

Quarterly Statistical Summaries

2019 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).¹ The MSRB obtains some information on the characteristics of securities traded from Standard & Poor's Financial Services LLC and CUSIP databases furnished by CUSIP Global Services.² 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®) website.

For additional data on municipal trading activity, interest rate resets, and continuing and primary market disclosures, please see the MSRB's 2018 Fact Book or visit the EMMA website at EMMA.MSRB.org.

¹ As described in a 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 the EMMA website, 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 \$722.9 billion in 2019:Q3, lower than the \$743.3 billion in 2018:Q3 and the \$807.6 billion in 2019:Q2. Total number of trades decreased by about 16% to 2.01 million compared to the same period in 2018.

Par volume traded of taxable securities accounted for 10.2% in 2019:Q3, compared to 7.4% in the previous quarter and 6.7% in the same quarter of 2018.

Most Actively Traded Municipal Securities

Securities from Puerto Rico continued to dominate trading activity accounting for 19 of the top 50 most traded securities in 2019:Q3 with nearly 25,000 trades. Two tax and revenue anticipation notes from the State of Texas had the most par amount traded with \$12.7 billion in 2019:Q3.

Municipal Market Trades by Trade Type

Customer buying activity accounted for 37.1% of the 2.01 million trades in 2019:Q3, lower than the 39.5% in 2018:Q3. Customer sales accounted for 23.6% of all trades in the period.

Municipal Market Variable Securities Rate Resets

The number of variable rate demand obligations rate resets continued to decline in 2019:Q3 to 88,935, down from the 92,707 rate resets in 2018:Q3.

The number of auction rate securities rate resets totaled 835 in 2019:Q3 compared to 1,270 resets in 2018:Q3.

Municipal Market Disclosures

The number of continuing disclosure documents received by the MSRB totaled 29,589 in 2019:Q3, with bond calls accounting for 29.1% and audited and annual financial filings accounting for 16.8% and 13.5%, respectively.

Municipal Market Trade Summary

Transaction Summary

Total par amount traded in \$ millions

	2019:Q3
Total	722,931.3

By Trade Type

Customer Bought	377,312.9
Customer Sold	221,099.3
Inter-Dealer	124,519.2

By Coupon Type

Fixed Rate	431,369.3
Variable Rate	225,167.6
Zero Coupon	17,366.9
Other ¹	49,027.4

By Source of Repayment

General Obligation	185,036.2
Revenue	474,084.6
Double Barrel	15,697.1
Other ¹	48,113.5

