

THE BOND BUYER

2019 IN STATISTICS

Annual Review



TAKE A PLUNGE

Late-2017 tax legislation caused a ripple effect that led to sinking municipal issuance in 2018

Underwriting Spreads: 1999-2018

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ALL BONDS	\$7.14	\$6.68	\$6.48	\$6.17	\$5.78	\$5.58	\$5.45	\$5.59	\$5.27	\$4.89	\$6.21	\$5.94	\$5.62	\$5.52	\$5.20	\$5.00	\$4.64	\$4.65	\$4.49	\$4.42
Negotiated	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	4.55	4.53
Competitive	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	4.22	3.91
New-Money	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	4.99	4.66
Refunding	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	4.11	3.93
Combined	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	4.14	4.10
Development	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	6.89	8.68
Education	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	4.92	5.17
Electric Power	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	3.26	3.16
Environmental	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	7.36	3.72
Health Care	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	5.99	6.02
Housing	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	4.92	5.02
Public Facilities	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	5.45	4.52
Transportation	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	3.29	3.01
Utilities	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	4.36	4.16
General Purpose	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	3.74	3.68
Stimulus Program	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	5.33	6.79

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. 9)

Taxable Bonds: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$31,498.1	1,073	\$38,917.4	1,157	-19.1%
First Quarter	4,978.2	201	7,807.0	219	-36.2
Second Quarter	8,967.4	334	10,517.2	308	-14.7
Third Quarter	8,140.4	238	7066.8	257	+15.2
Fourth Quarter	9,412.0	300	13526.3	373	-30.4
Development	4,273.3	125	5,198.9	138	-17.8
Education	5,136.7	386	10,257.2	398	-49.9
Electric Power	103.7	12	518.1	12	-80.0
Environmental Facilities	21.9	4	306.6	15	-92.9
Healthcare	2,392.1	75	2,785.7	78	-14.1
Housing	2,423.0	63	3,554.5	83	-31.8
Public Facilities	1,286.9	58	1,089.8	38	+18.1
Transportation	2,915.5	41	2,964.7	39	-1.7
Utilities	840.4	37	1,710.6	62	-50.9
General Purpose	12,104.3	272	10,531.2	294	+14.9
New-Money	21,086.8	768	20,236.7	721	+4.2
Refunding	6,602.6	260	11,849.6	360	-44.3
Combined	3,808.7	45	6,831.1	76	-44.2
Negotiated	19,455.6	607	26,657.0	758	-27.0
Competitive	5,682.9	297	7,474.5	213	-24.0
Private Placements	6,359.5	169	4,785.9	186	+32.9
Revenue	20,634.2	563	28,435.7	674	-27.4
General Obligation	10,863.9	510	10,481.7	483	+3.6
Fixed Rate	30,554.7	1,044	35,367.0	1,092	-13.6
Variable Rate (Short Put)	701.5	20	1,729.6	36	-59.4
Variable Rate (Long/No Put)	55.8	2	318.9	4	-82.5
Zero Coupon	11.7	3	64.5	7	-81.9
Linked Rate	174.4	4	1,437.5	18	-87.9
Convertible	0.0	0	0.0	0	n.m.
Bond Insurance	1,808.9	90	1,942.3	141	-6.9
Letter of Credit	344.2	7	518.9	9	-33.7
Standby Purchase Agreements	134.4	5	251.6	5	-46.6
Insured Mortgages	47.7	2	258.9	9	-81.6
Guaranties	513.7	38	781.8	52	-34.3
Surety bond	0.0	0	0.0	0	n.m.
State Governments	3,672.2	25	4,241.0	28	-13.4
State Agencies	8,131.2	207	13,078.9	256	-37.8
Counties & Parishes	2,422.8	63	1,930.9	73	+25.5
Cities & Towns	6,624.7	276	5,213.8	263	+27.1
District	1,946.9	264	1,996.5	220	-2.5
Local Authorities	7,172.2	193	6,627.6	259	+8.2
Colleges & Universities	1,327.6	35	5,646.2	53	-76.5
Direct Issuer	114.9	9	182.6	5	-37.1
Cooperative Utilities	0.0	0	0.0	0	n.m.
Tribal Government	85.6	1	0.0	0	n.m.
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Construction	0.0	0	231.1	13	-100.0
Other Stimulus Program	0.0	0	183.8	29	-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. 9)

Largest Taxable Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Apr-17	California (State), GOs (tax) (nm/ref)	\$2,147.0	Various firms
Dec-4	Chicago City-Illinois, (tax)	2,012.9	J P Morgan
Jul-11	NYS Dorm Authority, (tax) (cpt)	1,781.5	Morgan Stanley
Oct-2	NYS Dorm Authority, (tax) (cpt) (nm/ref)	1,692.4	Morgan Stanley
Dec-12	NYS Dorm Authority, (tax) (nm/ref)	1,669.6	Various firms
Oct-16	NYC Transitional Finance Auth, (tax) (cpt)	1,411.6	J P Morgan
Mar-13	NYS Dorm Authority, (tax) (cpt)	1,329.7	Wells Fargo
Sep-6	NYC Transitional Finance Auth, (tax) (cpt)	1,250.0	Morgan Stanley
Sep-6	NYC Transitional Finance Auth, (tax) (cpt)	1,250.0	Jefferies
Jun-19	Georgia (State), GOs (tax) (cpt)	1,228.6	J P Morgan

Key to abbreviations: neg — negotiated; nm — new-money; pvt — private placement; ref — refunding.

Source: Thomson Reuters (Jan. 9)

Taxable Bonds

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	J P Morgan	\$4,391.5
2	BA Merrill Lynch	3,095.9
3	Citi	2,730.0
4	RBC Capital Mkts	1,562.8
5	Morgan Stanley	1,438.5
6	Wells Fargo	1,362.1
7	Goldman Sachs	1,220.3
8	Piper Jaffray	1,152.9
9	Raymond James	999.4
10	Barclays	816.9

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. 9)

Taxable Bonds

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	Public Resources Adv	\$4,586.6
2	PFM Financial Adv	2,600.6
3	Hilltop Securities	1,970.3
4	Acacia Financial Grp	1,153.3
5	Swap Financial Grp	1,001.5
6	KNN Public Finance	942.8
7	Frasca & Associates	912.0
8	CSG Advisors Incorp	697.4
9	Ponder & Co	577.5
10	Davenport & Co	377.6

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. 9)

Contents

Tax Legislation’s Impact on 2018 Volume Drop Was Tangible	3A	Development, Health Care, Electric Power Led Sector Issuance Decline	10A
Long-term issuance, bonds and notes by state	3A-4A	Rankings: Senior managers, co-managers, financial advisors, issuers	13A
Bond Insurance Volume Outpaced Industry Issuance Decline.....	5A	Rankings: Bond, disclosure, special tax counsel	14A
Note Issuance Followed Rest of Market Down in ‘18	6A	Bond Buyer Indexes	15A
Issuance by sector.....	7A-12A		

Cover: Adobe Stock

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
TOTAL	\$343,356.7	9,526	\$448,614.1	12,055	-23.5%
January	21,729.5	583	36,047.6	780	-39.7
February	17,899.6	561	23,385.1	806	-23.5
March	26,084.0	745	32,893.5	959	-20.7
April	31,524.6	779	30,711.3	936	+2.6
May	35,187.4	1,145	38,710.4	1,203	-9.1
June	33,399.8	998	39,301.1	1,192	-15.0
July	27,784.8	719	24,973.1	733	+11.3
August	34,068.9	815	37,541.0	1,080	-9.2
September	25,258.8	762	29,696.0	843	-14.9
October	37,312.2	892	40,098.6	948	-6.9
November	28,899.6	854	45,429.7	1,211	-36.4
December	24,207.6	673	69,826.9	1,364	-65.3
First Quarter	65,713.1	1,889	92,326.1	2,545	-28.8
Second Quarter	100,111.8	2,922	108,722.8	3,331	-7.9
Third Quarter	87,112.5	2,296	92,210.0	2,656	-5.5
Fourth Quarter	90,419.4	2,419	155,355.2	3,523	-41.8
Development	8,691.8	424	17,518.2	475	-50.4
Education	83,152.3	3,268	121,611.7	4,589	-31.6
Electric Power	6,026.5	106	10,067.3	131	-40.1
Environmental Facilities	1,944.1	42	2,759.4	67	-29.5
Healthcare	31,316.2	461	54,614.1	700	-42.7
Housing	21,602.0	595	21,848.2	666	-1.1
Public Facilities	11,922.0	501	9,832.7	494	+21.2
Transportation	51,641.8	494	64,467.1	579	-19.9
Utilities	40,146.8	1,091	41,078.1	1,339	-2.3
General Purpose	86,913.2	2,544	104,817.4	3,015	-17.1
Tax- Exempt	294,241.9	8,336	393,213.6	10,741	-25.2
Taxable	31,502.5	1,074	38,917.4	1,157	-19.1
Minimum Tax	17,612.3	116	16,483.1	157	+6.9
New-Money	239,217.5	7,499	202,786.2	7,083	+18.0
Refunding	59,823.5	1,513	153,266.6	3,882	-61.0
Combined	44,315.7	514	92,561.4	1,090	-52.1
Negotiated	238,603.8	4,831	310,180.9	6,568	-23.1
Competitive	81,967.9	3,725	98,240.1	4,014	-16.6
Private Placements	22,785.0	970	40,193.1	1,473	-43.3
Revenue	218,179.2	3,943	283,396.2	4,984	-23.0
General Obligation	125,177.5	5,583	165,217.9	7,071	-24.2
Fixed Rate	312,921.9	9,033	413,513.6	11,352	-24.3
Variable Rate (Short Put)	10,140.4	184	15,234.9	310	-33.4
Variable Rate (Long/No Put)	12,921.9	171	8,521.5	155	+51.6
Zero Coupon	831.8	57	1,447.5	125	-42.5
Linked Rate	6,428.3	77	9,605.8	107	-33.1
Convertible	112.4	4	291.0	6	-61.4
Bond Insurance	18,883.3	1,247	23,048.4	1,637	-18.1
Letter of Credit	2,742.8	43	1,821.4	32	+50.6
Standby Purchase Agreements	2,538.2	34	1,147.8	21	+121.1
Insured Mortgages	1,554.9	51	2,628.7	102	-40.8
Guaranties	24,642.3	1,002	32,106.0	1,308	-23.2
Other Enhancements	0.0	0	0.0	0	n.m.
State Governments	29,612.8	154	43,922.6	197	-32.6
State Agencies	105,623.0	1,281	134,481.2	1,668	-21.5
Counties & Parishes	20,276.1	584	28,833.5	741	-29.7
Cities & Towns	53,888.4	2,680	57,862.0	3,078	-6.9
District	61,586.7	3,481	84,977.1	4,606	-27.5
Local Authorities	59,539.3	1,159	77,406.1	1,499	-23.1
Colleges & Universities	9,507.0	148	19,134.7	233	-50.3
Direct Issuer	2,263.0	31	1,899.7	28	+19.1
Cooperative Utilities	844.1	4	62.6	2	+1248.4
Tribal Government	216.3	4	34.6	3	+525.1
Bank Qualified	11,958.3	3,067	17,658.7	4,215	-32.3
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Construction	0.0	0	231.1	13	-100.0
Other Stimulus Program	19.4	4	222.6	35	-91.3

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. 9)

Tax Legislation’s Impact on 2018 Volume Was Tangible

By Aaron Weitzman

Following a late-2017 rush to market of advance refundings and private-activity bonds in the run-up to the implementation of new tax legislation, supply in 2018 -- particularly refunding issuance -- suffered a steep decline.

Total long-term municipal bond issuance was down 23.5% to \$343.36 billion from a record-setting \$448.61 billion in 2017, according to data from Refinitiv.

“2018 was a year of uncertainty for the municipal market – as we absorbed the impact of tax law changes,” said Alan Schankel, managing director and municipal strategist at Janney. “And searched in vain for signs of a DC infrastructure financing push; and worried about future Fed rate hikes.”

2018 also saw four interest rates hikes and as the Fed continued to raise rates, it put pressure on the entire curve.

Jack Muller, CFA and municipal securities strategist at Citi, said 2018 was transformative, with tax reform altering the composition and mechanics of the demand pool for municipals.

“It was also relatively volatile, given the large selloff followed by the large rally in the second half of the year,” he said.

The quarterly comparison the past two years highlights the impact of the new tax legislation, which banned advance refundings and reduced state and local tax deductions. The muni market started off at a crawl, with \$65.7 billion in the first quarter, down 28.8% from the first three months of 2017.

During the middle two quarters, issuance seemed to normalize a bit. The second quarter produced \$100.11 billion, off only 7.9% from the previous year’s second quarter. The third quarter’s \$87.1 billion was just 5.5% off from where it was a year earlier.

Then came the fourth quarter, which ended with a total of \$90.42 billion of issuance – a 41.8% decrease from the last three months of 2017.

The year saw only five months were issuance was greater than \$30 billion. For comparison, 2017 saw nine months over \$30 billion, including that were over \$40 billion (October and November) and one month that almost reached \$70 billion (December).

Only two months in 2018 saw more volume than the same month the previous year, which were April (up 2.65%) and July (up 11.3%). The total number of transactions also dropped to 9,526 versus 12,055 deals in record-setting 2017.

“The market has moved on from worrying about tax law impact although here may be a further burst of angst in April when taxpayers discover the impact of SALT deduction limits on their tax bill,” said Schankel.

For the year, refundings declined 61% to \$59.82 billion from \$153.26 billion. New money on the other hand was up 18% on the year to \$239.22 billion from \$202.8 billion.

For the year, tax-exempt issuance was

down 25.2% to \$294.24 billion from \$393.21 billion and taxable bond volume dipped 19% to \$31.50 billion from \$38.92 billion. Minimum tax bond deals were in the green, up 6.9% to \$17.61 billion from \$16.48 billion.

“On the supply side, we think the pain is mostly behind us,” said Muller. “In terms of demand, the law fundamentally changed the attractiveness of municipals to banks and property and casualty insurance companies. We will continue to feel the effects of that.”



Alan Schankel of Janney said 2018 was a year of uncertainty for the muni market.

Variable-rate deals with long- or no puts were up 51.6% on the year to \$12.92 billion from \$8.52 billion.

2018 also saw letters of credit increase 50.6% to \$2.74 billion and standby purchase agreements improve to \$2.54 billion from \$1.15 billion.

Only one sector was positive for the year and that was public facilities, which was 21.2% higher to \$11.92 billion from \$9.83 billion.

This year showed us once again that certain segments of the demand base, in particular mutual funds, vary strongly according to the market’s performance,” said Muller. “Even after rates stopped climbing, it took several weeks for mutual funds to start seeing inflows again.”

He added that in terms of credit, the year also affirmed for Citi that election years have the ability to grease the wheels of political machines everywhere, smoothing out political risk somewhat for the GO market.

“Pennsylvania’s statehouse easily passing its budget after several years of struggling to accomplish that is one big example,” he said.

