

**THE BOND BUYER**

# 2016 IN STATISTICS

Annual Review

## BREAK ON THROUGH

Long-term municipal volume ascends  
to an all-time high in 2016



## Underwriting Spreads: 1997-2016

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>ALL BONDS</b>	<b>\$7.18</b>	<b>\$7.07</b>	<b>\$7.14</b>	<b>\$6.68</b>	<b>\$6.48</b>	<b>\$6.17</b>	<b>\$5.78</b>	<b>\$5.58</b>	<b>\$5.45</b>	<b>\$5.59</b>	<b>\$5.27</b>	<b>\$4.89</b>	<b>\$6.21</b>	<b>\$5.94</b>	<b>\$5.62</b>	<b>\$5.52</b>	<b>\$5.20</b>	<b>\$5.00</b>	<b>\$4.64</b>	<b>\$4.65</b>
Negotiated	7.24	7.23	7.18	6.72	6.52	6.20	5.80	5.49	5.56	5.66	5.41	4.82	6.22	6.03	5.61	5.40	5.17	5.08	4.57	4.62
Competitive	6.72	5.99	6.82	6.38	6.10	5.86	5.57	6.31	4.42	4.89	4.12	5.61	6.16	5.23	5.65	6.17	5.35	4.58	4.96	4.77
New-Money	7.42	7.06	7.41	6.68	6.65	6.27	5.85	5.65	5.71	5.60	5.37	5.47	6.39	6.05	5.98	5.57	5.25	5.36	5.05	4.96
Refunding	6.83	6.99	6.71	6.31	6.01	5.88	5.45	5.33	5.21	5.45	4.87	3.82	5.84	5.59	5.16	5.51	5.13	4.65	4.40	4.49
Combined	7.16	7.22	6.68	7.00	6.63	6.38	6.23	5.80	5.20	5.68	5.34	5.01	6.20	6.27	5.52	5.46	5.21	4.99	4.47	4.46
Development	8.93	8.95	9.28	9.49	8.02	4.79	7.33	6.43	6.74	7.04	6.39	4.88	3.65	5.07	5.55	3.43	5.73	6.67	6.58	6.13
Education	7.15	7.23	6.88	6.67	6.52	6.38	5.74	5.55	5.45	5.38	5.12	5.32	6.43	6.33	6.13	6.06	5.53	5.23	5.05	4.92
Electric Power	5.85	5.45	6.62	4.75	5.94	6.17	5.58	5.39	4.34	5.24	4.83	4.74	5.81	5.35	4.52	4.51	4.48	4.24	2.86	3.18
Environmental	5.75	6.90	5.74	5.31	5.82	5.89	5.87	5.18	4.96	4.34	4.15	4.37	5.20	4.31	5.54	5.76	5.99	5.09	3.77	4.52
Health Care	7.41	7.84	7.30	6.99	7.26	6.59	6.50	5.65	4.99	5.64	5.90	4.13	7.78	8.56	7.10	7.42	7.08	7.28	6.38	6.37
Housing	8.03	7.94	7.87	7.60	6.68	6.63	5.81	5.86	5.43	6.11	5.84	5.40	5.66	6.40	6.89	6.57	6.09	6.10	4.72	4.82
Public Facilities	7.10	7.68	7.75	8.00	7.25	6.41	6.12	5.97	6.28	6.87	5.24	5.02	7.44	6.69	6.89	6.54	5.57	6.36	5.53	6.01
Transportation	7.26	6.02	6.26	5.33	5.65	5.14	5.31	5.07	4.85	5.06	4.78	4.80	5.55	5.28	4.79	4.74	4.24	3.94	3.57	3.95
Utilities	7.04	7.41	7.33	7.00	6.26	6.45	6.07	5.48	5.73	5.22	5.53	4.63	6.00	5.88	5.74	6.21	5.62	5.02	4.73	4.11
General Purpose	7.04	6.51	7.19	6.78	6.64	6.28	5.61	5.72	5.86	6.01	5.13	5.20	5.87	5.28	4.93	4.69	4.52	4.41	4.08	4.04
Stimulus Program	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	7.45	6.44	7.16	5.86	5.88	8.05	4.87	4.86

Note: Amounts represent dollars per \$1,000 face value of bond issues. Underwriting spreads include managers' fees, underwriting fees, average takedowns, and expenses. Private placements, short-term notes maturing in under 13 months, and remarketings of variable-rate securities are excluded. Source: Thomson Reuters (Jan. 18)

## Taxable Bonds: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$30,407.3</b>	<b>1,143</b>	<b>\$30,599.7</b>	<b>1,123</b>	<b>-0.6%</b>
First Quarter	7,063.9	260	7,165.9	265	-1.4
Second Quarter	7,317.5	307	8,565.6	332	-14.6
Third Quarter	8,248.5	280	8,719.2	266	-5.4
Fourth Quarter	7,777.4	296	6,149	260	+26.5
Development	1,950.1	94	3,803.6	122	-48.7
Education	8,913.7	430	8,017.6	377	+11.2
Electric Power	1,685.9	15	1,583.9	18	+6.4
Environmental Facilities	162.2	3	10.9	3	+1388.1
Healthcare	1,728.8	71	1,088.6	62	+58.8
Housing	3,174.4	75	2,939.3	86	+8.0
Public Facilities	957.6	42	1,694.3	43	-43.5
Transportation	1,929.7	44	1,118.5	42	+72.5
Utilities	1,143.0	63	1,231.8	63	-7.2
General Purpose	8,761.9	306	9,111.2	307	-3.8
New-Money	17,694.3	668	17,425.7	637	+1.5
Refunding	10,194.0	405	9,441.3	413	+8.0
Combined	2,519.0	70	3,732.5	73	-32.5
Negotiated	23,280.5	749	23,032.1	766	+1.1
Competitive	5,234.4	248	4,814.5	239	+8.7
Private Placements	1,892.4	146	2,753.1	118	-31.3
Revenue	21,462.5	571	21,068.2	584	+1.9
General Obligation	8,944.8	572	9,531.5	539	-6.2
Fixed Rate	28,611.6	1,099	27,737.4	1,070	+3.2
Variable Rate (Short Put)	1,193.9	25	1,035.0	22	+15.4
Variable Rate (Long/No Put)	72.9	4	56.0	3	+30.2
Zero Coupon	52.7	8	17.5	7	+201.1
Linked Rate	476.2	7	1,749.6	20	-72.8
Convertible	0.0	0	4.2	1	-100.0
Bond Insurance	1,259.4	144	2,130.2	121	-40.9
Letter of Credit	842.8	18	652.4	11	+29.2
Standby Purchase Agreements	0.0	0	250.6	5	-100.0
Insured Mortgages	190.2	6	120.1	2	+58.4
Guaranties	1,000.7	73	1,491.6	76	-32.9
State Governments	2,748.9	29	1,855.2	31	+48.2
State Agencies	10,405.0	188	8,667.1	211	+20.1
Counties & Parishes	1,674.0	68	1,578.0	56	+6.1
Cities & Towns	3,524.1	270	5,403.0	306	-34.8
District	3,130.8	301	2,689.1	238	+16.4
Local Authorities	5,461.6	236	6,437.0	222	-15.2
Colleges & Universities	3,316.9	45	3,391.7	54	-2.2
Direct Issuer	146.0	6	578.6	5	-74.8
Cooperative Utilities	0.0	0	0.0	0	n.m.
Tribal Government	0.0	0	0.0	0	n.m.
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	482.2	21	125.8	7	+283.3

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Largest Taxable Issues

Date	Issuer	Amt (\$mill)	Manager(s)
May-17	New York Transportation Dev Corp (tax)	\$2,410.4	Citi/Wells Fargo
Oct-18	California (State), GOs (tax) (cpt)	1,649.1	Jefferies
Apr-19	California (State), GOs (tax) (cpt)	1,467.7	Wells Fargo
Jun-7	Georgia (State), GOs (tax) (cpt) (ref)	1,370.7	Morgan Stanley/J P Morgan
Jun-28	Washington (State), GOs (tax) (cpt)	1,294.5	J P Morgan
Feb-22	Florida St Board Admin Fin Corp (tax)	1,200.0	Various firm
Nov-30	New Jersey Economic Dev Auth GOs (tax) (ref)	1,077.0	Barclays
Jul-13	NYC Transitional Finance Auth (tax) (cpt)	1,050.0	BA Merrill Lynch/RBC Cap Mkts
Aug-2	New York City-New York GOs (tax) (cpt)	1,050.0	BA Merrill Lynch/J P Morgan
Sep-14	NYC Transitional Finance Auth (tax) (cpt)	1,050.00	Source: Thomson Reuters (Jan. 18)

## Taxable Bonds

### Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 BA Merrill Lynch	\$3,747.7
2 J P Morgan	3,404.9
3 Morgan Stanley	3,056.5
4 Wells Fargo	2,698.1
5 Stifel Nicolaus	2,317.9
6 Barclays	1,955.1
7 Citi	1,869.5
8 RBC Cap Mkts	1,768.3
9 Raymond James	1,464.1
10 Goldman Sachs	1,133.9

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Taxable Bonds

### Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Fin Mgmt	\$3,985.8
2 Hilltop Securities	2,534.9
3 Public Res Adv	2,151.4
4 Acacia Financial	1,401.0
5 Raymond James	1,228.3
6 Montague DeRose	775.1
7 William B Tschudy	680.6
8 Caine Mitter	620.0
9 Ponder	614.0
10 CSG Advisors	573.4

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

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## Long-Term Bond Sales: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>TOTAL</b>	<b>\$450,306.9</b>	<b>13,488</b>	<b>\$404,964.8</b>	<b>13,294</b>	<b>+11.2%</b>
January	25,724.6	830	29,452.2	833	-12.7
February	31,754.1	1,025	33,357.2	1,108	-4.8
March	42,546.6	1,189	45,772.0	1,353	-7.0
April	35,444.4	1,189	41,102.2	1,381	-13.8
May	42,693.4	1,301	36,854.6	1,303	+15.8
June	48,157.1	1,482	40,251.9	1,430	+19.6
July	29,271.0	1,010	35,621.5	1,091	-17.8
August	46,695.1	1,241	32,447.9	968	+43.9
September	40,219.8	1,123	24,573.7	892	+63.7
October	54,362.1	1,270	35,123.3	979	+54.8
November	32,714.3	1,061	25,393.5	945	+28.8
December	20,724.4	767	25,014.8	1,011	-17.2
First Quarter	100,025.2	3,044	108,581.4	3,294	-7.9
Second Quarter	126,294.9	3,972	118,208.7	4,114	+6.8
Third Quarter	116,186.0	3,374	92,643.1	2,951	+25.4
Fourth Quarter	107,800.8	3,098	85,531.6	2,935	+26.0
Development	11,907.4	419	13,095.8	524	-9.1
Education	130,312.2	5,335	127,052.9	5,532	+2.6
Electric Power	14,565.7	164	17,539.2	184	-17.0
Environmental Facilities	2,455.7	48	1,688.4	50	+45.4
Healthcare	51,051.8	664	34,558.2	588	+47.7
Housing	19,937.7	577	16,666.6	531	+19.6
Public Facilities	9,985.9	513	11,466.2	523	-12.9
Transportation	51,911.1	485	48,255.8	499	+7.6
Utilities	51,840.7	1,661	41,329.6	1,529	+25.4
General Purpose	106,338.7	3,622	93,312.1	3,334	+14.0
Tax- Exempt	407,642.2	12,208	362,097.9	12,023	+12.6
Taxable	30,407.3	1,143	30,599.7	1,123	-0.6
Minimum Tax	12,257.4	137	12,267.2	148	-0.1
New-Money	176,112.8	6,663	154,473.5	6,559	+14.0
Refunding	180,064.7	5,606	166,241.6	5,582	+8.3
Combined	94,129.4	1,219	84,249.7	1,153	+11.7
Negotiated	325,146.4	7,638	290,396.8	7,638	+12.0
Competitive	98,670.4	4,637	87,247.9	4,438	+13.1
Private Placements	26,490.1	1,213	27,320.1	1,218	-3.0
Revenue	270,977.8	5,237	246,135.7	5,067	+10.1
General Obligation	179,329.1	8,251	158,829.1	8,227	+12.9
Fixed Rate	426,087.9	12,934	378,401.5	12,633	+12.6
Variable Rate (Short Put)	13,030.8	275	11,136.6	217	+17.0
Variable Rate (Long/No Put)	5,024.3	83	3,084.4	72	+62.9
Zero Coupon	1,639.8	137	1,694.5	206	-3.2
Linked Rate	4,510.8	56	10,546.7	160	-57.2
Convertible	13.3	3	101.1	6	-86.8
Bond Insurance	25,337.7	1,889	25,290.1	1,886	+0.2
Letter of Credit	2,073.3	43	2,668.0	45	-22.3
Standby Purchase Agreements	2,330.6	28	1,771.3	30	+31.6
Insured Mortgages	1,714.2	50	1,337.1	28	+28.2
Guaranties	36,830.1	1,742	37,524.6	1,825	-1.9
Other Enhancements	140.3	7	0.0	0	n.m.
State Governments	45,066.9	226	33,056.4	192	+36.3
State Agencies	125,251.9	1,452	111,717.2	1,443	+12.1
Counties & Parishes	26,767.5	833	24,172.9	807	+10.7
Cities & Towns	61,471.9	3,545	60,875.4	3,395	+1.0
District	99,023.7	5,534	90,740.2	5,588	+9.1
Local Authorities	72,244.3	1,593	65,523.0	1,588	+10.3
Colleges & Universities	18,359.8	266	16,388.5	238	+12.0
Direct Issuer	2,106.5	37	2,253.7	37	-6.5
Cooperative Utilities	0.0	0	0.3	1	-100.0
Tribal Government	14.4	2	237.2	5	-93.9
Bank Qualifie	22,799.4	5,349	22,665.9	5,418	+0.6
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Constructio	482.2	21	125.8	7	+283.3
Other Stimulus Program	130.2	26	212.8	24	-38.8

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded.  
n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Refunding Rush Drives Muni Volume to New Record in 2016

BY AARON WEITZMAN

Municipal bond issuers brought a record \$450.31 billion in long-term debt to market in 2016, driven by a surge in refunding volume as issuers rushed to market to take advantage of historically low rates while they still could.

Volume was up 11.2% year over year from \$404.96 billion in 2015, according to data from Thomson Reuters. The record volume was reached over 13,488 transactions, more than the 13,294 deals that came to market in 2015.

“The record amount of issuance in 2016 was a surprise. We thought issuance would be up nicely from 2015, but we were taken back that the second half of the year issuance was even stronger than what we believed would occur,” said Dan Heckman, senior fixed-income strategist, U.S. Bank Wealth Management.

Jim Colby, senior municipal strategist at VanEck Global said that two things surprised him in 2016: first, the lack of the revitalization of the U.S. economy despite a strong labor market, auto industry and housing market. And the second, bigger surprise, which he said had the greatest impact on overall performance, was the election of Donald Trump and subsequent rout in the fixed income markets.

“I will look back on 2016 as ‘the year that almost was’, as we saw another top performer year for fixed income and then the election changed everything,” said Colby.

During the record year, we saw more than \$40 billion in six out of the 12 months, with a high of \$54.36 billion in October.

The other largest months occurred in March, May, June, August and September. The lowest month in terms of issuance was December, when the market saw just \$20.72 billion.

The pace of issuance slowed down after the election, as the surprising result sent a shockwave through the financial markets, causing muni yields to sky rocket.

“I believe we would have seen at least another \$10 to 20 billion, possibly more, in issuance,” said Heckman. “It is hard to tell because what comes with higher rates and wider spreads is less refundings typically. However, I believe we would have had more issuance in any event if the sell-off wasn’t as extreme as it was.”

Colby agreed, saying that he believes the market would have likely had another \$20-25 billion in issuance through November and December. “December’s fall-off gave a much needed boost to year-end performance,” he said.

As far issuance breakdown by quarter, the first and last quarters were the slowest, accounting for \$100.03 billion and \$107.80 billion respectively. The muni business was boom-

ing in the middle two quarters, seeing \$126.29 billion in the second quarter and \$116.19 billion in the third.

At the beginning of 2016, popular opinion suggested there would be multiple interest rate hikes from the Federal Reserve but in actuality, the FOMC increased rates just once, by 25 basis points, in December.

“I think the real concern over rates moving higher and that the record low level of interest rates and spreads in the summer of 2016, really spurred issuance and issuers to come to market sooner rather than later in 2016 or 2017,” said Heckman.

Heckman noted that the low rates were like a ‘come and get it while it lasts’ type of mentality for issuers, as they saw a great window of opportunity to bring their refunding to market.