By Tax Status

Tax Exempt	595,584.6
Taxable	73,681.9
AMT	45,787.0
Other ¹	7,877.7

¹ 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

	2019:Q3
Total	2,008,137

By Trade Type

Customer Bought	744,292
Customer Sold	473,094
Inter-Dealer	790,751

By Coupon Type

Fixed Rate	1,859,636
Variable	74,934
Zero Coupon	67,573
Other ¹	5,994

By Source of Repayment

General Obligation	761,155
Revenue	1,175,818
Double Barrel	65,680
Other ¹	5,484

By Tax Status

Tax Exempt	1,833,193
Taxable	144,684
AMT	29,173
Other ¹	1,087

¹ 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, 2019:Q3

By par amount

Rank	CUSIP ¹	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/2020	9,590.2	1,067
2	882724GP6	TEXAS ST	4.00	8/29/2019	3,154.6	684
3	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2046	2,643.4	2,895
4	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	8/1/2035	2,281.2	203
5	402207AD6	GULF COAST INDL DEV AUTH TEX REV	-	11/1/2041	2,174.2	333
6	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2051	1,869.2	2,744
7	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	-	7/1/2049	1,850.5	119
8	467229AF7	JACKSON CNTY MISS PORT FAC REV	-	6/1/2023	1,835.3	240
9	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/2030	1,632.2	115
10	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	12/1/2040	1,591.5	141
11	64966KTD5	NEW YORK N Y	-	3/1/2042	1,408.7	203
12	882667AN8	TEXAS PRIVATE ACTIVITY BD SURFACE TRANSN CORP REV	5.00	6/30/2058	1,338.4	197
13	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	1,332.3	2,628
14	594751AM1	MICHIGAN TOB SETTLEMENT FIN AUTH TOB SETTLEMENT ASSET BACKED REV	-	6/1/2058	1,261.1	7
15	83703FLR1	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	-	5/1/2048	1,245.9	61
16	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,237.5	804
17	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/2040	1,215.0	747
18	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/2030	1,154.9	89
19	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/2022	1,129.0	160
20	544351PJ2	LOS ANGELES CALIF	5.00	6/25/2020	1,108.7	387
21	072024WG3	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	3.00	4/1/2054	1,073.0	838
22	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	-	8/15/2020	1,031.7	147
23	2350364W7	DALLAS FORT WORTH TEX INTL ARPT REV	2.99	11/1/2038	1,013.9	110
24	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	-	7/1/2034	1,010.5	256
25	91412GSK2	UNIVERSITY CALIF REVS	-	5/15/2048	990.8	160
26	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	-	2/1/2031	984.7	127
27	677561LA8	OHIO ST HOSP FAC REV	-	1/1/2052	969.0	59
28	91412GSH9	UNIVERSITY CALIF REVS	-	5/15/2048	960.8	189
29	040507QA6	ARIZONA HEALTH FACS AUTH REV	-	1/1/2046	953.4	137
30	57582RYN0	MASSACHUSETTS ST	2.66	9/1/2039	950.4	108
31	87638QBE8	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	-	10/1/2041	930.6	133
32	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/2045	903.3	123
33	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	-	6/1/2042	886.5	87
34	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	-	1/1/2032	880.4	213
35	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	-	12/1/2037	877.7	179
36	64971XKU1	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/2039	866.3	72
37	04052EAA6	ARIZONA INDL DEV AUTH HOSP REV	-	2/1/2048	854.1	103
38	91425MDV6	UNIVERSITY DEL REV	-	11/1/2037	852.0	93
39	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	-	11/15/2050	844.1	202
40	64972FX27	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2043	837.2	117
41	64972GCR3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2049	828.9	107
42	13063DMB1	CALIFORNIA ST	3.05	4/1/2029	827.0	129
43	41315RGV0	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	-	12/1/2041	818.9	155
44	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	810.9	1,579
45	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/2035	808.4	193
46	19672MCG1	COLORADO ST ED LN PROG	3.00	6/29/2020	801.7	105
47	626207VS0	MUNICIPAL ELEC AUTH GA	-	1/1/2048	795.0	85
48	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	792.2	414
49	19648FKT0	COLORADO HEALTH FACS AUTH REV	4.00	8/1/2049	791.0	225
50	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	-	10/1/2044	780.4	43

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Most Actively Traded Municipal Securities

Top 50 Most Active Securities, 2019:Q3

By number of trades

Rank	CUSIP ¹	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2046	2,643.4	2,895
2	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2051	1,869.2	2,744
3	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	1,332.3	2,628
4	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/2053	634.2	2,088
5	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	590.2	1,773
6	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	810.9	1,579
7	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/2049	442.9	1,438
8	74529JQF5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2033	66.4	1,376
9	74529JQE8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2031	162.0	1,277
10	113073AX8	BROOKHAVEN GA DEV AUTH REV	3.00	7/1/2046	411.1	1,138
11	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	68.8	1,115
12	882724PY7	TEXAS ST	4.00	8/27/2020	9,590.2	1,067
13	74529JQD0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2029	41.9	983
14	74529JQC2	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2027	9.1	955
15	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/2034	123.8	921
16	65821DWL1	NORTH CAROLINA MED CARE COMMN HEALTH CARE FACS REV	3.13	11/1/2049	74.1	848
17	072024WG3	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	3.00	4/1/2054	1,073.0	838
18	11861MAR7	BUCKS CNTY PA INDL DEV AUTH HOSP REV	3.00	8/15/2050	443.7	834
19	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,237.5	804
20	709224P60	PENNSYLVANIA ST TPK COMMN TPK REV	4.00	12/1/2049	216.5	757
21	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/2040	1,215.0	747
22	74529JQY4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	189.1	705
23	882724GP6	TEXAS ST	4.00	8/29/2019	3,154.6	684
24	74529JRI6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/2040	295.9	667
25	74529JQB4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2024	8.8	661
26	95308RRH4	WEST HARRIS CNTY TEX REGL WTR AUTH WTR SYS REV	3.00	12/15/2058	147.3	632
27	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/2041	187.1	630
28	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/2042	74.2	629
29	162410EN0	CHATTANOOGA TENN HEALTH EDL & HSG FAC BRD REV	3.25	8/1/2044	160.1	622
30	491501FD9	KENTUCKY ST MUN PWR AGY PWR SYS REV	3.00	9/1/2043	328.9	621
31	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/2029	527.9	605
32	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/2046	22.3	576
33	801577NM5	SANTA CLARA CNTY CALIF FING AUTH LEASE REV	3.13	5/1/2047	102.4	544
34	74529JPV1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	35.6	517
35	626207YS7	MUNICIPAL ELEC AUTH GA	7.06	4/1/2057	70.0	512
36	13063A5G5	CALIFORNIA ST	7.55	4/1/2039	318.9	504
37	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/2035	161.6	494
38	392276AW1	GREATER OUACHITA WTR CO INC LA WTRWKS & SWR SYS REV	3.00	9/1/2049	64.5	482
39	041806SU5	ARLINGTON TEX HIGHER ED FIN CORP ED REV	3.00	8/15/2054	110.9	482
40	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/2044	80.4	476
41	64966QCZ1	NEW YORK N Y	3.00	8/1/2045	132.4	469
42	63166MCA5	NASSAU CNTY N Y TOBACCO SETTLEMENT CORP	5.00	6/1/2035	93.9	468
43	13063BJB9	CALIFORNIA ST	7.70	11/1/2030	83.3	461
44	13032UFN3	CALIFORNIA HEALTH FACS FING AUTH REV	3.00	10/1/2047	25.3	456
45	65944RKX9	NORTH FT BEND WTR AUTH TEX WTR SYS REV	3.00	12/15/2058	97.9	447
46	13063BFV9	CALIFORNIA ST	7.95	3/1/2036	102.7	444
47	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/2020	478.1	430
48	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/2028	133.2	424
49	59447TVB6	MICHIGAN FIN AUTH REV	3.13	2/15/2044	29.5	422
50	13063A7G3	CALIFORNIA ST	6.20	10/1/2019	24.0	419