COMMENT

Let us know what you think about this story at BondBuyer.com

Bond Sales by State: Full Year

States	2018			2017			Percent Change
	Rank	Volume (\$mill)	# Issues	Rank	Volume (\$mill)	# Issues	
Alabama	24	\$4,614.4	765	29	\$3,976.2	156	+16.1
Alaska	50	547.8	585	47	996.2	13	−45.0
Arizona	25	4,272.0	315	20	6,699.6	160	−36.2
Arkansas	39	1,629.9	458	39	1,699.9	131	−4.1
California	1	47,865.4	358	1	68,440.4	1,090	−30.1
Colorado	8	10,655.3	191	11	11,376.9	298	−6.3
Connecticut	16	6,436.1	266	22	6,272.5	153	+2.6
Delaware	45	831.0	232	49	830.4	9	+0.1
Florida	6	12,320.3	222	6	18,625.0	384	−33.9
Georgia	15	7,214.7	535	15	9,229.6	170	−21.8
Hawaii	37	2,049.6	305	36	2,501.5	17	−18.1
Idaho	43	1,140.4	118	43	1,322.8	42	−13.8
Illinois	5	13,080.5	137	4	21,677.7	619	−39.7
Indiana	29	3,569.7	104	25	4,842.5	307	−26.3
Iowa	31	3,131.4	70	34	3,224.4	332	−2.9
Kansas	30	3,232.8	99	33	3,337.6	214	−3.1
Kentucky	21	5,040.9	103	32	3,594.8	148	+40.2
Louisiana	40	1,524.8	133	24	5,722.8	100	−73.4
Maine	42	1,280.5	380	41	1,423.9	54	−10.1
Maryland	18	5,910.9	251	12	11,317.5	110	−47.8
Massachusetts	11	8,223.1	117	10	11,746.1	270	−30.0
Michigan	14	7,541.2	122	16	7,440.2	337	+1.4
Minnesota	13	7,689.7	97	19	6,882.3	475	+11.7
Mississippi	41	1,287.6	43	37	2,236.8	100	−42.4
Missouri	23	4,714.9	90	18	6,958.7	387	−32.2
Montana	46	803.1	294	48	940.0	42	−14.6
Nebraska	35	2,155.1	181	35	2,950.0	324	−26.9
Nevada	27	3,789.3	304	28	4,124.1	64	−8.1
New Hampshire	47	774.3	64	42	1,352.2	35	−42.7
New Jersey	7	11,267.6	1	9	12,194.3	286	−7.6
New Mexico	38	1,718.0	23	38	1,753.3	52	−2.0
New York	2	42,522.3	231	2	48,871.4	729	−13.0
North Carolina	17	5,990.9	34	21	6,625.8	117	−9.6
North Dakota	44	964.9	11	45	1,191.0	78	−19.0
Ohio	10	8,503.4	46	7	13,930.7	355	−39.0
Oklahoma	22	4,826.0	75	27	4,490.1	364	+7.5
Oregon	26	3,809.2	66	17	7,189.5	136	−47.0
Pennsylvania	4	13,324.9	66	5	21,661.1	511	−38.5
Rhode Island	49	701.4	41	44	1,278.9	46	−45.2
South Carolina	28	3,776.2	69	30	3,900.8	111	−3.2
South Dakota	48	703.0	12	40	1,521.6	57	−53.8
Tennessee	20	5,279.3	32	23	5,804.6	144	−9.0
Texas	3	33,209.5	25	3	42,978.3	1,404	−22.7
Utah	32	3,118.9	25	26	4,704.3	118	−33.7
Vermont	51	246.0	27	50	677.9	28	−63.7
Virginia	19	5,572.4	17	14	9,840.5	120	−43.4
Washington	9	9,205.4	6	13	10,280.6	170	−10.5
West Virginia	36	2,089.4	3	46	1,046.9	30	+99.6
Wisconsin	12	7,963.7	1	8	12,655.1	611	−37.1
Wyoming	52	178.7	0	52	194.2	12	−8.0
American Samoa	54	50.3	1117	55	0.0	0	n.m.
D. of Columbia	34	2,339.5	155	31	3,809.7	32	−38.6
Guam	53	71.4	451	51	256.3	2	−72.1
Puerto Rico	33	2,597.8	46	54	0.0	0	n.m.
Trust Territories	..	0.0	0	..	0.0	0	n.m.
Virgin Islands	55	0.0	7	53	14.8	1	−100.0
Other Territories	..	0.0		..	0.0		n.m.
TOTAL		\$343,356.7	9,526		\$448,614.1	12,055	−23.5%

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. 9)

Note Sales by State: Full Year

States	2018			2017			Percent Change
	Rank	Volume (\$mill)	# Issues	Rank	Volume (\$mill)	# Issues	
Alabama	..	\$0.0	0	..	\$0.0	0	n.m.
Alaska	27	90.0	1	26	98.0	1	−8.2
Arizona	40	1.4	1	10	1,133.8	4	−99.9
Arkansas	39	1.7	1	43	0	0	n.m.
California	4	3,996.4	32	3	7,409.9	52	−46.1
Colorado	6	1,536.3	8	7	1,518.5	6	+1.2
Connecticut	14	721.8	66	8	1,412.7	87	−48.9
Delaware	..	0.0	0	..	0.0	0	n.m.
Florida	12	751.3	12	13	733.1	12	+2.5
Georgia	11	776.6	8	18	430.0	4	+80.6
Hawaii	26	99.1	2	36	9.6	3	+932.3
Idaho	15	540.0	1	16	485.8	1	+11.2
Illinois	7	1,231.2	71	6	1,548.3	67	−20.5
Indiana	25	115.6	12	17	448.8	29	−74.2
Iowa	37	6.0	2	38	6.9	2	−13.0
Kansas	17	315.7	14	21	251.7	16	+25.4
Kentucky	13	726.3	3	22	251.4	2	+188.9
Louisiana	35	23.5	6	35	18.2	6	+29.1
Maine	34	28.0	2	32	36.0	3	−22.2
Maryland	16	491.0	2	20	346.0	1	+41.9
Massachusetts	5	3,172.0	268	5	2,863.9	238	+10.8
Michigan	21	280.3	5	14	630.6	21	−55.6
Minnesota	36	11.8	8	37	8.7	10	+35.6
Mississippi	23	160.0	2	42	0	0	n.m.
Missouri	28	87.1	5	29	87.0	3	+0.1
Montana	..	0.0	0	..	0.0	0	n.m.
Nebraska	22	186.6	26	34	21.0	19	+788.6
Nevada	19	300.2	3	40	.3	1	+99966.7
New Hampshire	29	75.0	4	28	87.1	6	−13.9
New Jersey	3	5,506.9	508	4	4,846.3	556	+13.6
New Mexico	24	130.7	1	24	158.9	1	−17.7
New York	2	7,619.8	843	1	10,412.6	853	−26.8
North Carolina	18	314.6	4	30	65.5	5	+380.3
North Dakota	41	.9	1	44	0	0	n.m.
Ohio	10	783.6	177	12	972.1	179	−19.4
Oklahoma	38	4.2	2	33	27.6	3	−84.8
Oregon	32	43.9	2	15	619.4	3	−92.9
Pennsylvania	31	47.2	5	23	162.3	8	−70.9
Rhode Island	33	28.5	3	31	46.8	4	−39.1
South Carolina	8	1,119.3	19	11	1,049.8	25	+6.6
South Dakota	..	0.0	0	..	0.0	0	n.m.
Tennessee	42	0	0	19	375.0	2	−100.0
Texas	1	9,604.0	19	2	8,194.1	31	+17.2
Utah	30	72.1	3	25	123.4	7	−41.6
Vermont	43	0	0	27	95.2	3	−100.0
Virginia	44	0	0	39	.4	1	−100.0
Washington	0	0.0	0	0	0.0	0	n.m.
West Virginia	0	0.0	0	0	0.0	0	n.m.
Wisconsin	9	930.8	66	9	1,239.9	62	−24.9
Wyoming	..	0.0	0	..	0.0	0	n.m.
American Samoa	..	0.0	0	..	0.0	0	n.m.
D. of Columbia	20	300.0	1	41	0.0	0	n.m.
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.
TOTAL		\$42,230.8	2,219		\$48,226.5	2,337	−12.4%

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. 9)

Bond Insurance: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$18,883.3	1,247	\$23,048.3	1,637	-18.1%
First Quarter	3,622.6	257	5,192.5	376	-30.2
Second Quarter	5,420.5	366	6,611.4	487	-18.0
Third Quarter	4,227.0	302	5,061.4	379	-16.5
Fourth Quarter	5,613.2	322	6,183.0	395	-9.2
Development	1,161.0	53	1,330.5	68	-12.7
Education	5,410.7	465	7,777.1	652	-30.4
Electric Power	726.9	17	414.2	13	+75.5
Environmental Facilities	0.0	0	311.0	1	-100.0
Healthcare	1,100.8	8	554.4	9	+98.6
Housing	0.0	0	428.1	6	-100.0
Public Facilities	1,520.8	70	1,682.9	71	-9.6
Transportation	1,794.7	73	2,288.1	79	-21.6
Utilities	2,877.9	323	4,426.0	409	-35.0
General Purpose	4,290.8	238	3,836.3	329	+11.8
Tax-Exempt	16,373.1	1,132	20,488.7	1,469	-20.1
Taxable	1,883.1	97	2,111.0	152	-10.8
Minimum -Tax	627.1	18	448.6	16	+39.8
New-Money	12,558.1	929	9,508.0	889	+32.1
Refunding	4,338.2	229	9,415.1	553	-53.9
Combined	1,810.6	71	3,787.9	173	-52.2
Negotiated	13,303.8	723	18,203.1	1,125	-26.9
Competitive	5,570.4	523	4,823.3	510	+15.5
Private Placements	9.1	1	21.9	2	-58.4
Revenue	9,234.0	371	11,355.9	455	-18.7
General Obligation	9,649.2	876	11,692.4	1,182	-17.5
Fixed Rate	18,558.5	1,210	22,306.2	1,581	-16.8
Variable Rate (Long)	0.0	0	0.0	0	n.m.
Zero Coupon	194.5	27	354.6	44	-45.1
Linked Rate	0.0	0	387.5	12	-100.0
Convertible	130.2	10	0.0	0	n.m.
State Governments	389.5	5	25.0	1	+1458.0
State Agencies	2,454.5	33	2,637.3	50	-6.9
Counties & Parishes	1,036.6	53	1,178.9	62	-12.1
Cities & Towns	4,570.6	289	5,087.4	372	-10.2
District	7,053.5	726	9,415.7	942	-25.1
Local Authorities	2,878.8	125	4,321.3	191	-33.4
Colleges & Universities	499.6	16	378.4	18	+32.0
Direct Issuer	0.0	0	4.2	1	-100.0
Bank Qualified	2,935.4	591	4,169.4	811	-29.6
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Construction	0.0	0	167.7	9	-100.0
Other Stimulus Program	3.9	1	48.8	7	-92.0

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. 9)

Bond Insurer Rankings

Full Year 2018 - Ranked by Insured Amount

Rank	Firm	Volume	Market Share	Issues
1	AGM formerly FSA Inc	\$10,073.2	53.3	485
2	Build America Mutual (BAM)	8,358.6	44.3	653
3	Municipal Assurance Corp (MAC)	453.1	2.4	111
4	National Public Fin Guarantee	0.0	0.0	0

Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 insured within the issue.

Source: Thomson Reuters (AT10 league table)

Largest Insured Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Dec-4	Chicago City-Illinois, (amt) (nm/ref)	\$2,012.9	J P Morgan
Oct-3	New Jersey Trans Trust Fund Au, GOs (ref)	1,567.4	Citi
Feb-13	PA Commonwealth Financing Auth	1,487.2	Jefferies/Morgan Stanley
May-16	Pennsylvania (State),	1,247.0	BA Merrill Lynch
Jun-5	California Municipal Fin Auth, (amt)	1,181.5	BA Merrill Lynch/Citi
Mar-6	Oklahoma Dev Finance Auth, (tax/te)	1,162.3	BA Merrill Lynch/Citi
Nov-30	Chicago City BOE, GOs (nm/ref)	763.4	J P Morgan
Jul-26	NYS Dorm Authority, (tax)	685.2	BA Merrill Lynch/Citi
Nov-15	Michigan Strategic Fund, (amt)	610.3	BA Merrill Lynch/Wells Fargo
May-10	NYS Dorm Authority	585.2	Various firms

Key to abbreviations: GOs – general obligation bonds; nm – new-money; ref – refunding.

Source: Thomson Reuters (Jan. 9)

Bond Insurance Issuance Outpaced Industry Decline

By Aaron Weitzman

Municipal bond insurance may have finished 2018 down 18.1% from where it was the year before, but it outpaced the 23.5% decline the overall industry saw due to changes in tax legislation.

The two active municipal bond insurance companies -- Assured Guaranty and Build America Mutual -- combined to insure a total of \$18.88 billion across 1,247 deals this past year, down from \$23.04 billion in 1,637 transactions in 2017, according to data from Refinitiv.

Insurance penetration rose to 5.90% at the end of 2018, up from the 5.29% it was at the end of 2017. However, when you exclude high-rated ‘mega-issuers’ the insurance penetration picture looks quite different.

According to data from Ipreo, among single-A issuers, 55% of the transactions and 18% of the par was insured. School financing uses insurance more widely than the general market, in large part because it has fewer large issuers than sectors like transportation. Among all K-12 school district bonds, 9.5% were insured, and in seven states, more than 25% of school bonds were.

Another interesting tidbit was that Texas Municipal Utility Districts were another sector where insurance is used widely, again, in part because they are small- and mid-sized issuers; 61% of the par was insured in 2018.

The higher penetration in those sectors is important because it demonstrates that insurance is a go-to market access tool for a significant percentage of the market.

In terms of insured penetration by rating, 55% of single-B rated deals were insured and 100% of B-minus deals were insured. 20.8% of BBB-plus deals were insured, while A-plus rated deals were insured 21.9% of the time.

Assured Guaranty Corp. was the top municipal bond insurer in 2018. Assured insured a total of \$10.53 billion in 596 deals for a 55.7% market share, compared with \$13.46 billion in 832 transactions or 58.4% market share the year before. The figures include Assured's subsidiary Municipal Assurance Corp.

“Assured Guaranty, through its two platforms, AGM and MAC, continued to lead the market throughout 2018, insuring close to \$11 billion of primary market par volume on nearly 600 tax-exempt and taxable new issues sold across a broad spectrum of bond sectors, transaction sizes and deal structures, including public-private partnerships,” said Robert Tucker, senior managing director of communications and investor relations for Assured. “We garnered 57% of insured new-issue volume sold during the year, including \$500 million of corporate-CUSIP taxable bonds that it insured for ProMedica Healthcare’s Toledo Hospital. That transaction included an additional \$25 million of Assured Guaranty insurance on traditional tax-exempt bonds.”

Other notable healthcare transactions included insured new issues of \$301 million for Montefiore Medical Center, located in Bronx County, New York, and \$135 million for the Oklahoma University Medical System, as Assured expanded its healthcare

activity in both the primary and secondary.

“In total, Assured Guaranty insured \$11.8 billion of par across the primary and secondary markets in 2018,” Tucker said. “Assured Guaranty has the scale to insure large transactions without any single transaction representing a material amount of exposure. During 2018, Assured Guaranty was selected on 16 different transactions to insure more than \$100 million of par.”

Beyond the healthcare space, examples of major infrastructure transactions included one that helped provide broader market access for Detroit Downtown Development Authority’s \$311 million tax increment financing and another that helped lower interest costs on more than \$100 million of bonds for the LAX People Mover Project (LINXS), a transaction awarded The Bond Buyer’s Far West Region Deal of the Year.

Among general government credits, Assured Guaranty insured portions of two transactions for the Commonwealth of Pennsylvania that aggregated to \$660 million of insured par across the Commonwealth’s general obligation and appropriation-backed bonds.

“During the year, S&P Global Ratings and Kroll Bond Rating Agency once again recognized the strength of the Assured Guaranty franchise by affirming, with stable outlooks, S&P’s AA rating assigned to Assured Guaranty Ltd.’s insurance subsidiaries and KBRA’s AA+ ratings assigned to both AGM and MAC,” said Tucker.

BAM accounted for \$8.36 billion of insured volume spanning 653 transactions or 44.3% market share last year, compared with \$8.95 billion in 732 deals and 38.9% market share.

