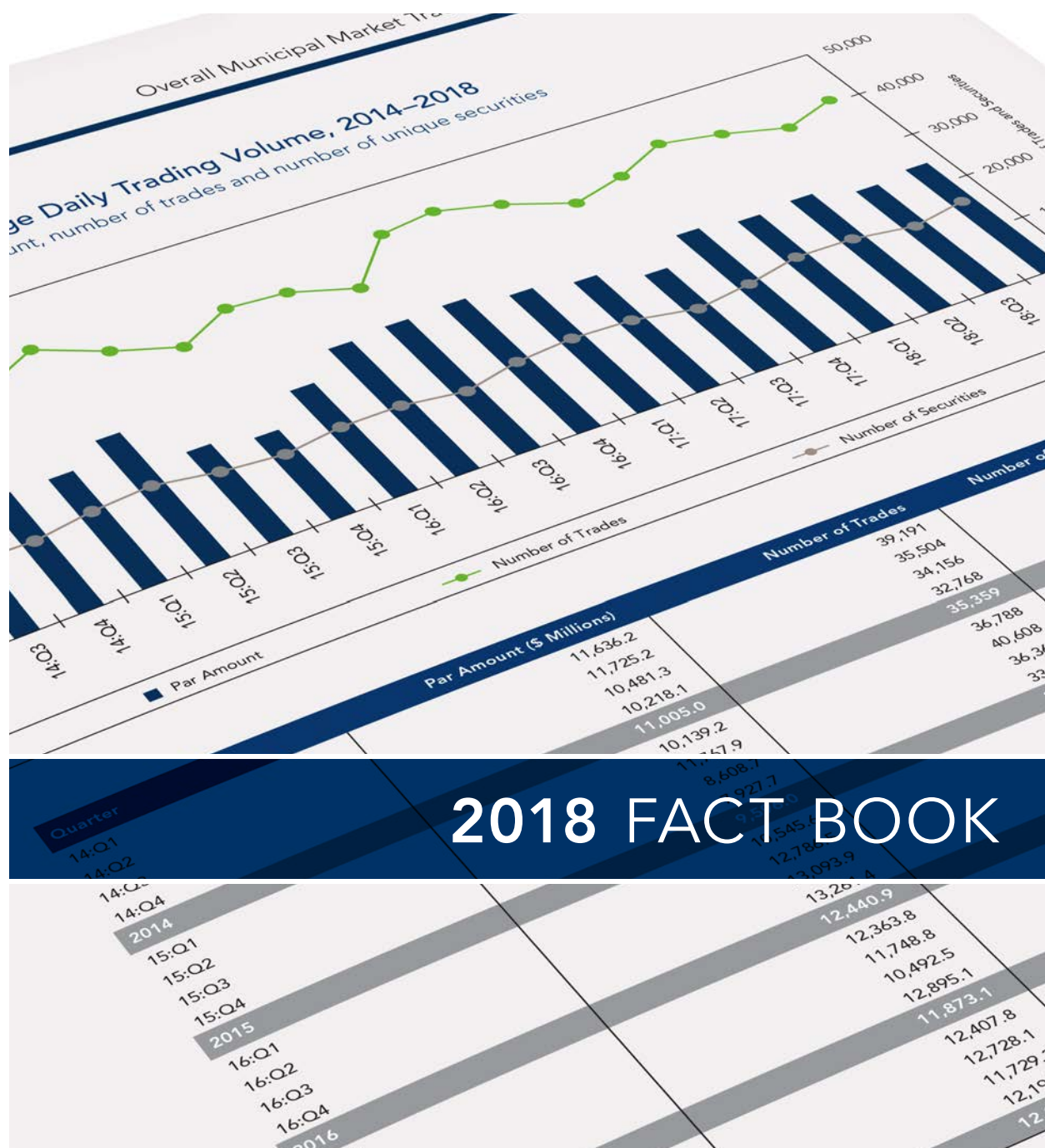




Municipal Securities Rulemaking Board



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 and consumption of 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 2018 *Fact Book* includes monthly, quarterly and yearly aggregate market information from 2014 to 2018, 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 2014 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 Electronic Municipal Market Access (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 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 digital 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-chartered, self-regulatory organization governed by a 21-member 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 Securities and Exchange Commission.

ABOUT EMMA®

The MSRB’s EMMA website, [EMMA.MSRB.org](https://emma.msrb.org), is designated by the U.S. Securities and Exchange Commission (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 savings plans, ABLE programs 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 Municipal Securities Rulemaking Board.

DATA AVAILABLE FROM THE MSRB

Data Subscriptions

The MSRB makes available municipal market trade data and disclosure documents associated with municipal bond issues. These materials are available on a subscription basis in real-time.*

The following subscription services are available:

- **MSRB Transaction Subscription Service:** All municipal trade data reported to the MSRB by municipal securities dealers in a real-time feed. Subscriptions to periodic reports and an academic data product are also available.
- **MSRB Short-term Obligation Subscription Service:** All variable rate securities data and documents.
- **MSRB Primary Market Subscription Service:** All primary market disclosure documents and related information provided by municipal bond dealers.
- **MSRB Continuing Disclosure Subscription Service:** All continuing disclosure documents and related information.

*This information is also available at no charge on the Electronic Municipal Market Access (EMMA®) website

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Part One

Municipal Market Trade Summary, 2014–2018

Transaction Summary

Total par amount traded in \$ millions

	2014	2015	2016	2017	2018
Total	2,773,264	2,418,198	3,135,100	2,980,146	3,091,206
By Trade Type					
Customer Bought	1,363,373	1,213,056	1,578,495	1,526,641	1,543,192
Customer Sold	835,255	635,899	947,081	925,050	1,023,351
Inter-Dealer	574,636	569,243	609,524	528,455	524,664
By Coupon Type					
Fixed Rate	1,545,487	1,616,112	1,782,334	1,773,113	1,844,298
Variable	920,912	539,494	1,014,906	940,777	989,411
Zero Coupon	144,709	84,855	107,337	98,167	70,692
Other ¹	162,157	177,737	230,522	168,089	186,806
By Source of Repayment					
General Obligation	680,941	672,654	801,361	795,978	787,852
Revenue	1,828,620	1,473,739	2,003,835	1,950,388	2,111,380
Double Barrel	64,735	68,535	71,396	56,475	62,337
Other ¹	198,969	203,270	258,507	177,306	129,637
By Tax Status					
Tax Exempt	2,411,818	2,055,157	2,709,773	2,527,506	2,573,742
Taxable	220,903	236,024	256,213	253,406	199,764
AMT	110,134	92,937	136,643	153,418	180,379
Other ¹	30,411	34,080	32,470	45,816	137,321

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

Transaction Summary

Total number of trades

	2014	2015	2016	2017	2018
Total	8,910,525	9,257,210	9,358,046	9,888,673	10,173,826
By Trade Type					
Customer Bought	3,747,662	3,841,980	3,796,034	3,946,262	3,949,571
Customer Sold	1,979,712	1,919,306	1,917,322	2,116,210	2,332,120
Inter-Dealer	3,183,151	3,495,924	3,644,690	3,826,201	3,892,135
By Coupon Type					
Fixed Rate	8,355,645	8,788,704	8,812,788	9,312,611	9,576,565
Variable	180,185	128,940	195,228	274,551	334,277
Zero Coupon	363,262	327,683	333,432	284,621	241,246
Other ¹	11,433	11,883	16,598	16,890	21,738
By Source of Repayment					
General Obligation	3,036,096	3,254,387	3,343,552	3,649,601	3,761,095
Revenue	5,549,923	5,663,212	5,674,679	5,897,655	6,071,101
Double Barrel	311,469	326,079	320,850	324,851	327,002
Other ¹	13,037	13,532	18,965	16,566	14,628
By Tax Status					
Tax Exempt	8,065,548	8,459,925	8,598,898	9,120,571	9,437,546
Taxable	619,650	623,484	625,848	635,843	587,926
AMT	222,222	170,643	129,843	127,083	132,014
Other ¹	3,105	3,158	3,457	5,176	16,340

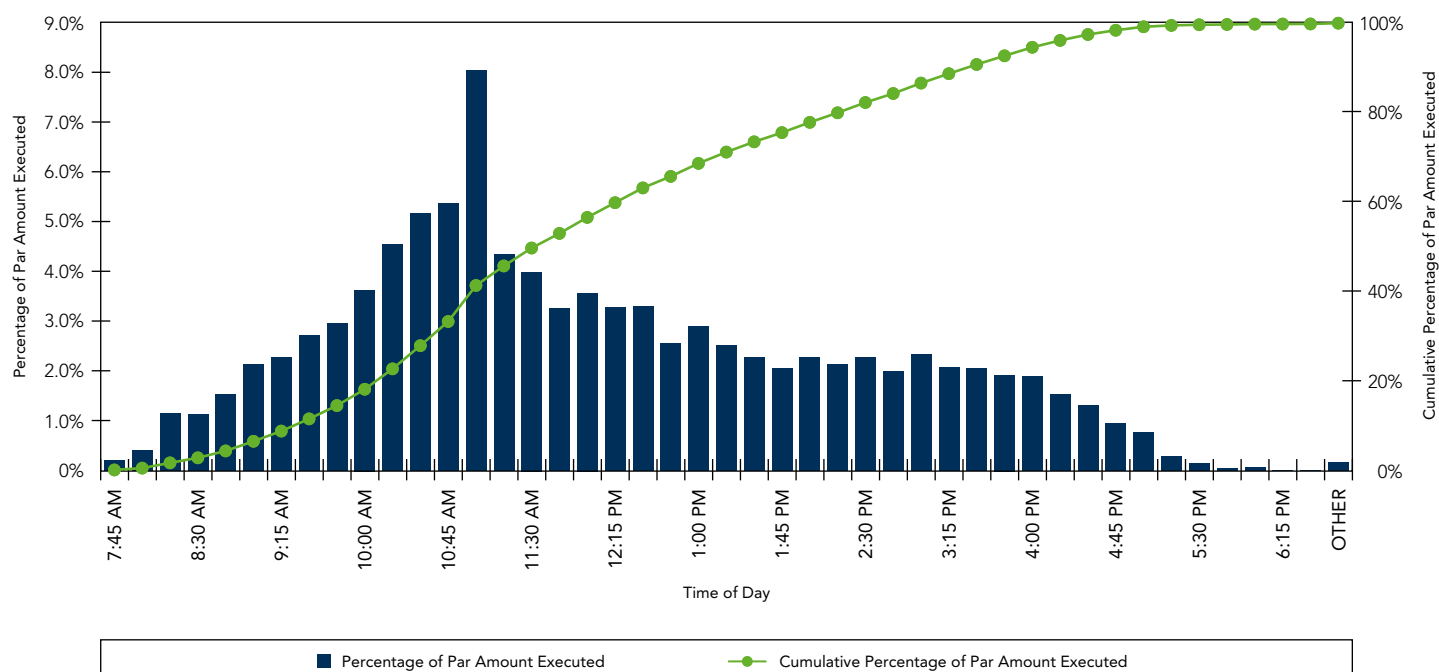
¹ Includes issues that could not be categorized based on available data.

Part Two

Municipal Market Trade Distribution Trends, 2018

Par Amount Traded by Time of Day, 2018

Trades executed within 15 minutes prior to time shown¹



Time of Execution	Average Par Value (\$ Millions)
7:45 AM	26.9
8:00 AM	50.7
8:15 AM	142.9
8:30 AM	138.6
8:45 AM	189.5
9:00 AM	263.3
9:15 AM	280.5
9:30 AM	334.6
9:45 AM	364.5
10:00 AM	446.5
10:15 AM	559.5
10:30 AM	635.3
10:45 AM	660.4
11:00 AM	988.3
11:15 AM	534.5
11:30 AM	490.1
11:45 AM	401.0
12:00 PM	438.7
12:15 PM	403.2
12:30 PM	405.3
12:45 PM	315.4
1:00 PM	356.5
1:15 PM	308.7

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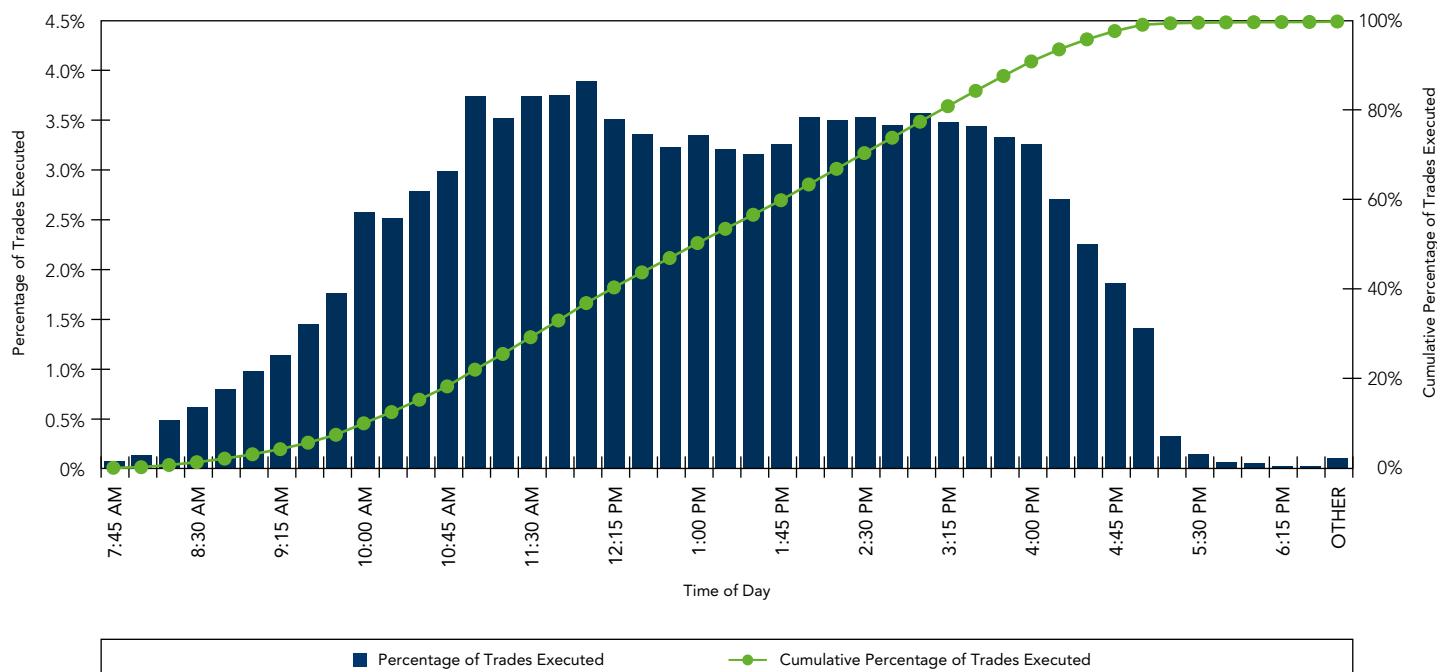
Time of Execution	Average Par Value (\$ Millions)
1:30 PM	280.7
1:45 PM	253.0
2:00 PM	280.9
2:15 PM	263.3
2:30 PM	280.0
2:45 PM	246.4
3:00 PM	286.9
3:15 PM	256.8
3:30 PM	253.5
3:45 PM	236.2
4:00 PM	232.6
4:15 PM	188.8
4:30 PM	162.3
4:45 PM	116.9
5:00 PM	95.5
5:15 PM	37.3
5:30 PM	18.1
5:45 PM	7.2
6:00 PM	9.5
6:15 PM	2.9
6:30 PM	2.0
Other ²	21.2
Total	12,266.7

¹ Eastern time.

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

Number of Trades by Time of Day, 2018

Trades executed within 15 minutes prior to time shown¹



Time of Execution	Average Number of Trades
7:45 AM	29
8:00 AM	53
8:15 AM	199
8:30 AM	252
8:45 AM	322
9:00 AM	396
9:15 AM	461
9:30 AM	585
9:45 AM	712
10:00 AM	1,039
10:15 AM	1,015
10:30 AM	1,122
10:45 AM	1,204
11:00 AM	1,510
11:15 AM	1,420
11:30 AM	1,512
11:45 AM	1,512
12:00 PM	1,572
12:15 PM	1,418
12:30 PM	1,357
12:45 PM	1,301
1:00 PM	1,351
1:15 PM	1,290

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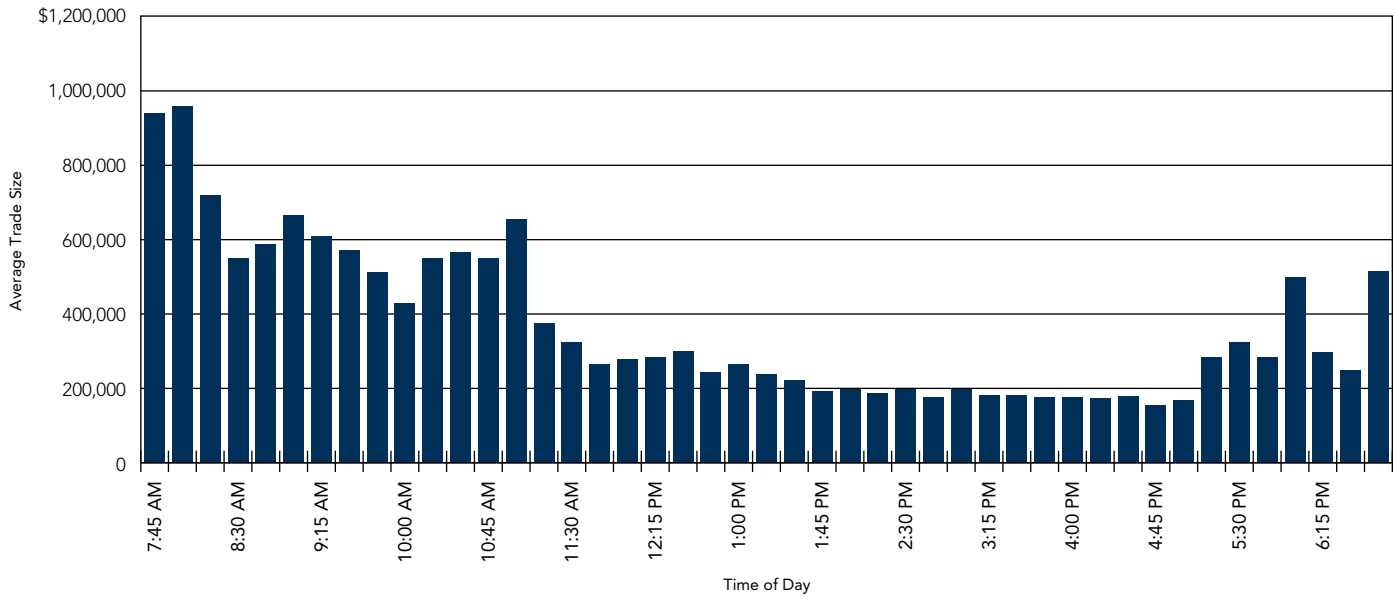
Time of Execution	Average Number of Trades
1:30 PM	1,271
1:45 PM	1,310
2:00 PM	1,427
2:15 PM	1,412
2:30 PM	1,424
2:45 PM	1,391
3:00 PM	1,442
3:15 PM	1,405
3:30 PM	1,390
3:45 PM	1,345
4:00 PM	1,311
4:15 PM	1,091
4:30 PM	907
4:45 PM	751
5:00 PM	569
5:15 PM	132
5:30 PM	56
5:45 PM	26
6:00 PM	19
6:15 PM	10
6:30 PM	8
Other ²	41
Total	40,372

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, 2018

Trades executed within 15 minutes prior to time shown¹



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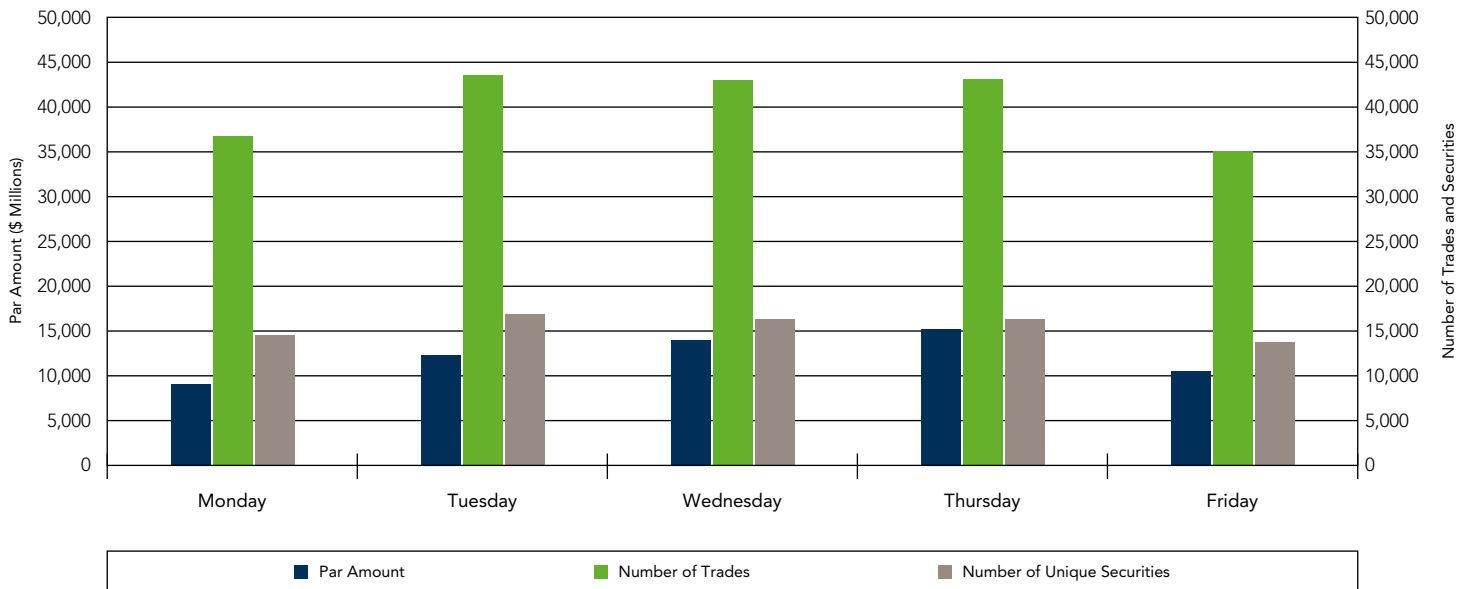
Time of Execution	Average Trade Size (\$)
7:45 AM	941,221
8:00 AM	959,572
8:15 AM	718,632
8:30 AM	549,207
8:45 AM	587,675
9:00 AM	664,769
9:15 AM	608,064
9:30 AM	571,574
9:45 AM	511,823
10:00 AM	429,726
10:15 AM	551,210
10:30 AM	566,148
10:45 AM	548,693
11:00 AM	654,527
11:15 AM	376,347
11:30 AM	324,169
11:45 AM	265,205
12:00 PM	279,113
12:15 PM	284,375
12:30 PM	298,747
12:45 PM	242,364
1:00 PM	263,841
1:15 PM	239,353

Time of Execution	Average Trade Size (\$)
1:30 PM	220,815
1:45 PM	193,034
2:00 PM	196,854
2:15 PM	186,444
2:30 PM	196,625
2:45 PM	177,112
3:00 PM	198,900
3:15 PM	182,722
3:30 PM	182,367
3:45 PM	175,575
4:00 PM	177,387
4:15 PM	172,987
4:30 PM	178,912
4:45 PM	155,515
5:00 PM	167,989
5:15 PM	283,268
5:30 PM	325,133
5:45 PM	282,698
6:00 PM	499,147
6:15 PM	296,653
6:30 PM	248,191
Other ²	513,904
Overall	304,053

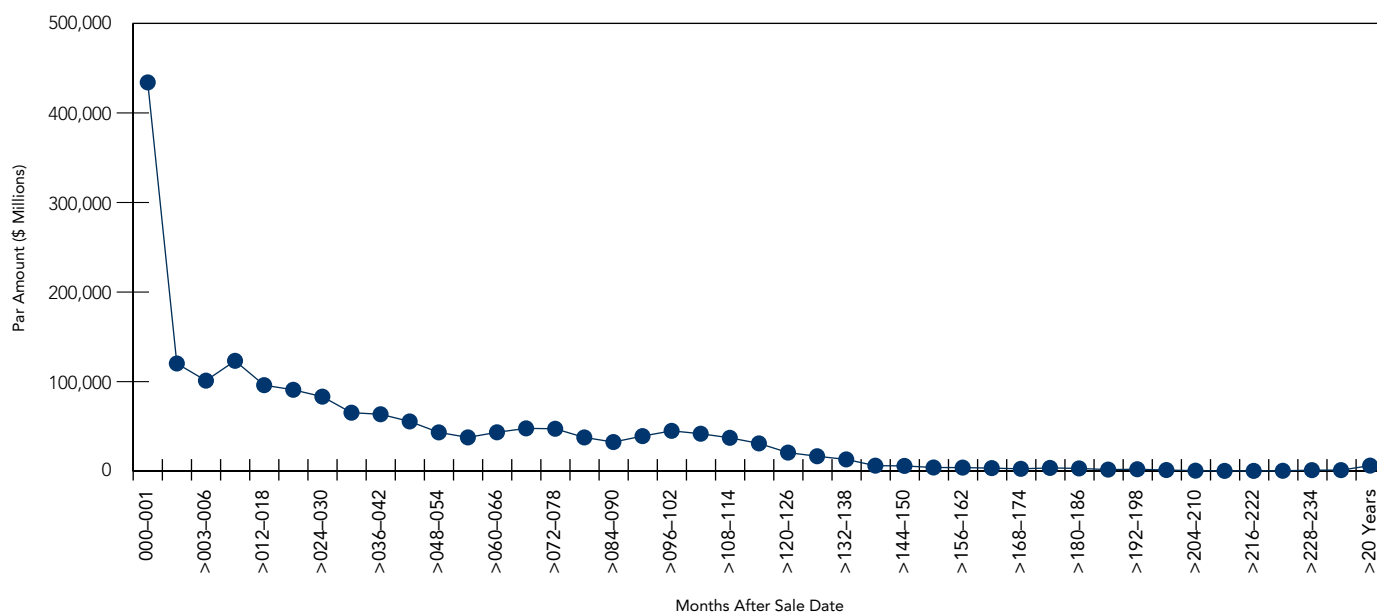
¹ Eastern time.