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Most Actively Traded Municipal Securities

Top 50 Most Active Fixed Rate¹ Securities, 2019:Q3

By par amount

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/2020	9,590.2	1,067
2	882724GP6	TEXAS ST	4.00	8/29/2019	3,154.6	684
3	882667AN8	TEXAS PRIVATE ACTIVITY BD SURFACE TRANSN CORP REV	5.00	6/30/2058	1,338.4	197
4	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	1,332.3	2,628
5	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,237.5	804
6	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/2040	1,215.0	747
7	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/2022	1,129.0	160
8	544351PJ2	LOS ANGELES CALIF	5.00	6/25/2020	1,108.7	387
9	072024WG3	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	3.00	4/1/2054	1,073.0	838
10	2350364W7	DALLAS FORT WORTH TEX INTL ARPT REV	2.99	11/1/2038	1,013.9	110
11	57582RYN0	MASSACHUSETTS ST	2.66	9/1/2039	950.4	108
12	13063DMB1	CALIFORNIA ST	3.05	4/1/2029	827.0	129
13	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	810.9	1,579
14	19672MCG1	COLORADO ST ED LN PROG	3.00	6/29/2020	801.7	105
15	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	792.2	414
16	19648FKT0	COLORADO HEALTH FACS AUTH REV	4.00	8/1/2049	791.0	225
17	79765PDV2	SAN FRANCISCO CALIF CITY & CNTY MULTIFAMILY HSG REV	5.63	12/1/2052	740.0	4
18	79766DSA8	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/2050	736.9	110
19	19648FKS2	COLORADO HEALTH FACS AUTH REV	5.00	8/1/2044	731.1	135
20	57582RYP5	MASSACHUSETTS ST	2.81	9/1/2043	727.2	85
21	64971XEN4	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.73	8/1/2029	720.1	37
22	64971XGE2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.80	8/1/2029	720.1	27
23	73358W3L6	PORT AUTH N Y & N J	3.29	8/1/2069	696.1	134
24	67765QGT7	OHIO ST WTR DEV AUTH REV	5.00	12/1/2029	647.4	127
25	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/2053	634.2	2,088
26	113073AY6	BROOKHAVEN GA DEV AUTH REV	4.00	7/1/2049	608.1	249
27	196729CK1	COLORADO ST GEN FD REV	5.00	6/26/2020	597.9	98
28	57582RYY6	MASSACHUSETTS ST	2.90	9/1/2049	591.5	104
29	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	590.2	1,773
30	20281PKV3	COMMONWEALTH FING AUTH PA REV	3.66	6/1/2038	577.6	30
31	13063DQK7	CALIFORNIA ST	5.00	10/1/2027	540.4	52
32	48504NBC2	KANSAS CITY MO INDL DEV AUTH ARPT SPL OBLIG	5.00	3/1/2046	537.0	157
33	16514PAG4	CHESAPEAKE BAY BRDG & TUNL DIST VA REV	5.00	11/1/2023	529.5	70
34	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/2029	527.9	605
35	709224P52	PENNSYLVANIA ST TPK COMMN TPK REV	5.00	12/1/2044	500.1	163
36	79766DRZ4	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/2045	491.6	116
37	19648FJE5	COLORADO HEALTH FACS AUTH REV	4.00	11/15/2043	481.9	140
38	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/2020	478.1	430
39	2350364X5	DALLAS FORT WORTH TEX INTL ARPT REV	3.14	11/1/2045	470.6	115
40	64966QCV0	NEW YORK N Y	5.00	8/1/2041	467.3	115
41	626207X25	MUNICIPAL ELEC AUTH GA	5.00	1/1/2049	455.2	44
42	71781LBH1	PHILADELPHIA PA AUTH FOR INDL DEV PENSION FDG	6.55	10/15/2028	450.0	2
43	64971XEBO	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.85	5/1/2030	450.0	29
44	11861MAR7	BUCKS CNTY PA INDL DEV AUTH HOSP REV	3.00	8/15/2050	443.7	834
45	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/2049	442.9	1,438
46	79766DSJ9	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/2025	441.2	24
47	783186TP4	RUTGERS ST UNIV N J	3.92	5/1/2119	439.0	139
48	915217XA6	UNIVERSITY VA UNIV REVS	3.23	9/1/2119	438.2	85
49	452152Q20	ILLINOIS ST	5.00	11/1/2028	436.9	173
50	113073AW0	BROOKHAVEN GA DEV AUTH REV	4.00	7/1/2044	432.2	190

