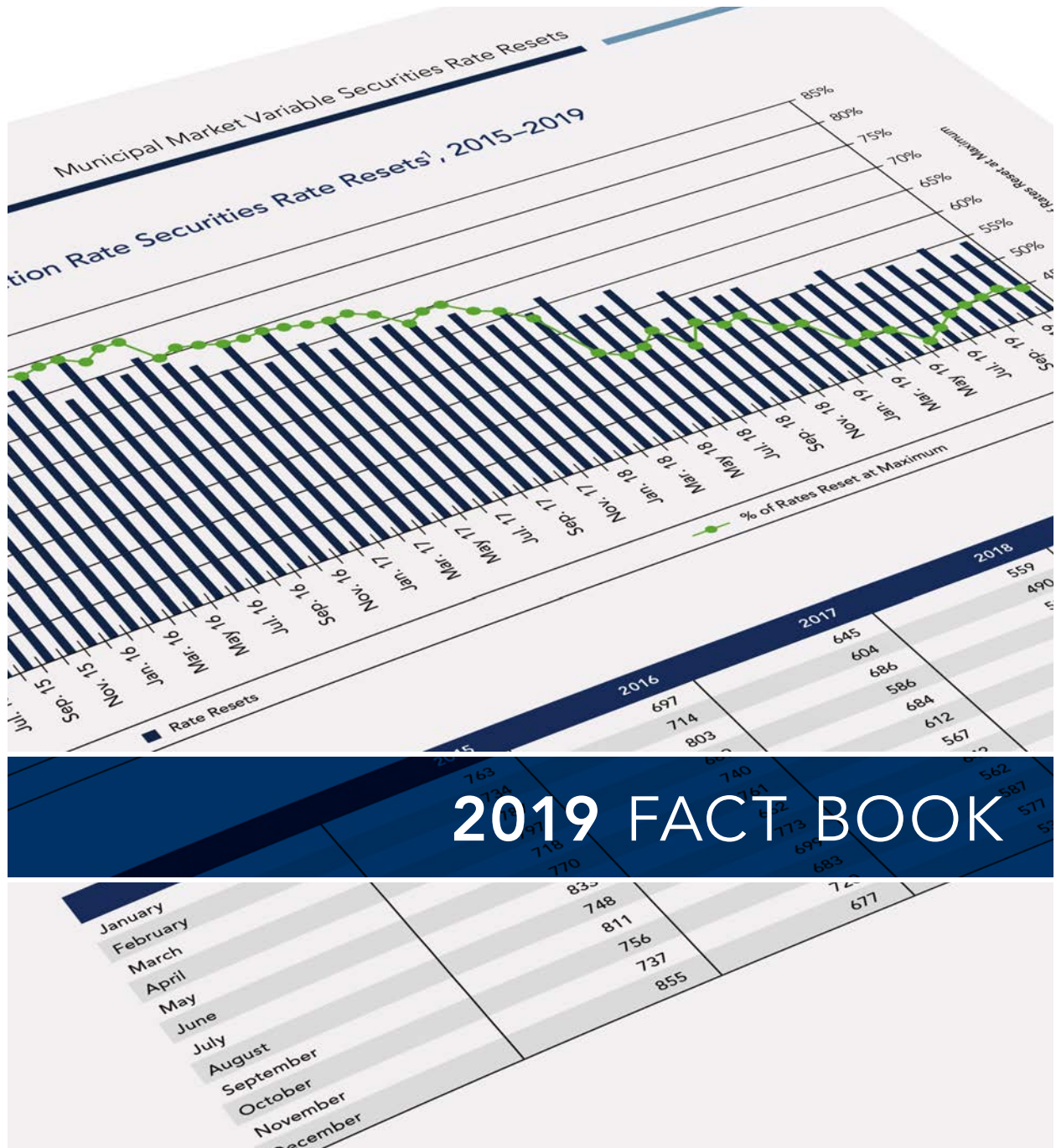




Municipal Securities Rulemaking Board



2019 FACT BOOK

About the MSRB Fact Book

As the self-regulatory organization for the municipal securities market, the Municipal Securities Rulemaking Board (MSRB) collects market data and disclosures to support market transparency and the surveillance functions of regulatory enforcement agencies. The MSRB makes its data, documents and related statistics available in multiple formats to facilitate widespread access to information that otherwise would not be readily available.

The MSRB's annual *Fact Book* provides comprehensive and historical statistics on municipal market trading patterns, primary market and continuing disclosures in the municipal securities market, and interest rate resets for municipal variable rate securities. Data in the *Fact Book* are based on information submitted to the MSRB by municipal securities dealers, municipal securities issuers and those acting on their behalf.

The MSRB publishes its annual *Fact Book* to provide municipal market participants, policymakers, regulators, academics and others with historical statistics that can be further analyzed to identify market trends and activity. The MSRB also publishes quarterly updates to the *Fact Book* on its website, msrb.org. These and other MSRB statistical reports, and the availability of source data and disclosures, are consistent with the organization's goal to make municipal market data freely available to the public and market participants. The information also supports the MSRB's regulatory activities.

The 2019 *Fact Book* includes monthly, quarterly and yearly aggregate market information from 2015 to 2019, and covers different types of municipal issues, trades and interest rate resets. Information about nearly every trade reported to the MSRB by municipal securities dealers since 2015 is included.¹ The data reflect aggregate trading activity at the end of each trading day as submitted to the MSRB's Real-Time Transaction Reporting System (RTRS). 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

Definitions for terminology used in the report can be found in the Definition of Terms Used section at the end of the *Fact Book*. For more information on trading, variable rate resets, continuing disclosures and official statements, please visit the MSRB's Electronic Municipal Market Access (EMMA[®]) website at emma.msrb.org.

¹ As described in a 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 MSRB's transparency products, including data disseminated through EMMA, but may be included in this report.

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WHY THE MSRB COLLECTS TRADE DATA AND DISCLOSURE DOCUMENTS

The MSRB Transaction Reporting Program serves two major functions in the municipal securities market—price transparency and market surveillance. The implementation of RTRS in January 2005 created “real-time” transaction price transparency. Although the most visible part of the MSRB’s transaction reporting program is the transparency function, another important function is the information and support the program provides to enforcement agencies charged with enforcing MSRB rules.

MSRB rules, specifically Rule G-14, require dealers to submit to the MSRB transaction data on all municipal securities trades with customers and with other dealers within 15 minutes of the time of trade, with limited exceptions. Transaction prices are electronically disseminated immediately after transaction data is received by the MSRB and automated error checking is completed. This system effectively provides “real-time” reporting of transaction prices in the municipal securities market.

The RTRS feed disseminates transaction data to information vendors and to the MSRB’s EMMA website, in real-time, as transactions are reported by dealers. The EMMA website receives and disseminates RTRS data in real-time and allows a user to search historical trade data.

The EMMA website provides, at no charge, real-time access to primary market and continuing disclosure documents, as well as documents related to variable rate security liquidity provisions and auction procedures. EMMA’s database contains primary market documents including official statements and advanced refunding documents since 1990. EMMA’s database also contains continuing disclosure documents produced in connection with municipal securities since July 1, 2009, based on EMMA’s designation by the Securities and Exchange Commission (SEC) as the official repository for continuing disclosure on that date.

The compilation of data in this *Fact Book* represents what the MSRB believes to be an accurate and meaningful presentation of municipal market information. This publication is available on the MSRB’s website.

ABOUT THE MSRB

The MSRB protects investors, state and local governments and other municipal entities, and the public interest by promoting a fair and efficient municipal securities market. The MSRB fulfills this mission by regulating the municipal securities firms, banks and municipal advisors that engage in municipal securities and advisory activities. To further protect market participants, the MSRB provides market transparency through its EMMA website, the official repository for information on virtually all municipal bonds.

The MSRB also serves as an objective resource on the municipal market, conducts extensive education and outreach to market stakeholders, and provides market leadership on key issues. The MSRB is a Congressionally created, self-regulatory organization governed by a board of directors that has a majority of public members, in addition to representatives of regulated entities. The MSRB is subject to oversight by the SEC.

ABOUT EMMA®

The MSRB’s EMMA website, emma.msrb.org, is designated by the SEC as the official source for municipal securities data and disclosure documents. The website provides free public access to objective municipal market information and interactive tools for investors, municipal entities and others. EMMA supports municipal market transparency but is not a platform for buying or selling bonds.

EMMA houses municipal disclosure documents including offering documents, called official statements, for most new offerings of municipal bonds, notes, 529 plans and other municipal securities issued since 1990. EMMA also provides access to advance refunding documents, which detail arrangements made when new bonds are issued to establish escrows to pay off existing bonds (usually to refinance their debt at a lower interest rate). Ongoing disclosures about municipal bonds throughout the life of the bonds also are available on EMMA. These continuing disclosures, which include annual financial statements and notices of material events, reflect the financial or operating condition of the issuer and events that can affect the ability of an issuer to repay its bonds and the value of the bond, among other things. Current municipal securities credit ratings from Kroll Bond Ratings, Fitch Ratings, Moody's Investors Service and Standard & Poor's also are provided on EMMA.

EMMA disseminates market transparency data, which includes real-time prices and yields at which bonds and notes are bought and sold, for most trades occurring on or after January 31, 2005. Interest rates for municipal securities, including those for auction rate securities and variable rate demand obligations, are available on EMMA, as well. A market statistics section on EMMA provides a summary of municipal securities transaction activity since 2006.

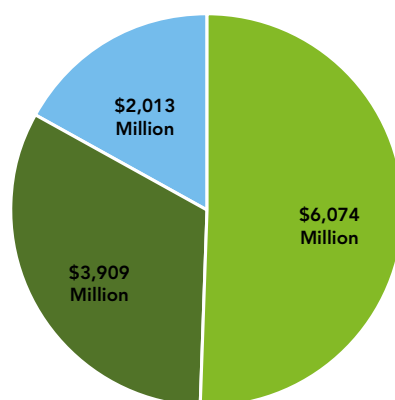
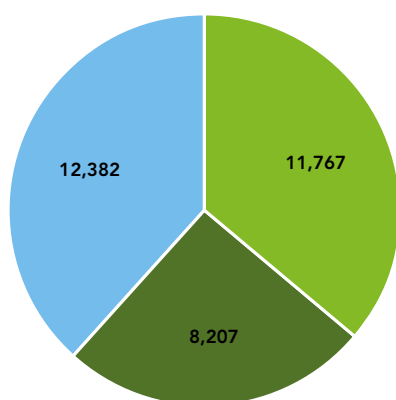
EMMA is a service of the MSRB.

DATA AVAILABLE FROM THE MSRB

30-Day Average Trade Summary — 01/02/2020 to 02/13/2020

Number of Trades: 32,256

Par Amount: \$11,995 Million



● Customer Bought ● Customer Sold ● Inter-Dealer Trade

View the Latest Municipal Securities Market Statistics on EMMA®

The EMMA Website's free market statistics show the trading activity of municipal securities, new municipal issuance and continuing disclosure submissions. [Learn more.](#)

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Part One

Municipal Market Trade Summary, 2015–2019

Transaction Summary

Total par amount traded in \$ millions

	2015	2016	2017	2018	2019
Total	2,418,198	3,135,100	2,980,146	3,091,206	3,014,104
By Trade Type					
Customer Bought	1,213,056	1,578,495	1,526,641	1,543,192	1,547,610
Customer Sold	635,899	947,081	925,050	1,023,351	945,111
Inter-Dealer	569,243	609,524	528,455	524,664	521,383
By Coupon Type					
Fixed Rate	1,616,112	1,782,334	1,773,113	1,844,298	1,797,962
Variable	539,494	1,014,906	940,777	989,411	955,384
Zero Coupon	84,855	107,337	98,167	70,692	71,142
Other ¹	177,737	230,522	168,089	186,806	189,616
By Source of Repayment					
General Obligation	672,654	801,361	795,978	787,852	773,360
Revenue	1,473,739	2,003,835	1,950,388	2,111,380	2,016,916
Double Barrel	68,535	71,396	56,475	62,337	64,169
Other ¹	203,270	258,507	177,306	129,637	159,660
By Tax Status					
Tax Exempt	2,055,157	2,709,773	2,527,506	2,573,742	2,480,940
Taxable	236,024	256,213	253,406	199,764	289,093
AMT	92,937	136,643	153,418	180,379	178,164
Other ¹	34,080	32,470	45,816	137,321	65,908

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

Transaction Summary

Total number of trades

	2015	2016	2017	2018	2019
Total	9,257,210	9,358,046	9,888,673	10,173,826	8,753,702
By Trade Type					
Customer Bought	3,841,980	3,796,034	3,946,262	3,949,571	3,327,806
Customer Sold	1,919,306	1,917,322	2,116,210	2,332,120	2,045,963
Inter-Dealer	3,495,924	3,644,690	3,826,201	3,892,135	3,379,933
By Coupon Type					
Fixed Rate	8,788,704	8,812,788	9,312,611	9,576,565	8,135,966
Variable	128,940	195,228	274,551	334,277	316,264
Zero Coupon	327,683	333,432	284,621	241,246	276,991
Other ¹	11,883	16,598	16,890	21,738	24,481
By Source of Repayment					
General Obligation	3,254,387	3,343,552	3,649,601	3,761,095	3,304,017
Revenue	5,663,212	5,674,679	5,897,655	6,071,101	5,159,263
Double Barrel	326,079	320,850	324,851	327,002	271,265
Other ¹	13,532	18,965	16,566	14,628	19,157
By Tax Status					
Tax Exempt	8,459,925	8,598,898	9,120,571	9,437,546	8,008,023
Taxable	623,484	625,848	635,843	587,926	615,982
AMT	170,643	129,843	127,083	132,014	120,378
Other ¹	3,158	3,457	5,176	16,340	9,319

DATA AVAILABLE FROM THE MSRB

Receive Municipal Market Data in Real Time

The MSRB offers subscriptions to two feeds of market data:*

- **MSRB Transaction Subscription Service:** All municipal trade data reported to the MSRB by municipal securities dealers.
- **MSRB Short-term Obligation Subscription Service:** All variable rate securities data and documents.

*This information is also available at no charge on the EMMA® website.



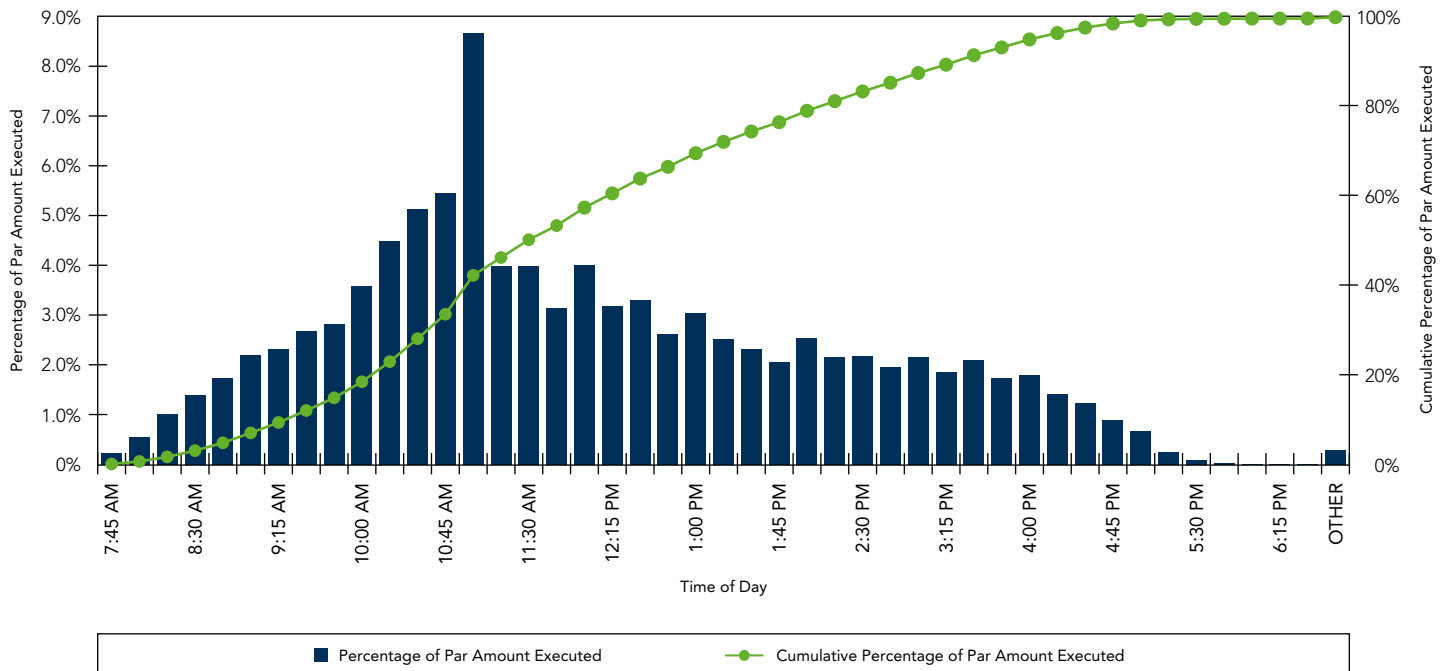
¹ Includes issues that could not be categorized based on available data.

Part Two

Municipal Market Trade Distribution Trends, 2019

Par Amount Traded by Time of Day, 2019

Trades executed within 15 minutes prior to time shown¹



Time of Execution	Average Par Value (\$ Millions)
7:45 AM	27.6
8:00 AM	66.9
8:15 AM	121.8
8:30 AM	167.5
8:45 AM	208.2
9:00 AM	263.9
9:15 AM	279.0
9:30 AM	321.1
9:45 AM	336.7
10:00 AM	429.2
10:15 AM	537.9
10:30 AM	613.9
10:45 AM	652.7
11:00 AM	1,038.7
11:15 AM	475.5
11:30 AM	477.2
11:45 AM	377.1
12:00 PM	480.0
12:15 PM	380.5
12:30 PM	394.9
12:45 PM	313.1
1:00 PM	364.1
1:15 PM	302.8

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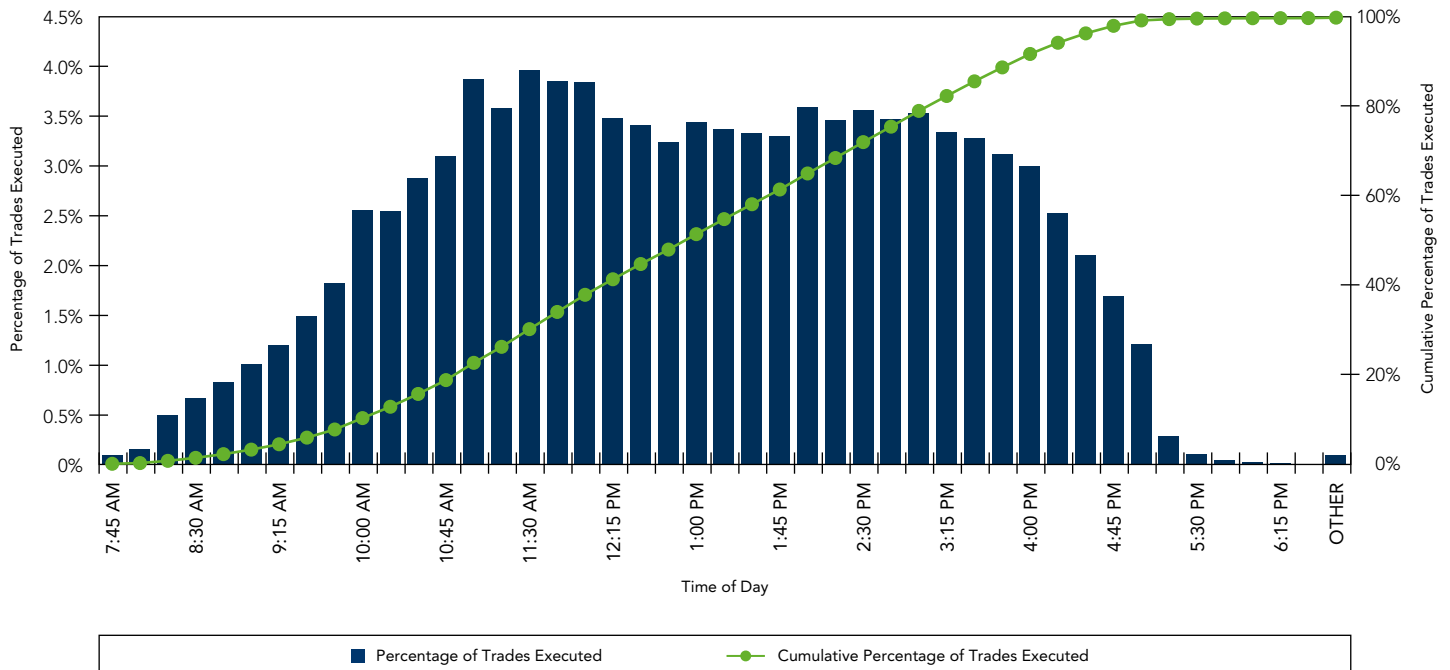
Time of Execution	Average Par Value (\$ Millions)
1:30 PM	278.2
1:45 PM	247.5
2:00 PM	304.1
2:15 PM	258.5
2:30 PM	260.2
2:45 PM	232.9
3:00 PM	258.8
3:15 PM	221.7
3:30 PM	252.4
3:45 PM	207.9
4:00 PM	214.2
4:15 PM	169.9
4:30 PM	147.4
4:45 PM	107.3
5:00 PM	81.8
5:15 PM	31.6
5:30 PM	11.3
5:45 PM	3.9
6:00 PM	2.8
6:15 PM	1.2
6:30 PM	1.5
Other ²	34.9
Total	11,960.7

¹ Eastern time.

² Trades reported after 6:30 p.m. and before 7:30 a.m.

Number of Trades by Time of Day, 2019

Trades executed within 15 minutes prior to time shown¹



Time of Execution	Average Number of Trades
7:45 AM	33
8:00 AM	57
8:15 AM	175
8:30 AM	232
8:45 AM	287
9:00 AM	352
9:15 AM	416
9:30 AM	519
9:45 AM	631
10:00 AM	887
10:15 AM	881
10:30 AM	998
10:45 AM	1,077
11:00 AM	1,343
11:15 AM	1,245
11:30 AM	1,376
11:45 AM	1,336
12:00 PM	1,334
12:15 PM	1,209
12:30 PM	1,185
12:45 PM	1,126
1:00 PM	1,196
1:15 PM	1,171

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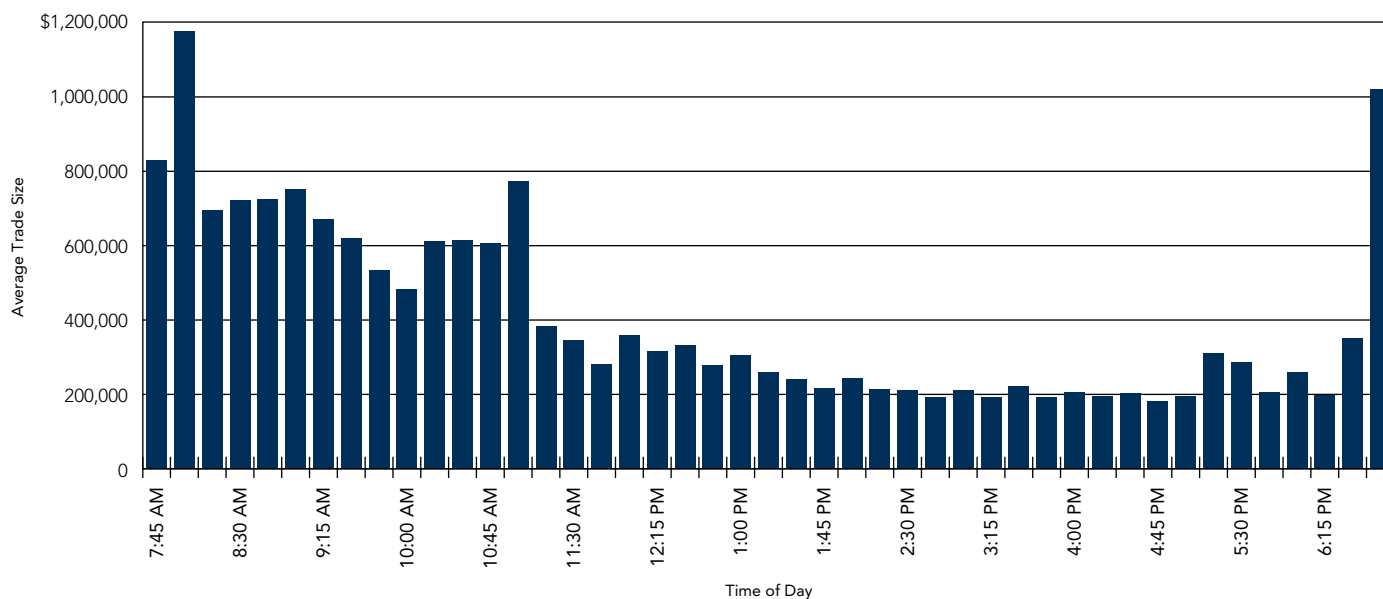
Time of Execution	Average Number of Trades
1:30 PM	1,158
1:45 PM	1,147
2:00 PM	1,245
2:15 PM	1,203
2:30 PM	1,235
2:45 PM	1,204
3:00 PM	1,225
3:15 PM	1,160
3:30 PM	1,139
3:45 PM	1,084
4:00 PM	1,044
4:15 PM	875
4:30 PM	728
4:45 PM	589
5:00 PM	419
5:15 PM	101
5:30 PM	39
5:45 PM	19
6:00 PM	11
6:15 PM	6
6:30 PM	4
Other ²	34
Total	34,737

¹ Eastern time.

² Trades reported after 6:30 p.m. and before 7:30 a.m.