“And sure enough it ended up being too much of a good thing and really hurt the market in October and accelerated the selling pressure after the election in November,” he said.

Refundings totaled \$180.06 billion in 5,606 deals, which is 8.3% higher than 2015’s total of \$166.24 billion in 5,582 deals.

New money transactions were not far behind at all, as they increased 14% up to \$176.11 billion in 6,663 deals compared to \$154.47 billion in 6,559 deals back in 2015.

“Issuance was predictably high in 2016 due to persistent low rates and the great opportunity for refinancing of higher cost debt,” said Colby.

Deals that went the negotiated route finished the year with \$325.15 billion, up 12% from the \$290.39 billion there was in 2015. Competitive deals increased 13.1% to \$98.67 billion from \$87.25 billion.

Revenue bonds accounted for \$270.98 billion in 2016, up from \$246.14 billion in the previous year, and general obligation bonds increased 12.9% to \$179.33 billion from \$158.83 billion in the same period the year before.

“The most remarkable item for 2016 was the record amount of consecutive weekly cash inflows to muni bond funds until it came to a screeching halt later in the year,” said Heckman.

“The year of 2016 was a wild roller coaster ride: up, down, up, then down again in prices,” Heckman said. “Even though it ended at the close of 2016 in the opposite direction in terms of cash flows, you could also say it was the year of cash inflows into muni bond funds.” □

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## Bond Sales by State: Full Year

States	2016			2015			Percent Change
	Rank	Volume (\$mill)	# Issues	Rank	Volume (\$mill)	# Issues	
Alabama	22	6,260.1	209	29	3,632.6	199	+72.3
Alaska	41	1,172.2	22	41	1,530.8	20	-23.4
Arizona	20	7,539.3	154	17	6,767.2	150	+11.4
Arkansas	37	2,417.8	234	36	2,527.8	186	-4.4
California	1	65,040.9	1,121	1	54,267.2	1030	+19.9
Colorado	14	8,890.5	318	21	6,265.6	248	+41.9
Connecticut	16	7,931.0	177	14	7,227.6	154	+9.7
Delaware	50	597.6	12	48	575.9	10	+3.8
Florida	6	18,644.8	379	4	20,861.9	356	-10.6
Georgia	18	7,722.0	138	13	7,774.6	141	-0.7
Hawaii	35	2,968.0	14	32	3,258.5	23	-8.9
Idaho	46	868.8	41	45	998.2	43	-13.0
Illinois	5	20,174.5	709	6	14,777.5	614	+36.5
Indiana	17	7,862.2	390	20	6,421.7	422	+22.4
Iowa	29	3,978.9	383	34	2,866.3	329	+38.8
Kansas	30	3,757.4	264	26	5,134.9	278	-26.8
Kentucky	24	6,006.6	307	28	4,365.6	247	+37.6
Louisiana	32	3,331.7	109	27	4,750.0	111	-29.9
Maine	43	955.0	42	42	1,386.1	53	-31.1
Maryland	21	7,527.1	102	16	6,900.0	87	+9.1
Massachusetts	7	15,482.0	285	9	10,678.2	295	+45.0
Michigan	8	13,164.0	460	8	11,741.5	452	+12.1
Minnesota	13	9,470.8	638	12	7,926.9	575	+19.5
Mississippi	40	1,638.7	86	37	2,509.8	109	-34.7
Missouri	23	6,089.8	354	23	5,533.1	385	+10.1
Montana	47	775.7	40	51	318.5	28	+143.5
Nebraska	33	3,280.6	384	33	3,238.2	382	+1.3
Nevada	27	4,526.8	66	30	3,564.4	56	+27.0
New Hampshire	42	1,153.5	32	44	1,096.8	37	+5.2
New Jersey	9	12,830.9	338	10	9,672.7	346	+32.7
New Mexico	39	1,869.0	70	38	2,182.5	81	-14.4
New York	3	44,235.8	759	3	42,573.1	824	+3.9
North Carolina	19	7,568.4	132	19	6,523.9	114	+16.0
North Dakota	45	890.5	107	43	1,234.2	136	-27.8
Ohio	10	11,352.0	406	11	9,548.4	393	+18.9
Oklahoma	31	3,358.0	360	35	2,853.9	380	+17.7
Oregon	28	4,495.9	129	24	5,176.8	154	-13.2
Pennsylvania	4	20,398.7	576	5	18,325.0	628	+11.3
Rhode Island	38	1,879.3	39	40	1,660.5	41	+13.2
South Carolina	25	5,909.7	151	22	5,771.6	133	+2.4
South Dakota	49	641.4	57	47	728.4	65	-11.9
Tennessee	26	5,049.9	144	25	5,138.0	146	-1.7
Texas	2	52,637.7	1,672	2	48,779.9	1,686	+7.9
Utah	34	3,076.3	89	31	3,268.7	82	-5.9
Vermont	48	694.5	22	49	562.4	21	+23.5
Virginia	15	8,680.1	104	15	7,127.6	113	+21.8
Washington	11	10,700.9	203	7	14,261.0	246	-25.0
West Virginia	44	917.3	40	46	949.0	45	-3.3
Wisconsin	12	10,354.4	570	18	6,701.4	584	+54.5
Wyoming	52	196.6	21	52	277.9	33	-29.3
American Samoa	55	0.0	0	55	55.9	2	-100.0
D. of Columbia	36	2,889.3	24	39	1,905.4	16	+51.6
Guam	..	0.0	0	..	0.0	0	n.m.
Puerto Rico	54	0.0	0	53	246.0	1	-100.0
Trust Territories	..	0.0	0	..	0.0	0	n.m.
Virgin Islands	53	34.0	1	54	132.9	3	-74.4
Other Territories	..	0.0	0	..	0.0	0	n.m.
<b>TOTAL</b>		<b>\$450,306.9</b>	<b>13,488</b>		<b>\$404,964.8</b>	<b>13,294</b>	<b>+11.2%</b>

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded.  
n.m. - not meaningful. Source: Thomson Reuters (Jan. 18)

## Note Sales by State: Full Year

States	2016			2015			Percent Change
	Rank	Volume (\$mill)	# Issues	Rank	Volume (\$mill)	# Issues	
Alabama	..	0.0	0	..	0.0	0	n.m.
Alaska	18	90.0	1	9	447.2	3	-79.9
Arizona	..	0.0	0	..	0.0	0	n.m.
Arkansas	37	0.1	1	43	0.0	0	n.m.
California	2	4,670.7	30	2	3,611.3	22	+29.3
Colorado	12	339.1	2	37	0.0	0	n.m.
Connecticut	7	516.3	40	5	892.5	41	-42.2
Delaware	36	0.4	1	42	0.0	0	n.m.
Florida	21	63.2	4	39	0.0	0	n.m.
Georgia	9	437.8	5	7	544.5	8	-19.6
Hawaii	33	5.3	1	41	0.0	0	n.m.
Idaho	6	550.0	2	8	500.0	1	+10.0
Illinois	22	54.5	22	19	106.2	16	-48.7
Indiana	16	121.2	6	20	100.3	9	+20.8
Iowa	32	5.5	2	32	9.5	2	-42.1
Kansas	15	132.4	8	21	92.2	7	+43.6
Kentucky	19	77.2	3	22	81.2	4	-4.9
Louisiana	43	0.0	0	35	5.0	2	-100.0
Maine	27	15.5	1	29	13.5	2	+14.8
Maryland	39	0.0	0	13	200.0	1	-100.0
Massachusetts	4	928.3	138	4	1,276.0	131	-27.2
Michigan	11	348.2	12	17	125.8	9	+176.8
Minnesota	35	2.2	2	26	18.7	6	-88.2
Mississippi	..	0.0	0	..	0.0	0	n.m.
Missouri	17	92.1	3	24	60.0	1	+53.5
Montana	..	0.0	0	..	0.0	0	n.m.
Nebraska	31	6.4	10	30	10.9	9	-41.3
Nevada	..	0.0	0	..	0.0	0	n.m.
New Hampshire	24	40.5	3	25	36.0	3	+12.5
New Jersey	3	2,292.3	292	3	2,240.8	305	+2.3
New Mexico	40	0.0	0	15	177.4	1	-100.0
New York	1	4,868.5	403	1	3,711.4	402	+31.2
North Carolina	29	11.3	2	31	10.4	3	+8.7
North Dakota	28	12.5	1	27	18.5	1	-32.4
Ohio	8	460.8	113	10	345.6	103	+33.3
Oklahoma	34	3.5	1	33	9.1	2	-61.5
Oregon	30	9.3	2	34	6.3	1	+47.6
Pennsylvania	20	71.4	2	23	61.7	2	+15.7
Rhode Island	25	20.0	1	36	2.6	2	+669.2
South Carolina	13	233.1	9	12	212.6	7	+9.6
South Dakota	..	0.0	0	..	0.0	0	n.m.
Tennessee	42	0.0	0	18	120.0	1	-100.0
Texas	5	783.9	9	6	875.8	11	-10.5
Utah	26	17.0	1	28	15.0	1	+13.3
Vermont	14	150.0	2	38	0.0	0	n.m.
Virginia	23	50.0	1	40	0.0	0	n.m.
Washington	38	0.0	0	11	317.2	3	-100.0
West Virginia	..	0.0	0	..	0.0	0	n.m.
Wisconsin	10	350.7	16	14	181.3	9	+93.4
Wyoming	..	0.0	0	..	0.0	0	n.m.
American Samoa	..	0.0	0	..	0.0	0	n.m.
D. of Columbia	41	0.0	0	16	150.0	2	-100.0
Guam	..	0.0	0	..	0.0	0	n.m.
Puerto Rico	..	0.0	0	..	0.0	0	n.m.
Trust Territories	..	0.0	0	..	0.0	0	n.m.
Virgin Islands	..	0.0	0	..	0.0	0	n.m.
Other Territories	..	0.0	0	..	0.0	0	n.m.
<b>TOTAL</b>		<b>\$17,831.2</b>	<b>1,152</b>		<b>\$16,586.5</b>	<b>1,133</b>	<b>+7.5%</b>

Notes: Figures are based on issues maturing in less than 13 months. Private placements and municipal forwards are included, but remarketings are excluded.  
n.m. - not meaningful. Source: Thomson Reuters (Jan. 18)



## Bond Insurance: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$25,337.7</b>	<b>1,889</b>	<b>\$25,290.1</b>	<b>1,886</b>	<b>+0.2%</b>
First Quarter	5,763.6	434	6,000.7	521	-4.0
Second Quarter	7,149.8	543	8,354.8	563	-14.4
Third Quarter	5,619.5	429	5,344.7	386	+5.1
Fourth Quarter	6,804.8	483	5,589.9	416	+21.7
Development	1,380.1	92	1,664.0	89	-17.1
Education	8,117.4	738	8,832.1	747	-8.1
Electric Power	427.6	15	2,337.0	21	-81.7
Environmental Facilities	0.0	0	62.1	4	-100.0
Healthcare	1,000.7	12	2,225.0	4	-55.0
Housing	1,000.7	3	0.0	0	n.m.
Public Facilities	2,027.3	58	1,220.2	77	+66.1
Transportation	4,415.3	59	973.0	50	+353.8
Utilities	3,301.3	472	4,091.2	506	-19.3
General Purpose	3,667.3	440	3,885.5	388	-5.6
Tax-Exempt	23,000.3	1,727	22,709.2	1,741	+1.3
Taxable	1,860.4	158	2,290.3	128	-18.8
Minimum -Tax	477.0	4	290.6	17	+64.1
New-Money	9,208.8	809	8,407.0	796	+9.5
Refunding	12,429.0	892	12,776.7	910	-2.7
Combined	3,699.9	188	4,106.4	180	-9.9
Negotiated	19,839.5	1,346	20,424.0	1,358	-2.9
Competitive	5,492.5	542	4,790.3	525	+14.7
Private Placements	5.7	1	75.8	3	-92.5
Revenue	12,528.2	631	12,438.4	631	+0.7
General Obligation	12,809.5	1,258	12,851.7	1,255	-0.3
Fixed Rate	25,140.9	1,853	24,957.0	1,827	+0.7
Variable Rate (Short Put)	0.0	0	0.0	0	n.m.
Zero Coupon	194.8	35	333.1	59	-41.5
Linked Rate	0.0	0	0.0	0	n.m.
Convertible	2.0	1	0.0	0	n.m.
State Governments	425.9	5	208.1	2	+104.7
State Agencies	2,179.9	43	1,779.4	54	+22.5
Counties & Parishes	1,262.5	85	1,484.7	93	-15.0
Cities & Towns	4,621.4	436	5,220.5	404	-11.5
District	11,538.9	1,047	11,107.0	1,036	+3.9
Local Authorities	4,751.2	249	4,871.7	271	-2.5
Colleges & Universities	486.7	23	395.3	23	+23.1
Direct Issuer	71.2	1	223.4	3	-68.1
Bank Qualifie	4,934.7	944	5,138.1	986	-4.0
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Constructio	200.2	11	0.0	0	n.m.
Other Stimulus Program	0.0	0	42.8	4	-100.0

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Bond Insurer Rankings

Full Year 2016 - Ranked by Insured Amount

Rank	Firm	Volume	Market Share	Issues
1	AGM formerly FSA Inc	\$13,285.3	52.4%	679
2	Build America Mutual (BAM)	10,133.6	40.0	871
3	National Public Fin Guarantee	974.7	3.8	115
4	Municipal Assurance Corp (MAC)	945.4	3.7	223

This is Thomson Reuters's "AT10" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. Each firm is credited with the amount it insured within the issue. Source: Thomson Reuters (Jan. 3)

## Largest Insured Issues

Date	Issuer	Amt (\$mill)	Manager(s)
May-17	New York Transportation Dev Corp (amt)	\$2,410.4	Citi/Wells Fargo
Oct-13	Illinois (State), GOs (ref)	1,303.1	BA Merrill Lynch/Jefferies
Aug-9	Pennsylvania (State), GOs (cpt)	1,208.7	BA Merrill Lynch
Nov-30	Chicago City-Illinois	1,117.3	Morgan Stanley
Jun-1	Pennsylvania (State), GOs (cpt)	988.2	Citi
Oct-14	Great Lakes Water Authority (nm/ref)	917.8	Citi/Goldman Sachs
Sep-23	Central Florida Expressway Au (ref)	631.3	Various firm
May-11	Alameda Corridor Transport Auth (ref)	591.1	BA Merrill Lynch
Oct-20	Pennsylvania St Pub Sch Bldg Auth (ref)	570.0	BA Merrill Lynch
Aug-16	Brooklyn Arena Loc Dev Corp (ref)	493.7	Goldman Sachs
Jan-14	Illinois (State), GOs (cpt)	480.0	BA Merrill Lynch

Key to abbreviations: GOs — general obligation bonds; nm — new-money; ref — refunding. Source: Thomson Reuters (Jan. 18)

# Insurance Stays on Course Despite Unfavorable Market Conditions

BY AARON WEITZMAN

Municipal bond insurance took on a tough environment once again in 2016 and although the penetration rate dipped slightly, overall par amount insured was up slightly compared with 2015.

The three active muni bond insurers — Assured Guaranty, Build America Mutual and National Public Finance Guarantee totaled \$25.34 billion of par amount insured throughout 1,889 transactions, both up from \$25.29 billion and 1,886 deals in 2015, according to data from Thomson Reuters.

The industry saw insurance penetration rate drop a tad to 5.63% from 6.36% in 2015 but did see a tough environment due to the historically low interest rates which hung over the market until December, when the Federal Reserve raised rates by 0.25%.

Assured once again led the market in terms of both par amount and the number of transactions insured during the year, capturing 56% of the par volume sold with insurance.

“Our \$14.2 billion of new issue par from 902 transactions exceeded by \$4 billion, or 40%, the par our closest competitor insured, and our total 2016 insured par in both primary and secondary markets was \$16 billion,” said Robert Tucker, senior managing director of communications and investor relations for Assured. “Growing institutional appreciation for our balance sheet strength, underwriting capabilities and trading value was reflected in the 57 transactions issued with \$50 million or more of our insurance.”

That includes more than \$400 million each for the LaGuardia Airport P3 transaction and a Philadelphia school district issue.

“Additionally, we provided insurance on \$1.6 billion par of double-A quality issues, \$1.1 billion of which was on 38 new issues in a range of sizes,” said Tucker.

Tucker also noted that Assured’s group claims-paying resources of \$12 billion at September 30 equals 19 times those of the next most active insurer.

“Our statutory capital grew in the third quarter even as we kept investors whole through timely claim payments, and our insured leverage ratios continued to improve, adding strength to our business,” he said.

