

Quarterly Statistical Summaries
2019 Second Quarter: April - June

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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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Municipal Securities Rulemaking Board

Highlights

Municipal Market Trade Summary

Par amount traded in the municipal securities market totaled \$807.6 billion in 2019:Q2, slightly lower than 2018:Q2 but 6.8% higher than the \$756.1 billion in 2019:Q1. Total number of trades decreased by 9.4% to 2.35 million compared to the same period in 2018.

Par volume traded of fixed-rate securities accounted for 58.7% in 2019:Q2, compared to 63.5% in the previous quarter and 58.6% in the same quarter of 2018. Variable rate securities accounted for 39.2% of the par traded in 2019:Q2, up from 27.6% in 2019:Q1 and 33.3% one year ago.

Most Actively Traded Municipal Securities

Securities from Puerto Rico accounted for 28 of the top 50 most traded securities in 2019:Q2 with over 42,000 trades. A Gulf Opportunity Zone Industrial Development revenue bond from the Mississippi Business Finance Corporation was the most actively traded security with \$3.6 billion in 2019:Q2.

Municipal Market Trades by Trade Type

Customer buying activity accounted for 37.5% of the 2.35 million trades in 2019:Q2, nearly unchanged from 2018:Q2. Customer sales accounted for 24.3% of all trades in the period.

A daily average of \$362.3 million, or 5.6% of customer purchases of trades of \$100,000 or less, occurred in 2019:Q2, compared to \$416.7 billion, or 6.5% of all customer purchases, in 2018:Q2.

Municipal Market Variable Securities Rate Resets

The number of variable rate demand obligations rate resets continued to decline in 2019:Q2 to 89,750, down from the 95,624 rate resets in 2018:Q2.

The number of auction rate securities rate resets totaled 919 in 2019:Q2 compared to 1,453 resets in 2018:Q2.

Municipal Market Disclosures

The number of continuing disclosure documents received by the MSRB totaled 36,302 in 2019:Q2, with bond calls accounting for 24.4% and audited and annual financial filings accounting for 20.8% and 19.3%, respectively.

Municipal Market Trade Summary

Transaction Summary

Total par amount traded in \$ millions

2019:Q2	
Total	807,629.6
By Trade Type	
Customer Bought	405,769.6
Customer Sold	267,563.8
Inter-Dealer	134,296.2
By Coupon Type	
Fixed Rate	443,831.0
Variable Rate	296,688.2
Zero Coupon	19,719.8
Other ¹	47,390.6
By Source of Repayment	
General Obligation	210,747.5
Revenue	541,849.4
Double Barrel	17,583.8
Other ¹	37,449.0
By Tax Status	
Tax Exempt	675,603.2
Taxable	59,662.7
AMT	52,740.9
Other ¹	19,622.8