Average Daily Trade Size by Time of Day, 2019

Trades executed within 15 minutes prior to time shown¹



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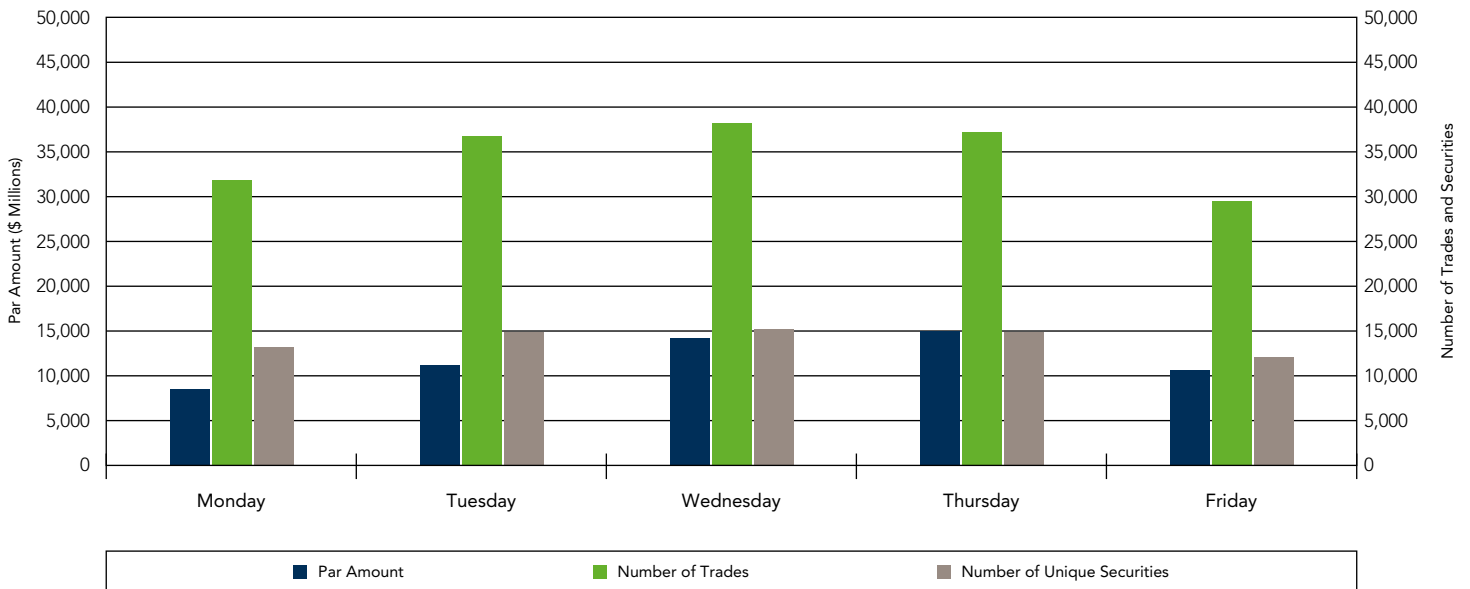
Time of Execution	Average Trade Size (\$)
7:45 AM	830,665
8:00 AM	1,175,279
8:15 AM	694,774
8:30 AM	720,794
8:45 AM	726,118
9:00 AM	750,704
9:15 AM	670,904
9:30 AM	618,757
9:45 AM	533,408
10:00 AM	484,098
10:15 AM	610,835
10:30 AM	615,086
10:45 AM	606,105
11:00 AM	773,436
11:15 AM	382,059
11:30 AM	346,807
11:45 AM	282,255
12:00 PM	359,669
12:15 PM	314,714
12:30 PM	333,132
12:45 PM	278,081
1:00 PM	304,471
1:15 PM	258,544

Time of Execution	Average Trade Size (\$)
1:30 PM	240,223
1:45 PM	215,706
2:00 PM	244,210
2:15 PM	214,912
2:30 PM	210,683
2:45 PM	193,467
3:00 PM	211,289
3:15 PM	191,102
3:30 PM	221,544
3:45 PM	191,764
4:00 PM	205,194
4:15 PM	194,159
4:30 PM	202,554
4:45 PM	182,329
5:00 PM	195,351
5:15 PM	311,727
5:30 PM	287,193
5:45 PM	206,293
6:00 PM	259,804
6:15 PM	197,808
6:30 PM	350,646
Other ²	1,021,097
Overall	344,323

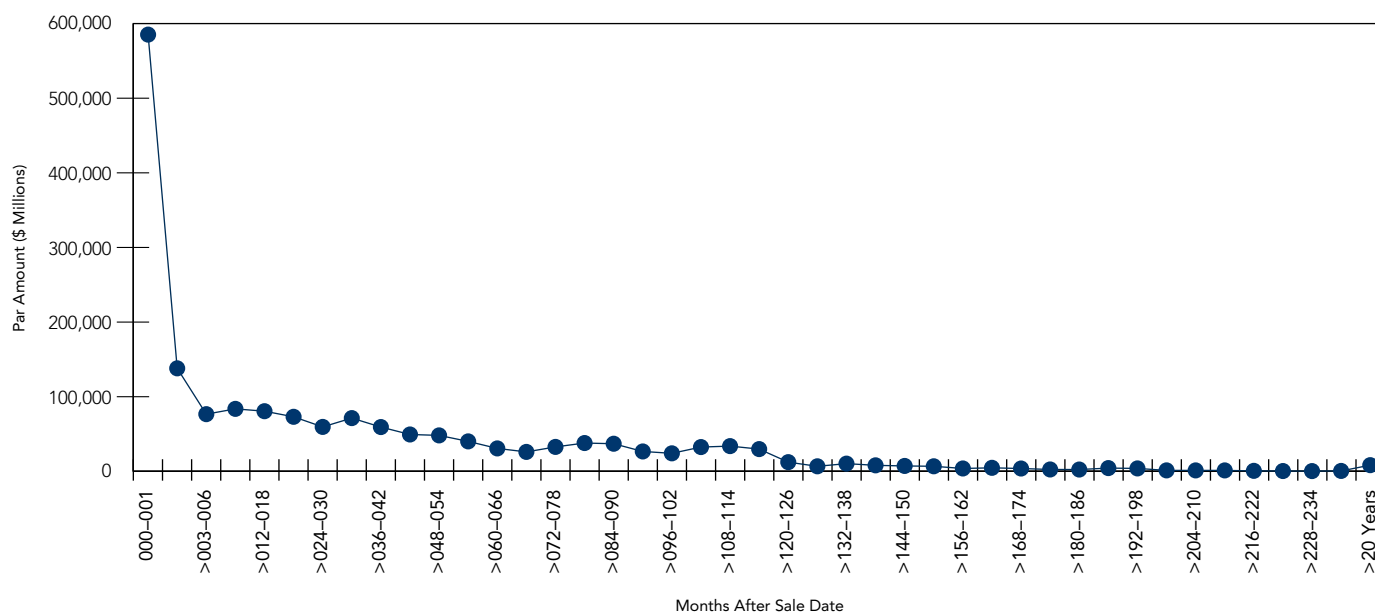
¹ Eastern time.

² Trades reported after 6:30 p.m. and before 7:30 a.m.

Average Trading Volume by Day of Week, 2019



Weekday	Par Amount (\$ Millions)	Number of Trades	Number of Unique Securities
Monday	8,553.3	31,810	13,172
Tuesday	11,252.6	36,728	14,874
Wednesday	14,213.8	38,203	15,196
Thursday	14,963.8	37,252	14,868
Friday	10,692.5	29,530	12,049

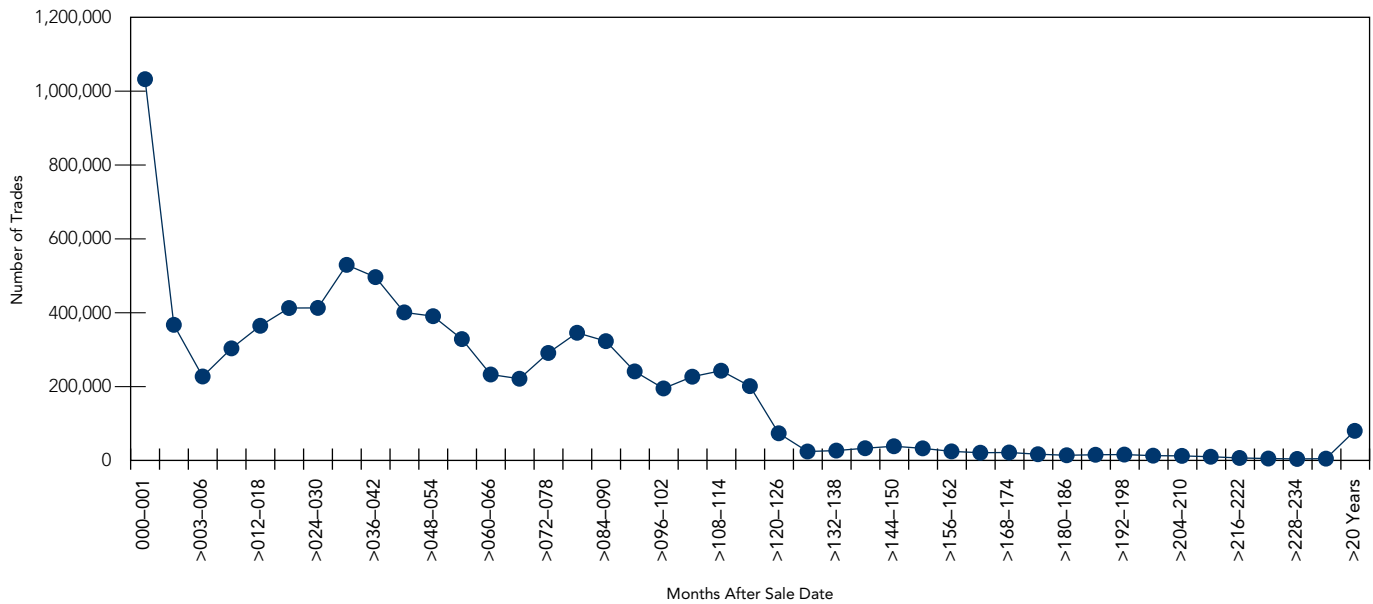
Par Amount Traded by Months After Sale Date¹, 2019

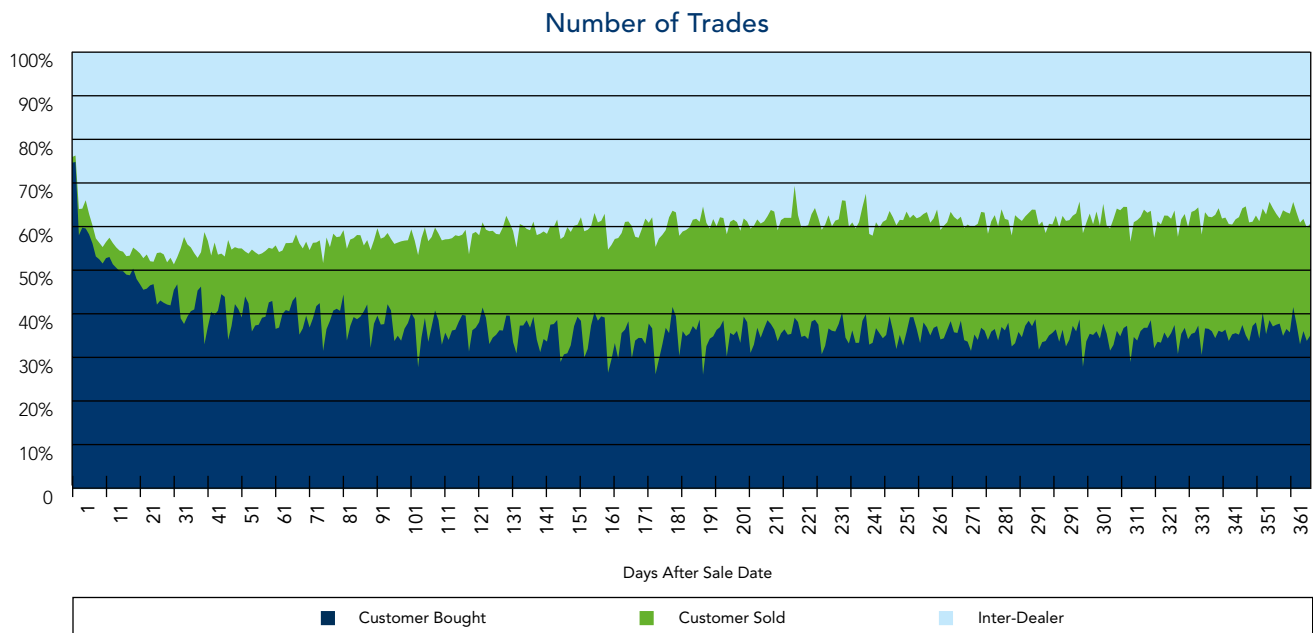
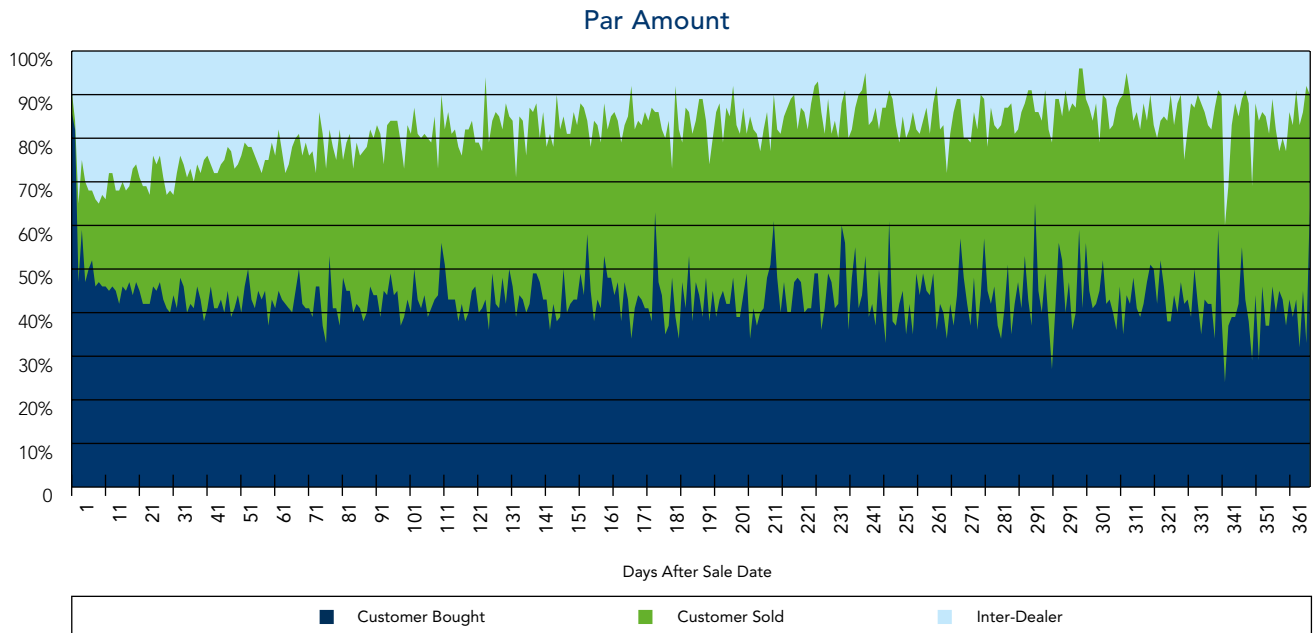
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Months After Sale Date	Par Amount (\$ Millions)	% of Total Par	Cumulative Percentage of Par Value
000-001	585,219.5	33.1%	33.1%
>001-003	138,017.6	7.8%	40.9%
>003-006	76,607.4	4.3%	45.3%
>006-012	83,700.9	4.7%	50.0%
>012-018	80,576.2	4.6%	54.6%
>018-024	73,071.4	4.1%	58.7%
>024-030	59,527.0	3.4%	62.1%
>030-036	71,334.4	4.0%	66.1%
>036-042	59,325.5	3.4%	69.5%
>042-048	49,381.1	2.8%	72.3%
>048-054	48,154.6	2.7%	75.0%
>054-060	40,121.6	2.3%	77.2%
>060-066	30,706.4	1.7%	79.0%
>066-072	26,021.8	1.5%	80.5%
>072-078	32,726.4	1.9%	82.3%
>078-084	37,917.7	2.1%	84.5%
>084-090	36,981.8	2.1%	86.5%
>090-096	26,629.9	1.5%	88.1%
>096-102	24,123.1	1.4%	89.4%
>102-108	32,519.7	1.8%	91.3%
>108-114	33,802.2	1.9%	93.2%
>114-120	29,802.6	1.7%	94.9%

Months After Sale Date	Par Amount (\$ Millions)	% of Total Par	Cumulative Percentage of Par Value
>120-126	12,299.6	0.7%	95.6%
>126-132	6,733.3	0.4%	95.9%
>132-138	10,320.5	0.6%	96.5%
>138-144	8,031.7	0.5%	97.0%
>144-150	7,226.1	0.4%	97.4%
>150-156	6,762.7	0.4%	97.8%
>156-162	3,827.3	0.2%	98.0%
>162-168	4,708.1	0.3%	98.3%
>168-174	3,780.7	0.2%	98.5%
>174-180	2,492.7	0.1%	98.6%
>180-186	2,410.6	0.1%	98.7%
>186-192	4,352.2	0.2%	99.0%
>192-198	3,900.5	0.2%	99.2%
>198-204	1,269.5	0.1%	99.3%
>204-210	1,246.2	0.1%	99.4%
>210-216	1,238.2	0.1%	99.4%
>216-222	652.2	0.0%	99.5%
>222-228	400.9	0.0%	99.5%
>228-234	335.1	0.0%	99.5%
>234-240	540.5	0.0%	99.5%
>240-246	8,273.6	0.5%	100.0%
Total	1,767,071.2	100%	

¹ Includes only Bonds—securities with maturities of two or more years (maturity date less dated date) with fixed or zero interest rate. Excludes \$1,372 million par amount traded for which the date of sale was not available.

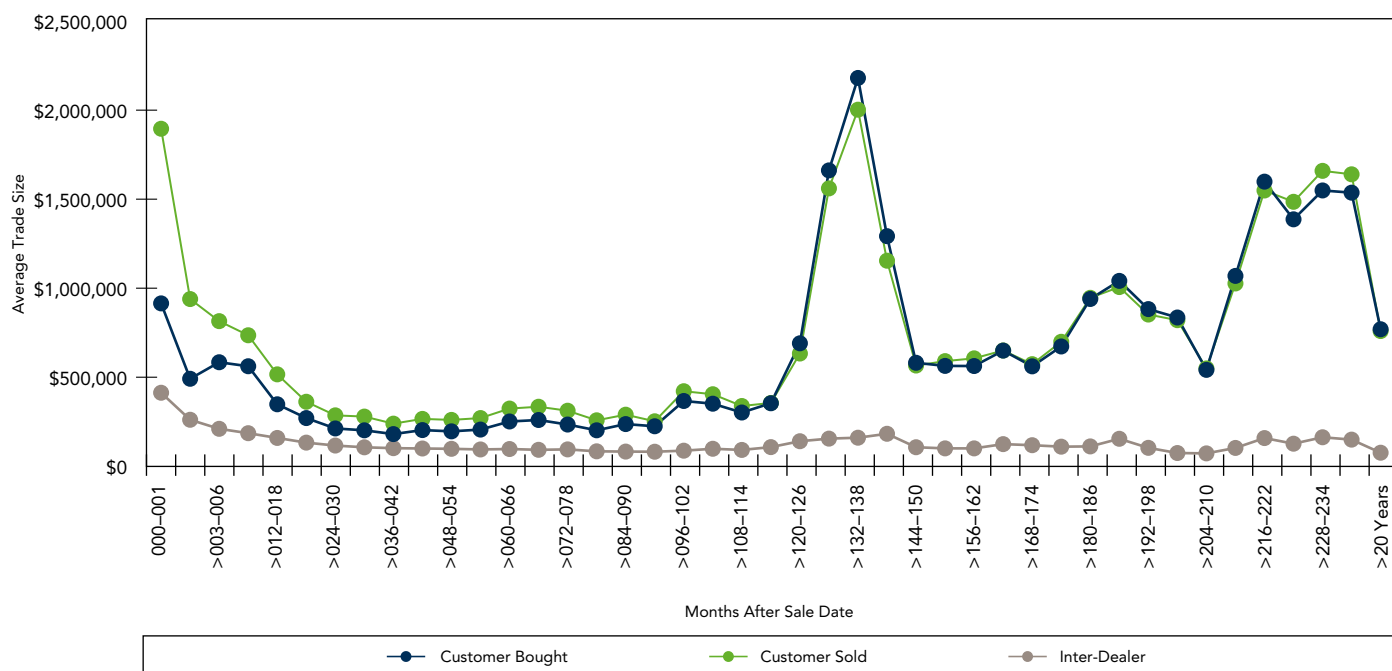
Number of Trades by Months After Sale Date¹, 2019

Distribution of Trades by Type After Sale Date¹, 2019

¹ Excludes transactions for which the date of sale was not available.

Average Trade Size by Trade Type by Months After Sale Date¹, 2019

All trades



Part Three

Most Actively Traded Municipal Securities, 2019

Top 50 Most Active Securities, 2019

By par amount

Rank	CUSIP ¹	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/20	11,035.3	1,958
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	–	11/1/41	10,751.7	1,207
3	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	–	8/1/35	10,145.9	784
4	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	9,554.1	464
5	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/46	9,141.0	13,686
6	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/51	8,095.2	13,191
7	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	–	12/1/40	7,325.6	603
8	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,071.8	12,452
9	882724GP6	TEXAS ST	4.00	8/29/19	5,550.9	3,005
10	467229AF7	JACKSON CNTY MISS PORT FAC REV	–	6/1/23	5,497.7	661
11	64966G4Q2	NEW YORK N Y	–	4/1/35	4,528.6	731
12	64966KTD5	NEW YORK N Y	–	3/1/42	4,467.2	715
13	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	–	8/1/42	4,386.7	625
14	64966ML98	NEW YORK N Y	–	12/1/47	4,210.2	538
15	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	4,096.7	383
16	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	–	8/1/45	4,011.2	561
17	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	–	8/15/20	3,997.2	552
18	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	–	12/1/37	3,979.7	531
19	546398YU6	LOUISIANA PUB FACS AUTH REV	–	8/1/43	3,875.2	234
20	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	–	11/15/50	3,799.8	763
21	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	3,763.5	1,737
22	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	–	11/1/29	3,724.2	337
23	452151LF8	ILLINOIS ST	5.10	6/1/33	3,529.4	2,352
24	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	3,405.6	6,137
25	83703FLR1	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	–	5/1/48	3,385.4	225
26	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	–	7/1/34	3,329.8	1,080
27	91425MDV6	UNIVERSITY DEL REV	–	11/1/37	3,143.8	321
28	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	–	7/1/49	3,135.9	250
29	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	–	6/1/42	3,135.0	348
30	91412GSK2	UNIVERSITY CALIF REVS	–	5/15/48	3,104.1	490
31	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	11/1/35	3,048.6	393
32	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	–	10/1/41	3,043.6	397
33	41315RGV0	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	–	12/1/41	3,038.0	540
34	64972GCR3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/49	3,037.3	393
35	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	11/1/35	3,037.0	738
36	64966JE77	NEW YORK N Y	–	4/1/42	2,965.1	1,115
37	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	–	11/15/52	2,949.9	742
38	60528ACB8	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	11/1/35	2,933.1	407
39	115034BS8	BROWARD CNTY FLA INDL DEV REV	–	6/1/45	2,926.8	232
40	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	–	11/1/38	2,925.6	623
41	919061BU4	VALDEZ ALASKA MARINE TERM REV	–	10/1/25	2,924.0	332
42	040507QA6	ARIZONA HEALTH FACS AUTH REV	–	1/1/46	2,922.6	555
43	64972FWK8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/39	2,859.9	629
44	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/39	2,812.5	386
45	60528ABY9	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	11/1/35	2,795.4	380
46	677561LA8	OHIO ST HOSP FAC REV	–	1/1/52	2,790.3	146
47	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	–	1/1/32	2,790.1	788
48	594751AM1	MICHIGAN TOB SETTLEMENT FIN AUTH TOB SETTLEMENT ASSET BACKED REV	–	6/1/58	2,770.5	27
49	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	–	10/1/44	2,750.6	154
50	45471AAS1	INDIANA FIN AUTH HOSP REV	–	12/31/39	2,693.6	563

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Securities, 2019

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	–	7/1/46	9,141.0	13,686
2	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/51	8,095.2	13,191
3	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,071.8	12,452
4	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,460.8	10,184
5	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	2,438.3	9,272
6	74529JQF5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/33	911.6	7,260
7	74529JQE8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/31	838.8	6,733
8	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	1,081.0	6,569
9	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	3,405.6	6,137
10	74529JQD0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/29	599.9	5,411
11	74529JQC2	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/27	600.0	5,382
12	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/34	780.9	4,853
13	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	1,279.6	3,915
14	74529JQB4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/24	371.3	3,805
15	882724GP6	TEXAS ST	4.00	8/29/19	5,550.9	3,005
16	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/49	596.9	2,974
17	74529JPV1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	475.8	2,966
18	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/46	1,397.1	2,759
19	650010CH2	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	3.00	1/1/53	477.5	2,730
20	6461364Z1	NEW JERSEY ST TRANSN TR FD AUTH	4.50	6/15/49	786.8	2,703
21	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	468.6	2,690
22	74529JQY4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	597.7	2,636
23	59261AXV4	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/3/20	1,348.7	2,578
24	452151LF8	ILLINOIS ST	5.10	6/1/33	3,529.4	2,352
25	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	1,098.2	2,178
26	11861MAR7	BUCKS CNTY PA INDL DEV AUTH HOSP REV	3.00	8/15/50	722.1	2,140
27	70917S6X6	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	3.00	8/15/47	246.3	2,107
28	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,215.5	2,094
29	74526QKX9	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/37	263.0	1,998
30	882724PY7	TEXAS ST	4.00	8/27/20	11,035.3	1,958
31	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	531.6	1,858
32	69651ABL7	PALM BEACH CNTY FLA HEALTH FACS AUTH HOSP REV	3.00	8/15/44	229.7	1,855
33	13063BJB9	CALIFORNIA ST	7.70	11/1/30	282.9	1,841
34	74526QXT4	PUERTO RICO ELEC PWR AUTH PWR REV	6.13	7/1/40	464.8	1,833
35	74514LB63	PUERTO RICO COMWLTH	5.13	7/1/37	345.9	1,802
36	592643DG2	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	3.00	10/1/50	467.8	1,801
37	072024TY8	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	5.00	10/1/54	287.3	1,753
38	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/46	76.2	1,752
39	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	3,763.5	1,737
40	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	926.1	1,715
41	113073AX8	BROOKHAVEN GA DEV AUTH REV	3.00	7/1/46	461.2	1,681
42	010685KH7	ALACHUA CNTY FLA HEALTH FACS AUTH HEALTH FACS REV	3.00	12/1/46	208.8	1,652
43	36005FGD1	FULTON CNTY GA DEV AUTH REV	3.00	7/1/44	238.3	1,613
44	6461365L1	NEW JERSEY ST TRANSN TR FD AUTH	3.25	6/15/39	258.6	1,596
45	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/44	797.9	1,578
46	57582RLK0	MASSACHUSETTS ST	3.00	9/1/46	323.2	1,566
47	64990GK2	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.95	8/1/48	393.3	1,559
48	646136E31	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	145.6	1,532
49	59447TMP5	MICHIGAN FIN AUTH REV	3.25	11/15/42	95.5	1,524
50	167593M74	CHICAGO ILL O HARE INTL ARPT REV	4.00	1/1/53	169.6	1,514

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Fixed Rate¹ Securities, 2019

