

## Quarterly Statistical Summaries

### 2016 Third Quarter: July - September

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## About the Quarterly Statistical Summaries

The MSRB's quarterly statistical summaries include aggregate municipal market information for the most recent quarter and cover different types of municipal issues, trades and interest rate resets. The MSRB publishes this information to regularly update certain data published annually in the MSRB Fact Book with the goal of providing market participants with historical statistics that can be further analyzed, studied and reviewed.

The quarterly summaries reflect aggregate trading activity at the end of each trading day as submitted to the MSRB's Real-Time Transaction Reporting System (RTRS).<sup>1</sup> The MSRB obtains some information on the characteristics of securities traded from Standard & Poor's Financial Services LLC and CUSIP databases furnished by the CUSIP Service Bureau.<sup>2</sup> Additionally, the quarterly data includes the number of interest rate resets for variable rate demand obligations and auction rate securities, as well as the statistics related to continuing disclosure documents received through the MSRB's Electronic Municipal Market Access (EMMA<sup>®</sup>) website.

For additional data on municipal trading activity, interest rate resets, and continuing and primary market disclosures, please see the MSRB's 2015 Fact Book or visit the EMMA website at [emma.msrb.org](http://emma.msrb.org).

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<sup>1</sup> As described in an MSRB Rule G-14 interpretive notice from January 2, 2008 (Reporting of Transactions in Certain Special Trading Situations), some transactions are subject to special conditions indicating that they are not a typical arms-length transaction and possibly a misleading indicator of the market value of a security. These transactions may be excluded from the MSRB's transparency products, including data disseminated through EMMA, but may be included in this report.

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## Highlights

### Municipal Market Trade Summary

Par amount traded in the municipal securities market totaled \$837.9 billion in 2016:Q3, up 52.1 percent from the \$551.0 billion traded in 2015:Q3. Total par traded was the highest since the \$825.4 billion traded in 2013:Q2 when volume reached \$838.3 billion. Total number of trades decreased to 2.15 million trades, down 7.7 percent from the 2.38 million trades in 2015:Q3.

### Most Actively Traded Municipal Securities

A sales tax revenue bond from Puerto Rico Sales Tax Financing Corporation was the most actively traded security in terms of par with \$2.4 billion traded in 2016:Q3, while a general obligation bond from the Commonwealth of Pennsylvania had the most activity with 3,248 trades.

### Municipal Market Trades by Trade Type

Customer buying activity increased to an average daily par amount of \$6.71 billion in 2016:Q3, compared to \$4.40 billion in the same period last year. The average daily number of trades of customer purchases totaled 13,583 in 2016:Q3, compared to 15,189 trades in 2015:Q3.

A daily average of \$357.7 million, or 5.3 percent of customer purchases of trades of \$100,000 or less, occurred in 2016:Q3, compared to \$404.6 million, or 9.3 percent of all customer purchases, in 2015:Q3.

### Municipal Market Variable Securities Rate Resets

The number of variable rate demand obligations rate resets declined to 117,501 in 2016:Q3, compared to the 135,504 rate resets in 2015:Q3.

The number of auction rate securities rate resets totaled 2,134 in 2016:Q3 compared to 2,398 resets in 2015:Q3.

### Municipal Market Disclosures

The number of continuing disclosure documents received by the MSRB totaled 33,100 in 2016:Q3, compared to 32,073 documents in the same period of 2015.

## Municipal Market Trade Summary

### Transaction Summary

Total par amount traded in \$ millions

<b>2016:Q3</b>	
<b>Total</b>	<b>837,929.9</b>
<b>By Trade Type</b>	
Customer Bought	429,744.3
Customer Sold	268,855.8
Inter-Dealer	139,329.8
<b>By Coupon Type</b>	
Fixed Rate	398,251.9
Variable Rate	346,015.8
Zero Coupon	31,164.2
Other <sup>1</sup>	62,498.1
<b>By Source of Repayment</b>	
General Obligation	198,803.3
Revenue	551,464.4
Double Barrel	17,819.4
Other <sup>1</sup>	69,842.8
<b>By Tax Status</b>	
Tax Exempt	722,308.9
Taxable	68,398.1
AMT	38,944.4
Other <sup>1</sup>	8,278.4

<sup>1</sup> Includes municipal commercial paper and issues that could not be categorized based on available data.

## Municipal Market Trade Summary

### Transaction Summary

Total number of trades

	<b>2016:Q3</b>
<b>Total</b>	<b>2,148,027</b>

#### By Trade Type

Customer Bought	869,337
Customer Sold	445,426
Inter-Dealer	833,264

#### By Coupon Type

Fixed Rate	2,001,113
Variable	55,859
Zero Coupon	85,874
Other <sup>1</sup>	5,181

#### By Source of Repayment

General Obligation	782,633
Revenue	1,284,127
Double Barrel	75,747
Other <sup>1</sup>	5,520

#### By Tax Status

Tax Exempt	1,954,827
Taxable	164,072
AMT	28,270
Other <sup>1</sup>	858

<sup>1</sup> Includes municipal commercial paper and issues that could not be categorized based on available data.

## Most Actively Traded Municipal Securities

### Top 50 Most Active Securities, 2016:Q3

By par amount

Rank	CUSIP <sup>1</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JAP0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	8/1/2054	2,375.8	234
2	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	12/1/2040	2,120.9	84
3	64966JB47	NEW YORK N Y	-	4/1/2042	1,705.9	16
4	13048TGT4	CALIFORNIA MUN FIN AUTH REV	-	11/1/2035	1,676.3	108
5	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	8/1/2035	1,518.8	44
6	402207AD6	GULF COAST INDL DEV AUTH TEX REV	-	11/1/2041	1,423.6	103
7	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	-	11/1/2038	1,324.6	154
8	544495DU5	LOS ANGELES CALIF DEPT WTR & PWR REV	-	7/1/2035	1,272.4	66
9	20774YJ99	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	2.00	7/1/2042	1,265.6	139
10	737347AF1	POSEY CNTY IND ECONOMIC DEV REV	1.11	7/1/2046	1,259.0	1
11	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	-	2/1/2031	1,252.3	45
12	914437QB7	UNIVERSITY MASS BLDG AUTH REV	-	11/1/2034	1,245.5	91
13	68609BVE4	OREGON ST	2.00	6/30/2017	1,126.7	143
14	13033FK74	CALIFORNIA HEALTH FACS FING AUTH REV	-	6/1/2041	1,092.5	45
15	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,050.3	1,717
16	544495DT8	LOS ANGELES CALIF DEPT WTR & PWR REV	-	7/1/2035	983.3	49
17	882723J67	TEXAS ST	-	12/1/2046	940.1	30
18	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/2030	900.4	48
19	01170PBX3	ALASKA HSG FIN CORP HOME MTG REV	-	12/1/2041	887.4	41
20	254842BB2	DISTRICT COLUMBIA TOB SETTLEMENT FING CORP	-	6/15/2046	885.6	28
21	64966G4Q2	NEW YORK N Y	-	4/1/2035	868.9	71
22	467229AF7	JACKSON CNTY MISS PORT FAC REV	-	6/1/2023	868.8	118
23	20772JZ39	CONNECTICUT ST	-	5/15/2034	864.6	57
24	93978HDB8	WASHINGTON ST HEALTH CARE FACS AUTH REV	-	8/15/2041	853.7	30
25	64966JE77	NEW YORK N Y	-	4/1/2042	853.4	101
26	64972F2H8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2044	839.4	67
27	64971WUM0	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	2/1/2045	829.5	68
28	64972FK62	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2041	815.1	44
29	626207VS0	MUNICIPAL ELEC AUTH GA	-	1/1/2048	814.8	66
30	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	-	7/1/2034	807.2	121
31	13063A5Y6	CALIFORNIA ST	-	5/1/2034	801.0	26
32	64966LCJ8	NEW YORK N Y	-	8/1/2038	795.0	131
33	197210AZ0	COLUMBIA ALA INDL DEV BRD POLLUTN CTL REV	-	12/1/2037	791.7	39
34	13063BJC7	CALIFORNIA ST	7.60	11/1/2040	790.3	220
35	130534XL9	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	-	11/1/2026	787.4	43
36	64966LU41	NEW YORK N Y	-	6/1/2044	784.9	62
37	546848AA0	LOUISVILLE KY REGL ARPT AUTH SPL FACS REV	-	11/1/2036	776.0	31
38	64986UEB9	NEW YORK ST HSG FIN AGY REV	-	5/1/2044	771.1	36
39	919061DT5	VALDEZ ALASKA MARINE TERM REV	-	12/1/2033	770.0	47
40	196729CA3	COLORADO ST GEN FD REV	2.00	6/27/2017	766.9	80
41	64971Q8Y2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	11/1/2043	766.2	152
42	130795C88	CALIFORNIA STATEWIDE CMNTYS DEV AUTH REV	-	4/1/2046	758.7	29
43	74529JAP0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	8/1/2056	758.6	60
44	64972GEK6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2049	756.8	70
45	20774LRU1	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	-	7/1/2036	751.7	143
46	888805AN8	TOBACCO SETTLEMENT AUTH IOWA TOB SETTLEMENT REV	-	6/1/2046	732.0	6
47	452252GD5	ILLINOIS ST TOLL HWY AUTH TOLL HIGHWAY REV	-	1/1/2031	729.7	33
48	679111TB0	OKLAHOMA ST TPK AUTH TPK REV	-	1/1/2028	727.1	58
49	9151153V9	UNIVERSITY TEX PERM UNIV FD	-	7/1/2038	720.9	22
50	542690Z47	LONG ISLAND PWR AUTH N Y ELEC SYS REV	-	5/1/2033	716.5	28