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:Q2
Total	2,353,292

By Trade Type

Customer Bought	882,395
Customer Sold	570,840
Inter-Dealer	900,057

By Coupon Type

Fixed Rate	2,181,069
Variable	90,894
Zero Coupon	75,994
Other ¹	5,335

By Source of Repayment

General Obligation	906,751
Revenue	1,371,515
Double Barrel	71,052
Other ¹	3,974

By Tax Status

Tax Exempt	2,169,845
Taxable	151,642
AMT	29,550
Other ¹	2,255

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:Q2

By par amount

Rank	CUSIP ¹	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/2030	3,568.7	147
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	-	11/1/2041	3,478.7	337
3	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2051	2,765.9	3,521
4	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	12/1/2040	2,260.2	165
5	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	8/1/2035	2,234.7	196
6	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2046	2,103.9	3,580
7	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	2,039.6	3,668
8	467229AF7	JACKSON CNTY MISS PORT FAC REV	-	6/1/2023	1,954.4	141
9	34061YAD2	FLORIDA DEV FIN CORP SURFACE TRANSN FAC REV	6.50	1/1/2049	1,911.1	300
10	650010BG5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	2/1/2020	1,614.2	211
11	546398YU6	LOUISIANA PUB FACS AUTH REV	-	8/1/2043	1,560.2	84
12	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2039	1,558.8	128
13	64966KTD5	NEW YORK N Y	-	3/1/2042	1,485.6	183
14	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	-	11/15/2050	1,483.0	190
15	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/2045	1,464.6	143
16	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	-	10/1/2041	1,463.9	121
17	64966G4Q2	NEW YORK N Y	-	4/1/2035	1,460.6	210
18	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	-	11/1/2038	1,432.1	208
19	64986URA7	NEW YORK ST HSG FIN AGY REV	-	11/1/2041	1,385.2	51
20	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/2042	1,383.4	140
21	59261AZB6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/2022	1,345.1	377
22	544351PJ2	LOS ANGELES CALIF	5.00	6/25/2020	1,319.7	183
23	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/2030	1,317.2	102
24	64966ML98	NEW YORK N Y	-	12/1/2047	1,293.2	188
25	882724GP6	TEXAS ST	4.00	8/29/2019	1,282.5	1,269
26	64972FWK8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2039	1,267.8	211
27	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	-	8/15/2020	1,232.5	156
28	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	-	12/1/2037	1,229.7	145
29	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	-	7/1/2034	1,211.4	289
30	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	1,204.1	3,336
31	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	1,199.4	1,598
32	115034BS8	BROWARD CNTY FLA INDL DEV REV	-	6/1/2045	1,188.0	88
33	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	1,186.2	498
34	91425MDV6	UNIVERSITY DEL REV	-	11/1/2037	1,163.9	96
35	91412GSK2	UNIVERSITY CALIF REVS	-	5/15/2048	1,135.6	113
36	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,111.9	684
37	13063DMB1	CALIFORNIA ST	3.05	4/1/2029	1,101.9	100
38	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	-	2/1/2031	1,097.1	60
39	644614RZ4	NEW HAMPSHIRE HEALTH & ED FACS AUTH REV	-	6/1/2041	1,090.4	74
40	64966LCJ8	NEW YORK N Y	-	8/1/2038	1,079.4	276
41	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/2035	1,041.3	91
42	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	2/1/2045	979.5	213
43	34061YAE0	FLORIDA DEV FIN CORP SURFACE TRANSN FAC REV	-	1/1/2049	959.5	29
44	64971QPN7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	11/1/2029	957.5	97
45	64972GEK6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/2049	957.3	193
46	919061BU4	VALDEZ ALASKA MARINE TERM REV	-	10/1/2025	955.8	95
47	41315RGV0	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	-	12/1/2041	950.8	89
48	41315RGU2	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	-	12/1/2041	943.9	89
49	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/2035	928.5	173
50	64966FA87	NEW YORK N Y	-	4/1/2036	915.8	170

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Most Actively Traded Municipal Securities

Top 50 Most Active Securities, 2019:Q2

By number of trades

Rank	CUSIP ¹	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	2,039.6	3,668
2	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2046	2,103.9	3,580
3	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2051	2,765.9	3,521
4	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	1,204.1	3,336
5	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/2053	738.3	3,021
6	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	743.0	2,444
7	74529JQF5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2033	272.7	2,022
8	74529JQE8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2031	184.1	1,945
9	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	1,199.4	1,598
10	74529JQD0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2029	165.0	1,588
11	74529JQC2	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2027	111.9	1,553
12	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/2034	175.0	1,429
13	882724GP6	TEXAS ST	4.00	8/29/2019	1,282.5	1,269
14	74526QKX9	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/2037	200.1	1,253
15	74526QXT4	PUERTO RICO ELEC PWR AUTH PWR REV	6.13	7/1/2040	318.7	1,173
16	74529JQY4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	231.8	1,136
17	74529JQB4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/2024	62.7	1,064
18	74526QKW1	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/2032	130.2	947
19	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/2041	266.2	873
20	74529JPV1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	173.8	868
21	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/2042	95.8	861
22	74526QVX7	PUERTO RICO ELEC PWR AUTH PWR REV	5.25	7/1/2040	174.8	795
23	59447TMP5	MICHIGAN FIN AUTH REV	3.25	11/15/2042	50.1	748
24	515300SZ5	LANE CNTY ORE SCH DIST NO 4 J EUGENE	3.00	6/15/2038	59.6	714
25	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/2029	170.0	712
26	74526QZS4	PUERTO RICO ELEC PWR AUTH PWR REV	6.05	7/1/2032	163.4	697
27	74526QA28	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/2042	238.7	697
28	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,111.9	684
29	968261NP8	WILKES-BARRE PA AREA SCH DIST	3.75	4/15/2044	52.0	676
30	4521524K4	ILLINOIS ST	6.00	4/1/2044	426.0	607
31	57582RLK0	MASSACHUSETTS ST	3.00	9/1/2046	170.5	603
32	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/2046	26.0	557
33	13063A5G5	CALIFORNIA ST	7.55	4/1/2039	281.3	546
34	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/2044	370.6	544
35	63166MCA5	NASSAU CNTY N Y TOBACCO SETTLEMENT CORP	5.00	6/1/2035	91.5	533
36	13063DPH5	CALIFORNIA ST	5.00	4/1/2029	504.2	521
37	398258AX1	GRIFFIN-SPALDING CNTY GA HOSP REV	3.75	4/1/2047	49.5	520
38	74526QZT2	PUERTO RICO ELEC PWR AUTH PWR REV	6.25	7/1/2040	90.1	512
39	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	1,186.2	498
40	7973557K4	SAN DIEGO CALIF UNI SCH DIST	3.25	7/1/2048	169.6	490
41	73358WSH8	PORT AUTH N Y & N J	4.00	12/15/2042	111.3	489
42	134340AB4	CAMPBELL CNTY WYO SOLID WASTE FACS REV	3.63	7/15/2039	229.6	487
43	713040JN4	PEORIA CNTY ILL SCH DIST NO 150 PEORIA	3.50	1/1/2042	48.4	481
44	946498HS4	WAYNE-WESTLAND CMNTY SCHS MICH	3.25	11/1/2043	67.4	468
45	745160RC7	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	5.25	7/1/2042	216.1	457
46	207889ST4	CONNELLSVILLE PA AREA SCH DIST	3.00	8/15/2036	32.1	456
47	613603ZM4	MONTGOMERY CNTY PA HIGHER ED & HEALTH AUTH REV	4.00	11/1/2046	31.4	456
48	74526QZY1	PUERTO RICO ELEC PWR AUTH PWR REV	5.05	7/1/2042	59.6	443
49	73358WE26	PORT AUTH N Y & N J	5.25	11/15/2056	168.8	443
50	29216MAC4	EMPLOYEES RETIREMENT SYS GOVT COMWLTH PUERTO RICO	6.15	7/1/2038	137.2	442

