548.4	2,065.7	-	1,140.3	1,748.3
Connecticut	7,227.7	4,376.9	2,850.8	32.3	6,069.4	594.7	4,251.7	-	520.4	1,924.3
District of Columbia	1,860.1	534.2	1,325.9	279.2	1,376.3	175.9	577.6	-	586.1	667.8
Delaware	575.9	247.6	328.3	-	575.2	0.7	337.7	-	189.7	48.6
Florida	20,620.1	3,302.2	17,317.9	1,448.2	16,273.3	1,096.0	6,012.1	-	3,269.0	9,536.3
Georgia	7,388.4	2,651.0	4,737.4	79.9	5,925.8	1,172.2	3,433.5	-	1,014.5	2,730.0
Guam	410.5	-	410.5	-	410.5	-	-	-	-	410.5
Hawaii	3,246.8	1,695.2	1,551.6	282.1	2,702.2	221.7	337.1	-	1,900.7	968.3
Idaho	998.2	434.5	563.7	16.0	927.8	25.8	393.6	-	242.2	333.7
Illinois	14,773.3	6,587.4	8,185.9	639.3	11,976.1	1,272.5	4,710.4	-	3,475.5	5,702.0
Indiana	6,400.1	377.1	6,023.0	363.1	4,536.8	284.8	1,882.4	-	483.8	2,818.4
Iowa	2,852.3	1,212.6	1,639.7	105.7	2,067.2	206.4	1,021.6	-	695.9	661.8
Kansas	5,134.9	2,039.1	3,095.8	71.4	3,939.1	1,055.5	2,974.8	-	1,067.4	1,023.8
Kentucky	4,365.6	376.7	3,988.9	-	4,002.3	203.5	1,805.4	-	1,172.8	1,227.5
Louisiana	4,647.2	949.6	3,697.6	612.7	3,366.6	164.7	1,638.8	-	189.0	2,316.3
Maine	1,386.1	330.5	1,055.6	150.4	1,042.8	57.1	539.0	-	99.3	612.0
Maryland	6,846.8	3,962.0	2,884.8	-	6,614.7	184.6	3,385.8	-	1,927.7	1,485.9
Massachusetts	10,668.2	4,550.8	6,117.4	383.8	8,857.1	327.3	4,529.6	-	2,046.1	2,992.5
Michigan	11,623.6	5,084.9	6,538.7	231.9	8,602.9	1,846.7	3,088.2	-	3,170.6	4,422.7
Minnesota	7,928.2	4,898.8	3,029.4	161.0	6,863.5	409.8	4,186.9	-	755.9	2,491.4
Mississippi	2,509.7	1,433.5	1,076.2	-	1,835.5	589.7	1,178.2	-	117.3	1,129.8
Missouri	5,533.2	1,235.0	4,298.2	23.1	4,833.3	116.1	1,591.2	-	884.6	2,496.7
Montana	318.5	141.8	176.7	34.4	206.4	-	152.7	-	5.8	82.3
Nebraska	3,132.8	1,171.3	1,961.5	41.1	3,005.6	19.4	965.5	-	794.6	1,306.0
Nevada	3,564.4	2,863.4	701.0	165.1	3,186.0	18.7	533.2	-	907.1	1,929.5
New Hampshire	1,096.8	302.8	794.0	20.6	496.1	123.9	202.5	-	142.8	295.4
New Jersey	9,672.7	3,238.6	6,434.1	294.8	8,644.6	648.2	4,060.6	6.6	2,555.1	2,965.2
New Mexico	2,182.5	609.1	1,573.4	-	1,810.7	203.7	1,009.8	-	727.4	277.3
New York	42,438.1	9,019.4	33,418.7	858.6	36,192.5	3,254.1	18,909.4	-	6,096.7	15,299.2
North Carolina	6,524.0	1,248.6	5,275.4	48.7	5,075.2	646.8	1,486.1	-	1,754.7	2,529.8
North Dakota	1,234.8	696.0	538.8	11.8	1,078.2	60.1	724.4	-	30.5	395.2
Ohio	9,548.2	4,310.8	5,237.4	309.4	7,563.1	833.6	4,593.1	-	1,096.5	3,016.5
Oklahoma	2,853.9	1,002.1	1,851.8	161.7	2,429.6	137.5	1,842.6	-	170.6	715.6
Oregon	5,137.3	2,633.9	2,503.4	42.3	4,167.6	500.2	2,164.5	-	880.6	1,664.9
Pennsylvania	18,272.2	7,925.1	10,347.1	1,192.8	15,256.8	548.3	6,009.4	-	4,465.7	6,522.9
Puerto Rico	246.0	246.0	-	-	-	-	-	-	-	-
Rhode Island	1,660.6	333.2	1,327.4	63.6	1,487.8	17.2	209.8	-	775.5	583.2
South Carolina	5,760.8	1,428.0	4,332.8	294.0	4,824.9	286.2	2,170.9	-	1,030.5	2,203.8
South Dakota	729.6	160.9	568.7	-	599.3	80.3	337.8	-	183.2	158.5
Tennessee	5,127.9	2,415.4	2,712.5	68.5	4,626.6	277.7	1,685.9	-	1,529.3	1,757.6
Texas	48,724.8	28,832.0	19,892.8	658.8	41,641.6	2,661.1	14,314.9	-	10,048.4	20,598.2
Utah	3,268.7	851.6	2,417.1	52.7	2,964.4	143.7	1,364.5	-	33.8	1,762.3
Vermont	562.4	347.3	215.1	53.2	468.7	14.4	121.4	-	281.0	133.8
Virgin Islands	-	159.9	13.0	-	89.9	-	89.9	-	-	-
Virginia	7,127.6	2,195.9	4,931.7	143.8	6,095.5	370.6	2,195.4	-	1,989.1	2,425.3
Washington	14,261.0	6,902.1	7,358.9	345.8	12,788.1	911.4	4,940.5	-	4,189.0	4,915.8
West Virginia	949.0	279.2	669.8	75.7	707.4	29.1	238.5	-	85.1	488.7
Wisconsin	6,701.5	4,403.1	2,298.4	170.5	5,715.6	403.9	3,612.6	-	569.0	2,108.3
Wyoming	277.9	-	277.9	60.3	130.9	-	-	-	130.9	60.3
ALL	377,579.0	153,315.4	224,263.6	11,311.2	338,418.4	27,846.7	140,778.1	6.6	82,783.8	154,007.8

⁷ Issuance totals do not include private placements.⁸ Due to securities falling into more than one category within subcategories, state breakouts are not identical to other non-state-specific breakdowns, particularly related to coupon types (e.g., zeros are higher by dollar amount when broken out by state but would instead be assigned to the convertible or fixed rate categories when not broken out by state). This is a quirk of the SDC database.