By par amount

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/20	11,035.3	1,958
2	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,071.8	12,452
3	882724GP6	TEXAS ST	4.00	8/29/19	5,550.9	3,005
4	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	3,763.5	1,737
5	452151LF8	ILLINOIS ST	5.10	6/1/33	3,529.4	2,352
6	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	3,405.6	6,137
7	544351PJ2	LOS ANGELES CALIF	5.00	6/25/20	2,611.0	719
8	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,460.8	10,184
9	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	2,438.3	9,272
10	2350364W7	DALLAS FORT WORTH TEX INTL ARPT REV	2.99	11/1/38	2,342.1	203
11	13063DMB1	CALIFORNIA ST	3.05	4/1/29	2,252.2	318
12	79766DMB2	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/49	2,054.0	319
13	59334DLV4	MIAMI-DADE CNTY FLA WTR & SWR REV	4.00	10/1/49	2,044.7	336
14	650010BG5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	2/1/20	1,927.9	418
15	59261AZB6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/22	1,906.1	700
16	25476FXV5	DISTRICT COLUMBIA	5.00	10/15/44	1,898.6	259
17	64971XEN4	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.73	8/1/29	1,809.4	95
18	57582RYN0	MASSACHUSETTS ST	2.66	9/1/39	1,720.6	201
19	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	1,640.6	1,417
20	64971XGE2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.80	8/1/29	1,638.0	130
21	882854Q70	TEXAS WTR DEV BRD REV	5.00	4/15/49	1,568.7	546
22	882667AN8	TEXAS PRIVATE ACTIVITY BD SURFACE TRANSN CORP REV	5.00	6/30/58	1,545.1	256
23	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	1,521.7	361
24	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/46	1,397.1	2,759
25	79766DMA4	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/44	1,385.9	254
26	20281PKV3	COMMONWEALTH FING AUTH PA REV	3.66	6/1/38	1,382.0	105
27	64971XEB0	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.85	5/1/30	1,349.7	73
28	59261AXV4	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/3/20	1,348.7	2,578
29	45528UZJ3	INDIANAPOLIS IND LOC PUB IMPT BD BK	5.00	2/1/49	1,341.4	210
30	91412HFG3	UNIVERSITY CALIF REVS	3.35	7/1/29	1,323.0	631
31	130179SD7	CALIFORNIA EDL FACS AUTH REV	5.00	5/1/49	1,288.6	281
32	59260XAA6	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	5.00	3/1/22	1,286.4	999
33	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	1,279.6	3,915
34	64990AMZ5	NEW YORK ST DORM AUTH SALES TAX REV ST SUPPORTED DEBT	5.00	3/15/48	1,268.1	657
35	882667AZ1	TEXAS PRIVATE ACTIVITY BD SURFACE TRANSN CORP REV	3.92	12/31/49	1,260.0	184
36	54466HHF6	LOS ANGELES CNTY CALIF MET TRANSN AUTH SALES TAX REV	5.00	7/1/44	1,246.4	404
37	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,215.5	2,094
38	6461364X6	NEW JERSEY ST TRANSN TR FD AUTH	5.25	6/15/43	1,184.9	598
39	13063BJC7	CALIFORNIA ST	7.60	11/1/40	1,179.0	463
40	5446466W7	LOS ANGELES CALIF UNI SCH DIST	5.25	7/1/42	1,148.3	234
41	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	1,098.2	2,178
42	88880NAT6	TOBACCO SETTLEMENT FING CORP VA	6.71	6/1/46	1,094.3	721
43	072024WG3	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	3.00	4/1/54	1,094.2	1,063
44	19648FKT0	COLORADO HEALTH FACS AUTH REV	4.00	8/1/49	1,087.3	331
45	57582RYP5	MASSACHUSETTS ST	2.81	9/1/43	1,084.8	160
46	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	1,081.0	6,569
47	64971XLV8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2.63	5/1/30	1,073.3	79
48	254845QA1	DISTRICT COLUMBIA WTR & SWR AUTH PUB UTIL REV	5.00	10/1/49	1,070.0	439
49	649902S95	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/15/24	1,048.3	168
50	48504NBC2	KANSAS CITY MO INDL DEV AUTH ARPT SPL OBLIG	5.00	3/1/46	1,033.4	271

¹ Excludes zero-coupon securities.² See page 1 for information on CUSIP identifiers.

Top 50 Most Active Fixed Rate¹ Securities, 2018

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	7/1/58	6,071.8	12,452
2	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,460.8	10,184
3	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	2,438.3	9,272
4	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	1,081.0	6,569
5	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	3,405.6	6,137
6	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/34	780.9	4,853
7	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	1,279.6	3,915
8	882724GP6	TEXAS ST	4.00	8/29/19	5,550.9	3,005
9	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/49	596.9	2,974
10	74529JPV1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	475.8	2,966
11	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/46	1,397.1	2,759
12	650010CH2	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	3.00	1/1/53	477.5	2,730
13	6461364Z1	NEW JERSEY ST TRANSN TR FD AUTH	4.50	6/15/49	786.8	2,703
14	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	468.6	2,690
15	74529JQY4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	597.7	2,636
16	59261AXV4	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/3/20	1,348.7	2,578
17	452151LF8	ILLINOIS ST	5.10	6/1/33	3,529.4	2,352
18	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	1,098.2	2,178
19	11861MAR7	BUCKS CNTY PA INDL DEV AUTH HOSP REV	3.00	8/15/50	722.1	2,140
20	70917S6X6	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	3.00	8/15/47	246.3	2,107
21	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,215.5	2,094
22	74526QKX9	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/37	263.0	1,998
23	882724PY7	TEXAS ST	4.00	8/27/20	11,035.3	1,958
24	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	531.6	1,858
25	69651ABL7	PALM BEACH CNTY FLA HEALTH FACS AUTH HOSP REV	3.00	8/15/44	229.7	1,855
26	13063BJB9	CALIFORNIA ST	7.70	11/1/30	282.9	1,841
27	74526QXT4	PUERTO RICO ELEC PWR AUTH PWR REV	6.13	7/1/40	464.8	1,833
28	74514LB63	PUERTO RICO COMWLTH	5.13	7/1/37	345.9	1,802
29	592643DG2	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	3.00	10/1/50	467.8	1,801
30	072024TY8	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	5.00	10/1/54	287.3	1,753
31	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/46	76.2	1,752
32	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	3,763.5	1,737
33	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	926.1	1,715
34	113073AX8	BROOKHAVEN GA DEV AUTH REV	3.00	7/1/46	461.2	1,681
35	010685KH7	ALACHUA CNTY FLA HEALTH FACS AUTH HEALTH FACS REV	3.00	12/1/46	208.8	1,652
36	36005FGD1	FULTON CNTY GA DEV AUTH REV	3.00	7/1/44	238.3	1,613
37	6461365L1	NEW JERSEY ST TRANSN TR FD AUTH	3.25	6/15/39	258.6	1,596
38	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/44	797.9	1,578
39	57582RLK0	MASSACHUSETTS ST	3.00	9/1/46	323.2	1,566
40	64990GGK2	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.95	8/1/48	393.3	1,559
41	6.46136E+36	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	145.6	1,532
42	59447TMP5	MICHIGAN FIN AUTH REV	3.25	11/15/42	95.5	1,524
43	167593M74	CHICAGO ILL O HARE INTL ARPT REV	4.00	1/1/53	169.6	1,514
44	794458FW4	SALEM ORE HOSP FAC AUTH REV	3.00	5/15/49	192.5	1,505
45	13063BFV9	CALIFORNIA ST	7.95	3/1/36	591.5	1,491
46	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/44	59.0	1,486
47	745160RC7	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	5.25	7/1/42	815.5	1,479
48	29216MAC4	EMPLOYEES RETIREMENT SYS GOVT COMWLTH PUERTO RICO	6.15	7/1/38	412.9	1,430
49	650010CF6	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	3.00	1/1/53	469.3	1,427
50	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	1,640.6	1,417

¹ Excludes zero-coupon securities.² See page 1 for information on CUSIP identifiers.

Top 50 Most Active Variable Rate Securities, 2019

By par amount

Rank	CUSIP ¹	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/41	10,751.7	1,207
2	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/35	10,145.9	784
3	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	9,554.1	464
4	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/40	7,325.6	603
5	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/23	5,497.7	661
6	64966G4Q2	NEW YORK N Y	4/1/35	4,528.6	731
7	64966KTD5	NEW YORK N Y	3/1/42	4,467.2	715
8	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/42	4,386.7	625
9	64966ML98	NEW YORK N Y	12/1/47	4,210.2	538
10	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	4,096.7	383
11	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/45	4,011.2	561
12	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	8/15/20	3,997.2	552
13	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	12/1/37	3,979.7	531
14	546398YU6	LOUISIANA PUB FACS AUTH REV	8/1/43	3,875.2	234
15	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	11/15/50	3,799.8	763
16	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	11/1/29	3,724.2	337
17	83703FLR1	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	5/1/48	3,385.4	225
18	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/34	3,329.8	1,080
19	91425MDV6	UNIVERSITY DEL REV	11/1/37	3,143.8	321
20	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	7/1/49	3,135.9	250
21	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	6/1/42	3,135.0	348
22	91412GSK2	UNIVERSITY CALIF REVS	5/15/48	3,104.1	490
23	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	3,048.6	393
24	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	10/1/41	3,043.6	397
25	41315RGV0	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	12/1/41	3,038.0	540
26	64972GCR3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/49	3,037.3	393
27	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	3,037.0	738
28	64966JE77	NEW YORK N Y	4/1/42	2,965.1	1,115
29	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	2,949.9	742
30	60528ACB8	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	2,933.1	407
31	115034BS8	BROWARD CNTY FLA INDL DEV REV	6/1/45	2,926.8	232
32	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/38	2,925.6	623
33	919061BU4	VALDEZ ALASKA MARINE TERM REV	10/1/25	2,924.0	332
34	040507QA6	ARIZONA HEALTH FACS AUTH REV	1/1/46	2,922.6	555
35	64972FWK8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/39	2,859.9	629
36	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/39	2,812.5	386
37	60528ABY9	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	2,795.4	380
38	677561LA8	OHIO ST HOSP FAC REV	1/1/52	2,790.3	146
39	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	2,790.1	788
40	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	10/1/44	2,750.6	154
41	45471AAS1	INDIANA FIN AUTH HOSP REV	12/31/39	2,693.6	563
42	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	2,686.8	485
43	60374VEJ8	MINNEAPOLIS MINN HEALTH CARE SYS REV	11/15/48	2,635.9	622
44	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	2,590.9	764
45	64971WUS7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/41	2,588.5	423
46	34061YAD2	FLORIDA DEV FIN CORP SURFACE TRANSN FAC REV	1/1/49	2,566.2	450
47	64986URA7	NEW YORK ST HSG FIN AGY REV	11/1/41	2,562.6	151
48	64971QPN7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/29	2,558.6	268
49	270838AJ4	EAST BATON ROUGE PARISH LA POLLUTION CTL REV	3/1/22	2,553.8	218
50	89602RFA8	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	11/1/32	2,531.3	756

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Variable Rate Securities, 2019

By number of trades

Rank	CUSIP ¹	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/41	10,751.7	1,207
2	64966JE77	NEW YORK N Y	4/1/42	2,965.1	1,115
3	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/34	3,329.8	1,080
4	89602RDT9	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	2,362.8	1,011
5	9151153V9	UNIVERSITY TEX PERM UNIV FD	7/1/38	2,081.0	924
6	64971MLS9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/27	370.9	891
7	414009AT7	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	12/1/24	2,329.7	859
8	64966GMR0	NEW YORK N Y	8/1/26	304.4	835
9	64966FHM9	NEW YORK N Y	8/1/34	525.1	817
10	57586CZW8	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/42	354.6	792
11	64970KYY7	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/35	1,387.4	789
12	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	2,790.1	788
13	64972GCN2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/50	1,969.6	787
14	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/35	10,145.9	784
15	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	2,590.9	764
16	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	11/15/50	3,799.8	763
17	89602RFA8	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	11/1/32	2,531.3	756
18	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	2,949.9	742
19	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	3,037.0	738
20	64966G4Q2	NEW YORK N Y	4/1/35	4,528.6	731
21	64966MFY0	NEW YORK N Y	8/1/44	662.5	727
22	57585KGP7	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	11/1/49	1,770.0	723
23	57586CFZ3	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/40	273.8	721
24	64966KTD5	NEW YORK N Y	3/1/42	4,467.2	715
25	64971WGU8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/43	1,679.5	706
26	57582N4G7	MASSACHUSETTS ST	3/1/26	2,447.7	706
27	64972F6R2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/45	1,536.6	701
28	89602RDR3	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/33	2,293.0	667
29	64971QYH0	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/39	1,855.7	666
30	64971WUK4	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	2,171.7	663
31	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/23	5,497.7	661
32	64972GCM4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/50	1,207.1	660
33	64966G4N9	NEW YORK N Y	4/1/36	731.3	658
34	64972F4W3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	819.7	654
35	64972FWK8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/39	2,859.9	629
36	64972GAW4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/32	1,954.9	626
37	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/42	4,386.7	625
38	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/38	2,925.6	623
39	60374VEJ8	MINNEAPOLIS MINN HEALTH CARE SYS REV	11/15/48	2,635.9	622
40	837151RV3	SOUTH CAROLINA ST PUB SVC AUTH REV	12/1/51	83.8	621
41	64966FA87	NEW YORK N Y	4/1/36	2,503.4	616
42	57586CGA7	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/40	250.8	605
43	6133408D3	MONTGOMERY CNTY MD	11/1/37	1,423.2	605
44	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/40	7,325.6	603
45	20774LRU1	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	7/1/36	1,112.3	601
46	59266TMV0	METROPOLITAN WTR DIST SOUTHN CALIF WTRWKS REV	7/1/47	1,114.3	594
47	161045FL8	CHARLOTTE N C WTR & SWR SYS REV	7/1/36	732.5	589
48	89602RED3	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	1,545.1	580
49	64966LU25	NEW YORK N Y	6/1/44	1,322.6	573
50	64972GCQ5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/48	1,416.5	568

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Short-Term¹ Securities, 2019

By par amount

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/20	11,035.3	1,958
2	882724GP6	TEXAS ST	4.00	8/29/19	5,550.9	3,005
3	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	0.60	8/15/20	3,997.2	552
4	544351PJ2	LOS ANGELES CALIF	5.00	6/25/20	2,611.0	719
5	650010BG5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	2/1/20	1,927.9	418
6	59261AXV4	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/3/20	1,348.7	2,578
7	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	981.7	645
8	544657HW2	LOS ANGELES CNTY CALIF	5.00	6/30/20	979.0	422
9	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	926.1	1,715
10	19672MCG1	COLORADO ST ED LN PROG	3.00	6/29/20	816.6	202
11	544657HV4	LOS ANGELES CNTY CALIF	4.00	6/28/19	795.1	291
12	20786LDG3	CONNECTOR 2000 ASSN INC S C TOLL RD REV	0.00	1/1/19	781.0	16
13	646039XG7	NEW JERSEY ST	1.17	6/25/20	750.0	1
14	270838AE5	EAST BATON ROUGE PARISH LA POLLUTION CTL REV	1.25	11/1/19	746.7	290
15	59261AA98	METROPOLITAN TRANSN AUTH N Y REV	4.00	9/1/20	739.1	285
16	402230EP7	GULF COAST WASTE DISP AUTH TEX POLLUTN CTL REV	0.61	6/1/20	723.4	230
17	196729CK1	COLORADO ST GEN FD REV	5.00	6/26/20	657.8	159
18	451434BZ6	IDAHO ST	3.00	6/30/20	559.0	162
19	57582RZT6	MASSACHUSETTS ST	4.00	5/21/20	551.9	42
20	57582RZS8	MASSACHUSETTS ST	4.00	4/23/20	530.4	50
21	452152P47	ILLINOIS ST	5.00	11/1/20	525.2	37
22	650010AD3	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	5.00	5/1/19	522.3	872
23	19672MCE6	COLORADO ST ED LN PROG	3.00	6/27/19	468.2	39
24	769110CT2	RIVERSIDE CNTY CALIF	5.00	6/30/20	463.2	181
25	95736U6E9	WESTCHESTER CNTY N Y	2.25	5/28/19	452.5	23
26	05914FN89	BALTIMORE CNTY MD	4.00	3/18/19	444.3	65
27	491189FY7	KENTUCKY ASSET / LIABILITY COMMN GEN FD REV	3.00	6/25/20	430.7	36
28	717883XN7	PHILADELPHIA PA SCH DIST	4.00	3/31/20	427.6	40
29	59261AZH3	METROPOLITAN TRANSN AUTH N Y REV	4.00	7/1/20	413.2	364
30	25478H2S0	DISTRICT COLUMBIA IAM COML PAPER BD ANTIC NTS 3/A2	1.45	11/20/19	410.0	10
31	25478H2T8	DISTRICT COLUMBIA IAM COML PAPER BD ANTIC NTS 3/A2	1.20	12/5/19	410.0	10
32	57582RZU3	MASSACHUSETTS ST	4.00	6/18/20	400.6	25
33	232929AA7	DADE CNTY FLA INDL DEV AUTH EXEMPT FACS REV	0.53	6/1/21	397.2	70
34	05914F2K5	BALTIMORE CNTY MD	4.00	3/19/20	385.1	467
35	769110CS4	RIVERSIDE CNTY CALIF	4.00	6/28/19	359.2	154
36	13066YSP5	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/20	357.7	885
37	763631W53	RICHLAND CNTY S C	3.00	2/27/20	350.3	474
38	13067JKT7	CALIFORNIA ST ECONOMIC RECOVERY	5.00	7/1/20	343.3	579
39	86476PZY7	SUFFOLK CNTY N Y	2.50	7/23/20	333.8	35
40	360046V60	FULTON CNTY GA	2.50	12/31/19	326.8	217
41	59333RJG0	MIAMI-DADE CNTY FLA SCH DIST	2.00	2/27/20	316.9	87
42	13063DKT4	CALIFORNIA ST	5.00	4/1/20	316.8	377
43	452152P39	ILLINOIS ST	5.00	11/1/19	315.8	108
44	544582GX1	LOS ANGELES CALIF MULTIFAMILY REV	1.28	8/1/19	311.6	12
45	196729CJ4	COLORADO ST GEN FD REV	3.00	6/26/20	305.6	92
46	61335W6H5	MONTGOMERY CNTY MD IAM COML PAPER 3/A2 SER 2010 B BANS	1.40	12/5/19	301.4	16
47	61335W6F9	MONTGOMERY CNTY MD IAM COML PAPER 3/A2 SER 2010 B BANS	1.40	7/18/19	301.2	16
48	61335W6G7	MONTGOMERY CNTY MD IAM COML PAPER 3/A2 SER 2010 B BANS	1.39	10/9/19	300.0	14
49	29270CXP5	ENERGY NORTHWEST WASH ELEC REV	5.00	7/1/19	284.8	331
50	59335QCP7	MIAMI DADE CNTY FLA WTR & SWR SYS IAM COML PAPER NTS 3/A2 SER A-1	1.38	11/6/19	283.2	12

¹ Securities with under two years in remaining maturity.² See page 1 for information on CUSIP identifiers.

Top 50 Most Active Short-Term¹ Securities, 2019

By number of trades

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724GP6	TEXAS ST	4.00	8/29/19	5,550.9	3,005
2	59261AXV4	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/3/20	1,348.7	2,578
3	882724PY7	TEXAS ST	4.00	8/27/20	11,035.3	1,958
4	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	926.1	1,715
5	13063A7G3	CALIFORNIA ST	6.20	10/1/19	84.5	1,287
6	645913AY0	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	0.00	2/15/20	203.5	1,149
7	13066YSP5	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/20	357.7	885
8	650010AD3	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	5.00	5/1/19	522.3	872
9	59261AXC6	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/20	185.3	826
10	13066YQN2	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/20	186.0	775
11	677525TK3	OHIO ST AIR QUALITY DEV AUTH REV	5.70	8/1/20	101.9	740
12	544351PJ2	LOS ANGELES CALIF	5.00	6/25/20	2,611.0	719
13	13067JKZ3	CALIFORNIA ST ECONOMIC RECOVERY	5.00	7/1/19	262.2	713
14	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	981.7	645
15	13067JKT7	CALIFORNIA ST ECONOMIC RECOVERY	5.00	7/1/20	343.3	579
16	650013T39	NEW YORK ST TWY AUTH HWY & BRDG TR FD	5.50	4/1/20	83.5	569
17	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	0.60	8/15/20	3,997.2	552
18	763631W53	RICHLAND CNTY S C	3.00	2/27/20	350.3	474
19	59261AVL8	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/20	136.0	474
20	05914F2K5	BALTIMORE CNTY MD	4.00	3/19/20	385.1	467
21	59261AVS3	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/20	100.8	455
22	64577BLA0	NEW JERSEY ECONOMIC DEV AUTH REV	4.45	6/15/20	60.8	453
23	231266JL2	CURATORS UNIV MO SYS FACS REV	5.00	11/1/19	76.3	444
24	542424VF0	LONG BEACH CALIF HBR REV	5.00	12/15/20	208.6	431
25	544657HW2	LOS ANGELES CNTY CALIF	5.00	6/30/20	979.0	422
26	645913AZ7	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	0.00	2/15/21	154.8	418
27	650010BG5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	2/1/20	1,927.9	418
28	13066YQM4	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/19	188.2	417
29	176553GZ2	CITIZENS PPTY INS CORP FLA	5.00	6/1/20	89.2	415
30	797400KY3	SAN DIEGO CNTY CALIF REGL TRANSN COMMN SALES TAX REV	4.00	4/1/21	195.4	380
31	13063DKT4	CALIFORNIA ST	5.00	4/1/20	316.8	377
32	341271AB0	FLORIDA ST BRD ADMIN FIN CORP REV	2.64	7/1/21	267.8	369
33	59261AZH3	METROPOLITAN TRANSN AUTH N Y REV	4.00	7/1/20	413.2	364
34	373384PN0	GEORGIA ST	5.00	7/1/20	133.2	355
35	70917RTT2	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	5.00	9/1/19	42.4	352
36	59261AVW4	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/20	51.5	342
37	938823AQ4	WASHINGTON FED HWY GRNT ANTIC REV	5.00	9/1/20	38.9	333
38	29270CXP5	ENERGY NORTHWEST WASH ELEC REV	5.00	7/1/19	284.8	331
39	7962533M2	SAN ANTONIO TEX ELEC & GAS REV	5.00	2/1/20	94.4	330
40	70914PLC4	PENNSYLVANIA ST	5.00	7/1/20	49.2	328
41	745145ZB1	PUERTO RICO COMWLTH	5.50	7/1/20	15.7	326
42	341271AA2	FLORIDA ST BRD ADMIN FIN CORP REV	2.16	7/1/19	125.8	320
43	89602NZW7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	5.00	11/15/19	67.2	317
44	59261AVX2	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/21	39.1	316
45	646136DY4	NEW JERSEY ST TRANSN TR FD AUTH	5.25	12/15/20	15.0	315
46	626207XT6	MUNICIPAL ELEC AUTH GA	5.00	1/1/20	68.9	313
47	63165TJ71	NASSAU CNTY N Y	4.00	12/10/19	78.4	308
48	574193NS3	MARYLAND ST	5.00	8/1/20	93.4	300
49	574193GN2	MARYLAND ST	4.50	8/1/20	138.9	292
50	59261AXD4	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/21	45.3	292

¹ Securities with under two years in remaining maturity.² See page 1 for information on CUSIP identifiers.

Top 50 Most Active Long-Term¹ Securities, 2019

By par amount

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	402207AD6	GULF COAST INDL DEV AUTH TEX REV	0.44	11/1/41	10,751.7	1,207
2	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	0.61	8/1/35	10,145.9	784
3	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	0.61	12/1/30	9,554.1	464
4	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/46	9,141.0	13,686
5	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/51	8,095.2	13,191
6	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	0.61	12/1/40	7,325.6	603
7	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,071.8	12,452
8	467229AF7	JACKSON CNTY MISS PORT FAC REV	0.60	6/1/23	5,497.7	661
9	64966G4Q2	NEW YORK N Y	0.62	4/1/35	4,528.6	731
10	64966KTD5	NEW YORK N Y	0.62	3/1/42	4,467.2	715
11	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	0.45	8/1/42	4,386.7	625
12	64966ML98	NEW YORK N Y	0.50	12/1/47	4,210.2	538
13	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	0.60	12/1/30	4,096.7	383
14	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	0.45	8/1/45	4,011.2	561
15	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	0.55	12/1/37	3,979.7	531
16	546398YU6	LOUISIANA PUB FACS AUTH REV	0.64	8/1/43	3,875.2	234
17	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	0.61	11/15/50	3,799.8	763
18	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	3,763.5	1,737
19	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	0.68	11/1/29	3,724.2	337
20	452151LF8	ILLINOIS ST	5.10	6/1/33	3,529.4	2,352
21	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	3,405.6	6,137
22	83703FLR1	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	0.48	5/1/48	3,385.4	225
23	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	0.55	7/1/34	3,329.8	1,080
24	91425MDV6	UNIVERSITY DEL REV	0.60	11/1/37	3,143.8	321
25	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	0.57	7/1/49	3,135.9	250
26	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	0.47	6/1/42	3,135.0	348
27	91412GSK2	UNIVERSITY CALIF REVS	0.48	5/15/48	3,104.1	490
28	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	0.60	11/1/35	3,048.6	393
29	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	0.64	10/1/41	3,043.6	397
30	41315RGV0	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	0.47	12/1/41	3,038.0	540
31	64972GCR3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	0.50	6/15/49	3,037.3	393
32	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	0.60	11/1/35	3,037.0	738
33	64966JE77	NEW YORK N Y	0.51	4/1/42	2,965.1	1,115
34	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	0.55	11/15/52	2,949.9	742
35	60528ACB8	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	0.60	11/1/35	2,933.1	407
36	115034BS8	BROWARD CNTY FLA INDL DEV REV	0.60	6/1/45	2,926.8	232
37	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	0.50	11/1/38	2,925.6	623
38	919061BU4	VALDEZ ALASKA MARINE TERM REV	0.61	10/1/25	2,924.0	332
39	040507QA6	ARIZONA HEALTH FACS AUTH REV	0.46	1/1/46	2,922.6	555
40	64972FWK8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	0.55	6/15/39	2,859.9	629
41	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	0.48	6/15/39	2,812.5	386
42	60528ABY9	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	0.60	11/1/35	2,795.4	380
43	677561LA8	OHIO ST HOSP FAC REV	0.50	1/1/52	2,790.3	146
44	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	0.50	1/1/32	2,790.1	788
45	594751AM1	MICHIGAN TOB SETTLEMENT FIN AUTH TOB SETTLEMENT ASSET BACKED REV	0.00	6/1/58	2,770.5	27
46	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	0.66	10/1/44	2,750.6	154
47	45471AAS1	INDIANA FIN AUTH HOSP REV	0.68	12/31/39	2,693.6	563
48	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	0.60	12/1/30	2,686.8	485
49	60374VEJ8	MINNEAPOLIS MINN HEALTH CARE SYS REV	0.68	11/15/48	2,635.9	622
50	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	0.45	2/1/45	2,590.9	764

¹ Securities with two years or more in remaining maturity.² See page 1 for information on CUSIP identifiers.