“Investors have shown they appreciate our record of profitability, our diversified business strategy and our interest in acquiring legacy bond insurers on attractive terms.”

In 2016, Assured completed the acquisition of CIFG, adding \$5.5 billion to its insured portfolio, and also announced the acquisition of MBIA UK, which further diversifies its risk profile.

BAM had another productive year that saw improvements in both par amount insured, number of transactions and market share. Build America Mutual’s insured principal amount rose to \$10.13 billion across 871 deals or a 40% market share, from \$9.57 billion — or a 38% market share — in 2015.

“2016 was a record year for BAM. We saw a new high in new-issue insurance and grew our secondary-market activity by more than 50%,” said Scott Richbourg, head of public finance at Build America Mutual.

“The rising interest-rate environment at the end of the year highlighted the benefits insured bonds offer to issuers and investors, and increased demand led to BAM insuring several larger transactions and some high-quality, AA-minus rated bonds,” Richbourg said.

Richbourg said that when we look back at 2016, he thinks we’ll see that it was a turning point in terms of increased public support for new-money infrastructure investments by both voters and their elected officials.

“That’s important for BAM because new-money transactions tend to have longer lives and interest costs are a greater portion of the total debt service, so we’ll have the opportunity to provide even more substantial savings to issuers,” Richbourg said.

Richbourg said that BAM remains very conscious that transparency and disclosure are at the top of the list of concerns for both underwriters and investors, and they’ve been able to respond to that by making BAM Credit Profile reports available much sooner in the underwriting process — before the pricing for most negotiated sales, and immediately after the bid for most competitive transactions.

“Having that information about the issuer on a timely basis is helping people make their investment decisions more efficiently,” he said.

NPFG also improved from the previous year, finishing the year with \$975 million of par insurance, up 95% from 2015. Its market share almost doubled, to 3.8% from 2%.

“Coming off a very strong year in which we wrote a record level of new insurance, greatly expanded the number of parties with whom we’re doing business and saw the trading differential with our competitors narrow, the prospects for bond insurance in 2017 appear very favorable,” said Tom Weyl, head of new business development at National. Continued amortization of NPFG’s existing insured portfolio has resulted in significant deleveraging and the strongest financial metrics in its history.”

Weyl also added that a rising interest rate environment coupled with significant infrastructure needs across the United States should lead to greater demand for [NPFG’s] guarantee, which provides municipal market participants with lower cost funding, efficient market access, enhanced liquidity and enduring protection. □

## COMMENT

Let us know what you think about this story at [BondBuyer.com](http://BondBuyer.com)

## Short-Term Note Issuance Slips as Austerity, Attractive Rates Prevail

By CHRISTINE ALBANO

Continued credit and fiscal strength, as well as attractive long-term interest rates for much of 2016, bolstered state and local governments and sparked a decline in many segments of the short-term note market, according to annual data from Thomson Reuters.

Municipal issuers' ability to lock into long-term rates ahead of a Federal Reserve Board tightening sequence also contributed to a decline of 1.5% in short-term note issuance in the 12-months from January to December.

As long-term volume surged 11.2%, short term note volume fell to \$36.67 billion in 2,391 issues from \$37.21 billion in 2,437 issues in all of 2015.

The biggest drop occurred in the second quarter, when note volume plunged 16.3% to \$11.49 billion in 703 deals, from \$13.72 billion in 766 issues.

Combined new money and refunding note volume fell to \$47.5 million in 10 deals for the year, a decrease of 50.8% from \$96.9 million in seven deals in 2015.

"More conservative budgetary assumptions are being incorporated into issuers' financial profiles and meaningful effort is being made to bolster reserve balances," Jeffrey Lipton, managing director and head of municipal research at Oppenheimer & Co., said in an interview explaining the decrease in note sales last year.

He said note issuance is typically cash-flow driven, and during periods of greater financial stress, short-term cash flow borrowings tend to rise as budgetary flexibility and the ability to manage interim shortfalls become limited.

Last year, however, continued austerity at state and local governments stunted the growth of short-term notes.

"It clearly reduced the amount of notes being sold," said Phil Fischer, head of municipal bond research at Bank of America Merrill Lynch. "On the one hand, having fewer notes outstanding is a reflection of generally enhanced credit quality."

On the other hand it limits investors' availability, he said.

The biggest drop in the supply of notes from a year earlier was in September, when volume fell by 38.8% to \$2.87 billion in 225 deals, from \$4.70 billion in 251 deals in the same month in 2015.

July's decline of 32.8% to \$4.70 billion among 250 offerings, from \$7 billion in the previous year in 305 deals, was a direct result of the reduction or absence of many big note deals by large states, which enjoyed better fiscal health as a result of austerity measures since the financial crisis, experts said.

"Coming out of the great recession, the volume of notes needed decreased" to approximately half of the \$60 billion the short-term note market issued in 2007 and 2008, Fischer said.

"We used to have big issues from Cal-

ifornia and Texas, but they have been scaled way back because the states didn't need the money," he said.

After issuing tax and revenue anticipation notes, TRANS, annually for nearly three decades, Texas' strong fiscal management, conservative budgeting, diverse economy, and fund balances have allowed the state to forgo issuing short-term note obligations in both fiscal 2016 and fiscal 2017, which begin on Sept. 1, according to the comptroller's office.

"A number of issuers that perhaps needed to access the note market over the past two years are in better credit shape and are not necessarily pressed to pursue cash flow financing," Lipton added.

In addition, overall note volume declined while long-term rates remained relatively low ahead of the Federal Reserve Board's decision on Dec. 14 to begin its tightening cycle and raise the fed funds rate by 25 basis points to between 0.50% and 0.75%.

Public facilities fell by 64.9% to \$124.8 million in 74 issues, from \$355.1 million in 64 deals,

Environmental facilities' issuance dropped 52.1% to \$3.5 million in just two deals, from \$7.3 million in three deals the previous year.

Electric power note issuance fizzled by 44.7%, decreasing to \$412.4 million in 15 deals, from \$746.2 million in 16 deals.

Fischer said note issuance is most frequently used by cities and school districts for education and general purpose financing.

Despite the market's overall credit strength and austerity, the education sector's issuance still grew by 17.7% to \$11.3 billion in 732 deals, from \$9.62 billion in 725 deals in all of 2015. Colleges and universities' sales increased 136.9% to \$1.56 billion in 13 deals, up from \$662.2 million in six deals.

"We kind of reached homeostasis with note issuance," Fischer said. "The wild card is simply the degree of the shift in money market funds, which occurred because of the new federal rules" that became effective in late 2016, and how that will affect the ability of the states and local issuers to finance notes going forward.

The impact of a further reduction in note volume could be seen as early as the spring note season, according to Fischer.

"If we see a big drop in June, that would suggest state and local governments' migration to private placements with banks" as opposed to issuing the traditional one-year note instruments in the municipal market, he said.

Lipton said both changing financial market and political climates could spark some growth in the note sector.

"As interest rates rise and the uncertainty of a national fiscal policy agenda could possibly weigh on state and local credit, we could see an increase in short-term, cash-flow borrowings," Lipton said. □

## Short-Term Note Sales: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>TOTAL</b>	<b>\$36,670.2</b>	<b>2,391</b>	<b>\$37,216.6</b>	<b>2,437</b>	<b>-1.5%</b>
January	2,015.2	131	1,172.2	128	+71.9
February	1,113.9	127	1,776.9	140	-37.3
March	2,861.8	189	1,948.0	158	+46.9
April	1,714.5	143	1,810.2	155	-5.3
May	2,089.1	185	1,948.6	167	+7.2
June	9,340.2	408	7,930.5	385	+17.8
July	4,701.1	250	7,000.0	305	-32.8
August	3,914.9	228	2,027.8	210	+93.1
September	2,877.0	225	4,700.9	251	-38.8
October	2,147.4	168	1,804.4	188	+19.0
November	1,205.7	180	1,375.7	152	-12.4
December	2,689.4	157	3,721.4	198	-27.7
First Quarter	5,991.1	447	4,897.1	426	+22.3
Second Quarter	13,143.8	736	11,689.3	707	+12.4
Third Quarter	11,492.9	703	13,728.6	766	-16.3
Fourth Quarter	6,042.4	505	6,901.6	538	-12.4
Development	305.1	15	114.5	11	+166.5
Education	11,333.3	732	9,628.9	725	+17.7
Electric Power	412.4	15	746.2	16	-44.7
Environmental Facilities	3.5	2	7.3	3	-52.1
Healthcare	154.6	9	176.9	11	-12.6
Housing	410.8	4	41.5	10	+889.9
Public Facilities	124.8	74	355.1	64	-64.9
Transportation	2,363.4	62	2,288.0	66	+3.3
Utilities	1,777.6	116	1,896.5	114	-6.3
General Purpose	19,784.7	1,362	21,961.7	1,417	-9.9
Tax- Exempt	33,927.8	2,208	35,406.9	2,295	-4.2
Taxable	2,472.4	177	1,574.5	135	+57.0
Minimum Tax	270.0	6	235.2	7	+14.8
New-Money	36,341.7	2,338	36,655.6	2,401	-0.9
Refunding	281.0	43	464.4	29	-39.5
Combined	47.5	10	96.6	7	-50.8
Negotiated	13,248.5	433	11,453.7	412	+15.7
Competitive	21,031.4	1,870	21,494.8	1,947	-2.2
Private Placements	2,390.3	88	4,268.1	78	-44.0
Revenue	6,023.8	85	4,039.4	77	+49.1
General Obligation	30,646.4	2,306	33,177.3	2,360	-7.6
Fixed Rate	30,666.3	2,333	30,833.1	2,388	-0.5
Variable Rate (Short Put)	5,175.0	48	4,177.9	32	+23.9
Zero Coupon	2.0	6	1.6	9	+25.0
Linked Rate	826.9	4	2,204.0	8	-62.5
Bond Insurance	2.5	6	3.5	5	-28.6
Letter of Credit	1,600.0	16	1,730.1	14	-7.5
Standby Purchase Agreements	0.0	0	0.0	0	n.m.
Guaranties	194.3	24	414.7	29	-53.1
State Governments	4,588.6	14	6,113.2	16	-24.9
State Agencies	3,261.6	33	3,280.2	38	-0.6
Counties & Parishes	522.3	133	515.4	125	+1.3
Cities & Towns	11,018.7	1,351	12,570.8	1,456	-12.3
District	8,228.1	748	6,873.7	690	+19.7
Local Authorities	2,721.1	82	2,213.6	91	+22.9
Colleges & Universities	1,568.5	13	662.2	6	+136.9
Direct Issuer	60.3	16	345.2	14	-82.5
Cooperative Utilities	0.3	1	0.3	1	unch
Bank-Qualifie	4,014.4	1,343	4,064.0	1,449	-1.2
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	8.4	2	4.4	2	+90.9

Notes: Figures are based on issues maturing in less than 13 months. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)



## Development: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$11,907.4</b>	<b>419</b>	<b>\$13,095.8</b>	<b>524</b>	<b>-9.1%</b>
First Quarter	2,732.0	98	2,341.8	103	+16.7
Second Quarter	3,321.3	95	4,436.1	180	-25.1
Third Quarter	3,210.9	98	3,055.1	138	+5.1
Fourth Quarter	2,643.2	128	3,262.8	103	-19.0
Economic Development	10,779.1	396	11,475.3	488	-6.1
Industrial Development	982.3	18	1,484.8	30	-33.8
Office Buildin	145.9	5	135.7	6	+7.5
Tax-Exempt	9,427.3	319	9,163.5	399	+2.9
Taxable	1,950.2	94	3,803.7	122	-48.7
Minimum-Tax	530.0	6	128.7	3	+311.8
New-Money	5,140.7	198	5,797.4	258	-11.3
Refunding	5,833.5	192	5,622.2	238	+3.8
Combined	933.2	29	1,676.2	28	-44.3
Negotiated	8,449.4	311	10,047.5	377	-15.9
Competitive	2,211.4	43	1,355.4	63	+63.2
Private Placements	1,246.6	65	1,692.9	84	-26.4
Revenue	9,746.0	358	11,348.5	446	-14.1
General Obligation	2,161.4	61	1,747.3	78	+23.7
Fixed Rate	11,656.5	405	12,362.7	507	-5.7
Variable Rate (Short Put)	156.1	10	622.9	15	-74.9
Variable Rate (Long/No Put)	0.0	0	0.0	0	n.m.
Zero-Coupon	90.9	3	0.0	0	n.m.
Linked Rate	0.0	0	110.2	2	-100.0
Convertible	3.9	1	0.0	0	n.m.
Bond Insurance	1,493.8	92	1,899.8	89	-21.4
Letter of Credit	117.6	7	436.0	9	-73.0
Insured Mortgages	175.2	2	0.0	0	n.m.
Guaranties	69.0	3	24.7	2	+179.4
State Governments	1,435.2	12	706.7	13	+103.1
State Agencies	2,381.8	45	2,979.8	50	-20.1
Counties & Parishes	1,061.9	14	1,227.0	30	-13.5
Cities & Towns	931.9	72	1,316.7	116	-29.2
District	1,040.8	83	913.0	77	+14.0
Local Authorities	5,055.8	193	5,723.4	234	-11.7
Colleges & Universities	0.0	0	0.0	0	n.m.
Direct Issuer	0.0	0	105.0	2	-100.0
Tibal Governments	0.0	0	124.2	2	-100.0
Cooperative Utilities	0.0	0	0.0	0	n.m.
Bank Qualifie	232.2	49	272.5	69	-14.8
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	6.3	2	0.0	0	n.m.

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded.  
n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Education: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$130,312.1</b>	<b>5,335</b>	<b>\$127,052.9</b>	<b>5,532</b>	<b>+2.6%</b>
First Quarter	35,271.2	1,419	39,686.8	1,559	-11.1
Second Quarter	36,670.8	1,654	40,028.2	1,825	-8.4
Third Quarter	28,405.0	1,209	27,120.7	1,065	+4.7
Fourth Quarter	29,965.1	1,053	20,217.2	1,083	+48.2
K-12 Education	85,152.5	4,562	85,474.5	4,774	-0.4
Higher Education	42,815.2	694	39,259.5	659	+9.1
Student Loans	1,789.5	11	1,849.0	18	-3.2
Other Education	554.9	68	469.9	81	+18.1
Tax-Exempt	120,609.4	4,898	118,090.7	5,140	+2.1
Taxable	8,913.7	430	8,017.7	377	+11.2
Minimum-Tax	789.0	7	944.5	15	-16.5
New-Money	50,515.3	2,607	46,034.8	2,630	+9.7
Refunding	52,650.6	2,329	53,656.6	2,516	-1.9
Combined	27,146.2	399	27,361.3	386	-0.8
Negotiated	97,474.0	3,057	92,157.2	3,215	+5.8
Competitive	28,312.9	1,915	28,910.8	1,924	-2.1
Private Placements	4,525.2	363	5,984.9	393	-24.4
Revenue	54,965.7	1,417	54,306.0	1,415	+1.2
General Obligation	75,346.4	3,918	72,746.9	4,117	+3.6
Fixed Rate	125,392.8	5,179	121,305.8	5,296	+3.4
Variable Rate (Short Put)	1,312.5	22	607.9	16	+115.9
Variable Rate (Long/No Put)	1,236.7	10	895.0	12	+38.2
Zero Coupon	675.3	111	1,444.6	179	-53.3
Linked Rate	1,685.4	11	2,761.0	28	-39.0
Convertible	9.4	2	38.6	1	-75.6
Bond Insurance	10,942.3	738	10,402.8	747	+5.2
Letter of Credit	391.5	3	16.8	1	+2230.4
Standby Purchase Agreements	300.0	1	0.0	0	n.m.
Insured Mortgages	140.3	7	0.0	0	n.m.
Guaranties	35,827.0	1,680	35,977.1	1,774	-0.4
Other Enhancements	0.0	0	0.0	0	n.m.
State Governments	955.5	18	1,261.3	18	-24.2
State Agencies	24,917.7	371	24,141.0	406	+3.2
Counties & Parishes	1,288.5	57	1,245.5	56	+3.5
Cities & Towns	1,324.6	69	1,645.0	81	-19.5
District	76,114.4	4,228	73,071.7	4,428	+4.2
Local Authorities	7,289.4	321	9,534.6	298	-23.5
Colleges & Universities	17,775.2	254	15,622.4	230	+13.8
Direct Issuer	646.8	17	531.4	15	+21.7
Bank Qualifie	10,749.8	2,400	11,343.5	2,580	-5.2
Qualified Sch Constructio	482.2	21	125.8	7	+283.3
Other Stimulus Program	43.7	15	52.8	11	-17.2