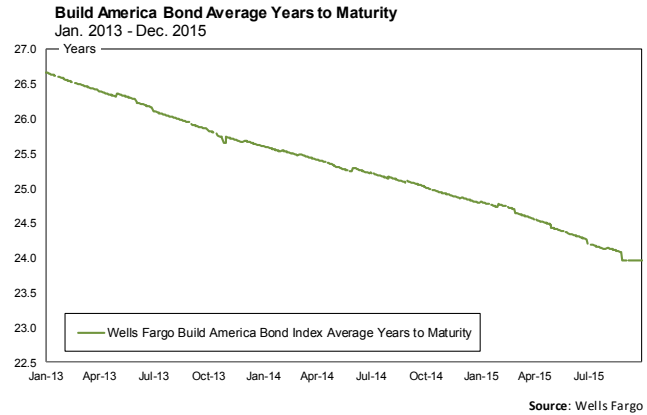
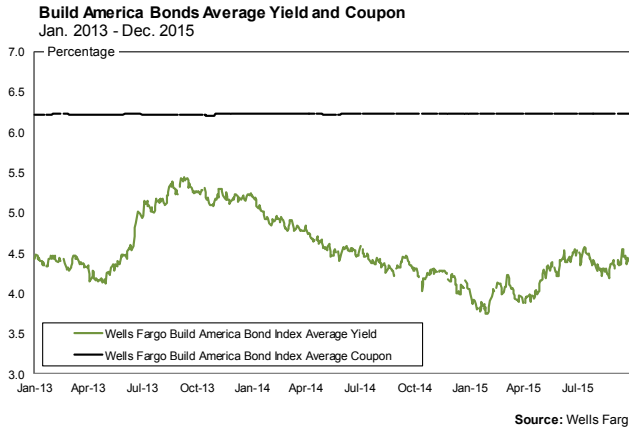
State	Total	Coupon Type						
		Convertible	Fixed Rate	Linked Rate	Variable Rate		Variable Rate	
					Long	No Put	Short (VRDO)	Zero
Alabama	3,632.6	38.1	3,325.8	-	-	-	-	-
Alaska	1,530.8	-	1,530.8	-	-	-	-	-
American Samoa	55.9	-	55.9	-	-	-	-	-
Arizona	6,760.2	-	6,073.5	-	-	-	276.3	-
Arkansas	2,527.8	-	2,235.6	100.0	-	-	40.0	-
California	54,248.5	38.6	50,659.3	418.3	100.8	-	369.4	1,064.3
Colorado	6,259.7	12.5	4,664.8	265.6	-	-	-	11.5
Connecticut	7,227.7	-	5,920.0	431.4	300.0	-	45.0	-
District of Columbia	1,860.1	-	1,774.7	-	11.5	-	45.3	-
Delaware	575.9	-	575.9	-	-	-	-	-
Florida	20,620.1	4.2	18,284.7	300.0	18.0	-	210.6	-
Georgia	7,388.4	-	6,964.2	-	26.6	-	177.1	10.1
Guam	410.5	-	410.5	-	-	-	-	-
Hawaii	3,246.8	-	3,091.4	114.7	-	-	-	-
Idaho	998.2	-	947.1	-	-	-	22.5	-
Illinois	14,773.3	-	13,512.4	280.1	5.7	-	27.9	61.8
Indiana	6,400.1	-	4,977.5	-	207.1	-	-	-
Iowa	2,852.3	-	2,339.3	-	-	-	40.0	-
Kansas	5,134.9	-	4,998.1	-	2.6	-	-	65.2
Kentucky	4,365.6	-	4,013.9	170.6	-	-	21.2	-
Louisiana	4,647.2	-	4,136.2	-	3.3	-	-	4.6
Maine	1,386.1	-	1,205.3	-	15.0	-	30.0	-
Maryland	6,846.8	-	6,608.6	48.2	-	-	142.5	-
Massachusetts	10,668.2	-	9,419.1	71.0	25.0	-	53.1	-
Michigan	11,623.6	-	10,030.9	635.2	-	-	15.5	-
Minnesota	7,928.2	-	7,297.2	-	28.0	-	57.4	51.6
Mississippi	2,509.7	-	2,374.5	50.7	-	-	-	-
Missouri	5,533.2	-	4,969.9	-	-	-	-	2.6
Montana	318.5	-	240.8	-	-	-	-	-
Nebraska	3,132.8	-	2,996.0	-	-	-	70.0	-
Nevada	3,564.4	-	3,369.7	-	-	-	-	-
New Hampshire	1,096.8	-	640.6	-	-	-	-	-
New Jersey	9,672.7	-	9,436.3	-	115.5	-	34.0	1.8
New Mexico	2,182.5	-	2,014.4	-	-	-	-	-
New York	42,438.1	-	36,375.9	528.1	347.6	-	3,053.7	-
North Carolina	6,524.0	-	5,752.4	-	18.3	-	-	-
North Dakota	1,234.8	-	1,107.4	17.7	-	-	25.0	-
Ohio	9,548.2	-	8,235.1	294.1	29.4	-	133.0	14.5
Oklahoma	2,853.9	-	2,567.2	48.4	113.2	-	-	-
Oregon	5,137.3	-	4,484.9	-	11.4	-	58.7	155.0
Pennsylvania	18,272.2	-	16,523.3	239.7	34.4	-	200.5	-
Puerto Rico	246.0	-	-	-	-	-	-	-
Rhode Island	1,660.6	-	1,553.5	15.0	-	-	-	-
South Carolina	5,760.8	-	5,387.1	-	-	-	18.0	-
South Dakota	729.6	-	649.6	-	-	-	30.0	-
Tennessee	5,127.9	-	4,759.7	-	35.0	28.0	150.0	-
Texas	48,724.8	-	42,805.7	363.0	1,238.3	-	310.8	243.6
Utah	3,268.7	-	2,745.1	415.5	-	-	-	-
Vermont	562.4	-	536.2	-	-	-	-	-
Virgin Islands	-	-	89.9	-	-	-	-	-
Virginia	7,127.6	4.4	6,577.4	-	-	-	28.0	-
Washington	14,261.0	-	13,610.8	250.0	-	-	184.6	-
West Virginia	949.0	-	726.2	-	-	-	86.0	-
Wisconsin	6,701.5	-	6,196.4	4.5	5.7	-	83.4	-
Wyoming	277.9	-	191.3	-	-	-	-	-
ALL	377,579.0	97.8	361,970.0	5,061.8	2,692.4	28.0	6,039.5	1,686.6