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Most Actively Traded Municipal Securities

Top 50 Most Active Fixed Rate¹ Securities, 2019:Q2

By par amount

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	2,039.6	3,668
2	650010BG5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	2/1/2020	1,614.2	211
3	59261AZB6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/2022	1,345.1	377
4	544351PJ2	LOS ANGELES CALIF	5.00	6/25/2020	1,319.7	183
5	882724GP6	TEXAS ST	4.00	8/29/2019	1,282.5	1,269
6	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	1,204.1	3,336
7	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	1,199.4	1,598
8	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	1,186.2	498
9	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,111.9	684
10	13063DMB1	CALIFORNIA ST	3.05	4/1/2029	1,101.9	100
11	45528UZJ3	INDIANAPOLIS IND LOC PUB IMPT BD BK	5.00	2/1/2049	878.5	108
12	544657HW2	LOS ANGELES CNTY CALIF	5.00	6/30/2020	858.4	223
13	5446466W7	LOS ANGELES CALIF UNI SCH DIST	5.25	7/1/2042	816.1	139
14	04108WCC4	ARKANSAS ST DEV FIN AUTH INDL DEV REV	4.50	9/1/2049	770.0	95
15	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	743.0	2,444
16	90068FAZ9	TUSCALOOSA CNTY ALA INDL DEV AUTH GULF OPPORTUNITY ZONE	5.25	5/1/2044	739.7	209
17	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/2053	738.3	3,021
18	13063DPG7	CALIFORNIA ST	5.00	4/1/2028	594.2	416
19	452152P21	ILLINOIS ST	5.00	11/1/2029	588.4	59
20	573903FZ9	MARTIN CNTY FLA HEALTH FACS AUTH HOSP REV	4.00	1/1/2046	584.5	117
21	544351NT2	LOS ANGELES CALIF	4.00	6/27/2019	584.1	385
22	13063BJC7	CALIFORNIA ST	7.60	11/1/2040	569.8	153
23	130179SD7	CALIFORNIA EDL FACS AUTH REV	5.00	5/1/2049	561.8	114
24	25476FXV5	DISTRICT COLUMBIA	5.00	10/15/2044	555.3	64
25	451434BZ6	IDAHO ST	3.00	6/30/2020	547.9	28
26	13063DPA0	CALIFORNIA ST	5.00	4/1/2025	522.8	175
27	13063DPH5	CALIFORNIA ST	5.00	4/1/2029	504.2	521
28	64990AMZ5	NEW YORK ST DORM AUTH SALES TAX REV ST SUPPORTED DEBT	5.00	3/15/2048	466.3	177
29	20281PKW1	COMMONWEALTH FING AUTH PA REV	3.81	6/1/2041	465.4	86
30	64971XKN7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	4.00	11/1/2040	435.6	257
31	546415R93	LOUISIANA ST	4.00	2/1/2034	432.1	90
32	13063DKE7	CALIFORNIA ST	5.00	10/1/2048	430.7	250
33	64972GTJ3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	4.00	6/15/2041	428.3	301
34	769110CT2	RIVERSIDE CNTY CALIF	5.00	6/30/2020	427.2	106
35	4521524K4	ILLINOIS ST	6.00	4/1/2044	426.0	607
36	1.6749E+26	CHICAGO ILL	5.00	1/1/2044	421.9	151
37	67754AAF1	OHIO ST AIR QUALITY DEV AUTH EXEMPT FACS REV	5.00	7/1/2049	407.2	74
38	491189FY7	KENTUCKY ASSET / LIABILITY COMMN GEN FD REV	3.00	6/25/2020	405.0	11
39	544646A77	LOS ANGELES CALIF UNI SCH DIST	5.72	5/1/2027	400.0	17
40	59333P4D7	MIAMI-DADE CNTY FLA AVIATION REV	5.00	10/1/2049	395.3	67
41	180848XJ7	CLARK CNTY NEV	5.00	5/1/2048	394.5	138
42	64971XKP2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	4.00	11/1/2042	392.8	326
43	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/2044	370.6	544
44	13063DPF9	CALIFORNIA ST	5.00	4/1/2027	366.0	200
45	6678257A5	NORTHWEST TEX INDPT SCH DIST	4.00	2/15/2044	363.5	43
46	544657HV4	LOS ANGELES CNTY CALIF	4.00	6/28/2019	361.8	150
47	48504NBC2	KANSAS CITY MO INDL DEV AUTH ARPT SPL OBLIG	5.00	3/1/2046	340.4	75
48	59447TVE0	MICHIGAN FIN AUTH REV	4.00	2/15/2050	339.6	51
49	48504NBE8	KANSAS CITY MO INDL DEV AUTH ARPT SPL OBLIG	5.00	3/1/2054	338.9	48
50	13013HAA8	CALIFORNIA CMNTY HSG AGY WORKFORCE HSG REV	5.00	4/1/2049	338.3	73