“At this point, investors are expecting to see insurance on new-issue transactions in certain sectors of the market – particularly for smaller and medium-sized issues where it’s not cost effective for the buy-side to invest in the credit review and surveillance activities that we can perform more efficiently,” said Scott Richbourg, BAM’s head of public finance. “The fact that refunding volume was down last year didn’t disrupt that long-term trend, particularly if you focus on the target market for insurance, which excludes transactions that are ineligible for BAM insurance or carry higher ratings that will not benefit from our guaranty.”

He also noted that 21% of the transactions in that target market were insured last year, up 10% from 2017, and the growing primary-market presence and liquidity helped increase demand in the secondary market, where BAM’s par insured rose 20% year-over-year.

“We’re going to stay focused on demonstrating the value of insurance to issuers and investors in more of the market,” said Richbourg. “For BAM, that’s one reason why we introduced the BAM GreenStar assessment that verifies that green bonds sold by our members align with the international standards for that sector, at no extra cost.”

BAM is also working on ways to distribute its 5,000-plus BAM Credit Profiles more widely, to make sure investors know they can look to them as a reliable source for continuing disclosure information. □

Note Issuance Followed Rest of Market Down in 2018

By CHRISTINE ALBANO

The impacts of tax reform, economic recovery, rate volatility, and ongoing state and local austerity prompted a 12.4% decline in municipal note issuance in 2018, municipal experts said.

"The tax law played a role by ruling out advance refundings," said Anthony Valeri, director of investment management at Zions Wealth Management in San Diego.

The absence of the municipal provision contributed to total annual note volume declining to \$42.23 billion among 2,219 deals, versus \$48.23 billion among 2,337 issues in 2017.

The elimination of advance refundings occurred under the Trump Administration's historic tax reform legislation signed into law Dec. 21, 2018. Much of the short-term note issuance declined last year because the promise of higher rates spooked issuers, others said.

"I would suspect that the decline in note issuance is partially related to sentiment last year that rates were on the rise," said Richard A. Ciccarone, president and chief executive officer at Merritt Research Services, LLC. "Issuers felt compelled to reduce short-term instruments in favor of longer-term financing in anticipation of higher borrowing rates later when the notes retire," Ciccarone explained.

Dan Heckman, senior fixed income strategist at U.S. Bank Wealth Management, said some municipalities decided to convert short-term debt to longer-term debt, which factored into the decline.

"The fear of the Fed raising rates further has some entities thinking now may be the time to do a conversion to fixed-rate structures," Heckman added.

Note issuance declined in every month of the year, except for February and August, when issuers sold 18.3% and 20.1% more of the one-year note vehicles, respectively, compared the prior year, according to the new annual data provided by Refinitiv.

The boost in issuance in those months could have resulted in some issuers starting off early 2018 with increased cash flow needs, as well as rushing some last-minute note deals to market in late summer, ahead of the potential tax reform in the fourth quarter, municipal sources said.

A rush to market in late summer, they said, also caused a slight pop of 4% additional note issuance in the third quarter overall to \$17.871 billion in total volume up from \$17.184 billion the prior year -- even though the deal count fell to 677 from 701.

Otherwise, issuance decline in all three other quarters -- by 9.7% in the first, 21.7% in the second, and 29% in the fourth -- as rate volatility and state and local austerity aided the declining note issuance overall last year. In those quarters, issuance fell to \$5.953 billion from \$6.589 billion; \$11.219 billion from \$14.337 billion; and \$7.186 billion from \$10.115 billion, respectively.

"Regarding state and local budget austerity, it was a reflection of two relatively modest years of revenue growth -- in fiscal year 2017 and fiscal year 2016," Valeri of Zions said.

The growth prompted states to take a modest approach for fiscal year 2018, he noted.

For instance, municipalities sold 86.1% less note volume for electric power projects in 2018, issuing \$183.3 million among 13, down from \$1.318 billion among 12 the prior year.

Short-term transportation note issuance also fell by 67% to \$1.105 billion in 64 deals, compared with \$3.347 billion in 70 deals, according to the data.

Additionally, healthcare issuance dropped by 66.8% to \$225.8 million in nine deals, versus \$679.8 million in 12 deals.

"While there is evidence of underperformance in certain areas of the economy, the data throughout last year supported the late-cycle recovery," said Jeffrey Lipton, managing director and head of municipal research and strategy at Oppenheimer & Co. Inc.

"We would suspect that improving allocations to state 'rainy day' funds helped to mitigate the need for cash-flow borrowings as a way to bridge the gap between revenues and expenditures," Lipton said.

"States have done a credible job of growing these resources in subsequent years following the 2008-2009 financial crisis," he noted. "In 2018, many issuers experienced improved revenue collections and were able to effectively control expenditures, and thus were able to redirect a portion of surplus monies into their rainy day funds as a sign of prudent fiscal management."

However, others said state expenses have matched modest revenue gains and that overlap limited note issuance.

"Expenses are rising on a variety of fronts and not any one single source," Valeri explained. "There isn't much capacity to take on additional debt."

That was reflected in the volume of short-term notes for mortgages and other enhancements, whose issuance both fell to zero from \$28.9 million in two deals and \$29.5 million in one deal, respectively, in 2017.

Housing is one sector that did experience an 89% increase in short-term note issuance to \$68.8 million from \$36.4 million the prior year. However, deal size declined to four from five.

The growing population of school aged children -- and school construction needs -- around the country most likely led to the 12.2% increase in short-term notes in the education sector last year to \$11.10 billion in 681 deals, up from \$9.89 billion in 740 deals in 2017.

"The noted rise in short-term note issuance for higher education credits in 2018 can be attributed to ongoing budgetary pressure experienced within this sector," Lipton said.

Aside from these individual sectors nuances, Valeri predicted any increase in note supply is likely to be limited going forward.

Meanwhile, other market and political forces factored into the decrease of the one-year instruments.

"A relatively steeper yield curve and the absence of new tax reform concerns also contributed to the 2018 drop in note issuance," Lipton said. □

Short-Term Note Sales: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
TOTAL	\$42,230.8	2,219	\$48,226.5	2,337	-12.4%
January	2,084.6	112	3,070.6	127	-32.1
February	2,196.5	110	1,857.3	137	+18.3
March	1,672.0	143	1,661.2	148	+0.7
April	1,043.6	125	1,181.0	135	-11.6
May	2,154.0	196	4,009.1	174	-46.3
June	8,022.2	359	9,146.9	391	-12.3
July	3,245.0	210	4,426.2	234	-26.7
August	11,469.7	254	9,553.4	248	+20.1
September	3,156.9	213	3,205.3	219	-1.5
October	2,427.2	212	5,082.3	209	-52.2
November	2,290.6	154	2,372.9	161	-3.5
December	2,468.5	131	2,660.5	154	-7.2
First Quarter	5,953.2	365	6,589.1	412	-9.7
Second Quarter	11,219.7	680	14,337.0	700	-21.7
Third Quarter	17,871.7	677	17,184.8	701	+4.0
Fourth Quarter	7,186.3	497	10,115.6	524	-29.0
Development	114.2	19	163.7	22	-30.2
Education	11,108.6	681	9,898.8	740	+12.2
Electric Power	183.3	13	1,318.3	12	-86.1
Environmental Facilities	7.6	2	7.2	4	+5.6
Healthcare	225.8	9	679.8	12	-66.8
Housing	68.8	4	36.4	5	+89.0
Public Facilities	167.3	85	249.2	82	-32.9
Transportation	1,105.9	64	3,347.1	70	-67.0
Utilities	2,172.3	95	5,322.9	132	-59.2
General Purpose	27,077.0	1,247	27,203.0	1,258	-0.5
Tax- Exempt	40,779.6	2,087	44,370.5	2,158	-8.1
Taxable	1,384.5	129	3,604.0	172	-61.6
Minimum Tax	66.7	3	252.1	7	-73.5
New-Money	41,782.2	2,183	47,245.5	2,262	-11.6
Refunding	363.5	25	919.3	62	-60.5
Combined	85.1	11	61.6	13	+38.1
Negotiated	10,346.5	332	16,108.8	381	-35.8
Competitive	30,093.8	1,800	28,393.9	1,863	+6.0
Private Placements	1,790.5	87	3,723.8	93	-51.9
Revenue	2,325.1	64	5,115.0	76	-54.5
General Obligation	39,905.7	2,155	43,111.5	2,261	-7.4
Fixed Rate	36,962.4	2,184	38,907.6	2,287	-5.0
Variable Rate (Short Put)	5,119.4	32	9,314.9	46	-45.0
Zero Coupon	1.6	2	4.0	4	-60.0
Linked Rate	147.4	1	0.0	0	n.m.
Bond Insurance	3.3	3	0.8	1	+312.5
Letter of Credit	1,277.3	9	3,357.3	22	-62.0
Standby Purchase Agreements	75.0	1	200.0	2	-62.5
Guaranties	423.2	47	223.9	33	+89.0
Mortgage	0.0	0	28.9	2	-100.0
Other Enhancements	0.0	0	29.5	1	-100.0
State Governments	11,809.5	14	10,722.3	21	+10.1
State Agencies	1,094.4	22	5,585.0	46	-80.4
Counties & Parishes	6,188.6	117	5,793.5	120	+6.8
Cities & Towns	11,290.7	1,255	12,466.5	1,305	-9.4
District	9,709.5	721	9,537.3	742	+1.8
Local Authorities	1,787.4	86	3,891.3	96	-54.1
Colleges & Universities	350.0	1	230.0	4	+52.2
Direct Issuer	0.8	3	0.2	1	+300.0
Cooperative Utilities	0.0	0	0.3	2	-100.0
Bank-Qualified	3,638.8	1,224	3,923.3	1,272	-7.3
Build America Bonds	0.0	0	0.0	0	n.m.
Qualified Sch Construction	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 less than 13 months. Private placements and municipal forwards are included, but remarketings are excluded. n.m. — not meaningful.

Source: Thomson Reuters (Jan. 17)

Development: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$8,691.8	424	\$17,518.2	475	−50.4%
First Quarter	1,780.4	84	2,349.2	103	−24.2
Second Quarter	1,672.4	123	6,040.1	92	−72.3
Third Quarter	2,254.0	81	1,965.1	128	+14.7
Fourth Quarter	2,985.1	136	7,163.9	152	−58.3
Economic Development	5,792.0	358	14,019.0	425	−58.7
Industrial Development	2,574.9	63	3,385.1	43	−23.9
Office Building	324.9	3	114.2	7	+184.5
Tax-Exempt	5,007.0	298	11,678.6	331	−57.1
Taxable	3,345.0	121	5,198.9	138	−35.7
Minimum-Tax	339.8	5	640.8	6	−47.0
New-Money	6,059.3	310	7,120.8	259	−14.9
Refunding	2,058.3	89	9,275.4	173	−77.8
Combined	574.2	25	1,122.0	43	−48.8
Negotiated	5,359.3	271	13,176.0	340	−59.3
Competitive	706.4	45	1,004.4	42	−29.7
Private Placements	2,626.1	108	3,337.9	93	−21.3
Revenue	8,115.2	375	16,539.7	406	−50.9
General Obligation	576.7	49	978.5	69	−41.1
Fixed Rate	8,343.2	408	16,358.4	461	−49.0
Variable Rate (Short Put)	281.2	13	86.4	7	+225.5
Variable Rate (Long/No Put)	0.0	0	1,000.0	1	−100.0
Zero-Coupon	0.0	0	18.0	2	−100.0
Linked Rate	25.5	2	41.9	3	−39.1
Convertible	42.0	1	13.5	1	+211.1
Bond Insurance	851.6	53	1,247.0	68	−31.7
Letter of Credit	106.7	4	19.0	4	+461.6
Insured Mortgages	0.0	0	0.0	0	n.m.
Guaranties	70.0	1	90.5	4	−22.7
other enhancement	0.0	0	0.0	0	n.m.
State Governments	174.3	2	84.6	2	+106.0
State Agencies	983.8	28	4,091.9	56	−76.0
Counties & Parishes	671.5	23	1,721.2	24	−61.0
Cities & Towns	2,180.1	125	1,831.9	112	+19.0
District	1,122.1	111	873.0	85	+28.5
Local Authorities	3,056.7	130	8,894.8	195	−65.6
Colleges & Universities	0.0	0	0.0	0	n.m.
Direct Issuer	302.4	2	0.0	0	n.m.
Tibal Governments	201.0	3	20.8	1	+866.3
Cooperative Utilities	0.0	0	0.0	0	n.m.
Bank Qualified	136.5	35	228.0	52	−40.1
Qualified Sch Construction	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	19.7	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. 9)

Education: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$83,152.3	3,268	\$121,611.7	4,589	−31.6%
First Quarter	20,268.2	775	32,364.0	1,101	−37.4
Second Quarter	26,156.7	1,108	32,020.8	1,372	−18.3
Third Quarter	18,703.3	715	24,426.8	911	−23.4
Fourth Quarter	18,024.1	670	32,800.0	1,205	−45.0
K-12 Education	58,992.5	2,773	75,820.6	3,826	−22.2
Higher Education	22,392.9	425	43,696.8	686	−48.8
Student Loans	1,211.4	14	1,307.9	13	−7.4
Other Education	555.5	56	786.3	64	−29.4
Tax-Exempt	77,128.9	2,871	110,587.5	4,180	−30.3
Taxable	5,307.1	388	10,257.2	398	−48.3
Minimum-Tax	716.3	9	766.9	11	−6.6
New-Money	65,361.0	2,676	59,237.2	2,701	+10.3
Refunding	8,911.3	446	38,823.0	1,524	−77.0
Combined	8,880.0	146	23,551.5	364	−62.3
Negotiated	58,917.6	1,722	87,326.5	2,651	−32.5
Competitive	20,802.7	1,337	29,060.0	1,584	−28.4
Private Placements	3,432.0	209	5,225.1	354	−34.3
Revenue	34,333.9	937	51,836.8	1,277	−33.8
General Obligation	48,818.5	2,331	69,774.8	3,312	−30.0
Fixed Rate	80,221.5	3,190	116,571.4	4,418	−31.2
Variable Rate (Short Put)	274.3	12	1,789.2	42	−84.7
Variable Rate (Long/No Put)	349.2	9	1,315.9	13	−73.5
Zero Coupon	619.5	45	944.8	102	−34.4
Linked Rate	1,627.9	11	745.0	10	+118.5
Convertible	59.8	1	245.5	4	−75.6
Bond Insurance	6,391.8	465	8,684.9	652	−26.4
Letter of Credit	7.4	1	130.0	3	−94.3
Standby Purchase Agreements	1.3	1	0.0	0	n.m.
Insured Mortgages	0.0	0	0.0	0	n.m.
Guaranties	24,016.8	950	30,792.2	1,258	−22.0
Other Enhancements	0.0	0	0.0	0	n.m.
State Governments	1,380.8	19	2,232.3	22	−38.1
State Agencies	17,144.8	318	22,588.8	449	−24.1
Counties & Parishes	2,230.1	55	1,778.0	42	+25.4
Cities & Towns	564.9	29	909.8	58	−37.9
District	46,765.4	2,471	66,698.9	3,476	−29.9
Local Authorities	5,761.7	225	8,552.9	302	−32.6
Colleges & Universities	9,198.0	142	18,425.7	225	−50.1
Direct Issuer	106.7	9	425.4	15	−74.9
Bank Qualified	4,921.3	1,192	8,278.8	1,853	−40.6
Qualified Sch Construction	0.0	0	231.1	13	−100.0
Other Stimulus Program	15.1	3	94.6	23	−84.0

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. 9)