LONG-TERM MUNICIPAL ISSUANCE BY GENERAL USE OF PROCEEDS

\$ Millions

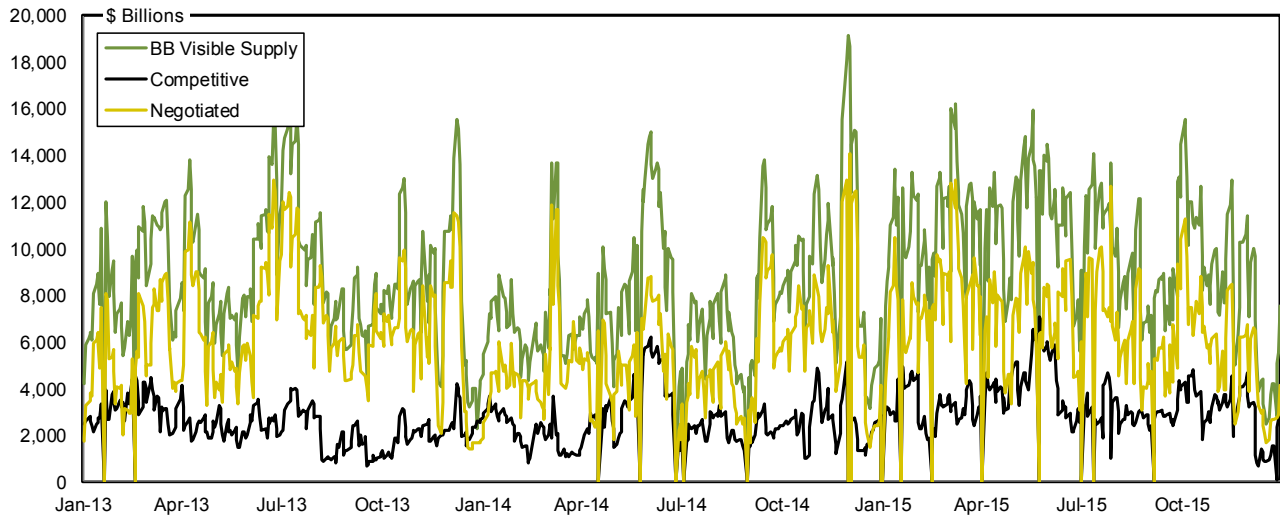
Use of Proceeds	4Q'14	3Q'15	4Q'15	Q-o-Q	Y-o-Y	2015
Airports	1,239.2	3,021.7	4,119.4	36.3%	232.4%	10,624.4
Assisted Living	62.0	132.9	48.5	-63.5%	-21.8%	277.7
Bridges	1,376.8	525.2	1,350.7	157.2%	-1.9%	3,240.0
Childrens hospital		153.2		-100.0%		876.3
Civic & convention centers	1,258.4	1,105.2	1,128.7	2.1%	-10.3%	2,866.7
Combined utilities	451.2	168.9	491.5	191.0%	8.9%	1,133.3
Cont Care Retirement Community	666.5	946.5	721.1	-23.8%	8.2%	3,299.2
Correctional facilities	580.3	204.8	457.9	123.6%	-21.1%	1,427.9
Economic development	1,622.0	2,646.1	2,238.4	-15.4%	38.0%	10,303.9
Fire stations & equipment	91.3	80.9	105.7	30.7%	15.8%	375.3
Flood control	275.1	174.7	253.1	44.9%	-8.0%	1,017.6
Gas	611.3	326.9	27.1	-91.7%	-95.6%	408.6
General acute care hospital	5,646.2	3,279.8	3,435.0	4.7%	-39.2%	21,151.5
General Medical	100.2	303.2		-100.0%	-100.0%	471.0
General purpose / public improvement	21,340.2	22,061.4	15,693.1	-28.9%	-26.5%	91,248.7
Government buildings	92.4	819.5	469.6	-42.7%	408.2%	1,885.7
Higher education	6,553.2	8,018.6	3,902.2	-51.3%	-40.5%	36,607.9
Hospital equipment loans	303.6		9.5		-96.9%	9.5
Industrial development	241.9	103.5	328.5	217.4%	35.8%	948.5
Libraries & museums	95.7	55.6	479.7	762.8%	401.3%	712.6
Mass transportation	4,069.7	4,084.9	2,666.8	-34.7%	-34.5%	12,658.9
Multi family housing	2,650.6	837.6	1,869.0	123.1%	-29.5%	5,789.9
Nursing homes	18.3	15.5	53.9	247.7%	194.5%	220.9
Office buildings	1,589.1	19.4	3.1	-84.0%	-99.8%	135.8
Other education	95.7	130.9	70.2	-46.4%	-26.6%	469.4
Other recreation	136.8	200.5	59.8	-70.2%	-56.3%	378.2
Parking facilities	61.9	79.8	132.8	66.4%	114.5%	401.1
Parks, Zoos & Beaches	197.1	288.4	342.8	18.9%	73.9%	1,242.1
Police stations & equipment	24.7	6.9	5.0	-27.5%	-79.8%	85.9
Pollution control	1,019.9	390.5	276.6	-29.2%	-72.9%	776.3
Primary & secondary education	16,136.0	16,863.2	14,745.0	-12.6%	-8.6%	82,547.6
Public power	5,620.6	3,135.0	3,678.0	17.3%	-34.6%	16,384.9
Sanitation	473.9	49.3	203.5	312.8%	-57.1%	541.1
Seaports / marine terminals	60.7	329.6	297.4	-9.8%	390.0%	1,314.1
Single family housing	1,916.0	2,385.1	2,460.5	3.2%	28.4%	7,717.9
Single speciality hospital	729.8	37.3	389.3	943.7%	-46.7%	569.0
Solid waste	26.8	15.5	152.3	882.6%	468.3%	703.0
Stadiums & sports complexes	1,019.0	500.0	205.2	-59.0%	-79.9%	1,504.5
Student loans	448.3		76.0		-83.0%	1,445.3
Telecommunications	15.2	350.0	2.9	-99.2%	-80.9%	512.6
Theatres		41.6	0.8	-98.1%		42.3
Toll roads, highways & streets	9,582.2	4,748.7	5,061.1	6.6%	-47.2%	18,064.3
Veterans (excloding housing)	36.0				-100.0%	
Water & sewer facilities	10,658.5	7,504.0	8,409.2	12.1%	-21.1%	35,191.5
ALL	99,194.3	86,142.3	76,420.9	-11.3%	-23.0%	377,582.9

BUILD AMERICA BONDS

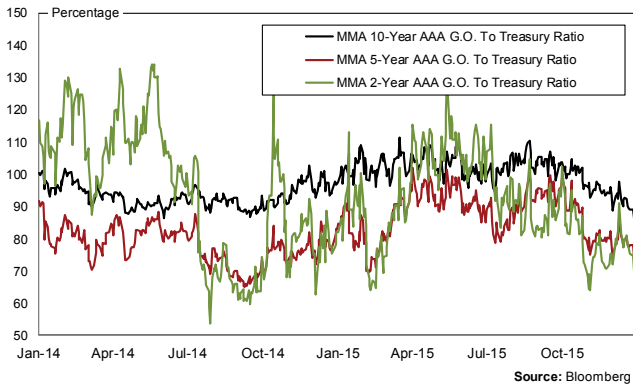


SUPPLY, YIELD CURVES, TOTAL RETURN, SPREADS & RATIOS

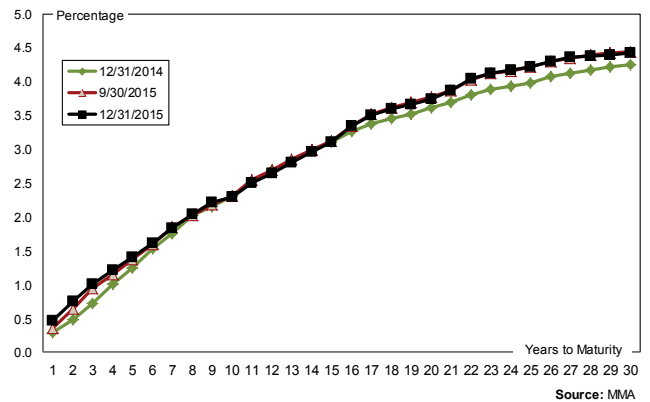
Bond Buyer 30-Day Visible Supply
Jan. 1, 2013 - Dec. 31, 2015

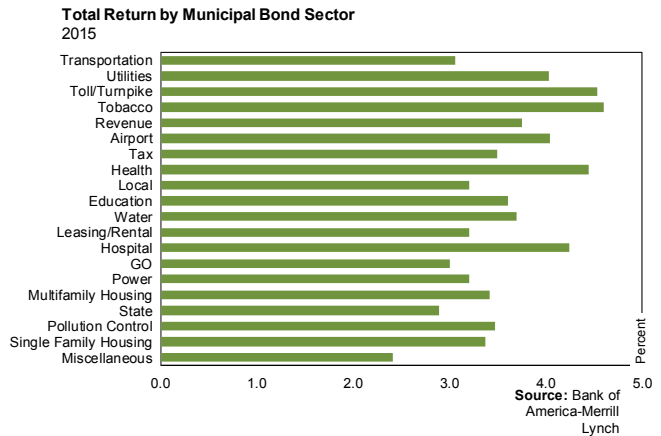
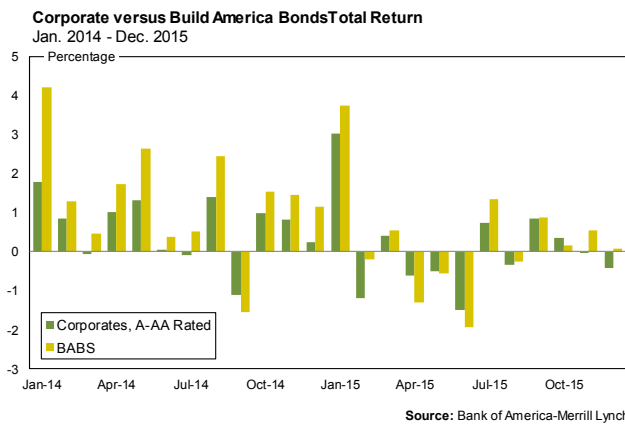
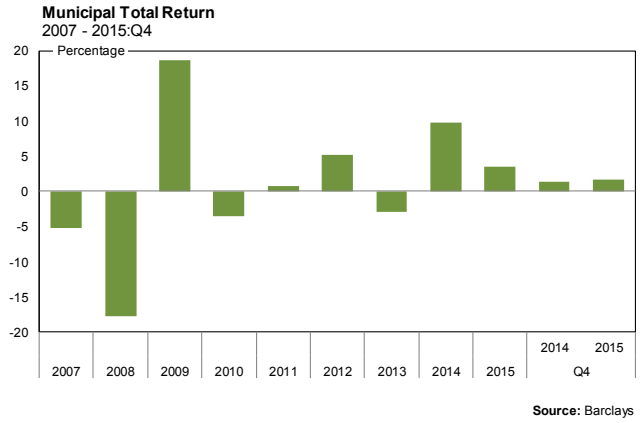
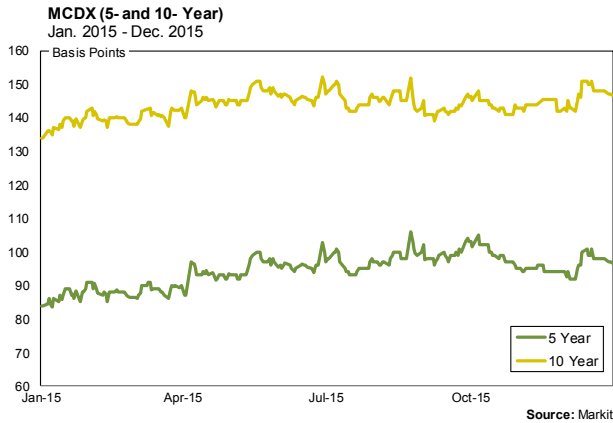