¹ Includes zero-coupon securities

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Most Actively Traded Municipal Securities

Top 50 Most Active Fixed Rate¹ Securities, 2019:Q3

By number of trades

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	1,332.3	2,628
2	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/2053	634.2	2,088
3	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	590.2	1,773
4	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	810.9	1,579
5	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/2049	442.9	1,438
6	113073AX8	BROOKHAVEN GA DEV AUTH REV	3.00	7/1/2046	411.1	1,138
7	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	68.8	1,115
8	882724PY7	TEXAS ST	4.00	8/27/2020	9,590.2	1,067
9	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/2034	123.8	921
10	65821DWL1	NORTH CAROLINA MED CARE COMMN HEALTH CARE FACS REV	3.13	11/1/2049	74.1	848
11	072024WG3	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	3.00	4/1/2054	1,073.0	838
12	11861MAR7	BUCKS CNTY PA INDL DEV AUTH HOSP REV	3.00	8/15/2050	443.7	834
13	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,237.5	804
14	709224P60	PENNSYLVANIA ST TPK COMMN TPK REV	4.00	12/1/2049	216.5	757
15	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/2040	1,215.0	747
16	74529JQY4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	189.1	705
17	882724GP6	TEXAS ST	4.00	8/29/2019	3,154.6	684
18	74529JRJ6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/2040	295.9	667
19	95308RRH4	WEST HARRIS CNTY TEX REGL WTR AUTH WTR SYS REV	3.00	12/15/2058	147.3	632
20	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/2041	187.1	630
21	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/2042	74.2	629
22	162410EN0	CHATTANOOGA TENN HEALTH EDL & HSG FAC BRD REV	3.25	8/1/2044	160.1	622
23	491501FD9	KENTUCKY ST MUN PWR AGY PWR SYS REV	3.00	9/1/2043	328.9	621
24	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/2029	527.9	605
25	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/2046	22.3	576
26	801577NM5	SANTA CLARA CNTY CALIF FING AUTH LEASE REV	3.13	5/1/2047	102.4	544
27	74529JPV1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	35.6	517
28	626207YS7	MUNICIPAL ELEC AUTH GA	7.06	4/1/2057	70.0	512
29	13063A5G5	CALIFORNIA ST	7.55	4/1/2039	318.9	504
30	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/2035	161.6	494
31	041806SU5	ARLINGTON TEX HIGHER ED FIN CORP ED REV	3.00	8/15/2054	110.9	482
32	392276AW1	GREATER OUACHITA WTR CO INC LA WTRWKS & SWR SYS REV	3.00	9/1/2049	64.5	482
33	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/2044	80.4	476
34	64966QCZ1	NEW YORK N Y	3.00	8/1/2045	132.4	469
35	63166MCA5	NASSAU CNTY N Y TOBACCO SETTLEMENT CORP	5.00	6/1/2035	93.9	468
36	13063BJB9	CALIFORNIA ST	7.70	11/1/2030	83.3	461
37	13032JFN3	CALIFORNIA HEALTH FACS FING AUTH REV	3.00	10/1/2047	25.3	456
38	65944RKX9	NORTH FT BEND WTR AUTH TEX WTR SYS REV	3.00	12/15/2058	97.9	447
39	13063BFV9	CALIFORNIA ST	7.95	3/1/2036	102.7	444
40	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/2020	478.1	430
41	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/2028	133.2	424
42	59447TVB6	MICHIGAN FIN AUTH REV	3.13	2/15/2044	29.5	422
43	13063A7G3	CALIFORNIA ST	6.20	10/1/2019	24.0	419
44	74529JRL1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.78	7/1/2058	214.4	416
45	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	792.2	414
46	57582RLK0	MASSACHUSETTS ST	3.00	9/1/2046	50.7	406
47	959878RF8	WESTERN WASH UNIV WASH REVS	3.00	4/1/2049	39.9	406
48	64972GUG7	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/2049	105.6	395
49	544351PJ2	LOS ANGELES CALIF	5.00	6/25/2020	1,108.7	387
50	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/2046	207.3	384