Development

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	Stifel Nicolaus	\$1,189.6
2	Barclays	449.9
3	Piper Jaffray	430.4
4	BA Merrill Lynch	386.9
5	Citi	382.0
6	FMSbonds Inc	362.0
7	J P Morgan Securities	355.3
8	MBS Capital Mkt	302.0
9	Raymond James	238.7
10	Goldman Sachs	208.7

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. 9)

Development

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	PFM Financial Adv	\$926.8
2	Urban Futures Inc	467.2
3	Fieldman Rolapp	435.1
4	CSG Advisors Incorp	364.2
5	Davenport & Co	357.6
6	Montague DeRose	302.4
7	Hilltop Securities	158.5
8	Umbaugh LLP	105.0
9	Del Rio Advisors	93.5
10	Sisung Securities	66.8

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. 9)

Education

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	BA Merrill Lynch	\$8,456.0
2	RBC Capital Mkts	6,926.1
3	Citi	6,347.3
4	J P Morgan	6,177.6
5	Piper Jaffray	6,103.2
6	Raymond James	5,253.1
7	Stifel Nicolaus	5,228.3
8	Wells Fargo	4,524.6
9	Robert W Baird	4,340.8
10	Morgan Stanley	4,068.7

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. 9)

Education

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	PFM Financial Adv	\$8,604.6
2	Hilltop Securities	4,796.3
3	Acacia Financial Grp	2,993.7
4	Public Resources Adv	2,945.1
5	Swap Financial Grp	2,750.4
6	Urban Futures	2,187.9
7	KNN Public Finance	2,158.0
8	RBC Capital Mkts	1,764.4
9	Piper Jaffray	1,600.7
10	Ehlers & Associates	1,557.0

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. 9)

Largest Development Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Jun-6	Connecticut (State), GOs	\$492.1	BA Merrill Lynch
Oct-3	Columbus City-Ohio, GOs (tax)	399.8	BA Merrill Lynch
Jul-12	Los Angeles Co Facs Inc, (tax/te)	302.4	Barclays
Mar-16	Oregon Business Development Comm, (tax/amt)	245.5	Goldman Sachs/Stern Brothers
Oct-23	Ohio (State), GOs (cpt)	160.0	J P Morgan
Sep-26	Pomona Successor Redev Agy, (tax) (ref)	128.9	Ziegler
Sep-19	Coronado Successor Comm Dev Agcy, (ref)	120.9	Piper Jaffray/J P Morgan
Oct-30	Virginia Resources Auth (VRA), (tax/te) (cpt) (nm/ref)	119.0	Raymond James
Aug-30	Riverside City Successor Redev Agy, (tax/te) (ref)	114.8	Stifel Nicolaus
Jan-4	Anaheim Successor Redev Agcy, (tax/te) (ref)	112.2	Stifel Nicolaus

Key to abbreviations: amt — alternative minimum tax; nm — new-money; ref — refunding; tax — taxable. Source: Thomson Reuters (Jan. 9)

Largest Education Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Oct-16	NYC Transitional Finance Auth, (Tax/te) (cpt)	\$1,411.6	J P Morgan
Feb-21	Los Angeles USD, GOs	1,350.0	BA Merrill Lynch/Goldman Sachs
May-22	Regents of the Univ of California, (tax/te)	1,227.7	BA Merrill Lynch/Ramirez
Mar-14	NYC Transitional Finance Auth, (tax/te) (cpt) (nm/ref)	1,075.7	BA Merrill Lynch
Jul-17	NYC Transitional Finance Auth, (tax/te) (cpt) (nm/ref)	1,043.9	Citi
May-23	Regents of the Univ of California, (tax/te)	831.3	BA Merrill Lynch/Raymond James
Nov-30	Chicago City BOE, GOs (nm/ref)	763.4	J P Morgan
Jul-12	California State Univ Trustees, (tax/te) (nm/ref)	663.7	Morgan Stanley/Goldman Sachs
May-4	NYS Dorm Authority, (tax/te)	592.6	Wells Fargo/Goldman Sachs
May-10	NYS Dorm Authority	585.2	Various firms

Key to abbreviations: nm — new money; ref — refunding; tax — taxable; te — tax exempt. Source: Thomson Reuters (Jan. 9)

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$6,026.5	106	\$10,067.3	131	−40.1%
First Quarter	1,182.5	21	1,812.2	25	−34.7
Second Quarter	2,309.3	33	1,921.0	21	+20.2
Third Quarter	872.7	27	1,504.5	34	−42.0
Fourth Quarter	1,662.0	25	4,829.5	51	−65.6
Tax-Exempt	5,923.7	94	9,543.4	118	−37.9
Taxable	101.7	11	518.1	12	−80.4
Minimum-Tax	1.1	1	5.8	1	−81.0
New-Money	2,393.3	53	3,576.6	54	−33.1
Refunding	2,839.7	41	3,616.5	60	−21.5
Combined	793.6	12	2874.2	17	−72.4
Negotiated	5,566.1	79	8,511.3	100	−34.6
Competitive	403.9	19	507.1	12	−20.4
Private Placements	56.5	8	1,049.0	19	−94.6
Revenue	5,962.7	100	9,912.0	119	−39.8
General Obligation	63.8	6	155.4	12	−58.9
Fixed Rate	5,462.3	100	9,447.8	125	−42.2
Variable Rate (Short Put)	0.0	0	512.0	5	−100.0
Variable Rate (Long/No Put)	250.8	3	107.5	1	+133.3
Zero Coupon	0.0	0	0.0	0	n.m.
Linked Rate	313.4	3	0.0	0	n.m.
Bond Insurance	265.8	17	109.2	13	+143.4
Letter of Credit	0.0	0	0.0	0	n.m.
Standby Purch Agreements	0.0	0	0.0	0	n.m.
Guaranties	0.0	0	0.0	0	n.m.
State Governments	0.0	0	97.1	3	−100.0
State Agencies	251.3	7	1,472.1	18	−82.9
Counties & Parishes	30.2	2	25.6	3	+18.0
Cities & Towns	1,316.8	45	2,632.5	47	−50.0
District	552.3	16	1,505.8	16	−63.3
Local Authorities	2,830.3	29	3,696.3	39	−23.4
Direct Issuer	1,033.7	6	597.7	4	+72.9
Cooperative Utilities	11.8	1	40.2	1	−70.6
Bank Qualified	109.0	28	123.2	31	−11.5
Qualified Sch Construction	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	2.0	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. 9)					

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$1,944.1	42	\$2,759.4	67	−29.5%
First Quarter	45.5	4	431.0	11	−89.4
Second Quarter	322.6	8	490.7	14	−34.3
Third Quarter	783.9	14	429.9	13	+82.3
Fourth Quarter	792.1	16	1,407.8	29	−43.7
Pollution Control	927.2	18	1,653.0	26	−43.9
Solid Waste Disposal	1,016.9	24	1,106.4	41	−8.1
Recycling	0.0	0	0.0	0	n.m.
Tax-Exempt	875.5	22	1,470.7	35	−40.5
Taxable	21.8	4	306.6	15	−92.9
Minimum-Tax	1,046.7	16	982.1	17	+6.6
New-Money	1,266.0	31	2,129.8	51	−40.6
Refunding	663.2	10	576.7	14	+15.0
Combined	14.9	1	52.9	2	−71.8
Negotiated	1,678.9	30	1,796.6	38	−6.6
Competitive	121.7	4	93.8	7	+29.7
Private Placements	143.5	8	869.0	22	−83.5
Revenue	1,901.1	38	2,712.6	63	−29.9
General Obligation	43.0	4	46.8	4	−8.1
Fixed Rate	991.4	28	1,260.5	43	−21.3
Variable Rate (Short Put)	671.7	8	435.1	8	+54.4
Variable Rate (Long/No Put)	168.5	4	660.8	13	−74.5
Linked Rate	112.5	2	399.9	2	−71.9
Zero coupon	0.0	0	3.1	1	−100.0
Bond Insurance	0.0	0	6.0	1	−100.0
Letter of Credit	120.5	3	0.0	0	n.m.
Guaranties	15.5	2	0.0	0	n.m.
Other Enhancement	0.0	0	0.0	0	n.m.
State Governments	0.0	0	8.8	2	−100.0
State Agencies	559.2	16	1,213.5	21	−53.9
Counties & Parishes	282.9	8	240.8	9	+17.5
Cities & Towns	137.5	3	138.3	6	−0.6
District	315.0	1	68.2	3	+361.9
Local Authorities	649.4	14	1,089.9	26	−40.4
Direct Issuer	0.0	0	0.0	0	n.m.
Bank Qualified	1.2	1	11.9	3	−89.9
Qualified Sch Construction	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	51.5	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. 9)					

Electric Power

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	BA Merrill Lynch	\$1,445.6
2	J P Morgan	1,091.7
3	Wells Fargo	879.6
4	Siebert Cisneros	432.7
5	Goldman Sachs	359.7
6	RBC Capital Mkts	346.1
7	Ramirez & Co	318.5
8	Citi	308.5
9	Barclays	267.6
10	Morgan Stanley	120.7

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. 9)

Electric Power		
Financial Advisors: Full Year 2018		
	Advisor	Amt (\$mill)
1	PFM Financial Adv	\$2,728.4
2	Public Resources Adv	1,045.6
3	Piper Jaffray	552.6
4	Specialized Public Fin	349.4
5	Ramirez & Co	162.1
6	RBC Capital Mkts	152.6
7	Barclays	145.3
8	George K Baum	105.2
9	Montague DeRose	98.9
10	Dougherty & Co	82.4
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. 9)		

Environmental

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	BA Merrill Lynch	\$715.1
2	Goldman Sachs	429.0
3	Raymond James	189.7
4	J P Morgan	181.7
5	Citi	110.5
6*	KeyBanc Capital Mkts	27.5
6*	Wells Fargo	27.5
8	Stifel Nicolaus	25.8
9	The Frazer Lanier	20.5
10	US Bancorp	17.9

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. 9)

Environmental

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	Financing IDEAS	\$315.0
2	KNN Public Fin	149.0
3*	Urban Futures	55.3
3*	Fieldman Rolapp	55.3
5	Caldwell Flores Winters	23.0
6	Hilltop Securities	17.7
7*	Environmental Capital	15.0
7*	CTBH Partners	15.0
9	Powell Capital Mkts	14.9
10	Susquehanna Group	14.5

*Tie. 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. 9)

Largest Electric Power Issues			
Date	Issuer	Amt (\$mill)	Manager(s)
May-9	Energy Northwest, (tax/te) (ref)	\$633.4	J P Morgan/BA Merrill Lynch
Oct-17	Long Island Power Authority	430.0	Wells Fargo
Dec-10	Los Angeles Dept of Wtr & Power	391.2	Wells Fargo/Siebert Cisneros Shank
Mar-27	Los Angeles Dept of Wtr & Power, (nm/ref)	354.4	Siebert Cisneros Shank
Feb-22	Energy Northwest, (tax/te) (ref)	321.9	BA Merrill Lynch/J P Morgan
Oct-10	Los Angeles Dept of Wtr & Power, (nm/ref)	300.0	Ramirez
Jun-6	Lower Colorado River Authority (LCRA), (amt)	291.4	BA Merrill Lynch
Jun-5	Seattle City-Washington, (cpt)	263.8	BA Merrill Lynch
Dec-13	Georgia Muni Electric Au (MEAG)	242.9	Various firms
May-3	So California Pub Pwr Au (SCPPA), (amt)	228.9	J P Morgan
VKey to abbreviations: nm – new-money; ref – refunding; tax – taxable; te – tax-exempt. Source: Thomson Reuters (Jan. 9)			

Largest Environmental Facility Issues			
Date	Issuer	Amt (\$mill)	Manager(s)
Dec-17	Port of Port Arthur Navig Dt, (amt)	\$315.0	Goldman Sachs
Aug-29	New Hampshire National Fin Auth, (amt) (ref)	169.6	BA Merrill Lynch
Aug-29	Niagara Area Development Corp, (amt) (ref)	165.0	BA Merrill Lynch
Nov-14	Santa Barbara Co-California, (amt/tax/te)	149.0	Raymond James
Apr-25	Putnam Co Dev Auth, (amt)	114.0	Goldman Sachs
Jul-17	Los Angeles City-California, (cpt)	110.5	Citi
Nov-26	Burke Co Development Authority	108.2	J P Morgan
Sep-5	California Poll Control Fin Auth	100.0	BA Merrill Lynch
Sep-27	New Hampshire National Fin Auth, (amt)	82.5	BA Merrill Lynch
Jun-28	Harrison Co County Commission, (amt) (ref)	73.5	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. 9)			

General Purpose: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$86,913.2	2,544	\$104,817.4	3,015	−17.1%
First Quarter	17,274.4	456	22,931.0	586	−24.7
Second Quarter	26,328.1	771	23,145.0	860	+13.8
Third Quarter	21,716.4	672	21,181.7	715	+2.5
Fourth Quarter	21,594.4	645	37,559.6	854	−42.5
General Purpose	86,807.4	2,539	104,728.0	3,010	−17.1
Agriculture	0.0	0	57.0	2	−100.0
Veterans	105.8	5	32.4	3	+226.5
Tax-Exempt	74,647.9	2,265	94,173.5	2,716	−20.7
Taxable	12,138.1	273	10,531.2	294	+15.3
Minimum-Tax	127.3	6	112.7	5	+13.0
New-Money	57,148.2	2,044	48,432.2	1,785	+18.0
Refunding	13,212.5	370	34,267.9	953	−61.4
Combined	16,552.5	130	22,117.2	277	−25.2
Negotiated	42,495.5	895	52,186.8	1,198	−18.6
Competitive	39,645.5	1,429	47,301.3	1,485	−16.2
Private Placements	4,772.2	220	5,329.2	332	−10.5
Revenue	33,770.3	496	30,445.8	550	+10.9
General Obligation	53,142.9	2,048	74,371.6	2,465	−28.5
Fixed Rate	85,301.2	2,513	102,600.4	2,971	−16.9
Variable Rate (Short Put)	1,271.1	17	1,368.0	25	−7.1
Variable Rate (Long/No Put)	52.0	2	74.0	2	−29.7
Zero Coupon	18.1	4	1.2	3	+1408.3
Linked Rate	267.6	7	741.8	13	−63.9
Convertible	3.2	1	32.0	1	−90.0
Bond Insurance	4,857.4	238	4,595.8	329	+5.7
Letter of Credit	100.0	1	0.0	0	n.m.
Standby Purchase Agreements	638.5	4	430.0	3	+48.5
Guaranties	329.5	23	632.9	26	−47.9
Mortgage	0.0	0	9.0	5	−100.0
State Governments	22,040.4	96	33,925.5	106	−35.0
State Agencies	22,407.1	126	19,471.8	126	+15.1
Counties & Parishes	8,775.8	329	13,617.5	442	−35.6
Cities & Towns	25,447.6	1,709	30,039.1	2,029	−15.3
District	1,890.2	160	2,604.0	160	−27.4
Local Authorities	6,168.3	115	5,141.0	148	+20.0
College & Universities	79.0	3	1.5	1	+5166.7
Direct Issuer	104.8	6	3.1	1	+3280.6
Tribal Governments	0.0	0	13.9	2	−100.0
Cooperative Utilities	0.0	0	0.0	0	n.m.
Bank Qualified	3,746.6	929	5,060.2	1,216	−26.0
Qualified Sch Construction	0.0	0	0.0	0	n.m.
Other Stimulus Program	4.3	1	25.2	4	−82.9

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. 9)