2-, 5-, and 10-Year AAA G.O. to Treasury Ratios
Jan. 2014 - Dec. 2015



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	
2015:Q3	966,348	468,209	884,657	2,319,214	227,450	122,204	135,440	\$485,094	
2015:Q4	876,950	422,465	818,905	2,118,320	201,380	106,475	131,389	\$439,244	
%Change	-9%	-10%	-7%	-9%	-11%	-13%	-3%	-9%	

	# of Trades				Par Amount (Millions)					
	0 - 100,000	100,001 - 500,000	500,001 - 1,000,000	1,000,000+	All Trades	0 - 100,000	100,001 - 500,000	500,001 - 1,000,000	1,000,000+	All Trades
2015:Q3	83%	12%	2%	3%	2,319,214	13%	15%	9%	64%	\$485,094
2015:Q4	82%	13%	2%	3%	2,118,320	13%	15%	10%	62%	\$439,244

	Trades by Sector							Total (Millions)
	Education	Health	Utility	Various Purpose	Transportation	Tax-Revenue	Other	
2015:Q3	20%	8%	11%	13%	9%	12%	27%	\$485,094
2015:Q4	19%	6%	12%	13%	12%	13%	25%	\$439,244

	Trades by Maturity					Total (Millions)
	1 Year or Less	1+ Year to 5 Years	5+ Years to 10 Years	10+ Years to 20 Years	20+ Years	
2015:Q3	7%	14%	18%	32%	30%	\$485,094
2015:Q4	5%	13%	17%	34%	30%	\$439,244

	Trades by Source of Repayment					Total (Millions)
	Revenue	General Obligation	Double Barrel	Not Available		
2015:Q3	65%	32%	3%	0%	\$485,094	
2015:Q4	66%	31%	3%	0%	\$439,244	

	Trades by Coupon Type					Total (Millions)
	Fixed Rate	Variable Rate	Zero Coupon	Not Available		
2015:Q3	80%	16%	4%	0%	\$485,094	
2015:Q4	83%	13%	4%	0%	\$439,244	

Source: MSRB EMMA

MUNICIPAL CDS

Market Risk Activity of Single-Name Municipal CDS (\$ millions) ⁹

State	California	Connecticut	Florida	Illinois	Michigan	Nevada	New Jersey	New York	Ohio	South Carolina	Texas	New York City	Massachusetts	TOTAL	Average Contract Size
Oct-14	61.6			94.6	7.0		44.2		12.0		1.4	30.0	10.0	260.8	5.1
Nov-14	25.0		75.0	30.1	65.0			1.1	10.0		30.0	55.8	85.0	377.0	4.8
Dec-14	25.0			39.7	10.0		10.0		5.0			45.0		134.7	7.5
Jan-15	37.2		5.0	27.4			14.7				20.0			104.3	3.4
Feb-15			10.0		10.0		10.0				10.0			40.0	2.5
Mar-15		10.0		43.7			0.3				0.3			54.3	2.0
Apr-15				1.1			0.1				0.2			1.4	0.5
May-15	8.0			28.0			6.0				1.0			43.0	2.7
Jun-15	171.9		26.0	73.0	25.0		98.6	0.5				15.2	20.0	430.2	6.1
Jul-15	200.5	16.2	135.0	219.2	80.0	20.0	117.5	45.0	40.0		30.0	51.5	13.0	967.9	7.2
Aug-15	306.5	10.0	40.0	289.0	70.0		242.7	10.0	35.0		1.9	85.0		1,090.1	5.4
Sep-15								55.0				20.0		75.0	18.8
Oct-15	25.0	5.0			25.0			20.0					10.0	85.0	14.2
Nov-15	1.0		4.6	15.0	12.2		23.7	11.0		7.0	4.9	11.0	11.0	101.5	9.2
Dec-15			54.6	70.0										120.0	40.0
4Q15	26.0	5.0	54.6	85.0	37.2	0.0	23.7	31.0	0.0	7.0	4.9	11.0	21.0	306.5	15.3
Q-to-Q	-94.9%	-80.9%	-68.8%	-83.3%	-75.2%	-100.0%	-93.4%	-71.8%	-100.0%	-84.8%	-93.0%	61.5%	-85.6%		
Y-to-Y	-76.7%		-27.1%	-48.3%	-54.6%		-56.2%	2718.2%	-100.0%		-84.5%	-91.6%	-77.9%	-60.3%	

Source: DTCC

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

	6M	1Y	2Y	3Y	4Y	5Y	7Y	10Y
CA California	30.0	25.3	41.8	56.1	62.1	69.2	98.4	120.2
CT Connecticut	36.8	36.9	69.6	89.3	104.0	113.9	126.4	173.5
DE Delaware	18.2	20.5	27.7	32.0	32.5	33.2	41.9	64.1
FL Florida	18.4	20.0	32.2	41.8	42.8	43.6	49.4	90.0
IL Illinois	108.3	112.9	165.3	229.3	281.6	293.4	338	365.5
MA Massachusetts	18.0	20.2	27.0	46.9	49.6	51.7	58.1	100.4
MD Maryland	12.8	18.9	27.4	34.8	37.3	39.3	50.0	81.5
MI Michigan	27.0	29.8	38.9	46.4	56.8	67.9	95.4	114.6
MN Minnesota	11.1	13.3	19.0	25.8	31.0	35.6	47.5	63.9
NC North Carolina	18.8	19.9	23.1	29.0	32.4	34.8	37.6	66.7
NJ New Jersey	58.9	61.7	101.1	141.3	174.8	183.5	201.3	259.5
NV Nevada	29.9	30.7	40.8	49.2	52.6	53.6	65.1	104.4
NY New York	16.2	17.5	28.1	39.8	41.2	43.5	48.6	90.1
OH Ohio	24.8	27.4	37.7	49.6	56.0	60.2	74.2	112.6
PA Pennsylvania	45.7	47.7	58.7	85.3	96.9	103.8	112.3	172.4
PR Puerto Rico	11,296.5	7,490.2	4,948.4	3,894.1	3,310.0	2,933.6	2,480.2	2,143.4
RI Rhode Island	12.0	21.1	28.5	39.8	43.1	46.3	62.0	100.3
SC South Carolina	14.1	14.9	17.5	25.4	28.4	32.7	49.7	70.0
TN Tennessee	57.6	59.6	55.1	51.9	46.2	44.7	51.8	66.6
TX Texas	12.2	14.1	18.7	25.2	31.6	37.5	51.2	71.6
UT Utah	57.6	59.6	55.1	51.9	46.2	44.7	51.8	66.6
VA Virginia	20.6	25.5	30.9	37.1	36.1	36.5	39.7	55.7
WA Washington	15.1	16.2	20.0	23.1	30.2	46.2	53.3	77.0
WI Wisconsin	8.5	8.8	12.6	19.5	23.5	28.3	41.6	60.3
NYC New York City	30.0	33.9	59.0	66.2	72.5	74.8	92.1	129.3

⁹ "Market risk activity" (as defined by DTCC): The gross notional and contract counts include transaction types of new trades between two parties, a termination of an existing transaction, or the new leg of an assignment representing the trade between the step-in party and the remaining party. Excludes transactions which do not result in a change in the market risk position of the market participants, and are not market activity. For example, central counterparty clearing, and portfolio compression both terminate existing transactions and re-book new transactions or amend existing transactions. These transactions still maintain the same risk profile and consequently are not included as "market risk transfer activity."