Top 50 Most Active Long-Term¹ Securities, 2019

By number of trades

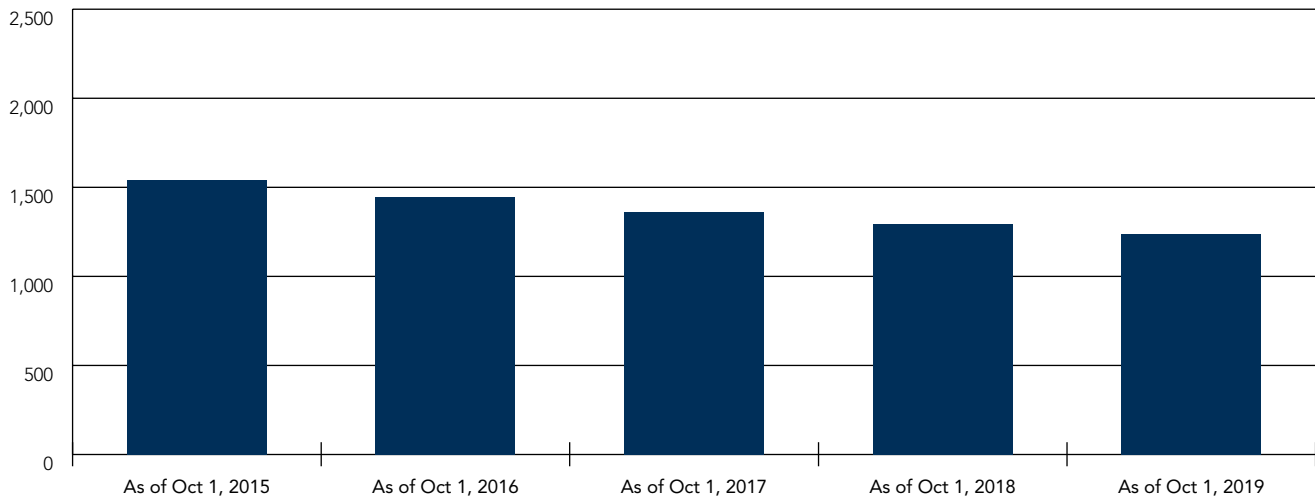
Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/46	9,141.0	13,686
2	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/51	8,095.2	13,191
3	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,071.8	12,452
4	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,460.8	10,184
5	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	2,438.3	9,272
6	74529JQF5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/33	911.6	7,260
7	74529JQE8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/31	838.8	6,733
8	74529JQA6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	1,081.0	6,569
9	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	3,405.6	6,137
10	74529JQD0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/29	599.9	5,411
11	74529JQC2	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/27	600.0	5,382
12	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/34	780.9	4,853
13	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	1,279.6	3,915
14	74529JQB4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	0.00	7/1/24	371.3	3,805
15	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/49	596.9	2,974
16	74529JPV1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	475.8	2,966
17	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/46	1,397.1	2,759
18	650010CH2	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	3.00	1/1/53	477.5	2,730
19	6461364Z1	NEW JERSEY ST TRANSN TR FD AUTH	4.50	6/15/49	786.8	2,703
20	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	468.6	2,690
21	74529JQY4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	597.7	2,636
22	452151LF8	ILLINOIS ST	5.10	6/1/33	3,529.4	2,352
23	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	1,098.2	2,178
24	11861MAR7	BUCKS CNTY PA INDL DEV AUTH HOSP REV	3.00	8/15/50	722.1	2,140
25	70917S6X6	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	3.00	8/15/47	246.3	2,107
26	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,215.5	2,094
27	74526QKX9	PUERTO RICO ELEC PWR AUTH PWR REV	5.00	7/1/37	263.0	1,998
28	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	531.6	1,858
29	69651ABL7	PALM BEACH CNTY FLA HEALTH FACS AUTH HOSP REV	3.00	8/15/44	229.7	1,855
30	13063BJB9	CALIFORNIA ST	7.70	11/1/30	282.9	1,841
31	74526QXT4	PUERTO RICO ELEC PWR AUTH PWR REV	6.13	7/1/40	464.8	1,833
32	74514LB63	PUERTO RICO COMWLTH	5.13	7/1/37	345.9	1,802
33	592643DG2	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	3.00	10/1/50	467.8	1,801
34	072024TY8	BAY AREA TOLL AUTH CALIF TOLL BRDG REV	5.00	10/1/54	287.3	1,753
35	64972GMU5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/46	76.2	1,752
36	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	3,763.5	1,737
37	113073AX8	BROOKHAVEN GA DEV AUTH REV	3.00	7/1/46	461.2	1,681
38	010685KH7	ALACHUA CNTY FLA HEALTH FACS AUTH HEALTH FACS REV	3.00	12/1/46	208.8	1,652
39	36005FGD1	FULTON CNTY GA DEV AUTH REV	3.00	7/1/44	238.3	1,613
40	6461365L1	NEW JERSEY ST TRANSN TR FD AUTH	3.25	6/15/39	258.6	1,596
41	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/44	797.9	1,578
42	57582RLK0	MASSACHUSETTS ST	3.00	9/1/46	323.2	1,566
43	64990GGK2	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.95	8/1/48	393.3	1,559
44	6.46136E+36	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	145.6	1,532
45	59447TMP5	MICHIGAN FIN AUTH REV	3.25	11/15/42	95.5	1,524
46	167593M74	CHICAGO ILL O HARE INTL ARPT REV	4.00	1/1/53	169.6	1,514
47	794458FW4	SALEM ORE HOSP FAC AUTH REV	3.00	5/15/49	192.5	1,505
48	13063BFV9	CALIFORNIA ST	7.95	3/1/36	591.5	1,491
49	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/44	59.0	1,486
50	745160RC7	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	5.25	7/1/42	815.5	1,479

¹ Securities with two years or more in remaining maturity.² See page 1 for information on CUSIP identifiers.

Part Four

Dealer Activity and Distribution of Municipal Trades, 2015–2019

Number of MSRB Registered Dealers



	Number of Registered Dealers	% Change from Prior Period ¹
As of Oct 1, 2015	1,541	-5.2%
As of Oct 1, 2016	1,448	-6.0%
As of Oct 1, 2017	1,363	-5.9%
As of Oct 1, 2018	1,295	-5.0%
As of Oct 1, 2019	1,237	-4.5%

¹ A number of factors have impacted the decrease in the number of registered dealers, including the consolidation of broker dealers, mergers and acquisitions, as well as firms exiting the municipal securities business.

DATA AVAILABLE FROM THE MSRB

See the Latest Aggregate Data with the MSRB's Quarterly Statistical Summaries

The MSRB's free Quarterly Statistical Summaries include aggregate municipal bond market information on:

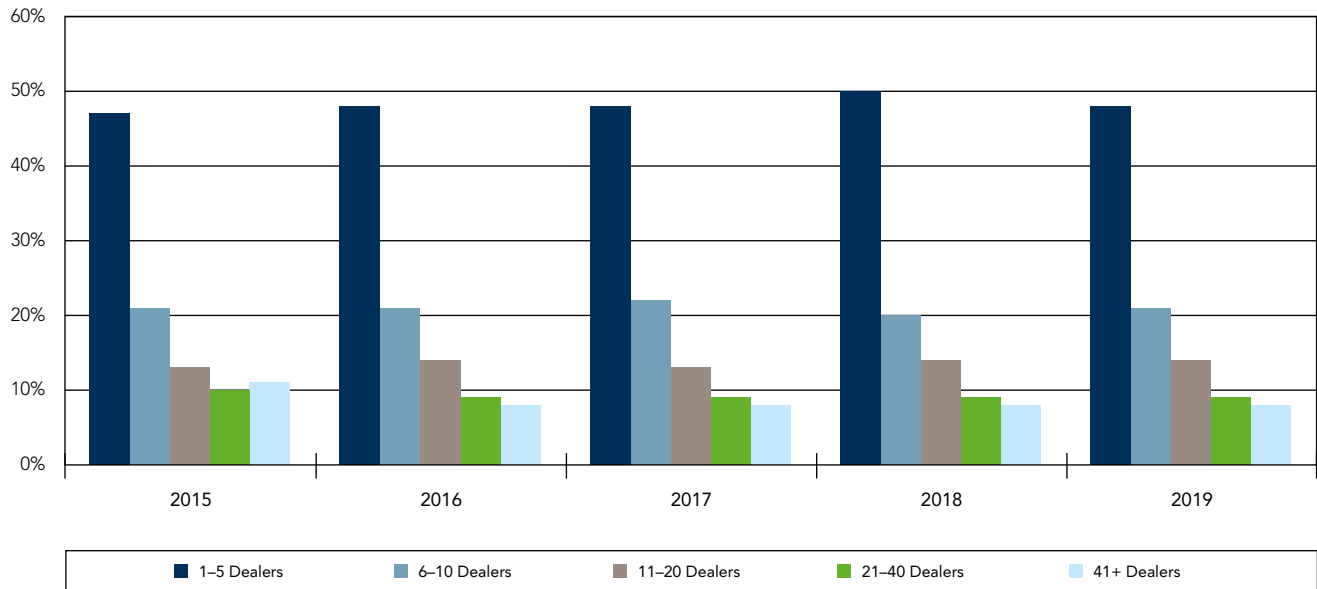
- Trading activity,
- The number of interest rate resets for variable rate demand obligations and auction rate securities, and
- Statistics about the continuing disclosure documents received through the MSRB's EMMA® website.

[View the quarterly statistical summaries.](#)



Distribution of Customer Trades by Number of Dealers

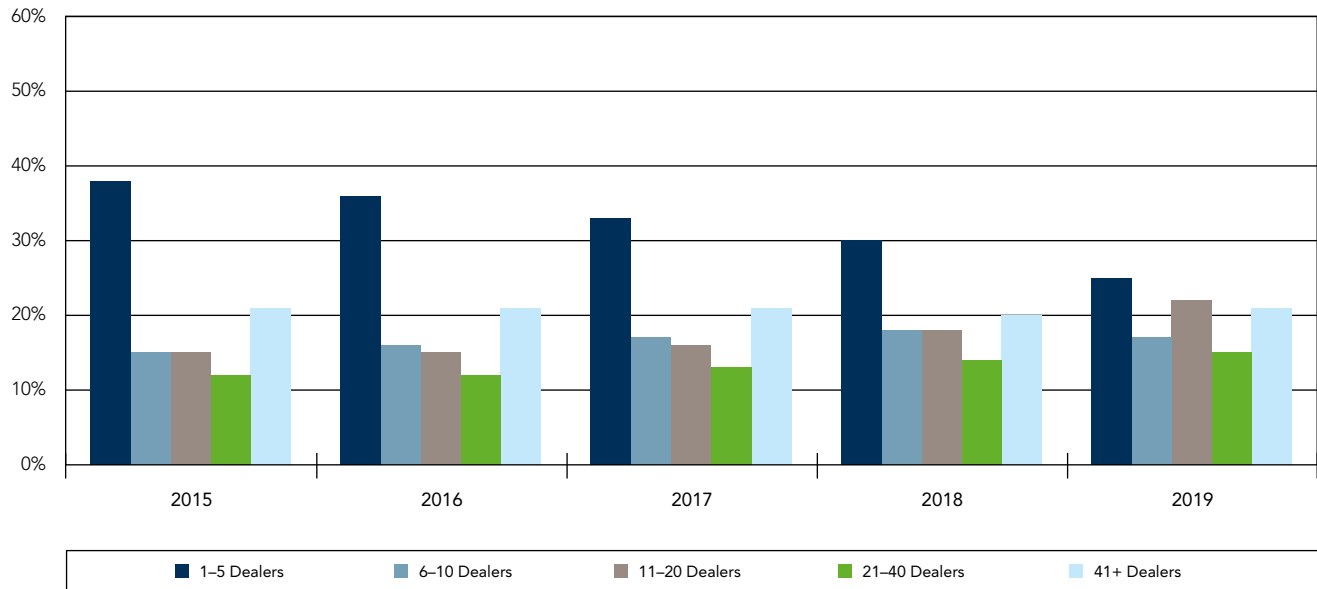
Par Amount



	2015	2016	2017	2018	2019
1-5 Dealers	47%	48%	48%	50%	48%
6-10 Dealers	21%	21%	22%	20%	21%
11-20 Dealers	13%	14%	13%	14%	14%
21-40 Dealers	10%	9%	9%	9%	9%
41+ Dealers	11%	8%	8%	8%	8%

Distribution of Customer Trades by Number of Dealers

Number of Trades



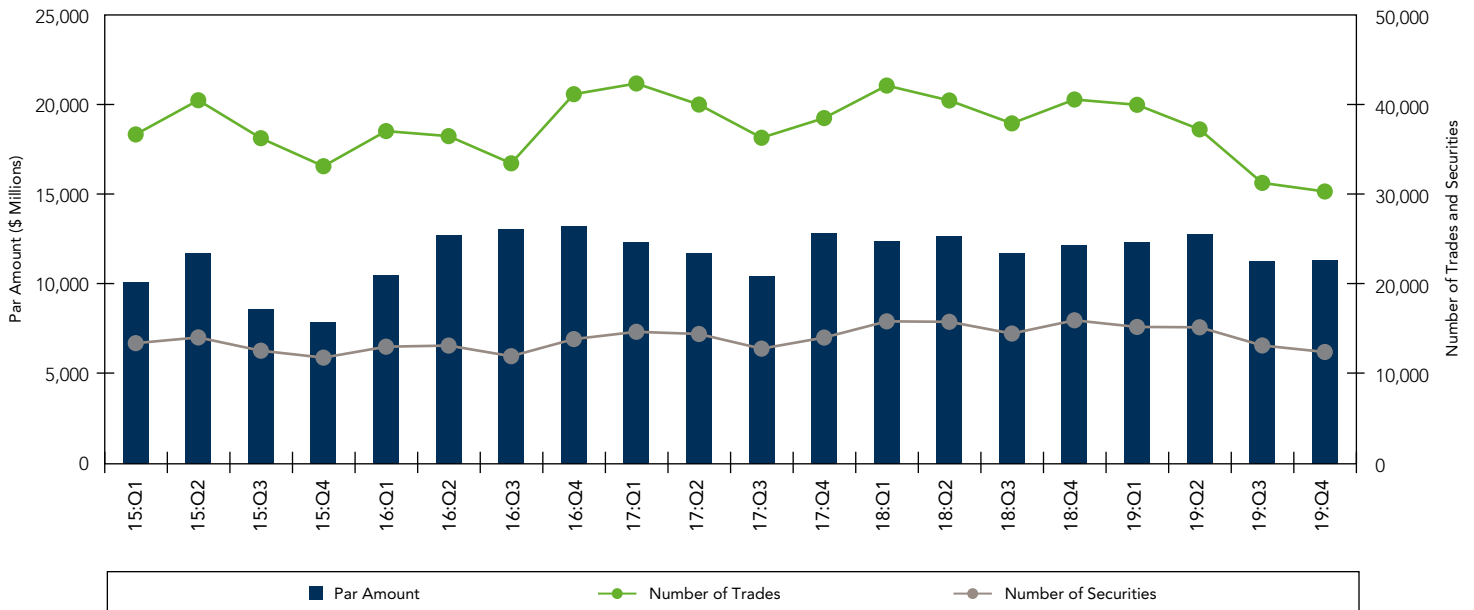
	2015	2016	2017	2018	2019
1-5 Dealers	38%	36%	33%	30%	25%
6-10 Dealers	15%	16%	17%	18%	17%
11-20 Dealers	15%	15%	16%	18%	22%
21-40 Dealers	12%	12%	13%	14%	15%
41+ Dealers	21%	21%	21%	20%	21%

Part Five

Overall Municipal Market Trading Activity, 2015–2019

Average Daily Trading Volume, 2015–2019

By par amount, number of trades and number of unique securities

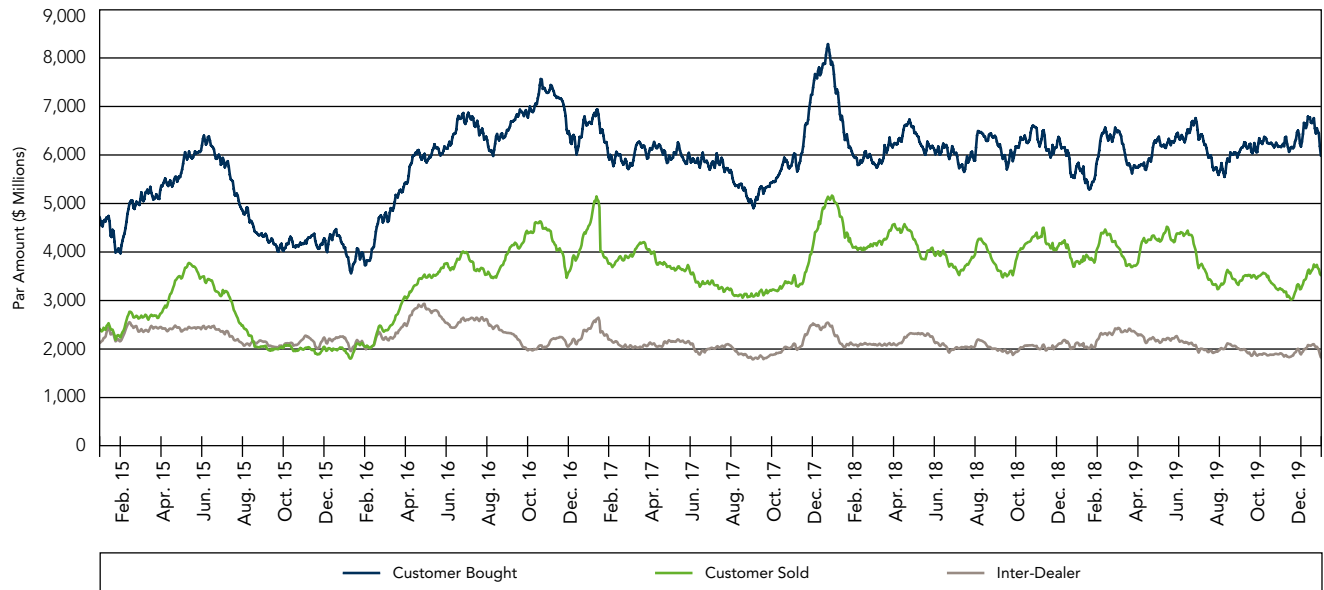


Quarter	Par Amount (\$ Millions)	Number of Trades	Number of Unique Securities
15:Q1	10,139.2	36,788	13,476
15:Q2	11,767.9	40,608	14,116
15:Q3	8,608.7	36,369	12,633
15:Q4	7,927.7	33,238	11,859
2015	9,596.0	36,735	13,011
16:Q1	10,545.6	37,162	13,081
16:Q2	12,786.5	36,599	13,206
16:Q3	13,093.9	33,562	12,020
16:Q4	13,261.4	41,283	13,929
2016	12,440.9	37,135	13,055
17:Q1	12,363.8	42,478	14,743
17:Q2	11,748.8	40,125	14,499
17:Q3	10,492.5	36,417	12,862
17:Q4	12,895.1	38,616	14,099
2017	11,873.1	39,397	14,048
18:Q1	12,407.8	42,247	15,911
18:Q2	12,728.1	40,582	15,860
18:Q3	11,729.3	38,023	14,549
18:Q4	12,199.8	40,689	16,029
2018	12,266.7	40,372	15,588
19:Q1	12,396.0	40,096	15,288
19:Q2	12,813.6	37,351	15,248
19:Q3	11,295.8	31,377	13,218
19:Q4	11,371.3	30,415	12,491
2019	11,960.7	34,737	14,042

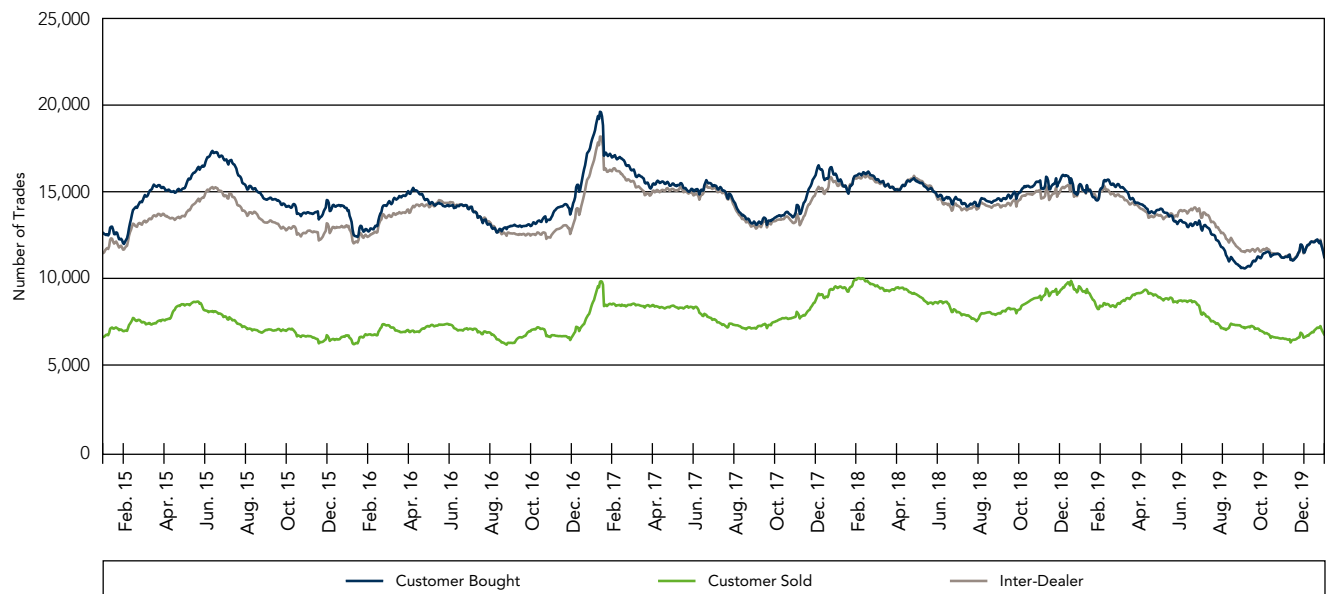
Daily Trading Volume, 2015–2019

30-day trailing average by trade type

Par Amount



Number of Trades



Trade Type and Size, 2015–2019

Average daily par amount in \$ millions

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
All Trades									
Total	9,596.0	12,440.9	11,873.1	12,266.7	11,960.7	12,396.0	12,813.6	11,295.8	11,371.3
0–\$25,000	288.4	282.7	304.3	310.7	253.3	297.1	272.4	226.6	219.5
\$25,001–\$50,000	305.9	312.0	327.8	335.6	275.1	324.8	297.9	243.5	237.0
\$50,001–\$75,000	112.8	117.7	125.2	134.3	114.7	130.0	127.7	102.9	99.3
\$75,001–\$100,000	272.1	280.5	291.2	299.8	250.6	294.2	269.1	222.2	219.2
\$100,001–\$500,000	1,160.0	1,227.0	1,268.4	1,266.9	1,194.2	1,333.1	1,306.8	1,080.9	1,064.3
\$500,001–\$1,000,000	716.7	772.3	815.5	767.6	812.5	888.3	869.0	734.7	762.3
\$1,000,001–\$2,000,000	789.8	883.8	924.3	906.9	961.7	1,056.4	989.9	881.3	924.2
More than \$2,000,000	5,950.3	8,564.9	7,816.5	8,244.8	8,098.5	8,072.1	8,680.8	7,803.7	7,845.4
Customer Bought									
Total	4,813.7	6,263.9	6,082.2	6,123.8	6,141.3	6,033.2	6,437.4	5,895.7	6,198.5
0–\$25,000	121.4	114.2	119.5	118.2	93.2	114.3	98.8	80.8	80.1
\$25,001–\$50,000	127.6	126.6	131.8	131.5	105.2	129.9	113.0	89.8	89.3
\$50,001–\$75,000	44.8	46.2	48.9	51.6	43.7	51.3	48.3	38.0	37.6
\$75,001–\$100,000	111.1	113.5	117.0	118.2	96.0	117.3	102.1	82.3	83.3
\$100,001–\$500,000	450.2	492.1	511.7	509.1	482.9	530.5	519.4	432.3	452.4
\$500,001–\$1,000,000	285.9	334.2	363.0	334.9	363.9	369.8	375.6	338.6	372.2
\$1,000,001–\$2,000,000	351.4	413.8	446.1	425.0	471.4	469.0	471.9	447.1	497.7
More than \$2,000,000	3,321.3	4,623.3	4,344.3	4,435.3	4,484.9	4,251.1	4,708.3	4,387.0	4,585.9
Customer Sold									
Total	2,523.4	3,758.3	3,685.5	4,060.9	3,750.4	4,013.4	4,244.5	3,454.4	3,309.5
0–\$25,000	59.2	56.6	63.5	68.7	58.0	65.1	64.5	53.3	49.8
\$25,001–\$50,000	60.6	59.7	64.3	70.2	58.7	64.9	65.6	53.6	50.9
\$50,001–\$75,000	24.4	24.9	27.4	31.6	26.3	28.8	30.1	23.7	22.8
\$75,001–\$100,000	55.9	55.7	60.4	67.3	57.4	63.7	63.9	51.9	50.3
\$100,001–\$500,000	218.5	235.0	265.1	302.0	273.9	311.8	316.0	242.3	228.1
\$500,001–\$1,000,000	144.2	160.4	190.6	212.4	204.0	242.0	233.9	172.6	169.7
\$1,000,001–\$2,000,000	182.4	213.8	249.8	278.7	264.5	319.5	292.7	228.4	220.5
More than \$2,000,000	1,778.3	2,952.1	2,764.2	3,030.1	2,807.6	2,917.5	3,177.8	2,628.6	2,517.4
Inter-Dealer									
Total	2,258.9	2,418.7	2,105.4	2,082.0	2,069.0	2,349.4	2,131.7	1,945.6	1,863.3
0–\$25,000	107.8	111.9	121.2	123.8	102.0	117.8	109.1	92.5	89.6
\$25,001–\$50,000	117.7	125.7	131.6	133.8	111.3	130.0	119.3	100.1	96.8
\$50,001–\$75,000	43.6	46.6	49.0	51.2	44.7	49.8	49.3	41.3	38.9
\$75,001–\$100,000	105.1	111.3	113.8	114.4	97.2	113.1	103.1	88.0	85.6
\$100,001–\$500,000	491.3	499.9	491.6	455.8	437.4	490.9	471.4	406.4	383.8
\$500,001–\$1,000,000	286.6	277.8	261.9	220.3	244.5	276.5	259.5	223.4	220.4
\$1,000,001–\$2,000,000	255.9	256.1	228.4	203.2	225.8	267.8	225.3	205.8	206.1
More than \$2,000,000	850.7	989.5	708.0	779.5	806.0	903.5	794.8	788.2	742.1