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded.  
n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Development

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 Stifel Nicolaus	\$2,160.8
2 Citi	1,663.7
3 BA Merrill Lynch	1,071.0
4 Piper Jaffray	800.1
5 Wells Fargo	786.4
6 Morgan Stanley	761.1
7 RBC Cap Mkts	613.9
8 Raymond James	391.4
9 PNC Financial	266.6
10 Hilltop Securities	189.3

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Development

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Fin Mgmt.	\$1,869.9
2 Public Resources Advs	813.7
3 Davenport & Company	660.1
4 Fieldman Rolapp	651.7
5 KNN Public Fin	574.6
6 Acacia Financial	569.0
7 Columbia Capital Mgmt	548.8
8 Urban Futures Inc	436.8
9 Hilltop Securities	347.0
10 Harrell & Comp Advs	281.9

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Education

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 J P Morgan	\$10,287.7
2 BA Merrill Lynch	10,087.3
3 Stifel Nicolaus	9,726.6
4 Raymond James	9,605.6
5 RBC Cap Mkts	9,312.1
6 Citi	9,222.2
7 Piper Jaffray	8,283.6
8 Morgan Stanley	7,846.7
9 Wells Fargo	7,180.3
10 Barclays	6,943.0

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Education

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Financial Mgmt	\$15,307.1
2 Hilltop Securities	12,629.3
3 KNN Public Fin	5,019.4
4 RBC Capital Mkts	4,436.5
5 Swap Financial Group	2,700.6
6 Samco Capital Mkts	2,579.0
7 Acacia Financial	2,564.3
8 Keygent LLC	2,165.6
9 Public Resources Advs	2,162.5
10 Phoenix Capital Partners	2,154.0

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Largest Development Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Mar-9	Empire State Development Corp (ref)	\$1,654.9	Various firm
Aug-25	Illinois (State), (tax/te) (cpt) (ref)	548.8	Various firm
Aug-3	Connecticut (State), GOs (tax) (cpt)	500.0	Morgan Stanley
Jul-21	Columbus City-Ohio GOs (tax) (cpt)	481.4	PNC Cap Mkts
Feb-23	Ohio Public Fac Commission GOs (tax/te) (cpt) (ref)	367.6	Various firm
May-25	Miami-Dade Co-Florida GOs	340.1	RBC Cap Mkts
Apr-26	Miami-Dade Co-Florida GOs (cpt) (ref)	339.4	Wells Fargo
Jun-8	Nassau Co-New York GOs (cpt)	300.1	Citi
Dec-6	Mississippi (State), GOs (tax)	270.4	Raymond James
Jun-21	Iowa (State), (ref)	265.4	Citi

Key to abbreviations: amt — alternative minimum tax; nm — new-money; ref — refunding; tax — taxable. Source: Thomson Reuters (Jan. 18)

## Largest Education Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Oct-6	Massachusetts Dev Finance Agcy (ref)	\$1,539.7	Various firm
Apr-8	California State Univ Trustees (ref)	1,383.1	Various firm
Mar-1	Los Angeles USD GOs (nm/ref)	1,226.4	Citi/Wells Fargo
Nov-30	New Jersey Economic Dev Auth GOs (tax/te) (nm/ref)	1,077.0	Barclays
Aug-10	Regents of the Univ of California (tax/te) (nm/ref)	1,046.2	Barclays/J P Morgan
Jun-2	NYS Dorm Authority (tax/te)	829.1	Morgan Stanley/Wells Fargo
Oct-20	Philadelphia SD GOs (tax/te) (nm/ref)	821.7	BA Merrill Lynch
Apr-7	Regents of the Univ of California (tax/te) (nm/ref)	813.1	Wells Fargo/Barclays
Oct-20	Commonwealth Financing Auth (PA) (tax)	758.2	Morgan Stanley
Mar-29	Harris Co (Houston) ISD GOs (nm/ref)	757.2	J P Morgan

Key to abbreviations: nm — new money; ref — refunding; tax — taxable; te — tax exempt. Source: Thomson Reuters (Jan. 18)

## Electric Power: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$14,565.7</b>	<b>164</b>	<b>\$17,539.2</b>	<b>184</b>	<b>-17.0%</b>
First Quarter	3,513.8	32	3,707.0	41	-5.2
Second Quarter	4,083.7	49	6,669.6	59	-38.8
Third Quarter	3,999.5	46	3,307.4	47	+20.9
Fourth Quarter	2,968.7	37	3,855.2	37	-23.0
Tax-Exempt	12,817.0	147	15,906.2	164	-19.4
Taxable	1,685.9	15	1,583.9	18	+6.4
Minimum-Tax	62.8	2	49.1	2	+27.9
New-Money	4,038.9	56	3,694.5	54	+9.3
Refunding	7,786.8	88	9,681.4	102	-19.6
Combined	2740	20	4163.3	28	-34.2
Negotiated	13,148.0	127	15,510.0	146	-15.2
Competitive	808.5	26	899.1	18	-10.1
Private Placements	609.2	11	1,130.1	20	-46.1
Revenue	14,498.6	159	17,393.8	181	-16.6
General Obligation	67.1	5	145.4	3	-53.9
Fixed Rate	13,964.4	156	16,811.4	172	-16.9
Variable Rate (Short Put)	541.1	6	240.3	4	+125.2
Variable Rate (Long/No Put)	0.0	0	0.0	0	n.m.
Zero Coupon	10.2	1	17.4	2	-41.4
Linked Rate	50.0	1	470.1	6	-89.4
Bond Insurance	424.2	15	902.5	21	-53.0
Letter of Credit	0.0	0	24.2	1	-100.0
Standby Purch Agreements	0.0	0	128.1	2	-100.0
Guaranties	0.0	0	0.0	0	n.m.
State Governments	0.0	0	0.0	0	n.m.
State Agencies	4,564.9	23	6,429.3	33	-29.0
Counties & Parishes	14.3	1	0.0	0	n.m.
Cities & Towns	2,484.1	56	3,530.9	51	-29.6
District	2,773.8	43	2,557.2	43	+8.5
Local Authorities	3,672.7	33	3,650.0	48	+0.6
Direct Issuer	1,055.9	8	1,371.8	9	-23.0
Cooperative Utilities	0.0	0	0.0	0	n.m.
Bank Qualifie	180.0	51	140.1	36	+28.5
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	31.9	1	98.9	2	-67.7

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Environmental Facilities: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$2,455.7</b>	<b>48</b>	<b>\$1,688.4</b>	<b>50</b>	<b>+45.4%</b>
First Quarter	665.7	10	246.7	7	+169.8
Second Quarter	498.3	15	461.8	13	+7.9
Third Quarter	752.7	11	551.0	21	+36.6
Fourth Quarter	539.0	12	428.9	9	+25.7
Pollution Control	1,929.8	30	920.1	24	+109.7
Solid Waste Disposal	525.9	18	768.3	26	-31.6
Recycling	0.0	0	0.0	0	n.m.
Tax-Exempt	1,507.5	34	909.2	34	+65.8
Taxable	786.0	11	768.3	13	+2.3
Minimum-Tax	162.2	3	10.9	3	+1388.1
New-Money	391.9	15	516.4	23	-24.1
Refunding	1,895.2	29	1,041.4	23	+82.0
Combined	168.6	4	130.6	4	+29.1
Negotiated	2,257.4	39	1,238.3	26	+82.3
Competitive	72.3	3	241.0	10	-70.0
Private Placements	126.0	6	209.1	14	-39.7
Revenue	2,198.7	44	1,426.3	41	+54.2
General Obligation	257.0	4	262.1	9	-1.9
Fixed Rate	1,502.6	33	1,334.8	43	+12.6
Variable Rate (Short Put)	571.7	8	267.6	6	+113.6
Variable Rate (Long/No Put)	381.4	7	86.0	1	+343.5
Linked Rate	0.0	0	0.0	0	n.m.
Bond Insurance	0.0	0	76.7	4	-100.0
Letter of Credit	0.0	0	0.0	0	n.m.
Guaranties	172.2	3	431.1	5	-60.1
Other Enhancement	0.0	0	0.0	0	n.m.
State Governments	122.4	2	133.2	2	-8.1
State Agencies	874.9	19	552.9	8	+58.2
Counties & Parishes	515.5	9	231.8	10	+122.4
Cities & Towns	625.7	10	349.7	10	+78.9
District	19.1	1	5.1	2	+274.5
Local Authorities	298.1	7	415.7	18	-28.3
Direct Issuer	0.0	0	0.0	0	n.m.
Bank Qualifie	11.2	3	23.3	5	-51.9
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	0.0	0	n.m.

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

### Electric Power

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 BA Merrill Lynch	\$3,275.0
2 Citi	2,366.7
3 Goldman Sachs	1,872.4
4 Barclays	1,638.6
5 Morgan Stanley	1,186.0
6 RBC Cap Mkts	819.2
7 J P Morgan	741.9
8 Wells Fargo	525.7
9 Ramirez	326.9
10 Stifel Nicolaus	293.3

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

### Electric Power

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Fin Mgmt	\$7,948.0
2 Ramirez	976.7
3 Public Res Adv	619.4
4 Piper Jaffray	593.7
5 Montague DeRose	567.2
6 Dunlap	424.1
7 Hilltop Securities	354.7
8 Avant Energy Inc	323.5
9 Barclays	287.0
10 Specialized Pub Fin	277.3

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

### Environmental

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 BA Merrill Lynch	\$691.6
2 J P Morgan	631.2
3 Morgan Stanley	521.8
4 SunTrust Robinson	171.7
5 Westhoff Cone	78.3
6 Goldman Sachs	62.5
7 Citi	54.4
8 William Blair	35.4
9 Raymond James	30.2
10 Ziegler	25.0

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

### Environmental

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Res Adv	\$114.2
2 Hilltop Securities	103.5
3 Piper Jaffray	73.6
4 Dunlap	66.2
5 Lamont Fin Ser	62.5
6 Robert W Baird	60.0
7 Springsted Incorporated	17.9
8 Acacia Financial	17.7
9 NHA Advisors	12.5
10 Public Fin Mgmt	5.8

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Largest Electric Power Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Jun-30	SC Pub Svc Au (Santee Cooper) (tax/te) (nm/ref)	\$831.4	Barclays/BA Merrill Lynch
Nov-18	Salt River Proj Agric Imp & Pwr Dt (ref)	761.0	Morgan Stanley
Mar-2	NYS Utility Debt Securitization Auth	636.8	Various firm
Sep-13	California Dept of Wtr Resources (tax) (ref)	567.2	Goldman Sachs/Stifel Nicolaus
Jun-28	San Antonio City-Texas (ref)	544.3	BA Merrill Lynch/J P Morgan
Jan-8	SC Pub Svc Au (Santee Cooper) (ref)	543.8	BA Merrill Lynch/Barclays
Oct-26	Grand River Dam Authority (tax/te) (ref)	496.4	Citi
Mar-23	Energy Northwest (tax/te) (ref)	493.9	BA Merrill Lynch/J P Morgan
Aug-11	NYS Utility Debt Securitization Auth	469.3	Various firm
Feb-17	Florida Municipal Power Agcy (FMPPA) (ref)	424.1	BA Merrill Lynch/Wells Fargo

Key to abbreviations: nm — new-money; ref — refunding; tax — taxable; te — tax-exempt. Source: Thomson Reuters (Jan. 18)

## Largest Environmental Facility Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Oct-5	Honolulu City & Co-Hawaii GOs (tax) (ref)	\$378.8	BA Merrill Lynch
Feb-29	Lehigh Co Industrial Dev Auth (ref)	223.8	SunTrust Robinson/Morgan Stanley
Mar-10	Louisiana Public Facs Auth (LPFA) (ref)	198.7	Morgan Stanley
Jun-23	Michigan (State), GOs (ref)	189.0	BA Merrill Lynch
Feb-18	Wisconsin Public Finance Auth (amt) (ref)	161.6	Morgan Stanley
Sep-22	Farmington City-New Mexico (ref)	146.0	Morgan Stanley/J P Morgan
Aug-5	Forsyth City-Montana (ref)	144.7	J P Morgan
May-4	Wisconsin Public Finance Auth (amt) (ref)	143.0	BA Merrill Lynch
Sep-7	Trimble Co-Kentucky (amt)(ref)	125.0	J P Morgan
Nov-2	Hillsborough Co-Florida (amt) (nm/ref)	114.2	J P Morgan

Key to abbreviations: amt — alternative minimum tax; GOs — general obligation bonds; nm — new-money; ref — refunding; te — tax-exempt. Source: Thomson Reuters (Jan. 18)



## General Purpose: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$106,338.7</b>	<b>3,622</b>	<b>\$93,312.1</b>	<b>3,334</b>	<b>+14.0%</b>
First Quarter	24,831.6	733	26,403.0	758	-6.0
Second Quarter	28,987.3	1,116	28,182.5	1,026	+2.9
Third Quarter	29,673.9	943	22,509.0	807	+31.8
Fourth Quarter	22,845.9	830	16,217.6	743	+40.9
General Purpose	106,292.7	3,619	93,312.1	3,334	+13.9
Agriculture	6.2	1	0.0	0	n.m.
Veterans	39.8	2	0.0	0	n.m.
Tax-Exempt	97,379.8	3,313	84,036.7	3,019	+15.9
Taxable	8,761.9	306	9,111.1	307	-3.8
Minimum-Tax	197.0	3	164.3	8	+19.9
New-Money	45,719.6	1,820	40,242.8	1,692	+13.6
Refunding	40,070.1	1,460	32,817.9	1,324	+22.1
Combined	20,549.0	342	20,251.4	318	+1.5
Negotiated	56,985.0	1,626	52,915.3	1,531	+7.7
Competitive	46,055.8	1,758	38,250.0	1,587	+20.4
Private Placements	3,297.9	238	2,146.8	216	+53.6
Revenue	26,300.7	627	29,149.4	616	-9.8
General Obligation	80,038.0	2,995	64,162.7	2,718	+24.7
Fixed Rate	104,507.5	3,593	91,222.0	3,293	+14.6
Variable Rate (Short Put)	1,191.8	20	1,120.4	14	+6.4
Variable Rate (Long/No Put)	250.0	1	0.0	0	n.m.
Zero Coupon	105.1	3	10.2	5	+930.4
Linked Rate	284.3	5	901.1	18	-68.4
Convertible	0.0	0	58.4	4	-100.0
Bond Insurance	5,132.9	440	4,951.2	388	+3.7
Letter of Credit	21.2	1	150.0	2	-85.9
Standby Purchase Agreements	540.7	6	540.0	6	+0.1
Guaranties	414.7	30	495.0	21	-16.2
State Governments	36,658.2	144	23,875.5	107	+53.5
State Agencies	13,189.6	117	13,806.3	114	-4.5
Counties & Parishes	13,734.3	517	12,852.5	480	+6.9
Cities & Towns	31,735.3	2,425	30,709.4	2,283	+3.3
District	2,751.4	216	1,795.5	154	+53.2
Local Authorities	8,028.4	193	10,054.4	187	-20.2
College & Universities	133.1	5	49.6	2	+168.3
Direct Issuer	94.1	3	55.5	3	+69.5
Tribal Governments	14.3	2	113	3	-87.3
Cooperative Utilities	0.0	0	0.4	1	-100.0
Bank Qualifie	6,618.0	1,608	6,262.1	1,526	+5.7
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	28.3	5	42.7	6	-33.7

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Health Care: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$51,051.8</b>	<b>664</b>	<b>\$34,558.2</b>	<b>588</b>	<b>+47.7%</b>
First Quarter	8,047.1	97	9,352.8	132	-14.0
Second Quarter	14,752.7	186	11,712.6	173	+26.0
Third Quarter	14,318.8	177	6,600.0	134	+117.0
Fourth Quarter	13,933.2	204	6,892.8	149	+102.1
General Acute-Care Hosps	42,436.5	422	26,363.5	343	+61.0
Single-SpecialtyHospitals	815.1	13	832.4	16	-2.1
Pediatric Hospitals	965.4	10	1,779.3	14	-45.7
Hospitals Equipment Loans	0.0	0	9.5	1	-100.0
General Medical	526.3	9	868.9	22	-39.4
Continuing Care	5,717.4	161	4,104.4	144	+39.3
Nursing Homes	120.6	15	255.9	11	-52.9
Life Care/Retirement	470.5	34	344.3	37	+36.7
Tax-Exempt	49,323.0	593	33,437.9	525	+47.5
Taxable	1,728.8	71	1,088.6	62	+58.8
Minimum-Tax	0.0	0	31.7	1	-100.0
New-Money	12,936.8	254	8,962.5	250	+44.3
Refunding	20,663.0	280	14,236.9	221	+45.1
Combined	17,452.0	130	11,358.8	117	+53.6
Negotiated	42,209.5	475	26,473.6	384	+59.4
Competitive	737.3	13	432.0	14	+70.7
Private Placements	8,105.0	176	7,652.6	190	+5.9
Revenue	49,616.1	610	32,540.6	528	+52.5
General Obligation	1,435.7	54	2,017.6	60	-28.8
Fixed Rate	45,016.1	563	27,907.4	459	+61.3
Variable Rate (Short Put)	4,049.1	75	2,564.9	55	+57.9
Variable Rate (Long/No Put)	837.0	10	396.0	11	+111.4
Zero Coupon	0.0	0	4.6	1	-100.0
Linked Rate	1,149.6	16	3,681.1	61	-68.8
Convertible	0.0	0	4.2	1	-100.0
Bond Insurance	115.0	12	290.5	4	-60.4
Letter of Credit	429.4	9	268.2	6	+60.1
Standby Purchase Agreements	311.0	5	0.0	0	n.m.
Insured Mortgages	303.0	11	395.9	6	-23.5
Guaranties	44.2	2	39.5	2	+11.9
State Governments	290.8	3	534.6	5	-45.6
State Agencies	28,000.0	269	19,878.7	260	+40.9
Counties & Parishes	2,135.6	52	2,011.7	52	+6.2
Cities & Towns	2,381.5	60	1,165.2	46	+104.4
District	2,537.3	42	1,411.3	32	+79.8
Local Authorities	15,061.3	223	8,817.0	185	+70.8
Colleges & Universities	451.6	7	697.6	5	-35.3
Direct Issuer	193.7	8	42.1	3	+360.1
Bank Qualifie	292.6	45	227.0	41	+28.9
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	0.0	0	n.m.