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## Most Actively Traded Municipal Securities

### Top 50 Most Active Securities, 2016:Q3

By number of trades

Rank	CUSIP <sup>1</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	70914PF49	PENNSYLVANIA ST	3.00	9/15/2036	324.3	3,248
2	452152BM2	ILLINOIS ST	6.63	2/1/2035	168.7	2,541
3	70914PE99	PENNSYLVANIA ST	3.00	9/15/2033	253.3	2,337
4	452152KQ3	ILLINOIS ST	5.75	1/1/2037	101.9	1,941
5	13032UFN3	CALIFORNIA HEALTH FACS FING AUTH REV	3.00	10/1/2047	308.9	1,834
6	70914PF31	PENNSYLVANIA ST	3.00	9/15/2035	155.2	1,808
7	546589ZR6	LOUISVILLE & JEFFERSON CNTY KY MET SWR DIST SWR & DRAIN SYS REV	3.00	5/15/2046	257.5	1,743
8	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,050.3	1,717
9	452152GS4	ILLINOIS ST	7.35	7/1/2035	220.2	1,698
10	80372PAU0	SARPY CNTY NEB HOSP AUTH NO 1 HEALTH FACS REV	3.00	5/15/2046	226.6	1,592
11	546604FV6	LOUISVILLE & JEFFERSON CNTY KY VISITORS & CONVENTION COMMN DEDICATED TAX	3.13	6/1/2046	135.6	1,491
12	13063CU65	CALIFORNIA ST	3.00	9/1/2046	309.8	1,470
13	57582RLK0	MASSACHUSETTS ST	3.00	9/1/2046	274.1	1,361
14	677525TK3	OHIO ST AIR QUALITY DEV AUTH REV	5.70	8/1/2020	204.4	1,294
15	452152GB1	ILLINOIS ST	7.10	7/1/2035	144.7	1,291
16	452151LD3	ILLINOIS ST	4.35	6/1/2018	73.5	1,287
17	57582RJM9	MASSACHUSETTS ST	3.00	4/1/2044	155.8	1,265
18	70917SZT3	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	3.00	6/15/2045	110.7	1,232
19	13032UFM5	CALIFORNIA HEALTH FACS FING AUTH REV	3.00	10/1/2041	209.4	1,185
20	259230MV9	DOUGLAS CNTY NEB HOSP AUTH NO 2 REV	3.00	5/15/2039	129.1	1,172
21	917393BX7	UTAH CNTY UTAH HOSP REV	3.00	5/15/2047	72.9	1,153
22	913366HM5	UNIV CALIF REGTS MED CTR POOLED REV	3.00	5/15/2042	179.0	1,116
23	452152DU2	ILLINOIS ST	6.90	3/1/2035	40.8	1,092
24	452152FA4	ILLINOIS ST	6.73	4/1/2035	199.8	1,081
25	70917SXU2	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	3.00	5/1/2037	80.8	1,066
26	74529JHN8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.00	8/1/2042	258.2	1,045
27	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/2041	136.6	1,035
28	113807BQ3	BROOKLYN ARENA LOC DEV CORP N Y PILOT REV	3.00	7/15/2043	197.7	994
29	837151RV3	SOUTH CAROLINA ST PUB SVC AUTH REV	2.25	12/1/2051	310.0	988
30	91514AEW1	UNIVERSITY TEX UNIV REVS	2.00	8/15/2041	310.7	971
31	546604FU8	LOUISVILLE & JEFFERSON CNTY KY VISITORS & CONVENTION COMMN DEDICATED TAX	3.13	6/1/2041	82.9	935
32	64966LKZ3	NEW YORK N Y	4.00	3/1/2039	129.4	931
33	67910HQB9	OKLAHOMA ST MUN PWR AUTH PWR SUPPLY SYS REV	3.13	1/1/2041	135.5	904
34	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/2046	143.8	856
35	59261AHJ9	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/2041	221.8	848
36	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/2029	282.6	837
37	735352QK5	PORT ST LUCIE FLA UTIL REV	3.00	9/1/2035	94.2	829
38	017357C51	ALLEGHENY CNTY PA SAN AUTH SWR REV	3.00	12/1/2037	61.4	800
39	032555NK6	ANAHEIM CALIF ELEM SCH DIST	3.00	8/1/2046	101.5	800
40	97712DUE4	WISCONSIN ST HEALTH & EDL FACS AUTH REV	3.50	2/15/2046	117.8	782
41	113807BN0	BROOKLYN ARENA LOC DEV CORP N Y PILOT REV	3.00	7/15/2036	152.3	760
42	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/2042	127.4	750
43	57582RJK3	MASSACHUSETTS ST	4.00	4/1/2046	346.9	749
44	959215EP5	WESTERN PLACER CALIF UNI SCH DIST CTFIS PARTN	3.13	8/1/2047	95.9	749
45	745190DH8	PUERTO RICO COMWLTH HWY & TRANSN AUTH TRANSN REV	4.75	7/1/2038	32.1	746
46	64971WS35	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.00	8/1/2042	148.2	736
47	59261AHS9	METROPOLITAN TRANSN AUTH N Y REV	3.00	11/15/2046	123.5	736
48	83704AAF9	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH LEASE REV	3.00	8/15/2038	92.1	727
49	452151LE1	ILLINOIS ST	4.95	6/1/2023	36.1	726
50	59447TMJ9	MICHIGAN FIN AUTH REV	3.00	11/15/2033	113.1	711