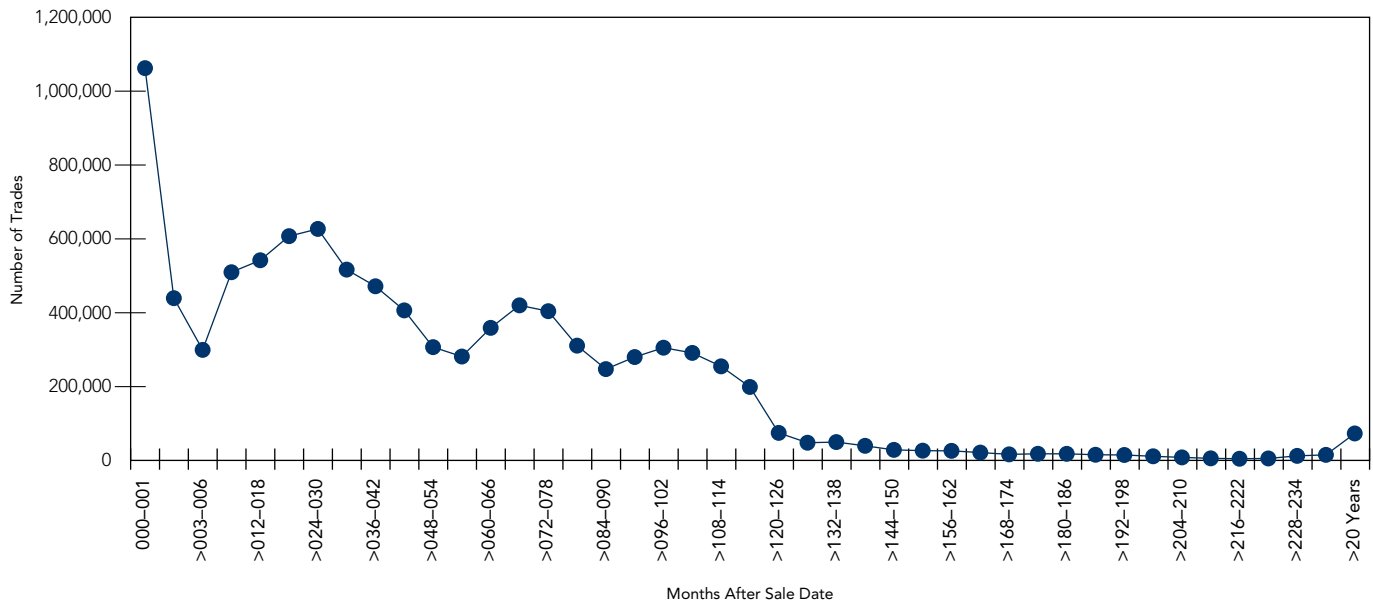
² Trades reported after 6:30 p.m. and before 7:30 a.m.

Average Trading Volume by Day of Week, 2018



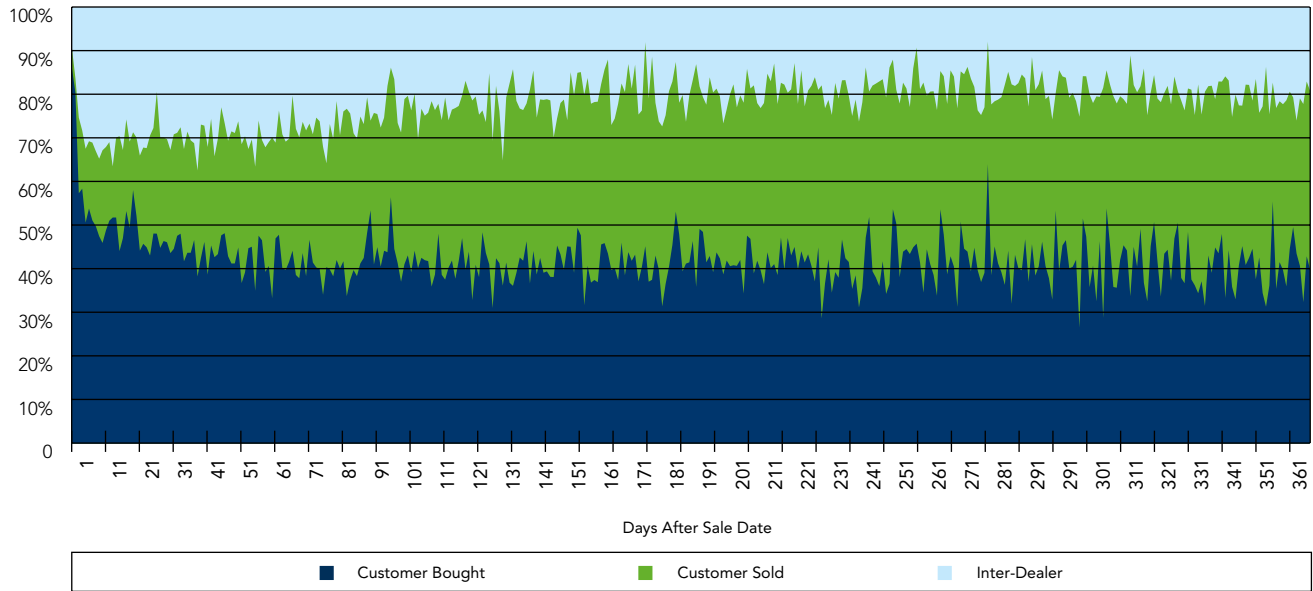
Weekday	Par Amount (\$ Millions)	Number of Trades	Number of Unique Securities
Monday	9,108.7	36,800	14,576
Tuesday	12,280.1	43,559	16,840
Wednesday	14,042.3	43,060	16,323
Thursday	15,219.1	43,102	16,346
Friday	10,497.5	35,129	13,793

Par Amount Traded by Months After Sale Date¹, 2018

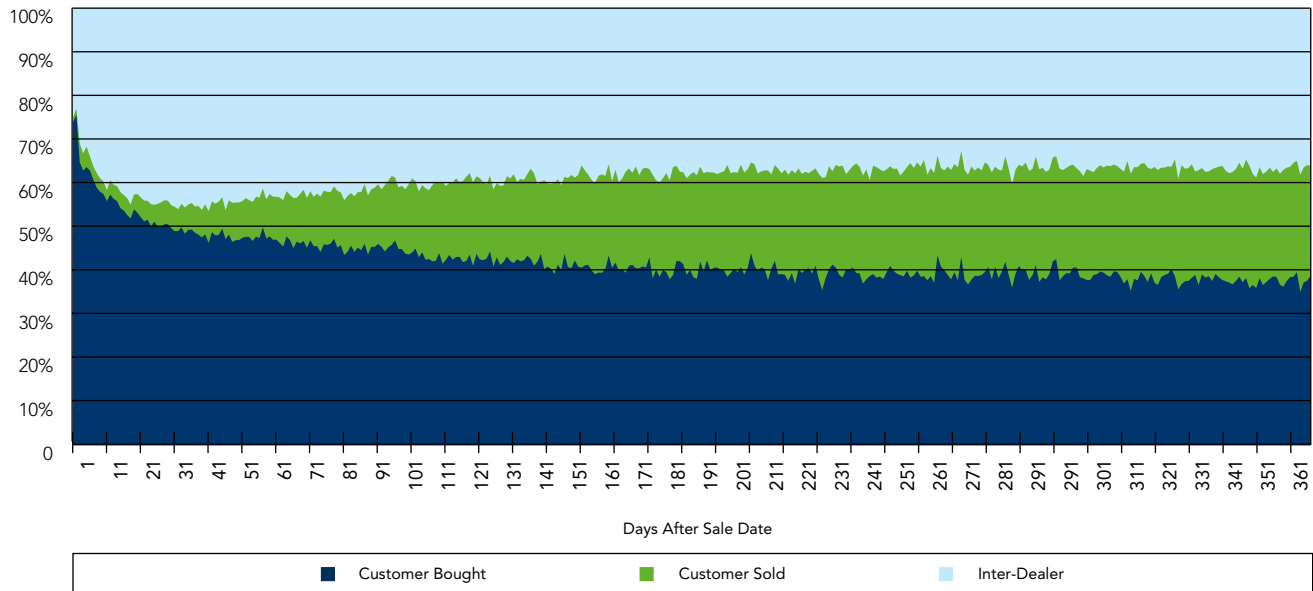
Number of Trades by Months After Sale Date¹, 2018

Distribution of Trades by Type After Sale Date¹, 2018

Par Amount

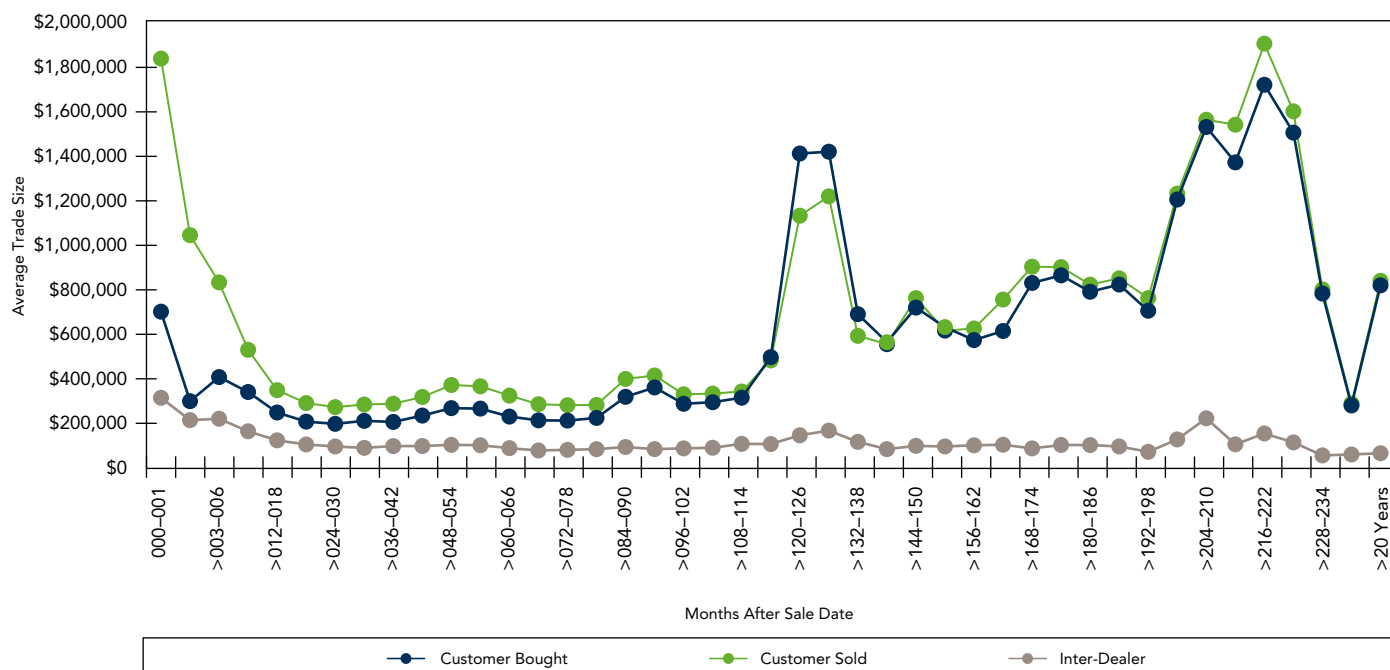


Number of Trades

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

Average Trade Size by Trade Type by Months After Sale Date¹, 2018

All trades



continued >

Months After Sale Date	Customer Bought	Customer Sold	Inter-dealer
000-001	704,371	1,841,459	317,373
>001-003	302,181	1,048,212	217,034
>003-006	410,464	835,873	223,344
>006-012	343,325	532,891	166,775
>012-018	251,297	351,584	126,070
>018-024	210,185	293,578	107,537
>024-030	200,230	275,440	98,432
>030-036	213,800	287,156	92,302
>036-042	208,852	290,600	100,425
>042-048	237,468	320,947	100,622
>048-054	270,810	374,808	105,870
>054-060	268,718	368,905	104,062
>060-066	232,904	327,117	91,089
>066-072	215,986	288,604	80,553
>072-078	214,963	284,081	83,431
>078-084	226,873	285,404	86,445
>084-090	321,655	402,112	96,170
>090-096	363,883	417,637	86,645
>096-102	290,361	332,910	90,058
>102-108	297,443	336,309	92,842
>108-114	317,765	345,569	110,338
>114-120	500,002	485,256	109,448

Months After Sale Date	Customer Bought	Customer Sold	Inter-dealer
>120-126	1,414,934	1,135,577	148,895
>126-132	1,423,172	1,222,489	169,859
>132-138	693,181	595,616	119,261
>138-144	567,207	558,242	86,639
>144-150	722,573	765,352	101,347
>150-156	634,898	619,325	98,699
>156-162	576,630	628,770	103,932
>162-168	617,576	758,709	106,371
>168-174	833,364	906,432	89,909
>174-180	867,499	904,608	105,309
>180-186	793,832	825,768	104,886
>186-192	826,193	854,037	98,736
>192-198	708,513	765,270	74,524
>198-204	1,208,296	1,235,026	130,257
>204-210	1,534,268	1,566,582	225,206
>210-216	1,375,192	1,544,430	108,150
>216-222	1,723,895	1,908,472	156,911
>222-228	1,508,857	1,604,623	116,924
>228-234	785,798	804,385	58,475
>234-240	282,867	291,539	62,640
>20 Years	822,602	842,995	68,228

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

Part Three

Most Actively Traded Municipal Securities, 2018

Top 50 Most Active Securities, 2018

By par amount

Rank	CUSIP ¹	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	–	8/1/35	13,804.9	723
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	–	11/1/41	12,504.0	1,383
3	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	11,476.4	505
4	882724GP6	TEXAS ST	4.00	8/29/19	8,836.4	3,245
5	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	–	12/1/40	7,211.9	516
6	71884SAA8	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	–	11/15/52	5,857.7	496
7	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	–	12/1/37	5,774.0	551
8	882724DQ7	TEXAS ST	4.00	8/30/18	5,505.2	2,428
9	64966LCJ8	NEW YORK N Y	–	8/1/38	5,498.4	1,172
10	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	–	11/1/38	5,121.1	785
11	13063BCH3	CALIFORNIA ST	–	5/1/33	5,056.9	451
12	64966G4Q2	NEW YORK N Y	–	4/1/35	4,639.6	440
13	64966JE77	NEW YORK N Y	–	4/1/42	4,613.4	1,259
14	467229AF7	JACKSON CNTY MISS PORT FAC REV	–	6/1/23	4,553.4	416
15	64966KTD5	NEW YORK N Y	–	3/1/42	4,424.3	483
16	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,325.0	2,172
17	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	–	6/1/42	4,105.2	345
18	130534XA3	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	3.25	11/1/26	4,054.3	530
19	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	–	10/1/41	4,043.5	391
20	644614RZ4	NEW HAMPSHIRE HEALTH & ED FACS AUTH REV	–	6/1/41	3,826.1	306
21	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	–	8/15/20	3,792.4	417
22	118217AX6	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	–	6/1/52	3,669.3	141
23	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	–	2/1/31	3,667.8	152
24	9151153W7	UNIVERSITY TEX PERM UNIV FD	–	7/1/37	3,659.8	198
25	821697K99	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	–	6/1/42	3,658.4	362
26	13048TGT4	CALIFORNIA MUN FIN AUTH REV	–	11/1/35	3,442.2	586
27	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	3,425.7	2,088
28	64966MSD2	NEW YORK N Y	–	10/1/46	3,390.2	318
29	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	3,380.6	357
30	91425MDV6	UNIVERSITY DEL REV	–	11/1/37	3,340.7	222
31	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	–	10/1/44	3,330.9	160
32	040507QA6	ARIZONA HEALTH FACS AUTH REV	–	1/1/46	3,325.5	613
33	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	11/1/35	3,184.9	929
34	575827R51	MASSACHUSETTS ST	–	12/1/30	3,059.4	336
35	64972FSG2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/25	3,026.0	468
36	60528AAV6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	3,023.8	206
37	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	3,006.5	298
38	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	–	11/15/52	2,995.1	759
39	64972F6T8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/45	2,953.0	546
40	64972F2H8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/44	2,939.1	378
41	533485BB3	LINCOLN CNTY WYO POLLUTN CTL REV	–	10/1/44	2,899.4	357
42	573202AY4	MARTIN CNTY FLA POLLUTN CTL REV	–	7/15/22	2,870.6	346
43	57586CV36	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	–	8/15/40	2,839.9	438
44	452151LF8	ILLINOIS ST	5.10	6/1/33	2,829.6	2,228
45	64966FA87	NEW YORK N Y	–	4/1/36	2,814.8	352
46	64972F6V3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/45	2,766.2	376
47	57582N4G7	MASSACHUSETTS ST	–	3/1/26	2,692.3	737
48	130534XX3	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	–	11/1/26	2,686.1	432
49	89602RDT9	TRIBOROUGH BRDG & TUNL AUTH N Y REV	–	1/1/32	2,574.4	1,127
50	915137T60	UNIVERSITY TEX UNIV REV	–	8/1/34	2,526.2	254

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Securities, 2018

By number of trades

Rank	CUSIP ¹	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	70914PN32	PENNSYLVANIA ST	3.75	3/1/39	303.8	3,867
2	650010AD3	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	5.00	5/1/19	1,520.6	3,431
3	882724GP6	TEXAS ST	4.00	8/29/19	8,836.4	3,245
4	20282EAS5	COMMONWEALTH FING AUTH PA TOB MASTER SETTLEMENT PMT REV	4.00	6/1/39	1,272.8	3,198
5	74529JAC9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.05	8/1/36	1,192.1	3,105
6	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	969.8	2,539
7	64972GPY4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.63	6/15/48	274.9	2,455
8	882724DQ7	TEXAS ST	4.00	8/30/18	5,505.2	2,428
9	5742184J9	MARYLAND ST HEALTH & HIGHER EDL FACS AUTH REV	4.00	7/1/48	448.7	2,395
10	646140CS0	NEW JERSEY ST TPK AUTH TPK REV	3.25	1/1/38	220.6	2,348
11	64966MA33	NEW YORK N Y	3.50	4/1/46	778.1	2,258
12	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,277.0	2,232
13	452151LF8	ILLINOIS ST	5.10	6/1/33	2,829.6	2,228
14	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,325.0	2,172
15	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	1,073.7	2,143
16	59447TMQ3	MICHIGAN FIN AUTH REV	4.00	11/15/46	210.9	2,119
17	6461364J7	NEW JERSEY ST TRANSN TR FD AUTH	4.00	12/15/37	389.9	2,101
18	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	3,425.7	2,088
19	13063DFR4	CALIFORNIA ST	3.63	10/1/47	449.8	2,081
20	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/44	88.7	2,053
21	74529JLM5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.25	8/1/41	1,298.2	1,987
22	956622N91	WEST VIRGINIA ST HOSP FIN AUTH HOSP REV	4.00	6/1/51	611.6	1,952
23	74529JGP4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.35	8/1/39	525.9	1,921
24	01728A3Z7	ALLEGHENY CNTY PA HOSP DEV AUTH REV	4.00	4/1/44	784.2	1,914
25	74529JHN8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.00	8/1/42	1,146.2	1,892
26	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	512.5	1,872
27	646140CT8	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/43	487.4	1,860
28	13063A7G3	CALIFORNIA ST	6.20	10/1/19	378.5	1,810
29	45471ARM6	INDIANA FIN AUTH HOSP REV	4.00	11/1/48	248.5	1,795
30	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	678.4	1,788
31	745160RC7	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	5.25	7/1/42	609.1	1,723
32	745190DH8	PUERTO RICO COMWLTH HWY & TRANSN AUTH TRANSN REV	4.75	7/1/38	134.6	1,693
33	13063BFV9	CALIFORNIA ST	7.95	3/1/36	560.6	1,645
34	398258AX1	GRIFFIN-SPALDING CNTY GA HOSP REV	3.75	4/1/47	123.6	1,581
35	64972GBA1	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	4.00	6/15/47	667.8	1,577
36	59261AQN0	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/38	281.2	1,570
37	59261ATJ6	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/42	1,170.8	1,561
38	64972GQD9	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.50	6/15/40	157.4	1,551
39	60637AMP4	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.00	6/1/48	207.4	1,537
40	646140CU5	NEW JERSEY ST TPK AUTH TPK REV	5.00	1/1/43	161.7	1,515
41	646136E31	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	108.0	1,500
42	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	137.2	1,493
43	59334DJR6	MIAMI-DADE CNTY FLA WTR & SWR REV	3.38	10/1/47	104.7	1,466
44	847113CJ4	SPARTANBURG S C REGL HEALTH SVCS DIST INC HOSP REV	4.00	4/15/48	151.4	1,464
45	6461393H6	NEW JERSEY ST TPK AUTH TPK REV	5.00	1/1/38	218.7	1,447
46	574193QH4	MARYLAND ST	3.13	3/15/33	162.9	1,446
47	60637AMW9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.00	11/15/48	316.2	1,432
48	64972HK84	NEW YORK N Y CITY TRANSITIONAL FIN AUTH BLDG AID REV	3.63	7/15/47	152.8	1,427
49	613603YZ6	MONTGOMERY CNTY PA HIGHER ED & HEALTH AUTH REV	4.00	9/1/49	197.5	1,422
50	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	420.1	1,419

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Fixed Rate¹ Securities, 2018

By par amount

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724GP6	TEXAS ST	4.00	8/29/19	8,836.4	3,245
2	882724DQ7	TEXAS ST	4.00	8/30/18	5,505.2	2,428
3	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,325.0	2,172
4	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	3,425.7	2,088
5	452151LF8	ILLINOIS ST	5.10	6/1/33	2,829.6	2,228
6	888808HT2	TOBACCO SETTLEMENT FING CORP N J	5.00	6/1/46	2,343.7	572
7	38122NZW5	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	5.00	6/1/47	2,207.1	416
8	91412HDE0	UNIVERSITY CALIF REVS	5.00	5/15/58	2,183.5	335
9	13063DGD4	CALIFORNIA ST	4.50	4/1/33	2,020.4	527
10	452152P96	ILLINOIS ST	5.00	11/1/27	1,706.4	361
11	544646W7	LOS ANGELES CALIF UNI SCH DIST	5.25	7/1/42	1,658.9	146
12	38122NZU9	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	5.00	6/1/47	1,546.3	438
13	650010AD3	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	5.00	5/1/19	1,520.6	3,431
14	452152P70	ILLINOIS ST	5.00	11/1/23	1,475.1	509
15	452152Q46	ILLINOIS ST	5.00	11/1/25	1,455.1	327
16	64990AMQ5	NEW YORK ST DORM AUTH SALES TAX REV ST SUPPORTED DEBT	5.00	3/15/39	1,401.7	47
17	38122NZV7	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	5.25	6/1/47	1,317.1	196
18	452152Q20	ILLINOIS ST	5.00	11/1/28	1,304.0	528
19	74529JLM5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.25	8/1/41	1,298.2	1,987
20	544657HV4	LOS ANGELES CNTY CALIF	4.00	6/28/19	1,295.6	494
21	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,277.0	2,232
22	20282EAS5	COMMONWEALTH FING AUTH PA TOB MASTER SETTLEMENT PMT REV	4.00	6/1/39	1,272.8	3,198
23	452152P88	ILLINOIS ST	5.00	11/1/24	1,252.1	409
24	64971XEB0	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.85	5/1/30	1,237.0	39
25	20772GF45	CONNECTICUT ST	5.85	3/15/32	1,225.2	242
26	74529JAC9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.05	8/1/36	1,192.1	3,105
27	373385CW1	GEORGIA ST	3.25	7/1/37	1,187.9	795
28	882854Q70	TEXAS WTR DEV BRD REV	5.00	4/15/49	1,173.5	169
29	59261ATJ6	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/42	1,170.8	1,561
30	13063DGE2	CALIFORNIA ST	4.60	4/1/38	1,169.1	397
31	64990C7K1	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.85	7/1/48	1,159.8	162
32	74529JAR6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.25	8/1/57	1,159.0	1,016
33	74529JHN8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.00	8/1/42	1,146.2	1,892
34	576000WE9	MASSACHUSETTS ST SCH BLDG AUTH DEDICATED SALES TAX REV	5.25	2/15/48	1,141.3	327
35	64990AJV8	NEW YORK ST DORM AUTH SALES TAX REV ST SUPPORTED DEBT	5.00	3/15/31	1,107.4	47
36	452152Q61	ILLINOIS ST	5.00	11/1/26	1,104.1	205
37	118217AU2	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.88	6/1/47	1,098.3	1,288
38	649902S95	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/15/24	1,090.6	159
39	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	1,073.7	2,143
40	13063BBU5	CALIFORNIA ST	7.35	11/1/39	1,065.8	446
41	74529JKM6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.50	8/1/42	1,057.7	1,219
42	79766DLF4	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/43	1,053.6	52
43	574193QT8	MARYLAND ST	5.00	8/1/30	1,044.8	76
44	13063BJC7	CALIFORNIA ST	7.60	11/1/40	1,029.9	513
45	888808HQ8	TOBACCO SETTLEMENT FING CORP N J	5.00	6/1/46	1,027.8	276
46	57582RUM6	MASSACHUSETTS ST	5.25	9/1/43	1,001.7	135
47	180848XJ7	CLARK CNTY NEV	5.00	5/1/48	1,000.9	250
48	13048VBY3	CALIFORNIA MUN FIN AUTH REV	5.00	12/31/43	995.7	213
49	13063DGB8	CALIFORNIA ST	3.38	4/1/25	992.9	316
50	13063DKC1	CALIFORNIA ST	5.00	10/1/29	979.0	152