¹ Includes zero-coupon securities

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Most Actively Traded Municipal Securities

Top 50 Most Active Fixed Rate¹ Securities, 2019:Q2

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	2,039.6	3,668
2	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	1,204.1	3,336
3	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/2053	738.3	3,021
4	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/2058	743.0	2,444
5	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/2040	1,199.4	1,598
6	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/2034	175.0	1,429
7	882724GP6	TEXAS ST	4.00	8/29/2019	1,282.5	1,269
8	74526QKX9	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/2037	200.1	1,253
9	74526QXT4	PUERTO RICO ELEC PWR AUTH PWR REV	6.13	7/1/2040	318.7	1,173
10	74529JQY4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	231.8	1,136
11	74526QKW1	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/2032	130.2	947
12	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/2041	266.2	873
13	74529JPV1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/2040	173.8	868
14	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/2042	95.8	861
15	74526QVX7	PUERTO RICO ELEC PWR AUTH PWR REV	5.25	7/1/2040	174.8	795
16	59447TMP5	MICHIGAN FIN AUTH REV	3.25	11/15/2042	50.1	748
17	515300SZ5	LANE CNTY ORE SCH DIST NO 4 J EUGENE	3.00	6/15/2038	59.6	714
18	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/2029	170.0	712
19	74526QA28	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/2042	238.7	697
20	74526QZS4	PUERTO RICO ELEC PWR AUTH PWR REV	6.05	7/1/2032	163.4	697
21	452151LF8	ILLINOIS ST	5.10	6/1/2033	1,111.9	684
22	968261NP8	WILKES-BARRE PA AREA SCH DIST	3.75	4/15/2044	52.0	676
23	4521524K4	ILLINOIS ST	6.00	4/1/2044	426.0	607
24	57582RLK0	MASSACHUSETTS ST	3.00	9/1/2046	170.5	603
25	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/2046	26.0	557
26	13063A5G5	CALIFORNIA ST	7.55	4/1/2039	281.3	546
27	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/2044	370.6	544
28	63166MCA5	NASSAU CNTY N Y TOBACCO SETTLEMENT CORP	5.00	6/1/2035	91.5	533
29	13063DPH5	CALIFORNIA ST	5.00	4/1/2029	504.2	521
30	398258AX1	GRIFFIN-SPALDING CNTY GA HOSP REV	3.75	4/1/2047	49.5	520
31	74526QZT2	PUERTO RICO ELEC PWR AUTH PWR REV	6.25	7/1/2040	90.1	512
32	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/2035	1,186.2	498
33	7973557K4	SAN DIEGO CALIF UNI SCH DIST	3.25	7/1/2048	169.6	490
34	73358WSH8	PORT AUTH N Y & N J	4.00	12/15/2042	111.3	489
35	134340AB4	CAMPBELL CNTY WYO SOLID WASTE FACS REV	3.63	7/15/2039	229.6	487
36	713040JN4	PEORIA CNTY ILL SCH DIST NO 150 PEORIA	3.50	1/1/2042	48.4	481
37	946498HS4	WAYNE-WESTLAND CMNTY SCHS MICH	3.25	11/1/2043	67.4	468
38	745160RC7	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	5.25	7/1/2042	216.1	457
39	207889ST4	CONNELLSVILLE PA AREA SCH DIST	3.00	8/15/2036	32.1	456
40	613603ZM4	MONTGOMERY CNTY PA HIGHER ED & HEALTH AUTH REV	4.00	11/1/2046	31.4	456
41	73358WE26	PORT AUTH N Y & N J	5.25	11/15/2056	168.8	443
42	74526QZY1	PUERTO RICO ELEC PWR AUTH PWR REV	5.05	7/1/2042	59.6	443
43	29216MAC4	EMPLOYEES RETIREMENT SYS GOVT COMWLTH PUERTO RICO	6.15	7/1/2038	137.2	442
44	13063A7G3	CALIFORNIA ST	6.20	10/1/2019	31.1	441
45	745235D65	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/2033	71.2	438
46	207889SU1	CONNELLSVILLE PA AREA SCH DIST	3.13	8/15/2039	43.7	435
47	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/2044	23.7	434
48	927793K99	VIRGINIA COMWLTH TRANSN BRD TRANSN REV	3.00	5/15/2039	34.5	432
49	59334PHL4	MIAMI-DADE CNTY FLA TRAN SYS SALES SURTAX REV	3.00	7/1/2038	84.8	431
50	851035UK9	SPRINGFIELD MO SCH DIST NO R 12	3.00	3/1/2039	67.3	430