¹ Includes zero-coupon securities

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Most Actively Traded Municipal Securities

Top 50 Most Active Variable Rate Securities, 2019:Q3

By par amount

Rank	CUSIP ¹	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/2035	2,281.2	203
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/2041	2,174.2	333
3	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	7/1/2049	1,850.5	119
4	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/2023	1,835.3	240
5	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/2030	1,632.2	115
6	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/2040	1,591.5	141
7	64966KTD5	NEW YORK N Y	3/1/2042	1,408.7	203
8	83703FLR1	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	5/1/2048	1,245.9	61
9	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/2030	1,154.9	89
10	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	8/15/2020	1,031.7	147
11	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/2034	1,010.5	256
12	91412GSK2	UNIVERSITY CALIF REVS	5/15/2048	990.8	160
13	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	2/1/2031	984.7	127
14	677561LA8	OHIO ST HOSP FAC REV	1/1/2052	969.0	59
15	91412GSH9	UNIVERSITY CALIF REVS	5/15/2048	960.8	189
16	040507QA6	ARIZONA HEALTH FACS AUTH REV	1/1/2046	953.4	137
17	87638QBE8	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	10/1/2041	930.6	133
18	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/2045	903.3	123
19	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	6/1/2042	886.5	87
20	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/2032	880.4	213
21	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	12/1/2037	877.7	179
22	64971XKU1	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/2039	866.3	72
23	04052EAA6	ARIZONA INDL DEV AUTH HOSP REV	2/1/2048	854.1	103
24	91425MDV6	UNIVERSITY DEL REV	11/1/2037	852.0	93
25	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	11/15/2050	844.1	202
26	64972FX27	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2043	837.2	117
27	64972GCR3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2049	828.9	107
28	41315RGV0	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	12/1/2041	818.9	155
29	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/2035	808.4	193
30	626207VS0	MUNICIPAL ELEC AUTH GA	1/1/2048	795.0	85
31	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	10/1/2044	780.4	43
32	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2039	768.1	66
33	546598AA1	LOUISVILLE & JEFFERSON CNTY KY REGL ARPT AUTH SPL FACS REV	1/1/2029	763.8	78
34	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/2042	756.0	162
35	544525DD7	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	7/1/2035	754.6	123
36	270838AJ4	EAST BATON ROUGE PARISH LA POLLUTION CTL REV	3/1/2022	746.5	66
37	677561LD2	OHIO ST HOSP FAC REV	1/1/2052	738.6	112
38	64966JE77	NEW YORK N Y	4/1/2042	717.9	291
39	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	10/1/2041	710.0	83
40	64972FWK8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2039	708.2	147
41	64966QEC0	NEW YORK N Y	8/1/2038	694.8	92
42	451295ZZ5	IDAHO HEALTH FACS AUTH REV	3/1/2048	692.1	106
43	13048TGT4	CALIFORNIA MUN FIN AUTH REV	11/1/2035	686.5	173
44	64966ML98	NEW YORK N Y	12/1/2047	674.1	137
45	84129NML0	SOUTHCENTRAL PA GEN AUTH REV	6/1/2035	657.2	59
46	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/2045	654.9	178
47	20774YQN0	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	7/1/2048	654.0	39
48	115034BS8	BROWARD CNTY FLA INDL DEV REV	6/1/2045	651.4	51
49	01757LDW3	ALLEN CNTY OHIO HOSP FACS REV	6/1/2034	648.2	69
50	89602RDT9	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/2032	644.7	241

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Municipal Market Trades by Trade Type

Trade Type and Size

Average daily par amount in \$ millions

2019:Q3	
All Trades	
Total	11,295.8
0 - \$25,000	226.6
\$25,001 - \$50,000	243.5
\$50,001 - \$75,000	102.9
\$75,001 - \$100,000	222.2
\$100,001 - \$500,000	1,080.9
\$500,001 - \$1,000,000	734.7
\$1,000,001 - \$2,000,000	881.3
More than \$2,000,000	7,803.7

Customer Bought	
Total	5,895.5
0 - \$25,000	80.8
\$25,001 - \$50,000	89.8
\$50,001 - \$75,000	38.0
\$75,001 - \$100,000	82.3
\$100,001 - \$500,000	432.3
\$500,001 - \$1,000,000	338.6
\$1,000,001 - \$2,000,000	447.1
More than \$2,000,000	4,386.8

Customer Sold	
Total	3,454.7
0 - \$25,000	53.3
\$25,001 - \$50,000	53.6
\$50,001 - \$75,000	23.7
\$75,001 - \$100,000	51.9
\$100,001 - \$500,000	242.3
\$500,001 - \$1,000,000	172.7
\$1,000,001 - \$2,000,000	228.5
More than \$2,000,000	2,628.8