¹ Includes 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	70914PN32	PENNSYLVANIA ST	3.75	3/1/39	303.8	3,867
2	650010AD3	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	5.00	5/1/19	1,520.6	3,431
3	882724GP6	TEXAS ST	4.00	8/29/19	8,836.4	3,245
4	20282EAS5	COMMONWEALTH FING AUTH PA TOB MASTER SETTLEMENT PMT REV	4.00	6/1/39	1,272.8	3,198
5	74529JAC9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.05	8/1/36	1,192.1	3,105
6	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	969.8	2,539
7	64972GPY4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.63	6/15/48	274.9	2,455
8	882724DQ7	TEXAS ST	4.00	8/30/18	5,505.2	2,428
9	5742184J9	MARYLAND ST HEALTH & HIGHER EDL FACS AUTH REV	4.00	7/1/48	448.7	2,395
10	646140CS0	NEW JERSEY ST TPK AUTH TPK REV	3.25	1/1/38	220.6	2,348
11	64966MA33	NEW YORK N Y	3.50	4/1/46	778.1	2,258
12	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,277.0	2,232
13	452151LF8	ILLINOIS ST	5.10	6/1/33	2,829.6	2,228
14	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,325.0	2,172
15	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	1,073.7	2,143
16	59447TMQ3	MICHIGAN FIN AUTH REV	4.00	11/15/46	210.9	2,119
17	6461364J7	NEW JERSEY ST TRANSN TR FD AUTH	4.00	12/15/37	389.9	2,101
18	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	3,425.7	2,088
19	13063DFR4	CALIFORNIA ST	3.63	10/1/47	449.8	2,081
20	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/44	88.7	2,053
21	74529JLM5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.25	8/1/41	1,298.2	1,987
22	956622N91	WEST VIRGINIA ST HOSP FIN AUTH HOSP REV	4.00	6/1/51	611.6	1,952
23	74529JGP4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.35	8/1/39	525.9	1,921
24	01728A3Z7	ALLEGHENY CNTY PA HOSP DEV AUTH REV	4.00	4/1/44	784.2	1,914
25	74529JHN8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	6.00	8/1/42	1,146.2	1,892
26	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	512.5	1,872
27	646140CT8	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/43	487.4	1,860
28	13063A7G3	CALIFORNIA ST	6.20	10/1/19	378.5	1,810
29	45471ARM6	INDIANA FIN AUTH HOSP REV	4.00	11/1/48	248.5	1,795
30	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	678.4	1,788
31	745160RC7	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	5.25	7/1/42	609.1	1,723
32	745190DH8	PUERTO RICO COMWLTH HWY & TRANSN AUTH TRANSN REV	4.75	7/1/38	134.6	1,693
33	13063BFV9	CALIFORNIA ST	7.95	3/1/36	560.6	1,645
34	398258AX1	GRIFFIN-SPALDING CNTY GA HOSP REV	3.75	4/1/47	123.6	1,581
35	64972GBA1	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	4.00	6/15/47	667.8	1,577
36	59261AQN0	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/38	281.2	1,570
37	59261ATJ6	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/42	1,170.8	1,561
38	64972GQD9	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.50	6/15/40	157.4	1,551
39	60637AMP4	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.00	6/1/48	207.4	1,537
40	646140CU5	NEW JERSEY ST TPK AUTH TPK REV	5.00	1/1/43	161.7	1,515
41	646136E31	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	108.0	1,500
42	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	137.2	1,493
43	59334DJR6	MIAMI-DADE CNTY FLA WTR & SWR REV	3.38	10/1/47	104.7	1,466
44	847113CJ4	SPARTANBURG S C REGL HEALTH SVCS DIST INC HOSP REV	4.00	4/15/48	151.4	1,464
45	6461393H6	NEW JERSEY ST TPK AUTH TPK REV	5.00	1/1/38	218.7	1,447
46	574193QH4	MARYLAND ST	3.13	3/15/33	162.9	1,446
47	60637AMW9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.00	11/15/48	316.2	1,432
48	64972HK84	NEW YORK N Y CITY TRANSITIONAL FIN AUTH BLDG AID REV	3.63	7/15/47	152.8	1,427
49	613603YZ6	MONTGOMERY CNTY PA HIGHER ED & HEALTH AUTH REV	4.00	9/1/49	197.5	1,422
50	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	420.1	1,419

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

Top 50 Most Active Variable Rate Securities, 2018

By par amount

Rank	CUSIP ¹	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/35	13,804.9	723
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/41	12,504.0	1,383
3	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	11,476.4	505
4	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/40	7,211.9	516
5	71884SAA8	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	5,857.7	496
6	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	12/1/37	5,774.0	551
7	64966LCJ8	NEW YORK N Y	8/1/38	5,498.4	1,172
8	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/38	5,121.1	785
9	13063BCH3	CALIFORNIA ST	5/1/33	5,056.9	451
10	64966G4Q2	NEW YORK N Y	4/1/35	4,639.6	440
11	64966JE77	NEW YORK N Y	4/1/42	4,613.4	1,259
12	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/23	4,553.4	416
13	64966KTD5	NEW YORK N Y	3/1/42	4,424.3	483
14	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	6/1/42	4,105.2	345
15	130534XA3	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	11/1/26	4,054.3	530
16	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	10/1/41	4,043.5	391
17	644614RZ4	NEW HAMPSHIRE HEALTH & ED FACS AUTH REV	6/1/41	3,826.1	306
18	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	8/15/20	3,792.4	417
19	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	2/1/31	3,667.8	152
20	9151153W7	UNIVERSITY TEX PERM UNIV FD	7/1/37	3,659.8	198
21	821697K99	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	6/1/42	3,658.4	362
22	13048TGT4	CALIFORNIA MUN FIN AUTH REV	11/1/35	3,442.2	586
23	64966MSD2	NEW YORK N Y	10/1/46	3,390.2	318
24	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	3,380.6	357
25	91425MDV6	UNIVERSITY DEL REV	11/1/37	3,340.7	222
26	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	10/1/44	3,330.9	160
27	040507QA6	ARIZONA HEALTH FACS AUTH REV	1/1/46	3,325.5	613
28	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	3,184.9	929
29	575827R51	MASSACHUSETTS ST	12/1/30	3,059.4	336
30	64972FSG2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/25	3,026.0	468
31	60528AAV6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	3,023.8	206
32	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	3,006.5	298
33	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	2,995.1	759
34	64972F6T8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/45	2,953.0	546
35	64972F2H8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	2,939.1	378
36	533485BB3	LINCOLN CNTY WYO POLLUTN CTL REV	10/1/44	2,899.4	357
37	573202AY4	MARTIN CNTY FLA POLLUTN CTL REV	7/15/22	2,870.6	346
38	57586CV36	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	8/15/40	2,839.9	438
39	64966FA87	NEW YORK N Y	4/1/36	2,814.8	352
40	64972F6V3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/45	2,766.2	376
41	57582N4G7	MASSACHUSETTS ST	3/1/26	2,692.3	737
42	130534XX3	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	11/1/26	2,686.1	432
43	89602RDT9	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	2,574.4	1,127
44	915137T60	UNIVERSITY TEX UNIV REVS	8/1/34	2,526.2	254
45	64972GJN5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/48	2,505.3	433
46	64966LU41	NEW YORK N Y	6/1/44	2,484.2	406
47	13033FK74	CALIFORNIA HEALTH FACS FING AUTH REV	6/1/41	2,478.1	1,416
48	414009AT7	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	12/1/24	2,476.9	803
49	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/39	2,467.7	360
50	59259N8Q9	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	11/1/31	2,423.6	597

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Variable Rate Securities, 2018

By number of trades

Rank	CUSIP ¹	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	13033FK74	CALIFORNIA HEALTH FACS FING AUTH REV	6/1/41	2,478.1	1,416
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/41	12,504.0	1,383
3	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/34	1,558.0	1,273
4	64966JE77	NEW YORK N Y	4/1/42	4,613.4	1,259
5	64966LCJ8	NEW YORK N Y	8/1/38	5,498.4	1,172
6	89602RDT9	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	2,574.4	1,127
7	64971MLS9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/27	372.0	1,000
8	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	3,184.9	929
9	57586CFZ3	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/40	239.3	853
10	64970KYY7	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/35	2,105.9	851
11	64966GMR0	NEW YORK N Y	8/1/26	265.7	836
12	6133408D3	MONTGOMERY CNTY MD	11/1/37	2,312.4	835
13	842475E92	SOUTHERN CALIF PUB PWR AUTH PWR PROJ REV	7/1/36	2,027.9	830
14	64972GCM4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/50	1,504.2	823
15	9151153V9	UNIVERSITY TEX PERM UNIV FD	7/1/38	1,429.0	810
16	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	1,485.7	804
17	64972F4W3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	1,424.3	804
18	414009AT7	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	12/1/24	2,476.9	803
19	13048TGU1	CALIFORNIA MUN FIN AUTH REV	11/1/35	481.7	791
20	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/38	5,121.1	785
21	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	2,995.1	759
22	57582N4G7	MASSACHUSETTS ST	3/1/26	2,692.3	737
23	64971QV26	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/36	1,512.4	729
24	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/35	13,804.9	723
25	57585KGP7	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	11/1/49	2,423.1	723
26	60637AMN9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	1/1/58	342.8	713
27	13063A5W0	CALIFORNIA ST	5/1/34	1,136.4	702
28	64966FHM9	NEW YORK N Y	8/1/34	1,185.1	692
29	91412GSJ5	UNIVERSITY CALIF REVS	5/15/48	1,676.7	690
30	64972GCQ5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/48	1,259.2	672
31	13063A6G4	CALIFORNIA ST	5/1/34	561.4	666
32	64972GCN2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/50	1,016.2	665
33	64972GAW4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/32	1,959.6	661
34	13048TGV9	CALIFORNIA MUN FIN AUTH REV	11/1/35	252.8	654
35	64966JB47	NEW YORK N Y	4/1/42	2,133.2	644
36	64579FYJ6	NEW JERSEY HEALTH CARE FACS FING AUTH REV	7/1/43	1,586.1	640
37	57586CZW8	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/42	260.1	621
38	64971QYH0	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/39	1,689.7	620
39	1309117L8	CALIFORNIA STATEWIDE CMNTYS DEV AUTH REV	11/1/36	1,107.2	617
40	57586CGA7	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/40	176.9	614
41	040507QA6	ARIZONA HEALTH FACS AUTH REV	1/1/46	3,325.5	613
42	60528AAU8	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	1,642.5	608
43	64966LLS8	NEW YORK N Y	3/1/40	1,837.7	606
44	040507QB4	ARIZONA HEALTH FACS AUTH REV	1/1/46	1,810.5	604
45	59259N8Q9	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	11/1/31	2,423.6	597
46	161045FL8	CHARLOTTE N C WTR & SWR SYS REV	7/1/36	717.2	597
47	13048TGT4	CALIFORNIA MUN FIN AUTH REV	11/1/35	3,442.2	586
48	463612GK1	IRVINE CALIF UNI SCH DIST SPL TAX	9/1/54	1,053.1	583
49	64966GMS8	NEW YORK N Y	8/1/26	148.2	581
50	64966MFY0	NEW YORK N Y	8/1/44	1,175.1	579

¹ See page 1 for information on CUSIP identifiers.

Top 50 Most Active Short-Term¹ Securities, 2018

By par amount

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724GP6	TEXAS ST	4.00	8/29/19	8,836.4	3,245
2	882724DQ7	TEXAS ST	4.00	8/30/18	5,505.2	2,428
3	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	3,425.7	2,088
4	650010AD3	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	5.00	5/1/19	1,520.6	3,431
5	270838AE5	EAST BATON ROUGE PARISH LA POLLUTION CTL REV	–	11/1/19	1,339.7	455
6	544657HV4	LOS ANGELES CNTY CALIF	4.00	6/28/19	1,295.6	494
7	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	–	8/15/20	1,192.4	157
8	19672MCA4	COLORADO ST ED LN PROG	4.00	6/28/18	911.5	109
9	763631V70	RICHLAND CNTY S C	3.00	2/27/19	886.2	419
10	745177FN0	PUERTO RICO COMWLTH GOVT DEV BK	4.38	2/1/19	846.4	717
11	57582RTN6	MASSACHUSETTS ST	4.00	4/25/19	741.4	518
12	451434BY9	IDAHO ST	4.00	6/28/19	740.0	144
13	196729CG0	COLORADO ST GEN FD REV	4.00	6/26/19	669.7	350
14	57582RTP1	MASSACHUSETTS ST	4.00	5/23/19	613.4	143
15	05914FN89	BALTIMORE CNTY MD	4.00	3/18/19	582.3	110
16	57582RTQ9	MASSACHUSETTS ST	4.00	6/20/19	573.9	263
17	544351LB3	LOS ANGELES CALIF	5.00	6/28/18	571.9	451
18	544657HU6	LOS ANGELES CNTY CALIF	5.00	6/29/18	563.4	383
19	769110CS4	RIVERSIDE CNTY CALIF	4.00	6/28/19	560.9	215
20	452152P39	ILLINOIS ST	5.00	11/1/19	550.5	55
21	59261AXC6	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/20	539.3	687
22	59261ANY9	METROPOLITAN TRANSN AUTH N Y REV	4.00	5/15/19	520.7	158
23	68609B5X1	OREGON ST	5.00	9/28/18	481.7	325
24	745177EX9	PUERTO RICO COMWLTH GOVT DEV BK	4.70	5/1/16	476.4	361
25	59261AVD6	METROPOLITAN TRANSN AUTH N Y REV	4.00	8/15/19	441.0	409
26	13066YQM4	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/19	436.8	1,373
27	59261AVL8	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/20	434.8	599
28	86476PYL6	SUFFOLK CNTY N Y	5.00	7/24/19	434.6	308
29	05914FN97	BALTIMORE CNTY MD	4.00	3/18/19	415.0	67
30	36004NAC3	FULTON CNTY GA DEV AUTH ARPT FAC REV	–	12/1/18	412.4	18
31	544582GX1	LOS ANGELES CALIF MULTIFAMILY REV	–	8/1/19	410.7	22
32	130536PN9	CALIFORNIA POLLUTN CTL FING AUTH SOLID WASTE DISP REV	–	4/1/20	407.4	192
33	451434BX1	IDAHO ST	4.00	6/29/18	404.3	114
34	13066YSP5	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/20	399.0	545
35	402230EP7	GULF COAST WASTE DISP AUTH TEX POLLUTN CTL REV	–	6/1/20	382.4	119
36	13063A7G3	CALIFORNIA ST	6.20	10/1/19	378.5	1,810
37	745177FK6	PUERTO RICO COMWLTH GOVT DEV BK	4.35	8/1/18	378.3	282
38	59333RJE5	MIAMI-DADE CNTY FLA SCH DIST	5.00	6/15/19	367.9	58
39	452152HU8	ILLINOIS ST	5.88	3/1/19	340.3	604
40	45506BFN4	INDIANA ST FIN AUTH REV VRDO IAM COML PAPER 3/A2 SER 2008 D-2	–	4/9/18	339.1	8
41	45506BFR5	INDIANA ST FIN AUTH REV VRDO IAM COML PAPER 3/A2 SER 2008 D-2	–	8/6/18	339.1	8
42	45506BFL8	INDIANA ST FIN AUTH REV VRDO IAM COML PAPER 3/A2 SER 2008 D-2	–	3/8/18	339.1	8
43	19672MCB2	COLORADO ST ED LN PROG	4.00	6/27/19	333.8	101
44	542424TQ9	LONG BEACH CALIF HBR REV	5.00	11/15/18	332.0	624
45	745177FM2	PUERTO RICO COMWLTH GOVT DEV BK	3.88	2/1/17	313.1	437
46	923035BN8	VENTURA CNTY CALIF	4.00	7/2/18	312.8	159
47	13067JMY4	CALIFORNIA ST ECONOMIC RECOVERY	5.00	7/1/18	304.8	656
48	70869VAF1	PENNSYLVANIA ECONOMIC DEV FING AUTH UNEMPLOYMENT COMPENSATION REV	5.00	7/1/19	304.5	523
49	605155AH3	MISSION TEX ECONOMIC DEV CORP SOLID WASTE DISP REV	–	1/1/20	295.8	42
50	7973557A6	SAN DIEGO CALIF UNI SCH DIST	4.00	6/28/19	291.2	376

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, 2018

By number of trades

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	650010AD3	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	5.00	5/1/19	1,520.6	3,431
2	882724GP6	TEXAS ST	4.00	8/29/19	8,836.4	3,245
3	882724DQ7	TEXAS ST	4.00	8/30/18	5,505.2	2,428
4	544351NT2	LOS ANGELES CALIF	4.00	6/27/19	3,425.7	2,088
5	13063A7G3	CALIFORNIA ST	6.20	10/1/19	378.5	1,810
6	13066YQM4	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/19	436.8	1,373
7	13067JKZ3	CALIFORNIA ST ECONOMIC RECOVERY	5.00	7/1/19	257.6	1,159
8	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	238.4	969
9	645913AX2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	–	2/15/19	118.7	946
10	645913AY0	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	–	2/15/20	70.5	918
11	130795E29	CALIFORNIA STATEWIDE CMNTYS DEV AUTH REV	5.00	4/1/19	129.0	775
12	745177FN0	PUERTO RICO COMWLTH GOVT DEV BK	4.38	2/1/19	846.4	717
13	59261AXC6	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/20	539.3	687
14	13067JMY4	CALIFORNIA ST ECONOMIC RECOVERY	5.00	7/1/18	304.8	656
15	745177FB6	PUERTO RICO COMWLTH GOVT DEV BK	4.15	8/1/17	281.5	625
16	542424TQ9	LONG BEACH CALIF HBR REV	5.00	11/15/18	332.0	624
17	341271AA2	FLORIDA ST BRD ADMIN FIN CORP REV	–	7/1/19	255.9	613
18	452152HU8	ILLINOIS ST	5.88	3/1/19	340.3	604
19	59261AVL8	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/20	434.8	599
20	745177ET8	PUERTO RICO COMWLTH GOVT DEV BK	5.40	8/1/19	185.2	593
21	745177EN1	PUERTO RICO COMWLTH GOVT DEV BK	5.50	8/1/20	278.6	588
22	677525TK3	OHIO ST AIR QUALITY DEV AUTH REV	5.70	8/1/20	57.7	574
23	29270CXP5	ENERGY NORTHWEST WASH ELEC REV	5.00	7/1/19	210.5	556
24	13063BFU1	CALIFORNIA ST	6.20	3/1/19	144.3	547
25	13066YSP5	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/20	399.0	545
26	70917RTT2	PENNSYLVANIA ST HIGHER EDL FACS AUTH REV	5.00	9/1/19	106.7	544
27	13063A4J0	CALIFORNIA ST	5.50	4/1/19	164.8	540
28	13067JKT7	CALIFORNIA ST ECONOMIC RECOVERY	5.00	7/1/20	196.0	530
29	70869VAF1	PENNSYLVANIA ECONOMIC DEV FING AUTH UNEMPLOYMENT COMPENSATION REV	5.00	7/1/19	304.5	523
30	57582RTN6	MASSACHUSETTS ST	4.00	4/25/19	741.4	518
31	59261AVS3	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/20	282.5	506
32	544657HV4	LOS ANGELES CNTY CALIF	4.00	6/28/19	1,295.6	494
33	13066YQN2	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/20	130.4	469
34	13063A4K7	CALIFORNIA ST	5.00	4/1/20	37.2	458
35	646139Y90	NEW JERSEY ST TPK AUTH TPK REV	5.00	1/1/19	155.1	457
36	270838AE5	EAST BATON ROUGE PARISH LA POLLUTION CTL REV	–	11/1/19	1,339.7	455
37	544351LB3	LOS ANGELES CALIF	5.00	6/28/18	571.9	451
38	745177FM2	PUERTO RICO COMWLTH GOVT DEV BK	3.88	2/1/17	313.1	437
39	646136Z46	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/19	104.8	434
40	677525TF4	OHIO ST AIR QUALITY DEV AUTH REV	5.63	6/1/18	155.6	434
41	763631V70	RICHLAND CNTY S C	3.00	2/27/19	886.2	419
42	59447PMQ1	MICHIGAN FIN AUTH REV	5.00	7/1/19	259.0	410
43	59261AVD6	METROPOLITAN TRANSN AUTH N Y REV	4.00	8/15/19	441.0	409
44	442435YM9	HOUSTON TEX UTIL SYS REV	5.00	11/15/18	133.5	404
45	373384PL4	GEORGIA ST	5.00	7/1/19	88.5	404
46	745177FC4	PUERTO RICO COMWLTH GOVT DEV BK	4.50	8/1/19	167.4	403
47	79730AHE1	SAN DIEGO CALIF PUB FACS FING AUTH SWR REV	5.00	5/15/19	49.7	396
48	6459185W9	NEW JERSEY ECONOMIC DEV AUTH REV	5.00	6/15/19	72.0	394
49	544657HU6	LOS ANGELES CNTY CALIF	5.00	6/29/18	563.4	383
50	7973557A6	SAN DIEGO CALIF UNI SCH DIST	4.00	6/28/19	291.2	376

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, 2018

By par amount

Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	–	8/1/35	13,804.9	723
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	–	11/1/41	12,504.0	1,383
3	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	11,476.4	505
4	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	–	12/1/40	7,211.9	516
5	71884SAA8	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	–	11/15/52	5,857.7	496
6	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	–	12/1/37	5,774.0	551
7	64966LCJ8	NEW YORK N Y	–	8/1/38	5,498.4	1,172
8	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	–	11/1/38	5,121.1	785
9	13063BCH3	CALIFORNIA ST	–	5/1/33	5,056.9	451
10	64966G4Q2	NEW YORK N Y	–	4/1/35	4,639.6	440
11	64966JE77	NEW YORK N Y	–	4/1/42	4,613.4	1,259
12	467229AF7	JACKSON CNTY MISS PORT FAC REV	–	6/1/23	4,553.4	416
13	64966KTD5	NEW YORK N Y	–	3/1/42	4,424.3	483
14	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,325.0	2,172
15	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	–	6/1/42	4,105.2	345
16	130534XA3	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	3.25	11/1/26	4,054.3	530
17	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	–	10/1/41	4,043.5	391
18	644614RZ4	NEW HAMPSHIRE HEALTH & ED FACS AUTH REV	–	6/1/41	3,826.1	306
19	118217AX6	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	–	6/1/52	3,669.3	141
20	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	–	2/1/31	3,667.8	152
21	9151153W7	UNIVERSITY TEX PERM UNIV FD	–	7/1/37	3,659.8	198
22	821697K99	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	–	6/1/42	3,658.4	362
23	13048TGT4	CALIFORNIA MUN FIN AUTH REV	–	11/1/35	3,442.2	586
24	64966MSD2	NEW YORK N Y	–	10/1/46	3,390.2	318
25	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	3,380.6	357
26	91425MDV6	UNIVERSITY DEL REV	–	11/1/37	3,340.7	222
27	533485BD9	LINCOLN CNTY WYO POLLUTN CTL REV	–	10/1/44	3,330.9	160
28	040507QA6	ARIZONA HEALTH FACS AUTH REV	–	1/1/46	3,325.5	613
29	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	11/1/35	3,184.9	929
30	575827R51	MASSACHUSETTS ST	–	12/1/30	3,059.4	336
31	64972FSG2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/25	3,026.0	468
32	60528AAV6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	3,023.8	206
33	60528AAW4	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	–	12/1/30	3,006.5	298
34	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	–	11/15/52	2,995.1	759
35	64972F6T8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/45	2,953.0	546
36	64972F2H8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/44	2,939.1	378
37	533485BB3	LINCOLN CNTY WYO POLLUTN CTL REV	–	10/1/44	2,899.4	357
38	573202AY4	MARTIN CNTY FLA POLLUTN CTL REV	–	7/15/22	2,870.6	346
39	57586CV36	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	–	8/15/40	2,839.9	438
40	452151LF8	ILLINOIS ST	5.10	6/1/33	2,829.6	2,228
41	64966FA87	NEW YORK N Y	–	4/1/36	2,814.8	352
42	64972F6V3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/45	2,766.2	376
43	57582N4G7	MASSACHUSETTS ST	–	3/1/26	2,692.3	737
44	130534XX3	CALIFORNIA POLLUTN CTL FING AUTH POLLUTN CTL REV	–	11/1/26	2,686.1	432
45	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	–	8/15/20	2,600.0	260
46	89602RDT9	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	–	1/1/32	2,574.4	1,127
47	915137T60	UNIVERSITY TEX UNIV REVS	–	8/1/34	2,526.2	254
48	64972GJN5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	–	6/15/48	2,505.3	433
49	64966LU41	NEW YORK N Y	–	6/1/44	2,484.2	406
50	13033FK74	CALIFORNIA HEALTH FACS FING AUTH REV	–	6/1/41	2,478.1	1,416