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## General Purpose

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 BA Merrill Lynch	\$19,986.0
2 Citi	13,364.7
3 J P Morgan	10,031.8
4 Morgan Stanley	7,319.9
5 Wells Fargo	5,061.7
6 Jefferies LLC	3,594.1
7 Raymond James	3,508.6
8 Robert W Baird	3,388.1
9 Ramirez	3,148.4
10 Barclays	3,134.3

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## General Purpose

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Res Adv	\$22,318.4
2 Public Fin Mgmt	16,984.8
3 Hilltop Securities	9,366.2
4 Acacia Financial	6,139.0
5 A C Advisory Inc	2,522.5
6 Davenport	2,518.3
7 Piper Jaffray	2,000.1
8 Capital Mkts Adv	1,474.1
9 Raymond James	1,410.8
10 Montague DeRose	1,194.9

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Health Care

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 BA Merrill Lynch	\$8,082.9
2 J P Morgan	7,437.0
3 Morgan Stanley	6,302.6
4 Ziegler	4,492.1
5 Citi	3,676.9
6 Wells Fargo	2,133.3
7 Barclays	1,930.7
8 Goldman Sachs	1,867.9
9 Piper Jaffray	1,399.8
10 RBC Cap Mkts	1,211.0

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Health Care

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Kaufman Hall	\$8,554.4
2 Ponder	7,086.7
3 Public Fin Mgmt	3,081.3
4 Melio	1,959.8
5 Acacia Financial	1,943.1
6 Hammond Hanlon	1,198.6
7 KNN Pub Fin	996.4
8 Raymond James	962.2
9 Lancaster Pollard	947.6
10 Echo Financial	624.7

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Largest General Purpose Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Mar-8	California (State), GOs (nm/ref)	\$2,951.1	Citi/Goldman Sachs
Mar-8	California (State), GOs (nm/ref)	2,951.1	Citi/Goldman Sachs
Aug-30	California (State), GOs (nm/ref)	2,653.0	J P Morgan/BA Merrill Lynch
Oct-18	California (State), GOs (tax/te) (cpt) (ref)	1,649.1	Various firm
Apr-19	California (State), GOs (tax/te) (cpt) (nmref)	1,467.7	Various firm
Jun-7	Georgia (State), GOs (tax/te) (cpt) (nmref)	1,370.7	Various firm
Oct-13	Illinois (State), GOs (ref)	1,303.1	BA Merrill Lynch/Jefferies
Jun-28	Washington (State), GOs (tax/te) (cpt) (ref)	1,294.5	J P Morgan/BA Merrill Lynch
Aug-9	Pennsylvania (State), GOs (cpt)	1,208.7	Bank of America Merrill Lynch
Feb-22	Florida St Board Admin Fin Corp (tax)	1,200.0	Various firm

Key to abbreviations: GOs – general obligation bonds; nm – new money; ref – refunding. Source: Thomson Reuters (Jan. 18)

## Largest Health Care Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Apr-27	Wisconsin Health and Ed Fac Auth (nm/ref)	\$1,019.8	Morgan Stanley
Jul-26	Illinois Finance Authority (nm/ref)	1,000.0	J P Morgan
Apr-28	California Statewide CDA (CSCDA) (nm/ref)	947.6	BA Merrill Lynch
Sep-14	Michigan Finance Authority (ref)	853.0	Goldman Sachs/J P Morgan
Oct-12	Maricopa Co Industrial Dev Auth (ref)	803.5	J P Morgan/Morgan Stanley
Jul-27	California Health Facs Fin Auth (ref)	748.6	Morgan Stanley
Oct-20	New Jersey Hlth Care Fac Fin Au (nm/ref)	679.1	Citi
Oct-27	California Health Facs Fin Auth (nm/ref)	669.7	Barclays
Oct-5	Tarrant Co Cult Ed Fac Fin Corp (nm/ref)	631.1	Morgan Stanley
Jul-12	Louisville-Jefferson Co Metro Gov (nm/ref)	521.0	J P Morgan/Citi

All issues were for general acute-care hospitals. Key to abbreviations: nm – new money; ref – refunding. Source: Thomson Reuters (Jan. 18)

## Healthcare and Utilities Were the Big Growth Sectors of 2016

BY ROBERT SLAVIN

Healthcare and utilities municipal bond issuance grew by a combined \$27 billion in 2016 year-over-year.

They were the sectors with the first and third biggest growth in terms of par value in the year. The general purpose sector saw a \$13 billion expansion but had a smaller 14% growth.

For the year, healthcare grew 47.7% and utilities grew 25.4%, the first and third largest percent expansions from 2015. Environmental facilities had the second largest percent expansion with 45.4% but only grew by about \$770 million in par value.

Total municipal volume was up 11.2% from a year earlier.

The sectors that saw the greatest percent decreases were electric power (down 17%), public facilities (down 12.9%), and development (down 9.1%). All dollar totals and percentages are for par value of issuance and based on Thomson Reuters data.

The sectors with the greatest amount of issuance were education with \$130.3 billion, general purpose with \$106.3 billion, transportation with \$51.9 billion, utilities with \$51.8 billion, and healthcare with \$51.1 billion.

To explain the increase in healthcare issuance, veteran municipal market analyst and Bond Buyer contributing editor John Hallacy pointed to the Affordable Care Act. This led to increased outpatient facilities use and consequently increased building of these facilities.

In the healthcare sector, general acute care hospital issuance increased 61% and \$16.1 billion and continuing care issuance increased 39.3% and \$1.6 billion.

Mergers and acquisitions increased in 2016 and institutions probably sold bonds to finance them, said Citi municipal strategies team associate Jack Muller. The 25.4% growth in utility issuance was "likely a result of water and sewer issuers repairing their infrastructure," Muller said. "Given the water contamination crisis in one city, other water providers all got a strong reminder that properly functioning and well maintained infrastructure is a must."

Hallacy said that most of the expansion was in refunding volume, with utilities trying to take advantage of the low rates found during most of the year. Refunding grew 11.5% and combined issuance grew 93.5% while new money rose only 6.9%. Drought conditions and population growth in some areas also promoted greater water and sewer bond sales.

Muller explained the electrical sector's 17% decline by saying, "Continuously low natural gas prices have put pressure on electric utilities, because it means power is available for cheap in the wholesale market. The way power utilities deal with finan-

cial pressure is rate increases and cost cutting measures, which means less investment and therefore less debt issuance."

Hallacy said that power refundings are generally very sensitive to rates and were hurt by the increase in rates later in the year. "New money was probably curtailed due to the change in administrations and [concern about] what the new proposed policies would be from the Clean Air [Act] perspective."

In the housing sector refunding was down 7.7% even as it was up 8.3% for all bonds. To explain this, Muller said, "Housing finance agencies today are shifting their business model from lending out mortgages and selling them into the secondary (mortgage-backed securities) market, to lending the mortgages and keeping them on their balance sheets instead. To do this, they have to raise money for the loans in the municipal market. Therefore, the focus for HFAs this year has been new money issuance, rather than refundings."

Though public facilities issuance was down 12.9%, the libraries and museums subsector issuance was up 62.9% in what Hallacy said was a late economic expansion phenomenon. Governments usually green light their projects late in the economic cycle. "Certain select venues have had rising number of visitors and need to expand and to update to stay competitive with other venues," Hallacy said.

The airport subsector of transportation was up 16.5% or about \$2 billion. In this subsector, "airlines are profitable and [there are] good airport utilization statistics, which leads to terminal improvements to help in gate issues and maximize concession spending," said Evercore director of municipal research Howard Cure.

Seaport subsector issuance shot up 46.8% due in part to the United States' "ever expanding trade deficits," Hallacy said. This had led to increased cargo loads passing through the ports triggering greater infrastructure needs for the ports. "The new Super Ships that are traversing the [2016 widened] Panama Canal require ports with deeper drafts. Many efforts are focused at dredging and improving dockside facilities and transfer operations. This activity is especially keen on the East Coast since the ports are in intense competition for business."

Muller agreed that greater use of the seaports probably contributed to the increased sales of bonds.

Environmental facilities issuance's growth of 45.8% was because some Clean Air Act standards were phased in over the last several years, Hallacy said. Some plants were replaced and others fitted with updated equipment. He also noted that while there as a large percent increase, the total was back at the trend line from earlier years. □

## Housing: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$19,937.7</b>	<b>577</b>	<b>\$16,666.6</b>	<b>531</b>	<b>+19.6%</b>
First Quarter	3,407.9	102	2,905.3	93	+17.3
Second Quarter	5,108.4	130	3,970.5	124	+28.7
Third Quarter	5,633.9	165	3,582.2	124	+57.3
Fourth Quarter	5,787.5	180	6,208.6	190	-6.8
Single-Family	9,173.9	359	8,740.8	343	+5.0
Multifamily	10,763.8	218	7,925.8	188	+35.8
Tax-Exempt	14,459.4	442	11,793.5	404	+22.6
Taxable	3,174.3	75	2,939.3	86	+8.0
Minimum-Tax	2,304.0	60	1,933.8	41	+19.1
New-Money	15,213.5	481	11,894.3	420	+27.9
Refunding	2,558.1	66	2,771.7	77	-7.7
Combined	2,166.1	30	2,000.6	34	+8.3
Negotiated	15,997.7	412	13,159.3	398	+21.6
Competitive	258.8	14	316.3	15	-18.2
Private Placements	3,681.2	151	3,191.0	118	+15.4
Revenue	19,371.1	561	14,512.1	494	+33.5
General Obligation	566.6	16	2,154.5	37	-73.7
Fixed Rate	14,343.8	398	11,376.2	375	+26.1
Variable Rate (Short Put)	4,081.0	119	3,397.4	94	+20.1
Variable Rate (Long/No Put)	773.7	44	702.5	33	+10.1
Zero coupon	0.0	0	1.8	1	-100.0
Linked Rate	739.2	16	1,188.7	28	-37.8
Bond Insurance	22.7	3	9.5	1	+138.9
Letter of Credit	1,004.1	20	1,122.7	23	-10.6
Standby Purchase Agreements	634.7	13	642.1	16	-1.2
Insured Mortgages	1,042.7	36	941.2	22	+10.8
Guaranties	2.8	1	2.2	2	+27.3
State Governments	99.7	2	585.7	5	-83.0
State Agencies	15,991.9	430	13,303.4	382	+20.2
Counties & Parishes	1.5	1	51.0	4	-97.1
Cities & Towns	1,321.7	40	335.5	27	+293.9
Local Authorities	2,522.9	104	2,385.1	112	+5.8
Colleges & Universities	0.0	0	0.0	0	n.m.
Direct Issuer	0.0	0	5.9	1	-100.0
Bank Qualifie	24.2	7	41.3	11	-41.4
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	0.0	0	n.m.

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Housing

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 RBC Cap Mkts	\$3,564.0
2 J P Morgan	2,509.6
3 BA Merrill Lynch	1,996.6
4 Citi	1,443.9
5 Stifel Nicolaus	1,260.2
6 Barclays	1,106.1
7 Morgan Stanley	898.5
8 Raymond James	445.0
9 Jefferies LLC	436.4
10 Bk of New York	357.0

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Housing

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 CSG Advisors	\$3,051.8
2 Caine Mitter	1,598.6
3 Lamont Fin Svcs	825.9
4 RBC Cap Mkts	551.2
5 Acacia Financial	459.9
6 George K Baum	382.5
7 Public Res Adv	365.1
8 Public Fin Mgmt	292.5
9 Montague DeRose	266.9
10 UBS Securities	192.0

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Largest Housing Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Dec-8	NYC Housing Dev Corp (tax/te)	\$503.7	Various firm
Sep-23	Michigan State Housing Dev Auth (amt)	377.0	Barclays
Mar-10	NYC Housing Dev Corp	376.2	Various firm
Aug-25	Maryland Dept of Hsg & Comm Dev Admin (tax) (nm/ref)	325.8	J P Morgan
Aug-11	Michigan State Housing Dev Auth (amt/tax/te) (ref)	305.0	BA Merrill Lynch
Jun-22	NYS Housing Fin-Mortgage Agcy	302.7	Morgan Stanley
Sep-1	Pennsylvania Housing Fin Agency (nm/ref)	254.8	Jefferies
Jan-14	Texas Veterans Land Board GOs	250.0	BNY Cap Mkts
Nov-30	San Francisco City/Co-California (tax/te)	240.3	Goldman Sachs/ Citi
Jun-21	California Housing Finance Agcy (tax) (ref)	236.4	BA Merrill Lynch/RBC Cap Mkts

Key to abbreviations: amt — alternative minimum tax; cpt — competitive; nm — new money; ref — refunding; tax — taxable; te — tax exempt. Source: Thomson Reuters (Jan. 18)



## Public Facilities: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$9,985.9</b>	<b>513</b>	<b>\$11,466.2</b>	<b>523</b>	<b>-12.9%</b>
First Quarter	1,652.1	120	1,991.9	118	-17.1
Second Quarter	2,167.7	127	2,310.2	144	-6.2
Third Quarter	4,045.2	142	3,840.3	124	+5.3
Fourth Quarter	2,120.9	124	3,323.8	137	-36.2
Libraries & Museums	1,183.5	64	726.6	41	+62.9
Government Buildings	1,127.9	75	2,035.7	68	-44.6
Fire Stations & Equipment	471.9	99	404.6	108	+16.6
Correctional Facilities	1,097.2	51	1,493.6	57	-26.5
Police Stations & Equipment	222.6	6	85.9	9	+159.1
Civic & Convention Centers	2,038.3	28	3,101.4	38	-34.3
Stadium & Sports Complexes	1,611.7	27	1,789.9	24	-10.0
Theaters	390.7	8	42.3	2	+823.6
Park, Zoos & Beaches	938.0	119	1,362.5	132	-31.2
Other Recreation	904.1	36	423.7	44	+113.4
Tax-Exempt	9,028.3	471	9,772.0	480	-7.6
Taxable	957.6	42	1,694.2	43	-43.5
Minimum-Tax	0.0	0	0.0	0	n.m.
New-Money	4,387.4	285	4,779.4	271	-8.2
Refunding	4,381.1	198	4,852.9	206	-9.7
Combined	1,217.4	30	1,833.9	46	-33.6
Negotiated	7,482.7	286	7,645.4	306	-2.1
Competitive	2,099.8	178	2,882.6	181	-27.2
Private Placements	403.4	49	938.2	36	-57.0
Revenue	7,769.5	226	8,914.9	219	-12.8
General Obligation	2,216.4	287	2,551.3	304	-13.1
Fixed Rate	9,338.6	506	10,949.6	518	-14.7
Variable Rate (Short Put)	120.2	2	0.0	0	n.m.
Variable Rate (Long/No Put)	25.0	1	0.0	0	n.m.
Zero Coupon	502.1	4	88.6	3	+466.7
Linked Rate	0.0	0	428.0	2	-100.0
Convertible	0.0	0	0.0	0	n.m.
Bond Insurance	852.8	58	907.2	76	-6.0
Letter of Credit	0.0	0	0.0	0	n.m.
Standby Purchase Agreements	0.0	0	0.0	0	n.m.
Guaranties	82.1	6	48.8	4	+68.2
State Governments	473.5	9	291.7	11	+62.3
State Agencies	969.0	29	2,576.9	40	-62.4
Counties & Parishes	1,690.7	66	914.3	59	+84.9
Cities & Towns	1,673.0	107	1,984.2	98	-15.7
District	1,598.4	189	1,190.9	189	+34.2
Local Authorities	3,581.3	113	4,395.6	124	-18.5
Colleges & Universities	0.0	0	18.8	1	-100.0
Direct Issuer	0.0	0	93.8	1	-100.0
Bank Qualifie	1,012.2	256	926.1	261	+9.3
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	3.2	1	-100.0