¹ Includes zero-coupon securities

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Most Actively Traded Municipal Securities

Top 50 Most Active Variable Rate Securities, 2019:Q2

By par amount

Rank	CUSIP ¹	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/2030	3,568.7	147
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/2041	3,478.7	337
3	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/2040	2,260.2	165
4	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/2035	2,234.7	196
5	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/2023	1,954.4	141
6	34061YAD2	FLORIDA DEV FIN CORP SURFACE TRANSN FAC REV	1/1/2049	1,911.1	300
7	546398YU6	LOUISIANA PUB FACS AUTH REV	8/1/2043	1,560.2	84
8	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2039	1,558.8	128
9	64966KTD5	NEW YORK N Y	3/1/2042	1,485.6	183
10	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	11/15/2050	1,483.0	190
11	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/2045	1,464.6	143
12	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	10/1/2041	1,463.9	121
13	64966G4Q2	NEW YORK N Y	4/1/2035	1,460.6	210
14	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/2038	1,432.1	208
15	64986URA7	NEW YORK ST HSG FIN AGY REV	11/1/2041	1,385.2	51
16	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/2042	1,383.4	140
17	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/2030	1,317.2	102
18	64966ML98	NEW YORK N Y	12/1/2047	1,293.2	188
19	64972FWK8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2039	1,267.8	211
20	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	8/15/2020	1,232.5	156
21	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	12/1/2037	1,229.7	145
22	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/2034	1,211.4	289
23	115034BS8	BROWARD CNTY FLA INDL DEV REV	6/1/2045	1,188.0	88
24	91425MDV6	UNIVERSITY DEL REV	11/1/2037	1,163.9	96
25	91412GSK2	UNIVERSITY CALIF REVS	5/15/2048	1,135.6	113
26	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	2/1/2031	1,097.1	60
27	644614RZ4	NEW HAMPSHIRE HEALTH & ED FACS AUTH REV	6/1/2041	1,090.4	74
28	64966LCJ8	NEW YORK N Y	8/1/2038	1,079.4	276
29	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/2035	1,041.3	91
30	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/2045	979.5	213
31	34061YAE0	FLORIDA DEV FIN CORP SURFACE TRANSN FAC REV	1/1/2049	959.5	29
32	64971QPN7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/2029	957.5	97
33	64972GEK6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/2049	957.3	193
34	919061BU4	VALDEZ ALASKA MARINE TERM REV	10/1/2025	955.8	95
35	41315RGV0	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	12/1/2041	950.8	89
36	41315RGU2	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	12/1/2041	943.9	89
37	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/2035	928.5	173
38	64966FA87	NEW YORK N Y	4/1/2036	915.8	170
39	040507QA6	ARIZONA HEALTH FACS AUTH REV	1/1/2046	913.1	168
40	917393BK5	UTAH CNTY UTAH HOSP REV	5/15/2051	910.1	18
41	60528ACB8	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/2035	900.0	125
42	64971XKS6	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/2044	888.4	70
43	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/2032	871.8	238
44	64966JE77	NEW YORK N Y	4/1/2042	864.6	321
45	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	6/1/2042	861.7	73
46	64971QYH0	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/2039	841.7	233
47	56035DCH3	MAIN STR NAT GAS INC GA GAS SUPPLY REV	8/1/2049	838.6	86
48	83703FLR1	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	5/1/2048	826.9	58
49	64966LCP4	NEW YORK N Y	8/1/2040	825.4	100
50	8.4248E+97	SOUTHERN CALIF PUB PWR AUTH PWR PROJ REV	7/1/2036	824.5	147