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, 2018

By number of trades

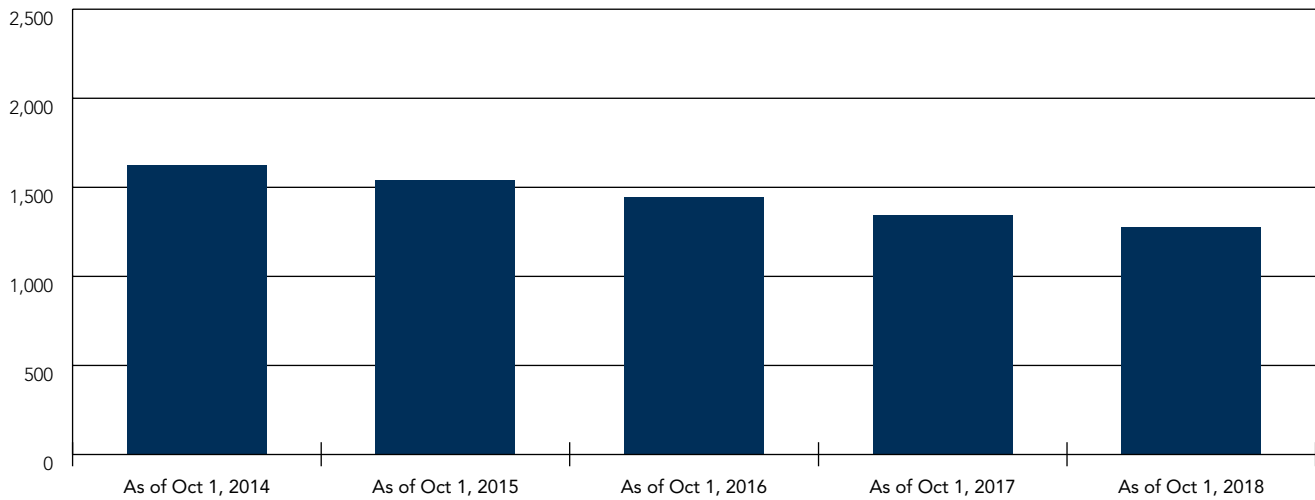
Rank	CUSIP ²	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	70914PN32	PENNSYLVANIA ST	5.00	3/1/39	303.8	3,867
2	20282EAS5	COMMONWEALTH FING AUTH PA TOB MASTER SETTLEMENT PMT REV	5.10	6/1/39	1,272.8	3,198
3	74529JAC9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.00	8/1/36	1,192.1	3,105
4	74514LB89	PUERTO RICO COMWLTH	5.25	7/1/41	969.8	2,539
5	64972GPY4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	3.00	6/15/48	274.9	2,455
6	5742184J9	MARYLAND ST HEALTH & HIGHER EDL FACS AUTH REV	5.25	7/1/48	448.7	2,395
7	646140CS0	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/38	220.6	2,348
8	64966MA33	NEW YORK N Y	3.75	4/1/46	778.1	2,258
9	13063A5G5	CALIFORNIA ST	4.75	4/1/39	1,277.0	2,232
10	452151LF8	ILLINOIS ST	4.00	6/1/33	2,829.6	2,228
11	74514LE86	PUERTO RICO COMWLTH	4.25	7/1/35	4,325.0	2,172
12	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	3.25	2/15/29	1,073.7	2,143
13	59447TMQ3	MICHIGAN FIN AUTH REV	5.13	11/15/46	210.9	2,119
14	6461364J7	NEW JERSEY ST TRANSN TR FD AUTH	4.00	12/15/37	389.9	2,101
15	13063DFR4	CALIFORNIA ST	4.25	10/1/47	449.8	2,081
16	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	3.25	6/15/44	88.7	2,053
17	74529JLM5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.25	8/1/41	1,298.2	1,987
18	956622N91	WEST VIRGINIA ST HOSP FIN AUTH HOSP REV	5.00	6/1/51	611.6	1,952
19	74529JGP4	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.00	8/1/39	525.9	1,921
20	01728A3Z7	ALLEGHENY CNTY PA HOSP DEV AUTH REV	8.00	4/1/44	784.2	1,914
21	74529JHN8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	3.25	8/1/42	1,146.2	1,892
22	646140CT8	NEW JERSEY ST TPK AUTH TPK REV	5.13	1/1/43	487.4	1,860
23	45471ARM6	INDIANA FIN AUTH HOSP REV	5.00	11/1/48	248.5	1,795
24	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	7.37	7/1/42	678.4	1,788
25	745160RC7	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	6.10	7/1/42	609.1	1,723
26	745190DH8	PUERTO RICO COMWLTH HWY & TRANSN AUTH TRANSN REV	4.00	7/1/38	134.6	1,693
27	13063BFV9	CALIFORNIA ST	5.00	3/1/36	560.6	1,645
28	398258AX1	GRIFFIN-SPALDING CNTY GA HOSP REV	5.00	4/1/47	123.6	1,581
29	64972GBA1	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	5.13	6/15/47	667.8	1,577
30	59261AQN0	METROPOLITAN TRANSN AUTH N Y REV	7.55	11/15/38	281.2	1,570
31	59261ATJ6	METROPOLITAN TRANSN AUTH N Y REV	5.25	11/15/42	1,170.8	1,561
32	64972GQD9	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	5.10	6/15/40	157.4	1,551
33	60637AMP4	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	6.00	6/1/48	207.4	1,537
34	646140CU5	NEW JERSEY ST TPK AUTH TPK REV	7.43	1/1/43	161.7	1,515
35	646136E31	NEW JERSEY ST TRANSN TR FD AUTH	6.05	6/15/42	108.0	1,500
36	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	4.00	6/15/42	137.2	1,493
37	59334DJR6	MIAMI-DADE CNTY FLA WTR & SWR REV	5.75	10/1/47	104.7	1,466
38	847113CJ4	SPARTANBURG S C REGL HEALTH SVCS DIST INC HOSP REV	4.00	4/15/48	151.4	1,464
39	6461393H6	NEW JERSEY ST TPK AUTH TPK REV	3.63	1/1/38	218.7	1,447
40	574193QH4	MARYLAND ST	6.00	3/15/33	162.9	1,446
41	60637AMW9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	5.25	11/15/48	316.2	1,432
42	64972HK84	NEW YORK N Y CITY TRANSITIONAL FIN AUTH BLDG AID REV	4.00	7/15/47	152.8	1,427
43	613603YZ6	MONTGOMERY CNTY PA HIGHER ED & HEALTH AUTH REV	4.00	9/1/49	197.5	1,422
44	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	5.00	12/15/28	420.1	1,419
45	13033FK74	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	6/1/41	2,478.1	1,416
46	64972HS94	NEW YORK N Y CITY TRANSITIONAL FIN AUTH BLDG AID REV	3.00	7/15/47	180.5	1,413
47	13063BJB9	CALIFORNIA ST	4.00	11/1/30	129.5	1,412
48	803301DK3	SARASOTA CNTY FLA PUB HOSP DIST HOSP REV	5.00	7/1/48	397.5	1,409
49	59261ATK3	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/46	420.1	1,406
50	402207AD6	GULF COAST INDL DEV AUTH TEX REV	4.00	11/1/41	12,504.0	1,383

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, 2014–2018

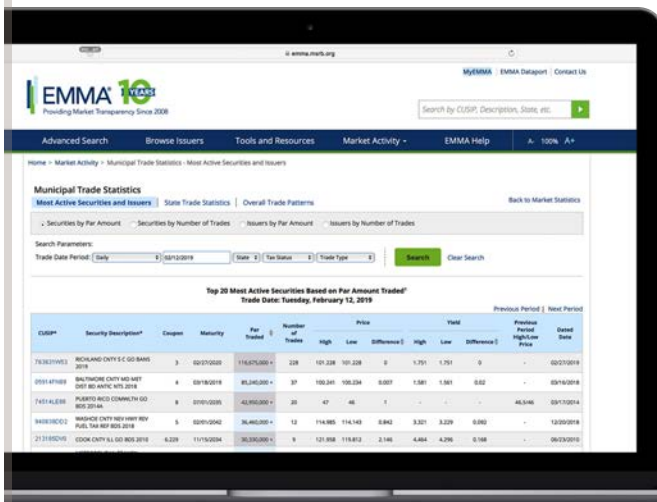
Number of MSRB Registered Dealers



	Number of Registered Dealers	% Change from Prior Period ¹
As of Oct 1, 2014	1,625	-4.7%
As of Oct 1, 2015	1,541	-5.2%
As of Oct 1, 2016	1,448	-6.0%
As of Oct 1, 2017	1,346	-7.0%
As of Oct 1, 2018	1,277	-5.1%

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



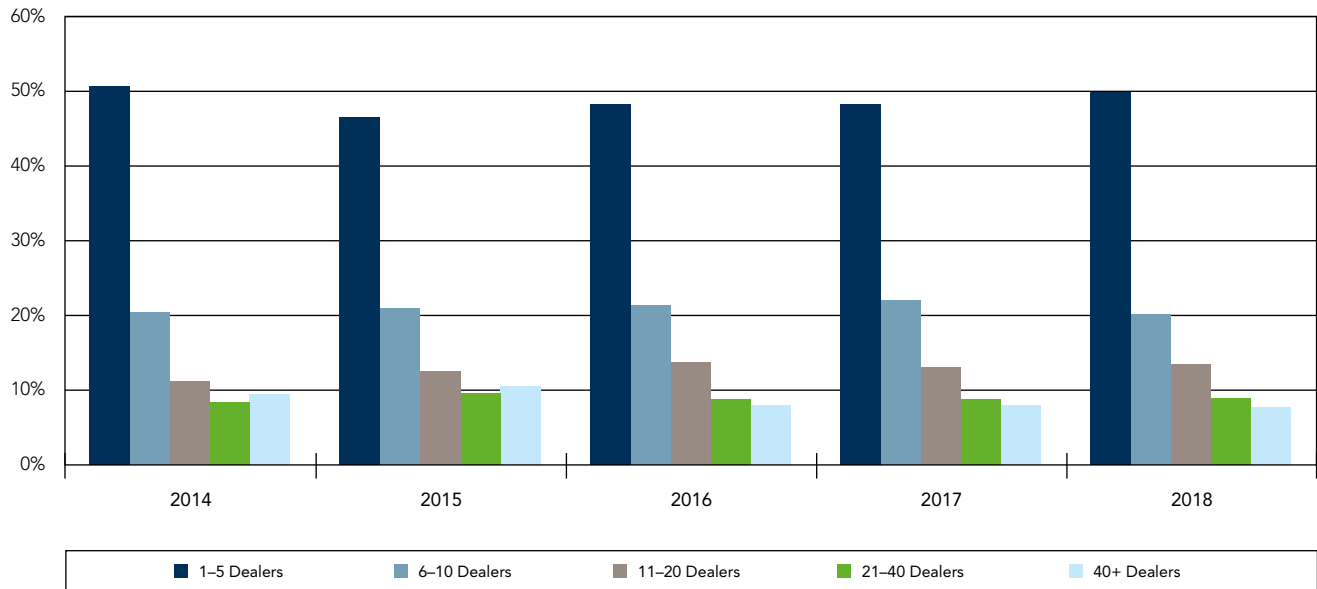
Quarterly Statistical Summaries

MSRB Quarterly Statistical Summaries include aggregate market information for the most recent quarter. In addition to data on municipal trading activity, the quarterly data includes the number of interest rate resets for variable rate demand obligations and auction rate securities, as well as statistics related to continuing disclosure documents received through the MSRB's EMMA® website. The MSRB Quarterly Statistical Summaries are available free of charge approximately four to five weeks after the end of each quarter.

[Find out more on the MSRB website.](#)

Distribution of Customer Trades by Number of Dealers

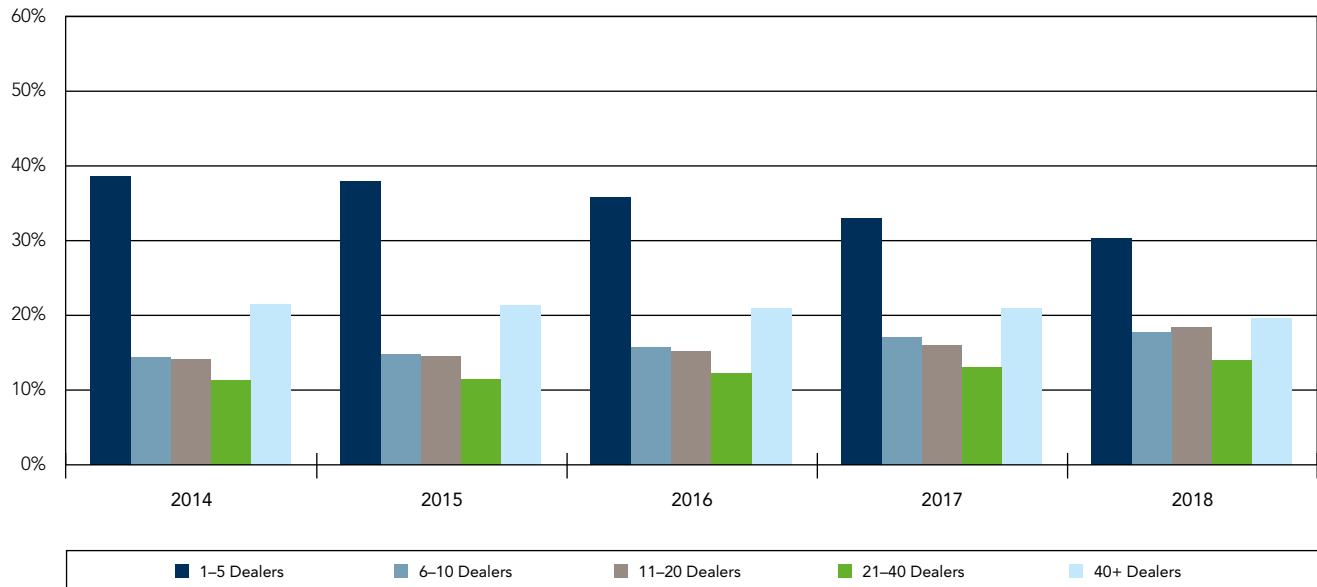
Par Amount



	2014	2015	2016	2017	2018
1-5 Dealers	51%	47%	48%	48%	50%
6-10 Dealers	20%	21%	21%	22%	20%
11-20 Dealers	11%	13%	14%	13%	14%
21-40 Dealers	8%	10%	9%	9%	9%
40+ Dealers	9%	11%	8%	8%	8%

Distribution of Customer Trades by Number of Dealers

Number of Trades



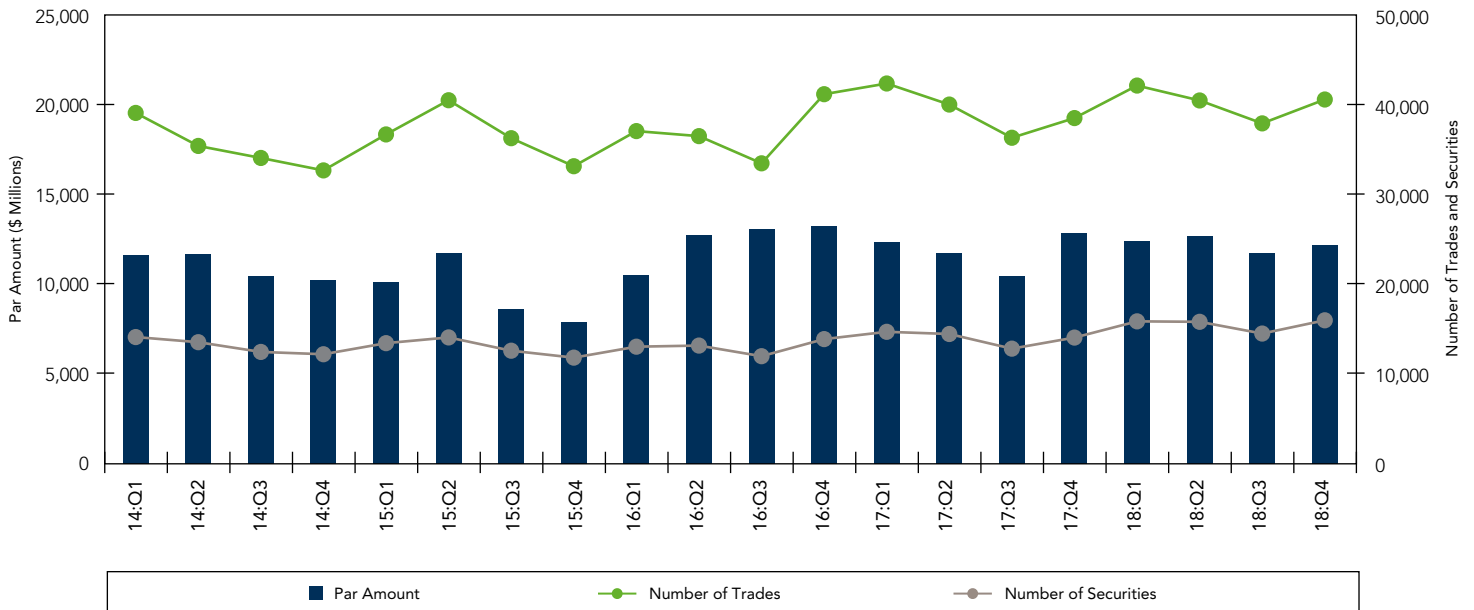
	2014	2015	2016	2017	2018
1-5 Dealers	39%	38%	36%	33%	30%
6-10 Dealers	14%	15%	16%	17%	18%
11-20 Dealers	14%	15%	15%	16%	18%
21-40 Dealers	11%	12%	12%	13%	14%
40+ Dealers	22%	21%	21%	21%	20%

Part Five

Overall Municipal Market Trading Activity, 2014–2018

Average Daily Trading Volume, 2014–2018

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

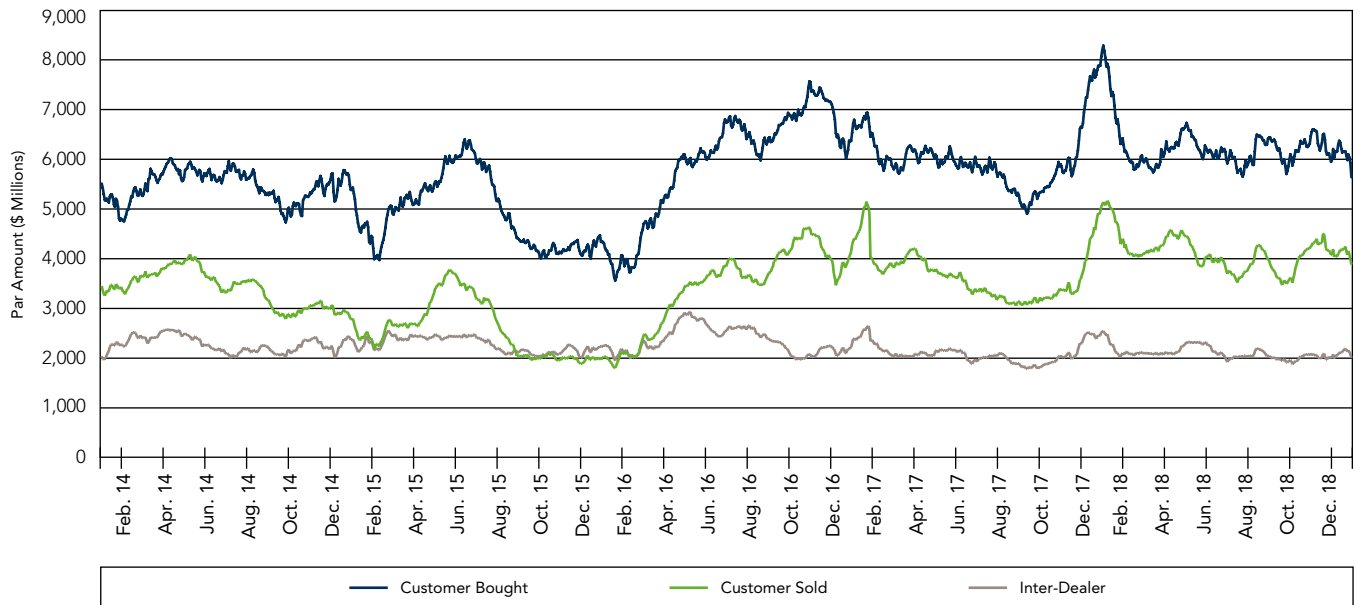


Quarter	Par Amount (\$ Millions)	Number of Trades	Number of Unique Securities
14:Q1	11,636.2	39,191	14,157
14:Q2	11,725.2	35,504	13,583
14:Q3	10,481.3	34,156	12,496
14:Q4	10,218.1	32,768	12,238
2014	11,005.0	35,359	13,104
15:Q1	10,139.2	36,788	13,476
15:Q2	11,767.9	40,608	14,116
15:Q3	8,608.7	36,369	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

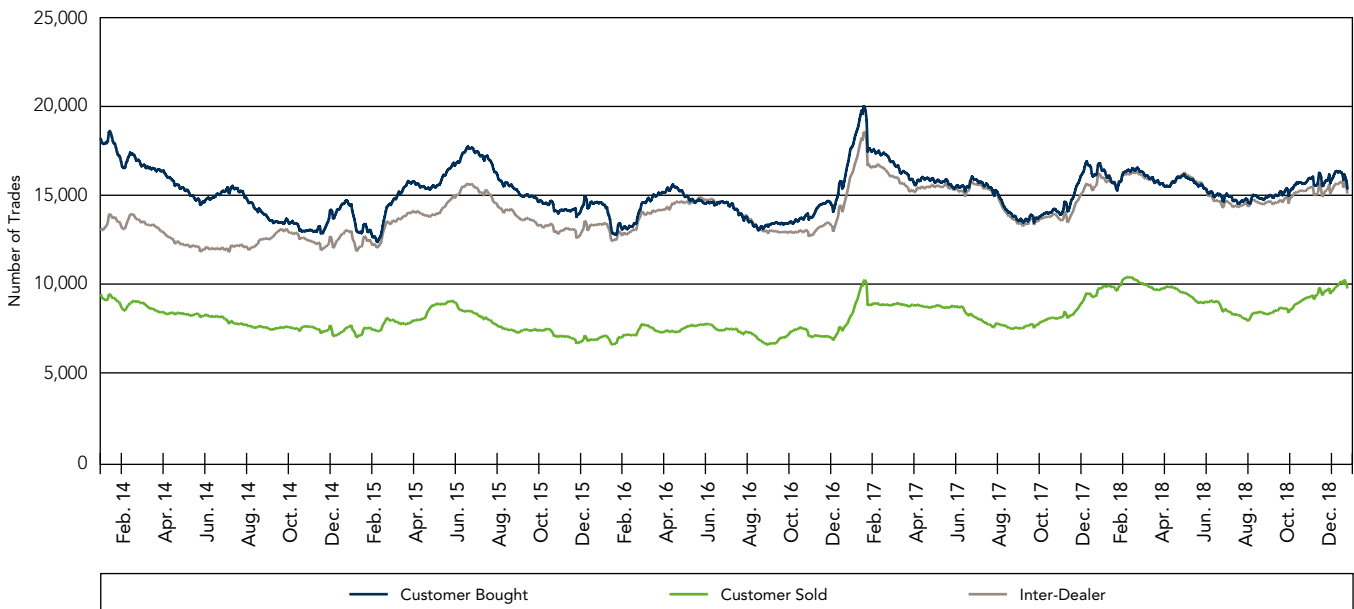
Daily Trading Volume, 2014–2018

30-Day trailing average by trade type

Par Amount



Number of Trades



Trade Type and Size, 2014–2018

Average daily par amount in \$ millions

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
All Trades									
Total	11,005.0	9,596.0	12,440.9	11,873.1	12,266.7	12,407.8	12,728.1	11,729.3	12,199.8
0–\$25,000	277.6	288.4	282.7	304.3	310.7	332.8	314.0	293.7	303.2
\$25,001–\$50,000	288.7	305.9	312.0	327.8	335.6	351.7	334.9	312.7	343.4
\$50,001–\$75,000	105.5	112.8	117.7	125.2	134.3	138.8	132.9	123.6	142.1
\$75,001–\$100,000	256.5	272.1	280.5	291.2	299.8	309.3	295.5	280.2	314.4
\$100,001–\$500,000	1,091.2	1,160.0	1,227.0	1,268.4	1,266.9	1,272.2	1,265.2	1,198.1	1,331.2
\$500,001–\$1,000,000	690.3	716.7	772.3	815.5	767.6	775.7	786.0	722.2	786.2
\$1,000,001–\$2,000,000	789.0	789.8	883.8	924.3	906.9	895.6	942.7	849.6	938.3
More than \$2,000,000	7,506.1	5,950.3	8,564.9	7,816.5	8,244.8	8,331.7	8,657.0	7,949.1	8,041.0
Customer Bought									
Total	5,410.2	4,813.7	6,263.9	6,082.2	6,123.8	6,045.1	6,401.7	5,969.9	6,072.2
0–\$25,000	120.7	121.4	114.2	119.5	118.2	124.7	118.5	113.5	116.5
\$25,001–\$50,000	121.1	127.6	126.6	131.8	131.5	136.5	130.8	125.7	133.2
\$50,001–\$75,000	41.5	44.8	46.2	48.9	51.6	52.7	50.8	49.2	53.7
\$75,001–\$100,000	104.4	111.1	113.5	117.0	118.2	121.4	116.6	114.1	120.7
\$100,001–\$500,000	408.1	450.2	492.1	511.7	509.1	506.0	516.2	487.8	525.8
\$500,001–\$1,000,000	261.6	285.9	334.2	363.0	334.9	336.6	349.2	314.6	339.2
\$1,000,001–\$2,000,000	328.6	351.4	413.8	446.1	425.0	416.7	442.9	405.7	434.1
More than \$2,000,000	4,024.0	3,321.3	4,623.3	4,344.3	4,435.3	4,350.6	4,676.9	4,359.4	4,349.0
Customer Sold									
Total	3,314.5	2,523.4	3,758.3	3,685.5	4,060.9	4,256.1	4,136.6	3,750.6	4,104.6
0–\$25,000	59.9	59.2	56.6	63.5	68.7	76.9	69.2	62.4	66.5
\$25,001–\$50,000	63.2	60.6	59.7	64.3	70.2	76.7	68.9	61.3	74.2
\$50,001–\$75,000	25.0	24.4	24.9	27.4	31.6	33.4	30.8	27.1	35.0
\$75,001–\$100,000	58.0	55.9	55.7	60.4	67.3	69.0	66.4	57.7	76.0
\$100,001–\$500,000	227.2	218.5	235.0	265.1	302.0	300.8	298.0	265.8	342.7
\$500,001–\$1,000,000	155.3	144.2	160.4	190.6	212.4	213.3	213.4	192.0	230.4
\$1,000,001–\$2,000,000	201.9	182.4	213.8	249.8	278.7	277.1	281.1	249.3	306.8
More than \$2,000,000	2,523.9	1,778.3	2,952.1	2,764.2	3,030.1	3,208.8	3,108.7	2,835.0	2,973.1
Inter-Dealer									
Total	2,280.3	2,258.9	2,418.7	2,105.4	2,082.0	2,106.6	2,189.8	2,008.7	2,022.9
0–\$25,000	97.0	107.8	111.9	121.2	123.8	131.2	126.2	117.8	120.2
\$25,001–\$50,000	104.4	117.7	125.7	131.6	133.8	138.4	135.1	125.8	136.0
\$50,001–\$75,000	39.0	43.6	46.6	49.0	51.2	52.7	51.3	47.2	53.4
\$75,001–\$100,000	94.1	105.1	111.3	113.8	114.4	118.9	112.5	108.4	117.7
\$100,001–\$500,000	455.9	491.3	499.9	491.6	455.8	465.5	451.0	444.5	462.7
\$500,001–\$1,000,000	273.4	286.6	277.8	261.9	220.3	225.8	223.4	215.6	216.6
\$1,000,001–\$2,000,000	258.5	255.9	256.1	228.4	203.2	201.8	218.7	194.7	197.4
More than \$2,000,000	958.1	850.7	989.5	708.0	779.5	772.3	871.4	754.7	718.9