Inter-Dealer	
Total	1,945.6
0 - \$25,000	92.5
\$25,001 - \$50,000	100.1
\$50,001 - \$75,000	41.3
\$75,001 - \$100,000	88.0
\$100,001 - \$500,000	406.4
\$500,001 - \$1,000,000	223.4
\$1,000,001 - \$2,000,000	205.8
More than \$2,000,000	788.2

Municipal Market Trades by Trade Type

Trade Type and Size

Average daily number of trades

2019:Q3	
All Trades	
Total	31,377
0 - \$25,000	14,929
\$25,001 - \$50,000	5,804
\$50,001 - \$75,000	1,547
\$75,001 - \$100,000	2,292
\$100,001 - \$500,000	4,332
\$500,001 - \$1,000,000	928
\$1,000,001 - \$2,000,000	582
More than \$2,000,000	963

Customer Bought	
Total	11,630
0 - \$25,000	5,130
\$25,001 - \$50,000	2,136
\$50,001 - \$75,000	570
\$75,001 - \$100,000	848
\$100,001 - \$500,000	1,717
\$500,001 - \$1,000,000	425
\$1,000,001 - \$2,000,000	295
More than \$2,000,000	508

Customer Sold	
Total	7,392
0 - \$25,000	3,569
\$25,001 - \$50,000	1,286
\$50,001 - \$75,000	355
\$75,001 - \$100,000	535
\$100,001 - \$500,000	976
\$500,001 - \$1,000,000	215
\$1,000,001 - \$2,000,000	149
More than \$2,000,000	309

Inter-Dealer	
Total	12,355
0 - \$25,000	6,230
\$25,001 - \$50,000	2,382
\$50,001 - \$75,000	622
\$75,001 - \$100,000	909
\$100,001 - \$500,000	1,640
\$500,001 - \$1,000,000	288
\$1,000,001 - \$2,000,000	138
More than \$2,000,000	146

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

Transaction Summary - Fixed Rate Securities

Average daily par amount in \$ millions

2019:Q3	
Fixed Rate	
Total	6,740.1
0 - \$25,000	218.8
\$25,001 - \$50,000	233.5
\$50,001 - \$75,000	97.9
\$75,001 - \$100,000	197.7
\$100,001 - \$500,000	949.2
\$500,001 - \$1,000,000	608.0
\$1,000,001 - \$2,000,000	691.0
More than \$2,000,000	3,744.1

Zero Coupon	
Total	271.4
0 - \$25,000	6.8
\$25,001 - \$50,000	8.6
\$50,001 - \$75,000	4.1
\$75,001 - \$100,000	7.1
\$100,001 - \$500,000	26.4
\$500,001 - \$1,000,000	13.3
\$1,000,001 - \$2,000,000	13.6
More than \$2,000,000	191.4

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

Transaction Summary - Fixed Rate Securities

Average daily number of trades

2019:Q3	
Fixed Trade	
Total	29,057
0 - \$25,000	14,322
\$25,001 - \$50,000	5,562
\$50,001 - \$75,000	1,472
\$75,001 - \$100,000	2,044
\$100,001 - \$500,000	3,842
\$500,001 - \$1,000,000	770
\$1,000,001 - \$2,000,000	457
More than \$2,000,000	590

Zero Coupon	
Total	1,056
0 - \$25,000	550
\$25,001 - \$50,000	209
\$50,001 - \$75,000	64
\$75,001 - \$100,000	74
\$100,001 - \$500,000	117
\$500,001 - \$1,000,000	17
\$1,000,001 - \$2,000,000	9
More than \$2,000,000	15

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

Source of Repayment

Average daily par amount in \$ millions

2019:Q3	
Fixed Rate	
Total	6,739.2
General Obligation	2,455.9
Revenue	4,071.1
Double Barrel	212.2

Zero Coupon	
Total	271.4
General Obligation	80.3
Revenue	188.3
Double Barrel	2.7

Average daily number of trades

Fixed Rate	
Total	29,057
General Obligation	11,254
Revenue	16,804
Double Barrel	999

Zero Coupon	
Total	1,056
General Obligation	494
Revenue	541
Double Barrel	21

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

Tax Status

Average daily par amount in \$ millions

2019:Q3	
Fixed Rate	
Total	6,739.3
Tax Exempt	5,498.1
Taxable	937.6
AMT	303.7

Zero Coupon	
Total	271.3
Tax Exempt	245.4
Taxable	25.9
AMT	<0.1

Average daily number of trades

Fixed Rate	
Total	29,057
Tax Exempt	26,512
Taxable	2,154
AMT	390

Zero Coupon	
Total	1,056
Tax Exempt	977
Taxable	78
AMT	<1

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

Sector

Average daily par amount in \$ millions

2019:Q3	
Fixed Rate	
Total	6,740.1
Education	1,389.6
Health	467.7
Housing	176.4
Tax-Revenue	720.4
Transportation	850.5
Utility	708.1
Various Purpose	1,151.7
Other	1,275.8