Trade Type and Size, 2015–2019

Average daily number of trades

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
All Trades									
Total	36,735	37,135	39,397	40,372	34,737	40,096	37,351	31,377	30,415
0–\$25,000	18,252	17,739	19,148	19,594	16,412	19,145	17,496	14,929	14,221
\$25,001–\$50,000	7,187	7,329	7,728	7,945	6,533	7,684	7,076	5,804	5,631
\$50,001–\$75,000	1,689	1,763	1,876	2,014	1,723	1,951	1,917	1,547	1,492
\$75,001–\$100,000	2,793	2,881	2,993	3,085	2,584	3,032	2,775	2,292	2,261
\$100,001–\$500,000	4,650	4,911	5,080	5,175	4,802	5,379	5,283	4,332	4,248
\$500,001–\$1,000,000	897	964	1,020	969	1,029	1,126	1,104	928	963
\$1,000,001–\$2,000,000	522	582	610	600	639	704	662	581	610
More than \$2,000,000	745	965	942	992	1,016	1,075	1,038	963	989
Customer Bought									
Total	15,246	15,064	15,722	15,673	13,206	15,592	14,005	11,630	11,720
0–\$25,000	7,664	7,096	7,413	7,313	5,836	7,096	6,131	5,130	5,049
\$25,001–\$50,000	2,987	2,963	3,097	3,102	2,491	3,060	2,680	2,136	2,117
\$50,001–\$75,000	669	689	729	771	655	767	724	570	565
\$75,001–\$100,000	1,138	1,164	1,200	1,214	989	1,208	1,053	848	858
\$100,001–\$500,000	1,818	1,967	2,042	2,071	1,933	2,153	2,096	1,717	1,779
\$500,001–\$1,000,000	357	415	451	421	459	467	477	425	468
\$1,000,001–\$2,000,000	231	271	292	280	312	311	315	295	328
More than \$2,000,000	380	498	497	501	531	529	531	508	556
Customer Sold									
Total	7,616	7,608	8,431	9,254	8,119	9,174	9,060	7,392	6,914
0–\$25,000	3,845	3,659	4,095	4,382	3,866	4,395	4,263	3,569	3,267
\$25,001–\$50,000	1,429	1,409	1,528	1,678	1,405	1,556	1,569	1,286	1,220
\$50,001–\$75,000	364	372	409	472	394	433	451	355	341
\$75,001–\$100,000	574	573	621	693	591	657	658	535	518
\$100,001–\$500,000	895	955	1,068	1,230	1,099	1,246	1,269	976	915
\$500,001–\$1,000,000	177	196	235	263	254	302	291	215	211
\$1,000,001–\$2,000,000	119	139	163	182	174	211	193	149	144
More than \$2,000,000	214	305	311	353	336	376	365	309	298
Inter-Dealer									
Total	13,873	14,463	15,244	15,445	13,412	15,330	14,287	12,356	11,781
0–\$25,000	6,743	6,983	7,640	7,898	6,710	7,654	7,103	6,230	5,905
\$25,001–\$50,000	2,771	2,957	3,103	3,165	2,637	3,068	2,827	2,382	2,294
\$50,001–\$75,000	656	702	737	770	674	751	742	622	587
\$75,001–\$100,000	1,080	1,145	1,172	1,178	1,004	1,167	1,064	909	884
\$100,001–\$500,000	1,936	1,988	1,970	1,874	1,770	1,980	1,918	1,640	1,554
\$500,001–\$1,000,000	363	353	334	284	316	358	336	288	284
\$1,000,001–\$2,000,000	172	172	154	137	153	182	154	138	138
More than \$2,000,000	151	163	133	138	148	170	142	146	136

Trade Type and Size, 2015–2019

Average daily number of unique securities

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
All Trades									
Total	13,011	13,055	14,048	15,588	14,042	15,288	15,248	13,218	12,491
0–\$25,000	7,257	6,989	7,602	8,323	7,151	7,964	7,655	6,749	6,284
\$25,001–\$50,000	3,181	3,143	3,327	3,647	3,119	3,528	3,425	2,832	2,713
\$50,001–\$75,000	887	907	956	1,064	937	1,039	1,045	849	823
\$75,001–\$100,000	1,355	1,363	1,444	1,552	1,347	1,540	1,472	1,205	1,182
\$100,001–\$500,000	2,129	2,251	2,369	2,532	2,441	2,651	2,708	2,239	2,179
\$500,001–\$1,000,000	496	544	588	588	617	672	668	556	576
\$1,000,001–\$2,000,000	314	356	385	392	409	450	427	373	388
More than \$2,000,000	425	562	567	593	584	623	607	552	556
Customer Bought									
Total	9,104	9,067	9,748	10,508	9,207	10,392	9,909	8,468	8,125
0–\$25,000	5,056	4,832	5,275	5,588	4,636	5,450	4,922	4,239	3,974
\$25,001–\$50,000	2,221	2,204	2,350	2,494	2,076	2,454	2,258	1,834	1,780
\$50,001–\$75,000	593	606	643	690	597	684	655	531	525
\$75,001–\$100,000	926	934	979	1,021	859	1,021	925	749	750
\$100,001–\$500,000	1,413	1,494	1,534	1,595	1,526	1,654	1,665	1,383	1,408
\$500,001–\$1,000,000	298	337	356	349	373	387	395	342	369
\$1,000,001–\$2,000,000	194	225	237	238	257	265	264	241	257
More than \$2,000,000	294	385	375	387	389	399	401	368	388
Customer Sold									
Total	6,526	6,557	7,352	8,114	7,056	7,694	7,883	6,545	6,146
0–\$25,000	3,388	3,260	3,726	4,015	3,445	3,718	3,812	3,252	3,016
\$25,001–\$50,000	1,343	1,325	1,442	1,579	1,338	1,444	1,504	1,237	1,175
\$50,001–\$75,000	353	361	397	452	382	410	440	347	334
\$75,001–\$100,000	548	545	594	659	570	625	637	518	503
\$100,001–\$500,000	832	885	995	1,143	1,032	1,157	1,193	924	862
\$500,001–\$1,000,000	168	187	223	252	244	290	280	206	201
\$1,000,001–\$2,000,000	114	133	157	176	167	202	186	143	138
More than \$2,000,000	195	278	284	320	297	333	321	273	265
Inter-Dealer									
Total	7,452	7,478	8,082	8,905	7,879	8,710	8,534	7,426	6,897
0–\$25,000	4,149	4,123	4,562	5,022	4,317	4,820	4,598	4,093	3,787
\$25,001–\$50,000	1,763	1,772	1,887	2,047	1,729	1,969	1,889	1,583	1,487
\$50,001–\$75,000	452	462	491	535	469	520	524	432	402
\$75,001–\$100,000	689	692	724	763	659	754	712	597	579
\$100,001–\$500,000	1,104	1,127	1,155	1,166	1,113	1,223	1,234	1,028	973
\$500,001–\$1,000,000	224	223	217	192	208	235	223	186	190
\$1,000,001–\$2,000,000	109	112	104	97	104	124	106	93	95
More than \$2,000,000	94	106	91	100	102	118	99	98	92

Average Daily Trade Size, 2015–2019

By customer trade



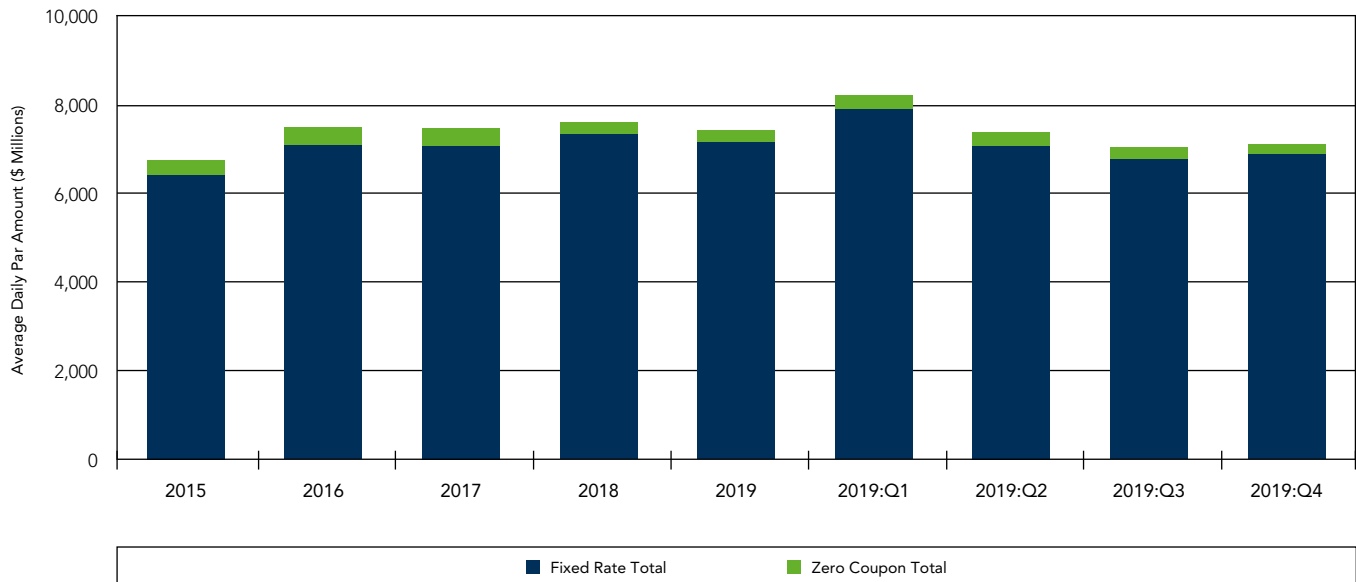
Quarter	Customer Bought (\$)	Customer Sold (\$)
15:Q1	331,941	338,520
15:Q2	350,641	397,689
15:Q3	285,685	292,412
15:Q4	289,667	282,011
2015	315,737	331,317
16:Q1	343,387	375,567
16:Q2	444,454	492,143
16:Q3	494,375	603,730
16:Q4	390,052	505,511
2016	415,827	493,960
17:Q1	358,804	451,250
17:Q2	379,215	421,387
17:Q3	372,358	417,310
17:Q4	439,631	456,033
2017	386,857	437,126
18:Q1	373,632	427,266
18:Q2	407,117	447,947
18:Q3	397,458	452,122
18:Q4	384,782	430,054
2018	390,724	438,807
19:Q1	386,948	437,483
19:Q2	459,644	468,504
19:Q3	506,954	467,321
19:Q4	528,878	478,646
2019	465,054	461,939

Part Six

Municipal Fixed Rate Securities—Par Amount Traded and Number of Trades, 2015–2019

Transaction Summary—Fixed Rate Securities, 2015–2019

Average daily par amount in \$ millions



	2015	2016	2017	2018	2019
Fixed Rate Total	6,413.1	7,072.8	7,064.2	7,318.6	7,134.8
0–\$25,000	278.5	272.4	295.2	302.6	245.1
\$25,001–\$50,000	292.9	298.2	315.7	325.4	265.2
\$50,001–\$75,000	106.8	111.5	119.7	129.4	109.7
\$75,001–\$100,000	255.8	262.6	267.6	273.2	225.5
\$100,001–\$500,000	1,091.1	1,144.3	1,143.7	1,115.1	1,052.0
\$500,001–\$1,000,000	658.9	694.9	696.8	627.7	673.8
\$1,000,001–\$2,000,000	697.7	749.3	744.1	699.3	751.3
More than \$2,000,000	3,031.4	3,539.5	3,481.5	3,845.9	3,812.1

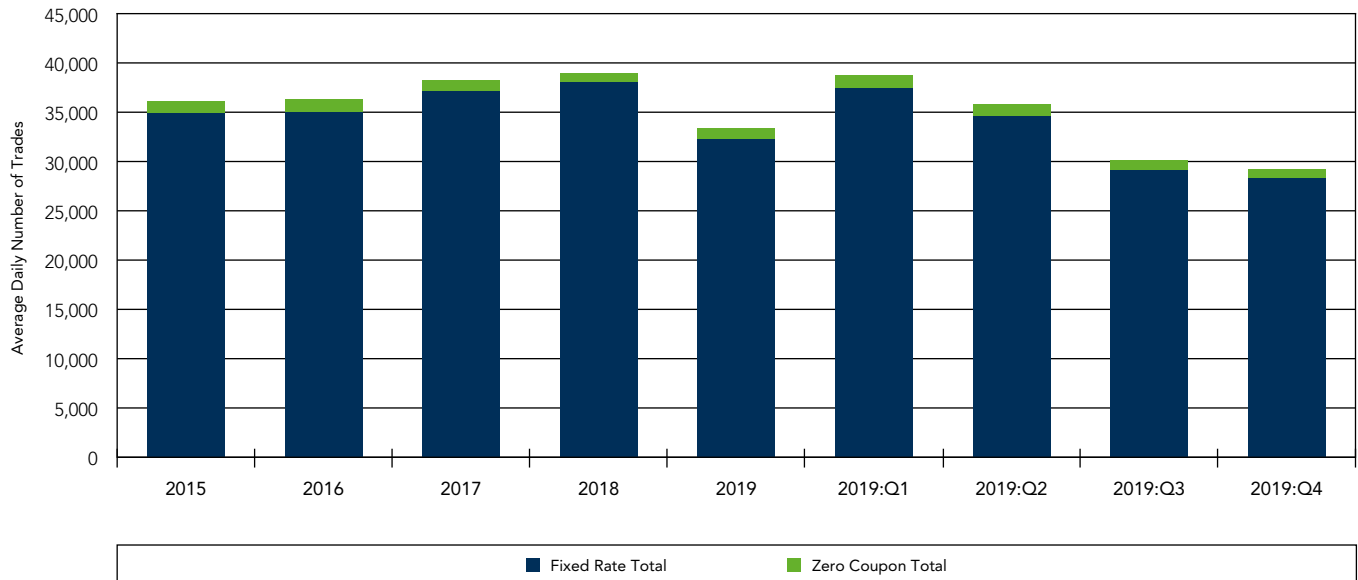
	2015	2016	2017	2018	2019
Zero Coupon Total	336.7	425.9	391.1	280.5	282.3
0–\$25,000	8.8	9.1	7.9	6.9	7.1
\$25,001–\$50,000	11.5	11.9	10.3	8.4	8.4
\$50,001–\$75,000	5.3	5.5	4.8	3.9	4.1
\$75,001–\$100,000	11.1	11.1	9.4	7.3	7.0
\$100,001–\$500,000	39.7	38.7	32.1	26.2	27.4
\$500,001–\$1,000,000	21.4	21.2	17.6	12.3	14.6
\$1,000,001–\$2,000,000	23.4	21.2	18.7	12.2	15.7
More than \$2,000,000	215.6	307.3	290.5	203.3	198.0

	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	7,882.2	7,060.4	6,757.1	6,873.3
0–\$25,000	287.6	263.4	218.8	212.9
\$25,001–\$50,000	313.8	286.9	233.5	229.3
\$50,001–\$75,000	124.3	122.3	98.0	95.3
\$75,001–\$100,000	268.3	241.0	197.8	197.3
\$100,001–\$500,000	1,177.6	1,149.5	949.6	938.6
\$500,001–\$1,000,000	740.3	711.8	608.8	637.9
\$1,000,001–\$2,000,000	840.7	751.7	692.6	724.6
More than \$2,000,000	4,129.6	3,533.7	3,758.1	3,837.5

	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Zero Coupon Total	327.9	308.1	271.3	224.4
0–\$25,000	8.4	7.8	6.8	5.7
\$25,001–\$50,000	9.3	9.2	8.6	6.5
\$50,001–\$75,000	4.7	4.5	4.1	3.2
\$75,001–\$100,000	7.8	8.2	7.1	5.0
\$100,001–\$500,000	33.3	29.7	26.4	20.5
\$500,001–\$1,000,000	18.5	16.9	13.3	9.8
\$1,000,001–\$2,000,000	19.8	17.1	13.6	12.5
More than \$2,000,000	226.0	214.6	191.4	161.4

Transaction Summary—Fixed Rate Securities, 2015–2019

Average daily number of trades



	2015	2016	2017	2018	2019
Fixed Rate Total	34,876	34,971	37,102	38,002	32,286
0–\$25,000	17,591	17,057	18,550	19,053	15,761
\$25,001–\$50,000	6,875	7,002	7,439	7,700	6,293
\$50,001–\$75,000	1,599	1,669	1,792	1,939	1,647
\$75,001–\$100,000	2,626	2,697	2,753	2,815	2,329
\$100,001–\$500,000	4,380	4,596	4,624	4,624	4,275
\$500,001–\$1,000,000	825	870	874	794	856
\$1,000,001–\$2,000,000	462	496	493	464	500
More than \$2,000,000	519	584	577	612	623

	2015	2016	2017	2018	2019
Zero Coupon Total	1,300	1,323	1,134	957	1,099
0–\$25,000	599	614	525	465	590
\$25,001–\$50,000	276	286	248	204	205
\$50,001–\$75,000	80	83	72	60	63
\$75,001–\$100,000	115	115	98	75	73
\$100,001–\$500,000	168	163	136	113	120
\$500,001–\$1,000,000	27	27	22	16	19
\$1,000,001–\$2,000,000	15	14	12	8	11
More than \$2,000,000	21	22	21	16	17

	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	37,397	34,630	29,065	28,326
0–\$25,000	18,341	16,793	14,323	13,726
\$25,001–\$50,000	7,416	6,811	5,563	5,442
\$50,001–\$75,000	1,864	1,834	1,472	1,432
\$75,001–\$100,000	2,768	2,490	2,044	2,039
\$100,001–\$500,000	4,802	4,701	3,843	3,786
\$500,001–\$1,000,000	941	908	771	807
\$1,000,001–\$2,000,000	561	506	458	479
More than \$2,000,000	703	588	591	615

	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Zero Coupon Total	1,325	1,205	1,056	824
0–\$25,000	738	639	550	442
\$25,001–\$50,000	228	227	209	159
\$50,001–\$75,000	73	70	64	48
\$75,001–\$100,000	82	85	74	52
\$100,001–\$500,000	146	131	117	88
\$500,001–\$1,000,000	23	22	17	12
\$1,000,001–\$2,000,000	13	11	9	8
More than \$2,000,000	21	19	15	13

Source of Repayment and Trade Size, 2015–2019

Average daily par amount in \$ millions

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	6,413.1	7,072.7	7,064.2	7,315.7	7,133.8	7,879.9	7,059.5	6,756.1	6,873.3
General Obligation	2,264.4	2,598.8	2,654.8	2,619.7	2,627.2	3,029.0	2,793.5	2,464.2	2,243.5
Revenue	3,902.5	4,221.5	4,205.2	4,465.6	4,294.0	4,589.2	4,054.6	4,079.7	4,462.7
Double Barrel	246.2	252.5	204.1	230.5	212.5	261.7	211.5	212.2	167.0
Zero Coupon Total	336.7	425.9	391.1	280.5	282.3	327.9	308.1	271.3	224.4
General Obligation	146.7	143.2	114.1	80.9	76.7	68.2	99.7	80.3	58.7
Revenue	184.4	277.2	274.9	196.8	202.3	257.9	203.4	188.3	162.3
Double Barrel	5.6	5.5	2.1	2.9	3.2	1.8	5.1	2.7	3.4

Average daily number of trades

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	34,876	34,971	37,102	38,002	32,285	37,397	34,630	29,065	28,326
General Obligation	12,175	12,495	13,790	14,262	12,470	14,447	13,680	11,254	10,611
Revenue	21,481	21,249	22,042	22,470	18,767	21,737	19,852	16,813	16,823
Double Barrel	1,219	1,227	1,271	1,270	1,048	1,212	1,097	999	892
Zero Coupon Total	1,300	1,323	1,134	957	1,099	1,325	1,205	1,056	824
General Obligation	675	675	606	502	487	514	531	494	410
Revenue	556	607	510	431	592	793	649	541	398
Double Barrel	70	41	18	24	20	18	25	21	16

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Tax Status and Trade Size, 2015–2019

Average daily par amount in \$ millions

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	6,413.1	7,072.7	7,064.2	7,317.0	7,133.9	7,880.1	7,060.1	6,756.3	6,873.1
Tax Exempt	5,540.8	6,181.5	6,113.2	6,379.2	5,898.2	6,829.1	6,070.9	5,514.4	5,224.6
Taxable	722.9	736.2	789.8	676.4	979.5	778.9	788.3	937.6	1,400.7
AMT	149.4	155.0	161.2	261.5	256.3	272.2	200.8	304.4	247.8
Zero Coupon Total	336.7	425.9	391.1	280.5	282.3	327.8	308.1	271.3	224.4
Tax Exempt	298.6	401.6	359.5	265.5	262.6	312.7	294.0	245.4	201.0
Taxable	38.0	24.3	31.6	15.0	19.7	15.1	14.1	25.9	23.5
AMT	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Average daily number of trades

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	34,876	34,971	37,102	38,002	32,285	37,396	34,630	29,065	28,326
Tax Exempt	31,906	32,184	34,260	35,324	29,538	34,486	31,938	26,520	25,475.7
Taxable	2,333	2,322	2,389	2,214	2,337	2,445	2,302	2,154	2,452.4
AMT	637	465	453	465	410	464	390	390	398.3
Zero Coupon Total	1,300	1,323	1,134	957	1,099	1,325	1,204	1,055	823
Tax Exempt	1,177	1,187	1,014	862	1,018	1,242	1,129	977	738.0
Taxable	122	136	120	95	81	83	76	78	85.4
AMT	1	<1	<1	<1	<1	<1	<1	<1	<1

Sector—Fixed Rate Securities, 2015–2019

Average daily par amount in \$ millions

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	6,413.1	7,072.8	7,064.2	7,318.6	7,134.8	7,882.2	7,060.4	6,757.1	6,873.3
Education	1,376.0	1,521.6	1,561.8	1,475.3	1,548.3	1,743.4	1,670.8	1,391.2	1,399.0
Health	373.2	529.9	527.5	490.6	459.1	424.7	397.3	469.0	542.9
Housing	95.5	107.6	118.1	134.1	185.3	172.2	170.6	180.6	216.9
Tax-Revenue	795.9	751.4	808.5	921.5	835.7	1,084.6	766.1	716.8	786.0
Transportation	634.7	667.1	703.5	779.7	831.5	840.1	648.6	850.8	984.2
Utility	845.4	924.4	817.0	874.1	828.8	864.2	854.2	709.6	889.1
Various Purpose	981.1	1,137.3	1,131.0	1,132.5	1,157.0	1,378.8	1,139.1	1,151.8	968.3
Other Sectors	1,311.3	1,433.5	1,396.8	1,510.9	1,289.1	1,374.2	1,413.8	1,287.4	1,086.8
Zero Coupon Total	336.7	425.9	391.1	280.5	282.3	327.9	308.1	271.3	224.4
Education	139.8	136.4	106.7	76.2	72.1	65.5	93.8	75.8	53.3
Health	3.9	9.1	5.5	2.8	5.3	4.2	9.8	3.2	4.0
Housing	3.1	1.0	0.2	0.4	0.1	0.2	0.1	0.2	0.1
Tax-Revenue	92.2	105.9	87.5	75.9	102.8	153.5	112.7	93.0	54.6
Transportation	28.5	35.8	32.1	28.3	28.0	38.3	16.6	22.6	34.8
Utility	5.3	5.3	3.9	3.2	3.6	2.8	5.4	4.0	2.1
Various Purpose	11.7	11.0	11.4	7.5	8.3	12.8	7.4	7.6	5.6
Other Sectors	52.2	121.4	143.7	86.1	62.1	50.5	62.3	65.0	69.9

Average daily number of trades

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	34,876	34,971	37,102	38,002	32,286	37,397	34,630	29,065	28,326
Education	8,534	8,755	9,448	9,531	8,381	9,786	9,254	7,502	7,063
Health	2,752	2,881	2,972	2,742	2,251	2,531	2,234	2,127	2,126
Housing	668	681	713	804	811	934	797	721	799
Tax-Revenue	3,553	3,378	3,808	3,915	3,301	4,099	3,492	2,875	2,779
Transportation	2,793	2,755	2,935	3,145	2,643	3,065	2,652	2,352	2,523
Utility	4,896	4,838	5,003	5,247	4,274	4,779	4,718	3,827	3,802
Various Purpose	4,231	4,346	4,736	4,972	4,271	4,996	4,539	3,842	3,745
Other Sectors	7,449	7,336	7,486	7,646	6,353	7,207	6,944	5,819	5,490
Zero Coupon Total	1,300	1,323	1,134	957	1,099	1,325	1,205	1,056	824
Education	621	630	546	459	453	481	490	460	382
Health	30	32	30	27	23	24	25	26	17
Housing	10	5	2	2	1	2	1	2	1
Tax-Revenue	175	181	157	135	317	494	346	266	173
Transportation	135	149	129	112	109	124	124	101	88
Utility	83	81	67	59	56	60	62	61	42
Various Purpose	87	100	80	63	52	55	59	50	46
Other Sectors	159	146	124	100	88	87	98	91	75

Remaining Maturity—Fixed Rate Securities, 2015–2019

Average daily par amount in \$ millions

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	6,413.1	7,072.8	7,064.2	7,318.6	7,134.8	7,882.2	7,060.4	6,757.1	6,873.3
0–9 Months	246.0	363.0	298.4	338.5	317.4	337.8	370.7	268.1	294.9
>9 Months–2 Years	398.8	409.3	459.4	547.7	502.2	440.8	531.9	666.6	367.1
>2 Years–5 Years	703.3	693.3	753.6	801.7	754.0	853.2	797.4	705.8	664.8
>5 Years–10 Years	1,234.4	1,299.9	1,308.8	1,401.8	1,347.4	1,516.6	1,370.9	1,230.0	1,280.4
>10 Years–15 Years	1,181.0	1,265.6	1,208.3	1,212.9	1,141.1	1,264.3	1,149.4	1,006.0	1,150.8
>15 Years–20 Years	1,006.6	1,172.4	1,141.2	1,028.3	1,025.8	1,146.2	942.0	963.3	1,055.9
>20 Years–30 Years	1,323.6	1,515.2	1,570.2	1,676.0	1,653.1	1,901.7	1,554.4	1,460.2	1,706.1
More than 30 Years	319.2	353.3	321.1	304.0	388.6	418.0	339.6	448.0	349.3
Unavailable	0.2	0.8	3.3	7.7	5.3	3.7	4.1	9.0	4.1
Zero Coupon Total	336.7	425.9	391.1	280.5	282.3	327.9	308.1	271.3	224.4
0–9 Months	5.2	4.7	4.2	3.8	5.0	3.8	6.2	5.3	4.8
>9 Months–2 Years	6.3	6.4	5.3	5.6	4.4	4.8	3.6	4.6	4.5
>2 Years–5 Years	15.7	14.6	14.9	13.3	12.6	14.2	13.4	12.9	9.9
>5 Years–10 Years	28.1	39.2	31.0	25.3	30.2	41.5	32.1	27.6	20.2
>10 Years–15 Years	38.8	59.6	42.1	26.0	34.6	47.5	37.1	29.8	24.7
>15 Years–20 Years	52.7	63.1	40.0	35.7	18.0	21.2	19.8	16.3	14.7
>20 Years–30 Years	91.6	90.1	92.8	88.9	93.5	96.6	109.3	90.9	77.5
More than 30 Years	98.4	148.2	160.7	81.8	80.8	85.2	86.5	83.6	68.1
Unavailable	<0.1	<0.1	0.1	0.1	3.2	12.9	0.2	0.2	0.1