Trade Type and Size, 2014–2018

Average daily number of trades

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
All Trades									
Total	35,359	36,735	37,135	39,397	40,372	42,247	40,582	38,023	40,689
0–\$25,000	17,770	18,252	17,739	19,148	19,594	20,932	19,813	18,624	19,053
\$25,001–\$50,000	6,780	7,187	7,329	7,728	7,945	8,324	7,942	7,405	8,117
\$50,001–\$75,000	1,581	1,689	1,763	1,876	2,014	2,080	1,994	1,853	2,129
\$75,001–\$100,000	2,633	2,793	2,881	2,993	3,085	3,180	3,041	2,882	3,238
\$100,001–\$500,000	4,374	4,650	4,911	5,080	5,175	5,189	5,137	4,854	5,516
\$500,001–\$1,000,000	860	897	964	1,020	969	971	996	911	995
\$1,000,001–\$2,000,000	521	522	582	610	600	592	623	562	621
More than \$2,000,000	841	745	965	942	992	980	1,036	931	1,020
Customer Bought									
Total	14,872	15,246	15,064	15,722	15,673	16,179	15,725	15,020	15,781
0–\$25,000	7,736	7,664	7,096	7,413	7,313	7,695	7,335	7,028	7,207
\$25,001–\$50,000	2,839	2,987	2,963	3,097	3,102	3,219	3,090	2,964	3,138
\$50,001–\$75,000	620	669	689	729	771	787	760	736	803
\$75,001–\$100,000	1,070	1,138	1,164	1,200	1,214	1,245	1,198	1,172	1,241
\$100,001–\$500,000	1,656	1,818	1,967	2,042	2,071	2,055	2,085	1,981	2,161
\$500,001–\$1,000,000	325	357	415	451	421	419	440	395	429
\$1,000,001–\$2,000,000	216	231	271	292	280	274	292	267	287
More than \$2,000,000	409	380	498	497	501	486	524	478	515
Customer Sold									
Total	7,856	7,616	7,608	8,431	9,254	9,961	9,235	8,296	9,544
0–\$25,000	3,883	3,845	3,659	4,095	4,382	4,888	4,423	4,039	4,198
\$25,001–\$50,000	1,486	1,429	1,409	1,528	1,678	1,831	1,650	1,467	1,767
\$50,001–\$75,000	374	364	372	409	472	499	461	407	522
\$75,001–\$100,000	596	574	573	621	693	710	683	594	782
\$100,001–\$500,000	928	895	955	1,068	1,230	1,228	1,206	1,069	1,414
\$500,001–\$1,000,000	190	177	196	235	263	262	267	237	286
\$1,000,001–\$2,000,000	132	119	139	163	182	181	183	163	201
More than \$2,000,000	268	214	305	311	353	361	360	320	373
Inter-Dealer									
Total	12,632	13,873	14,463	15,244	15,445	16,106	15,623	14,707	15,364
0–\$25,000	6,150	6,743	6,983	7,640	7,898	8,349	8,055	7,558	7,648
\$25,001–\$50,000	2,454	2,771	2,957	3,103	3,165	3,274	3,202	2,974	3,212
\$50,001–\$75,000	587	656	702	737	770	794	773	711	804
\$75,001–\$100,000	967	1,080	1,145	1,172	1,178	1,224	1,160	1,117	1,214
\$100,001–\$500,000	1,790	1,936	1,988	1,970	1,874	1,906	1,846	1,804	1,941
\$500,001–\$1,000,000	345	363	353	334	284	290	289	279	280
\$1,000,001–\$2,000,000	173	172	172	154	137	136	147	132	133
More than \$2,000,000	165	151	163	133	138	134	151	133	132

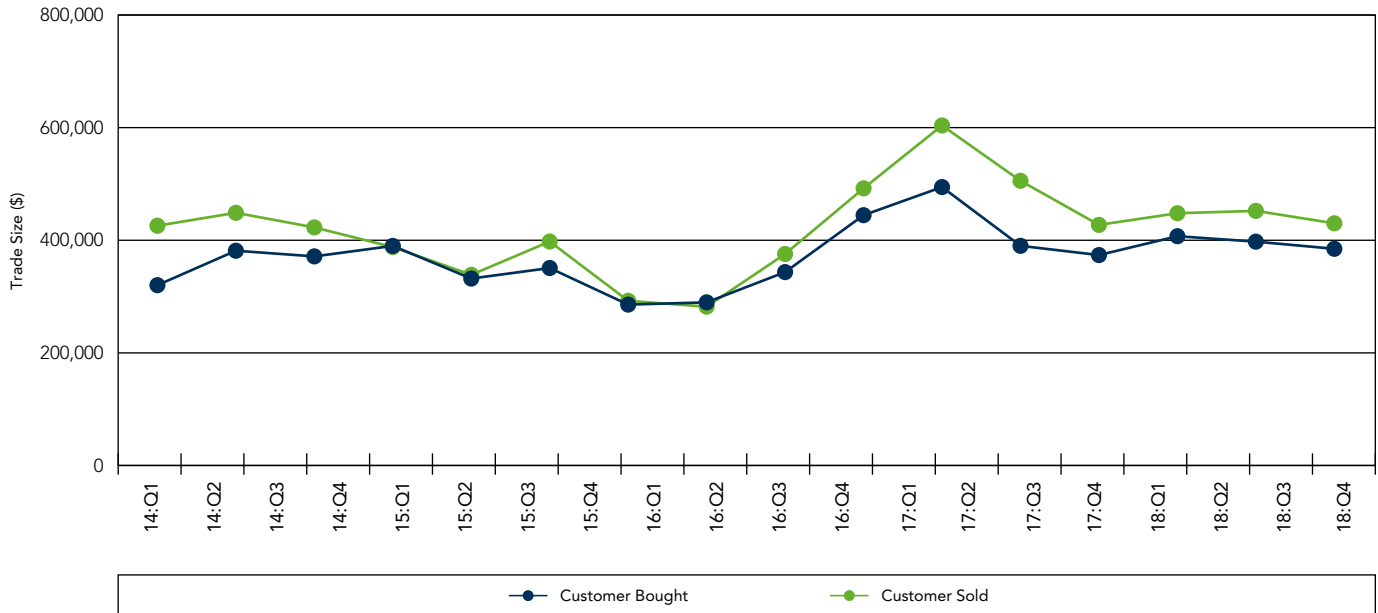
Trade Type and Size, 2014–2018

Average daily number of unique securities

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
All Trades									
Total	13,104	13,011	13,055	14,048	15,588	15,911	15,860	14,549	16,029
0–\$25,000	7,351	7,257	6,989	7,602	8,323	8,710	8,471	7,899	8,223
\$25,001–\$50,000	3,195	3,181	3,143	3,327	3,647	3,732	3,668	3,376	3,814
\$50,001–\$75,000	861	887	907	956	1,064	1,071	1,059	977	1,146
\$75,001–\$100,000	1,342	1,355	1,363	1,444	1,552	1,560	1,550	1,433	1,663
\$100,001–\$500,000	2,060	2,129	2,251	2,369	2,532	2,472	2,545	2,343	2,762
\$500,001–\$1,000,000	475	496	544	588	588	576	610	554	610
\$1,000,001–\$2,000,000	311	314	356	385	392	382	408	366	411
More than \$2,000,000	476	425	562	567	593	588	621	551	610
Customer Bought									
Total	9,125	9,104	9,067	9,748	10,508	10,766	10,693	9,889	10,686
0–\$25,000	5,189	5,056	4,832	5,275	5,588	5,811	5,684	5,359	5,503
\$25,001–\$50,000	2,186	2,221	2,204	2,350	2,494	2,557	2,520	2,349	2,552
\$50,001–\$75,000	558	593	606	643	690	705	686	645	723
\$75,001–\$100,000	883	926	934	979	1,021	1,040	1,019	968	1,056
\$100,001–\$500,000	1,302	1,413	1,494	1,534	1,595	1,585	1,613	1,487	1,692
\$500,001–\$1,000,000	272	298	337	356	349	348	364	323	360
\$1,000,001–\$2,000,000	184	194	225	237	238	234	247	222	247
More than \$2,000,000	315	294	385	375	387	385	402	357	403
Customer Sold									
Total	6,748	6,526	6,557	7,352	8,114	8,698	8,127	7,279	8,364
0–\$25,000	3,459	3,388	3,260	3,726	4,015	4,445	4,070	3,704	3,858
\$25,001–\$50,000	1,399	1,343	1,325	1,442	1,579	1,713	1,559	1,379	1,671
\$50,001–\$75,000	361	353	361	397	452	475	443	388	501
\$75,001–\$100,000	570	548	545	594	659	677	651	565	744
\$100,001–\$500,000	864	832	885	995	1,143	1,144	1,120	992	1,315
\$500,001–\$1,000,000	180	168	187	223	252	252	255	228	274
\$1,000,001–\$2,000,000	126	114	133	157	176	175	176	158	194
More than \$2,000,000	239	195	278	284	320	328	325	289	339
Inter-Dealer									
Total	6,778	7,452	7,478	8,082	8,905	9,120	9,041	8,489	8,972
0–\$25,000	3,709	4,149	4,123	4,562	5,022	5,240	5,121	4,843	4,891
\$25,001–\$50,000	1,542	1,763	1,772	1,887	2,047	2,092	2,072	1,916	2,106
\$50,001–\$75,000	391	452	462	491	535	546	536	492	568
\$75,001–\$100,000	604	689	692	724	763	778	753	719	801
\$100,001–\$500,000	1,016	1,104	1,127	1,155	1,166	1,162	1,152	1,116	1,235
\$500,001–\$1,000,000	209	224	223	217	192	191	197	187	191
\$1,000,001–\$2,000,000	107	109	112	104	97	97	104	93	96
More than \$2,000,000	98	94	106	91	100	95	108	96	99

Average Daily Trade Size, 2014–2018

By customer trade



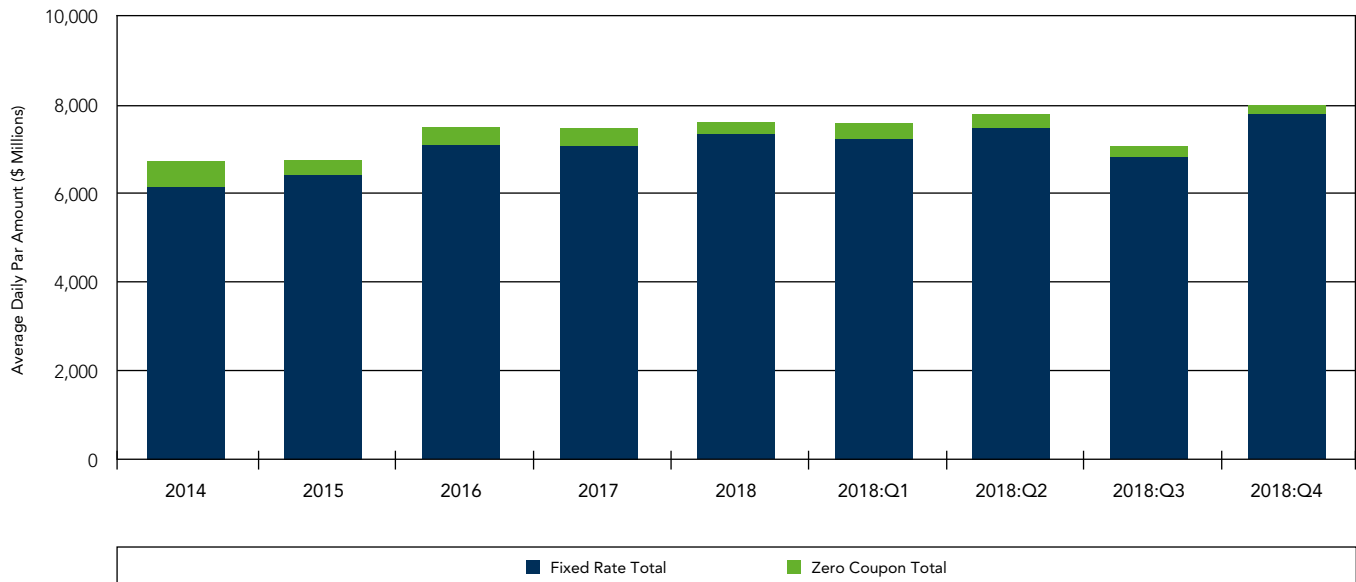
Quarter	Customer Bought (\$)	Customer Sold (\$)
14:Q1	320,198	425,800
14:Q2	381,343	448,689
14:Q3	370,821	421,998
14:Q4	389,714	387,568
2014	363,793	421,907
15:Q1	331,941	338,520
15:Q2	350,641	397,689
15:Q3	285,685	292,412
15:Q4	289,667	282,011
2015	315,737	331,317
16:Q1	343,387	375,567
16:Q2	444,454	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

Part Six

Municipal Fixed Rate Securities—Par Amount Traded and Number of Trades, 2014–2018

Transaction Summary—Fixed Rate Securities, 2014–2018

Average daily par amount in \$ millions



	2014	2015	2016	2017	2018
Fixed Rate Total	6,132.9	6,413.1	7,072.8	7,064.2	7,318.6
0–\$25,000	266.9	278.5	272.4	295.2	302.6
\$25,001–\$50,000	274.3	292.9	298.2	315.7	325.4
\$50,001–\$75,000	98.8	106.8	111.5	119.7	129.4
\$75,001–\$100,000	237.9	255.8	262.6	267.6	273.2
\$100,001–\$500,000	1,006.4	1,091.1	1,144.3	1,143.7	1,115.1
\$500,001–\$1,000,000	611.6	658.9	694.9	696.8	627.7
\$1,000,001–\$2,000,000	660.3	697.7	749.3	744.1	699.3
More than \$2,000,000	2,976.6	3,031.4	3,539.5	3,481.5	3,845.9

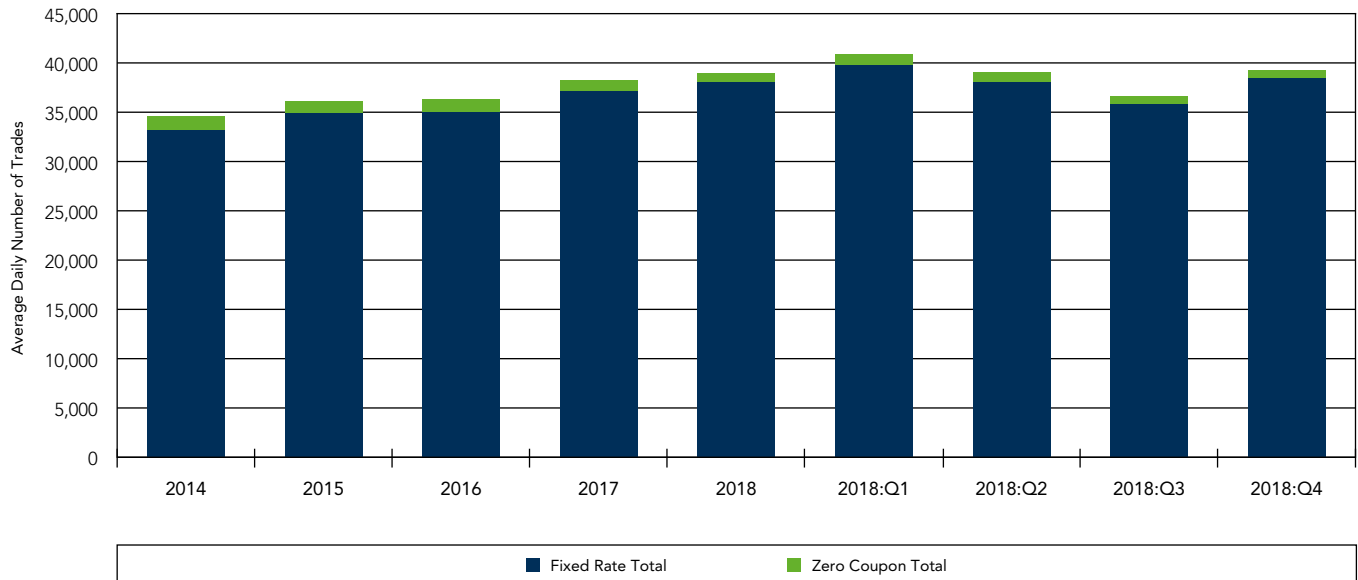
	2014	2015	2016	2017	2018
Zero Coupon Total	574.2	336.7	425.9	391.1	280.5
0–\$25,000	9.5	8.8	9.1	7.9	6.9
\$25,001–\$50,000	12.8	11.5	11.9	10.3	8.4
\$50,001–\$75,000	5.9	5.3	5.5	4.8	3.9
\$75,001–\$100,000	12.2	11.1	11.1	9.4	7.3
\$100,001–\$500,000	45.6	39.7	38.7	32.1	26.2
\$500,001–\$1,000,000	26.0	21.4	21.2	17.6	12.3
\$1,000,001–\$2,000,000	26.7	23.4	21.2	18.7	12.2
More than \$2,000,000	435.4	215.6	307.3	290.5	203.3

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	7,224.3	7,462.4	6,807.6	7,767.9
0–\$25,000	323.5	305.6	286.1	296.0
\$25,001–\$50,000	340.1	324.7	303.4	333.8
\$50,001–\$75,000	133.3	127.9	119.2	137.3
\$75,001–\$100,000	282.6	266.6	254.8	289.0
\$100,001–\$500,000	1,123.2	1,101.2	1,053.6	1,181.8
\$500,001–\$1,000,000	637.8	631.7	590.5	650.7
\$1,000,001–\$2,000,000	694.2	711.2	657.5	733.6
More than \$2,000,000	3,689.6	3,993.7	3,542.6	4,145.6

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Zero Coupon Total	339.6	322.9	254.4	207.5
0–\$25,000	8.0	7.0	6.5	6.0
\$25,001–\$50,000	9.9	8.4	7.8	7.8
\$50,001–\$75,000	4.5	4.1	3.4	3.8
\$75,001–\$100,000	8.1	7.1	6.9	7.0
\$100,001–\$500,000	29.3	24.5	26.1	25.2
\$500,001–\$1,000,000	13.0	11.7	12.7	11.9
\$1,000,001–\$2,000,000	12.9	12.4	13.2	10.2
More than \$2,000,000	253.9	247.7	177.9	135.8

Transaction Summary—Fixed Rate Securities, 2014–2018

Average daily number of trades



	2014	2015	2016	2017	2018
Fixed Rate Total	33,157	34,876	34,971	37,102	38,002
0–\$25,000	17,051	17,591	17,057	18,550	19,053
\$25,001–\$50,000	6,434	6,875	7,002	7,439	7,700
\$50,001–\$75,000	1,479	1,599	1,669	1,792	1,939
\$75,001–\$100,000	2,442	2,626	2,697	2,753	2,815
\$100,001–\$500,000	4,044	4,380	4,596	4,624	4,624
\$500,001–\$1,000,000	763	825	870	874	794
\$1,000,001–\$2,000,000	437	462	496	493	464
More than \$2,000,000	506	519	584	577	612

	2014	2015	2016	2017	2018
Zero Coupon Total	1,442	1,300	1,323	1,134	957
0–\$25,000	644	599	614	525	465
\$25,001–\$50,000	308	276	286	248	204
\$50,001–\$75,000	90	80	83	72	60
\$75,001–\$100,000	126	115	115	98	75
\$100,001–\$500,000	192	168	163	136	113
\$500,001–\$1,000,000	33	27	27	22	16
\$1,000,001–\$2,000,000	18	15	14	12	8
More than \$2,000,000	31	21	22	21	16

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	39,761	38,074	35,779	38,442
0–\$25,000	20,311	19,255	18,114	18,577
\$25,001–\$50,000	8,045	7,698	7,180	7,888
\$50,001–\$75,000	1,996	1,919	1,787	2,056
\$75,001–\$100,000	2,909	2,749	2,625	2,981
\$100,001–\$500,000	4,648	4,543	4,327	4,972
\$500,001–\$1,000,000	801	805	747	825
\$1,000,001–\$2,000,000	461	472	436	486
More than \$2,000,000	590	634	564	657

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Zero Coupon Total	1,105	963	900	867
0–\$25,000	546	475	439	404
\$25,001–\$50,000	239	203	188	188
\$50,001–\$75,000	69	63	53	58
\$75,001–\$100,000	84	74	72	72
\$100,001–\$500,000	124	107	110	110
\$500,001–\$1,000,000	16	15	16	15
\$1,000,001–\$2,000,000	9	8	9	7
More than \$2,000,000	18	18	14	12

Source of Repayment and Trade Size, 2014–2018

Average daily par amount in \$ millions

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	6,132.8	6,413.1	7,072.7	7,064.2	7,315.7	7,218.3	7,459.9	6,805.2	7,766.9
General Obligation	2,121.8	2,264.4	2,598.8	2,654.8	2,619.7	2,823.1	2,736.7	2,467.1	2,459.1
Revenue	3,791.2	3,902.5	4,221.5	4,205.2	4,465.6	4,200.1	4,444.0	4,117.8	5,082.4
Double Barrel	219.8	246.2	252.5	204.1	230.5	195.1	279.2	220.4	225.4
Zero Coupon Total	574.2	336.7	425.9	391.1	280.5	339.6	322.9	254.4	207.5
General Obligation	157.9	146.7	143.2	114.1	80.9	106.2	75.5	71.0	71.8
Revenue	411.1	184.4	277.2	274.9	196.8	228.2	245.6	181.5	133.1
Double Barrel	5.2	5.6	5.5	2.1	2.9	5.2	1.8	1.9	2.7

Average daily number of trades

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	33,157	34,876	34,971	37,102	38,002	39,761	38,074	35,779	38,442
General Obligation	11,263	12,175	12,495	13,790	14,262	14,841	14,443	13,595	14,187
Revenue	20,723	21,481	21,249	22,042	22,470	23,694	22,330	20,895	22,993
Double Barrel	1,171	1,219	1,227	1,271	1,270	1,226	1,301	1,289	1,262
Zero Coupon Total	1,442	1,300	1,323	1,134	957	1,105	963	900	867
General Obligation	697	675	675	606	502	571	505	480	456
Revenue	689	556	607	510	431	502	434	400	391
Double Barrel	56	70	41	18	24	32	24	21	20