Zero Coupon	
Total	271.4
Education	75.8
Health	3.2
Housing	0.2
Tax-Revenue	93.0
Transportation	22.6
Utility	4.0
Various Purpose	7.6
Other	65.1

Average daily number of trades

Fixed Rate	
Total	29,057
Education	7,500
Health	2,126
Housing	720
Tax-Revenue	2,876
Transportation	2,350
Utility	3,825
Various Purpose	3,842
Other	5,818

Zero Coupon	
Total	1,056
Education	460
Health	26
Housing	2
Tax-Revenue	266
Transportation	101
Utility	61
Various Purpose	50
Other	92

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

Variable Rate Demand Obligations¹ Trade Type and Size

Average daily par amount in \$ millions

2019:Q3	
All Trades	
Total	3,205.9
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	15.0
\$100,001 - \$500,000	87.5
\$500,001 - \$1,000,000	94.0
\$1,000,001 - \$2,000,000	145.5
More than \$2,000,000	2,864.0
Customer Bought	
Total	1,550.5
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	4.5
\$100,001 - \$500,000	34.5
\$500,001 - \$1,000,000	42.7
\$1,000,001 - \$2,000,000	68.3
More than \$2,000,000	1,400.5
Customer Sold	
Total	1,568.6
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	7.6
\$100,001 - \$500,000	39.7
\$500,001 - \$1,000,000	42.4
\$1,000,001 - \$2,000,000	68.6
More than \$2,000,000	1,410.2
Inter-Dealer	
Total	86.9
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	2.9
\$100,001 - \$500,000	13.3
\$500,001 - \$1,000,000	8.8
\$1,000,001 - \$2,000,000	8.6
More than \$2,000,000	53.3

¹ 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 Obligations¹ Trade Type and Size

Average daily number of trades

2019:Q3	
All Trades	
Total	951
0 - \$25,000	1
\$25,001 - \$50,000	1
\$50,001 - \$75,000	1
\$75,001 - \$100,000	150
\$100,001 - \$500,000	306
\$500,001 - \$1,000,000	117
\$1,000,001 - \$2,000,000	96
More than \$2,000,000	280
Customer Bought	
Total	397
0 - \$25,000	1
\$25,001 - \$50,000	<1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	45
\$100,001 - \$500,000	117
\$500,001 - \$1,000,000	53
\$1,000,001 - \$2,000,000	45
More than \$2,000,000	136
Customer Sold	
Total	451
0 - \$25,000	1
\$25,001 - \$50,000	1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	76
\$100,001 - \$500,000	139
\$500,001 - \$1,000,000	53
\$1,000,001 - \$2,000,000	45
More than \$2,000,000	137
Inter-Dealer	
Total	103
0 - \$25,000	<1
\$25,001 - \$50,000	<1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	29
\$100,001 - \$500,000	50
\$500,001 - \$1,000,000	11
\$1,000,001 - \$2,000,000	6
More than \$2,000,000	7

¹ 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 Securities¹ Trade Type and Size

Average daily par amount in \$ millions

2019:Q3	
All Trades	
Total	16.1
0 - \$25,000	0.2
\$25,001 - \$50,000	0.3
\$50,001 - \$75,000	0.2
\$75,001 - \$100,000	0.4
\$100,001 - \$500,000	5.1
\$500,001 - \$1,000,000	2.8
\$1,000,001 - \$2,000,000	2.1
More than \$2,000,000	5.0
Customer Bought	
Total	5.2
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	1.7
\$500,001 - \$1,000,000	0.9
\$1,000,001 - \$2,000,000	0.6
More than \$2,000,000	1.4
Customer Sold	
Total	5.0
0 - \$25,000	0.1
\$25,001 - \$50,000	0.1
\$50,001 - \$75,000	0.1
\$75,001 - \$100,000	0.1
\$100,001 - \$500,000	1.7
\$500,001 - \$1,000,000	0.8
\$1,000,001 - \$2,000,000	0.7
More than \$2,000,000	1.5
Inter-Dealer	
Total	5.9
0 - \$25,000	<0.1
\$25,001 - \$50,000	0.1
\$50,001 - \$75,000	0.1
\$75,001 - \$100,000	0.1
\$100,001 - \$500,000	1.7
\$500,001 - \$1,000,000	1.0
\$1,000,001 - \$2,000,000	0.8
More than \$2,000,000	2.1

¹ 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 Securities¹ Trade Type and Size