Health Care: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$31,316.2	461	\$54,614.1	700	−42.7%
First Quarter	4,152.7	42	7,615.3	113	−45.5
Second Quarter	6,652.3	116	13,073.2	133	−49.1
Third Quarter	9,374.4	135	10,279.9	162	−8.8
Fourth Quarter	11,136.9	168	23,645.8	292	−52.9
General Acute-Care Hosps	24,628.9	251	42,079.9	411	−41.5
Single-SpecialtyHospitals	840.3	9	1,786.4	25	−53.0
Pediatric Hospitals	492.9	5	2,946.2	23	−83.3
Hospitals Equipment Loans	0.0	0	0.0	0	n.m.
General Medical	194.6	6	719.1	9	−72.9
Continuing Care	4,261.5	133	6,210.0	171	−31.4
Nursing Homes	87.1	7	120.7	13	−27.8
Life Care/Retirement	811.0	50	751.9	48	+7.9
Tax-Exempt	28,741.4	385	51,811.8	621	−44.5
Taxable	2,574.8	76	2,785.7	78	−7.6
Minimum-Tax	0.0	0	16.6	1	−100.0
New-Money	17,507.5	271	20,654.5	321	−15.2
Refunding	8,736.0	130	20,596.7	264	−57.6
Combined	5,072.8	60	13,362.9	115	−62.0
Negotiated	27,079.8	348	40,318.7	428	−32.8
Competitive	291.3	9	605.0	11	−51.9
Private Placements	3,945.1	104	13,690.5	261	−71.2
Revenue	29,373.5	422	52,904.9	666	−44.5
General Obligation	1,942.7	39	1,709.3	34	+13.7
Fixed Rate	25,345.9	374	44,996.1	563	−43.7
Variable Rate (Short Put)	3,914.6	47	4,733.6	84	−17.3
Variable Rate (Long/No Put)	1,435.5	26	1,245.4	13	+15.3
Zero Coupon	15.0	1	0.0	0	n.m.
Linked Rate	605.2	13	3,639.1	40	−83.4
Convertible	0.0	0	0.0	0	n.m.
Bond Insurance	587.9	8	249.4	9	+135.7
Letter of Credit	1,534.3	18	234.7	7	+553.7
Standby Purchase Agreements	475.1	4	0.0	0	n.m.
Insured Mortgages	220.3	4	39.5	2	+457.7
Guaranties	0.0	0	172.4	6	−100.0
State Governments	321.1	4	1,222.7	8	−73.7
State Agencies	16,123.3	192	28,728.9	299	−43.9
Counties & Parishes	1,724.4	35	4,354.6	48	−60.4
Cities & Towns	1,772.1	49	1,851.2	72	−4.3
District	1,822.4	33	2,286.4	43	−20.3
Local Authorities	9,175.7	142	15,351.2	221	−40.2
Colleges & Universities	230.0	3	667.4	6	−65.5
Direct Issuer	132.1	2	151.7	3	−12.9
Tribal Governments	15.3	1	0.0	0	n.m.
Bank Qualified	56.8	12	185.9	38	−69.4
Qualified Sch Construction	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. 9)

General Purpose

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	BA Merrill Lynch	\$13,962.2
2	Citi	12,664.4
3	Morgan Stanley	8,406.4
4	Jefferies LLC	7,107.2
5	J P Morgan	6,931.3
6	Loop Capital Mkts	2,997.5
7	Goldman Sachs	2,880.3
8	Raymond James	2,763.2
9	Robert W Baird	2,600.9
10	Wells Fargo	2,459.3

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. 9)

General Purpose

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	Public Resources Adv	\$22,457.1
2	PFM Financial Adv	15,786.3
3	Hilltop Securities	5,995.1
4	Acacia Financial Grp	4,903.8
5	Davenport & Co	1,983.7
6	Columbia Capital Mgmt	1,779.8
7	Capital Markets Adv	1,341.1
8	Lamont Financial	1,268.6
9	Ehlers & Associates	1,020.2
10	Piper Jaffray	1,008.5

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. 9)

Health Care

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	BA Merrill Lynch	\$5,862.3
2	J P Morgan	3,726.6
3	Citi	3,552.1
4	Ziegler	2,406.6
5	Piper Jaffray	2,073.8
6	Morgan Stanley	2,042.9
7	Barclays	1,724.0
8	Wells Fargo	1,466.6
9	KeyBanc Capital Mkts	671.0
10	RBC Capital Mkts	585.1

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. 9)

Health Care

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	Ponder & Co	\$7,111.1
2	Kaufman Hall	4,189.0
3	Raymond James	1,350.4
4	KeyBanc Capital Mkts	1,337.5
5	PFM Financial Adv	1,145.6
6	Acacia Financial Grp	572.0
7	Hammond Hanlon	521.1
8	Columbia Capital Mgmt	466.1
9	KNN Public Finance	451.2
10	Stifel Nicolaus	422.1

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. 9)

Largest General Purpose Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Apr-4	NJ Tobacco Settlement Fin Corp, (nm/ref)	\$3,146.7	Jefferies/Citi
Mar-6	California (State), GOs (nm/ref)	2,181.3	Various firms
Apr-17	California (State), GOs (tax) (nm/ref)	2,147.0	Various firms
Jul-11	NYS Dorm Authority, (tax/te) (cpt)	1,781.5	Morgan Stanley
Dec-12	NYS Dorm Authority, (nm/ref)	1,699.6	Various firms
Oct-2	NYS Dorm Authority, (amt/tax/te) (cpt) (nm/ref)	1,692.4	Barclays
Jun-20	Golden State Tobacco Sec Corp, (ref)	1,674.7	Citi/Jefferies
Dec-12	NYS Dorm Authority, (tax) (nm/ref)	1,669.6	Various firms
Dec-12	NYS Dorm Authority, (nm/ref)	1,669.6	Various firms
Feb-13	PA Commonwealth Financing Auth	1,487.2	Jefferies/Morgan Stanley

Key to abbreviations: GOs – general obligation bonds; nm – new money; ref – refunding. Source: Thomson Reuters (Jan. 9)

Largest Health Care Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Mar-6	Oklahoma Dev Finance Auth, (tax/te)	\$1,162.3	BA Merrill Lynch/Citi
Aug-15	Allegheny Co Hospital Dev Auth, (ref)	943.4	Citi/BA Merrill Lynch
Jul-26	NYS Dorm Authority, (tax/te)	685.2	Citi/BA Merrill Lynch
Oct-16	Duluth Economic Dev Auth, (nm/ref)	682.3	Various firms
Mar-27	California Health Facs Fin Auth	619.0	Morgan Stanley
Nov-14	South Carolina Jobs Econ Dev Au, (ref)	586.5	Wells Fargo/BA Merrill Lynch
May-10	Greeneville Hlth & Ed Facs Bd	535.2	BA Merrill Lynch
Oct-23	Tarrant Co Cult Ed Fac Fin Corp	443.6	J P Morgan/Barclays
Jun-13	Massachusetts Dev Finance Agcy	432.7	Citi
Oct-11	Maricopa Co Spec Health Care Dt, GOs	422.1	J P Morgan

issues were for general acute-care hospitals. Key to abbreviations: nm – new money; ref – refunding; Source: Thomson Reuters (Jan. 9)

Development, Healthcare, Electric Power Led Decline

By Robert Slavin

In a year of widely declining municipal issuance, the development, healthcare, and electric power sectors saw the steepest drop-offs.

Development was down 50.4%, healthcare was off by 42.7%, and electric power declined 40.1%. The slides compared with an overall decline of 23.5% in total issuance.

All percentages are for par value unless otherwise stated and are comparisons to the figures for 2017. All dollar-value and number-of-issues statistics are from Refinitiv.

The sectors with the biggest dollar value declines were education (about \$38 billion), healthcare (about \$23 billion), and general purpose (about \$18 billion). The biggest sectors by par were general purpose (\$86.9 billion), education (\$83.2 billion), and transportation (\$51.6 billion).

In late 2017 there was a proposal in the United States Congress to end the ability to sell tax-exempt private activity bonds. Several analysts said concern about this affected shifts in sector issuance in 2018.

“Development got a lot of issuance in 2017 from advance refundings, which were pulled forward into the end of that year as a result of tax reform,” explained Jack Muller, associate with the Citi Municipal Strategies Team. “With some of those deals pulled forward, and without the ability to execute new advance refundings in 2018, issuance was impacted. In healthcare, we saw a very similar phenomenon.

“And, in addition, healthcare issuance by municipal issuers in the corporate market increased in 2018, in an effort to tap a different demand base,” Muller continued. “This likely cannibalized a bit of municipal market issuance in that sector.”

Piper Jaffray managing director Justin Hoogendoorn said rising rates and the elimination of tax preferred advance refunding sharply reduced refunding in 2018 and these were the prime causes of the decline in healthcare issuance.

Regarding the 40.1% decline in the electric power sector, Hoogendoorn said, “In addition to the tax reform and interest rate trends [upward in 2018], the changing administration played a role as Environmental Protection Agency regulations became a focal point.

“The Trump administration’s relaxed view of environmental goals put issuer’s long-term capital development in flux, as anticipated reductions of environmental enforcement and potential relaxation of rules limited development,” Hoogendoorn said. “Utilities may have placed certain retrofitting of coal power plants and investments in renewables on hold ... We would expect issuance to increase in 2019.”

The only sector to see an increase in 2018 was public facilities, which

grew 21.2%. “The reason public facilities did not follow suit was likely just happenstance,” Muller said. “It is a relatively small sector but the median deal size may be large.

“Project finance deals for things like stadiums and convention centers are relatively rare, but they require borrowing hundreds of millions of dollars at a time, if not more,” Muller said. “A few large deals can bring up year over year numbers materially and that is likely what happened in 2018.”

Muller said the fact that within public facilities civic and convention centers had a 46.1% increase and “other recreation” had a 258.3% increase supported his argument. The sector with the smallest decline outside of public facilities was housing, with a 1.1% decline. Bond Buyer Contributing Editor John Hallacy said “housing is counter-cyclical in munis. As rates climb, there is more demand for the lower rates that municipal deals provide.”

Muller explained this by saying, “With the current flatness of the yield curve and the aggressive pattern of rate hikes witnessed in 2018, some state housing finance agencies (HFAs) are rotating their business model toward borrowing to fund mortgage lending, which they will retain on their balance sheets.

“When interest rates were at their lowest in the front end of the curve, HFAs found it more profitable to originate the mortgages and sell them in the secondary market, keeping their balance sheets light,” Muller said. “This did not require long-term borrowing.”

Within the education sector, college and universities went down 50.3%. Hallacy said, “They issued a lot pre-[federal] tax reform[, which went into effect at the start of 2018]. They also use more taxable financing and direct lending that is not counted in our numbers.”

To explain the decline in college and university issuance, Muller said, “Borrowing by state governments/agencies to fund higher education is declining in some states because of difficulty balancing budgets and increasing pension contributions. Oftentimes, when a state needs to reallocate expenses, it is higher ed funding that gets shortchanged, for whatever reason.

“As pension liabilities grow and public pressure to fund them mounts, some states are becoming more aggressive with their contributions, and they must often take money from other parts of the budget like higher ed to do so,” Muller said.

While the transportation sector went down 19.9%, the seaport subcategory increased 165.4%.

Hallacy said this was because “increased trade and deeper draft ships including supertankers have required deeper ports and more cranes and ship-side storage facilities.”

Housing: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$21,602.0	595	\$21,848.2	666	-1.1%
First Quarter	2,521.6	76	3,600.6	121	-30.0
Second Quarter	6,946.6	182	5,909.0	166	+17.6
Third Quarter	4,899.7	130	4,613.5	143	+6.2
Fourth Quarter	7,234.1	207	7,725.1	236	-6.4
Single-Family	11,327.7	236	10,665.2	215	+6.2
Multifamily	10,274.3	359	11,183.0	451	-8.1
Tax-Exempt	18,085.2	503	16,856.6	532	+7.3
Taxable	2,605.7	64	3,554.5	83	-26.7
Minimum-Tax	911.1	28	1,437.1	51	-36.6
New-Money	18,784.7	523	16,810.5	546	+11.7
Refunding	1,158.0	38	3,274.1	86	-64.6
Combined	1,659.3	34	1,763.6	34	-5.9
Negotiated	17,262.6	437	17,171.7	480	+0.5
Competitive	630.9	18	541.5	16	+16.5
Private Placements	3,708.5	140	4,135.0	170	-10.3
Revenue	19,691.5	563	20,128.2	630	-2.2
General Obligation	1,910.5	32	1,720.0	36	+11.1
Fixed Rate	16,925.7	409	15,278.9	428	+10.8
Variable Rate (Short Put)	2,136.0	63	3,978.4	117	-46.3
Variable Rate (Long/No Put)	2,009.5	106	1,574.0	100	+27.7
Zero coupon	0.0	0	7.4	1	-100.0
Linked Rate	530.8	17	1,009.6	20	-47.4
Bond Insurance	0.0	0	123.1	6	-100.0
Letter of Credit	292.5	8	1,182.6	15	-75.3
Standby Purchase Agreements	922.1	20	637.8	17	+44.6
Insured Mortgages	1334.7	47	2580.2	95	-48.3
Guaranties	0.0	0	0.0	0	n.m.
State Governments	83.8	2	284.6	5	-70.6
State Agencies	15,816.3	425	17,033.3	485	-7.1
Counties & Parishes	259.8	3	301.6	7	-13.9
Cities & Towns	987.5	28	811.5	22	+21.7
Local Authorities	4,411.4	134	3,407.3	146	+29.5
Colleges & Universities	0.0	0	0.0	0	n.m.
District	25.2	2	10.0	1	+152.0
Direct Issuer	18.0	1	0.0	0	n.m.
Bank Qualified	38.5	4	50.7	11	-24.1
Qualified Sch Construction	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. 9)

Housing

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	RBC Capital Mkts	\$3,842.9
2	J P Morgan	1,922.6
3	BA Merrill Lynch	1,904.9
4	Morgan Stanley	1,865.4
5	Stifel Nicolaus	1,358.7
6	Citi	1,270.4
7	Barclays	1,196.4
8	Wells Fargo	1,076.3
9	Raymond James	794.5
10	Jefferies LLC	722.2

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. 9)

Housing

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	CSG Advisors Incorp	\$3,677.7
2	Caine Mitter	2,939.8
3	Lamont Financial	722.8
4	George K Baum	548.1
5	Hilltop Securities	432.4
6	Acacia Financial Grp	387.9
7	PFM Financial Adv	254.2
8	RBC Capital Mkts	183.3
9	Piper Jaffray	177.1
10	Public Resources Adv	174.7

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. 9)

Largest Housing Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Jun-13	NYC Housing Dev Corp, (tax/te)	\$625.5	J P Morgan/Morgan Stanley
Dec-6	NYC Housing Dev Corp	455.6	Wells Fargo
Jun-15	New Jersey Hsg & Mtg Fin Agency, (amt)	378.9	RBC Capital Mkts
Oct-4	NYC Housing Dev Corp, (tax/te)	337.6	Wells Fargo
Jun-13	Michigan St Housing Dev Auth, (amt) (ref)	328.1	BA Merrill Lynch
Sep-13	Chicago Housing Authority, GOs (tax/te)	325.0	Cabrera Capital Mkts
Jun-27	Los Angeles City-California.GOs (tax/te) (cpt) (amt)	321.3	PNC Capital Mkts
Oct-11	Michigan St Housing Dev Auth	315.9	Barclays
Oct-24	Maryland Dept Hsg & Com Dev (DHCD), (amt)	280.0	Morgan Stanley
Jun-21	Texas Veterans Land Board, GOs	250.0	Jefferies

Key to abbreviations: amt – alternative minimum tax; cpt – competitive; nm – new money; ref – refunding; tax – taxable; te – tax exempt. Source: Thomson Reuters (Jan. 9)