Average daily number of trades

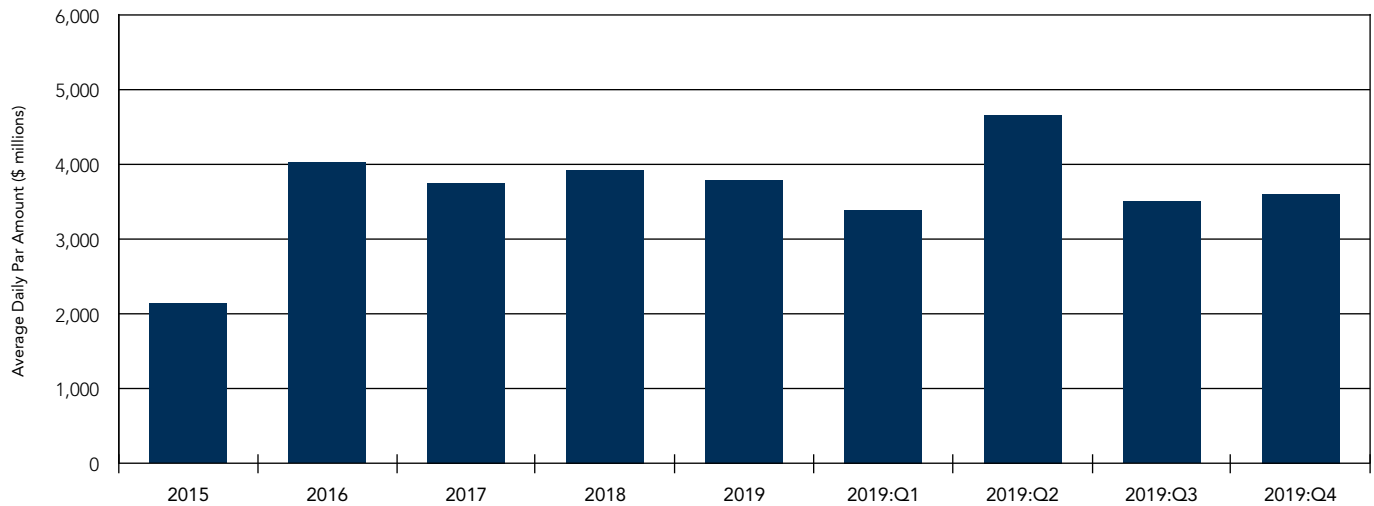
	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Fixed Rate Total	34,876	34,971	37,102	38,002	32,286	37,397	34,630	29,065	28,326
0–9 Months	938	1,025	1,167	1,507	1,526	1,631	1,829	1,208	1,446
>9 Months–2 Years	1,669	1,768	2,091	2,633	2,271	2,452	2,400	2,267	1,975
>2 Years–5 Years	4,391	4,388	5,000	5,736	4,854	5,558	5,315	4,388	4,195
>5 Years–10 Years	7,212	7,172	8,105	9,083	7,532	8,784	8,193	6,725	6,494
>10 Years–15 Years	6,687	6,435	6,799	6,864	5,707	6,716	5,903	5,203	5,057
>15 Years–20 Years	5,861	6,193	6,309	5,325	4,380	5,189	4,682	3,917	3,775
>20 Years–30 Years	7,232	7,149	6,849	6,183	5,254	6,221	5,590	4,610	4,647
More than 30 Years	881	837	768	648	737	827	690	724	710
Unavailable	4	5	14	24	25	20	28	24	27
Zero Coupon Total	1,300	1,323	1,134	957	1,099	1,325	1,205	1,056	824
0–9 Months	43	41	39	43	42	40	52	43	34
>9 Months–2 Years	86	82	74	80	62	71	61	65	51
>2 Years–5 Years	201	205	187	179	162	169	170	167	144
>5 Years–10 Years	299	322	272	234	278	319	302	273	220
>10 Years–15 Years	268	273	229	178	238	314	266	214	162
>15 Years–20 Years	190	182	160	117	102	115	115	102	78
>20 Years–30 Years	182	184	146	107	148	193	168	137	95
More than 30 Years	32	34	27	18	64	101	69	53	36
Unavailable	<1	<1	<1	1	2	1	2	2	2

Part Seven

Municipal Variable Rate Securities—Par Amount Traded and Number of Trades, 2015–2019

Transaction Summary—Variable Rate Securities, 2015–2019

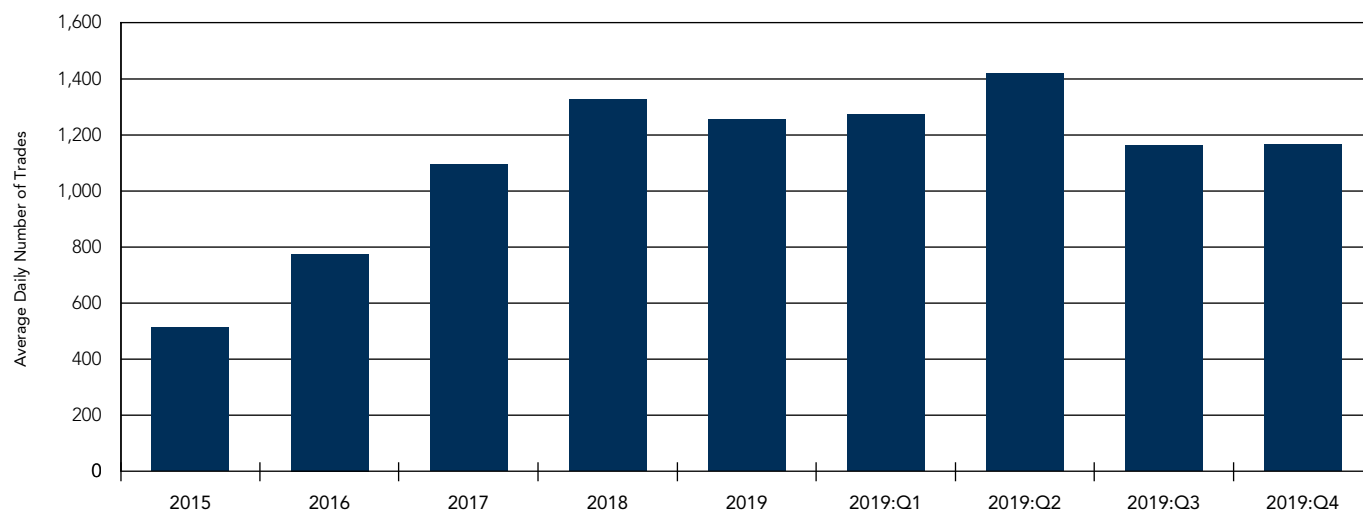
Average daily par amount in \$ millions



	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Total	2,140.8	4,027.4	3,748.1	3,926.2	3,791.2	3,388.2	4,663.2	3,503.2	3,604.9
0–\$25,000	1.0	1.1	1.2	1.2	1.0	1.1	1.1	1.0	0.9
\$25,001–\$50,000	1.6	1.8	1.8	1.7	1.5	1.6	1.6	1.4	1.2
\$50,001–\$75,000	0.7	0.7	0.8	0.9	0.8	0.9	0.9	0.8	0.8
\$75,001–\$100,000	5.1	6.6	13.9	18.8	17.5	17.5	19.4	16.8	16.4
\$100,001–\$500,000	28.6	42.6	89.7	121.1	109.5	116.9	122.3	99.8	99.5
\$500,001–\$1,000,000	35.5	54.1	98.1	121.8	116.3	122.1	132.5	105.6	105.5
\$1,000,001–\$2,000,000	66.0	108.6	156.1	185.9	180.5	183.1	209.7	161.6	168.2
More than \$2,000,000	2,002.5	3,811.8	3,386.7	3,474.9	3,364.0	2,945.0	4,175.8	3,116.2	3,212.2

Transaction Summary—Variable Rate Securities, 2015–2019

Average daily number of trades



	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Variable Rate Total	512	775	1,094	1,326	1,255	1,274	1,420	1,163	1,167
0–\$25,000	60	66	68	72	58	63	62	55	52
\$25,001–\$50,000	35	41	40	39	33	37	37	32	29
\$50,001–\$75,000	10	10	11	13	12	13	13	11	12
\$75,001–\$100,000	51	67	139	188	176	176	195	168	165
\$100,001–\$500,000	101	146	309	421	386	410	431	353	352
\$500,001–\$1,000,000	44	65	121	151	145	153	165	131	132
\$1,000,001–\$2,000,000	43	69	101	121	119	121	137	106	111
More than \$2,000,000	169	311	305	321	326	301	380	308	315

Variable Rate Demand Obligations¹ Trade Type and Size, 2015–2019

Average daily par amount in \$ millions

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Total	1,779.8	3,654.3	3,316.8	3,599.7	3,469.6	3,090.2	4,318.7	3,217.5	3,247.3
0–\$25,000	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$25,001–\$50,000	0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1
\$50,001–\$75,000	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$75,001–\$100,000	2.4	3.5	11.0	16.3	15.6	15.1	17.4	15.0	14.8
\$100,001–\$500,000	16.7	28.2	75.1	108.2	97.3	104.3	109.8	87.5	88.3
\$500,001–\$1,000,000	25.9	42.3	86.5	112.1	105.8	112.6	121.7	94.0	95.6
\$1,000,001–\$2,000,000	53.3	92.4	141.0	173.3	165.1	170.7	191.4	145.6	153.2
More than \$2,000,000	1,681.3	3,487.7	3,003.2	3,189.8	3,085.7	2,687.5	3,878.4	2,875.5	2,895.2
Customer Bought Total	863.4	1,715.7	1,646.8	1,805.3	1,717.2	1,514.5	2,158.0	1,558.4	1,635.4
0–\$25,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$25,001–\$50,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$50,001–\$75,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$75,001–\$100,000	0.9	1.6	4.5	6.2	4.9	5.2	5.7	4.5	4.2
\$100,001–\$500,000	6.9	14.5	36.3	49.6	38.8	44.6	44.4	34.5	31.9
\$500,001–\$1,000,000	11.7	21.7	42.7	53.5	47.5	51.4	54.3	42.7	41.9
\$1,000,001–\$2,000,000	24.9	46.6	72.3	86.9	79.8	83.1	93.4	68.3	74.8
More than \$2,000,000	818.9	1,631.1	1,490.9	1,609.1	1,546.2	1,330.2	1,960.1	1,408.3	1,482.5
Customer Sold Total	799.2	1,681.2	1,611.9	1,729.7	1,671.6	1,520.4	2,063.5	1,572.3	1,529.1
0–\$25,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$25,001–\$50,000	0.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$50,001–\$75,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$75,001–\$100,000	1.3	1.5	5.4	8.4	8.2	8.4	9.3	7.6	7.8
\$100,001–\$500,000	8.2	11.0	32.1	49.1	46.8	51.8	53.3	39.7	42.7
\$500,001–\$1,000,000	12.7	17.6	37.9	51.2	50.0	55.3	59.1	42.4	43.5
\$1,000,001–\$2,000,000	25.1	39.4	62.4	77.9	77.0	81.0	89.9	68.7	68.9
More than \$2,000,000	751.8	1,611.6	1,474.1	1,543.0	1,489.5	1,323.9	1,851.8	1,413.9	1,366.2
Inter-Dealer Total	117.3	257.4	58.2	64.8	80.9	55.5	97.3	86.9	82.9
0–\$25,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$25,001–\$50,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$50,001–\$75,000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
\$75,001–\$100,000	0.2	0.4	1.1	1.8	2.4	1.5	2.4	2.9	2.8
\$100,001–\$500,000	1.5	2.7	6.6	9.5	11.8	7.9	12.0	13.3	13.7
\$500,001–\$1,000,000	1.6	3.0	5.9	7.3	8.4	6.0	8.3	8.8	10.3
\$1,000,001–\$2,000,000	3.4	6.4	6.4	8.5	8.2	6.7	8.1	8.6	9.6
More than \$2,000,000	110.5	244.9	38.2	37.7	50.1	33.4	66.5	53.3	46.5

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.

Variable Rate Demand Obligations¹ Trade Type and Size, 2015–2019

Average daily number of trades

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Total	300	526	841	1,088	1,037	1,044	1,188	951	968
0–\$25,000	5	4	3	2	1	1	1	1	1
\$25,001–\$50,000	2	1	1	1	1	1	1	1	2
\$50,001–\$75,000	1	1	<1	1	<1	<1	<1	1	1
\$75,001–\$100,000	24	35	110	163	156	151	174	150	149
\$100,001–\$500,000	56	92	253	371	338	360	381	306	308
\$500,001–\$1,000,000	32	51	106	139	132	141	152	117	120
\$1,000,001–\$2,000,000	35	59	91	113	109	113	126	96	101
More than \$2,000,000	145	283	276	297	299	277	353	280	287
Customer Bought Total	137	256	406	504	443	460	516	398	400
0–\$25,000	3	2	1	1	<1	<1	1	1	<1
\$25,001–\$50,000	1	1	<1	<1	<1	<1	<1	<1	<1
\$50,001–\$75,000	<1	<1	<1	<1	<1	<1	<1	<1	<1
\$75,001–\$100,000	9	16	45	62	49	52	57	45	42
\$100,001–\$500,000	23	46	120	167	132	152	151	117	109
\$500,001–\$1,000,000	14	26	52	66	59	64	67	53	52
\$1,000,001–\$2,000,000	16	30	47	57	53	55	61	45	49
More than \$2,000,000	71	135	139	150	150	137	179	136	147
Customer Sold Total	142	229	384	511	503	522	580	451	461
0–\$25,000	3	2	1	1	1	1	1	1	<1
\$25,001–\$50,000	1	1	1	1	1	1	1	1	1
\$50,001–\$75,000	1	<1	<1	<1	<1	<1	<1	<1	<1
\$75,001–\$100,000	13	15	54	84	83	84	93	76	78
\$100,001–\$500,000	28	37	109	170	163	179	186	139	149
\$500,001–\$1,000,000	16	21	47	64	63	69	74	53	55
\$1,000,001–\$2,000,000	16	25	40	51	51	53	59	45	45
More than \$2,000,000	66	128	132	141	143	135	167	137	133
Inter-Dealer Total	21	41	51	73	91	62	93	103	106
0–\$25,000	<1	<1	<1	<1	<1	<1	<1	<1	<1
\$25,001–\$50,000	<1	<1	<1	<1	<1	<1	<1	<1	1
\$50,001–\$75,000	<1	<1	<1	<1	<1	<1	<1	<1	<1
\$75,001–\$100,000	2	4	11	18	24	15	24	29	28
\$100,001–\$500,000	5	9	23	34	44	29	45	50	51
\$500,001–\$1,000,000	2	4	7	9	11	8	10	11	13
\$1,000,001–\$2,000,000	2	4	4	6	6	4	5	6	7
More than \$2,000,000	8	20	5	6	7	5	8	7	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.

Auction Rate Securities¹ Trade Type and Size, 2015–2019

Average daily par amount in \$ millions

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Total	22.7	21.5	22.5	27.6	20.4	22.8	24.7	16.1	18.2
0–\$25,000	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
\$25,001–\$50,000	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2
\$50,001–\$75,000	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
\$75,001–\$100,000	1.0	0.8	0.8	0.8	0.5	0.9	0.5	0.4	0.4
\$100,001–\$500,000	4.1	3.7	4.4	4.8	4.8	4.7	4.9	5.1	4.7
\$500,001–\$1,000,000	3.1	3.3	3.1	3.1	2.8	3.0	2.8	2.8	2.6
\$1,000,001–\$2,000,000	2.7	3.8	2.9	3.0	2.8	2.9	3.3	2.1	2.8
More than \$2,000,000	11.3	9.5	10.6	15.1	8.8	10.7	12.5	5.0	7.0
Customer Bought									
Total	8.8	8.1	8.9	10.1	7.2	8.1	8.9	5.2	6.7
0–\$25,000	<1.0	<0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$25,001–\$50,000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$50,001–\$75,000	0.1	<0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$75,001–\$100,000	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1
\$100,001–\$500,000	1.4	1.4	1.7	1.5	1.5	1.4	1.3	1.7	1.5
\$500,001–\$1,000,000	1.1	1.2	1.1	1.1	1.0	1.1	1.0	0.9	1.0
\$1,000,001–\$2,000,000	0.9	1.3	1.0	1.0	0.9	1.0	1.2	0.6	0.9
More than \$2,000,000	5.0	4.0	4.7	5.9	3.3	4.1	5.1	1.4	2.9
Customer Sold									
Total	7.9	6.9	7.3	9.4	6.5	6.9	7.7	5.0	6.3
0–\$25,000	<1.0	<0.1	<0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$25,001–\$50,000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$50,001–\$75,000	<1.0	<0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$75,001–\$100,000	0.6	0.4	0.4	0.4	0.2	0.4	0.2	0.1	0.1
\$100,001–\$500,000	1.3	1.3	1.4	1.8	1.8	1.8	2.0	1.7	1.8
\$500,001–\$1,000,000	0.9	1.1	1.0	1.0	0.9	0.9	0.9	0.8	0.9
\$1,000,001–\$2,000,000	0.9	1.3	0.9	0.8	0.8	0.7	0.9	0.7	0.8
More than \$2,000,000	4.1	2.7	3.4	5.2	2.6	2.9	3.4	1.5	2.4
Inter-Dealer									
Total	5.9	6.4	6.3	8.1	6.7	7.8	8.0	5.9	5.1
0–\$25,000	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
\$25,001–\$50,000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$50,001–\$75,000	<1.0	<0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$75,001–\$100,000	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1
\$100,001–\$500,000	1.3	1.0	1.3	1.5	1.6	1.5	1.6	1.7	1.4
\$500,001–\$1,000,000	1.0	1.0	1.1	1.0	0.9	1.1	0.9	1.0	0.7
\$1,000,001–\$2,000,000	0.9	1.2	1.0	1.1	1.0	1.1	1.2	0.8	1.0
More than \$2,000,000	2.2	2.8	2.5	4.0	2.9	3.7	4.0	2.1	1.7

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.

Auction Rate Securities¹ Trade Type and Size, 2015–2019

Average daily number of trades

	2015	2016	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
Total	45	39	46	53	49	50	52	48	45
0–\$25,000	5	3	6	9	8	7	10	9	8
\$25,001–\$50,000	5	4	6	6	6	5	6	6	5
\$50,001–\$75,000	2	2	2	3	3	3	3	3	4
\$75,001–\$100,000	10	8	8	8	5	9	5	4	4
\$100,001–\$500,000	15	14	16	18	19	18	19	20	18
\$500,001–\$1,000,000	4	4	4	4	4	4	4	4	3
\$1,000,001–\$2,000,000	2	3	2	2	2	2	2	1	2
More than \$2,000,000	2	2	2	2	2	2	2	1	1
Customer Bought									
Total	14	13	17	18	17	17	17	19	17
0–\$25,000	2	1	3	3	4	3	4	4	4
\$25,001–\$50,000	2	1	2	3	2	2	2	3	2
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	2	2	2	2	2	3	2	2	2
\$100,001–\$500,000	5	5	6	6	6	6	5	7	5
\$500,001–\$1,000,000	1	2	1	2	1	1	1	1	1
\$1,000,001–\$2,000,000	1	1	1	1	1	1	<1	<1	1
More than \$2,000,000	1	1	1	1	1	1	<1	<1	1
Customer Sold									
Total	17	15	16	20	17	19	19	15	16
0–\$25,000	2	1	2	3	3	2	3	3	3
\$25,001–\$50,000	2	1	2	2	2	2	2	2	2
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	6	4	4	4	2	4	2	1	1
\$100,001–\$500,000	5	5	5	7	7	7	8	7	7
\$500,001–\$1,000,000	1	1	1	1	1	1	1	1	1
\$1,000,001–\$2,000,000	1	1	1	1	1	<1	1	<1	1
More than \$2,000,000	1	1	1	1	<1	<1	<1	<1	<1
Inter-Dealer									
Total	14	12	13	15	14	14	15	14	13
0–\$25,000	2	1	1	2	2	2	3	2	2
\$25,001–\$50,000	1	1	1	2	1	2	2	1	1
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	3	2	2	2	1	2	1	1	1
\$100,001–\$500,000	5	4	5	6	6	6	6	6	6
\$500,001–\$1,000,000	1	1	1	1	1	2	1	1	1
\$1,000,001–\$2,000,000	1	1	1	1	1	1	1	1	1
More than \$2,000,000	<1	1	1	1	1	1	<1	<1	<1

¹Based 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.

Part Eight

Yield Distributions, 2017–2019

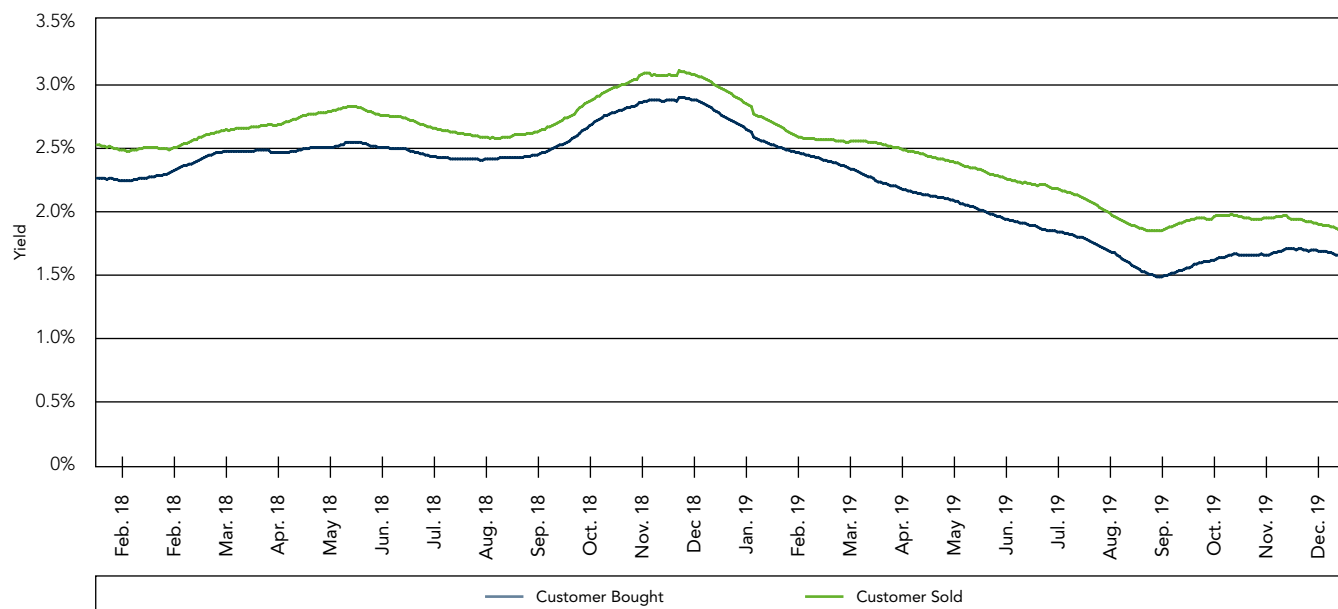
Customer Trade and Size of Tax Exempt, Fixed Rate Securities, 2017–2019

Average daily yields

	2017	2018	2019	2019:Q1	2019:Q2	2019:Q3	2019:Q4
All Trades							
Total	2.46	2.64	2.08	2.48	2.15	1.80	1.79
0–\$25,000	2.55	2.71	2.14	2.56	2.24	1.84	1.81
\$25,001–\$50,000	2.42	2.61	2.05	2.45	2.09	1.76	1.74
\$50,001–\$75,000	2.23	2.51	1.95	2.33	2.01	1.68	1.68
\$75,001–\$100,000	2.33	2.56	2.00	2.37	2.04	1.72	1.75
\$100,001–\$500,000	2.29	2.51	1.98	2.31	2.04	1.73	1.76
\$500,001–\$1,000,000	2.63	2.61	2.11	2.41	2.17	1.88	1.89
\$1,000,001–\$2,000,000	2.45	2.66	2.17	2.48	2.19	1.94	1.99
More than \$2,000,000	2.66	2.82	2.31	2.70	2.34	2.02	2.07
Customer Bought							
Total	2.28	2.53	1.95	2.36	1.99	1.63	1.66
0–\$25,000	2.36	2.60	1.98	2.44	2.04	1.64	1.65
\$25,001–\$50,000	2.26	2.50	1.92	2.34	1.94	1.59	1.63
\$50,001–\$75,000	2.08	2.36	1.80	2.18	1.84	1.53	1.55
\$75,001–\$100,000	2.16	2.44	1.87	2.24	1.90	1.57	1.63
\$100,001–\$500,000	2.05	2.36	1.85	2.17	1.90	1.59	1.65
\$500,001–\$1,000,000	2.29	2.56	2.05	2.35	2.11	1.83	1.87
\$1,000,001–\$2,000,000	2.46	2.68	2.16	2.52	2.18	1.92	2.00
More than \$2,000,000	2.70	2.88	2.33	2.76	2.37	2.04	2.12
Customer Sold							
Total	2.45	2.73	2.20	2.56	2.30	1.94	1.88
0–\$25,000	2.60	2.86	2.33	2.72	2.46	2.07	2.00
\$25,001–\$50,000	2.38	2.69	2.13	2.49	2.23	1.90	1.80
\$50,001–\$75,000	2.25	2.59	2.02	2.37	2.12	1.76	1.72
\$75,001–\$100,000	2.21	2.57	2.01	2.35	2.10	1.77	1.73
\$100,001–\$500,000	2.14	2.48	1.95	2.26	2.04	1.71	1.68
\$500,001–\$1,000,000	2.31	2.54	2.04	2.34	2.11	1.79	1.75
\$1,000,001–\$2,000,000	2.36	2.58	2.10	2.39	2.13	1.84	1.84
More than \$2,000,000	2.66	2.76	2.27	2.63	2.32	1.97	1.95