Tax Status and Trade Size, 2014–2018

Average daily par amount in \$ millions

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	6,132.9	6,413.1	7,072.7	7,064.2	7,317.0	7,220.8	7,461.6	6,805.6	7,767.4
Tax Exempt	5,359.7	5,540.8	6,181.5	6,113.2	6,379.2	6,289.8	6,456.5	5,900.3	6,858.4
Taxable	624.2	722.9	736.2	789.8	676.4	715.5	740.1	672.2	579.5
AMT	149.0	149.4	155.0	161.2	261.5	215.5	265.0	233.2	329.6
Zero Coupon Total	574.2	336.7	425.9	391.1	280.5	339.6	322.9	254.4	207.5
Tax Exempt	457.7	298.6	401.6	359.5	265.5	328.5	309.7	236.7	189.5
Taxable	116.5	38.0	24.3	31.6	15.0	11.1	13.1	17.7	18.0
AMT	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1

Average daily number of trades

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	33,157	34,876	34,971	37,102	38,002	39,761	38,074	35,779	38,442
Tax Exempt	30,024	31,906	32,184	34,260	35,324	36,905	35,383	33,176	35,871.3
Taxable	2,302	2,333	2,322	2,389	2,214	2,411	2,227	2,137	2,087.7
AMT	832	637	465	453	465	445	464	466	483.3
Zero Coupon Total	1,442	1,300	1,323	1,134	957	1,105	963	900	867
Tax Exempt	1,303	1,177	1,187	1,014	862	991	869	811	781.8
Taxable	137	122	136	120	95	114	93	89	84.8
AMT	2	1	<1	<1	<1	<1	<1	<1	<1

Sector—Fixed Rate Securities, 2014–2018

Average daily par amount in \$ millions

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	6,132.9	6,413.1	7,072.8	7,064.2	7,318.6	7,224.3	7,462.4	6,807.6	7,767.9
Education	1,104.7	1,376.0	1,521.6	1,561.8	1,475.3	1,531.0	1,617.5	1,328.1	1,425.1
Health	349.8	373.2	529.9	527.5	490.6	457.0	450.2	479.3	574.0
Housing	89.5	95.5	107.6	118.1	134.1	91.3	154.5	129.5	159.2
Tax-Revenue	759.9	795.9	751.4	808.5	921.5	893.1	906.4	823.7	1,059.8
Transportation	655.9	634.7	667.1	703.5	779.7	711.5	723.3	702.4	977.0
Utility	846.5	845.4	924.4	817.0	874.1	849.4	899.2	813.9	931.9
Various Purpose	963.7	981.1	1,137.3	1,131.0	1,132.5	1,211.6	1,195.4	1,028.0	1,096.9
Other Sectors	1,363.0	1,311.3	1,433.5	1,396.8	1,510.9	1,479.4	1,516.0	1,502.6	1,544.0
Zero Coupon Total	574.2	336.7	425.9	391.1	280.5	339.6	322.9	254.4	207.5
Education	151.9	139.8	136.4	106.7	76.2	101.2	73.0	67.4	64.4
Health	4.8	3.9	9.1	5.5	2.8	2.7	2.1	2.2	4.2
Housing	2.6	3.1	1.0	0.2	0.4	0.2	0.2	0.7	0.6
Tax-Revenue	190.0	92.2	105.9	87.5	75.9	80.6	84.1	85.0	54.3
Transportation	55.9	28.5	35.8	32.1	28.3	38.4	27.8	31.0	16.5
Utility	7.1	5.3	5.3	3.9	3.2	3.5	3.4	3.4	2.7
Various Purpose	12.3	11.7	11.0	11.4	7.5	5.4	6.0	8.6	10.1
Other Sectors	149.8	52.2	121.4	143.7	86.1	107.7	126.4	56.2	54.6

Average daily number of trades

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	33,157	34,876	34,971	37,102	38,002	39,761	38,074	35,779	38,442
Education	7,531	8,534	8,755	9,448	9,531	10,277	9,711	8,895	9,267
Health	2,694	2,752	2,881	2,972	2,742	2,875	2,637	2,638	2,822
Housing	668	668	681	713	804	706	833	749	922
Tax-Revenue	3,397	3,553	3,378	3,808	3,915	3,965	3,891	3,678	4,124
Transportation	2,805	2,793	2,755	2,935	3,145	3,363	3,021	2,883	3,319
Utility	4,814	4,896	4,838	5,003	5,247	5,513	5,306	4,947	5,230
Various Purpose	3,707	4,231	4,346	4,736	4,972	5,118	5,124	4,674	4,973
Other Sectors	7,542	7,449	7,336	7,486	7,646	7,943	7,551	7,315	7,785
Zero Coupon Total	1,442	1,300	1,323	1,134	957	1,105	963	900	867
Education	632	621	630	546	459	519	461	442	418
Health	37	30	32	30	27	33	27	24	25
Housing	16	10	5	2	2	2	3	2	1
Tax-Revenue	205	175	181	157	135	143	132	128	138
Transportation	170	135	149	129	112	138	110	108	93
Utility	102	83	81	67	59	68	68	52	49
Various Purpose	93	87	100	80	63	76	66	57	53
Other Sectors	186	159	146	124	100	127	95	88	90

Remaining Maturity—Fixed Rate Securities, 2014–2018

Average daily par amount in \$ millions

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	6,132.9	6,413.1	7,072.8	7,064.2	7,318.6	7,224.3	7,462.4	6,807.6	7,767.9
0–9 Months	209.4	246.0	363.0	298.4	338.5	354.3	376.5	262.7	360.3
>9 Months–2 Years	380.3	398.8	409.3	459.4	547.7	416.3	540.5	740.3	490.4
>2 Years–5 Years	659.8	703.3	693.3	753.6	801.7	772.6	802.6	787.1	843.0
>5 Years–10 Years	1,179.9	1,234.4	1,299.9	1,308.8	1,401.8	1,502.7	1,433.3	1,204.9	1,468.1
>10 Years–15 Years	1,084.8	1,181.0	1,265.6	1,208.3	1,212.9	1,242.0	1,185.1	1,124.6	1,299.8
>15 Years–20 Years	860.6	1,006.6	1,172.4	1,141.2	1,028.3	1,017.6	1,045.7	962.3	1,086.0
>20 Years–30 Years	1,392.5	1,323.6	1,515.2	1,570.2	1,676.0	1,648.5	1,729.8	1,418.2	1,902.1
More than 30 Years	365.3	319.2	353.3	321.1	304.0	267.0	342.9	292.6	311.6
Unavailable	0.2	0.2	0.8	3.3	7.7	3.3	6.0	15.1	6.5
Zero Coupon Total	574.2	336.7	425.9	391.1	280.5	339.6	322.9	254.3	207.5
0–9 Months	3.3	5.2	4.7	4.2	3.8	3.1	3.8	3.5	4.8
>9 Months–2 Years	6.4	6.3	6.4	5.3	5.6	5.0	5.4	5.5	6.4
>2 Years–5 Years	15.6	15.7	14.6	14.9	13.3	14.4	13.6	12.1	13.3
>5 Years–10 Years	31.2	28.1	39.2	31.0	25.3	26.7	18.4	26.8	29.3
>10 Years–15 Years	52.6	38.8	59.6	42.1	26.0	26.6	22.7	29.3	25.7
>15 Years–20 Years	76.9	52.7	63.1	40.0	35.7	42.5	34.4	37.1	29.2
>20 Years–30 Years	153.1	91.6	90.1	92.8	88.9	115.8	117.3	81.9	41.7
More than 30 Years	235.1	98.4	148.2	160.7	81.8	105.5	107.4	58.1	57.0
Unavailable	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	0.2

Average daily number of trades

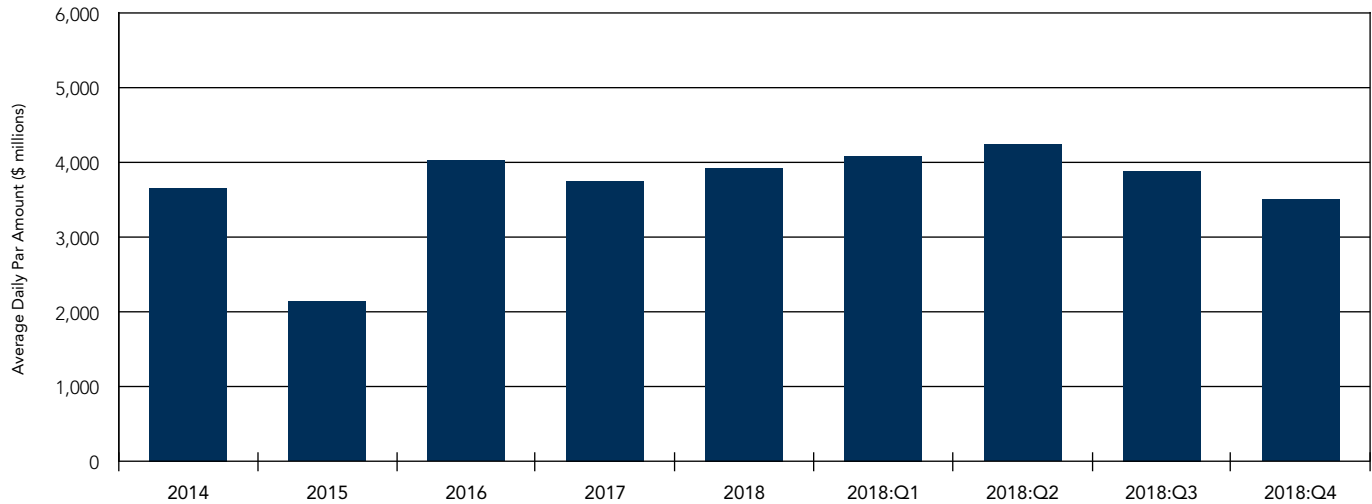
	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Fixed Rate Total	33,157	34,876	34,971	37,102	38,002	39,761	38,074	35,779	38,442
0–9 Months	833	938	1,025	1,167	1,507	1,685	1,565	1,151	1,629
>9 Months–2 Years	1,438	1,669	1,768	2,091	2,633	2,529	2,601	2,699	2,700
>2 Years–5 Years	3,980	4,391	4,388	5,000	5,736	5,853	5,822	5,352	5,915
>5 Years–10 Years	7,109	7,212	7,172	8,105	9,083	9,421	9,186	8,459	9,273
>10 Years–15 Years	6,372	6,687	6,435	6,799	6,864	7,127	6,982	6,589	6,766
>15 Years–20 Years	5,355	5,861	6,193	6,309	5,325	5,764	5,301	5,018	5,232
>20 Years–30 Years	7,210	7,232	7,149	6,849	6,183	6,696	5,942	5,835	6,277
More than 30 Years	857	881	837	768	648	665	656	649	625
Unavailable	4	4	5	14	24	22	18	27	27
Zero Coupon Total	1,442	1,300	1,323	1,134	957	1,105	963	900	867
0–9 Months	40	43	41	39	43	47	49	36	39
>9 Months–2 Years	90	86	82	74	80	86	80	79	76
>2 Years–5 Years	212	201	205	187	179	202	183	164	169
>5 Years–10 Years	315	299	322	272	234	276	231	223	207
>10 Years–15 Years	293	268	273	229	178	216	172	168	157
>15 Years–20 Years	226	190	182	160	117	134	117	111	108
>20 Years–30 Years	207	182	184	146	107	124	110	101	95
More than 30 Years	59	32	34	27	18	20	21	16	14
Unavailable	<1	<1	<1	<1	1	1	1	1	2

Part Seven

Municipal Variable Rate Securities—Par Amount Traded and Number of Trades, 2014–2018

Transaction Summary—Variable Rate Securities, 2014–2018

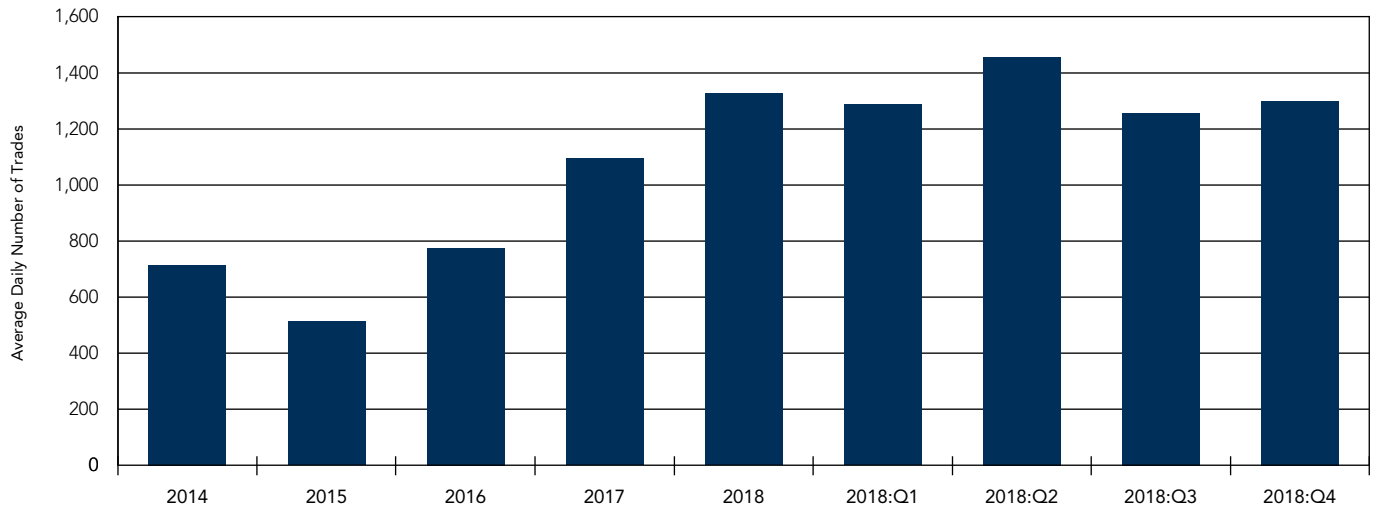
Average daily par amount in \$ millions



	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Total	3,654.4	2,140.8	4,027.4	3,748.1	3,926.2	4,086.4	4,238.3	3,881.9	3,505.1
0–\$25,000	1.1	1.0	1.1	1.2	1.2	1.2	1.3	1.2	1.2
\$25,001–\$50,000	1.6	1.6	1.8	1.8	1.7	1.7	1.7	1.6	1.8
\$50,001–\$75,000	0.8	0.7	0.7	0.8	0.9	1.0	0.9	0.9	1.0
\$75,001–\$100,000	6.3	5.1	6.6	13.9	18.8	18.0	21.2	17.9	18.0
\$100,001–\$500,000	38.3	28.6	42.6	89.7	121.1	114.6	134.6	114.1	120.5
\$500,001–\$1,000,000	51.7	35.5	54.1	98.1	121.8	118.7	137.1	113.3	117.6
\$1,000,001–\$2,000,000	98.5	66.0	108.6	156.1	185.9	179.0	209.3	170.0	184.8
More than \$2,000,000	3,456.1	2,002.5	3,811.8	3,386.7	3,474.9	3,652.2	3,732.2	3,463.0	3,060.2

Transaction Summary—Variable Rate Securities, 2014–2018

Average daily number of trades



	2014	2015	2016	2017	2018
Variable Rate Total	715	512	775	1,094	1,326
0–\$25,000	72	60	66	68	72
\$25,001–\$50,000	36	35	41	40	39
\$50,001–\$75,000	11	10	10	11	13
\$75,001–\$100,000	63	51	67	139	188
\$100,001–\$500,000	135	101	146	309	421
\$500,001–\$1,000,000	63	44	65	121	151
\$1,000,001–\$2,000,000	64	43	69	101	121
More than \$2,000,000	270	169	311	305	321

	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Variable Rate Total	1,288	1,457	1,258	1,301
0–\$25,000	70	78	69	69
\$25,001–\$50,000	39	39	36	41
\$50,001–\$75,000	14	12	13	14
\$75,001–\$100,000	181	212	180	181
\$100,001–\$500,000	396	469	400	419
\$500,001–\$1,000,000	146	169	141	147
\$1,000,001–\$2,000,000	116	136	111	122
More than \$2,000,000	326	342	308	307

Variable Rate Demand Obligations¹ Trade Type and Size, 2014–2018

Average daily par amount in \$ millions

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Total	3,234.1	1,779.8	3,654.3	3,316.8	3,599.7	3,771.5	3,932.1	3,527.3	3,174.8
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	3.5	2.4	3.5	11.0	16.3	15.4	19.0	15.6	15.3
\$100,001–\$500,000	24.9	16.7	28.2	75.1	108.2	102.1	122.9	102.1	105.3
\$500,001–\$1,000,000	40.1	25.9	42.3	86.5	112.1	110.2	128.3	103.3	106.4
\$1,000,001–\$2,000,000	84.2	53.3	92.4	141.0	173.3	168.8	197.1	157.2	169.5
More than \$2,000,000	3,081.0	1,681.3	3,487.7	3,003.2	3,189.8	3,375.0	3,464.9	3,149.1	2,778.3
Customer Bought Total	1,585.7	863.4	1,715.7	1,646.8	1,805.3	1,857.5	1,996.0	1,740.1	1,629.1
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	0.1	<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	1.1	0.9	1.6	4.5	6.2	6.4	7.6	5.6	5.1
\$100,001–\$500,000	9.1	6.9	14.5	36.3	49.6	48.4	56.7	46.3	46.7
\$500,001–\$1,000,000	16.6	11.7	21.7	42.7	53.5	55.1	61.4	48.5	49.2
\$1,000,001–\$2,000,000	39.7	24.9	46.6	72.3	86.9	88.4	96.5	77.5	84.9
More than \$2,000,000	1,519.1	818.9	1,631.1	1,490.9	1,609.1	1,659.1	1,773.7	1,562.2	1,443.2
Customer Sold Total	1,474.6	799.2	1,681.2	1,611.9	1,729.7	1,850.1	1,852.3	1,732.8	1,489.1
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	0.1	0.0	<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	2.1	1.3	1.5	5.4	8.4	7.3	9.3	8.2	8.7
\$100,001–\$500,000	13.8	8.2	11.0	32.1	49.1	44.6	54.5	47.0	50.1
\$500,001–\$1,000,000	20.5	12.7	17.6	37.9	51.2	48.1	57.4	48.7	50.5
\$1,000,001–\$2,000,000	39.6	25.1	39.4	62.4	77.9	71.3	89.8	72.5	77.4
More than \$2,000,000	1,398.5	751.8	1,611.6	1,474.1	1,543.0	1,678.6	1,641.4	1,556.3	1,302.4
Inter-Dealer Total	173.8	117.3	257.4	58.2	64.8	64.1	83.9	54.5	56.7
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	0.3	0.2	0.4	1.1	1.8	1.7	2.0	1.7	1.6
\$100,001–\$500,000	2.1	1.5	2.7	6.6	9.5	9.0	11.7	8.9	8.5
\$500,001–\$1,000,000	3.0	1.6	3.0	5.9	7.3	6.9	9.5	6.1	6.7
\$1,000,001–\$2,000,000	5.0	3.4	6.4	6.4	8.5	9.1	10.8	7.2	7.1
More than \$2,000,000	163.4	110.5	244.9	38.2	37.7	37.4	49.8	30.6	32.7

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.

Variable Rate Demand Obligations¹ Trade Type and Size, 2014–2018

Average daily number of trades

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Total	478	300	526	841	1,088	1,055	1,222	1,027	1,044
0–\$25,000	8	5	4	3	2	3	3	2	1
\$25,001–\$50,000	3	2	1	1	1	1	1	1	1
\$50,001–\$75,000	1	1	1	<1	1	<1	1	1	1
\$75,001–\$100,000	36	24	35	110	163	154	190	156	154
\$100,001–\$500,000	84	56	92	253	371	348	423	353	360
\$500,001–\$1,000,000	49	32	51	106	139	135	158	128	133
\$1,000,001–\$2,000,000	55	35	59	91	113	110	128	103	112
More than \$2,000,000	242	145	283	276	297	304	318	282	283
Customer Bought Total	211	137	256	406	504	507	571	465	471
0–\$25,000	3	3	2	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	12	9	16	45	62	64	76	56	51
\$100,001–\$500,000	30	23	46	120	167	162	193	157	155
\$500,001–\$1,000,000	20	14	26	52	66	68	76	60	62
\$1,000,001–\$2,000,000	26	16	30	47	57	58	63	51	56
More than \$2,000,000	118	71	135	139	150	153	161	139	146
Customer Sold Total	236	142	229	384	511	480	562	493	506
0–\$25,000	4	3	2	1	1	1	2	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	21	13	15	54	84	73	93	82	87
\$100,001–\$500,000	47	28	37	109	170	154	188	163	173
\$500,001–\$1,000,000	25	16	21	47	64	59	71	60	63
\$1,000,001–\$2,000,000	26	16	25	40	51	46	58	47	51
More than \$2,000,000	111	66	128	132	141	145	149	138	131
Inter-Dealer Total	31	21	41	51	73	69	89	69	67
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	3	2	4	11	18	17	20	17	16
\$100,001–\$500,000	7	5	9	23	34	32	42	33	31
\$500,001–\$1,000,000	4	2	4	7	9	9	12	8	8
\$1,000,001–\$2,000,000	3	2	4	4	6	6	7	5	5
More than \$2,000,000	13	8	20	5	6	6	7	6	6

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, 2014–2018

Average daily par amount in \$ millions

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Total	28.5	22.7	21.5	22.5	27.6	29.3	31.1	20.7	29.2
0–\$25,000	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
\$25,001–\$50,000	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
\$50,001–\$75,000	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2
\$75,001–\$100,000	1.0	1.0	0.8	0.8	0.8	0.9	0.9	0.8	0.7
\$100,001–\$500,000	4.3	4.1	3.7	4.4	4.8	5.4	5.1	4.4	4.5
\$500,001–\$1,000,000	2.9	3.1	3.3	3.1	3.1	3.3	3.5	2.5	3.2
\$1,000,001–\$2,000,000	2.1	2.7	3.8	2.9	3.0	2.7	3.2	2.6	3.3
More than \$2,000,000	17.5	11.3	9.5	10.6	15.1	16.2	17.7	9.6	16.9
Customer Bought Total	11.6	8.8	8.1	8.9	10.1	10.3	11.9	7.6	10.8
0–\$25,000	<1.0	<1.0	<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	0.2	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	0.2	0.2	0.2	0.2
\$100,001–\$500,000	1.5	1.4	1.4	1.7	1.5	2.0	1.5	1.3	1.4
\$500,001–\$1,000,000	1.2	1.1	1.2	1.1	1.1	1.5	1.1	0.8	1.2
\$1,000,001–\$2,000,000	0.8	0.9	1.3	1.0	1.0	0.9	1.2	0.9	1.1
More than \$2,000,000	7.8	5.0	4.0	4.7	5.9	5.4	7.6	4.0	6.7
Customer Sold Total	10.2	7.9	6.9	7.3	9.4	9.6	10.7	7.6	9.6
0–\$25,000	<1.0	<1.0	<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	<1.0	<0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$75,001–\$100,000	0.5	0.6	0.4	0.4	0.4	0.4	0.5	0.3	0.4
\$100,001–\$500,000	1.3	1.3	1.3	1.4	1.8	1.9	2.0	1.7	1.6
\$500,001–\$1,000,000	0.8	0.9	1.1	1.0	1.0	0.9	1.1	0.8	1.0
\$1,000,001–\$2,000,000	0.7	0.9	1.3	0.9	0.8	0.7	1.0	0.8	0.8
More than \$2,000,000	6.8	4.1	2.7	3.4	5.2	5.3	5.9	3.8	5.6
Inter-Dealer Total	6.6	5.9	6.4	6.3	8.1	9.4	8.5	5.5	8.8
0–\$25,000	0.1	<1.0	<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	<1.0	<0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$75,001–\$100,000	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1
\$100,001–\$500,000	1.6	1.3	1.0	1.3	1.5	1.5	1.6	1.5	1.5
\$500,001–\$1,000,000	1.0	1.0	1.0	1.1	1.0	0.9	1.2	0.9	1.0
\$1,000,001–\$2,000,000	0.6	0.9	1.2	1.0	1.1	1.1	1.1	0.9	1.4
More than \$2,000,000	2.9	2.2	2.8	2.5	4.0	5.5	4.2	1.8	4.6