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Transportation: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$51,911.1</b>	<b>485</b>	<b>\$48,255.8</b>	<b>499</b>	<b>+7.6%</b>
First Quarter	8,266.1	85	11,677.5	120	-29.2
Second Quarter	16,052.2	127	9,105.5	127	+76.3
Third Quarter	13,333.0	146	13,152.6	132	+1.4
Fourth Quarter	14,259.8	127	14,320.2	120	-0.4
Airport	13,424.0	86	11,518.9	122	+16.5
Seaport	2,136.2	40	1,455.1	23	+46.8
Toll Roads, Hwys & Streets	18,324.8	240	18,339.1	231	-0.1
Bridges	2,424.6	12	3,260.0	14	-25.6
Tunnels	321.5	1	0.0	0	n.m.
Parking Facilities	479.4	28	401.1	23	+19.5
Mass Transportaions	14,800.6	78	13,281.6	86	+11.4
Tax-Exempt	42,278.4	401	38,930.1	395	+8.6
Taxable	2,268.3	45	1,118.5	42	+102.8
Minimum-Tax	7,364.4	39	8,207.2	62	-10.3
New-Money	23,040.0	251	18,776.1	278	+22.7
Refunding	22,160.0	185	21,779.5	181	+1.7
Combined	6,711.1	49	7,700.2	40	-12.8
Negotiated	43,251.1	316	40,573.6	311	+6.6
Competitive	6,199.1	124	5,729.1	151	+8.2
Private Placements	2,460.9	45	1,953.1	37	+26.0
Revenue	42,179.0	275	41,511.5	273	+1.6
General Obligation	9,732.1	210	6,744.3	226	+44.3
Fixed Rate	50,280.0	470	45,261.7	472	+11.1
Variable Rate (Short Put)	380.0	2	1,727.2	9	-78.0
Variable Rate (Long/No Put)	507.1	3	521.6	5	-2.8
Zero Coupon	248.8	5	115.1	3	+116.2
Linked Rate	495.2	5	630.2	10	-21.4
Convertible	0.0	0	0.0	0	n.m.
Bond Insurance	1,680.1	59	798.1	50	+110.5
Letter of Credit	0.0	0	650.0	3	-100.0
Standby Purch Agreement	144.2	1	106.1	1	+35.9
Guaranties	158.8	4	481.9	6	-67.0
State Governments	4,711.4	31	5,060.6	25	-6.9
State Agencies	27,067.3	95	22,647.3	87	+19.5
Counties & Parishes	2,581.7	48	2,813.6	57	-8.2
Cities & Towns	4,240.1	109	4,894.7	152	-13.4
District	1,820.4	72	1,284.7	47	+41.7
Local Authorities	11,490.2	130	11,554.9	131	-0.6
Direct Issuer	0.0	0	0.0	0	n.m.
Bank Qualifie	363.2	115	340.5	119	+6.7
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	7.1	1	4.9	1	+44.9

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Public Facilities

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 Citi	\$1,472.3
2 BA Merrill Lynch	994.0
3 Goldman Sachs	859.6
4 Morgan Stanley	752.3
5 RBC Cap Mkts	670.2
6 Stifel Nicolaus	622.9
7 Piper Jaffray	554.3
8 Robert W Baird	521.0
9 Ramirez	309.8
10 Raymond James	294.3

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Public Facilities

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Fin Mgmt	\$1,391.9
2 Hilltop Securities	835.4
3 Public Res Adv	656.7
4 Ross Sinclair	371.8
5 North Slope Cap Adv	271.8
6 KNN Public Finance	262.3
7 Robert W Baird	258.7
8 Acacia Financial	203.7
9 Columbia Cap Mgmt	196.0
10 Raymond James	191.4

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Transportation

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 BA Merrill Lynch	\$12,213.3
2 Citi	8,085.4
3 Wells Fargo	4,943.8
4 Morgan Stanley	4,634.6
5 J P Morgan	4,134.4
6 Goldman Sachs	2,650.9
7 RBC Cap Mkts	1,902.9
8 Barclays	1,691.9
9 Siebert Cisneros	1,662.7
10 Ramirez	1,550.5

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Transportation

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Fin Mgmt	\$16,301.1
2 Frasca	4,408.6
3 Hilltop Securities	4,027.7
4 Public Res Adv	3,572.1
5 Estrada Hinojosa	3,269.0
6 G-Entry Principle	1,356.6
7 Acacia Financial	1,165.8
8 Columbia Cap Mgmt	1,068.9
9 Piper Jaffray	1,043.8
10 Jefferies LLC	885.2

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Largest Public Facility Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Aug-16	Brooklyn Arena Loc Dev Corp (tax/te) (ref)	\$493.7	Goldman Sachs
Jul-21	Columbus City-Ohio GOs (tax) (cpt)	481.4	PNC Cap Mkts
Sep-14	NY Convention Center Dev Corp	420.2	Citi
Mar-23	Denver City and Co-Colorado (tax/te) (nm/ref)	397.3	Citi/Stifel Nicolaus
Nov-4	Sumter Landing Comm Dev Dt (tax)	351.8	Citi
Apr-7	Kansas City-Missouri (ref)	333.8	Citi
Aug-3	Hamilton Co-Ohio (ref)	324.0	RBC Cap Mkts
Jul-15	Miami-Dade Co-Florida (ref)	309.8	Ramirez
Nov-29	Orange Co-Florida (cpt)	291.7	BA Merrill Lynch
Jul-21	NYC Trust for Cultural Resources (nm/ref)	278.4	Goldman Sachs

Key to abbreviations: GOs – general obligation bonds; nm – new-money; ref – refunding; tax – taxable; te – tax-exempt. Source: Thomson Reuters (Jan. 18)

## Largest Transportation Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Oct-26	New Jersey Trans Trust Fund Au GOs	\$2,741.4	BA Merrill Lynch
May-17	New York Transportation Dev Corp (tax)	2,410.4	Citi/Wells Fargo
Mar-9	Empire State Development Corp (ref)	1,654.9	Various firm
Jun-28	Washington (State), GOs (cpt) (ref)	1,294.5	BA Merrill Lynch
Nov-30	Chicago City-Illinois (amt)	1,117.3	Morgan Stanley
Sep-15	Metropolitan Transport Auth (MTA)	1,057.4	Goldman Sachs
Nov-3	Chicago City-Illinois (amt) (nm/ref)	1,014.3	BA Merrill Lynch
Jun-1	Pennsylvania (State) GOs (cpt)	988.2	Citi
May-12	North Texas Tollway Auth (NTTA) (ref)	987.8	J P Morgan
Sep-15	San Francisco City & Co Airport Comm (amt) (nm/ref)	887.9	Goldman Sachs/Barclays

Key to abbreviations: amt – alternative minimum tax; GOs – general obligation bonds; nm – new-money; ref – refunding; tax – taxable; te – tax-exempt. Source: Thomson Reuters (Jan. 18)



## Utilities: Full Year

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$51,840.7</b>	<b>1,661</b>	<b>\$41,329.6</b>	<b>1,529</b>	<b>+25.4%</b>
First Quarter	11,637.7	348	10,268.6	363	+13.3
Second Quarter	14,264.0	473	11,332.0	443	+25.9
Third Quarter	12,812.9	435	8,924.7	359	+43.6
Fourth Quarter	13,126.1	405	10,804.3	364	+21.5
Water & Sewer	46,365.0	1,421	37,725.7	1,317	+22.9
Gas	1,619.5	11	417.0	15	+288.4
Telephone	283.8	13	525.2	15	-46.0
Sanitation	874.0	105	510.8	87	+71.1
Flood Control	607.7	48	1,017.6	53	-40.3
Combined-Utilities	2,090.7	63	1,133.3	42	+84.5
Tax-Exempt	50,473.5	1,589	40,058.1	1,463	+26.0
Taxable	1,143.0	63	1,231.7	63	-7.2
Minimum-Tax	224.2	9	39.8	3	+463.3
New-Money	14,731.0	698	13,775.6	683	+6.9
Refunding	22,065.1	777	19,781.0	694	+11.5
Combined	15,044.6	186	7,773.0	152	+93.5
Negotiated	37,503.2	989	30,676.7	944	+22.3
Competitive	11,914.3	561	8,231.5	475	+44.7
Private Placements	2,423.2	111	2,421.4	110	+0.1
Revenue	44,352.1	961	35,032.6	854	+26.6
General Obligation	7,488.6	700	6,297.0	675	+18.9
Fixed Rate	50,085.5	1,631	39,870.0	1,498	+25.6
Variable Rate (Short Put)	817.7	12	769.7	9	+6.2
Variable Rate (Long/No Put)	823.0	6	301.5	5	+173.0
Zero Coupon	7.3	10	12.3	12	-40.7
Linked Rate	107.2	2	376.1	5	-71.5
Convertible	0.0	0	0.0	0	n.m.
Bond Insurance	4,673.9	472	5,051.9	506	-7.5
Letter of Credit	109.6	3	0.0	0	n.m.
Standby Purchase Agreements	400.0	2	355.0	5	+12.7
Insured Mortgages	193.3	1	0.0	0	n.m.
Guaranties	59.5	13	24.3	9	+144.9
State Governments	320.3	5	607.3	6	-47.3
State Agencies	6,906.1	54	5,401.6	63	+27.9
Counties & Parishes	3,743.5	68	2,825.4	59	+32.5
Cities & Towns	14,754.0	595	14,944.2	531	-1.3
District	10,756.6	662	8,510.7	616	+26.4
Local Authorities	15,244.3	276	8,992.2	251	+69.5
Indian Tribe	0.0	0	0.0	0	n.m.
Direct Issuer	115.9	1	48.2	3	+140.5
Cooperative Utilities	0.0	0	0.0	0	n.m.
Bank Qualifie	3,316.0	815	3,089.6	770	+7.3
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	12.9	2	10.3	3	+25.2

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Utilities

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 Citi	\$7,545.8
2 BA Merrill Lynch	7,518.4
3 J P Morgan	5,563.8
4 Wells Fargo	4,900.1
5 Morgan Stanley	3,670.9
6 RBC Cap Mkts	2,387.8
7 Goldman Sachs	2,378.1
8 Raymond James	2,333.5
9 Piper Jaffray	1,422.0
10 Stifel Nicolaus	1,166.1

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Utilities

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Fin Mgmt	\$11,494.5
2 Hilltop Securities	6,527.9
3 Public Res Adv	2,609.2
4 Montague DeRose	2,224.0
5 Piper Jaffray	1,915.8
6 Jefferies LLC	1,187.6
7 Davenport	991.4
8 Lamont Fin Svcs	848.6
9 Estrada Hinojosa	843.3
10 Acacia Financial	789.1

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Largest Utility Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Feb-10	Houston City-Texas (nm/ref)	\$955.1	Wells Fargo
Oct-14	Great Lakes Water Authority (nm/ref)	917.8	Citi/Goldman Sachs
Oct-6	San Francisco City/Co Public Util Comm (nm/ref)	893.8	J P Morgan
Apr-15	Massachusetts Water Resources Au (ref)	747.6	Citi
Oct-19	Connecticut (State), GOs	650.0	Various firm
Apr-7	Los Angeles Dept of Wtr & Power (nm/ref)	628.6	Wells Fargo/BA Merrill Lynch
Mar-10	Las Vegas Valley Water Dt GOs (nm/ref)	606.0	Morgan Stanley/Citi
Sep-20	Texas Water Development Board	600.1	BA Merrill Lynch
Feb-23	Lower Alabama Gas Dt	599.4	Goldman Sachs
May-25	San Diego Public Facs Fin Auth (nm/ref)	564.0	J P Morgan

Key to abbreviations: amt — alternative minimum tax; cpt — competitive; nm — new money; pvt — private placement; ref — refunding; te — tax exempt. Source: Thomson Reuters (Jan. 18)

## Bank-Qualified Bonds: Full Yea

	2016		2015		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
<b>Total</b>	<b>\$22,799.4</b>	<b>5,349</b>	<b>\$22,665.9</b>	<b>5,418</b>	<b>+0.6%</b>
First Quarter	5,513.0	1,258	6,098.0	1,379	-9.6
Second Quarter	6,707.3	1,686	6,549.8	1,690	+2.4
Third Quarter	5,417.6	1,244	4,804.0	1,168	+12.8
Fourth Quarter	5,161.5	1,161	5,214.1	1,181	-1.0
Development	232.2	49	272.4	69	-14.8
Education	10,749.8	2,400	11,343.5	2,580	-5.2
Electric Power	180.0	51	140.1	36	+28.5
Environmental Facilities	11.2	3	23.3	5	-51.9
Healthcare	292.6	45	227.0	41	+28.9
Housing	24.2	7	41.3	11	-41.4
Public Facilities	1,012.2	256	926.1	261	+9.3
Transportation	363.2	115	340.5	119	+6.7
Utilities	3,316.0	815	3,089.6	770	+7.3
General Purpose	6,618.0	1,608	6,262.1	1,526	+5.7
Tax-Exempt	22,799.4	5,349	22,663.1	5,416	+0.6
Taxable	0.0	0	0.0	0	n.m.
Minimum-Tax	0.0	0	2.8	2	-100.0
New-Money	10,516.1	2,736	10,003.9	2,781	+5.1
Refunding	10,805.4	2,336	11,181.7	2,349	-3.4
Combined	1,477.9	277	1,480.3	288	-0.2
Negotiated	12,569.1	2,700	12,834.9	2,757	-2.1
Competitive	9,682.0	2,484	9,280.5	2,486	+4.3
Private Placements	548.3	165	550.5	175	-0.4
Revenue	4,295.5	922	4,047.4	915	+6.1
General Obligation	18,503.9	4,427	18,618.5	4,503	-0.6
Fixed Rate	22,748.3	5,283	22,599.5	5,326	+0.7
Variable Rate (Short Put)	0.0	0	2.1	1	-100.0
Variable Rate (Long/No Put)	0.0	0	0.0	0	n.m.
Zero Coupon	49.1	65	59.3	90	-17.2
Linked Rate	0.0	0	5.0	1	-100.0
Convertible	2.0	1	0.0	0	n.m.
Bond Insurance	4,934.7	944	5,138.1	986	-4.0
Letter of Credit	0.0	0	2.1	1	-100.0
Standby Purchase Agreements	0.0	0	0.0	0	n.m.
Insured Mortgages	24.2	5	0.0	0	n.m.
Guaranties	4,566.9	925	4,772.4	945	-4.3
Other Enhancements	0.0	0	0.0	0	n.m.
State Governments	0.0	0	2.3	1	-100.0
State Agencies	95.6	24	87.4	32	+9.4
Counties & Parishes	1,377.2	275	1,245.5	255	+10.6
Cities & Towns	6,684.5	1,739	6,287.7	1,679	+6.3
District	12,818.6	2,981	13,280.6	3,100	-3.5
Local Authorities	1,631.4	298	1,591.4	318	+2.5
Colleges & Universities	169.7	29	138.8	26	+22.3
Direct Issuer	22.4	3	31.9	6	-29.8
Cooperative Utilities	0.0	0	0.3	1	-100.0
Bank Qualifie	22,799.4	5,349	22,665.9	5,418	+0.6
Qualified Sch Constructio	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	2.9	1	-100.0

Notes: Figures are based on issues maturing in 13 months or longer. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful. Source: Thomson Reuters (Jan. 18)

## Bank-Qualified Bond

Senior Managers: Full Year 2016

Manager	Amt (\$mill)
1 Robert W Baird	\$2,189.0
2 Stifel Nicolaus	1,898.7
3 Raymond James	1,729.9
4 RBC Capital Mkts	1,390.4
5 Piper Jaffray	1,384.7
6 D A Davidson	1,099.1
7 FTN Fin Cap Mkts	1,049.1
8 Roosevelt & Cross	881.7
9 Janney Montgomery	823.9
10 BOKF NA	710.6