OUTSTANDING MUNICIPAL DEBT

Outstanding by Type, Maturity, and Security Type¹⁰

\$ Millions

State	Total Outstanding	G.O.	Revenue	Due in 13 Months	Long-Term	2015:Q3 Total Outstanding	% Change
AK Alaska	10,112.4	2,641.5	7,470.9	635.0	9,477.4	10,170.8	-0.6%
AL Alabama	30,959.7	6,015.8	24,944.0	992.5	29,967.2	31,295.7	-1.1%
AR Arkansas	14,055.7	6,380.9	7,674.8	495.7	13,560.0	13,851.6	1.5%
AS American Samoa	55.9		55.9	-		55.9	0.0%
AZ Arizona	50,396.2	11,250.1	39,146.1	2,349.2	48,047.0	50,407.7	0.0%
CA California	516,819.1	197,154.5	319,664.6	20,745.3	496,073.9	521,120.4	-0.8%
CO Colorado	52,681.7	11,184.5	41,497.2	3,346.3	49,335.4	54,227.4	-2.9%
CT Connecticut	46,506.0	25,552.9	20,953.1	3,557.3	42,948.7	46,045.1	1.0%
DC District of Columbia	29,468.4	3,456.5	26,011.9	863.4	28,605.0	29,574.5	-0.4%
DE Delaware	7,012.7	2,507.0	4,505.7	330.9	6,681.8	6,960.4	0.8%
FL Florida	137,482.4	16,143.9	121,338.5	6,850.6	130,631.7	139,388.2	-1.4%
GA Georgia	65,684.1	14,983.9	50,700.3	3,202.5	62,481.6	66,974.2	-1.9%
GU Guam	2,471.1	19.7	2,451.4	37.6	2,433.5	2,516.1	-1.8%
HI Hawaii	16,196.8	9,739.5	6,457.3	835.8	15,361.1	15,707.0	3.1%
IA Iowa	19,922.1	6,097.1	13,825.0	1,160.1	18,762.0	20,285.7	-1.8%
ID Idaho	6,324.8	1,793.4	4,531.4	694.8	5,629.9	6,297.5	0.4%
IL Illinois	151,360.5	77,819.0	73,541.6	8,108.7	143,251.9	153,742.6	-1.5%
IN Indiana	47,934.4	1,103.9	46,830.5	2,886.3	45,048.1	48,219.8	-0.6%
KS Kansas	23,395.8	9,926.9	13,469.0	1,515.1	21,880.8	23,358.9	0.2%
KY Kentucky	33,038.7	1,776.1	31,262.6	1,969.3	31,069.4	33,037.7	0.0%
LA Louisiana	33,332.9	6,844.0	26,488.9	1,278.8	32,054.1	33,695.4	-1.1%
MA Massachusetts	92,042.4	34,945.7	57,096.7	6,259.6	85,782.8	92,407.2	-0.4%
MD Maryland	49,695.2	24,926.0	24,769.2	2,962.8	46,732.4	48,939.0	1.5%
ME Maine	7,393.9	1,770.5	5,623.4	517.3	6,876.6	7,706.0	-4.1%
MI Michigan	74,751.6	24,450.4	50,301.2	3,272.1	71,479.5	76,138.9	-1.8%
MN Minnesota	48,072.6	25,252.9	22,819.7	2,890.5	45,182.1	48,441.7	-0.8%
MO Missouri	46,073.4	9,211.1	36,862.3	1,783.4	44,290.0	46,403.6	-0.7%
MS Mississippi	16,565.2	6,356.1	10,209.2	795.0	15,770.3	16,628.2	-0.4%
MT Montana	3,932.8	1,267.3	2,665.5	233.9	3,698.9	4,068.4	-3.3%
NC North Carolina	48,990.1	12,048.8	36,941.3	2,366.1	46,624.0	49,334.0	-0.7%
ND North Dakota	4,951.8	1,793.8	3,158.0	266.2	4,685.6	4,675.2	5.9%
NE Nebraska	17,764.3	5,402.4	12,361.9	823.7	16,940.6	18,054.3	-1.6%
NH New Hampshire	7,955.3	2,223.2	5,732.1	398.2	7,557.0	8,298.6	-4.1%
NJ New Jersey	116,145.9	25,377.8	90,768.0	10,648.2	105,497.7	115,585.5	0.5%
NM New Mexico	13,500.2	3,307.7	10,192.4	943.3	12,556.9	13,568.3	-0.5%
NV Nevada	24,968.5	12,847.2	12,121.3	1,137.5	23,831.0	24,545.0	1.7%
NY New York	370,178.6	76,110.6	294,068.1	21,332.0	348,846.7	371,137.0	-0.3%
OH Ohio	101,722.4	28,551.5	73,170.9	5,116.6	96,605.8	103,787.7	-2.0%
OK Oklahoma	18,532.2	3,717.5	14,814.7	1,462.8	17,069.3	18,694.7	-0.9%
OR Oregon	34,805.7	19,649.4	15,156.2	2,306.2	32,499.5	35,527.4	-2.0%
OT Other Territories	9,468.8	50.0	9,418.9	495.0	8,973.8	9,941.4	-4.8%
PA Pennsylvania	120,846.4	43,180.0	77,666.4	6,385.0	114,461.4	123,391.4	-2.1%
PR Puerto Rico	100,834.0	12,801.0	88,033.0	1,742.1	99,091.9	101,816.2	-1.0%
RI Rhode Island	10,836.5	1,693.4	9,143.1	449.2	10,387.3	11,020.3	-1.7%
SC South Carolina	35,173.2	8,645.8	26,527.4	2,184.8	32,988.4	35,514.6	-1.0%
SD South Dakota	4,817.9	931.5	3,886.4	209.7	4,608.2	4,754.0	1.3%
TN Tennessee	36,933.3	14,433.8	22,499.5	1,777.0	35,156.3	36,996.3	-0.2%
TT Trust Territories	263.5	83.3	180.2	140.0	123.5	264.8	-0.5%
TX Texas	307,347.4	154,246.3	153,101.1	11,839.3	295,508.1	305,425.0	0.6%
UT Utah	20,008.4	6,051.4	13,957.0	1,023.5	18,984.8	20,217.4	-1.0%
VA Virginia	58,003.8	12,619.3	45,384.5	2,867.0	55,136.8	58,989.6	-1.7%
VI Virgin Islands	2,368.7		2,368.7	65.6	2,303.1	2,345.9	1.0%
VT Vermont	4,771.9	727.3	4,044.5	144.7	4,627.1	4,846.1	-1.5%
WA Washington	79,490.7	38,151.9	41,338.8	3,923.1	75,567.6	79,452.3	0.0%
WI Wisconsin	43,014.5	21,562.3	21,452.2	3,359.5	39,655.0	43,260.6	-0.6%
WV West Virginia	10,127.3	766.2	9,361.1	331.0	9,796.3	10,294.8	-1.6%
WY Wyoming	2,578.1	151.6	2,426.5	117.3	2,460.8	2,711.3	-4.9%
TOTAL (12/31/2015)	3,240,137.6	1,047,695.8	2,192,441.8	164,424.1	3,075,657.5	3,262,114.9	-0.7%
TOTAL (9/30/2015)	3,262,114.9	1,049,775.9	2,212,338.9	170,089.9	3,091,969.0		
% Change	-0.7%	-0.2%	-0.9%	-3.3%	-0.5%		

¹⁰ Outstanding includes both short- and long-term municipal debt, including certain preferred fund shares (e.g., VRDPS). "Due in 13 months" looks at original maturity and will not include securities with short puts unless original maturity is within 13 months. Outstanding does not include refunded (inclusive of prerefunded) debt and derivatives. See additional tables for prerefunded and derivatives debt. The chart replaces "Outstanding by Insurance" from prior municipal reports. For comparability against Federal Reserve's Flow of Funds, aggregate prerefunded with outstanding but not derivatives; differences between the two aggregates afterward are due to underlying database differences (Fed: Mergent; these tables: Bloomberg). Those CUSIPs unverified by Bloomberg are not included in the total; this affects approximately \$100 million outstanding.