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## Most Actively Traded Municipal Securities

### Top 50 Most Active Fixed Rate<sup>1</sup> Securities, 2016:Q3

By par amount

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	68609BVE4	OREGON ST	2.00	6/30/2017	1,126.7	143
2	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,050.3	1,717
3	13063BJC7	CALIFORNIA ST	7.60	11/1/2040	790.3	220
4	196729CA3	COLORADO ST GEN FD REV	2.00	6/27/2017	766.9	80
5	13032UDU9	CALIFORNIA HEALTH FACS FING AUTH REV	5.00	11/15/2046	683.9	160
6	13063A5G5	CALIFORNIA ST	7.55	4/1/2039	661.4	436
7	57582RKS4	MASSACHUSETTS ST	2.00	5/22/2017	632.0	56
8	13063A7D0	CALIFORNIA ST	7.30	10/1/2039	624.6	206
9	62476RAA3	MTA HUDSON RAIL YARDS TR OBLIGS REV	5.00	11/15/2046	623.6	539
10	13063CX21	CALIFORNIA ST	5.00	9/1/2028	616.6	84
11	13066YTY5	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	1.71	5/1/2021	616.5	70
12	57582RLJ3	MASSACHUSETTS ST	4.00	9/1/2042	615.7	71
13	57582RKR6	MASSACHUSETTS ST	2.00	4/24/2017	614.4	73
14	13063CX39	CALIFORNIA ST	5.00	9/1/2029	609.6	43
15	837151RW1	SOUTH CAROLINA ST PUB SVC AUTH REV	2.39	12/1/2023	608.3	173
16	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	596.0	249
17	57582RKT2	MASSACHUSETTS ST	2.00	6/26/2017	571.9	50
18	113807BP5	BROOKLYN ARENA LOC DEV CORP N Y PILOT REV	5.00	7/15/2042	544.7	176
19	79766DGF0	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/2046	512.2	37
20	62476RAC9	MTA HUDSON RAIL YARDS TR OBLIGS REV	5.00	11/15/2056	501.9	198
21	64971WM64	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	5.00	5/1/2040	500.9	324
22	13063CS43	CALIFORNIA ST	5.00	9/1/2031	496.1	224
23	59333RGA6	MIAMI-DADE CNTY FLA SCH DIST	5.00	2/23/2017	490.5	38
24	13066YTZ2	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	2.00	5/1/2022	480.1	154
25	60636AMS9	MISSOURI ST HEALTH & EDL FACS AUTH EDL FACS REV	3.09	9/15/2051	464.6	109
26	62476RAB1	MTA HUDSON RAIL YARDS TR OBLIGS REV	5.00	11/15/2051	440.4	278
27	452152QW4	ILLINOIS ST	5.52	4/1/2038	437.5	432
28	167486PG8	CHICAGO ILL	5.43	1/1/2042	426.3	401
29	452152HT1	ILLINOIS ST	5.67	3/1/2018	404.0	198
30	13032UDT2	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	11/15/2041	390.7	424
31	73474TAP5	PORT MORROW ORE TRANSMISSION FACS REV	2.99	9/1/2036	388.1	86
32	59447TMQ3	MICHIGAN FIN AUTH REV	4.00	11/15/2046	372.3	203
33	25476FQY7	DISTRICT COLUMBIA	1.50	9/30/2016	356.0	17
34	7973555G5	SAN DIEGO CALIF UNI SCH DIST	2.00	6/30/2017	355.5	88
35	649902T29	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.50	3/15/2030	352.6	82
36	57582RJK3	MASSACHUSETTS ST	4.00	4/1/2046	346.9	749
37	69848AAA6	PANHANDLE TEX ECONOMIC DEV CORP LEASE REV	3.99	7/15/2048	339.8	62
38	13063BFV9	CALIFORNIA ST	7.95	3/1/2036	332.8	345
39	70914PF49	PENNSYLVANIA ST	3.00	9/15/2036	324.3	3,248
40	13063CR69	CALIFORNIA ST	5.00	9/1/2028	321.8	55
41	745223AA5	PUERTO RICO COMWLTH INFRASTRUCTURE FING AUTH DEDICATED TAX FD REV	8.25	5/1/2017	316.9	36
42	977100DR4	WISCONSIN ST GEN FD ANNUAL APPROPRIATION REV	3.29	5/1/2037	315.9	77
43	544351KK4	LOS ANGELES CALIF	2.00	3/30/2017	311.2	258
44	45204EFH6	ILLINOIS FIN AUTH REV	4.00	2/15/2041	310.4	77
45	13063CU65	CALIFORNIA ST	3.00	9/1/2046	309.8	1,470
46	13032UFN3	CALIFORNIA HEALTH FACS FING AUTH REV	3.00	10/1/2047	308.9	1,834
47	649902S95	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/15/2024	302.5	50
48	544351KJ7	LOS ANGELES CALIF	3.00	6/29/2017	299.5	125
49	650116AV8	NEW YORK TRANSN DEV CORP SPL FAC REV	5.25	1/1/2050	296.4	86
50	13063CZ86	CALIFORNIA ST	5.00	9/1/2034	296.0	112

<sup>1</sup> Includes zero-coupon securities

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## Most Actively Traded Municipal Securities