Public Facilities: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$11,922.0	501	\$9,832.7	494	+21.2%
First Quarter	2,568.3	123	1,182.9	100	+117.1
Second Quarter	2,353.9	108	3,087.0	124	−23.7
Third Quarter	4,166.7	109	1,968.2	96	+111.7
Fourth Quarter	2,833.2	161	3,594.6	174	−21.2
Libraries & Museums	815.0	53	632.1	45	+28.9
Government Buildings	1,698.6	52	1,752.8	79	−3.1
Fire Stations & Equipment	463.9	95	383.9	81	+20.8
Correctional Facilities	1,353.3	39	1,342.2	57	+0.8
Police Stations & Equipment	173.6	16	234.0	18	−25.8
Civic & Convention Centers	3,777.9	38	2,586.6	28	+46.1
Stadium & Sports Complexes	1,729.1	20	1,571.8	27	+10.0
Theaters	152.6	4	129.7	6	+17.7
Park, Zoos & Beaches	910.4	135	963.0	122	−5.5
Other Recreation	847.7	49	236.6	31	+258.3
Tax-Exempt	10,452.4	442	8,739.3	455	+19.6
Taxable	1,469.6	59	1,089.8	38	+34.9
Minimum-Tax	0.0	0	3.5	1	−100.0
New-Money	10,304.5	424	5,011.4	341	+105.6
Refunding	1,237.9	64	3,349.6	128	−63.0
Combined	379.7	13	1,471.7	25	−74.2
Negotiated	8,929.5	248	5,999.8	242	+48.8
Competitive	2,400.6	195	3,205.7	199	−25.1
Private Placements	592.0	58	627.2	53	−5.6
Revenue	9,087.2	195	6,890.4	186	+31.9
General Obligation	2,834.8	306	2,942.3	308	−3.7
Fixed Rate	11,444.6	496	9,193.1	487	+24.5
Variable Rate (Short Put)	12.5	1	243.7	2	−94.9
Variable Rate (Long/No Put)	0.0	0	0.0	0	n.m.
Zero Coupon	88.5	1	224.4	4	−60.6
Linked Rate	376.5	3	171.5	1	+119.5
Convertible	0.0	0	0.0	0	n.m.
Bond Insurance	1,022.1	70	1,448.1	71	−29.4
Letter of Credit	0.0	0	0.0	0	n.m.
Standby Purchase Agreements	0.0	0	0.0	0	n.m.
Guaranties	78.1	4	30.0	3	+160.3
State Governments	292.0	7	572.1	9	−49.0
State Agencies	2,093.9	28	2,085.3	38	+0.4
Counties & Parishes	1,777.5	50	1,909.0	75	−6.9
Cities & Towns	2,477.4	116	1,995.2	103	+24.2
District	1,759.5	191	1,024.5	186	+71.7
Local Authorities	3,519.3	108	2,206.6	82	+59.5
Colleges & Universities	0.0	0	40.0	1	−100.0
Direct Issuer	2.5	1	0.0	0	n.m.
Bank Qualified	783.6	222	819.8	236	−4.4
Qualified Sch Construction	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	1.6	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. 9)					

Public Facilities

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	Citi	\$1,460.1
2	RBC Capital Mkts	1,376.5
3	Goldman Sachs	1,275.5
4	BA Merrill Lynch	1,016.4
5	Morgan Stanley	719.0
6	Robert W Baird	692.3
7	Wells Fargo	607.0
8	Stifel Nicolaus	501.7
9	Raymond James	449.3
10	J P Morgan	439.5

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. 9)

Public Facilities

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	PFM Financial Adv	\$1,799.2
2	Hilltop Securities	1,176.2
3	Montague DeRose	623.3
4	KNN Public Finance	581.6
5	Estrada Hinojosa	465.4
6	Hobbs Ong & Asso	447.6
7	Umbaugh LLP	417.7
8	JNA Consulting Grp	340.0
9	Frasca & Associates	333.1
10	Springsted Incorporated	199.3

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. 9)

Transportation: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$51,641.8	494	\$64,467.1	579	−19.9%
First Quarter	8,591.1	91	12,478.2	110	−31.2
Second Quarter	16,125.4	151	10,839.5	141	+48.8
Third Quarter	12,636.8	139	18,168.4	146	−30.4
Fourth Quarter	14,288.6	113	22,980.9	182	−37.8
Airport	17,372.5	84	14,697.9	116	+18.2
Seaport	4,109.9	38	1,548.4	30	+165.4
Toll Roads, Hwys & Streets	15,313.8	256	20,115.4	281	−23.9
Bridges	2,362.3	22	5,865.2	27	−59.7
Tunnels	0.0	0	0.0	0	n.m.
Parking Facilities	394.5	23	470.5	22	−16.2
Mass Transportaions	12,088.7	71	21,769.7	103	−44.5
Tax-Exempt	34,434.5	407	48,988.2	477	−29.7
Taxable	3,098.2	41	2,964.7	39	+4.5
Minimum-Tax	14,109.1	46	12,514.2	63	+12.7
New-Money	31,269.8	377	24,119.7	338	+29.6
Refunding	14,069.5	94	22,890.1	171	−38.5
Combined	6,302.5	23	17,457.3	70	−63.9
Negotiated	40,972.6	276	53,464.5	357	−23.4
Competitive	9,610.7	185	7,798.1	173	+23.2
Private Placements	1,058.6	33	3,204.5	49	−67.0
Revenue	40,275.3	249	56,516.9	342	−28.7
General Obligation	11,366.5	245	7,950.2	237	+43.0
Fixed Rate	49,039.7	465	59,163.4	547	−17.1
Variable Rate (Short Put)	854.5	12	1,262.7	9	−32.3
Variable Rate (Long/No Put)	1,083.6	7	1,854.3	8	−41.6
Zero Coupon	74.8	2	237.8	5	−68.5
Linked Rate	581.8	7	1,949.0	10	−70.1
Convertible	7.4	1	0.0	0	n.m.
Bond Insurance	1,862.3	73	2,013.6	79	−7.5
Letter of Credit	431.4	5	150.0	1	+187.6
Standby Purch Agreement	191.2	2	0.0	0	n.m.
Guaranties	27.0	1	320.0	3	−91.6
State Governments	5,068.2	21	4,538.1	28	+11.7
State Agencies	21,754.8	89	30,660.5	124	−29.0
Counties & Parishes	3,202.0	39	2,504.4	44	+27.9
Cities & Towns	8,799.7	169	6,369.4	153	+38.2
District	661.7	68	1,862.6	86	−64.5
Local Authorities	12,146.7	107	18,502.1	143	−34.3
Direct Issuer	8.7	1	30.0	1	−71.0
Bank Qualified	409.2	145	494.0	143	−17.2
Qualified Sch Construction	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. 9)					

Transportation

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	BA Merrill Lynch	\$10,920.7
2	Citi	10,417.8
3	J P Morgan	7,339.3
4	Morgan Stanley	4,648.4
5	Goldman Sachs	4,491.6
6	Wells Fargo	2,681.0
7	Siebert Cisneros	1,760.1
8	Barclays	1,723.8
9	Raymond James	1,406.1
10	Jefferies LLC	1,173.8

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. 9)

Transportation

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	PFM Financial Adv	\$11,261.7
2	Frasca & Associates	8,707.6
3	Public Resources Adv	7,045.8
4	Hilltop Securities	3,738.0
5	Estrada Hinojosa	1,853.4
6	Backstrom McCarley	1,808.0
7	MUFG	1,181.5
8	Acacia Financial Grp	1,166.8
9	Swap Financial Grp	1,006.4
10	Zions Bank	791.8

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. 9)

Largest Public Facility Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Aug-1	Washington Conv Ctr Pub Facs Dt	\$1,003.6	Citi/Goldman Sachs
Apr-11	Clark Co-Nevada,GOs	645.1	RBC Capital Mkts/J P Morgan
Sep-13	Las Vegas Conv & Visitors Auth	500.0	RBC Capital Mkts/J P Morgan
Mar-7	Arlington City-Texas, (tax/te)	465.4	Citi
Oct-23	Clark Co-Nevada, GOs (cpt)	422.6	BA Merrill Lynch
Oct-3	Columbus City-Ohio,GOs (tax)	399.8	BA Merrill Lynch
Jan-5	New Jersey Economic Dev Auth, (tax/te)	375.7	RBC Capital Mkts/J P Morgan
Feb-22	Washington Convention & Sports Au, (tax/te) (ref)	333.1	Goldman Sachs
Jul-31	San Antonio City-Texas, GOs (tax)	323.1	J P Morgan
Aug-21	Denver City and Co-Colorado, (tax/te)	300.0	Citi/Piper Jaffray
Key to abbreviations: GOs – general obligation bonds; nm – new-money; ref – refunding; tax – taxable; te – tax-exempt. Source: Thomson Reuters (Jan. 9)			

Largest Transportation Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Aug-14	Denver City and Co-Colorado, (amt) (ref)	\$2,526.1	BA Merrill Lynch/Citi
Dec-4	Chicago City-Illinois, (amt/tax/te) (nm/ref)	2,012.9	J P Morgan
Jun-14	Metropolitan Transport Auth (MTA),GOs (cpt)	1,600.0	Various firms
Oct-3	New Jersey Trans Trust Fund Au, GOs (ref)	1,567.4	Citi
Apr-24	New York Transportation Dev Corp, (amt)	1,383.5	Citi
Jul-17	New Jersey Trans Trust Fund Au, (ref)	1,195.7	Morgan Stanley
Jun-5	California Municipal Fin Auth, (amt)	1,181.5	BA Merrill Lynch/Citi
Oct-3	Metropolitan Transport Auth (MTA), GOs (cpt)	900.0	Various firms
May-16	San Francisco City & Co Airport Comm, (amt/tax/te) (nm/ref)	881.8	Citi/BA Merrill Lynch
May-16	Grand Parkway Transport Corp	878.6	Goldman Sachs/Morgan Stanley
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. 9)			

Utilities: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$40,146.8	1,091	\$41,078.1	1,339	−2.3%
First Quarter	7,328.5	217	7,561.7	275	−3.1
Second Quarter	11,244.5	322	12,196.5	408	−7.8
Third Quarter	11,704.8	274	7,672.0	308	+52.6
Fourth Quarter	9,869.1	278	13,647.9	348	−27.7
Water & Sewer	27,950.0	866	36,067.6	1,135	−22.5
Gas	9,983.2	37	2,427.6	15	+311.2
Telephone	210.1	13	152.3	16	+38.0
Sanitation	286.5	80	315.7	90	−9.2
Flood Control	403.6	46	800.5	46	−49.6
Combined-Utilities	1,313.4	49	1,314.4	37	−0.1
Tax-Exempt	38,945.4	1,049	39,364.0	1,276	−1.1
Taxable	840.4	37	1,710.6	62	−50.9
Minimum-Tax	360.9	5	3.5	1	+10211.4
New-Money	29,070.8	789	15,693.6	687	+85.2
Refunding	6,989.8	232	16,596.6	509	−57.9
Combined	4,086.3	70	8,788.0	143	−53.5
Negotiated	30,301.3	526	30,228.9	734	+0.2
Competitive	7,354.3	484	8,123.3	485	−9.5
Private Placements	2,491.3	81	2,725.8	120	−8.6
Revenue	35,616.2	567	35,509.0	745	+0.3
General Obligation	4,530.7	524	5,569.1	594	−18.6
Fixed Rate	29,846.5	1,050	38,643.7	1,309	−22.8
Variable Rate (Short Put)	724.4	11	825.9	11	−12.3
Variable Rate (Long/No Put)	7,572.8	14	689.6	4	+998.1
Zero Coupon	15.9	4	10.8	7	+47.2
Linked Rate	1,987.2	12	908.1	8	+118.8
Convertible	0.0	0	0.0	0	n.m.
Bond Insurance	3,044.5	323	4,571.4	409	−33.4
Letter of Credit	149.9	3	105.0	2	+42.8
Standby Purchase Agreements	310.0	3	80.0	1	+287.5
Insured Mortgages	0.0	0	0.0	0	n.m.
Guaranties	105.4	21	68.1	8	+54.8
Surety bond	0.0	0	0.0	0	n.m.
State Governments	252.1	3	956.8	12	−73.7
State Agencies	8,436.1	51	7,135.2	52	+18.2
Counties & Parishes	1,321.9	40	2,380.8	47	−44.5
Cities & Towns	10,204.8	407	11,283.1	476	−9.6
District	6,672.9	428	8,043.8	550	−17.0
Local Authorities	11,872.4	156	10,564.1	197	+12.4
Indian Tribe	0.0	0	0.0	0	n.m.
Direct Issuer	554.3	3	691.9	4	−19.9
Cooperative Utilities	832.4	3	22.4	1	+3616.1
Bank Qualified	1,755.6	499	2,406.1	632	−27.0
Qualified Sch Construction	0.0	0	0.0	0	n.m.
Other Stimulus Program	0.0	0	28.0	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. 9)

Utilities

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	Morgan Stanley	\$5,161.1
2	Citi	4,687.1
3	RBC Capital Mkts	4,450.1
4	BA Merrill Lynch	3,880.2
5	J P Morgan	3,766.8
6	Goldman Sachs	3,593.8
7	Piper Jaffray	1,544.3
8	Raymond James	1,269.2
9	Siebert Cisneros Shank	1,241.0
10	Wells Fargo	1,182.5

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. 9)

Utilities

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	Municipal Capital Mkts	\$9,016.4
2	Hilltop Securities	6,327.1
3	PFM Financial Adv	4,904.0
4	Public Resources Adv	1,990.4
5	Montague DeRose	998.0
6	Lamont Financial	975.7
7	Drexel Hamilton	925.7
8	TKG & Associates	598.3
9	Piper Jaffray	577.1
10	Estrada Hinojosa	507.9

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. 9)

Largest Utility Issues

Date	Issuer	Amt (\$mill)	Manager(s)
Sep-18	Texas Water Development Board	\$1,672.2	Citi
Jan-26	Main Street Natural Gas Inc	1,021.7	RBC Capital Mkts
Apr-24	Main Street Natural Gas Inc	1,000.2	RBC Capital Mkts
Sep-12	Kentucky Pub Energy Au (PEAK)	996.0	Morgan Stanley
Jun-8	Southeast Alabama Gas Dt	970.4	Morgan Stanley
Dec-7	Kentucky Pub Energy Au (PEAK)	902.0	Morgan Stanley
Aug-16	Connecticut (State), GOs	889.2	Siebert Cisneros Shank
Jan-19	Kentucky Pub Energy Au (PEAK)	833.1	Morgan Stanley
Jul-25	Patriots Energy Group	832.4	RBC Capital Mkts
Apr-24	Texas Water Development Board	832.1	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. 9)