Outstanding and by Tax Status, Coupon, Use of Proceeds, Industry¹¹

\$ Millions

State	Total Outstanding	Tax-Exempt	AMT	Taxable	Fixed	Zero	FRN	Other	Industry	Total Outstanding
AK Alaska	10,112.4	8,470.5	486.0	1,155.9	7,765.7	165.4	394.7	1,786.6	Airport	85,057.3
AL Alabama	30,959.7	23,764.8	1,065.3	6,129.7	23,819.3	1,012.8	347.9	5,779.8	Development	105,447.6
AR Arkansas	14,055.7	9,050.3	333.1	4,672.2	12,533.0	259.3	528.2	735.2	Education	680,890.4
AS American Samoa	55.9	44.2			55.9			-	GO	646,414.0
AZ Arizona	50,396.2	44,026.7	1,203.9	5,165.6	45,317.4	31.9	625.0	4,421.9	Healthcare	251,624.0
CA California	516,819.1	411,365.8	18,285.1	87,168.2	376,167.0	66,136.4	9,793.5	64,722.3	Housing	126,027.8
CO Colorado	52,681.7	39,008.8	2,758.5	10,914.4	43,229.1	3,142.0	1,014.3	5,296.3	Other	646,681.2
CT Connecticut	46,506.0	35,716.1	1,154.7	9,635.2	39,027.0	457.2	2,159.2	4,862.7	Public Facilities	13,733.8
DC District of Columbia	29,468.4	22,485.4	3,477.4	3,505.6	19,581.7	5,611.4	159.7	4,115.7	Student Loan	30,252.3
DE Delaware	7,012.7	5,217.2	298.9	1,496.5	5,568.8	11.7		1,432.1	Transportation	231,497.8
FL Florida	137,482.4	113,084.0	11,368.4	13,029.9	115,298.5	3,046.7	2,592.3	16,544.8	Utilities	423,527.6
GA Georgia	65,684.1	51,242.5	3,256.5	11,185.1	52,250.6	110.4	1,781.1	11,542.0	TOTAL	3,241,153.7
GU Guam	2,471.1	2,242.4	188.7	40.1	2,355.7	115.5		-		
HI Hawaii	16,196.8	12,491.1	1,255.3	2,450.4	15,734.4	26.0	114.7	321.7		
IA Iowa	19,922.1	12,896.8	520.5	6,504.7	17,432.7	554.4	11.5	1,923.5		
ID Idaho	6,324.8	4,757.1	376.9	1,190.8	5,148.5	103.4	434.4	638.5		
IL Illinois	151,360.5	98,776.4	5,405.1	47,179.0	121,113.2	15,283.6	1,895.4	13,068.4		
IN Indiana	47,934.4	34,054.4	4,213.7	9,666.3	36,349.9	1,032.4	1,030.2	9,521.9		
KS Kansas	23,395.8	15,200.8	401.0	7,794.1	21,941.2	331.6	181.5	941.6		
KY Kentucky	33,038.7	22,252.1	1,639.9	9,146.6	26,869.7	470.6	1,885.9	3,812.6		
LA Louisiana	33,332.9	25,577.9	1,915.7	5,839.3	26,984.0	212.2	1,905.1	4,231.6		
MA Massachusetts	92,042.4	76,082.4	3,611.9	12,348.1	76,349.1	1,098.7	2,935.0	11,659.5		
MD Maryland	49,695.2	41,425.5	1,806.2	6,463.4	43,535.0	135.2	547.6	5,477.5		
ME Maine	7,393.9	5,340.7	572.7	1,480.5	6,704.1		15.0	674.8		
MI Michigan	74,751.6	55,350.4	2,877.9	16,523.3	54,493.8	7,390.9	2,751.5	10,115.4		
MN Minnesota	48,072.6	34,076.7	1,515.1	12,480.9	41,984.1	802.1	740.8	4,545.6		
MO Missouri	46,073.4	30,251.7	1,058.9	14,762.8	34,206.2	859.2	3,987.5	7,020.5		
MS Mississippi	16,565.2	11,090.6	333.3	5,141.3	11,937.6	3.0	192.5	4,432.1		
MT Montana	3,932.8	2,162.2	250.6	1,520.0	2,754.0	10.2	370.4	798.2		
NC North Carolina	48,990.1	41,008.9	1,267.2	6,713.9	39,082.3	257.3	2,197.7	7,452.8		
ND North Dakota	4,951.8	3,356.9	244.2	1,350.7	4,520.4		87.7	343.7		
NE Nebraska	17,764.3	12,506.1	511.6	4,746.5	16,028.9	-	253.2	1,482.3		
NH New Hampshire	7,955.3	5,091.7	588.6	2,275.0	5,848.3	75.7	762.2	1,269.1		
NJ New Jersey	116,145.9	86,153.7	6,602.9	23,389.2	90,613.3	14,479.4	1,933.3	9,119.8		
NM New Mexico	13,500.2	10,935.8	424.9	2,139.4	11,063.2	9.9	1,215.0	1,212.1		
NV Nevada	24,968.5	20,028.5	1,967.8	2,972.2	20,464.0	917.0		3,587.4		
NY New York	370,178.6	297,675.5	19,073.1	53,430.0	298,040.2	14,574.4	4,964.7	52,599.3		
OH Ohio	101,722.4	73,070.1	2,478.2	26,174.0	75,276.3	8,564.6	875.0	17,006.5		
OK Oklahoma	18,532.2	13,422.7	986.9	4,122.5	16,413.3	85.1	943.3	1,090.5		
OR Oregon	34,805.7	22,407.8	1,098.0	11,299.9	29,612.2	3,066.5	223.8	1,903.2		
OT Other Territories	9,468.8	2,213.7	7,214.9	40.3	921.5			8,547.3		
PA Pennsylvania	120,846.4	90,123.5	5,598.8	25,124.2	95,907.6	5,170.3	5,421.7	14,346.7		
PR Puerto Rico	100,834.0	82,810.1	219.1	17,804.8	56,736.1	37,335.0	1,709.1	5,053.8		
RI Rhode Island	10,836.5	8,608.9	869.0	1,358.6	7,897.4	1,754.4	459.8	724.8		
SC South Carolina	35,173.2	29,023.1	1,028.8	5,121.4	29,158.3	2,412.2	1,633.6	1,969.1		
SD South Dakota	4,817.9	2,967.3	305.6	1,545.0	4,264.1	4.0	61.5	488.3		
TN Tennessee	36,933.3	28,271.4	1,235.0	7,426.9	30,595.6	674.5	748.5	4,914.7		
TT Trust Territories	263.5	223.3	40.2	-	123.5			140.0		
TX Texas	307,347.4	231,914.9	14,916.8	60,515.7	247,912.1	16,882.8	12,613.0	29,939.6		
UT Utah	20,008.4	13,620.6	256.6	6,131.1	15,751.7	81.9	1,412.3	2,762.4		
VA Virginia	58,003.8	45,876.2	2,350.8	9,776.7	51,287.4	1,619.3	471.3	4,625.8		
VI Virgin Islands	2,368.7	2,205.6	46.5	116.6	2,320.6	48.1		-		
VT Vermont	4,771.9	2,918.0	449.5	1,404.4	3,027.6		1,343.7	400.5		
WA Washington	79,490.7	61,516.2	3,682.7	14,291.8	72,081.2	2,123.6	735.9	4,550.1		
WI Wisconsin	43,014.5	28,101.5	1,417.6	13,495.4	38,100.3	357.1	780.0	3,777.1		
WV West Virginia	10,127.3	5,597.9	737.4	3,792.0	6,391.0	2,084.5	50.2	1,601.6		
WY Wyoming	2,578.1	1,649.2	638.8	290.1	1,717.3			860.8		
TOTAL (12/31/2015)	3,240,137.6	2,470,804.9	147,882.7	621,438.2	2,557,662.8	220,991.7	79,291.0	382,192.1		
TOTAL (9/30/2015)	3,262,114.9	2,483,964.0	152,038.5	626,100.7	2,566,710.5	223,656.5	79,464.8	392,283.0		
% Change	-0.7%	-0.5%	-2.7%	-0.7%	-0.4%	-1.2%	-0.2%	-2.6%		

¹¹ Outstanding does not include refunded (inclusive of prerefunded) debt and derivatives. See additional tables for prerefunded and derivatives debt. The chart replaces "Outstanding by Insurance" from prior municipal reports. For comparability against Federal Reserve's Flow of Funds aggregate prerefunded with outstanding but not derivatives; differences between the two aggregates afterward are due to underlying database differences (Fed: Mergent; these tables: Bloomberg) as well as the growth of the municipal direct loan market, which is largely not CUSIP-based. Fixed rate debt does not include those multimodal bonds that are currently in long-term fixed rate mode.