### Top 50 Most Active Fixed Rate<sup>1</sup> Securities, 2016:Q3

By number of trades

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	70914PF49	PENNSYLVANIA ST	3.00	9/15/2036	324.3	3,248
2	452152BM2	ILLINOIS ST	6.63	2/1/2035	168.7	2,541
3	70914PE99	PENNSYLVANIA ST	3.00	9/15/2033	253.3	2,337
4	452152KQ3	ILLINOIS ST	5.75	1/1/2037	101.9	1,941
5	13032UFN3	CALIFORNIA HEALTH FACS FING AUTH REV	3.00	10/1/2047	308.9	1,834
6	70914PF31	PENNSYLVANIA ST	3.00	9/15/2035	155.2	1,808
7	546589ZR6	LOUISVILLE & JEFFERSON CNTY KY MET SWR DIST SWR & DRAIN SYS REV	3.00	5/15/2046	257.5	1,743
8	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,050.3	1,717
9	452152GS4	ILLINOIS ST	7.35	7/1/2035	220.2	1,698
10	80372PAU0	SARPY CNTY NEB HOSP AUTH NO 1 HEALTH FACS REV	3.00	5/15/2046	226.6	1,592
11	546604FV6	LOUISVILLE & JEFFERSON CNTY KY VISITORS & CONVENTION COMMN DEDICATED TAX	3.13	6/1/2046	135.6	1,491
12	13063CU65	CALIFORNIA ST	3.00	9/1/2046	309.8	1,470
13	57582RLK0	MASSACHUSETTS ST	3.00	9/1/2046	274.1	1,361
14	677525TK3	OHIO ST AIR QUALITY DEV AUTH REV	5.70	8/1/2020	204.4	1,294
15	452152GB1	ILLINOIS ST	7.10	7/1/2035	144.7	1,291
16	452151LD3	ILLINOIS ST	4.35	6/1/2018	73.5	1,287
17	57582RJM9	MASSACHUSETTS ST	3.00	4/1/2044	155.8	1,265
18	70917SZT3	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	3.00	6/15/2045	110.7	1,232
19	13032UFM5	CALIFORNIA HEALTH FACS FING AUTH REV	3.00	10/1/2041	209.4	1,185
20	259230MV9	DOUGLAS CNTY NEB HOSP AUTH NO 2 REV	3.00	5/15/2039	129.1	1,172
21	917393BX7	UTAH CNTY UTAH HOSP REV	3.00	5/15/2047	72.9	1,153
22	913366HM5	UNIV CALIF REGTS MED CTR POOLED REV	3.00	5/15/2042	179.0	1,116
23	452152DU2	ILLINOIS ST	6.90	3/1/2035	40.8	1,092
24	452152FA4	ILLINOIS ST	6.73	4/1/2035	199.8	1,081
25	70917SXU2	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	3.00	5/1/2037	80.8	1,066
26	74529JHN8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.00	8/1/2042	258.2	1,045
27	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/2041	136.6	1,035
28	113807BQ3	BROOKLYN ARENA LOC DEV CORP N Y PILOT REV	3.00	7/15/2043	197.7	994
29	546604FU8	LOUISVILLE & JEFFERSON CNTY KY VISITORS & CONVENTION COMMN DEDICATED TAX	3.13	6/1/2041	82.9	935
30	64966LKZ3	NEW YORK N Y	4.00	3/1/2039	129.4	931
31	67910HQB9	OKLAHOMA ST MUN PWR AUTH PWR SUPPLY SYS REV	3.13	1/1/2041	135.5	904
32	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/2046	143.8	856
33	59261AHJ9	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/2041	221.8	848
34	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/2029	282.6	837
35	735352QK5	PORT ST LUCIE FLA UTIL REV	3.00	9/1/2035	94.2	829
36	017357C51	ALLEGHENY CNTY PA SAN AUTH SWR REV	3.00	12/1/2037	61.4	800
37	032555NK6	ANAHEIM CALIF ELEM SCH DIST	3.00	8/1/2046	101.5	800
38	97712DUE4	WISCONSIN ST HEALTH & EDL FACS AUTH REV	3.50	2/15/2046	117.8	782
39	113807BN0	BROOKLYN ARENA LOC DEV CORP N Y PILOT REV	3.00	7/15/2036	152.3	760
40	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/2042	127.4	750
41	959215EP5	WESTERN PLACER CALIF UNI SCH DIST CTFS PARTN	3.13	8/1/2047	95.9	749
42	57582RJK3	MASSACHUSETTS ST	4.00	4/1/2046	346.9	749
43	745190DH8	PUERTO RICO COMWLTH HWY & TRANSN AUTH TRANSN REV	4.75	7/1/2038	32.1	746
44	64971WS35	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.00	8/1/2042	148.2	736
45	59261AHS9	METROPOLITAN TRANSN AUTH N Y REV	3.00	11/15/2046	123.5	736
46	83704AAF9	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH LEASE REV	3.00	8/15/2038	92.1	727
47	452151LE1	ILLINOIS ST	4.95	6/1/2023	36.1	726
48	59447TMJ9	MICHIGAN FIN AUTH REV	3.00	11/15/2033	113.1	711
49	45506DXS9	INDIANA ST FIN AUTH REV	3.13	3/1/2044	96.7	690
50	70914PA28	PENNSYLVANIA ST	3.00	2/1/2035	35.6	686

<sup>1</sup> Includes zero-coupon securities

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## Most Actively Traded Municipal Securities

### Top 50 Most Active Variable Rate Securities, 2016:Q3

By par amount

Rank	CUSIP <sup>1</sup>	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/2040	2,120.9	84
2	64966JB47	NEW YORK N Y	4/1/2042	1,705.9	16
3	13048TGT4	CALIFORNIA MUN FIN AUTH REV	11/1/2035	1,676.3	108
4	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/2035	1,518.8	44
5	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/2041	1,423.6	103
6	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/2038	1,324.6	154
7	544495DU5	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/2035	1,272.4	66
8	20774YJ99	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	7/1/2042	1,265.6	139
9	737347AF1	POSEY CNTY IND ECONOMIC DEV REV	7/1/2046	1,259.0	1
10	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	2/1/2031	1,252.3	45
11	914437QB7	UNIVERSITY MASS BLDG AUTH REV	11/1/2034	1,245.5	91
12	13033FK74	CALIFORNIA HEALTH FACS FING AUTH REV	6/1/2041	1,092.5	45
13	544495DT8	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/2035	983.3	49
14	882723J67	TEXAS ST	12/1/2046	940.1	30
15	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/2030	900.4	48
16	01170PBX3	ALASKA HSG FIN CORP HOME MTG REV	12/1/2041	887.4	41
17	64966G4Q2	NEW YORK N Y	4/1/2035	868.9	71
18	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/2023	868.8	118
19	20772JZ39	CONNECTICUT ST	5/15/2034	864.6	57
20	93978HDB8	WASHINGTON ST HEALTH CARE FACS AUTH REV	8/15/2041	853.7	30
21	64966JE77	NEW YORK N Y	4/1/2042	853.4	101
22	64972F2H8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2044	839.4	67
23	64971WUMC	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/2045	829.5	68
24	64972FK62	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2041	815.1	44
25	626207VS0	MUNICIPAL ELEC AUTH GA	1/1/2048	814.8	66
26	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/2034	807.2	121
27	13063A5Y6	CALIFORNIA ST	5/1/2034	801.0	26
28	64966LCJ8	NEW YORK N Y	8/1/2038	795.0	131
29	197210AZ0	COLUMBIA ALA INDL DEV BRD POLLUTN CTL REV	12/1/2037	791.7	39
30	130534XL9	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	11/1/2026	787.4	43
31	64966LU41	NEW YORK N Y	6/1/2044	784.9	62
32	546848AA0	LOUISVILLE KY REGL ARPT AUTH SPL FACS REV	11/1/2036	776.0	31
33	64986UEB9	NEW YORK ST HSG FIN AGY REV	5/1/2044	771.1	36
34	919061DT5	VALDEZ ALASKA MARINE TERM REV	12/1/2033	770.0	47
35	64971Q8Y2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/2043	766.2	152
36	130795C88	CALIFORNIA STATEWIDE CMNTYS DEV AUTH REV	4/1/2046	758.7	29
37	64972GEK6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2049	756.8	70
38	20774LRU1	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	7/1/2036	751.7	143
39	452252GD5	ILLINOIS ST TOLL HWY AUTH TOLL HIGHWAY REV	1/1/2031	729.7	33
40	679111TB0	OKLAHOMA ST TPK AUTH TPK REV	1/1/2028	727.1	58
41	9151153V9	UNIVERSITY TEX PERM UNIV FD	7/1/2038	720.9	22
42	542690Z47	LONG ISLAND PWR AUTH N Y ELEC SYS REV	5/1/2033	716.5	28
43	914455LR9	UNIVERSITY MICH UNIV REVS	4/1/2042	713.2	120
44	64971MN73	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/2035	709.1	15
45	13063A6F6	CALIFORNIA ST	5/1/2034	705.7	100
46	13062RG36	CALIFORNIA ST	5/1/2040	704.8	42
47	64972GCR3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2049	704.7	47
48	64966FA87	NEW YORK N Y	4/1/2036	694.2	41
49	64971M2B7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	5/1/2034	693.3	20
50	59259NH97	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	11/1/2031	692.5	90

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## Municipal Market Trades by Trade Type