Bank-Qualified Bonds: Full Year

	2018		2017		Percent Change
	Volume (\$ mill)	# Issues	Volume (\$ mill)	# Issues	
Total	\$11,958.3	3,067	\$17,658.7	4,215	−32.3%
First Quarter	2,651.7	679	4,194.4	946	−36.8
Second Quarter	3,714.3	988	5,155.7	1,297	−28.0
Third Quarter	2,812.0	730	3,831.2	945	−26.6
Fourth Quarter	2,780.4	670	4,477.4	1,027	−37.9
Development	136.5	35	228.0	52	−40.1
Education	4,921.3	1,192	8,278.8	1,853	−40.6
Electric Power	109.0	28	123.2	31	−11.5
Environmental Facilities	1.2	1	11.9	3	−89.9
Healthcare	56.8	12	185.9	38	−69.4
Housing	38.5	4	50.7	11	−24.1
Public Facilities	783.6	222	819.8	236	−4.4
Transportation	409.2	145	494.0	143	−17.2
Utilities	1,755.6	499	2,406.1	632	−27.0
General Purpose	3,746.6	929	5,060.2	1,216	−26.0
Tax-Exempt	11,958.3	3,067	17,658.5	4,214	−32.3
Taxable	0.0	0	0.0	0	n.m.
Minimum-Tax	0.0	0	0.2	1	−100.0
New-Money	9,687.6	2,553	10,229.8	2,676	−5.3
Refunding	1,810.1	421	6,261.8	1,310	−71.1
Combined	460.6	93	1,167.1	229	−60.5
Negotiated	4,842.5	1,153	9,159.0	1,991	−47.1
Competitive	6,895.5	1,822	8,079.5	2,093	−14.7
Private Placements	220.4	92	420.1	131	−47.5
Revenue	1,886.4	449	2,608.5	608	−27.7
General Obligation	10,071.9	2,618	15,050.1	3,607	−33.1
Fixed Rate	11,928.5	3,049	17,583.6	4,159	−32.2
Variable Rate (Short Put)	0.2	1	0.0	0	n.m.
Variable Rate (Long/No Put)	0.0	0	14.1	2	−100.0
Zero Coupon	26.3	16	61.1	54	−57.0
Linked Rate	0.0	0	0.0	0	n.m.
Convertible	3.2	1	0.0	0	n.m.
Bond Insurance	2,935.4	591	4,169.4	811	−29.6
Letter of Credit	0.0	0	5.4	1	−100.0
Standby Purchase Agreements	1.3	1	0.0	0	n.m.
Insured Mortgages	0.0	0	0.0	0	n.m.
Guaranties	2,051.5	437	3,178.5	627	−35.5
Other Enhancements	0.0	0	0.0	0	n.m.
State Governments	0.0	0	0.0	0	n.m.
State Agencies	51.4	14	69.0	15	−25.5
Counties & Parishes	828.0	166	1,106.6	210	−25.2
Cities & Towns	3,930.5	1,092	5,378.8	1,391	−26.9
District	6,493.5	1,649	10,189.9	2,394	−36.3
Local Authorities	598.0	135	800.4	184	−25.3
Colleges & Universities	56.6	10	100.2	18	−43.5
Direct Issuer	0.3	1	13.7	3	−97.8
Cooperative Utilities	0.0	0	0.0	0	n.m.
Bank Qualified	11,958.3	3,067	17,658.7	4,215	−32.3
Qualified Sch Construction	0.0	0	0.0	0	n.m.
Other Stimulus Program	5.6	2	0.8	1	+600.0

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. 9)

Bank-Qualified Bonds

Senior Managers: Full Year 2018

	Manager	Amt (\$mill)
1	Robert W Baird	\$1,658.4
2	Raymond James	768.7
3	Stifel Nicolaus	682.2
4	RBC Capital Mkts	666.0
5	Piper Jaffray	610.1
6	FTN Financial Capital	557.4
7	Roosevelt & Cross	550.8
8	Northland Securities	500.6
9	D A Davidson	490.0
10	Janney Montgomery	384.1

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. 9)

Bank-Qualified Bonds

Financial Advisors: Full Year 2018

	Advisor	Amt (\$mill)
1	PFM Financial Adv	\$1,051.2
2	Ehlers & Associates	775.7
3	Hilltop Securities	466.8
4	Robert W Baird	391.7
5	Umbaugh LLP	384.1
6	Piper Jaffray	356.0
7	Springsted Incorporated	231.4
8	Speer Financial	227.7
9	Masterson Advisors	219.4
10	Phoenix Advisors	212.4

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. 9)

Top Senior Managers: All Issues

Full Year 2018 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Bank of America Merrill Lynch	\$48,692.5	15.2%	446
2	Citi	41,250.2	12.9	403
3	J P Morgan Securities LLC	32,032.3	10.0	321
4	Morgan Stanley	26,877.3	8.4	309
5	RBC Capital Markets	20,842.7	6.5	462
6	Goldman Sachs & Co LLC	15,264.7	4.8	89
7	Wells Fargo & Co	14,893.8	4.7	246
8	Raymond James	12,654.9	4.0	486
9	Piper Jaffray & Co	12,007.3	3.8	410
10	Jefferies LLC	11,584.8	3.6	76

This is Thomson Reuters's "AT1" league table. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Senior Managers: Negotiated Issues

Full Year 2018 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Bank of America Merrill Lynch	\$31,834.4	13.4%	291
2	Citi	28,710.7	12.1	239
3	J P Morgan Securities LLC	24,824.2	10.4	200
4	RBC Capital Markets	19,745.7	8.3	404
5	Morgan Stanley	16,752.3	7.0	142
6	Goldman Sachs & Co LLC	12,964.7	5.4	73
7	Wells Fargo & Co	10,918.2	4.6	180
8	Piper Jaffray & Co	10,326.1	4.3	298
9	Stifel Nicolaus & Co Inc	10,177.8	4.3	535
10	Raymond James	10,135.8	4.3	294

This is Thomson Reuters's "AT3" league table for negotiated offerings. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Senior Managers: Competitive Issues

Full Year 2018 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Bank of America Merrill Lynch	\$16,858.0	20.6%	155
2	Citi	12,539.6	15.3	164
3	Morgan Stanley	10,125.0	12.4	167
4	J P Morgan Securities LLC	7,208.0	8.8	121
5	Robert W Baird & Co Inc	5,738.0	7.0	554
6	Wells Fargo & Co	3,975.6	4.9	66
7	Raymond James	2,519.1	3.1	192
8	Goldman Sachs & Co LLC	2,300.0	2.8	16
9	UBS Securities LLC	2,024.0	2.5	77
10	Piper Jaffray & Co	1,681.2	2.1	112

This is Thomson Reuters's "AT4" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Senior Managers: Small Issues

Full Year 2018 - True Economics to Book-Runners

Rank	Firm	Volume	Market Share	Issues
1	Robert W Baird & Co Inc	\$2,259.2	12.7%	504
2	Stifel Nicolaus & Co Inc	1,359.7	7.7	245
3	Raymond James	1,065.6	6.0	212
4	Piper Jaffray & Co	885.7	5.0	151
5	RBC Capital Markets	845.8	4.8	151
6	Roosevelt & Cross Inc	731.1	4.1	201
7	FTN Financial Capital Markets	652.7	3.7	103
8	D A Davidson & Co	644.9	3.6	192
9	Northland Securities	526.8	3.0	147
10	Hutchinson Shockey Erley & Co	514.4	2.9	122

This is Thomson Reuters's "AT2" league table for small-issue offerings. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Co-Managers: All Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	J P Morgan Securities LLC	\$10,132.8	3.2%	291
2	Bank of America Merrill Lynch	9,399.4	2.9	281
3	Citi	9,173.3	2.9	318
4	Raymond James	8,005.0	2.5	441
5	Ramirez & Co Inc	7,894.7	2.5	596
6	Siebert Cisneros Shank & Co LLC	7,408.3	2.3	319
7	Loop Capital Markets	7,267.6	2.3	801
8	Wells Fargo & Co	7,250.9	2.3	280
9	Stifel Nicolaus & Co Inc	6,856.3	2.1	479
10	RBC Capital Markets	6,794.7	2.1	315

This is Thomson Reuters's "AT12" league table. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Financial Advisors: All Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	PFM Financial Advisors LLC	\$47,371.0	17.3 %	808
2	Public Resources Advisory Group	36,143.9	13.2	176
3	Hilltop Securities	22,705.9	8.3	512
4	Acacia Financial Group Inc	10,328.4	3.8	129
5	Frasca & Associates	9,040.7	3.3	22
6	Municipal Capital Markets Group Inc	9,016.4	3.3	28
7	Ponder & Co	7,344.4	2.7	52
8	Piper Jaffray & Co	4,819.5	1.8	178
9	KNN Public Finance	4,601.4	1.7	65
10	CSG Advisors Incorporated	4,219.9	1.5	86

This is Thomson Reuters's "AT7" league table. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Financial Advisors: Negotiated Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	PFM Financial Advisors LLC	\$36,460.6	18.7%	460
2	Public Resources Advisory Group	18,734.6	9.6	84
3	Hilltop Securities	17,126.1	8.8	263
4	Frasca & Associates	9,040.7	4.6	22
5	Municipal Capital Markets Group Inc	9,016.4	4.6	28
6	Ponder & Co	7,242.8	3.7	51
7	Acacia Financial Group Inc	7,062.2	3.6	80
8	Swap Financial Group LLC	4,194.8	2.2	14
9	Kaufman Hall & Associates Inc	4,189.0	2.2	46
10	CSG Advisors Incorporated	4,094.4	2.1	84

This is Thomson Reuters's "AT7b" league table for negotiated offerings. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Financial Advisors: Competitive Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Public Resources Advisory Group	\$17,409.3	22.0%	92
2	PFM Financial Advisors LLC	10,910.4	13.8	348
3	Hilltop Securities	5,579.8	7.1	249
4	Acacia Financial Group Inc	3,266.2	4.1	49
5	Davenport & Company LLC	2,699.2	3.4	62
6	Ehlers & Associates	2,688.3	3.4	296
7	Piper Jaffray & Co	2,543.7	3.2	125
8	Springsted Incorporated	2,164.2	2.7	143
9	Capital Markets Advisors LLC	1,681.7	2.1	101
10	Umbaugh LLP	1,233.9	1.6	160

This is Thomson Reuters's "AT7c" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Financial Advisors: Small Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	PFM Financial Advisors LLC	\$1,351.1	10.1%	260
2	Hilltop Securities	993.5	7.4	198
3	Ehlers & Associates	987.1	7.4	262
4	Umbaugh LLP	607.2	4.5	141
5	Robert W Baird & Co Inc	594.3	4.4	134
6	Piper Jaffray & Co	468.4	3.5	86
7	Springsted Incorporated	384.0	2.9	91
8	Urban Futures Inc	369.2	2.8	78
9	Stephen H McDonald & Associates Inc	339.1	2.5	174
10	Masterson Advisors LLC	329.6	2.5	68

This is Thomson Reuters's "AT7a" league table for small-issue offerings. Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. 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 recompiled by The Bond Buyer on Jan. 2)

Top Issuers: All Issues

Full Year 2018

Rank	Firm	Volume	Market Share	Issues
1	NYS Dorm Authority	\$9,150.1	2.9%	31
2	NYC Transitional Finance Auth	7,757.7	2.4	24
3	California	6,279.0	2.0	10
4	New York City-New York	4,479.4	1.4	15
5	Metropolitan Transport Auth (MTA)	3,679.5	1.2	12
6	Connecticut	3,557.9	1.1	20
7	Denver City and Co-Colorado	3,319.0	1.0	9
8	NJ Tobacco Settlement Fin Corp	3,146.7	1.0	1
9	Texas Water Development Board	3,128.4	1.0	7
10	New Jersey Trans Trust Fund Au	2,763.2	.9	2

Dollar amounts are in millions. Rankings are final as of Jan. 2, 2019. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded.

Source: Thomson Reuters (as recompiled by The Bond Buyer on Jan. 2)

Top Bond Counsel: All Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$37,931.2	11.9%	377
2	Norton Rose Fulbright	18,251.6	5.7	303
3	Hawkins Delafield & Wood LLP	17,025.0	5.3	286
4	Kutak Rock LLP	16,200.1	5.1	369
5	McCall Parkhurst & Horton LLP	10,368.8	3.3	251
6	Chapman and Cutler LLP	7,491.5	2.4	288
7	Gilmore & Bell PC	6,451.6	2.0	312
8	Ballard Spahr LLP	6,272.5	2.0	98
9	Squire Patton Boggs	6,230.2	2.0	101
10	Nixon Peabody LLP	6,120.0	1.9	70

This is Thomson Reuters's "AT5" league table. Dollar amounts are in millions. Rankings are final as of Jan. 11, 2019. 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. 11)

Top Underwriter’s Counsel: All Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Hawkins Delafield & Wood LLP	\$19,844.5	8.8%	99
2	Orrick Herrington & Sutcliffe LLP	14,648.5	6.5	178
3	Nixon Peabody LLP	13,738.5	6.1	86
4	Norton Rose Fulbright	13,359.8	5.9	219
5	Chapman and Cutler LLP	10,401.3	4.6	75
6	Kutak Rock LLP	9,851.0	4.4	250
7	Katten Muchin Rosenman LLP	9,495.2	4.2	58
8	Stradling Yocca Carlson & Rauth	7,674.8	3.4	116
9	Squire Patton Boggs	7,008.9	3.1	102
10	Butler Snow LLP	4,910.2	2.2	83

This is Thomson Reuters's "AT6" league table. Dollar amounts are in millions. Rankings are final as of Jan. 11, 2019. 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. 11)

Top Bond Counsel: All Issues

Full Year 2018 - Full Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$40,208.8	12.6%	377
2	Hawkins Delafield & Wood LLP	21,652.0	6.8	286
3	Norton Rose Fulbright	20,339.3	6.4	303
4	Kutak Rock LLP	17,795.6	5.6	369
5	McCall Parkhurst & Horton LLP	10,735.7	3.4	251
6	Nixon Peabody LLP	9,450.7	3.0	70
7	Chapman and Cutler LLP	8,275.3	2.6	288
8	Ballard Spahr LLP	7,685.6	2.4	98
9	Golden Holley James LLP	7,493.9	2.4	22
10	Squire Patton Boggs	7,255.0	2.3	101

This is a modified version of Thomson Reuters's "AT5" league table. Dollar amounts are in millions. Rankings are final as of Jan. 9, 2019. 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. 11)

Top Underwriter’s Counsel: All Issues

Full Year 2018 - Full Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Hawkins Delafield & Wood LLP	\$19,844.5	8.8%	99
2	Orrick Herrington & Sutcliffe LLP	14,648.5	6.5	178
3	Nixon Peabody LLP	13,738.5	6.1	86
4	Norton Rose Fulbright	13,359.8	5.9	219
5	Chapman and Cutler LLP	10,401.3	4.6	75
6	Kutak Rock LLP	9,851.0	4.4	250
7	Katten Muchin Rosenman LLP	9,495.2	4.2	58
8	Stradling Yocca Carlson & Rauth	7,674.8	3.4	116
9	Squire Patton Boggs	7,008.9	3.1	102
10	Butler Snow LLP	4,910.2	2.2	83

This is a modified version of Thomson Reuters's "AT6" league table. Dollar amounts are in millions. Rankings are final as of Jan. 9, 2019. 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. 11)

Top Bond Counsel: Negotiated Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$33,538.8	14.1%	269
2	Kutak Rock LLP	13,725.0	5.8	314
3	Norton Rose Fulbright	13,457.6	5.7	167
4	Hawkins Delafield & Wood LLP	12,219.8	5.2	148
5	McCall Parkhurst & Horton LLP	8,575.8	3.6	122
6	Chapman and Cutler LLP	6,184.3	2.6	197
7	Squire Patton Boggs	5,482.2	2.3	78
8	Bracewell LLP	4,954.4	2.1	72
9	Gilmore & Bell PC	4,790.3	2.0	204
10	Ballard Spahr LLP	4,548.3	1.9	91

This is Thomson Reuters's "AT5a" league table for negotiated offerings. Dollar amounts are in millions. Rankings are final as of Jan. 9, 2019 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. 11,)

Top Disclosure Counsel: All Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$17,123.0	13.4%	176
2	Hawkins Delafield & Wood LLP	12,392.5	9.7	67
3	Stradling Yocca Carlson & Rauth	8,303.4	6.5	162
4	Bracewell LLP	5,479.4	4.3	27
5	Kutak Rock LLP	5,474.0	4.3	125
6	Nixon Peabody LLP	4,473.9	3.5	35
7	Chapman and Cutler LLP	4,453.0	3.5	192
8	Norton Rose Fulbright	3,787.1	3.0	77
9	Sherman & Howard	3,605.3	2.8	34
10	Jones Hall	3,513.9	2.8	149

This is Thomson Reuters's "AT23" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Jan. 9, 2019. 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. 11)