Private placements, short-term notes, and remarketings are excluded. In issues with multiple book-runners, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

## Bank-Qualified Bond

Financial Advisors: Full Year 2016

Advisor	Amt (\$mill)
1 Public Fin Mgmt	\$1,919.4
2 Hilltop Securities	1,385.0
3 Ehlers	1,033.5
4 Phoenix Adv	492.0
5 Samco Cap Mkts	432.7
6 Robert W Baird	430.3
7 Umbaugh	419.7
8 Springsted	386.8
9 Piper Jaffray	384.4
10 PMA Securities	370.8

Private placements, short-term notes, and remarketings are excluded. In issues with co-advisors, the par amount of the issue is divided equally among the firms. Source: Thomson Reuters (Jan. 18)

**Top Senior Managers: All Issues**

Full Year 2016 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Bank of America Merrill Lynch	\$65,916.1	15.6%	518
2	Citi	48,895.9	11.5	529
3	J P Morgan Securities LLC	41,510.2	9.8	402
4	Morgan Stanley	33,894.3	8.0	388
5	Wells Fargo & Co	26,086.4	6.2	326
6	RBC Capital Markets	23,608.9	5.6	717
7	Stifel Nicolaus & Co Inc	17,818.1	4.2	918
8	Raymond James	17,775.4	4.2	802
9	Barclays	17,063.4	4.0	128
10	Piper Jaffray & Co	16,421.6	3.9	676

This is Thomson Reuters's "AT1" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. The full par amount of an issue is credited to the book-running manager; in issues with multiple k-runners, each firm is credited with the allocation that it received

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Financial Advisors: All Issues**

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Public Financial Management Inc	\$73,300.7	20.8%	1,166
2	Hilltop Securities	34,965.9	9.9	888
3	Public Resources Advisory Group	33,487.2	9.5	159
4	Acacia Financial Group Inc	13,778.3	3.9	183
5	Kaufman Hall & Associates Inc	8,554.4	2.4	47
6	KNN Public Finance	8,112.1	2.3	89
7	Piper Jaffray & Co	7,792.3	2.2	218
8	Ponder & Co	7,386.0	2.1	53
9	RBC Capital Markets	6,676.5	1.9	172
10	Estrada Hinojosa & Company Inc	5,747.7	1.6	97

This is Thomson Reuters's "AT7" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with multiple advisors, the par amount is divided equally among the firms

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Senior Managers: Negotiated Issues**

Full Year 2016 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Bank of America Merrill Lynch	\$44,754.2	13.8%	337
2	Citi	35,259.5	10.8	288
3	J P Morgan Securities LLC	29,806.6	9.2	243
4	Morgan Stanley	25,068.0	7.7	228
5	RBC Capital Markets	22,678.8	7.0	650
6	Wells Fargo & Co	18,936.0	5.8	220
7	Stifel Nicolaus & Co Inc	16,924.3	5.2	801
8	Goldman Sachs & Co	15,536.1	4.8	88
9	Barclays	15,419.5	4.7	117
10	Piper Jaffray & Co	14,203.3	4.4	519

This is Thomson Reuters's "AT3" league table for negotiated offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. The full par amount of an issue is credited to the book-running manager; in issues with multiple book-runners, each firm is credited with the allocation that it received

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Financial Advisors: Negotiated Issues**

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Public Financial Management Inc	\$55,574.7	21.5%	679
2	Hilltop Securities	27,759.7	10.7	521
3	Public Resources Advisory Group	20,867.0	8.1	71
4	Acacia Financial Group Inc	10,800.6	4.2	131
5	Kaufman Hall & Associates Inc	8,554.4	3.3	47
6	KNN Public Finance	7,230.7	2.8	70
7	Ponder & Co	6,932.3	2.7	50
8	RBC Capital Markets	5,394.3	2.1	120
9	Estrada Hinojosa & Company Inc	5,253.3	2.0	87
10	Frasca & Associates	5,002.2	1.9	20

This is Thomson Reuters's "AT7b" league table for negotiated offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with multiple advisors, the par amount is divided equally among the firms.

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Senior Managers: Competitive Issues**

Full Year 2016 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Bank of America Merrill Lynch	\$21,161.9	21.5%	181
2	Citi	13,636.4	13.8	241
3	J P Morgan Securities LLC	11,703.6	11.9	159
4	Morgan Stanley	8,826.3	9.0	160
5	Robert W Baird & Co Inc	7,528.1	7.6	638
6	Wells Fargo & Co	7,150.4	7.3	106
7	Raymond James	4,053.8	4.1	353
8	Hutchinson Shockey Erley & Co	2,324.1	2.4	123
9	Piper Jaffray & Co	2,218.3	2.3	157
10	FTN Financial Capital Markets	1,886.2	1.9	201

This is Thomson Reuters's "AT4" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. The full par amount of an issue is credited to the book-running manager; in issues with multiple book-runners, each firm is credited with the allocation that it received

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Financial Advisors: Competitive Issues**

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Public Financial Management Inc	\$17,726.0	18.7%	487
2	Public Resources Advisory Group	12,620.2	13.3	88
3	Hilltop Securities	7,206.3	7.6	367
4	Piper Jaffray & Co	4,339.7	4.6	146
5	Davenport & Company LLC	3,271.2	3.5	65
6	Acacia Financial Group Inc	2,977.7	3.1	52
7	Ehlers & Associates	2,842.4	3.0	391
8	Springsted Incorporated	2,297.8	2.4	196
9	Capital Markets Advisors LLC	1,865.1	2.0	128
10	Montague DeRose & Associates LLC	1,748.4	1.9	17

This is Thomson Reuters's "AT7c" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with multiple advisors, the par amount is divided equally among the firms.

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Senior Managers: Small Issues**

Full Year 2016 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Robert W Baird & Co Inc	\$2,915.3	10.0%	631
2	Stifel Nicolaus & Co Inc	2,377.5	8.1	434
3	Raymond James	2,178.6	7.4	442
4	RBC Capital Markets	1,796.1	6.1	302
5	Piper Jaffray & Co	1,735.1	5.9	325
6	D A Davidson & Co	1,224.5	4.2	300
7	Roosevelt & Cross Inc	1,178.2	4.0	291
8	FTN Financial Capital Markets	1,156.2	4.0	199
9	Janney Montgomery Scott LLC	1,041.8	3.6	149
10	BOKF NA	801.1	2.7	209

This is Thomson Reuters's "AT2" league table for small-issue offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. The full par amount of an issue is credited to the book-running manager; in issues with multiple book-runners, each firm is credited with the allocation that it received

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Financial Advisors: Small Issues**

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Public Financial Management Inc	\$2,305.0	11.6%	414
2	Hilltop Securities	1,908.5	9.6	380
3	Ehlers & Associates	1,288.8	6.5	341
4	Phoenix Advisors LLC	619.2	3.1	105
5	Robert W Baird & Co Inc	601.2	3.0	125
6	Springsted Incorporated	583.5	2.9	131
7	Umbaugh LLP	583.3	2.9	137
8	Piper Jaffray & Co	497.3	2.5	100
9	Samco Capital Markets	479.1	2.4	86
10	PMA Securities Inc	460.3	2.3	91

This is Thomson Reuters's "AT7a" league table for small-issue offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with multiple advisors, the par amount is divided equally among the firms.

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Co-Managers: All Issues**

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Wells Fargo & Co	\$15,378.0	3.6%	427
2	Bank of America Merrill Lynch	13,857.2	3.3	340
3	J P Morgan Securities LLC	13,827.1	3.3	365
4	Raymond James	12,198.4	2.9	613
5	RBC Capital Markets	12,168.7	2.9	417
6	Morgan Stanley	11,892.4	2.8	486
7	Siebert Cisneros Shank & Co LLC	11,189.8	2.6	369
8	Citi	10,846.7	2.6	408
9	Ramirez & Co Inc	10,033.7	2.4	730
10	Loop Capital Markets	9,328.0	2.2	949

This is Thomson Reuters's "AT12" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. The par amount of each issue is divided equally among the co-managers.

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

**Top Issuers: All Issues**

Full Year 2016

Rank	Firm	Volume	Market Share	Issues
1	California	\$8,920.7	2.1%	13
2	NYS Dorm Authority	5,916.9	1.4	37
3	Metropolitan Transport Auth (MTA)	5,191.7	1.2	12
4	Massachusetts	4,826.0	1.1	24
5	NYC Transitional Finance Auth	4,750.0	1.1	14
6	Massachusetts Dev Finance Agcy	4,131.7	1.0	24
7	New York City-New York	3,882.0	0.9	11
8	Connecticut	3,656.7	0.9	30
9	Chicago City-Illinois	3,524.0	0.8	13
10	Illinois	3,361.9	0.8	8

Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded.

Source: Thomson Reuters (as compiled by The Bond Buyer on Jan. 3)

## Top Bond Counsel: All Issues

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$40,443.8	9.6%	454
2	Hawkins Delafield & Wood LL	21,278.1	5.0	349
3	Norton Rose Fulbright	17,792.5	4.2	354
4	Kutak Rock LLP	16,489.9	3.9	464
5	McCall Parkhurst & Horton LLP	15,026.7	3.6	480
6	Chapman and Cutler LLP	10,761.7	2.6	436
7	Stradling Yocca Carlson & Rauth	10,716.3	2.5	226
8	Squire Patton Boggs	10,302.2	2.4	183
9	Gilmore & Bell PC	8,081.1	1.9	457
10	Bracewell LLP	7,627.0	1.8	132

This is Thomson Reuters's "AT5" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with co-counsel, the par amount is divided equally among the firms.  
Source: Thomson Reuters (Jan. 13)

## Top Underwriter's Counsel: All Issues

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Hawkins Delafield & Wood LL	\$24,214.5	8.2%	135
2	Norton Rose Fulbright	18,398.6	6.2	384
3	Stradling Yocca Carlson & Rauth	13,148.2	4.4	185
4	Kutak Rock LLP	12,730.6	4.3	287
5	Orrick Herrington & Sutcliffe LLP	12,264.9	4.1	137
6	Nixon Peabody LLP	10,552.8	3.6	110
7	Squire Patton Boggs	8,878.9	3.0	116
8	Andrews Kurth Kenyon LLP	8,744.5	2.9	206
9	Greenberg Traurig LLP	7,097.1	2.4	127
10	Bracewell LLP	6,376.9	2.2	91

This is Thomson Reuters's "AT6" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with co-counsel, the par amount is divided equally among the firms.  
Source: Thomson Reuters (Jan. 13)

## Top Bond Counsel: All Issues

Full Year 2016 - Full Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$41,609.4	9.8%	454
2	Hawkins Delafield & Wood LL	25,187.2	6.0	349
3	Norton Rose Fulbright	19,612.0	4.6	356
4	Kutak Rock LLP	18,105.9	4.3	464
5	McCall Parkhurst & Horton LLP	16,664.3	3.9	485
6	Chapman and Cutler LLP	12,953.5	3.1	436
7	Squire Patton Boggs	12,905.3	3.1	183
8	Stradling Yocca Carlson & Rauth	10,870.5	2.6	226
9	D Seaton & Associates	9,721.2	2.3	28
10	Nixon Peabody LLP	9,638.8	2.3	72

This is a modified version of Thomson Reuters's "AT5" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with co-counsel, each firm is credited with the full par amount of the issue.  
Source: Thomson Reuters (Jan. 13)

## Top Underwriter's Counsel: All Issues

Full Year 2016 - Full Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Hawkins Delafield & Wood LL	\$24,789.5	8.3%	135
2	Norton Rose Fulbright	18,797.4	6.3	384
3	Stradling Yocca Carlson & Rauth	13,148.2	4.4	185
4	Kutak Rock LLP	12,994.4	4.4	287
5	Orrick Herrington & Sutcliffe LLP	12,847.8	4.3	137
6	Squire Patton Boggs	11,035.8	3.7	116
7	Nixon Peabody LLP	10,723.7	3.6	110
8	Andrews Kurth Kenyon LLP	9,282.5	3.1	206
9	Winston & Strawn	8,361.0	2.8	26
10	Bracewell LLP	7,916.3	2.7	91

This is a modified version of Thomson Reuters's "AT6" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with co-counsel, each firm is credited with the full par amount of the issue.  
Source: Thomson Reuters (Jan. 13)

## Top Bond Counsel: Negotiated Issues

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$34,150.2	10.6%	345
2	Hawkins Delafield & Wood LL	17,138.4	5.3	211
3	Norton Rose Fulbright	14,180.4	4.4	222
4	Kutak Rock LLP	13,422.6	4.2	420
5	McCall Parkhurst & Horton LLP	12,846.4	4.0	328
6	Squire Patton Boggs	8,965.0	2.8	154
7	Stradling Yocca Carlson & Rauth	8,957.0	2.8	195
8	Chapman and Cutler LLP	7,897.4	2.4	292
9	Andrews Kurth Kenyon LLP	6,919.1	2.1	102
10	Bracewell LLP	6,508.9	2.0	92

This is Thomson Reuters's "AT5a" league table for negotiated offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with co-counsel, the par amount is divided equally among the firms.  
Source: Thomson Reuters (Jan. 13)

## Top Disclosure Counsel: All Issues

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$21,935.7	14.2%	178
2	Stradling Yocca Carlson & Rauth	11,256.2	7.3	202
3	Hawkins Delafield & Wood LL	9,526.6	6.2	55
4	Kutak Rock LLP	8,750.6	5.7	198
5	Chapman and Cutler LLP	6,200.6	4.0	275
6	Nixon Peabody LLP	6,022.6	3.9	37
7	Greenberg Traurig LLP	4,344.7	2.8	43
8	Mintz Levin Cohn Ferris Glovsky & Popeo PC	4,259.9	2.8	13
9	McCall Parkhurst & Horton LLP	4,054.8	2.6	104
10	Squire Patton Boggs	3,739.3	2.4	59

This is Thomson Reuters's "AT23" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with co-counsel, each firm is credited with the full par amount of the issue.  
Source: Thomson Reuters (Jan. 13)

## Top Bond Counsel: Competitive Issues

Full Year 2016 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$6,293.6	6.4%	109
2	Hawkins Delafield & Wood LL	4,139.7	4.2	138
3	Norton Rose Fulbright	3,612.1	3.7	132
4	Foster Pepper PLLC	3,315.2	3.4	19
5	Kutak Rock LLP	3,067.3	3.1	44
6	Sherman & Howard	2,886.5	2.9	41
7	Chapman and Cutler LLP	2,864.3	2.9	144
8	Mintz Levin Cohn Ferris Glovsky & Popeo PC	2,834.8	2.9	13
9	Ballard Spahr LLP	2,787.8	2.8	18
10	Locke Lord LLP	2,558.1	2.6	188

This is Thomson Reuters's "AT5b" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. In issues with co-counsel, the par amount is divided equally among the firms.  
Source: Thomson Reuters (Jan. 13)

## Top Letter-of-Credit Providers: All Issues

Full Year 2016 - Ranked by Enhanced Amount

Rank	Firm	Volume	Market Share	Issues
1	Bank of China Ltd	\$578.1	28.1%	9
2	Bank of America	199.2	9.7	1
3	BMO Bancorp	190.3	9.2	4
4	PNC Bank NA	150.7	7.3	1
5	Barclays	144.9	7.0	1
6	Landesbank Hessen-Thuringen	140.0	6.8	1
7	The Bank of New York Mellon	107.0	5.2	1
8	J P Morgan Chase	101.4	4.9	3
9	US Bank NA	82.8	4.0	3
10	KB Financial Group Inc	80.0	3.9	1

This is Thomson Reuters's "AT29" league table modified to include domestic and foreign banks. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. Each firm is credited with the actual amount that it enhanced within the issue.  
Source: Thomson Reuters (Jan. 3)

## Top Trustee Banks: All Issues

Full Year 2016 - Ranked by Dollar Volume

Rank	Firm	Volume	Market Share	Issues
1	The Bank of New York Mellon	\$79,200.5	36.7%	774
2	US Bank NA	77,005.0	35.7	1,189
3	Wells Fargo Bank	21,101.2	9.8	259
4	Manufacturers & Traders Tr Co	6,647.4	3.1	157
5	Zions Bank	6,247.2	2.9	133
6	Regions Bank	5,134.4	2.4	143
7	UMB Bank NA	3,078.2	1.4	193
8	BOKF NA	2,769.2	1.3	83
9	Amalgamated Bank of Chicago	2,362.5	1.1	12
10	Huntington National Bank	1,735.9	.8	51