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, 2014–2018

Average daily number of trades

	2014	2015	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
Total	48	45	39	46	53	55	54	51	51
0–\$25,000	7	5	3	6	9	7	8	11	9
\$25,001–\$50,000	5	5	4	6	6	6	6	7	6
\$50,001–\$75,000	2	2	2	2	3	4	3	3	3
\$75,001–\$100,000	10	10	8	8	8	9	9	8	7
\$100,001–\$500,000	17	15	14	16	18	20	18	17	17
\$500,001–\$1,000,000	4	4	4	4	4	4	5	3	4
\$1,000,001–\$2,000,000	1	2	3	2	2	2	2	2	2
More than \$2,000,000	2	2	2	2	2	2	2	1	2
Customer Bought									
Total	15	14	13	17	18	18	17	19	17
0–\$25,000	2	2	1	3	3	2	3	5	4
\$25,001–\$50,000	2	2	1	2	3	2	3	3	3
\$50,001–\$75,000	1	1	1	1	1	2	1	1	1
\$75,001–\$100,000	2	2	2	2	2	2	2	2	2
\$100,001–\$500,000	6	5	5	6	6	7	6	5	5
\$500,001–\$1,000,000	1	1	2	1	2	2	2	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	16	17	15	16	20	22	21	18	18
0–\$25,000	2	2	1	2	3	4	4	4	3
\$25,001–\$50,000	2	2	1	2	2	3	2	2	2
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	5	6	4	4	4	4	5	3	4
\$100,001–\$500,000	5	5	5	5	7	7	7	6	6
\$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
More than \$2,000,000	1	1	1	1	1	1	<1	<1	<1
Inter-Dealer									
Total	17	14	12	13	15	15	15	14	15
0–\$25,000	3	2	1	1	2	2	2	2	3
\$25,001–\$50,000	2	1	1	1	2	1	2	1	2
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	3	3	2	2	2	2	2	2	1
\$100,001–\$500,000	6	5	4	5	6	6	6	5	6
\$500,001–\$1,000,000	1	1	1	1	1	1	2	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, 2016–2018

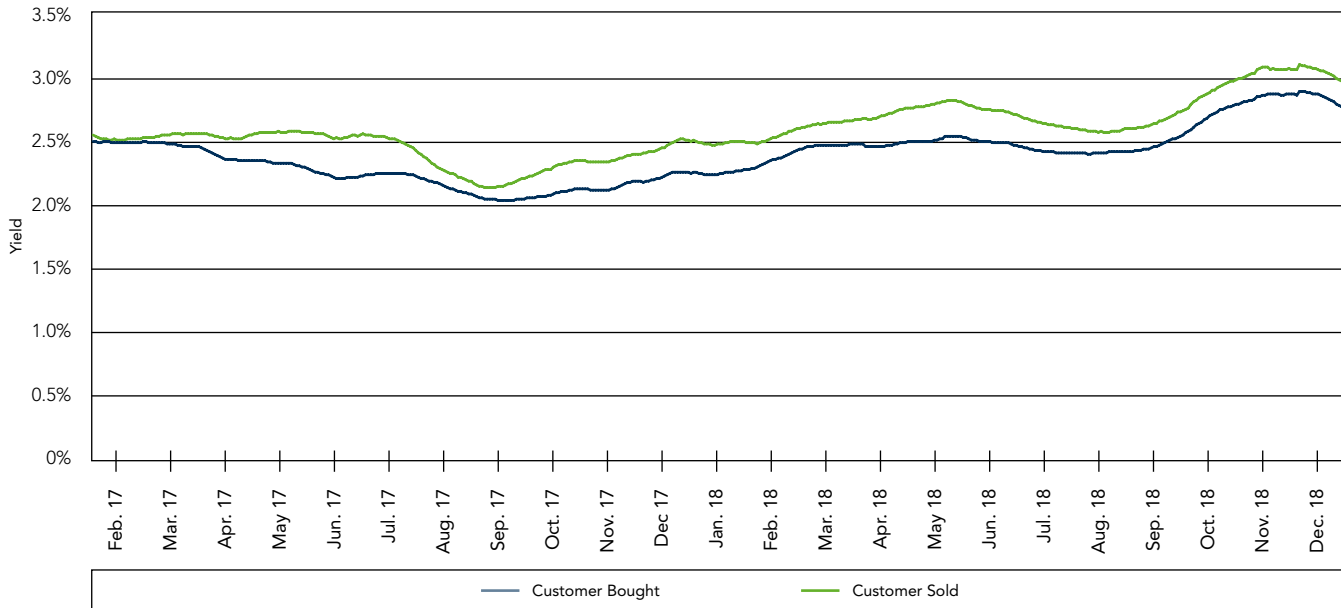
Customer Trade and Size of Tax Exempt, Fixed Rate Securities, 2016–2018

Average daily yields

	2016	2017	2018	2018:Q1	2018:Q2	2018:Q3	2018:Q4
All Trades							
Total	2.29	2.46	2.64	2.49	2.62	2.55	2.89
0–\$25,000	2.41	2.55	2.71	2.55	2.70	2.62	2.97
\$25,001–\$50,000	2.25	2.42	2.61	2.47	2.58	2.52	2.87
\$50,001–\$75,000	2.15	2.23	2.51	2.34	2.49	2.39	2.77
\$75,001–\$100,000	2.15	2.33	2.56	2.41	2.52	2.49	2.80
\$100,001–\$500,000	2.09	2.29	2.51	2.36	2.48	2.42	2.72
\$500,001–\$1,000,000	2.12	2.63	2.61	2.46	2.60	2.56	2.79
\$1,000,001–\$2,000,000	2.19	2.45	2.66	2.51	2.67	2.59	2.85
More than \$2,000,000	2.29	2.66	2.82	2.74	2.74	2.72	3.04
Customer Bought							
Total	2.07	2.28	2.53	2.38	2.49	2.46	2.78
0–\$25,000	2.15	2.36	2.60	2.44	2.56	2.54	2.87
\$25,001–\$50,000	2.08	2.26	2.50	2.36	2.45	2.42	2.77
\$50,001–\$75,000	1.94	2.08	2.36	2.20	2.33	2.26	2.62
\$75,001–\$100,000	1.97	2.16	2.44	2.30	2.39	2.39	2.67
\$100,001–\$500,000	1.85	2.05	2.36	2.21	2.34	2.28	2.58
\$500,001–\$1,000,000	1.97	2.29	2.56	2.41	2.54	2.51	2.73
\$1,000,001–\$2,000,000	2.13	2.46	2.68	2.51	2.67	2.62	2.88
More than \$2,000,000	2.23	2.70	2.88	2.79	2.74	2.79	3.15
Customer Sold							
Total	2.34	2.45	2.73	2.56	2.74	2.64	2.97
0–\$25,000	2.51	2.60	2.86	2.68	2.89	2.76	3.11
\$25,001–\$50,000	2.27	2.38	2.69	2.51	2.68	2.59	2.95
\$50,001–\$75,000	2.17	2.25	2.59	2.39	2.58	2.49	2.85
\$75,001–\$100,000	2.11	2.21	2.57	2.39	2.53	2.47	2.84
\$100,001–\$500,000	2.02	2.14	2.48	2.31	2.45	2.40	2.70
\$500,001–\$1,000,000	2.08	2.31	2.54	2.39	2.52	2.48	2.72
\$1,000,001–\$2,000,000	2.17	2.36	2.58	2.45	2.60	2.45	2.76
More than \$2,000,000	2.43	2.66	2.76	2.67	2.74	2.61	2.95

Daily Yield of Customer Trades of Tax Exempt, Fixed Rate Securities, 2017–2018

30-day trailing average



DATA AVAILABLE FROM THE MSRB

Data Subscriptions

The MSRB makes available municipal market trade data and disclosure documents associated with municipal bond issues. These materials are available on a subscription basis in real-time.*

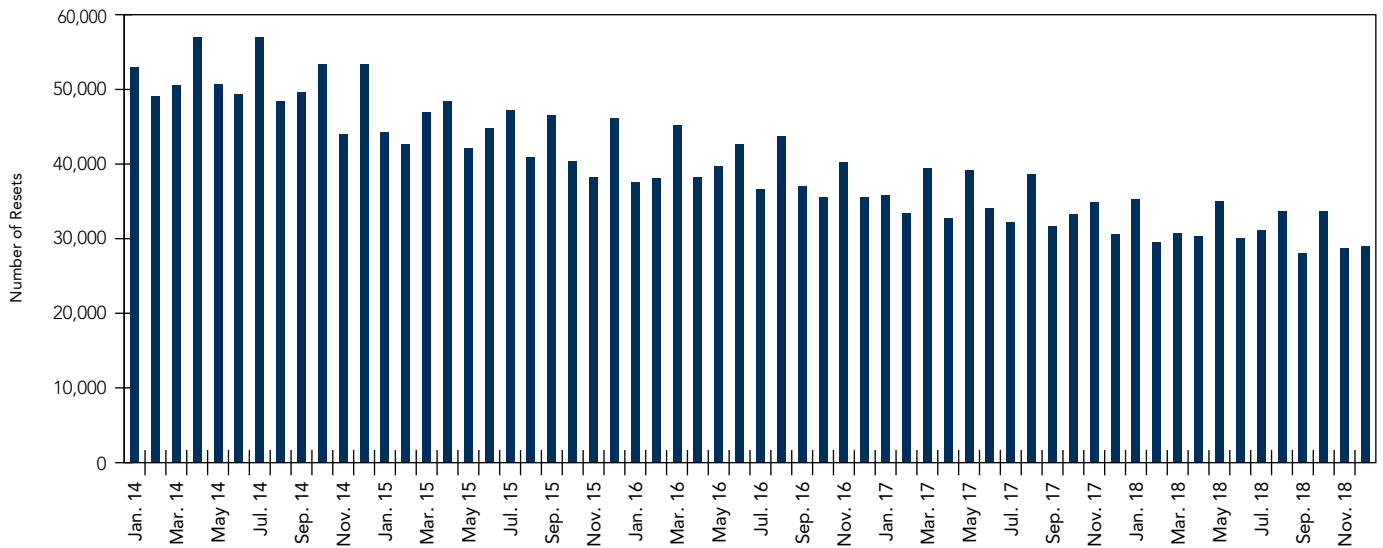
The following subscription services are available:

- **MSRB Transaction Subscription Service:** All municipal trade data reported to the MSRB by municipal securities dealers in a real-time feed. Subscriptions to periodic reports and an academic data product are also available.
- **MSRB Short-term Obligation Subscription Service:** All variable rate securities data and documents.
- **MSRB Primary Market Subscription Service:** All primary market disclosure documents and related information provided by municipal bond dealers.
- **MSRB Continuing Disclosure Subscription Service:** All continuing disclosure documents and related information.

*This information is also available at no charge on the Electronic Municipal Market Access (EMMA®) website

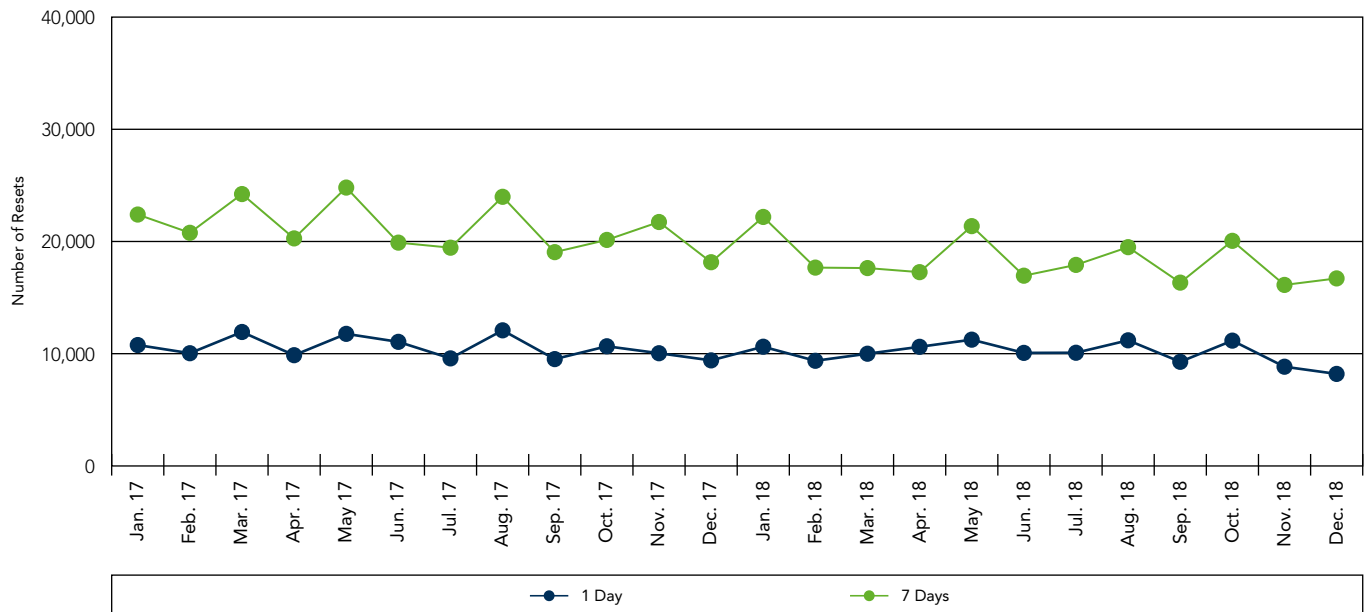
Part Nine

Municipal Market Variable Securities Rate Resets, 2014–2018

Number of Variable Rate Demand Obligations Rate Resets¹, 2014–2018

	2014	2015	2016	2017	2018
January	52,990	44,249	37,600	35,828	35,287
February	49,149	42,699	38,167	33,470	29,509
March	50,575	46,925	45,188	39,420	30,717
April	57,074	48,513	38,295	32,734	30,369
May	50,700	42,149	39,717	39,171	35,111
June	49,452	44,842	42,712	34,169	30,144
July	57,074	47,218	36,692	32,191	31,118
August	48,459	40,952	43,735	38,606	33,772
September	49,649	46,569	37,068	31,678	28,062
October	53,362	40,473	35,620	33,300	33,699
November	44,071	38,253	40,331	34,934	28,740
December	53,458	46,185	35,617	30,658	29,052

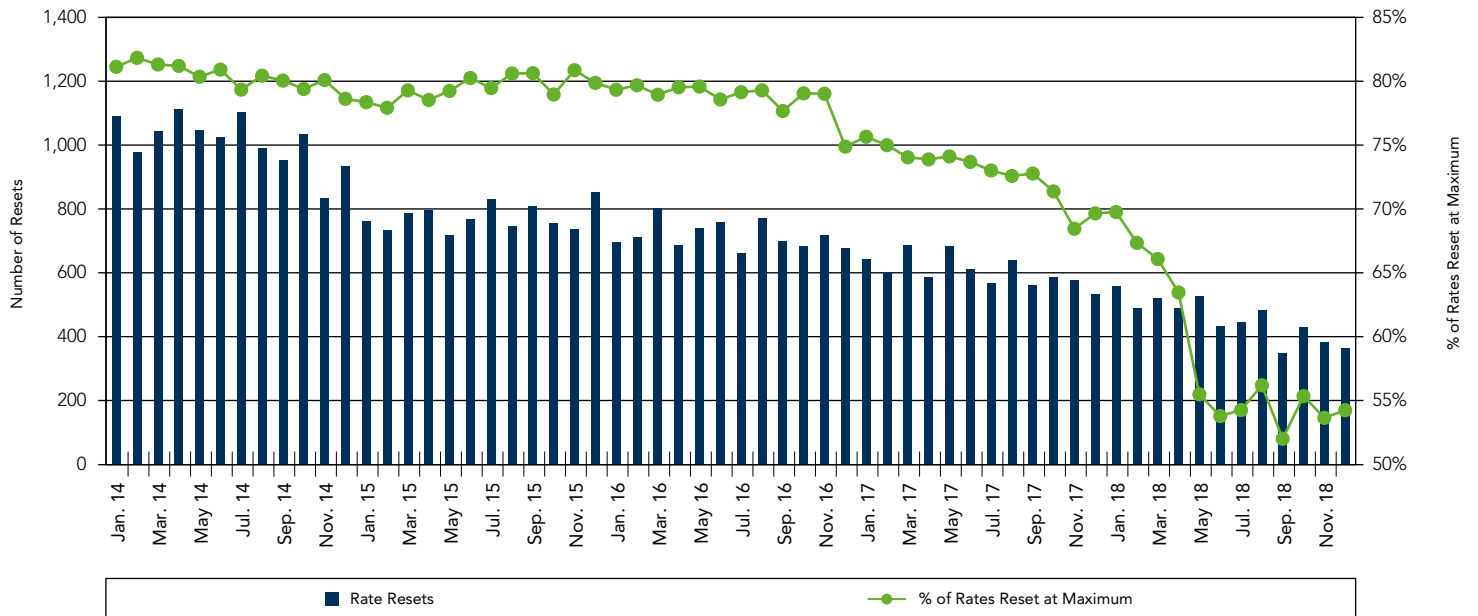
¹ Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

Number of Variable Rate Demand Obligations Rate Resets by Period¹, 2017–2018

	1 Day	7 Days
Jan. 17	10,773	22,406
Feb. 17	10,045	20,779
Mar. 17	11,938	24,231
Apr. 17	9,869	20,279
May 17	11,771	24,810
Jun. 17	11,059	19,902
Jul. 17	9,585	19,451
Aug. 17	12,085	23,987
Sep. 17	9,521	19,055
Oct. 17	10,664	20,144
Nov. 17	10,044	21,740
Dec. 17	9,407	18,156

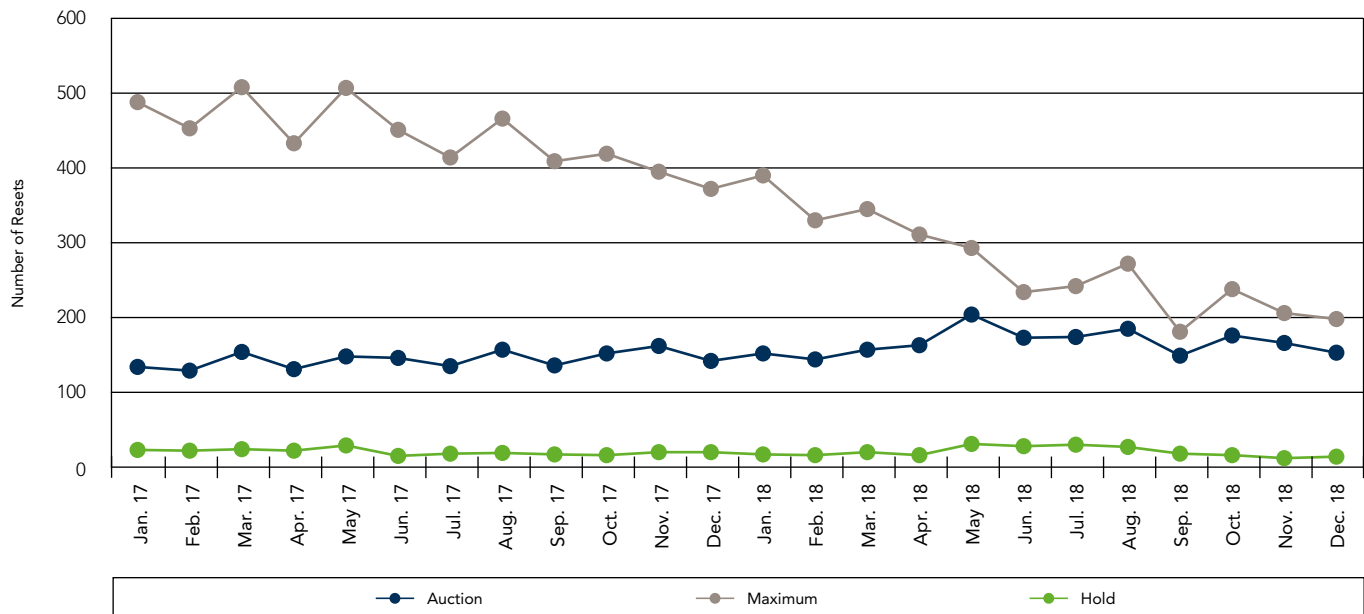
	1 Day	7 Days
Jan. 18	10,624	22,192
Feb. 18	9,371	17,676
Mar. 18	10,000	17,635
Apr. 18	10,616	17,271
May 18	11,253	21,373
Jun. 18	10,075	16,955
Jul. 18	10,087	17,917
Aug. 18	11,195	19,498
Sep. 18	9,280	16,337
Oct. 18	11,167	20,062
Nov. 18	8,842	16,132
Dec. 18	8,200	16,713

¹ 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 69,517 resets were for securities with other periodic reset frequencies.

Number of Auction Rate Securities Rate Resets¹, 2014–2018

	2014	2015	2016	2017	2018
January	1,092	763	697	645	559
February	980	734	714	604	490
March	1,044	787	803	686	522
April	1,112	797	689	586	490
May	1,049	718	740	684	528
June	1,027	770	761	612	435
July	1,104	833	662	567	446
August	992	748	773	642	484
September	954	811	699	562	348
October	1,035	756	683	587	430
November	834	737	720	577	384
December	937	855	677	534	365

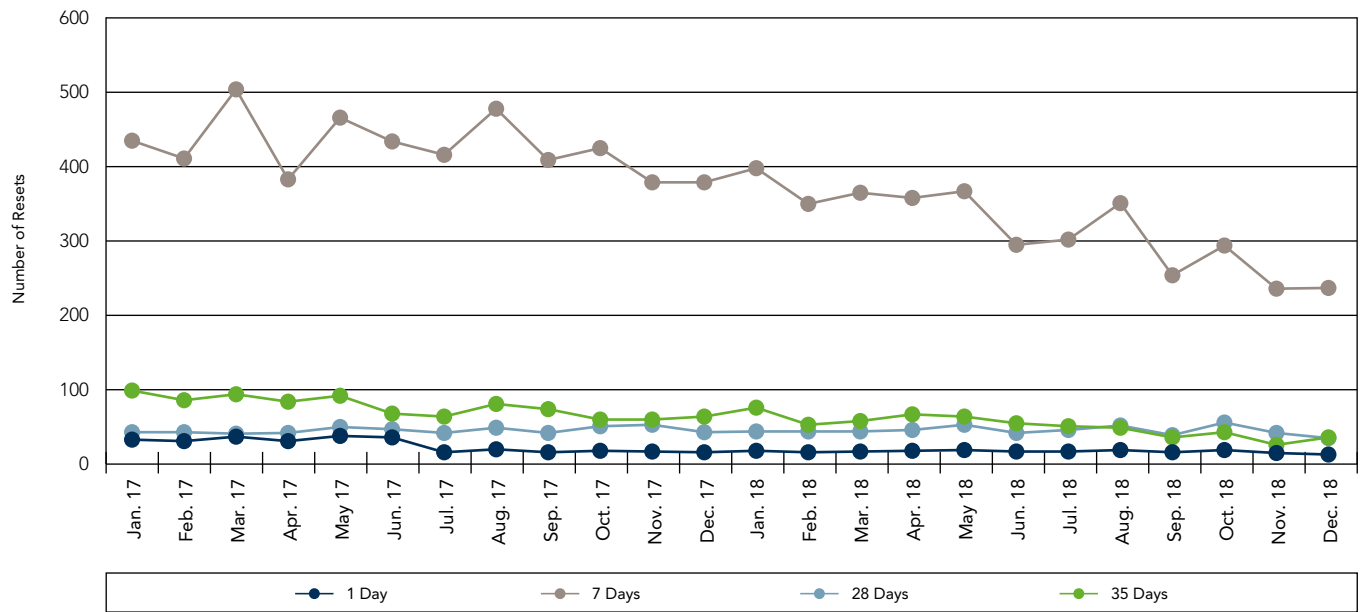
¹ Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT).
May exclude submissions that could not be categorized based on available data.

Number of Auction Rate Securities Rate Resets by Type¹, 2017–2018

	Auction	Maximum	Hold
Jan. 17	134	488	23
Feb. 17	129	453	22
Mar. 17	154	508	24
Apr. 17	131	433	22
May 17	148	507	29
Jun. 17	146	451	15
Jul. 17	135	414	18
Aug. 17	157	466	19
Sep. 17	136	409	17
Oct. 17	152	419	16
Nov. 17	162	395	20
Dec. 17	142	372	20

	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

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, 2017–2018

	1 Day	7 Days	28 Days	35 Days
Jan. 17	32	434	42	98
Feb. 17	30	410	42	85
Mar. 17	36	503	40	93
Apr. 17	30	382	41	83
May 17	37	465	49	91
Jun. 17	35	433	46	67
Jul. 17	15	415	41	63
Aug. 17	19	477	48	80
Sep. 17	15	408	41	73
Oct. 17	17	424	50	59
Nov. 17	16	378	52	59
Dec. 17	15	378	42	63

	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

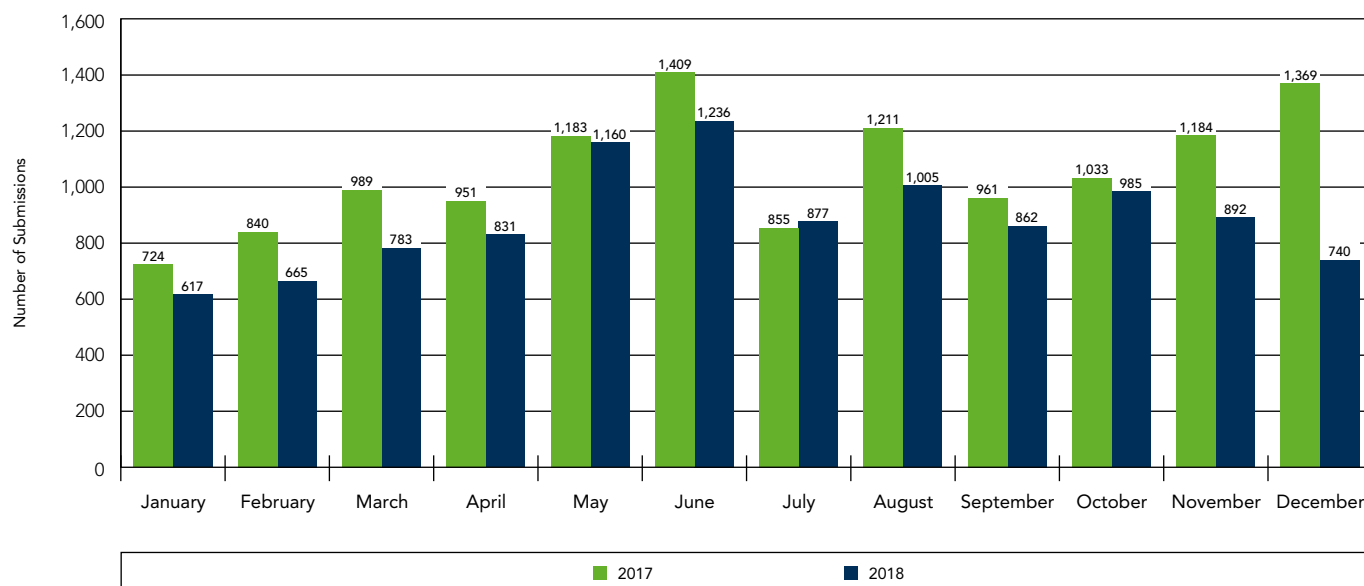
¹ Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data.