Top Bond Counsel: Competitive Issues

Full Year 2018 - Equal Credit to Each Firm

Rank	Firm	Volume	Market Share	Issues
1	Hawkins Delafield & Wood LLP	\$4,805.2	5.9%	138
2	Norton Rose Fulbright	4,794.0	5.9	136
3	Orrick Herrington & Sutcliffe LLP	4,392.4	5.4	108
4	Nixon Peabody LLP	2,756.2	3.4	22
5	Kutak Rock LLP	2,475.1	3.0	55
6	Golden Holley James LLP	2,401.8	3.0	16
7	Locke Lord LLP	2,147.5	2.6	147
8	McCall Parkhurst & Horton LLP	1,793.0	2.2	129
9	D Seaton & Associates	1,736.2	2.1	10
10	Ballard Spahr LLP	1,724.2	2.1	7

This is Thomson Reuters's "AT5b" league table for competitive offerings. Dollar amounts are in millions. Rankings are final as of Jan. 11, 2019. 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. 11)

Top Letter-of-Credit Providers: All Issues

Full Year 2018 - Ranked by Enhanced Amount

Rank	Firm	Volume	Market Share	Issues
1	TD Bank NA	\$438.2	16.2%	5
2	J P Morgan Chase	408.1	15.1	4
3	US Bank NA	358.9	13.3	6
4	Wells Fargo Bank	310.5	11.5	3
5	Barclays	238.2	8.8	2
6	Sumitomo Mitsui Banking Corp	238.2	8.8	2
7	PNC Bank NA	211.3	7.8	5
8	Bank of America	148.5	5.5	2
9	KB Financial Group Inc	80.0	3.0	1
10	Fed Home Loan Bk San Francisco	79.6	2.9	2

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 Jan. 2, 2019 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. 2)

Top Trustee Banks: All Issues

Full Year 2018 - Ranked by Dollar Volume

Rank	Firm	Volume	Market Share	Issues
1	The Bank of New York Mellon	\$72,874.3	40.5%	576
2	US Bank NA	62,903.6	34.9	971
3	Wells Fargo Bank	9,821.5	5.5	141
4	Wilmington Trust NA	7,742.7	4.3	156
5	Zions Bank	6,446.7	3.6	157
6	UMB Bank NA	5,429.1	3.0	220
7	Regions Bank	2,491.3	1.4	92
8	BOKF NA	2,308.8	1.3	61
9	Huntington National Bank	1,906.8	1.1	61
10	MUFG	1,148.8	0.6	31

This is Thomson Reuters's "AT8" league table. Dollar amounts are in millions. Rankings are final as of Jan. 11, 2019 Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded.

Source: Thomson Reuters (Jan. 11,)

Top Trustee Banks: All Issues

Full Year 2018 — Ranked by Number of Issues

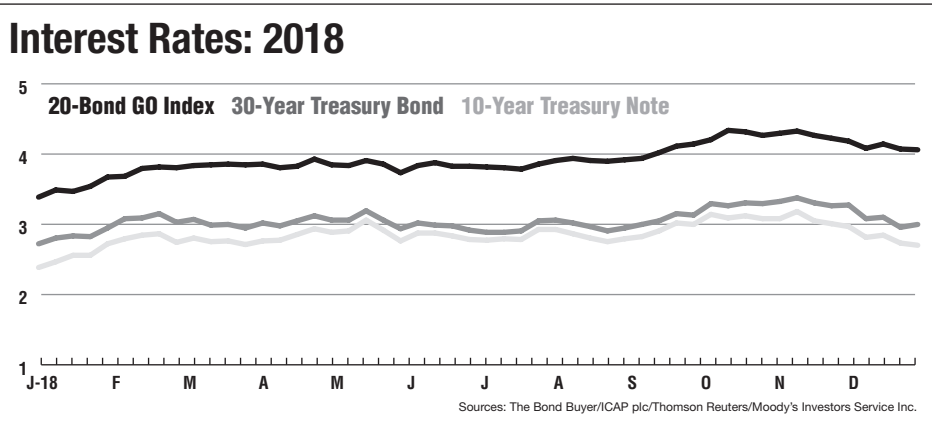
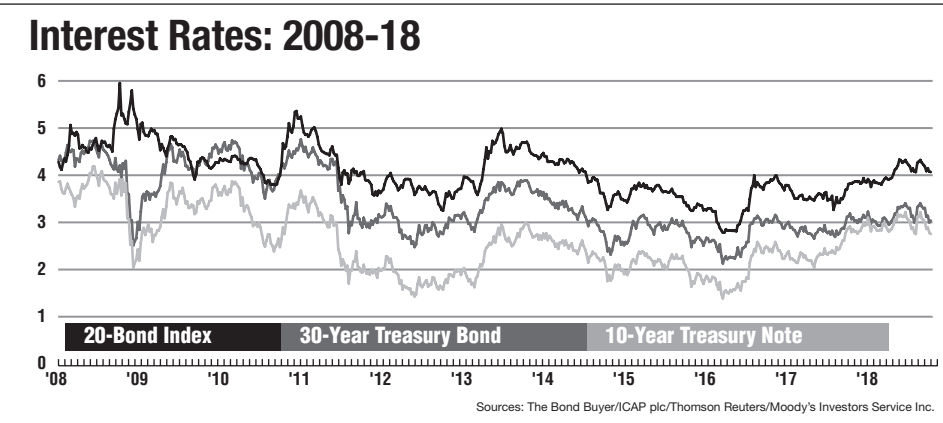
Rank	Firm	Issues	Market Share	Volume
1	US Bank NA	971	36.3%	\$62,903.6
2	The Bank of New York Mellon	576	21.5	72,874.3
3	UMB Bank NA	220	8.2	5,429.1
4	Zions Bank	157	5.9	6,446.7
5	Wilmington Trust NA	156	5.8	7,742.7
6	Wells Fargo Bank	141	5.3	9,821.5
7	Regions Bank	92	3.4	2,491.3
8	Huntington National Bank	61	2.3	1,906.8
8	BOKF NA	61	2.3	2,308.8
10	MUFG	31	1.2	1,148.8

This is Thomson Reuters's "AT9" league table. Dollar amounts are in millions. Rankings are final as of Jan. 11, 2019. Short-term notes, private placements, and deals not meeting Thomson Reuters's T+5 policy rule are excluded.

Source: Thomson Reuters (Jan. 11)

Top Special Tax Counsel: All Issues				
Full Year 2018 - Ranked by Tax Amount				
Rank	Firm	Volume	Market Share	Issues
1	Orrick Herrington & Sutcliffe LLP	\$5,132.1	42.1%	25
2*	Soeder & Associates LLC	953.9	7.8	18
2*	Robinson & Cole LLP	953.9	7.8	18
4	Kutak Rock LLP	930.0	7.6	16
5	Ballard Spahr LLP	850.5	7.0	4
6	Chapman and Cutler LLP	755.0	6.2	4
7	McKennon Shelton & Henn LLP	688.3	5.7	3
8	Nixon Peabody LLP	242.9	2.0	1
9	Bracewell LLP	242.4	2.0	11
10	Gilmore & Bell PC	200.2	1.6	13
*Tie. Dollar amounts are in millions. Rankings are final as of Jan. 9, 2019. 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. 11)				

Top Standby Purchase Agreement Providers: All Issues				
Full Year 2018 - Ranked by Enhanced Amount				
Rank	Firm	Volume	Market Share	Issues
1	J P Morgan Chase	\$715.0	28.2%	5
2	TD Bank NA	623.3	24.6	7
3	Fed Home Loan Bank of Dallas	250.0	9.9	2
4	State Street Bank & Trust Co	221.2	8.7	3
5	Federal Home Loan Bk of Topeka	143.6	5.7	4
6	Bank of America	132.5	5.2	3
7	Industrial & Comm Bank China	100.0	3.9	1
8	Barclays	85.6	3.4	3
9	Piper Jaffray & Co	85.3	3.4	1
10	Royal Bank of Canada	75.6	3.0	3
*Tie. Dollar amounts are in millions. Rankings are final as of Jan. 16, 2019. 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. 16)				



Interest Rate Indexes: 2018										
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-18	4	130-05	3.36	3.80	3.44	2.94	3.92	0.00	2.46	2.79
	11	128-22	3.51	3.87	3.54	3.04	4.03	0.00	2.54	2.87
	18	128-24	3.51	3.86	3.52	3.02	4.01	0.00	2.63	2.90
	25	128-04	3.57	3.89	3.59	3.09	4.08	0.00	2.63	2.89
Feb	1	126-23	3.74	3.97	3.72	3.22	4.21	0.00	2.79	3.01
	8	126-07	3.80	3.99	3.73	3.23	4.22	0.00	2.86	3.14
	15	125-17	3.87	4.02	3.84	3.34	4.33	0.00	2.91	3.15
	22	125-10	3.85	4.01	3.86	3.36	4.35	0.00	2.93	3.21
Mar	1	125-20	3.81	3.99	3.85	3.35	4.34	0.00	2.81	3.09
	8	125-10	3.84	4.01	3.88	3.38	4.37	0.00	2.87	3.13
	15	125-06	3.85	4.01	3.89	3.39	4.37	0.00	2.82	3.05
	22	125-15	3.83	4.00	3.90	3.40	4.38	0.00	2.83	3.06
Apr	28	125-25	3.80	3.99	3.89	3.39	4.37	0.00	2.78	3.01
	5	125-19	3.82	4.00	3.90	3.40	4.38	0.00	2.83	3.08
	12	125-29	3.78	3.98	3.85	3.35	4.33	0.00	2.84	3.04
	19	125-12	3.84	4.01	3.87	3.37	4.35	0.00	2.92	3.11
May	26	123-28	4.01	4.08	3.97	3.45	4.46	0.00	3.00	3.18
	3	125-18	3.82	4.00	3.89	3.37	4.38	0.00	2.95	3.12
	10	126-00	3.77	3.98	3.88	3.36	4.37	0.00	2.97	3.12
	17	124-30	3.89	4.03	3.95	3.43	4.44	0.00	3.12	3.25
Jun	24	125-19	3.81	4.00	3.90	3.38	4.39	0.00	2.98	3.12
	31	126-24	3.68	3.94	3.78	3.26	4.27	0.00	2.83	3.00
	7	125-24	3.79	3.99	3.88	3.36	4.37	0.00	2.94	3.08
	14	125-13	3.83	4.01	3.92	3.40	4.41	0.00	2.94	3.05
Jul	21	125-31	3.77	3.98	3.87	3.35	4.36	0.00	2.90	3.04
	28	126-01	3.76	3.98	3.87	3.35	4.36	0.00	2.85	2.98
	5	126-09	3.73	3.96	3.86	3.34	4.35	0.00	2.84	2.95
	12	126-12	3.72	3.96	3.85	3.33	4.34	0.00	2.86	2.95
Aug	19	126-13	3.72	3.96	3.83	3.31	4.33	0.00	2.85	2.97
	26	125-17	3.83	4.01	3.90	3.38	4.40	0.00	2.99	3.11
	2	125-06	3.86	4.02	3.95	3.43	4.45	0.00	2.99	3.12
	9	124-27	3.90	4.04	3.98	3.46	4.48	0.00	2.93	3.08
Sept	16	125-10	3.84	4.01	3.95	3.43	4.45	0.00	2.87	3.03
	23	125-15	3.83	4.01	3.94	3.42	4.44	0.00	2.82	2.97
	30	125-04	3.87	4.02	3.96	3.43	4.47	0.00	2.86	3.01
	6	124-28	3.90	4.04	3.98	3.45	4.49	0.00	2.89	3.06
Oct	13	123-29	4.01	4.08	4.06	3.53	4.57	0.00	2.97	3.11
	20	122-24	4.15	4.14	4.15	3.62	4.66	0.00	3.08	3.21
	27	122-26	4.14	4.14	4.18	3.65	4.69	0.00	3.06	3.19
	4	121-13	4.32	4.21	4.24	3.71	4.75	0.00	3.20	3.35
Nov	11	120-02	4.49	4.27	4.37	3.84	4.88	0.00	3.15	3.32
	18	120-04	4.49	4.28	4.35	3.82	4.86	0.00	3.18	3.36
	25	120-27	4.40	4.24	4.30	3.79	4.80	0.00	3.14	3.35
	1	119-25	4.53	4.29	4.33	3.82	4.82	0.00	3.14	3.38
Dec	8	119-17	4.57	4.31	4.36	3.85	4.85	0.00	3.24	3.43
	15	120-16	4.45	4.26	4.30	3.79	4.79	0.00	3.11	3.36
	21	121-09	4.34	4.21	4.26	3.76	4.75	0.00	3.07	3.32
	29	121-21	4.30	4.20	4.22	3.73	4.68	0.00	3.03	3.33
12-Month Average	6	123-14	4.07	4.11	4.12	3.63	4.58	0.00	2.88	3.14
	13	120-20	4.17	4.15	4.18	3.67	4.65	0.00	2.91	3.16
	20	123-24	4.03	4.09	4.11	3.60	4.59	0.00	2.80	3.02
	27	123-30	4.01	4.08	4.10	3.59	4.58	0.00	2.77	3.06

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 remarketings 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+	
California	Aa3 / AA- / AA-	Memphis, Tenn.	Aa2 / AA / NR	Aa3 / A+ / AA-
*Denver, Colo.	Aaa/AAA/AAA	Miami-Dade Co., Fla.	Aa2 / AA / NR	Aa1/AA+/AAA
*Florida	Aa1 / AAA / AAA	Milwaukee, Wis.	Aa3 / AA / AA	Aaa / AAA / AAA
*Georgia	Aaa / AAA / AAA	New York City	Aa2 / AA / AA	Aaa / AA+ / AAA
Houston, Tex.	Aa3 / AA / AA	*New York State	Aa1 / AA+ / AA+	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	AA-	AA-	
California Housing Finance Agency, multi-unit rental (AMT)	A1	AA+	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	Aa3	AA+	NR	
Intermountain Power Agency, Utah	Aa3	A+	AA-	
JEA (formerly Jacksonville Electric Authority), Fla. electric revenue	A2	A+	AA	
Kentucky Turnpike Authority	Aa3	A	NR	
Los Angeles Department of Water and Power, Calif., electric revenue	Aa2	AA	AA-	
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	A2	A+	A	
New York State Local Government Assistance Corp., revenue	Aa1	AA+	NR	
New York State Power Authority, general purpose	Aa1	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	Ca	D	D	
Salt River Project Agricultural Improvement and Power District, Ariz., electric revenue	Aa1	AA	NR	
South Carolina Public Service Authority, electric revenue	A2	A-	A+	
Texas Municipal Power Agency	A1	A+	A+	
Virginia Housing Development Authority	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.				

THE BOND BUYER'S

**MIDWEST MUNICIPAL MARKET
CONFERENCE**

June 5, 2019 | Chicago, IL

REGISTRATION IS NOW OPEN!

An aerial, painterly illustration of the Chicago skyline, featuring prominent skyscrapers like the Willis Tower. The scene is viewed from a low angle, looking down at a highway with traffic and up at the buildings. A blue circular callout is overlaid on the left side of the image.

**Early Bird
Rates
Available**

Build relationships and learn from the region's leading issuers, investors, dealers, attorneys, municipal advisors, rating analysts and regulators at the industry's premier regional annual gathering, **The Bond Buyer's Midwest Municipal Market** conference.

This invaluable day-long conference will explore the various financing techniques that will allow for the long-term infrastructure construction and rehabilitation projects that are necessary to support your region's economic growth.

**Book early while super
saver rates are available!**

Call Sherrice Green at (212) 803-6075

For sponsorship opportunities

Call Melissa Kroc at (212) 803-6089

www.bondbuyer.com/conference/midwest-2019