This is Thomson Reuters's "AT8" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded.  
Source: Thomson Reuters (Jan. 13)

## Top Trustee Banks: All Issues

Full Year 2016 - Ranked by Number of Issues

Rank	Firm	Issues	Market Share	Volume
1	US Bank NA	1,189	35.3%	\$77,005.0
2	The Bank of New York Mellon	774	23.0	79,200.5
3	Wells Fargo Bank	259	7.7	21,101.2
4	UMB Bank NA	193	5.7	3,078.2
5	Manufacturers & Traders Tr Co	157	4.7	6,647.4
6	Regions Bank	143	4.3	5,134.4
7	Zions Bank	133	4.0	6,247.2
8	BOKF NA	83	2.5	2,769.2
9	Huntington National Bank	51	1.5	1,735.9
10	MUFG	36	1.1	1,106.6

This is Thomson Reuters's "AT9" league table. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded.  
Source: Thomson Reuters (Jan. 13)



### Top Special Tax Counsel: All Issues

Full Year 2016 - Ranked by Tax Amount

Rank	Firm	Volume	Market Share	Issues
1	Norton Rose Fulbright	\$3,790.6	0.9%	11
2	Orrick Herrington & Sutcliffe LLP	2,134.0	0.5	15
3	Nixon Peabody LLP	1,276.6	0.3	7
4	Kutak Rock LLP	1,259.2	0.3	21
5*	Soeder & Associates LLC	1,169.0	0.3	29
5*	Robinson & Cole LLP	1,169.0	0.3	29
7	Polsinelli PC	761.0	0.2	1
8	Finn Dixon & Herling	450.5	0.1	10
9	Greenberg Traurig LLP	402.5	0.1	8
10	Bryant Miller Olive PA	385.4	0.1	1

\*Tie. Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. Each firm is credited with the actual amount that it enhanced within the issue. Source: Thomson Reuters (Jan. 26)

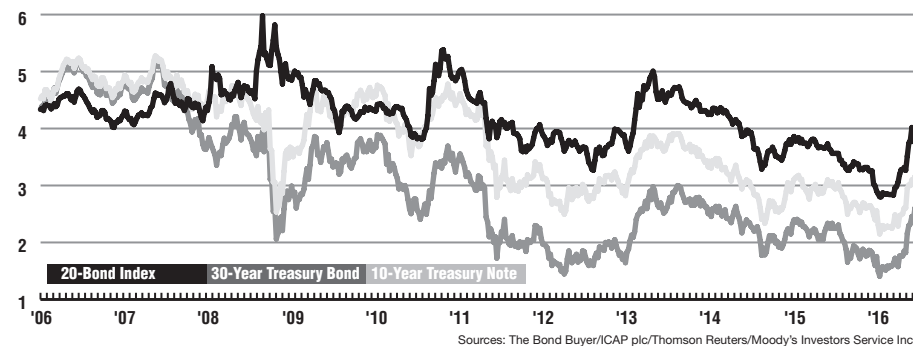
### Top Standby Purchase Agreement Providers: All Issues

Full Year 2016 - Ranked by Enhanced Amount

Rank	Firm	Volume	Market Share	Issues
1	Landesbank Hessen-Thuringen	\$421.0	17.2%	5
2	US Bank NA	360.0	14.7	2
3	BMO Bancorp	309.7	12.7	3
4	State Street Bank & Trust Co	263.6	10.8	5
5	J P Morgan Chase	222.8	9.1	3
6	Citibank	200.0	8.2	1
7	Wells Fargo Bank	161.0	6.6	3
8	Fortress Transp & Infra Inv	144.2	5.9	1
9	Royal Bank of Canada	100.0	4.1	2
10	Fedl Home Loan Bank of Seattle	78.3	3.2	2

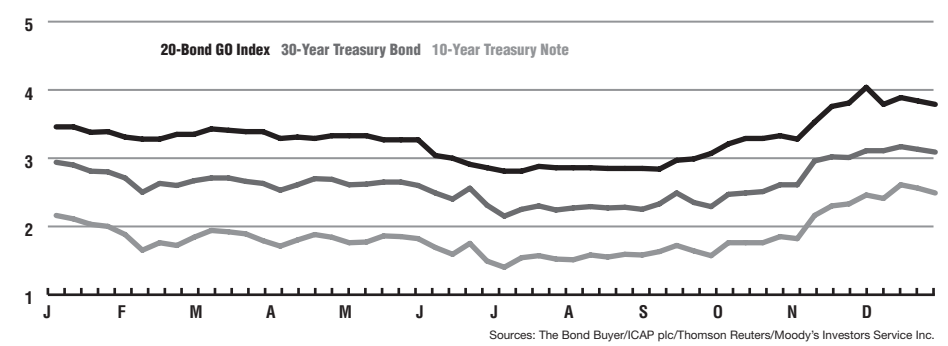
Dollar amounts are in millions. Rankings are final as of Dec. 31, 2016. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded. Each firm is credited with the actual amount that it enhanced within the issue. Source: Thomson Reuters (Jan. 26)

### Interest Rates: 2006-16



Sources: The Bond Buyer/ICAP plc/Thomson Reuters/Moody's Investors Service Inc.

### Interest Rates: 2016



Sources: The Bond Buyer/ICAP plc/Thomson Reuters/Moody's Investors Service Inc.

### Interest Rate Indexes: 2016

Date	Municipal Bond Index			Weekly Bond Indexes						
	6% Index	Yield to Per Call	Yield to Maturity	20-Bond Gen Obl	11-Bond Gen Obl	25-Bond Revenue	1-Year Note	10-Year Treasury	30-Year Treasury	
Jan	7	128-21	3.51	4.15	3.45	2.96	3.78	0.00	2.15	2.93
	14	128-16	3.53	4.15	3.45	2.96	3.79	0.00	2.10	2.89
	21	128-22	3.50	4.15	3.37	2.88	3.76	0.00	2.02	2.80
	28	128-14	3.53	4.16	3.38	2.90	3.83	0.00	1.99	2.79
Feb	4	129-02	3.29	4.03	3.30	2.82	3.78	0.00	1.87	2.70
	11	129-27	3.20	3.99	3.27	2.79	3.76	0.00	1.64	2.49
	18	128-21	3.34	4.05	3.27	2.79	3.76	0.00	1.75	2.62
	25	128-19	3.35	4.05	3.34	2.86	3.79	0.00	1.71	2.59
Mar	3	127-19	3.46	4.10	3.34	2.86	3.79	0.00	1.83	2.66
	10	127-27	3.43	4.09	3.42	2.94	3.86	0.00	1.93	2.70
	17	128-13	3.36	4.06	3.40	2.92	3.81	0.00	1.91	2.70
	23	128-21	3.33	4.05	3.38	2.90	3.79	0.00	1.88	2.65
	31	129-11	3.25	4.01	3.38	2.90	3.76	0.00	1.78	2.62
Apr	7	130-24	3.11	3.94	3.28	2.80	3.69	0.00	1.70	2.52
	14	130-24	3.11	3.94	3.30	2.82	3.71	0.00	1.79	2.60
	21	130-19	3.12	3.95	3.28	2.80	3.68	0.00	1.87	2.69
	28	130-24	3.10	3.94	3.32	2.84	3.71	0.00	1.83	2.68
May	5	131-14	3.05	3.92	3.32	2.84	3.54	0.00	1.75	2.60
	12	132-03	2.98	3.89	3.32	2.84	3.54	0.00	1.76	2.61
	19	132-00	2.98	3.89	3.26	2.78	3.48	0.00	1.85	2.64
	26	131-27	3.00	3.90	3.26	2.78	3.48	0.00	1.84	2.64
Jun	2	132-01	2.97	3.89	3.26	2.78	3.48	0.00	1.81	2.59
	9	133-10	2.83	3.83	3.03	2.65	3.23	0.00	1.68	2.48
	16	134-17	2.69	3.78	2.99	2.59	3.18	0.00	1.58	2.39
	23	133-16	2.80	3.82	2.90	2.49	3.08	0.00	1.74	2.55
	30	135-08	2.60	3.75	2.85	2.44	3.03	0.00	1.48	2.30
Jul	7	135-27	2.53	3.72	2.80	2.39	2.98	0.00	1.39	2.14
	14	134-26	2.64	3.77	2.80	2.39	2.98	0.00	1.53	2.24
	21	133-30	2.74	3.80	2.87	2.45	3.06	0.00	1.56	2.29
	28	134-07	2.70	3.79	2.85	2.43	3.06	0.00	1.51	2.23
Aug	4	133-31	2.74	3.79	2.85	2.43	3.06	0.00	1.50	2.26
	11	133-30	2.73	3.79	2.85	2.43	3.06	0.00	1.57	2.28
	18	134-09	2.70	3.75	2.84	2.42	3.06	0.00	1.54	2.26
	25	134-12	2.69	3.74	2.84	2.42	3.06	0.00	1.58	2.27
Sep	1	134-17	2.68	3.74	2.84	2.42	3.06	0.00	1.57	2.24
	8	134-05	2.72	3.76	2.83	2.41	3.05	0.00	1.62	2.32
	15	132-27	2.86	3.82	2.96	2.54	3.18	0.00	1.71	2.48
	22	132-28	2.86	3.82	2.98	2.56	3.23	0.00	1.63	2.34
	29	133-02	2.83	3.81	3.06	2.64	3.31	0.00	1.56	2.28
Oct	6	131-17	3.11	3.89	3.20	2.78	3.38	0.00	1.75	2.46
	13	130-24	3.20	3.93	3.28	2.86	3.53	0.00	1.75	2.48
	20	130-14	3.25	3.94	3.28	2.86	3.51	0.00	1.75	2.50
	27	129-21	3.33	3.97	3.32	2.90	3.53	0.00	1.84	2.60
Nov	3	130-09	3.28	3.93	3.27	2.85	3.44	0.00	1.81	2.60
	10	127-19	3.58	4.05	3.52	3.10	3.69	0.00	2.15	2.95
	17	124-19	3.95	4.19	3.75	3.30	3.87	0.00	2.29	3.01
	22	123-02	4.13	4.26	3.80	3.35	3.85	0.00	2.32	3.00
Dec	1	119-08	4.59	4.46	4.03	3.58	4.10	0.00	2.45	3.10
	8	122-26	4.16	4.28	3.78	3.33	3.87	0.00	2.40	3.10
	15	120-23	4.41	4.38	3.88	3.42	3.99	0.00	2.60	3.16
	22	122-03	4.25	4.31	3.83	3.36	3.96	0.00	2.55	3.12
	29	123-06	4.11	4.26	3.78	3.31	3.90	0.00	2.48	3.08
12-Month Average		129-95	3.22	3.97	3.25	2.81	3.52	0.00	1.84	2.60

### Explanation of the Indexes

**The Municipal Bond Index**  
The Bond Buyer Municipal Bond Index is a daily price index based on 40 long-term municipal bonds. The index's value is expressed in points and 32ds. The figures shown are weekly averages of the index's daily figures for each week ending Thursday. The index contains 40 long-term municipal bonds. Taxable bonds, variable-rate bonds, and private placements are excluded, but bonds subject to the alternative minimum tax and fixed-rate remarketing can be included. The index is based on price quotations provided by Standard & Poor's Securities Evaluations. It is calculated every business day using prices as of 4 p.m. Eastern time. The index's value is calculated by taking the dollar bid price for each bond, converting it to represent what the price would be if the bond had a standard 6% coupon rate, averaging the converted prices, and multiplying the result by the current value of the coefficient. The coefficient compensates for the changes made twice a month in the composition of the index. The average yield to par call is calculated using the average coupon rate, average par call date, and average dollar price. The average yield to maturity is calculated using the average maturity date.

**The Weekly Bond Indexes**  
The three weekly bond indexes are calculated every Thursday (or Wednesday if Thursday or Friday is a legal holiday). They represent theoretical yields rather than actual price or yield quotations. Municipal bond dealers and banks are asked to estimate what a current-coupon bond for each issuer would yield if the bond was sold at par value. The indexes are simple averages of the average estimated yields of the bonds. The 20-Bond Index consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa2 and Standard & Poor's Corp.'s AA. (No average Fitch rating is provided because Fitch does not rate all of the bonds in the index.) The 11-Bond Index uses a select group of 11 bonds in the 20-Bond Index. The average rating of the 11 bonds is roughly equivalent to Moody's Aa1 rating and S&P's AA-plus. (No average Fitch rating is provided.) The bonds currently used in the two indexes are listed below. The bonds in the 11-Bond Index are marked with an asterisk.

	Moody's/S&P/Fitch		Moody's/S&P/Fitch		Moody's/S&P/Fitch
Baltimore, Md.	Aa2 / AA- / A+	*Massachusetts	Aa1 / AA+ / AA+	Pennsylvania	Aa3 / AA- / AA-
California	Aa3 / AA- / AA-	Memphis, Tenn.	Aa2 / AA / AA-	*Phoenix, Ariz	Aa1 / AAA / NR
*Denver, Colo.	Aaa / AAA / AA+	Miami-Dade Co., Fla.	Aa2 / AA / NR	*Seattle, Wash.	Aaa / AAA / AAA
*Florida	Aa1 / AAA / AAA	Milwaukee, Wis.	Aa3 / AA / AA	*South Carolina	Aaa / AA+ / AAA
*Georgia	Aaa / AAA / AAA	New York City	Aa2 / AA / AA	*Texas	Aaa / AAA / AAA
Houston, Tex.	Aa3 / AA- / AA	*New York State	Aa1 / AA+ / AA+	*Washington	Aa1 / AA+ / AA+
*Maryland	Aaa / AAA / AAA	North Carolina	Aaa / AAA / AAA		

**The Revenue Bond Index**  
The Revenue Bond Index consists of 25 various revenue bonds that mature in 30 years. The average rating is roughly equivalent to Moody's A1 and S&P's A-plus. (No average Fitch rating is provided because Fitch does not rate all the bonds in the index.) The bonds currently used in the index and their ratings are listed below.

	Moody's	S&P	Fitch
Atlanta, Ga., airport (AMT)	Aa3	A+	A+
California Housing Finance Agency, multi-unit rental (AMT)	Aa2	A+	NR
Connecticut Housing Finance Authority	Aaa	AAA	NR
Dallas-Fort Worth International Airport Board, Tex. (AMT)	A1	A+	A+
Energy Northwest (formerly WPPSS), Wash., power revenue	Aa1	AA-	AA
Illinois Health Facilities Authority (Northwestern Memorial Hospital)	Aa2	AA+	NR
Illinois Housing Development Authority, multifamily	A1	A+	A+
Intermountain Power Agency, Utah	Aa3	A+	AA-
JEA (formerly Jacksonville Electric Authority), Fla. electric revenue	Aa2	AA-	AA
Kentucky Turnpike Authority	Aa2	AA+	A+
Los Angeles Department of Water and Power, Calif., electric revenue	Aa2	AA-	AA-
Mariocopa Co. Industrial Development Authority, Ariz. (Samaritan Health Service)	Baa1	BBB	NR
Massachusetts Port Authority (AMT)	Aa2	AA	AA
MEAG Power (formerly Municipal Electric Authority of Georgia)	A1	A+	A+
Nebraska Public Power District, power supply	A1	A+	A+
New Jersey Turnpike Authority, turnpike revenue	A3	A	A
New York State Local Government Assistance Corp., revenue	A3	AA-	A+
New York State Power Authority, general purpose	Aa2	AA-	AA
North Carolina Municipal Power Agency No. 1, Catawba electric revenue	A2	A	A
Port Authority of New York and New Jersey, consolidated (AMT)	Aa3	AA-	AA-
Puerto Rico Electric Power Authority	Caa3	CCC	CC
Salt River Project Agricultural Improvement and Power District, Ariz., electric revenue	Aa2	AA	NR
South Carolina Public Service Authority, electric revenue	A1	AA-	A+
Texas Municipal Power Agency	A2	A+	A+
Virginia Housing Development Authority (AMT)	Aa1	AA+	NR

**U.S. Treasury 10-Year Note and 30-Year Bond**  
The U.S. Treasury 10-year note and 30-year bond yields are Thomson Reuters quotes as of 3:30 p.m. Eastern time.



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January 31, 2017 | The Metropolitan Club, New York, NY

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- ✓ Infrastructure Interest: Will Tax Credits and Tax Exempts Coexist?
- ✓ The LGA Success Story - How New Approaches Thrived
- ✓ Tax Reform's Renewed Threats to Municipals and Potential Legal Changes
- ✓ Back to Basics in Investing in the Municipal Market
- ✓ Rating Migration, Effect of Changing Federal Policies, and Select Credit Insights
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