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Municipal Market Trades by Trade Type

Trade Type and Size

Average daily par amount in \$ millions

2019:Q2

All Trades

Total 12,819.5

0 - \$25,000	272.4
\$25,001 - \$50,000	297.9
\$50,001 - \$75,000	127.7
\$75,001 - \$100,000	269.1
\$100,001 - \$500,000	1,306.7
\$500,001 - \$1,000,000	869.0
\$1,000,001 - \$2,000,000	989.9
More than \$2,000,000	8,686.8

Customer Bought

Total 6,440.8

0 - \$25,000	98.8
\$25,001 - \$50,000	113.0
\$50,001 - \$75,000	48.3
\$75,001 - \$100,000	102.1
\$100,001 - \$500,000	519.3
\$500,001 - \$1,000,000	375.6
\$1,000,001 - \$2,000,000	471.8
More than \$2,000,000	4,711.8

362.274

0.056

Customer Sold

Total 4,247.0

0 - \$25,000	64.5
\$25,001 - \$50,000	65.6
\$50,001 - \$75,000	30.1
\$75,001 - \$100,000	64.0
\$100,001 - \$500,000	316.0
\$500,001 - \$1,000,000	233.9
\$1,000,001 - \$2,000,000	292.7
More than \$2,000,000	3,180.2

Inter-Dealer

Total 2,131.7

0 - \$25,000	109.1
\$25,001 - \$50,000	119.3
\$50,001 - \$75,000	49.3
\$75,001 - \$100,000	103.1
\$100,001 - \$500,000	471.4
\$500,001 - \$1,000,000	259.5
\$1,000,001 - \$2,000,000	225.3
More than \$2,000,000	794.8

Municipal Market Trades by Trade Type

Trade Type and Size

Average daily number of trades

2019:Q2	
All Trades	
Total	37,354
0 - \$25,000	17,497
\$25,001 - \$50,000	7,077
\$50,001 - \$75,000	1,917
\$75,001 - \$100,000	2,775
\$100,001 - \$500,000	5,283
\$500,001 - \$1,000,000	1,104
\$1,000,001 - \$2,000,000	662
More than \$2,000,000	1,038

Customer Bought	
Total	14,006
0 - \$25,000	6,132
\$25,001 - \$50,000	2,680
\$50,001 - \$75,000	724
\$75,001 - \$100,000	1,053
\$100,001 - \$500,000	2,096
\$500,001 - \$1,000,000	477
\$1,000,001 - \$2,000,000	314
More than \$2,000,000	531

Customer Sold	
Total	9,061
0 - \$25,000	4,263
\$25,001 - \$50,000	1,570
\$50,001 - \$75,000	451
\$75,001 - \$100,000	659
\$100,001 - \$500,000	1,269
\$500,001 - \$1,000,000	291
\$1,000,001 - \$2,000,000	193
More than \$2,000,000	365

Inter-Dealer	
Total	14,287
0 - \$25,000	7,103
\$25,001 - \$50,000	2,827
\$50,001 - \$75,000	742
\$75,001 - \$100,000	1,064
\$100,001 - \$500,000	1,918
\$500,001 - \$1,000,000	336
\$1,000,001 - \$2,000,000	154
More than \$2,000,000	142

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

Transaction Summary - Fixed Rate Securities

Average daily par amount in \$ millions

2019:Q2	
Fixed Rate	
Total	7,044.9
0 - \$25,000	263.4
\$25,001 - \$50,000	286.9
\$50,001 - \$75,000	122.2
\$75,001 - \$100,000	240.9
\$100,001 - \$500,000	1,148.7
\$500,001 - \$1,000,000	711.0
\$1,000,001 - \$2,000,000	750.3
More than \$2,000,000	3,521.5

Zero Coupon	
Total	313.0
0 - \$25,000	7.8
\$25,001 - \$50,000	9.3
\$50,001 - \$75,000	4.5
\$75,001 - \$100,000	8.2
\$100,001 - \$500,000	29.8
\$500,001 - \$1,000,000	17.0
\$1,000,001 - \$2,000,000	17.1
More than \$2,000,000	219.4

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

Transaction Summary - Fixed Rate Securities

Average daily number of trades

2019:Q2	
Fixed Trade	
Total	34,620
0 - \$25,000	16,792
\$25,001 - \$50,000	6,810
\$50,001 - \$75,000	1,833
\$75,001 - \$100,000	2,489
\$100,001 - \$500,000	4,698
\$500,001 - \$1,000,000	907
\$1,000,001 - \$2,000,000	505
More than \$2,000,000	586