Daily Yield of Customer Trades of Tax Exempt, Fixed Rate Securities, 2018–2019

30-day trailing average



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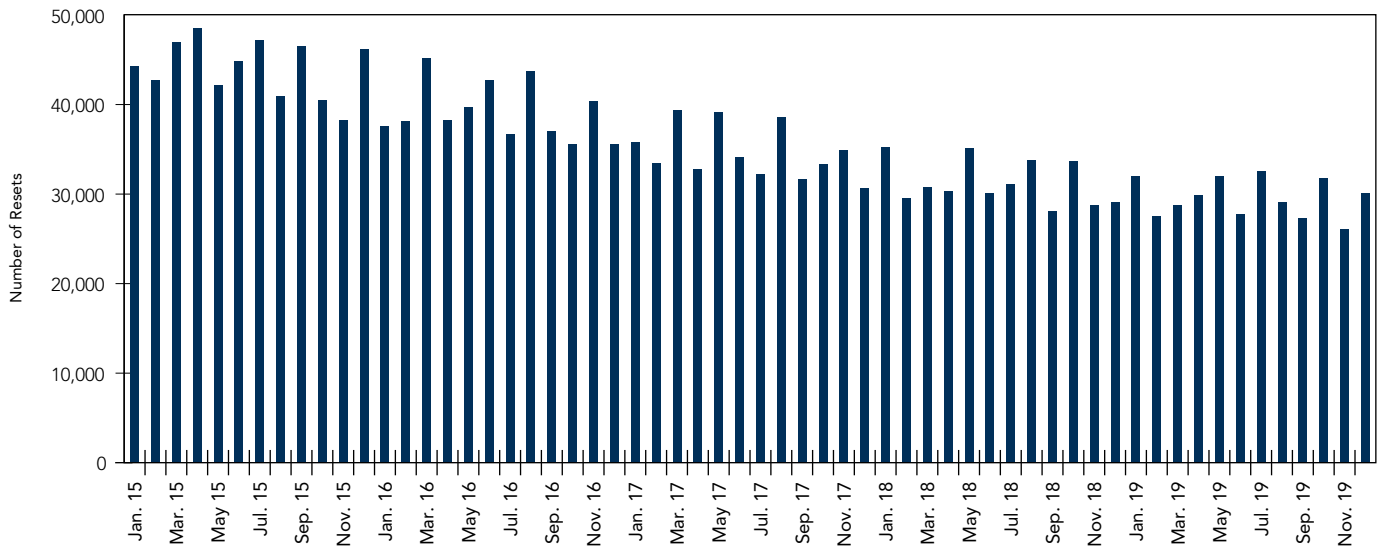
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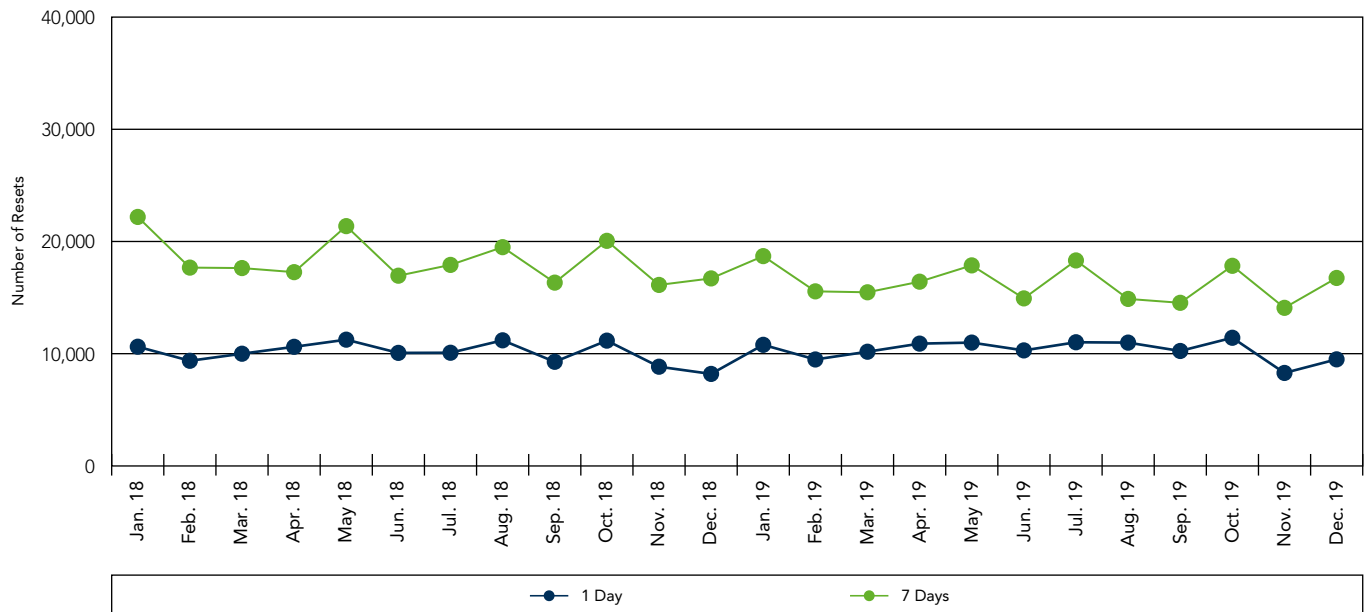
Part Nine

Municipal Market Variable Securities Rate Resets, 2015–2019

Number of Variable Rate Demand Obligations Rate Resets¹, 2015–2019

	2015	2016	2017	2018	2019
January	44,249	37,600	35,828	35,287	32,017
February	42,699	38,167	33,470	29,509	27,555
March	46,925	45,188	39,420	30,717	28,787
April	48,513	38,295	32,734	30,369	29,853
May	42,149	39,717	39,171	35,111	32,045
June	44,842	42,712	34,169	30,144	27,793
July	47,218	36,692	32,191	31,118	32,541
August	40,952	43,735	38,606	33,772	29,059
September	46,569	37,068	31,678	28,062	27,313
October	40,473	35,620	33,300	33,699	31,768
November	38,253	40,331	34,934	28,740	26,132
December	46,185	35,617	30,658	29,052	30,060

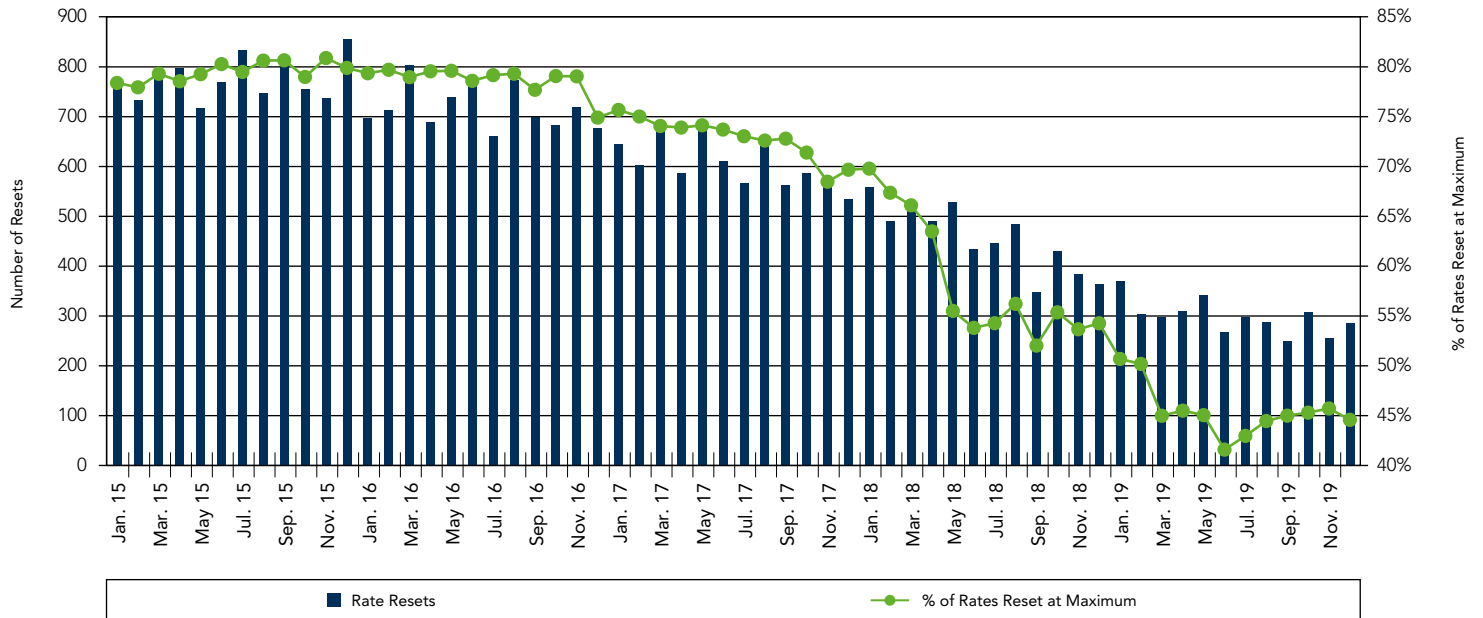
¹ Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

Number of Variable Rate Demand Obligations Rate Resets by Period¹, 2018–2019

	1 Day	7 Days
Jan. 18	10,624	22,192
Feb. 18	9,371	17,676
Mar. 18	10,000	17,635
Apr. 18	10,616	17,271
May 18	11,253	21,373
Jun. 18	10,075	16,955
Jul. 18	10,087	17,917
Aug. 18	11,195	19,498
Sep. 18	9,280	16,337
Oct. 18	11,167	20,062
Nov. 18	8,842	16,132
Dec. 18	8,200	16,713

	1 Day	7 Days
Jan. 19	10,793	18,700
Feb. 19	9,488	15,559
Mar. 19	10,178	15,476
Apr. 19	10,900	16,421
May 19	10,992	17,874
Jun. 19	10,296	14,932
Jul. 19	11,022	18,315
Aug. 19	10,991	14,885
Sep. 19	10,245	14,538
Oct. 19	11,422	17,836
Nov. 19	8,287	14,090
Dec. 19	9,499	16,754

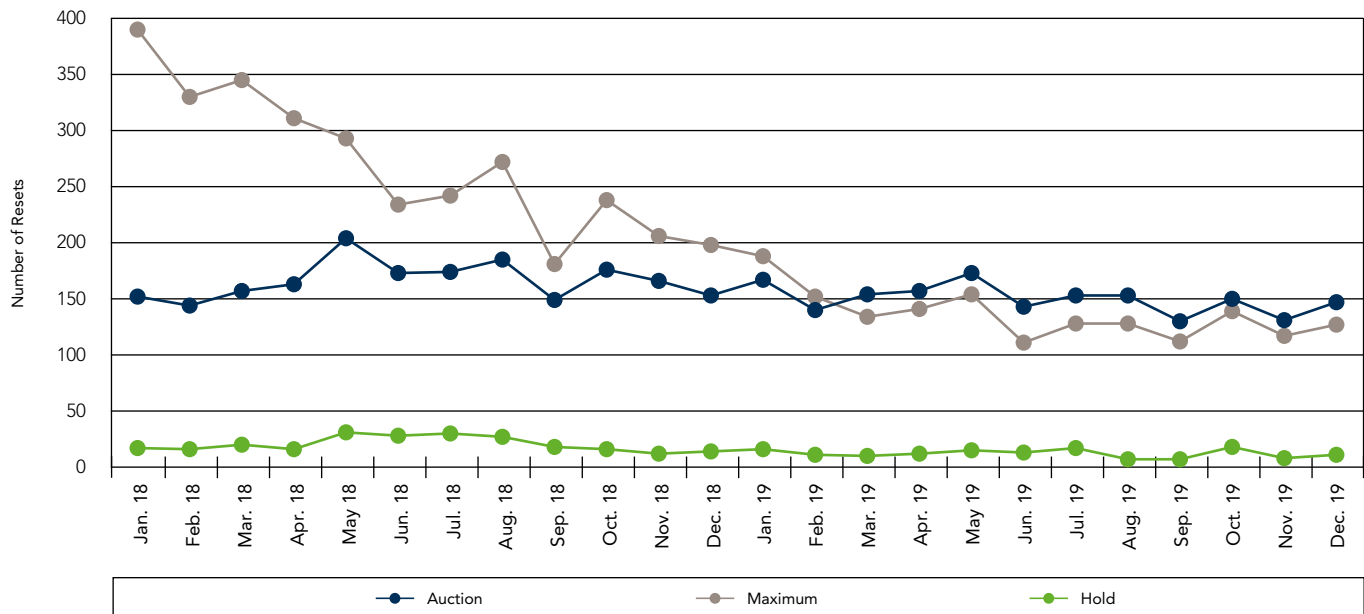
¹ Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System.
May exclude submissions that could not be categorized based on available data.
The remaining 70,481 resets were for securities with other periodic reset frequencies.

Number of Auction Rate Securities Rate Resets¹, 2015–2019

	2015	2016	2017	2018	2019
January	763	697	645	559	371
February	734	714	604	490	303
March	787	803	686	522	298
April	797	689	586	490	310
May	718	740	684	528	342
June	770	761	612	435	267
July	833	662	567	446	298
August	748	773	642	484	288
September	811	699	562	348	249
October	756	683	587	430	307
November	737	720	577	384	256
December	855	677	534	365	285

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

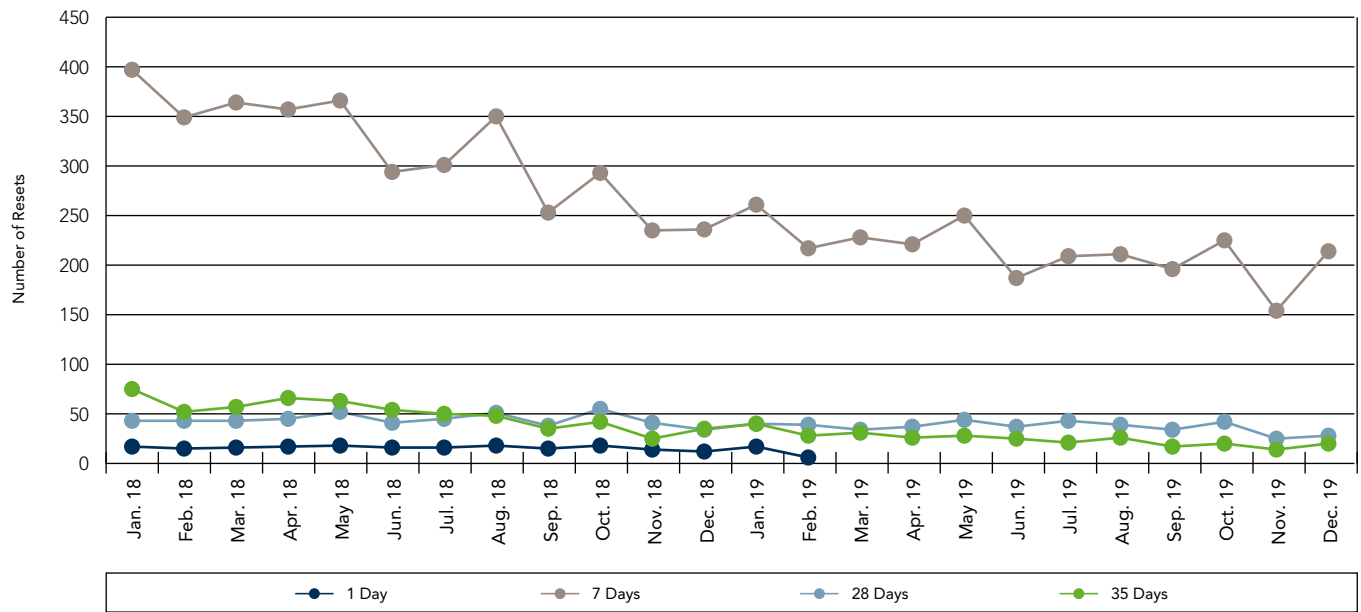
Number of Auction Rate Securities Rate Resets by Type¹, 2018–2019



	Auction	Maximum	Hold
Jan. 18	152	390	17
Feb. 18	144	330	16
Mar. 18	157	345	20
Apr. 18	163	311	16
May 18	204	293	31
Jun. 18	173	234	28
Jul. 18	174	242	30
Aug. 18	185	272	27
Sep. 18	149	181	18
Oct. 18	176	238	16
Nov. 18	166	206	12
Dec. 18	153	198	14

	Auction	Maximum	Hold
Jan. 19	167	188	16
Feb. 19	140	152	11
Mar. 19	154	134	10
Apr. 19	157	141	12
May 19	173	154	15
Jun. 19	143	111	13
Jul. 19	153	128	17
Aug. 19	153	128	7
Sep. 19	130	112	7
Oct. 19	150	139	18
Nov. 19	131	117	8
Dec. 19	147	127	11

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.

Number of Auction Rate Securities Rate Resets by Period¹, 2018–2019

	1 Day	7 Days	28 Days	35 Days
Jan. 18	17	397	43	75
Feb. 18	15	349	43	52
Mar. 18	16	364	43	57
Apr. 18	17	357	45	66
May 18	18	366	52	63
Jun. 18	16	294	41	54
Jul. 18	16	301	45	50
Aug. 18	18	350	51	48
Sep. 18	15	253	38	35
Oct. 18	18	293	55	42
Nov. 18	14	235	41	25
Dec. 18	12	236	34	35

	1 Day	7 Days	28 Days	35 Days
Jan. 19	17	261	40	40
Feb. 19	6	217	39	28
Mar. 19	-	228	34	31
Apr. 19	-	221	37	26
May 19	-	250	44	28
Jun. 19	-	187	37	25
Jul. 19	-	209	43	21
Aug. 19	-	211	39	26
Sep. 19	-	196	34	17
Oct. 19	-	225	42	20
Nov. 19	-	154	25	14
Dec. 19	-	214	28	20

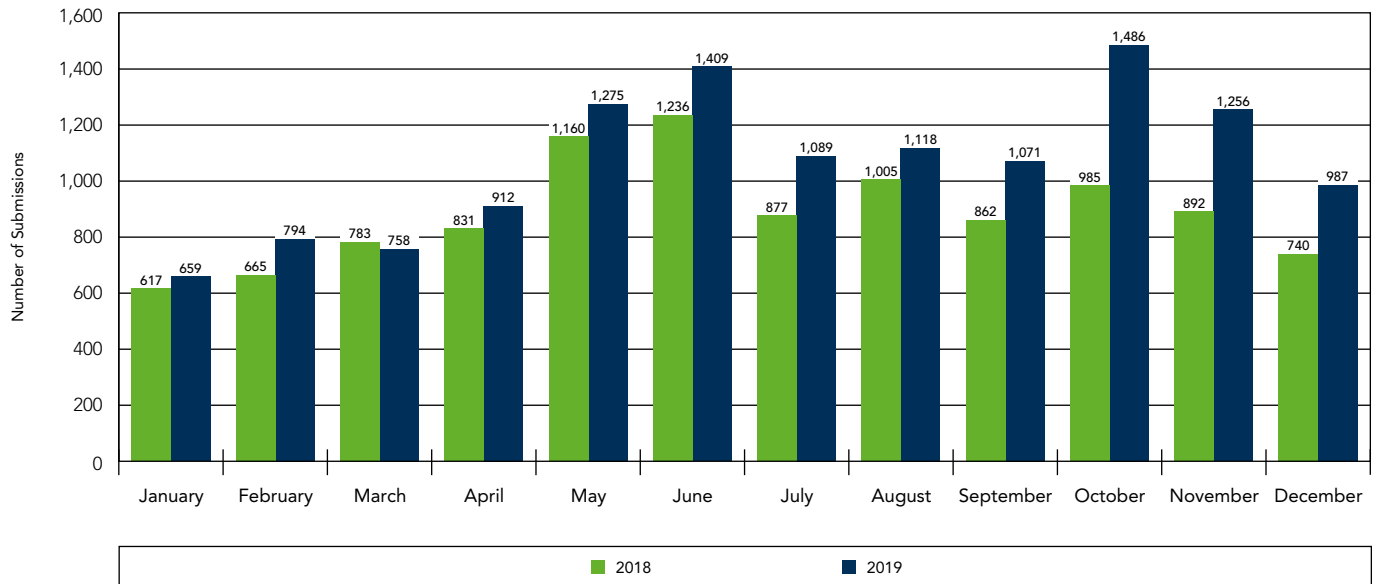
¹ Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

Part Ten

Municipal Market Disclosures, 2015–2019

Number of Primary Market Submissions¹, 2018–2019

By number of submissions

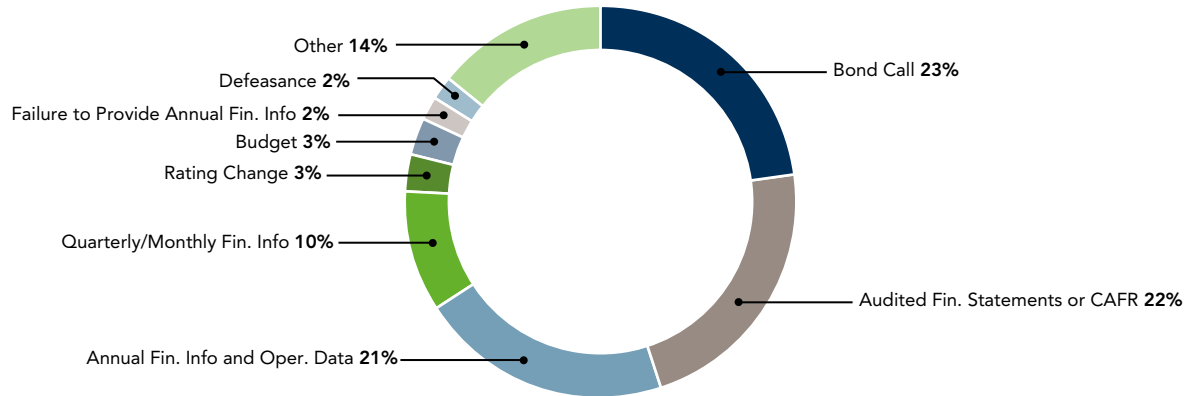


	2018	2019
January	617	659
February	665	794
March	783	758
April	831	912
May	1,160	1,275
June	1,236	1,409
July	877	1,089
August	1,005	1,118
September	862	1,071
October	985	1,486
November	892	1,256
December	740	987
Total	10,653	12,814

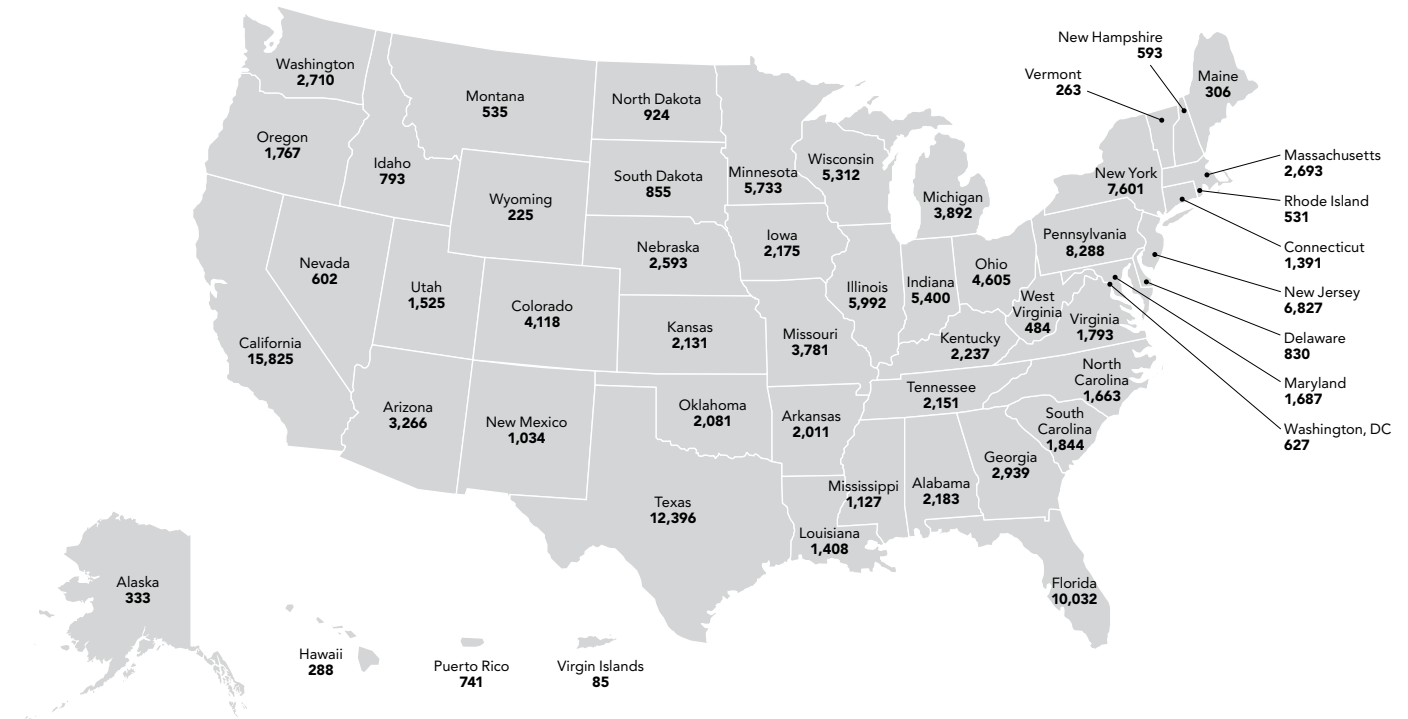
¹ Excludes remarketings.

Continuing Disclosures Submissions, 2019

By number of documents

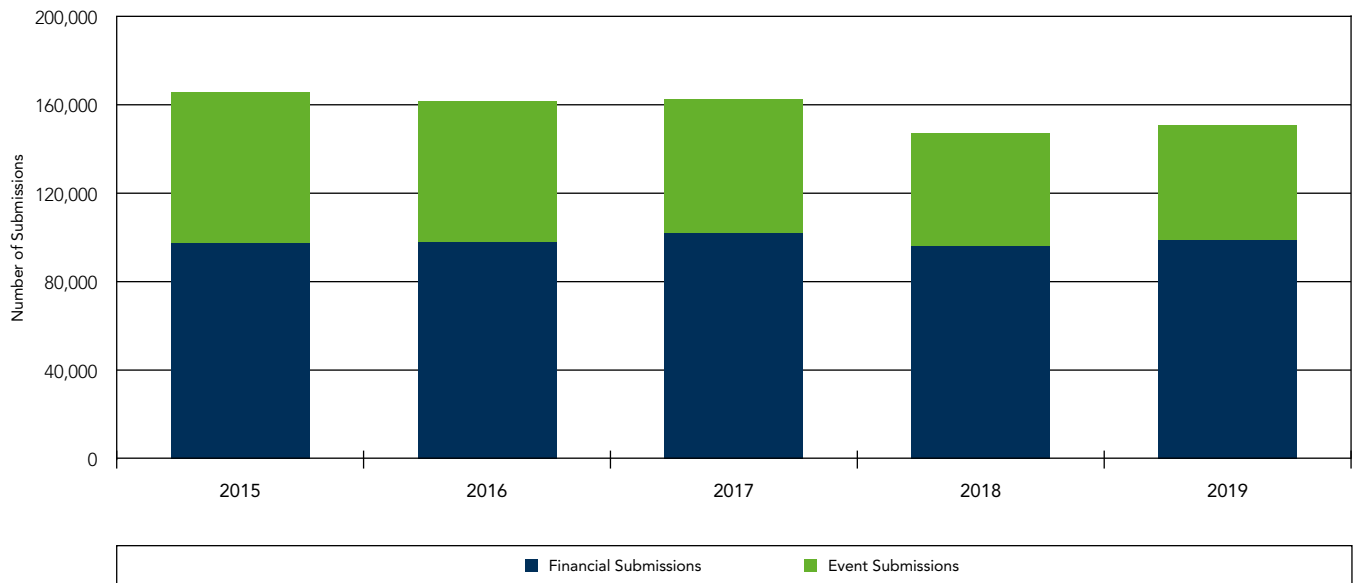


By state¹



¹ Based on information derived from the CUSIP Service Bureau.