Average daily number of trades

2019:Q3	
All Trades	
Total	48
0 - \$25,000	9
\$25,001 - \$50,000	6
\$50,001 - \$75,000	3
\$75,001 - \$100,000	4
\$100,001 - \$500,000	20
\$500,001 - \$1,000,000	4
\$1,000,001 - \$2,000,000	1
More than \$2,000,000	1
Customer Bought	
Total	19
0 - \$25,000	4
\$25,001 - \$50,000	3
\$50,001 - \$75,000	1
\$75,001 - \$100,000	2
\$100,001 - \$500,000	7
\$500,001 - \$1,000,000	1
\$1,000,001 - \$2,000,000	<1
More than \$2,000,000	<1
Customer Sold	
Total	15
0 - \$25,000	3
\$25,001 - \$50,000	2
\$50,001 - \$75,000	1
\$75,001 - \$100,000	1
\$100,001 - \$500,000	7
\$500,001 - \$1,000,000	1
\$1,000,001 - \$2,000,000	<1
More than \$2,000,000	<1
Inter-Dealer	
Total	14
0 - \$25,000	2
\$25,001 - \$50,000	1
\$50,001 - \$75,000	1
\$75,001 - \$100,000	1
\$100,001 - \$500,000	6
\$500,001 - \$1,000,000	1
\$1,000,001 - \$2,000,000	1
More than \$2,000,000	1

¹ 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

2019:Q3	
All Trades	
Total	1.80
0 - \$25,000	1.84
\$25,001 - \$50,000	1.76
\$50,001 - \$75,000	1.68
\$75,001 - \$100,000	1.72
\$100,001 - \$500,000	1.73
\$500,001 - \$1,000,000	1.88
\$1,000,001 - \$2,000,000	1.94
More than \$2,000,000	2.02

Customer Bought	
Total	1.63
0 - \$25,000	1.64
\$25,001 - \$50,000	1.59
\$50,001 - \$75,000	1.53
\$75,001 - \$100,000	1.57
\$100,001 - \$500,000	1.59
\$500,001 - \$1,000,000	1.83
\$1,000,001 - \$2,000,000	1.92
More than \$2,000,000	2.04

Customer Sold	
Total	1.94
0 - \$25,000	2.07
\$25,001 - \$50,000	1.90
\$50,001 - \$75,000	1.77
\$75,001 - \$100,000	1.77
\$100,001 - \$500,000	1.71
\$500,001 - \$1,000,000	1.79
\$1,000,001 - \$2,000,000	1.84
More than \$2,000,000	1.97

Municipal Market Variable Securities Rate Resets

Number of Variable Rate Demand Obligations Rate Resets by Type¹

	2019:Q3
Total	88,935
Set by Remarketing Agent	88,777
Set by Formula	89
Maximum Rate	69

¹ 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 Type¹

2019:Q3	
Total	835
Set by Auction	436
Maximum Rate	368
All Hold Rate	31

¹ 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

	2019:Q3
Bond Call	8,600
Audited Financial Statements or CAFR	4,977
Annual Financial Information and Operation Data	3,985
Quarterly/Monthly Financial Information	3,753
Other Financial/Operating Data	1,936
Budget	866
Other Event-Based Disclosures	1,222
Rating Change	1,005
Failure to Provide Annual Financial Info	478
Failure to Provide Event Filing Information	196
Defeasance	691
Financial Obligation - Incurrence or Agreement	663
Interim/Additional Financial Information/Operating Data	265
Notice to Investor Pursuant to Bond Documents	148
Principal & Interest Payment Delinquency	103
Successor, Additional or Change in Trustee	154
Tender Offer/Secondary Market Purchases	82
Consultant Reports	67
Information Provided to Rating Agency, Credit/Liquidity Provider or Other Third Party	50
Asset Backed Securities Filings ¹	39
Non-payment Related Default	16
Investment/Debt/Financial Policy	26
Consolidation	30
Substitution of Credit or Liquidity Provider or Its Failure to Perform	23
Bid for Auction Rate or Other Securities	26
Bankruptcy, Insolvency, Receivership	21
Change of Tender Agent, Remarketing Agent, or Other On-Going Party	26
Unscheduled Draw on Debt Service Reserve	22
Amendment to Continuing Disclosure Undertaking	13
Litigation/Enforcement Action	19
Unscheduled Draw on Credit Enhancement	15
Release, Substitution or Sale of Property	12
Modification to the Rights of Security Holders	9
Capital or Other Financing Plan	24
Change in Fiscal Year/Timing of Annual Disclosure	12
Financial Obligation - Event Reflecting Financial Difficulties	4
Communication from the Internal Revenue Service	4
Change in Obligated Person	4
Change in Accounting Standard	3

¹ 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.