Addendum Tables –Build America Bonds, Prerefunded, Derivatives, and Rating¹²
\$ Millions

State	Total Outstanding	BAB Only	VRDO Only	ARS Only	Prerefunded Only	Derivatives Only	AAA	AA	A	BBB	HY	NonRated
AK Alaska	10,112.4	357.7	1,498.4		656.7	229.4	1,219.0	5,679.2	2,205.8	84.5	471.8	452.1
AL Alabama	30,959.7	582.4	2,192.4	798.7	2,912.3	675.0	841.3	14,936.3	8,451.7	1,380.4	725.9	4,624.1
AR Arkansas	14,055.7	29.9	366.1		627.6	0.0	404.8	8,724.6	2,375.3	471.7	22.0	2,057.3
AS American Samoa	55.9											
AZ Arizona	50,396.2	1,954.7	1,955.1	129.7	3,474.2	1,373.5	3,087.4	29,247.8	10,492.1	3,407.4	926.8	3,234.6
CA California	516,819.1	37,486.4	24,433.2	1,918.0	30,473.8	19,445.3	9,850.2	223,390.6	193,635.6	21,833.7	19,975.9	48,133.2
CO Colorado	52,681.7	4,030.6	3,381.0	104.0	4,520.7	2,423.2	3,068.0	25,679.2	11,769.1	6,059.3	464.6	5,641.5
CT Connecticut	46,506.0	1,881.4	2,407.3	337.9	2,081.5	890.7	9,074.6	28,230.7	6,540.3	488.2	208.8	1,963.4
DC District of Columbia	29,468.4	1,889.3	1,577.3	281.5	1,073.1	1,177.8	367.9	11,613.0	8,823.1	2,507.8	3,499.3	2,657.3
DE Delaware	7,012.7	510.0	513.2	2,290.9	430.3	214.2	2,366.4	2,767.4	1,169.7	465.0	75.0	169.2
FL Florida	137,482.4	5,494.9	6,081.9	515.9	9,242.1	7,370.6	2,699.8	56,406.1	56,486.8	4,349.6	692.3	16,847.7
GA Georgia	65,684.1	3,689.1	3,557.4	122.6	3,985.0	1,365.1	14,318.1	18,861.3	21,521.9	2,604.1	251.2	8,127.5
GU Guam	2,471.1				381.0		-	-	940.5	1,290.0	222.5	18.1
HI Hawaii	16,196.8	1,227.6	27.8		2,279.2	422.1	176.1	12,146.0	2,819.6	529.8	122.8	402.5
IA Iowa	19,922.1	640.5	1,756.3	88.4	699.4	109.0	1,620.1	8,210.9	4,857.8	314.6	2,319.5	2,599.3
ID Idaho	6,324.8	152.1	292.9		689.3	173.2	652.6	2,137.3	1,994.1	144.6	118.7	1,277.4
IL Illinois	151,360.5	10,000.1	9,182.0	101.4	7,198.0	6,277.1	5,462.6	44,331.9	32,499.3	47,515.2	5,752.1	15,799.5
IN Indiana	47,934.4	1,856.7	3,200.7	220.0	3,508.3	1,631.7	2,189.1	21,675.7	13,974.0	2,933.2	396.6	6,765.9
KS Kansas	23,395.8	1,509.5	621.7	121.9	1,433.1	202.4	1,805.9	13,594.5	5,407.1	137.3	125.3	2,325.8
KY Kentucky	33,038.7	2,031.0	1,555.5	231.1	1,789.5	365.4	1,412.4	13,876.2	12,937.4	2,631.8	99.1	2,081.8
LA Louisiana	33,332.9	629.8	3,375.9	265.3	4,404.5	710.2	2,722.2	12,938.2	10,585.3	5,139.6	185.3	1,762.3
MA Massachusetts	22,042.4	4,818.6	6,260.6	1,924.0	6,251.1	4,422.4	13,296.3	60,153.9	10,035.6	1,936.9	215.8	6,404.0
MD Maryland	49,695.2	3,258.5	2,423.3	13.4	5,601.8	613.8	20,475.4	18,193.5	5,022.6	1,777.0	448.1	3,778.6
ME Maine	7,393.9	85.2	464.2		445.2	101.7	93.0	4,519.8	2,198.9	176.6	77.5	328.0
MI Michigan	74,751.6	2,067.0	4,067.1	72.5	3,437.6	2,405.3	6,287.5	33,149.1	14,784.4	5,360.6	9,360.4	5,809.6
MN Minnesota	48,072.6	1,111.3	2,243.0	163.3	2,268.5	640.3	5,805.8	31,621.4	5,556.1	899.3	336.1	3,854.0
MO Missouri	46,073.4	2,878.0	2,411.3	848.5	4,066.8	949.8	4,287.5	22,830.4	10,271.4	1,724.6	165.5	6,794.0
MS Mississippi	16,565.2	764.9	3,397.7		1,247.4	206.4	346.1	10,745.6	2,468.5	1,134.9	55.9	1,814.2
MT Montana	3,932.8	29.2	160.4		145.7	4.2	345.9	1,650.8	1,215.3	19.3	-	701.5
NC North Carolina	48,990.1	1,594.3	4,062.6	45.6	5,105.8	1,110.1	12,978.5	22,967.2	9,646.8	1,222.3	51.8	2,123.5
ND North Dakota	4,951.8	27.3	240.1		135.8	55.7	270.9	2,651.7	1,192.1	296.2	10.4	530.6
NE Nebraska	17,764.3	902.6	716.4		1,674.4	335.8	364.7	9,046.1	3,740.8	1,675.2	37.9	2,899.6
NH New Hampshire	7,955.3	354.9	721.8	153.7	575.3	192.2	198.4	4,727.4	2,187.4	375.4	110.3	356.3
NJ New Jersey	116,145.9	6,538.8	3,444.7	1,286.0	4,480.7	6,343.5	7,489.8	20,771.7	70,804.8	5,550.1	4,388.1	7,141.4
NM New Mexico	13,500.2	247.4	460.0		877.3	330.7	1,039.1	10,380.7	1,055.3	606.2	77.0	341.8
NV Nevada	24,968.5	2,150.6	2,190.2	258.0	1,629.3	1,215.1	237.5	13,754.2	7,506.8	460.4	314.8	2,694.8
NY New York	370,178.6	20,576.0	36,614.3	3,859.3	12,510.7	10,676.6	17,629.6	239,738.6	61,793.1	12,319.0	8,432.7	30,265.8
OH Ohio	101,722.4	6,855.2	5,294.0	455.2	6,124.3	1,823.3	7,569.5	44,536.3	21,369.2	3,909.8	12,580.2	11,757.3
OK Oklahoma	18,532.2	629.3	441.4	194.8	542.2	422.2	2,512.2	7,513.4	5,636.6	542.9	267.1	2,059.9
OR Oregon	34,805.7	965.6	1,209.9	235.0	3,651.3	172.1	1,222.1	26,914.8	4,435.8	550.4	30.6	1,651.9
OT Other Territories	9,468.8					5,947.4	1,111.8	6,601.7	48.9	370.1	-	1,336.4
PA Pennsylvania	120,846.4	4,871.8	7,210.0	22.5	5,584.1	3,829.9	2,847.7	48,353.5	50,053.4	8,637.3	1,359.5	9,595.0
PR Puerto Rico	100,834.0	1,013.0	15.2		777.6	1,874.2	179.5	169.4	3,740.7	397.1	82,891.0	13,456.3
RI Rhode Island	10,836.5		497.1	178.9	576.2	215.1	872.9	4,507.5	2,308.6	1,040.9	1,745.6	360.9
SC South Carolina	35,173.2	879.5	746.6	25.0	3,022.2	802.0	1,862.0	14,279.5	13,360.7	1,460.8	48.5	4,161.7
SD South Dakota	4,817.9	309.8	355.2	10.0	184.4	172.0	231.3	2,625.7	1,568.4	26.8	-	365.7
TN Tennessee	36,933.3	1,802.3	2,753.7	274.4	3,349.4	592.9	1,347.0	22,391.8	6,284.5	4,008.5	-	2,901.5
TT Trust Territories	263.5						-	-	-	-	40.2	223.3
TX Texas	307,347.4	16,490.2	11,522.2	1,929.9	30,879.2	6,829.4	118,663.0	96,877.8	50,415.0	16,714.8	2,608.2	22,068.6
UT Utah	20,008.4	2,882.4	1,435.3	391.1	2,226.9	848.2	6,985.4	9,083.6	2,234.0	89.0	74.8	1,541.6
VA Virginia	58,003.8	3,693.6	2,046.5	15.1	6,161.7	1,061.1	15,096.6	32,034.4	3,528.5	1,859.2	2,159.1	3,326.0
VI Virgin Islands	2,368.7	37.3					-	-	116.0	1,970.2	138.2	144.3
VT Vermont	4,771.9	123.8	288.1		189.9	0.0	37.6	3,126.6	1,181.9	193.9	31.0	200.9
WA Washington	79,490.7	5,974.2	2,453.2		9,802.3	2,129.2	1,520.4	64,693.9	9,807.4	875.2	138.6	2,455.2
WI Wisconsin	43,014.5	1,674.0	1,818.1	35.7	2,644.2	1,161.0	1,776.1	28,854.8	7,121.4	1,200.0	259.8	3,802.4
WV West Virginia	10,127.3	88.2	846.3	103.1	190.9	42.7	358.4	1,952.4	3,486.6	778.5	2,603.9	947.4
WY Wyoming	2,578.1	133.8	786.1			9.8	232.0	1,026.3	1,072.1	194.2	-	53.6
TOTAL (12/31/2015)	3,240,137.6	171,782.2	177,552.7	19,918.9	208,219.3	102,592.1	318,909.8	1,476,892.5	806,735.7	184,641.3	167,714.0	285,188.2
TOTAL (9/30/2015)	3,262,114.9	172,439.1	181,998.2	20,501.0	208,714.8	105,117.2	317,483.7	1,478,667.4	863,237.5	151,761.0	169,290.6	281,618.7
% Change	-0.7%	-0.4%	-2.4%	-2.8%	-0.2%	-2.4%	0.4%	-0.1%	-6.5%	21.7%	-0.9%	1.3%