### Trade Type and Size

Average daily par amount in \$ millions

2016:Q3	
<b>All Trades</b>	
<b>Total</b>	<b>13,092.7</b>
0 - \$25,000	252.6
\$25,001 - \$50,000	277.4
\$50,001 - \$75,000	106.2
\$75,001 - \$100,000	250.4
\$100,001 - \$500,000	1,122.1
\$500,001 - \$1,000,000	724.8
\$1,000,001 - \$2,000,000	815.9
More than \$2,000,000	9,543.3
<b>Customer Bought</b>	
<b>Total</b>	<b>6,714.8</b>
0 - \$25,000	99.5
\$25,001 - \$50,000	112.5
\$50,001 - \$75,000	42.6
\$75,001 - \$100,000	103.1
\$100,001 - \$500,000	472.9
\$500,001 - \$1,000,000	333.2
\$1,000,001 - \$2,000,000	410.6
More than \$2,000,000	5,140.4
<b>Customer Sold</b>	
<b>Total</b>	<b>4,200.9</b>
0 - \$25,000	52.6
\$25,001 - \$50,000	52.7
\$50,001 - \$75,000	21.6
\$75,001 - \$100,000	48.2
\$100,001 - \$500,000	198.0
\$500,001 - \$1,000,000	139.0
\$1,000,001 - \$2,000,000	180.1
More than \$2,000,000	3,508.6
<b>Inter-Dealer</b>	
<b>Total</b>	<b>2,177.0</b>
0 - \$25,000	100.5
\$25,001 - \$50,000	112.1
\$50,001 - \$75,000	42.1
\$75,001 - \$100,000	99.1
\$100,001 - \$500,000	451.2
\$500,001 - \$1,000,000	252.5
\$1,000,001 - \$2,000,000	225.1
More than \$2,000,000	894.3

## Municipal Market Trades by Trade Type

### Trade Type and Size

Average daily number of trades

#### 2016:Q3

<b>All Trades</b>	
<b>Total</b>	<b>33,563</b>
0 - \$25,000	16,001
\$25,001 - \$50,000	6,522
\$50,001 - \$75,000	1,593
\$75,001 - \$100,000	2,573
\$100,001 - \$500,000	4,476
\$500,001 - \$1,000,000	907
\$1,000,001 - \$2,000,000	538
More than \$2,000,000	955

<b>Customer Bought</b>	
<b>Total</b>	<b>13,583</b>
0 - \$25,000	6,185
\$25,001 - \$50,000	2,635
\$50,001 - \$75,000	635
\$75,001 - \$100,000	1,058
\$100,001 - \$500,000	1,881
\$500,001 - \$1,000,000	415
\$1,000,001 - \$2,000,000	269
More than \$2,000,000	506

<b>Customer Sold</b>	
<b>Total</b>	<b>6,960</b>
0 - \$25,000	3,499
\$25,001 - \$50,000	1,245
\$50,001 - \$75,000	323
\$75,001 - \$100,000	495
\$100,001 - \$500,000	804
\$500,001 - \$1,000,000	170
\$1,000,001 - \$2,000,000	117
More than \$2,000,000	306

<b>Inter-Dealer</b>	
<b>Total</b>	<b>13,020</b>
0 - \$25,000	6,317
\$25,001 - \$50,000	2,642
\$50,001 - \$75,000	635
\$75,001 - \$100,000	1,019
\$100,001 - \$500,000	1,791
\$500,001 - \$1,000,000	322
\$1,000,001 - \$2,000,000	151
More than \$2,000,000	143

## Municipal Fixed Rate Securities - Par Amount Traded and Number of Trades

### Transaction Summary - Fixed Rate Securities

Average daily par amount in \$ millions

2016:Q3	
<b>Fixed Rate</b>	
<b>Total</b>	<b>6,222.7</b>
0 - \$25,000	241.8
\$25,001 - \$50,000	263.5
\$50,001 - \$75,000	100.0
\$75,001 - \$100,000	232.3
\$100,001 - \$500,000	1,037.2
\$500,001 - \$1,000,000	644.6
\$1,000,001 - \$2,000,000	674.2
More than \$2,000,000	3,029.2
<b>Zero Coupon</b>	
<b>Total</b>	<b>486.9</b>
0 - \$25,000	9.5
\$25,001 - \$50,000	11.8
\$50,001 - \$75,000	5.5
\$75,001 - \$100,000	10.6
\$100,001 - \$500,000	37.5
\$500,001 - \$1,000,000	19.1
\$1,000,001 - \$2,000,000	18.8
More than \$2,000,000	374.3

**Municipal Fixed Rate Securities - Par Amount Traded and Number of Trades**

**Transaction Summary - Fixed Rate Securities**

Average daily number of trades

<b>2016:Q3</b>	
<b>Fixed Trade</b>	
<b>Total</b>	<b>31,267</b>
0 - \$25,000	15,276
\$25,001 - \$50,000	6,190
\$50,001 - \$75,000	1,498
\$75,001 - \$100,000	2,387
\$100,001 - \$500,000	4,155
\$500,001 - \$1,000,000	810
\$1,000,001 - \$2,000,000	447
More than \$2,000,000	505

<b>Zero Coupon</b>	
<b>Total</b>	<b>1,342</b>
0 - \$25,000	645
\$25,001 - \$50,000	284
\$50,001 - \$75,000	84
\$75,001 - \$100,000	110
\$100,001 - \$500,000	158
\$500,001 - \$1,000,000	24
\$1,000,001 - \$2,000,000	13
More than \$2,000,000	24

## Municipal Fixed Rate Securities - Par Amount Traded and Number of Trades

### Source of Repayment

Average daily par amount in \$ millions

2016:Q3	
<b>Fixed Rate</b>	
<b>Total</b>	<b>6,222.7</b>
General Obligation	2,375.4
Revenue	3,611.0
Double Barrel	236.3

<b>Zero Coupon</b>	
<b>Total</b>	<b>486.9</b>
General Obligation	133.5
Revenue	344.4
Double Barrel	9.0

Average daily number of trades

<b>Fixed Rate</b>	
<b>Total</b>	<b>31,267</b>
General Obligation	11,467
Revenue	18,666
Double Barrel	1,134

<b>Zero Coupon</b>	
<b>Total</b>	<b>1,342</b>
General Obligation	656
Revenue	640
Double Barrel	46



## Municipal Fixed Rate Securities - Par Amount Traded and Number of Trades

### Tax Status

Average daily par amount in \$ millions

2016:Q3	
<b>Fixed Rate</b>	
<b>Total</b>	<b>6,222.7</b>
Tax Exempt	5,372.5
Taxable	746.7
AMT	103.5

<b>Zero Coupon</b>	
<b>Total</b>	<b>486.9</b>
Tax Exempt	468.9
Taxable	18.1
AMT	0.0

Average daily number of trades

<b>Fixed Rate</b>	
<b>Total</b>	<b>31,267</b>
Tax Exempt	28,469
Taxable	2,410
AMT	388

<b>Zero Coupon</b>	
<b>Total</b>	<b>1,342</b>
Tax Exempt	1,217
Taxable	125
AMT	0

## Municipal Fixed Rate Securities - Par Amount Traded and Number of Trades

### Sector

Average daily par amount in \$ millions

2016:Q3	
<b>Fixed Rate</b>	
<b>Total</b>	<b>6,222.7</b>
Education	1,253.8
Health	480.8
Housing	120.4
Tax-Revenue	723.5
Transportation	530.7
Utility	783.6
Various Purpose	1,038.6
Other	1,291.1