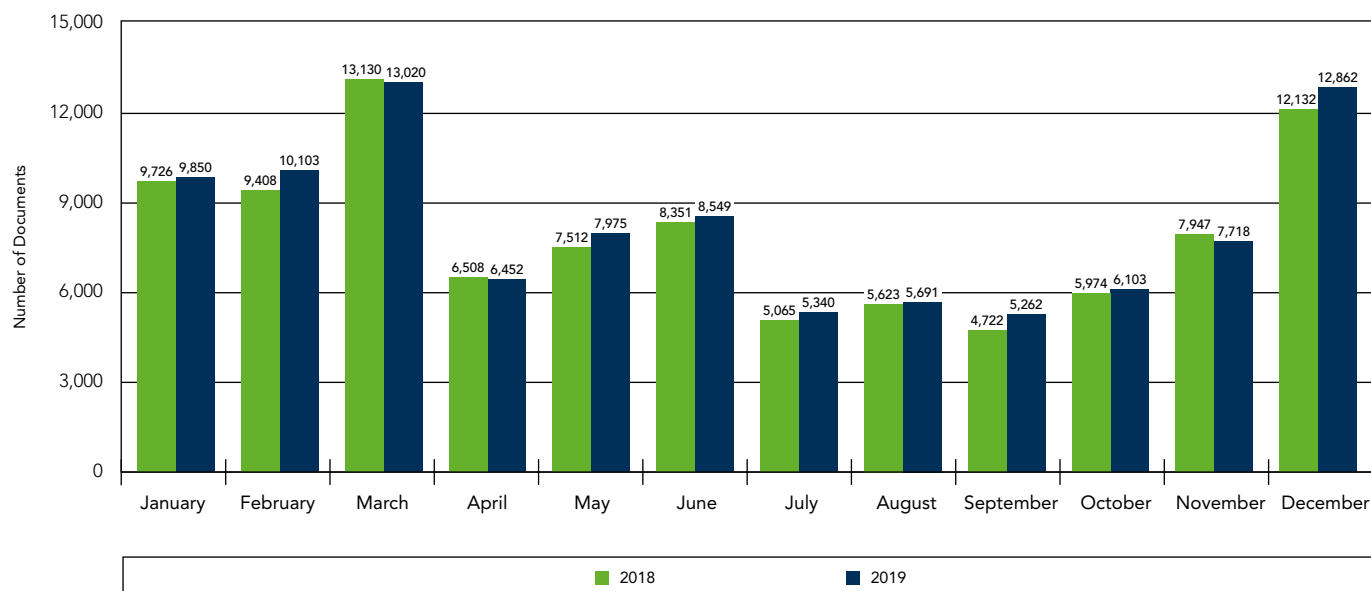
Number of Continuing Disclosure Submissions, 2015–2019



	Financial Submissions	Event Submissions
2015	97,379	68,309
2016	98,084	63,586
2017	101,843	60,883
2018	96,098	51,182
2019	98,925	51,660

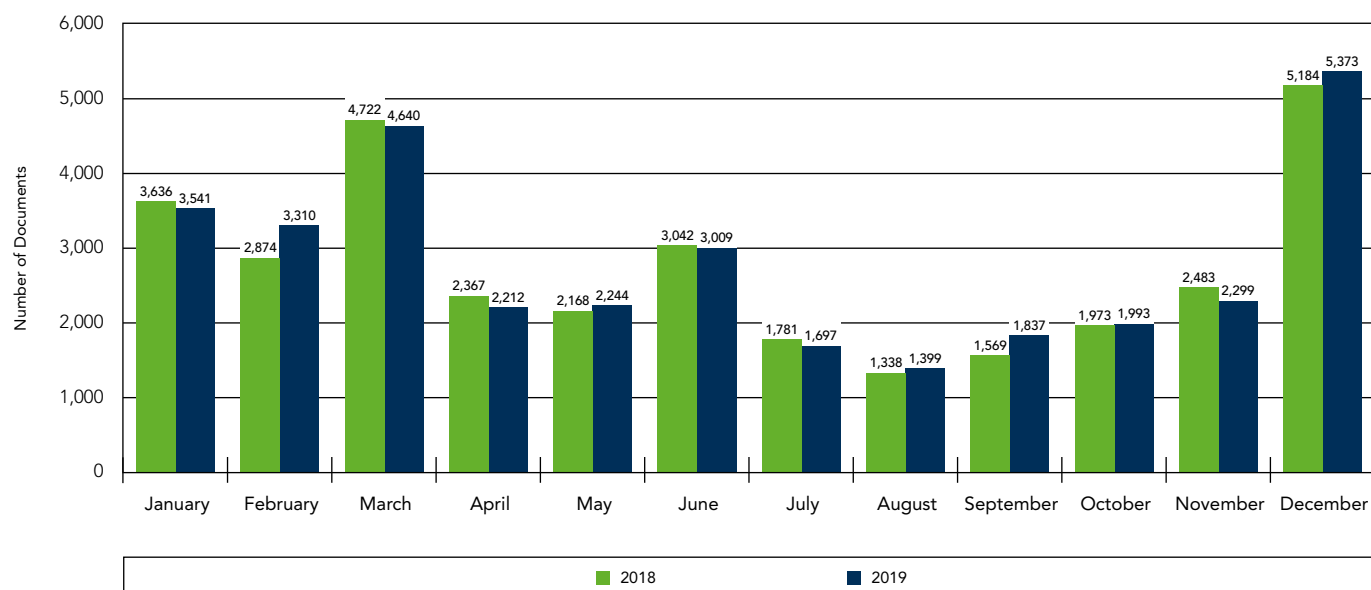
All Financial Disclosures, 2018–2019

By number of documents



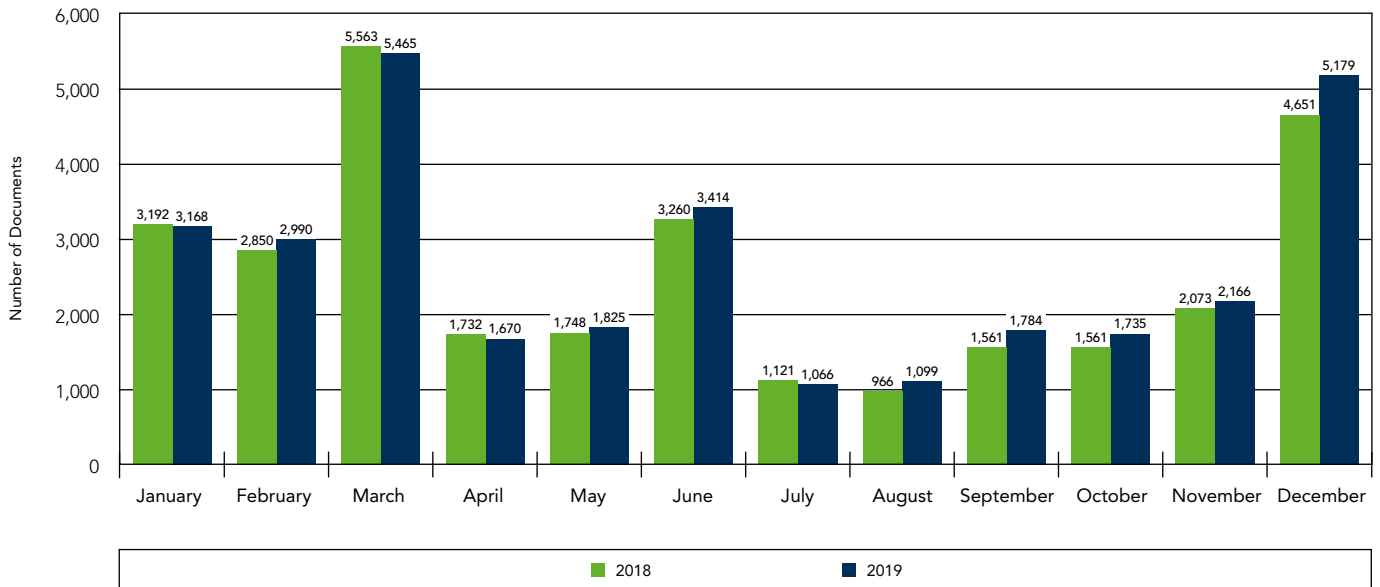
Audited Financial Statements or CAFR Submissions, 2018–2019

By number of documents



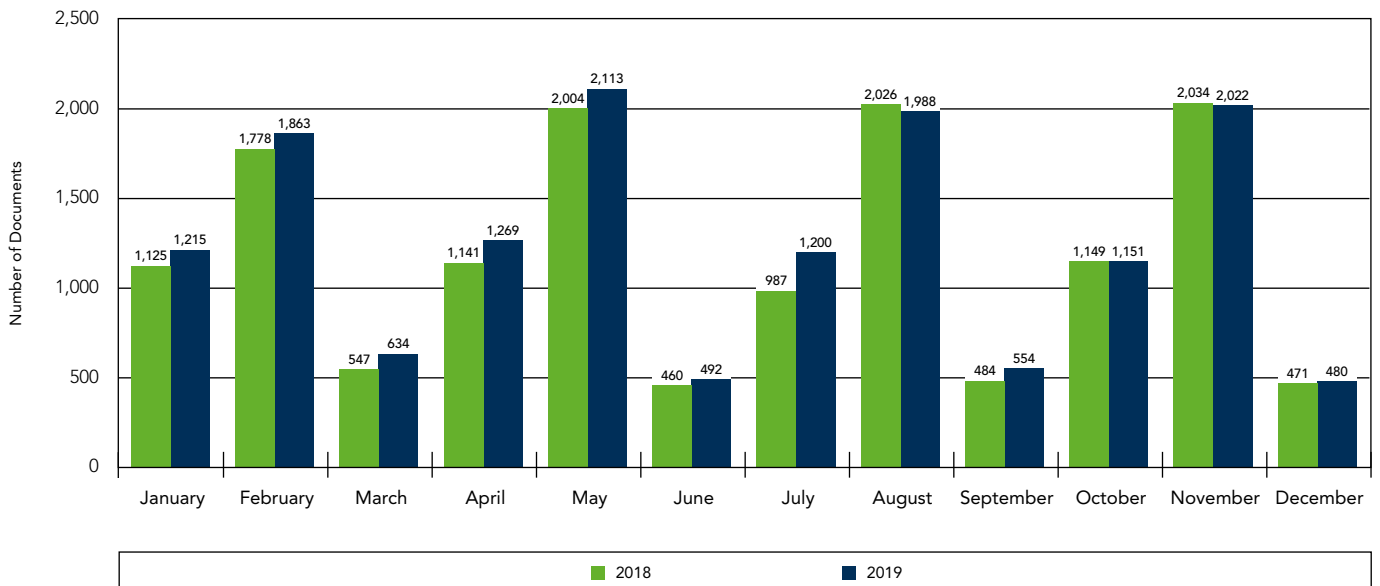
Annual Financial Information and Operating Data Submissions, 2018–2019

By number of documents



Quarterly/Monthly Financial Information Submissions, 2018–2019

By number of documents



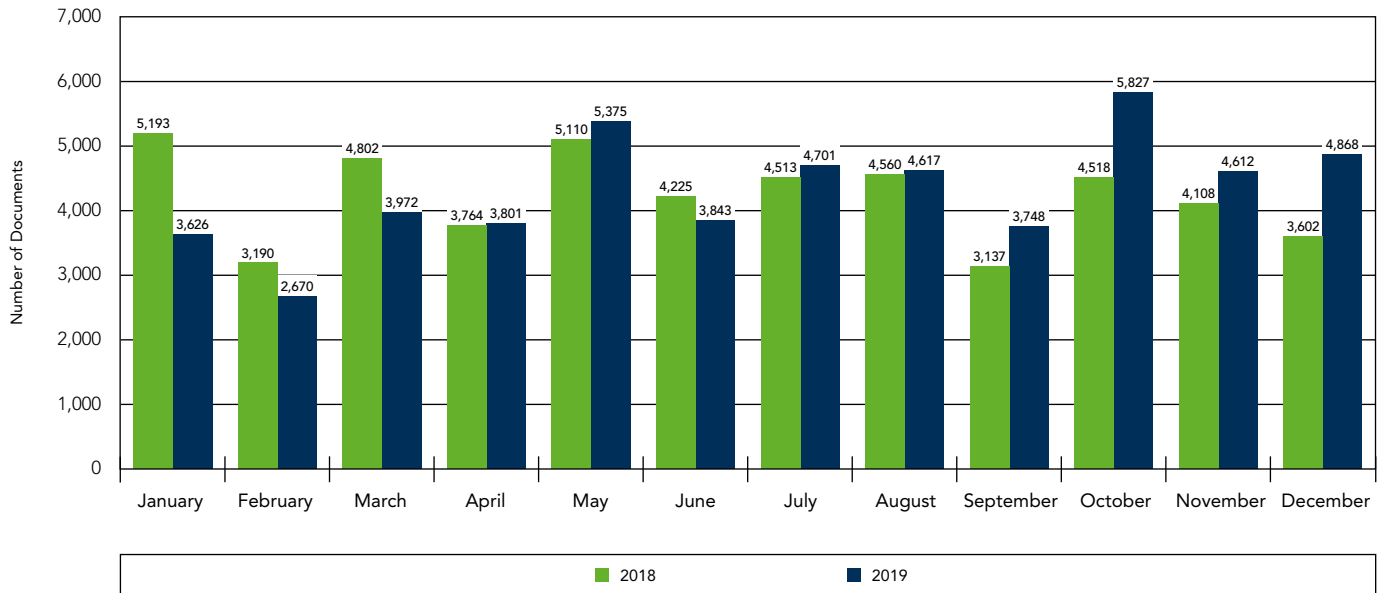
Other Financial Disclosures, 2018–2019

Financial disclosures

By Number of Documents	2018	2019
BUDGET	4,624	4,635
CHANGE IN ACCOUNTING STANDARD	2	6
CHANGE IN FISCAL YEAR/TIMING OF ANNUAL DISCLOSURE	33	34
CONSULTANT REPORTS	230	267
FAILURE TO PROVIDE ANNUAL FINANCIAL INFORMATION	2,881	2,885
INFORMATION PROVIDED TO RATING AGENCY, CREDIT/LIQUIDITY PROVIDER OR OTHER THIRD PARTY	182	228
INTERIM/ADDITIONAL FINANCIAL INFORMATION/OPERATING DATA	1,329	1,482
INVESTMENT/DEBT/FINANCIAL POLICY	97	111
OTHER FINANCIAL/OPERATING DATA	9,099	9,181

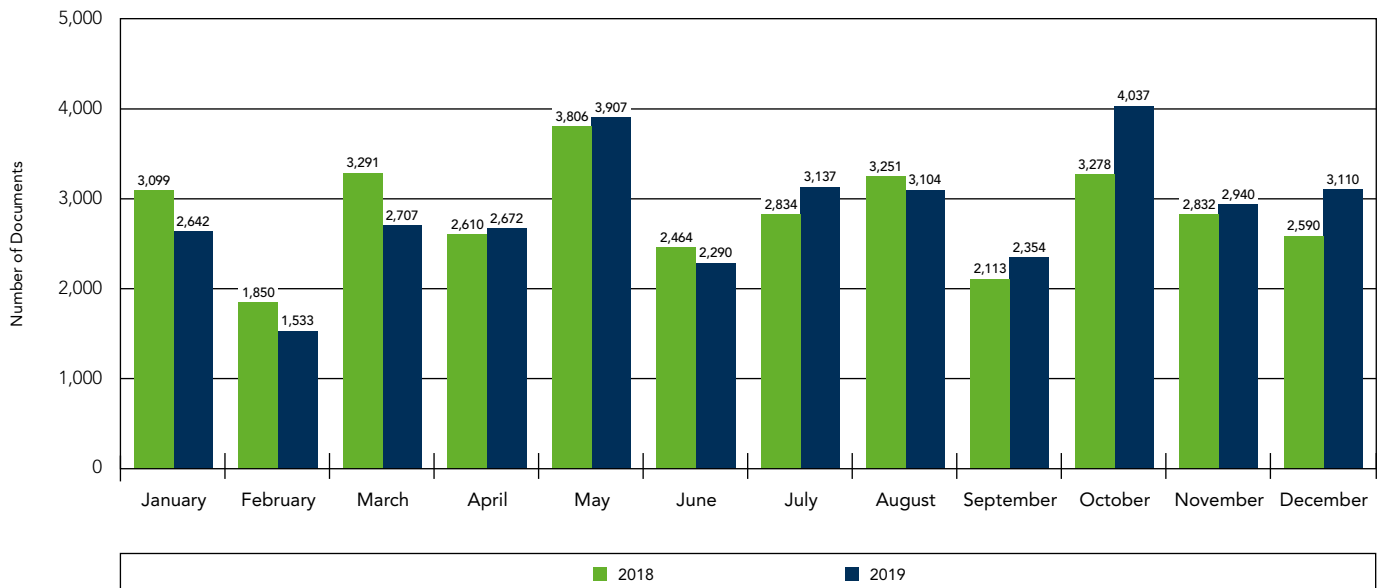
All Event Disclosures, 2018–2019

By number of documents



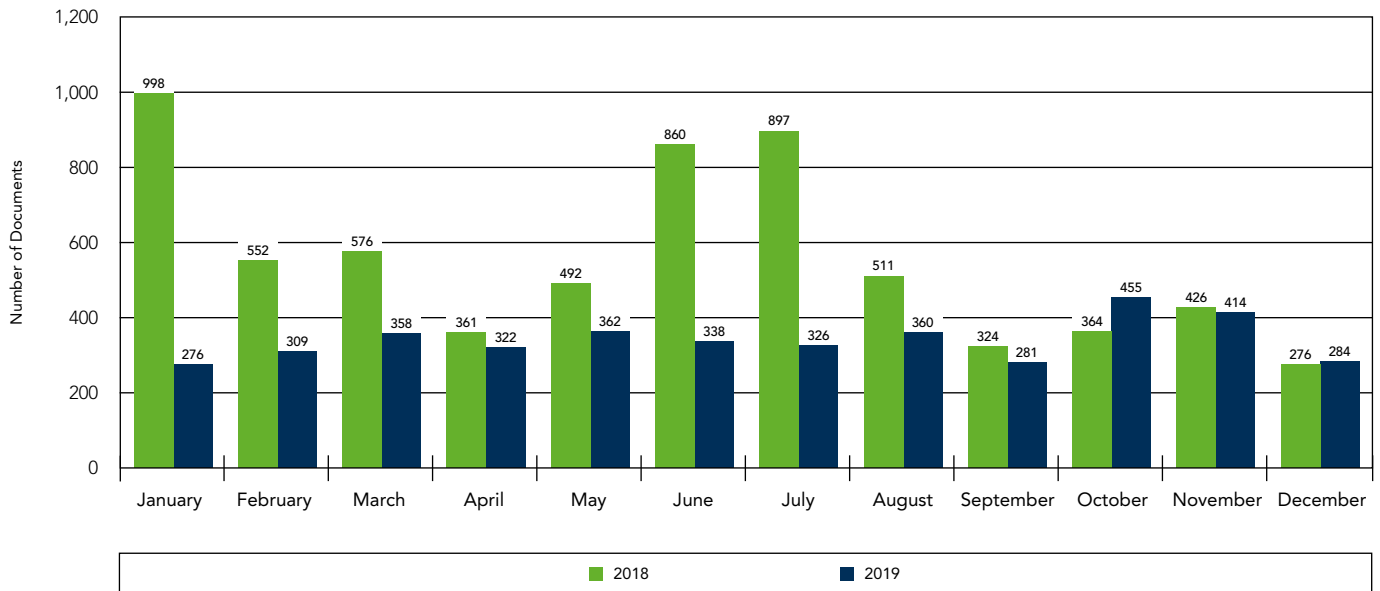
Bond Call Submissions, 2018–2019

By number of documents



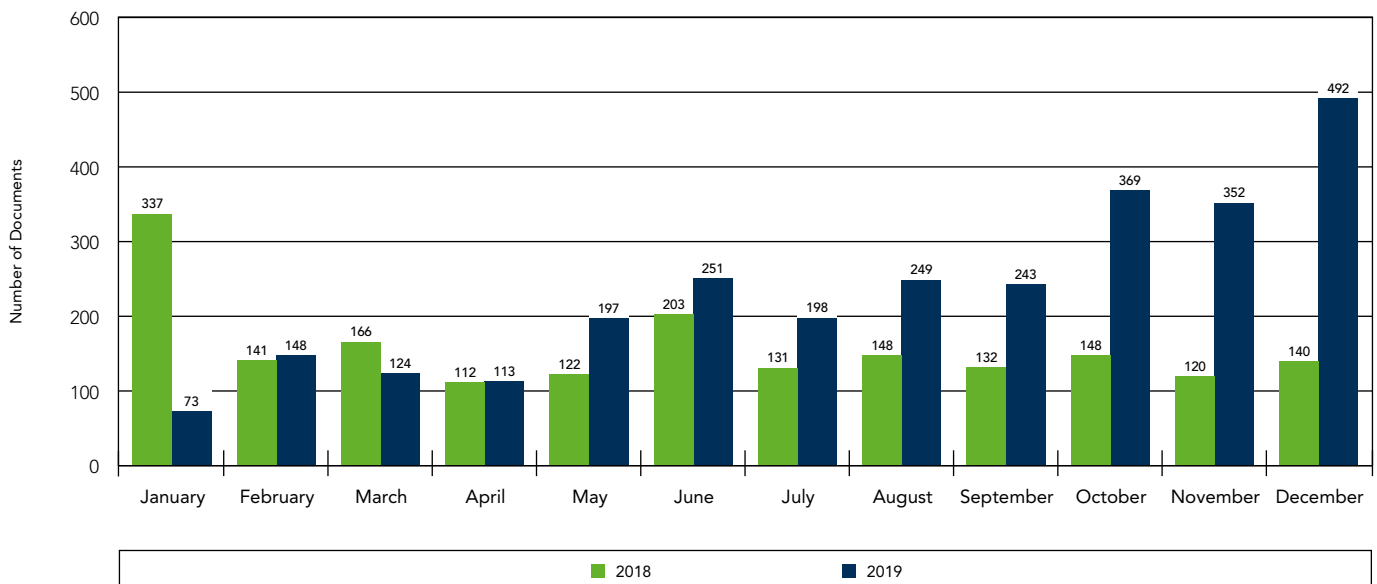
Rating Change Submissions, 2018–2019

By number of documents



Defeasance Submissions, 2018–2019

By number of documents



Other Event Disclosures, 2018–2019

Event Disclosures

By Number of Documents	2018	2019
ADVERSE TAX OPINION OR EVENT AFFECTING TAX-EXEMPT STATUS	3	2
AMENDMENT TO CONTINUING DISCLOSURE UNDERTAKING	47	59
BANKRUPTCY, INSOLVENCY, RECEIVERSHIP	65	81
BID FOR AUCTION RATE OR OTHER SECURITIES	103	101
CAPITAL OR OTHER FINANCING PLAN	30	68
CHANGE IN OBLIGATED PERSON	33	14
CHANGE OF TENDER AGENT, REMARKETING AGENT, OR OTHER ON-GOING PARTY	42	75
COMMUNICATION FROM THE INTERNAL REVENUE SERVICE	10	13
DERIVATIVE OR OTHER SIMILAR TRANSACTION	5	4
FAILURE TO PROVIDE EVENT FILING INFORMATION	723	754
FINANCIAL OBLIGATION - EVENT REFLECTING FINANCIAL DIFFICULTIES	–	19
FINANCIAL OBLIGATION - INCURRENCE OR AGREEMENT	–	2,059
LITIGATION/ENFORCEMENT ACTION	46	49
MERGER, CONSOLIDATION, ACQUISITION AND SALE OF ASSETS	102	97
MODIFICATION TO THE RIGHTS OF SECURITY HOLDERS	52	33
NON-PAYMENT RELATED DEFAULT	104	98
NOTICE TO INVESTOR PURSUANT TO BOND DOCUMENTS	582	694
OTHER EVENT-BASED DISCLOSURES	5,089	4,698
P&I PAYMENT DELINQUENCY	432	401
RELEASE, SUBSTITUTION OR SALE OF PROPERTY	39	51
SUBSTITUTION OF CREDIT OR LIQUIDITY PROVIDER OR ITS FAILURE TO PERFORM	91	80
SUCCESSOR, ADDITIONAL OR CHANGE IN TRUSTEE	121	321
TENDER OFFER/SECONDARY MARKET PURCHASES	320	317
UNSCHEDULED DRAW ON CREDIT ENHANCEMENT	44	55
UNSCHEDULED DRAW ON DEBT SERVICE RESERVE	84	99

Part Eleven

Definitions 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 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.

Event Disclosure—A type of continuing disclosure that is filed following a primary offering of municipal securities. See [Selecting Event Disclosure Categories on EMMA Dataport](#) for explanations of each category of event disclosure.

Final Maturity—Time remaining between original issue date and the stated final maturity date of the security. Final maturity does not take into account possible call and put options and rate reset frequencies as is the case with certain types of variable rate securities, such as auction rate securities and variable rate demand obligations.

Financial/Operating Disclosure—A type of continuing disclosure that is filed following a primary offering of municipal securities. See [Selecting Financial/Operating Disclosure Categories on EMMA Dataport](#) for explanations of each category of financial/operating disclosure.

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.

Remaining Maturity—Time remaining between the trade date and the stated final maturity date of the security. Remaining maturity does not take into account possible call and put options and rate reset frequencies as is the case with certain types of variable rate securities, such as auction rate securities and variable rate demand obligations.

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.

Sale Date or Award—The official acceptance by the issuer of a bid or offer to purchase a new issue of municipal securities by an underwriter. The date of the award is generally considered the "sale date" of an issue.

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.



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