¹² 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.

VARIABLE-RATE DEMAND OBLIGATIONS

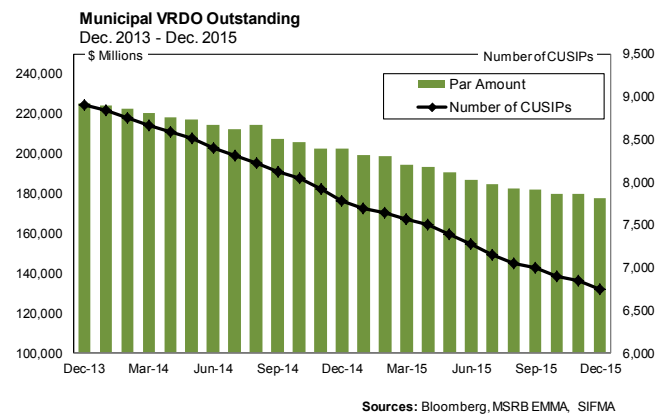
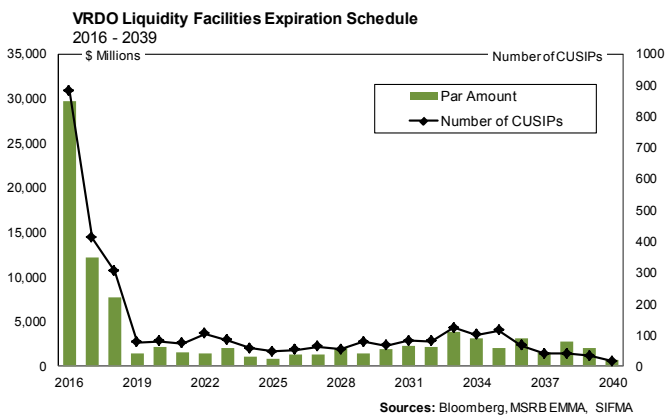
Liquidity Facility Expiration Schedule, 2016 - 2030¹³
As of December 31, 2015

By Type of Provider (\$ Millions)	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Bank	380.5	729.2	2,861.4	2,471.2	2,643.8	2,245.9	2,736.1	3,112.1	2,319.4	2,690.0	3,518.5	4,876.2
Corporate/Other	235.4	1,147.7	1,406.4	558.3	648.1	1,418.6	1,228.6	1,234.3	695.3	744.6	1,074.3	973.9
US Agency	4.2	62.9			6.3	5.6		177.8	29.5			57.0
# CUSIPs	42	92	196	173	184	233	220	250	193	190	216	311

By Type of Provider (\$ Millions)	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Bank	2,527.1	1,108.8	1,930.0	1,135.0	1,335.4	1,733.2	1,328.5	1,497.2	1,586.6	2,323.1	1,471.5	3,207.8
Corporate/Other	328.3	700.9	1,924.7	1,267.1	1,684.3	1,249.8	594.1	1,131.7	1,255.6	907.7	1,032.6	1,350.8
US Agency		70.0	3.9	19.5	5.2		34.9	44.0				18.9
# CUSIPs	144	92	121	76	118	114	89	93	97	104	106	154

By Type of Provider (\$ Millions)	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Bank	1,122.6	571.5	1,630.9	1,487.5	743.6	1,419.5	2,221.7	1,284.5	2,551.6	1,895.8	2,566.5	2,077.3
Corporate/Other	595.8	699.1	1,437.2	706.7	738.2	816.8	372.3	589.5	1,221.9	1,061.9	1,028.2	576.4
US Agency	26.6								21.4		48.8	126.5
# CUSIPs	47	36	73	56	61	81	93	70	80	83	96	104

By Type of Provider (\$ Millions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Bank	7,394.6	5,311.9	994.8	1,098.8	692.1	764.6	1,035.9	460.7	242.1	549.7	648.2	402.2
Corporate/Other	4,639.2	2,086.2	129.9	584.7	75.5	36.1	153.1	89.2	17.3	34.6	8.0	15.0
US Agency	145.5	303.6	308.8	392.0	712.1	650.5	767.8	542.9	485.1	676.7	674.1	1,550.8
# CUSIPs	411	304	75	79	73	103	83	57	46	52	61	54



¹³ For more detailed breakouts of VRDO data, please refer to the Variable Rate Demand Obligations December 2015 update at sifma.org.

A DESCRIPTION OF THE TERMINOLOGY IN THE MUNICIPAL BOND CREDIT REPORT

Long-Term Municipal Issue: municipal securities with a maturity of 13 months or longer at the time the municipal security is issued.¹⁴

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

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

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

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

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

Moody's Ratings¹⁵

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

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

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

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

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

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

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

¹⁴Authors' own definition.

¹⁵Moody's.com, "Ratings Definitions."

risk.

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

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

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

C: obligations rated C are the lowest rated class of bonds and are typically in default, with little prospect for recovery of principal or interest.¹⁶

Standard and Poor's Ratings¹⁷

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

Long-term issue credit ratings are based on:

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

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

AA: very strong capacity to meet financial commitments.

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

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

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

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

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

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

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

Fitch Ratings

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

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

¹⁶The lowest rating is a "D" at both Moody's and Standard and Poor's.

¹⁷Standardandpoors.com "Long-Term Issue Credit Ratings," May 17, 2002.

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

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

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

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

General Use of Proceeds: Refers to the type of project the proceeds or funds received from bond issuance are used. In the Municipal Bond Credit Report, the use of proceed classifications are general government use, education, water, sewer and gas, health care and a miscellaneous category, "other."¹⁸

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

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

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

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

¹⁸Authors' own definition.

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