Zero Coupon	
Total	1,206
0 - \$25,000	640
\$25,001 - \$50,000	227
\$50,001 - \$75,000	70
\$75,001 - \$100,000	86
\$100,001 - \$500,000	131
\$500,001 - \$1,000,000	22
\$1,000,001 - \$2,000,000	11
More than \$2,000,000	19

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

Source of Repayment

Average daily par amount in \$ millions

2019:Q2	
Fixed Rate	
Total	7,044.1
General Obligation	2,793.5
Revenue	4,039.2
Double Barrel	211.4

Zero Coupon	
Total	313.0
General Obligation	99.7
Revenue	208.2
Double Barrel	5.1

Average daily number of trades

Fixed Rate	
Total	34,619
General Obligation	13,680
Revenue	19,843
Double Barrel	1,096

Zero Coupon	
Total	1,206
General Obligation	532
Revenue	650
Double Barrel	25

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

Tax Status

Average daily par amount in \$ millions

2019:Q2	
Fixed Rate	
Total	7,044.6
Tax Exempt	6,063.7
Taxable	786.9
AMT	194.0

Zero Coupon	
Total	313.0
Tax Exempt	298.9
Taxable	14.1
AMT	<0.1

Average daily number of trades

Fixed Rate	
Total	34,620
Tax Exempt	31,926
Taxable	2,304
AMT	390

Zero Coupon	
Total	1,206
Tax Exempt	1,130
Taxable	76
AMT	<1

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

Sector

Average daily par amount in \$ millions

2019:Q2	
Fixed Rate	
Total	7,044.9
Education	1,670.3
Health	396.5
Housing	170.1
Tax-Revenue	767.1
Transportation	647.6
Utility	852.2
Various Purpose	1,137.1
Other	1,403.9

Zero Coupon	
Total	313.0
Education	93.9
Health	9.8
Housing	0.1
Tax-Revenue	117.5
Transportation	16.6
Utility	5.4
Various Purpose	7.4
Other	62.4

Average daily number of trades

Fixed Rate	
Total	34,620
Education	9,254
Health	2,233
Housing	795
Tax-Revenue	3,492
Transportation	2,650
Utility	4,715
Various Purpose	4,539
Other	6,943

Zero Coupon	
Total	1,206
Education	490
Health	25
Housing	1
Tax-Revenue	347
Transportation	124
Utility	62
Various Purpose	59
Other	98

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:Q2	
All Trades	
Total	4,315.4
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	17.4
\$100,001 - \$500,000	109.8
\$500,001 - \$1,000,000	121.6
\$1,000,001 - \$2,000,000	191.4
More than \$2,000,000	3,875.2
Customer Bought	
Total	2,155.1
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	5.7
\$100,001 - \$500,000	44.4
\$500,001 - \$1,000,000	54.3
\$1,000,001 - \$2,000,000	93.4
More than \$2,000,000	1,957.2
Customer Sold	
Total	2,063.1
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	9.3
\$100,001 - \$500,000	53.3
\$500,001 - \$1,000,000	59.1
\$1,000,001 - \$2,000,000	89.9
More than \$2,000,000	1,851.5
Inter-Dealer	
Total	97.3
0 - \$25,000	<0.1
\$25,001 - \$50,000	<0.1
\$50,001 - \$75,000	<0.1
\$75,001 - \$100,000	2.4
\$100,001 - \$500,000	12.0
\$500,001 - \$1,000,000	8.3
\$1,000,001 - \$2,000,000	8.1
More than \$2,000,000	66.5

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:Q2

All Trades	
Total	1,188
0 - \$25,000	1
\$25,001 - \$50,000	1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	174
\$100,001 - \$500,000	381
\$500,001 - \$1,000,000	152
\$1,000,001 - \$2,000,000	126
More than \$2,000,000	353

Customer Bought	
Total	516
0 - \$25,000	1
\$25,001 - \$50,000	<1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	57
\$100,001 - \$500,000	150
\$500,001 - \$1,000,000	67
\$1,000,001 - \$2,000,000	61
More than \$2,000,000	179

Customer Sold	
Total	580
0 - \$25,000	1
\$25,001 - \$50,000	1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	93
\$100,001 - \$500,000	186
\$500,001 - \$1,000,000	74
\$1,000,001 - \$2,000,000	59
More than \$2,000,000	167

Inter-Dealer	
Total	93
0 - \$25,000	<1
\$25,001 - \$50,000	<1
\$50,001 - \$75,000	<1
\$75,001 - \$100,000	24
\$100,001 - \$500,000	45
\$500,001 - \$1,000,000	10
\$1,000,001 - \$2,000,000	5
More than \$2,000,000	8