<b>Zero Coupon</b>	
<b>Total</b>	<b>486.9</b>
Education	126.6
Health	7.8
Housing	0.4
Tax-Revenue	185.0
Transportation	56.2
Utility	4.9
Various Purpose	6.6
Other	99.4

Average daily number of trades

<b>Fixed Rate</b>	
<b>Total</b>	<b>31,267</b>
Education	7,701
Health	2,474
Housing	662
Tax-Revenue	3,092
Transportation	2,375
Utility	4,355
Various Purpose	4,089
Other	6,520

<b>Zero Coupon</b>	
<b>Total</b>	<b>1,342</b>
Education	613
Health	30
Housing	4
Tax-Revenue	202
Transportation	148
Utility	81
Various Purpose	100
Other	165

## Municipal Variable Rate Securities - Par Amount Traded and Number of Trades

### Variable Rate Demand Obligations<sup>1</sup> Trade Type and Size

Average daily par amount in \$ millions

2016:Q3	
<b>All Trades</b>	
<b>Total</b>	<b>4,988.5</b>
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	3.8
\$100,001 - \$500,000	29.3
\$500,001 - \$1,000,000	45.4
\$1,000,001 - \$2,000,000	100.0
More than \$2,000,000	4,810.0
<b>Customer Bought</b>	
<b>Total</b>	<b>2,358.8</b>
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	2.0
\$100,001 - \$500,000	17.1
\$500,001 - \$1,000,000	24.8
\$1,000,001 - \$2,000,000	54.2
More than \$2,000,000	2,260.7
<b>Customer Sold</b>	
<b>Total</b>	<b>2,414.5</b>
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	1.4
\$100,001 - \$500,000	9.9
\$500,001 - \$1,000,000	17.5
\$1,000,001 - \$2,000,000	41.1
More than \$2,000,000	2,344.5
<b>Inter-Dealer</b>	
<b>Total</b>	<b>215.3</b>
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	0.3
\$100,001 - \$500,000	2.3
\$500,001 - \$1,000,000	3.1
\$1,000,001 - \$2,000,000	4.7
More than \$2,000,000	204.8

<sup>1</sup> Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

## Municipal Variable Rate Securities - Par Amount Traded and Number of Trades

### Variable Rate Demand Obligations<sup>1</sup> Trade Type and Size

Average daily number of trades

2016:Q3	
<b>All Trades</b>	
<b>Total</b>	<b>596</b>
0 - \$25,000	3
\$25,001 - \$50,000	1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	38
\$100,001 - \$500,000	95
\$500,001 - \$1,000,000	54
\$1,000,001 - \$2,000,000	64
More than \$2,000,000	341
<b>Customer Bought</b>	
<b>Total</b>	<b>306</b>
0 - \$25,000	2
\$25,001 - \$50,000	<1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	20
\$100,001 - \$500,000	54
\$500,001 - \$1,000,000	30
\$1,000,001 - \$2,000,000	34
More than \$2,000,000	167
<b>Customer Sold</b>	
<b>Total</b>	<b>258</b>
0 - \$25,000	2
\$25,001 - \$50,000	<1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	14
\$100,001 - \$500,000	33
\$500,001 - \$1,000,000	21
\$1,000,001 - \$2,000,000	26
More than \$2,000,000	161
<b>Inter-Dealer</b>	
<b>Total</b>	<b>32</b>
0 - \$25,000	<1
\$25,001 - \$50,000	<1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	3
\$100,001 - \$500,000	8
\$500,001 - \$1,000,000	4
\$1,000,001 - \$2,000,000	3
More than \$2,000,000	14

<sup>1</sup> Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

## Municipal Variable Rate Securities - Par Amount Traded and Number of Trades

### Auction Rate Securities<sup>1</sup> Trade Type and Size

Average daily par amount in \$ millions

2016:Q3	
<b>All Trades</b>	
<b>Total</b>	<b>20.2</b>
0 - \$25,000	0.1
\$25,001 - \$50,000	0.2
\$50,001 - \$75,000	0.1
\$75,001 - \$100,000	0.8
\$100,001 - \$500,000	3.2
\$500,001 - \$1,000,000	2.9
\$1,000,001 - \$2,000,000	3.4
More than \$2,000,000	9.5
<b>Customer Bought</b>	
<b>Total</b>	<b>7.7</b>
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	0.2
\$100,001 - \$500,000	1.3
\$500,001 - \$1,000,000	1.0
\$1,000,001 - \$2,000,000	1.2
More than \$2,000,000	3.9
<b>Customer Sold</b>	
<b>Total</b>	<b>6.6</b>
0 - \$25,000	<0.1
\$25,001 - \$50,000	0.1
\$50,001 - \$75,000	0.0
\$75,001 - \$100,000	0.4
\$100,001 - \$500,000	1.0
\$500,001 - \$1,000,000	1.0
\$1,000,001 - \$2,000,000	1.2
More than \$2,000,000	2.9
<b>Inter-Dealer</b>	
<b>Total</b>	<b>5.9</b>
0 - \$25,000	<0.1
\$25,001 - \$50,000	0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	0.3
\$100,001 - \$500,000	0.8
\$500,001 - \$1,000,000	0.9
\$1,000,001 - \$2,000,000	1.0
More than \$2,000,000	2.8

<sup>1</sup> Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

## Municipal Variable Rate Securities - Par Amount Traded and Number of Trades

### Auction Rate Securities<sup>1</sup> Trade Type and Size

Average daily number of trades

2016:Q3	
<b>All Trades</b>	
<b>Total</b>	<b>36</b>
0 - \$25,000	3
\$25,001 - \$50,000	3
\$50,001 - \$75,000	1
\$75,001 - \$100,000	8
\$100,001 - \$500,000	12
\$500,001 - \$1,000,000	4
\$1,000,001 - \$2,000,000	2
More than \$2,000,000	2
<b>Customer Bought</b>	
<b>Total</b>	<b>12</b>
0 - \$25,000	1
\$25,001 - \$50,000	1
\$50,001 - \$75,000	1
\$75,001 - \$100,000	2
\$100,001 - \$500,000	5
\$500,001 - \$1,000,000	1
\$1,000,001 - \$2,000,000	1
More than \$2,000,000	1
<b>Customer Sold</b>	
<b>Total</b>	<b>13</b>
0 - \$25,000	1
\$25,001 - \$50,000	1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	4
\$100,001 - \$500,000	4
\$500,001 - \$1,000,000	1
\$1,000,001 - \$2,000,000	1
More than \$2,000,000	1
<b>Inter-Dealer</b>	
<b>Total</b>	<b>11</b>
0 - \$25,000	1
\$25,001 - \$50,000	1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	3
\$100,001 - \$500,000	3
\$500,001 - \$1,000,000	1
\$1,000,001 - \$2,000,000	1
More than \$2,000,000	1