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:Q2	
All Trades	
Total	24.7
0 - \$25,000	0.2
\$25,001 - \$50,000	0.3
\$50,001 - \$75,000	0.2
\$75,001 - \$100,000	0.5
\$100,001 - \$500,000	4.9
\$500,001 - \$1,000,000	2.8
\$1,000,001 - \$2,000,000	3.3
More than \$2,000,000	12.5
Customer Bought	
Total	8.9
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	5.1
Customer Sold	
Total	7.7
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	2.0
\$500,001 - \$1,000,000	0.9
\$1,000,001 - \$2,000,000	0.9
More than \$2,000,000	3.4
Inter-Dealer	
Total	8.0
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	1.6
\$500,001 - \$1,000,000	0.9
\$1,000,001 - \$2,000,000	1.2
More than \$2,000,000	4.0

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:Q2	
All Trades	
Total	52
0 - \$25,000	10
\$25,001 - \$50,000	6
\$50,001 - \$75,000	3
\$75,001 - \$100,000	5
\$100,001 - \$500,000	19
\$500,001 - \$1,000,000	4
\$1,000,001 - \$2,000,000	2
More than \$2,000,000	2
Customer Bought	
Total	17
0 - \$25,000	4
\$25,001 - \$50,000	2
\$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
Customer Sold	
Total	19
0 - \$25,000	3
\$25,001 - \$50,000	2
\$50,001 - \$75,000	1
\$75,001 - \$100,000	2
\$100,001 - \$500,000	8
\$500,001 - \$1,000,000	1
\$1,000,001 - \$2,000,000	1
More than \$2,000,000	<1
Inter-Dealer	
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	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:Q2	
All Trades	
Total	2.15
0 - \$25,000	2.24
\$25,001 - \$50,000	2.09
\$50,001 - \$75,000	2.01
\$75,001 - \$100,000	2.05
\$100,001 - \$500,000	2.04
\$500,001 - \$1,000,000	2.17
\$1,000,001 - \$2,000,000	2.19
More than \$2,000,000	2.34

Customer Bought	
Total	1.99
0 - \$25,000	2.04
\$25,001 - \$50,000	1.94
\$50,001 - \$75,000	1.84
\$75,001 - \$100,000	1.90
\$100,001 - \$500,000	1.91
\$500,001 - \$1,000,000	2.11
\$1,000,001 - \$2,000,000	2.18
More than \$2,000,000	2.37

Customer Sold	
Total	2.30
0 - \$25,000	2.46
\$25,001 - \$50,000	2.23
\$50,001 - \$75,000	2.12
\$75,001 - \$100,000	2.10
\$100,001 - \$500,000	2.04
\$500,001 - \$1,000,000	2.11
\$1,000,001 - \$2,000,000	2.13
More than \$2,000,000	2.32

Municipal Market Variable Securities Rate Resets

Number of Variable Rate Demand Obligations Rate Resets by Type¹

	2019:Q2
Total	89,750
Set by Remarketing Agent	89,600
Set by Formula	87
Maximum Rate	63

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:Q2	
Total	919
Set by Auction	473
Maximum Rate	406
All Hold Rate	40

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:Q2
Bond Call	8,871
Audited Financial Statements or CAFR	7,543
Annual Financial Information and Operation Data	7,001
Quarterly/Monthly Financial Information	3,904
Other Financial/Operating Data	2,414
Budget	1,241
Other Event-Based Disclosures	1,195
Rating Change	1,033
Failure to Provide Annual Financial Info	868
Defeasance	561
Financial Obligation - Incurrence or Agreement	533
Interim/Additional Financial Information/Operating Data	248
Notice to Investor Pursuant to Bond Documents	144
Principal & Interest Payment Delinquency	115
Successor, Additional or Change in Trustee	87
Tender Offer/Secondary Market Purchases	84
Consultant Reports	70
Information Provided to Rating Agency, Credit/Liquidity Provider or Other Third Party	55
Asset Backed Securities Filings ¹	37
Non-payment Related Default	36
Investment/Debt/Financial Policy	31
Consolidation	29
Substitution of Credit or Liquidity Provider or Its Failure to Perform	29
Bid for Auction Rate or Other Securities	24
Bankruptcy, Insolvency, Receivership	23
Change of Tender Agent, Remarketing Agent, or Other On-Going Party	19
Unscheduled Draw on Debt Service Reserve	17
Amendment to Continuing Disclosure Undertaking	16
Litigation/Enforcement Action	14
Unscheduled Draw on Credit Enhancement	12
Release, Substitution or Sale of Property	11
Modification to the Rights of Security Holders	10
Capital or Other Financing Plan	9
Change in Fiscal Year/Timing of Annual Disclosure	5
Financial Obligation - Event Reflecting Financial Difficulties	5
Communication from the Internal Revenue Service	4
Change in Obligated Person	2
Change in Accounting Standard	2

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.