<sup>1</sup> Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

## Municipal Market Coupon Distributions

### Customer Trade and Size of Tax Exempt, Fixed Rate Securities

Average daily yields

2016:Q3	
<b>All Trades</b>	
<b>Total</b>	<b>1.87</b>
0 - \$25,000	1.94
\$25,001 - \$50,000	1.84
\$50,001 - \$75,000	1.77
\$75,001 - \$100,000	1.81
\$100,001 - \$500,000	1.74
\$500,001 - \$1,000,000	1.78
\$1,000,001 - \$2,000,000	1.80
More than \$2,000,000	1.88
<b>Customer Bought</b>	
<b>Total</b>	<b>1.71</b>
0 - \$25,000	1.76
\$25,001 - \$50,000	1.72
\$50,001 - \$75,000	1.61
\$75,001 - \$100,000	1.65
\$100,001 - \$500,000	1.56
\$500,001 - \$1,000,000	1.64
\$1,000,001 - \$2,000,000	1.75
More than \$2,000,000	1.83
<b>Customer Sold</b>	
<b>Total</b>	<b>1.99</b>
0 - \$25,000	2.18
\$25,001 - \$50,000	1.91
\$50,001 - \$75,000	1.79
\$75,001 - \$100,000	1.76
\$100,001 - \$500,000	1.65
\$500,001 - \$1,000,000	1.69
\$1,000,001 - \$2,000,000	1.75
More than \$2,000,000	1.97



## Municipal Market Variable Securities Rate Resets

### Number of Variable Rate Demand Obligations Rate Resets by Type<sup>1</sup>

	2016:Q3
<b>Total</b>	<b>117,501</b>
Set by Remarketing Agent	117,249
Set by Formula	188
Maximum Rate	64

<sup>1</sup> Based on data submitted to the MSRB's Short-Obligation Rate Transparency (SHORT) System.  
May exclude submissions that could not be categorized based on available information.

## Municipal Market Variable Securities Rate Resets

### Number of Auction Rate Securities Rate Resets by Type<sup>1</sup>

2016:Q3	
<b>Total</b>	<b>2,134</b>
Set by Auction	399
Maximum Rate	1,680
All Hold Rate	55

<sup>1</sup> Based on data submitted to the MSRB's Short-Obligation Rate Transparency (SHORT) System.  
May exclude submissions that could not be categorized based on available information.

## Municipal Market Disclosures

### Continuing Disclosures Submissions

Number of Documents

	2016:Q3
Bond Call	10,827
Audited Financial Statements or CAFR	5,104
Annual Financial Information and Operation Data	4,134
Quarterly/Monthly Financial Information	3,180
Other Financial/Operating Data	1,863
Defeasance	1,800
Rating Change	1,495
Failure to Provide Annual Financial Info	1,389
Other Event-Based Disclosures	1,221
Budget	941
Interim/Additional Financial Information/Operating Data	222
Notice to Investor Pursuant to Bond Documents	163
Tender Offer/Secondary Market Purchases	88
Principal & Interest Payment Delinquency	79
Asset Backed Securities Filings <sup>1</sup>	56
Consultant Reports	51
Information Provided to Rating Agency, Credit/Liquidity Provider or Other Third Party	46
Successor, Additional or Change in Trustee	46
Release, Substitution or Sale of Property	44
Investment/Debt/Financial Policy	40
Non-payment Related Default	36
Amendment to Continuing Disclosure Undertaking	36
Unscheduled Draw on Debt Service Reserve	35
Substitution of Credit or Liquidity Provider or Its Failure to Perform	33
Modification to the Rights of Security Holders	30
Bid for Auction Rate or Other Securities	27
Consolidation	25
Capital or Other Financing Plan	17
Bankruptcy, Insolvency, Receivership	16
Litigation/Enforcement Action	14
Change of Tender Agent, Remarketing Agent, or Other On-Going Party	13
Unscheduled Draw on Credit Enhancement	7
Change in Fiscal Year/Timing of Annual Disclosure	7
Change in Obligated Person	6
Communication from the Internal Revenue Service	5
Adverse Tax Opinion or Event Affecting Tax-Exempt Status	3
Change in Accounting Standard	1

<sup>1</sup> Disclosures related to municipal asset-backed securities required under Securities Exchange Act of 1934 Rule 15Ga-1

## Definition of Terms Used

Alternative Minimum Tax (AMT) Municipal Security—a tax-exempt bond, interest on which is subject to the alternative minimum tax.

Auction Rate Securities (ARS)—variable rate bonds whose interest rate is reset periodically under the Dutch auction process.

Bond—a security with two years or more in maturity (maturity date less dated date) with fixed or zero interest rate.

Commercial Paper—short-term, unsecured promissory notes, usually backed by a line of credit with a bank, that mature within 270 days.

CUSIP number (Committee on Uniform Securities Identification Procedures)—an identification number assigned to each maturity of an issue intended to help facilitate the identification and clearance of securities.

Customer Bought—a municipal trade in which a customer bought the security from a broker dealer or bank.

Customer Sold—a municipal trade in which a customer sold the security to a broker-dealer or bank.

Customer Trade—a municipal securities trade between a broker-dealer (including a dealer bank or broker's broker), acting as agent in an agency trade or as purchaser or seller in a principal trade, and a contra-party that is not a broker-dealer (including including a dealer bank or broker's broker).

Dated Date—the date of an issue from which interest on the issue usually starts to accrue, even though the issue may actually be delivered at some later date.

Double Barrel Municipal Security—a security with characteristics of both revenue and general obligation instruments.

Fixed Rate—an interest rate on a security that does not change for the remaining life of the security.

General Obligation Municipal Security— a security that is secured by the full faith, credit and taxing power of an issuer. General obligation securities issued by local units of government are typically secured by a pledge of the issuer's "ad valorem" taxing power; general obligation securities issued by states are generally based upon appropriations made by the state legislature for the purposes specified.

Inter-Dealer—a municipal securities trade between two broker-dealers, including dealer banks or broker's brokers.

Long Note—a security with over nine months in maturity, but under two years in maturity (maturity date less dated date) with fixed or zero interest rate.

Revenue Municipal Security—a security that is payable from a specific source of revenue and to which the full faith and credit of an issuer with taxing power is not pledged. Revenue bonds are payable from identified sources of revenue and do not permit the bondholders to compel taxation or legislative appropriation of funds not pledged for payment of debt service.

RULE 15c2-12—an SEC rule under the Securities Exchange Act of 1934 setting forth certain obligations of (i) underwriters to receive, review and disseminate official statements prepared by issuers of most primary offerings of municipal securities, (ii) underwriters to obtain continuing disclosure agreements from issuers and other obligated persons to provide material event disclosures and annual financial information on a continuing basis, and (iii) broker-dealers to have access to such continuing disclosure in order to make recommendations of municipal securities in the secondary market.

Sector—transactions according to the security's use of proceeds, i.e., issuer's intended use of the capital raised by the offering, according to definitions provided by Standard & Poor's Securities Evaluations, Inc. The top seven most active sectors based on par amount are displayed, as well as an "Other" category that includes the remaining sectors and trades for which the sector information was not available.

Short Note—a security with nine months or less in maturity (maturity date less dated date) with fixed or zero interest rate.

Tax Exempt—interest on most municipal securities is excluded from gross income for federal income tax purposes and may or may not be exempt from state income or personal property taxation in the jurisdiction where issued or in other jurisdictions. If the bond is exempt from state income tax, it possesses "double exemption" status. "Triple exemption" bonds are exempt from municipal, local income or other special taxes, as well as from federal and state income tax.

Taxable—bonds or other securities issued by a municipal issuer for which interest or other investment return is included in gross income for federal income tax purposes. A municipal security may be issued on a taxable basis because the intended use of proceeds does not meet federal tax law requirements for the exclusion from gross income (e.g., private activity bonds that are not qualified bonds) or because certain other federal tax law requirements are not met (e.g., insufficient volume cap).

Variable (Long and Short)—variable interest rate securities with interest reset periods. Over 99 percent of these securities are short variable (interest reset period of nine months or less) as opposed to long variables (interest reset period longer than nine months.)

Variable Rate—an interest rate, sometimes referred to as a "floating rate," on a security that changes at intervals according to market conditions or a predetermined index or formula.

Variable Rate Demand Obligation (VRDO)—floating rate obligations that have a nominal long-term maturity but have a coupon rate that is reset periodically (e.g., daily or weekly). The investor has the option to put the issue back to the trustee or tender agent at any time with specified (e.g., seven days') notice.

Zero Coupon—an original issue discount bond on which no periodic interest payments are made but which is issued at a deep discount from par, accreting (at the rate represented by the offering yield at issuance) to its full value at maturity.

## **Continuing Disclosure Definitions**

### **Financial/Operating-based disclosures**

#### Rule 15c2-12-Based Financial/Operating Data

Annual Financial Information and Operating Data—issuer's/obligated person's financial information or operating data, of the type included in the original official statement, provided on at least an annual basis—see Exchange Act Rule 15c2-12(b)(5)(i)(A), 15c2-12(d)(2)(ii)(A) and 15c2-12(f)(9).

Audited Financial Statements or CAFR—issuer's/ obligated person's audited financial statements or Comprehensive Annual Financial Report, if not included in annual financial information and operating data—see Exchange Act Rule 15c2-12(b)(5)(1)(B).

Failure to Provide Annual Financial Information—notice that issuer's/obligated person's annual financial information and operating data not submitted by date specified in the continuing disclosure undertaking—see Exchange Act Rule 15c2-12(b)(5)(i)(A).

#### Additional/Voluntary Financial/Operating Data

Quarterly/Monthly Financial Information—issuer's/obligated person's financial information provided on a quarterly or monthly basis.

Change in Fiscal Year/Timing of Annual Disclosure—notice that issuer's/obligated person's fiscal year has changed or the date specified in the continuing disclosure undertaking for submitting annual financial information and operating data has changed.

Change in Accounting Standard—notice that issuer's/obligated person's accounting standards pursuant to which it prepares its financial information have changed.

Interim/Additional Financial Information/Operating Data—additional financial or operating data of issuer/obligated person supplementing annual financial information or operating data or providing such information or data on an interim basis in addition to the annual submission.

Budget—issuer's/obligated person's budget document or other information relating to its budget.

Investment/Debt/Financial Policy—issuer's/obligated person's policy on its investment activities, debt incurrence or other financial matters.

Information Provided to Rating Agency, Credit/Liquidity Provider or Other Third Party—information that issuer/obligated person has provided to a rating agency, provider of a credit or liquidity facility or other entity that the issuer/obligated person wishes to be made available publicly.

Consultant Reports—report prepared for or about an issuer/obligated person by a third-party in connection with the issuer's/obligated person's issue of securities or other financial or operating matters.

Other Financial/Operating Data—any financial information or operating data of the issuer/obligated person not otherwise described in another category.

### **Event-Based Disclosures**

#### Rule 15c2-12 Material Event Notices

P&I Payment Delinquency—a delinquency in scheduled payment of principal of or interest on municipal securities—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(1).

Non-payment Related Default—a default relating to municipal securities other than a delinquency in payment of principal or interest, if material—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(2).

Unscheduled Draw on Debt Service Reserve—an unscheduled draw on any debt service reserve fund/account that reflects financial difficulties of the issuer/obligated person or in connection with the municipal securities—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(3).

Unscheduled Draw on Credit Enhancement—an unscheduled draw on credit enhancement for municipal securities reflecting financial difficulties of the issuer/obligated person or in connection with the municipal securities—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(4).

Substitution of Credit or Liquidity Provider or Its Failure to Perform—a change in the entity providing any credit enhancement or liquidity support for the municipal securities, or any failure by such entity to perform its obligations under such credit enhancement or liquidity support—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(5).

Adverse Tax Opinion or Event Affecting Tax-Exempt Status—notice of an adverse tax opinion, issuance by the Internal Revenue Service of proposed or final determination of taxability, Notice of Proposed Issue (IRS Form 5701-TEB) or other material notice of determination with respect to the tax status of the municipal securities, or other material event affecting the tax status of the municipal securities—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(6).

Modification to the Rights of Security Holders—a modification to the rights of holders of the municipal securities, if material—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(7).

Bond Call—a notice that municipal securities are called for redemption, if material—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(8).

Tender Offer/Secondary Market Purchases—a notice that the issuer/obligated person is seeking offers to tender municipal securities for purchase or redemption by the issuer/obligated person, or that the issuer/obligated person has or seeks to purchase its securities in the secondary market—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(8).

Defeasance—a notice that municipal securities have been defeased, typically by establishment of an escrow to pay principal and interest and the release of the covenants and original security lien—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(9).

Release, Substitution or Sale of Property—a notice that there has been a release, substitution or sale of property securing repayment of the municipal securities, if material—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(10).

Rating Change—a notice that a rating assigned by a rating agency on the municipal securities, the issuer of municipal securities, an obligated person or other rating relating to the municipal securities has been changed—see Exchange Act Rule 15c2-12(b)(5)

Bankruptcy, Insolvency, Receivership—a notice of bankruptcy, insolvency, receivership or similar event of the issuer/obligated person—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(12).

Merger, Consolidation, Acquisition and Sale of Assets—a notice of the consummation of a merger, consolidation, or acquisition involving an issuer/obligated person, or the sale of all or substantially all of the assets of the issuer/obligated person, if material—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(13).

Successor, Additional or Change in Trustee—a notice of the appointment of a successor or additional trustee, or the change of name of a trustee, if material—see Exchange Act Rule 15c2-12(b)(5)(i)(C)(14).

#### Additional/Voluntary Event-Based Disclosures

Amendment to Continuing Disclosure Undertaking—a notice that the issuer/obligated person has amended the continuing disclosure undertaking relating to its municipal securities.

Change in Obligated Person—a notice that a new obligated party for whom continuing disclosures will be provided has been added with respect to municipal securities and, if applicable, an existing obligated person has been released from its continuing disclosure obligation.

Notice to Investor Pursuant to Bond Documents—a notice required or authorized to be provided under the legal documents relating to the municipal securities.

Communication from the Internal Revenue Service—a notice of any communication from the Internal Revenue Service to the issuer/obligated person other than the items covered by “Adverse Tax Opinion or Event Affecting Tax-Exempt Status” above.

Bid for Auction Rate or Other Securities—a notice of a bid placed by the issuer/obligated person to purchase auction rate securities through the auction rate setting procedure or the purchase of any other of its securities.

Capital or Other Financing Plan—disclosure regarding an issuer’s/obligated person’s capital improvement plans or other financing or refinancing plans.

Litigation/Enforcement Action—disclosure regarding any litigation involving the issuer/obligated person or any other relevant party that has the potential to have a material impact on the municipal securities, or any regulatory enforcement action that may have such an impact.

Change of Tender Agent, Remarketing Agent, or Other On-Going Party—a notice of a change in the tender agent, remarketing agent, or other market participant that provides on-going services in connection with the issuer’s/obligated person’s municipal securities.

Derivative or Other Similar Transaction—any notice, disclosure or other document relating to derivatives or other financial products or structures used in connection with the issuer’s/obligated person’s municipal securities.

Other Event-Based Disclosures—any notice, disclosure or other document relating to the occurrence of an event or other non-financial matter relating to the issuer’s/obligated person’s municipal securities not otherwise described in another category.