Part Ten

Municipal Market Disclosures, 2014–2018

Number of Primary Market Submissions¹, 2017–2018

By number of submissions

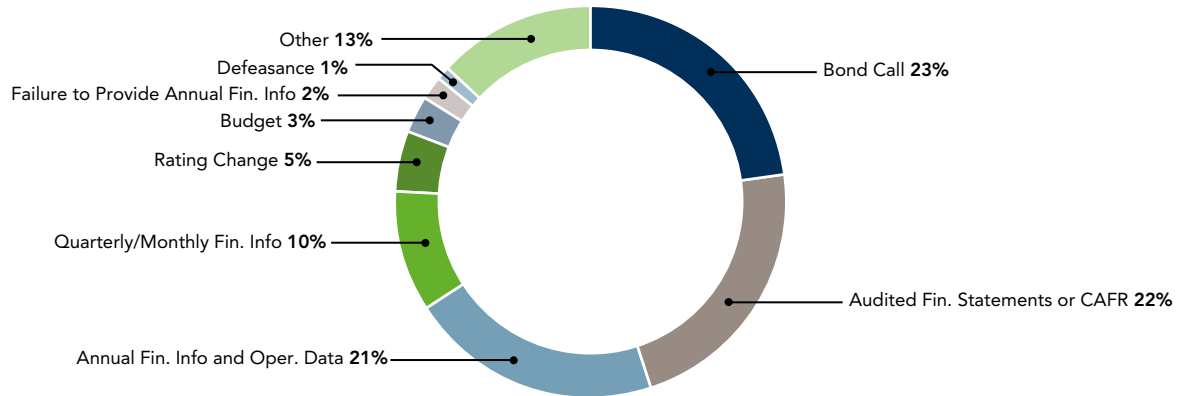


	2017	2018
January	724	617
February	840	665
March	989	783
April	951	831
May	1,183	1,160
June	1,409	1,236
July	855	877
August	1,211	1,005
September	961	862
October	1,033	985
November	1,184	892
December	1,369	740
Total	12,709	10,653

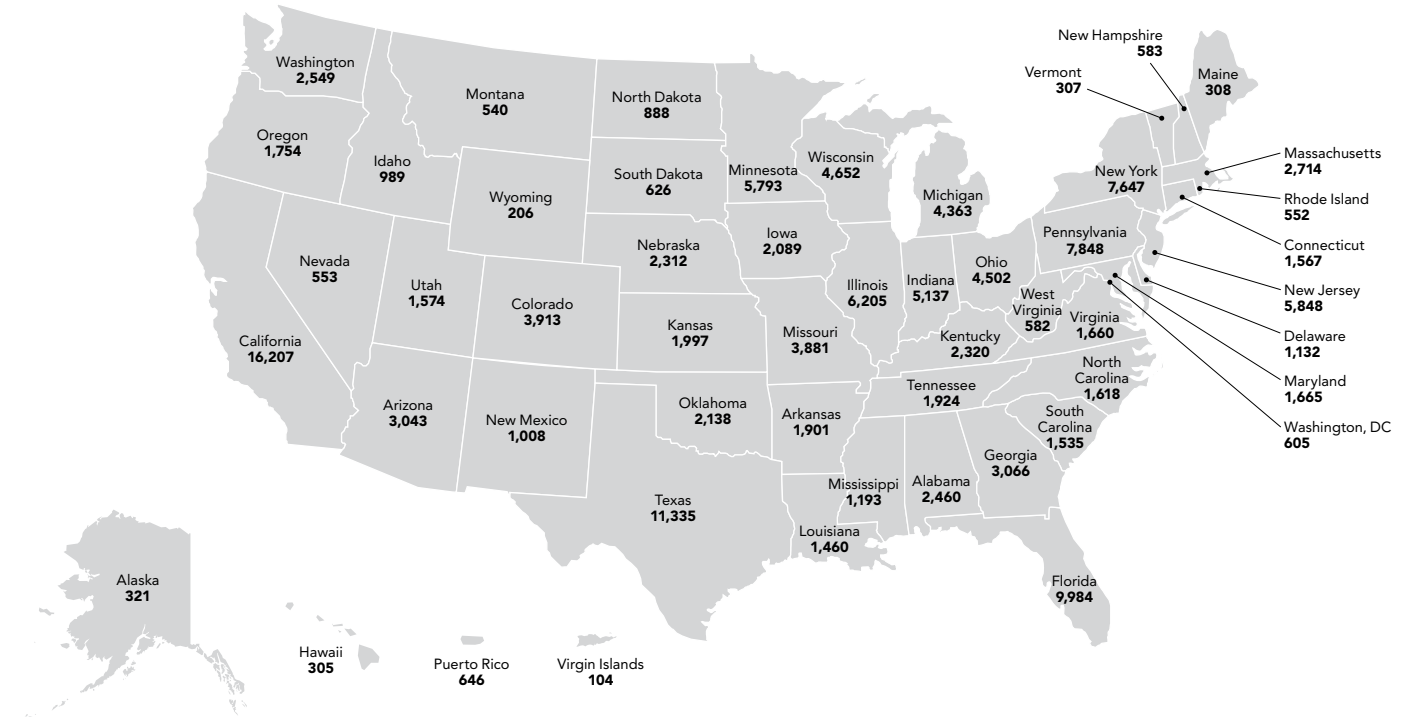
¹ Excludes remarketings.

Continuing Disclosures Submissions, 2018

By number of documents

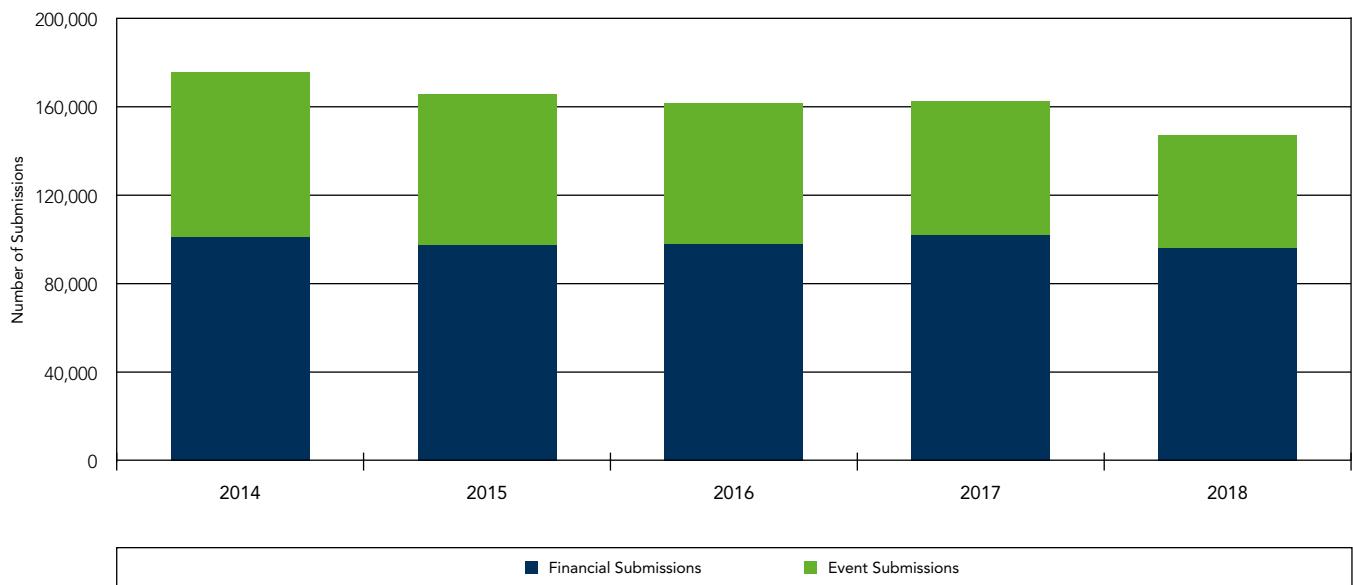


By state¹



¹ Based on information derived from the CUSIP Service Bureau.

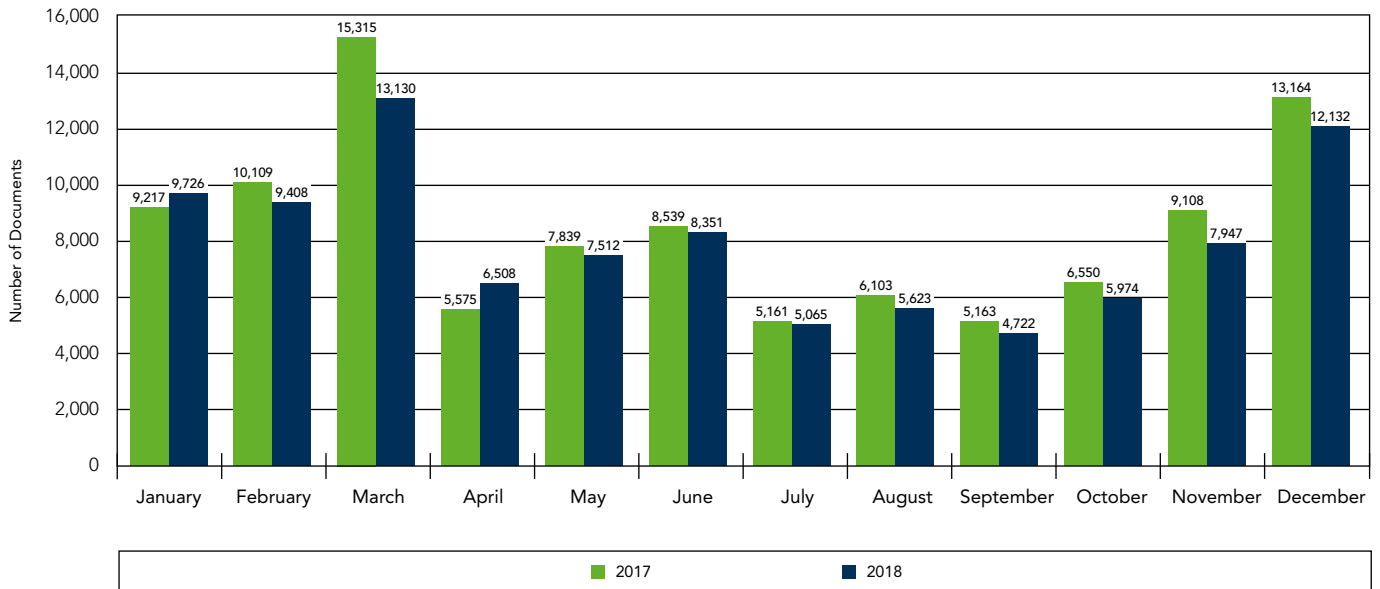
Number of Continuing Disclosure Submissions, 2014–2018



	Financial Submissions	Event Submissions
2014	101,289	74,340
2015	97,379	68,309
2016	98,084	63,586
2017	101,843	60,883
2018	96,098	50,722

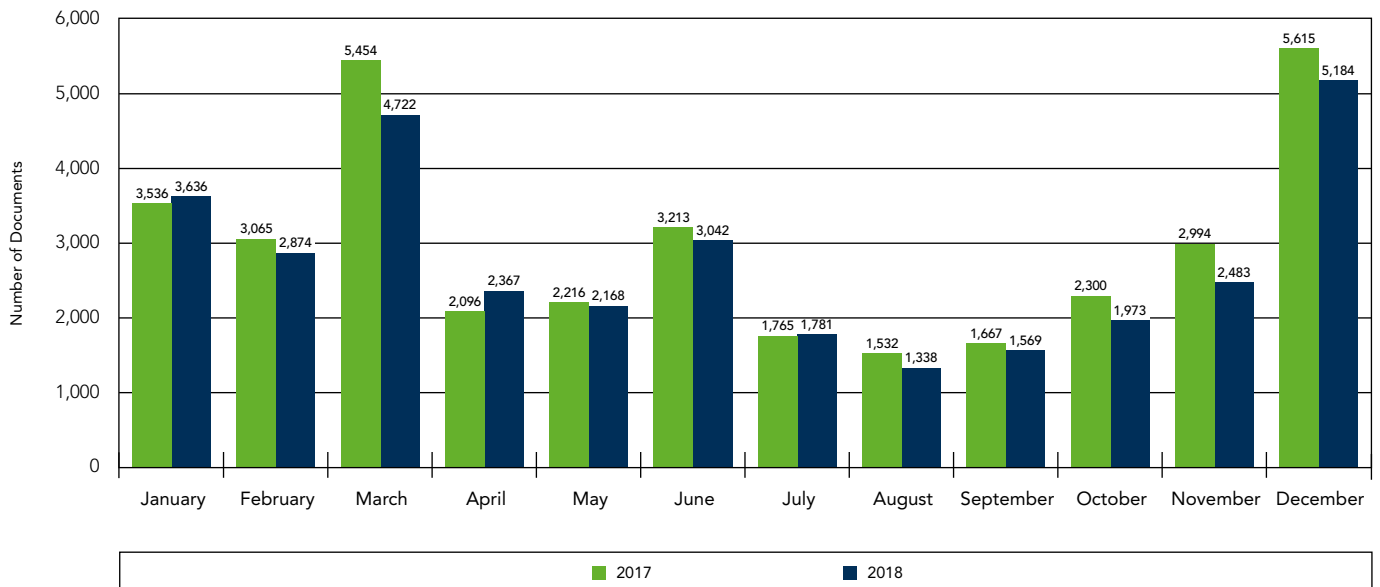
All Financial Disclosures, 2017–2018

By number of documents



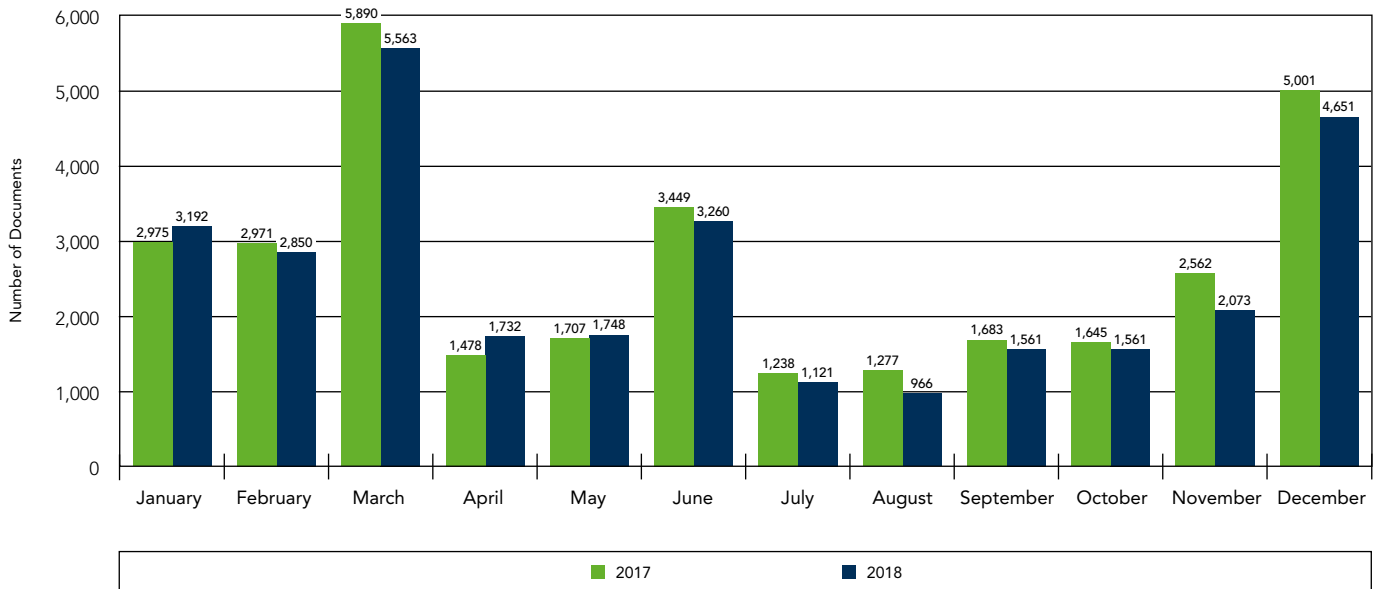
Audited Financial Statements or CAFR Submissions, 2017–2018

By number of documents



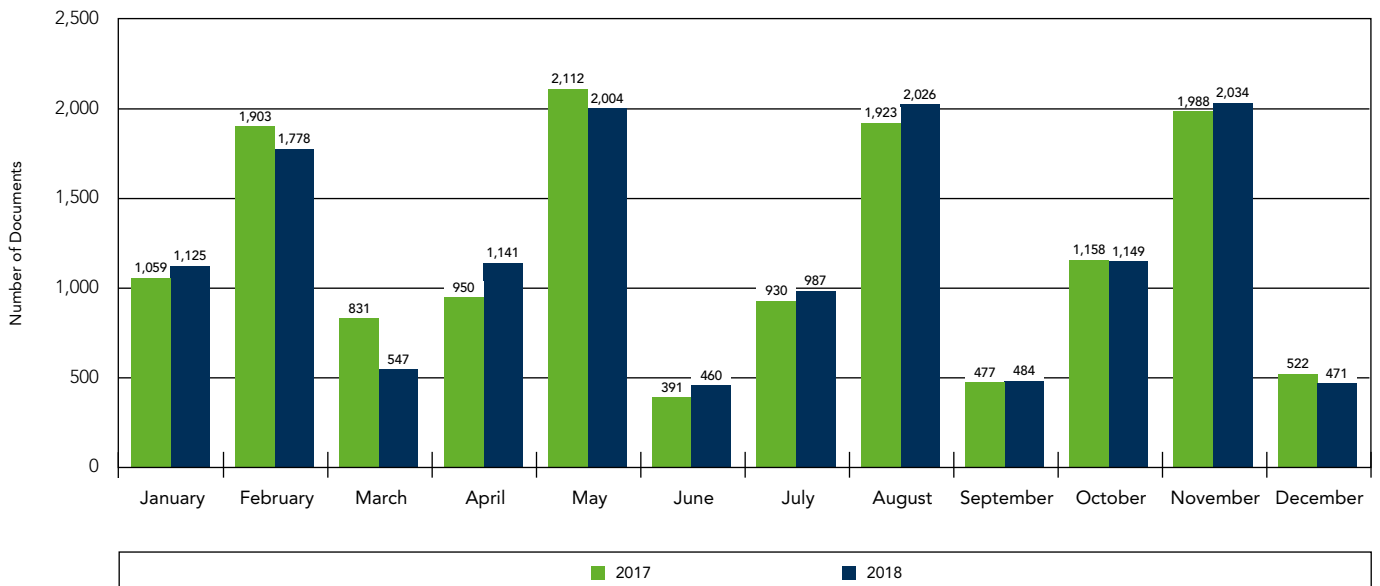
Annual Financial Information and Operating Data Submissions, 2017–2018

By number of documents



Quarterly/Monthly Financial Information Submissions, 2017–2018

By number of documents



Other Financial Disclosures, 2017–2018

Financial disclosures

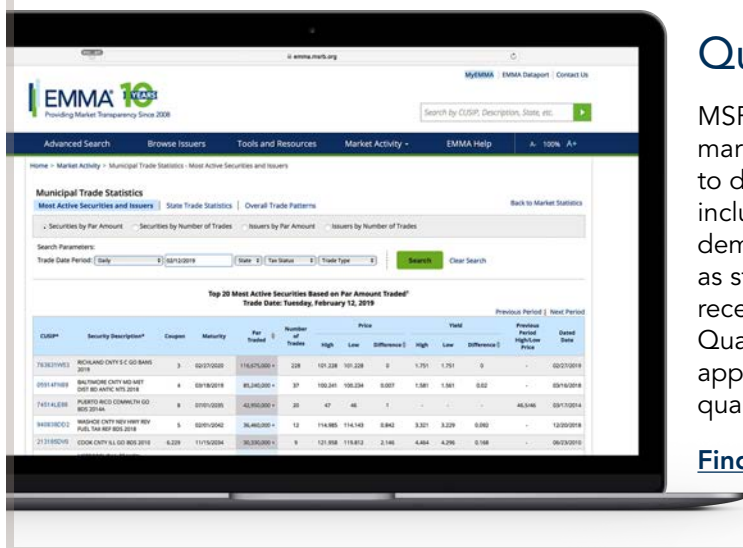
By number of documents	2017	2018
BUDGET	4,818	4,624
CHANGE IN ACCOUNTING STANDARD	2	2
CHANGE IN FISCAL YEAR/TIMING OF ANNUAL DISCLOSURE	35	33
CONSULTANT REPORTS	215	230
FAILURE TO PROVIDE ANNUAL FINANCIAL INFORMATION	5,007	3,604
INFORMATION PROVIDED TO RATING AGENCY, CREDIT/LIQUIDITY PROVIDER OR OTHER THIRD PARTY	187	182
INTERIM/ADDITIONAL FINANCIAL INFORMATION/OPERATING DATA	1,322	1,329
INVESTMENT/DEBT/FINANCIAL POLICY	129	97
OTHER FINANCIAL/OPERATING DATA	9,757	9,099

DATA AVAILABLE FROM THE MSRB

Quarterly Statistical Summaries

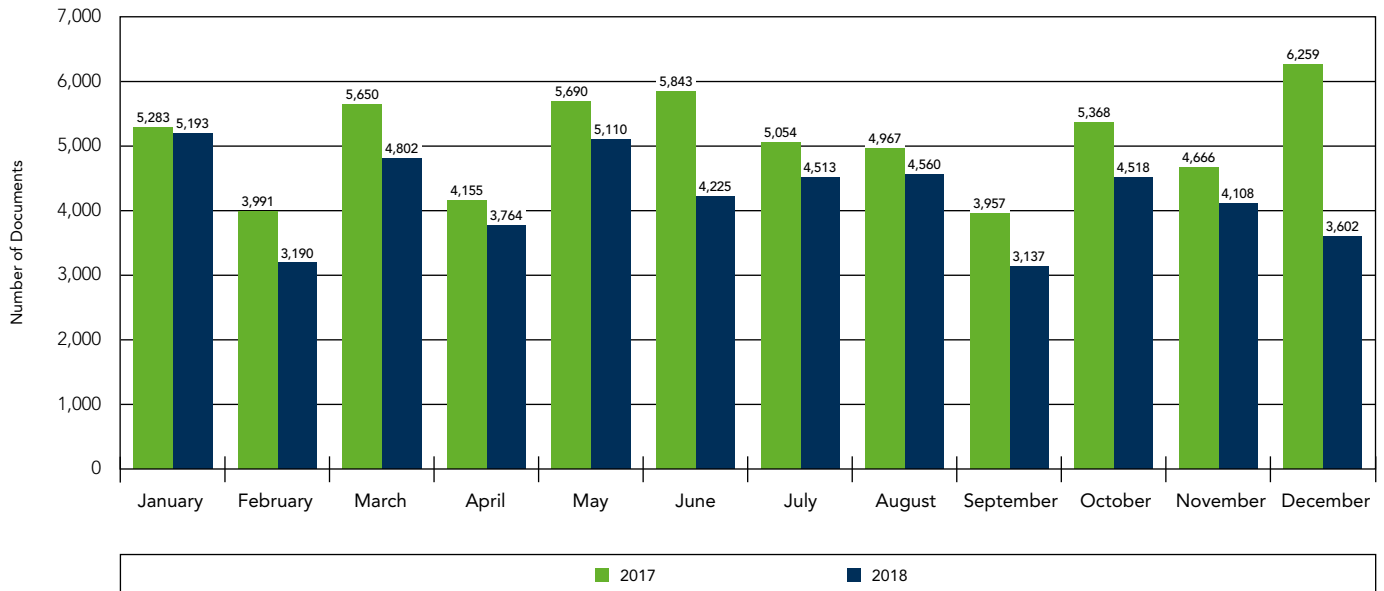
MSRB Quarterly Statistical Summaries include aggregate market information for the most recent quarter. In addition to data on municipal trading activity, the quarterly data includes the number of interest rate resets for variable rate demand obligations and auction rate securities, as well as statistics related to continuing disclosure documents received through the MSRB's EMMA® website. The MSRB Quarterly Statistical Summaries are available free of charge approximately four to five weeks after the end of each quarter.

[Find out more on the MSRB website.](#)



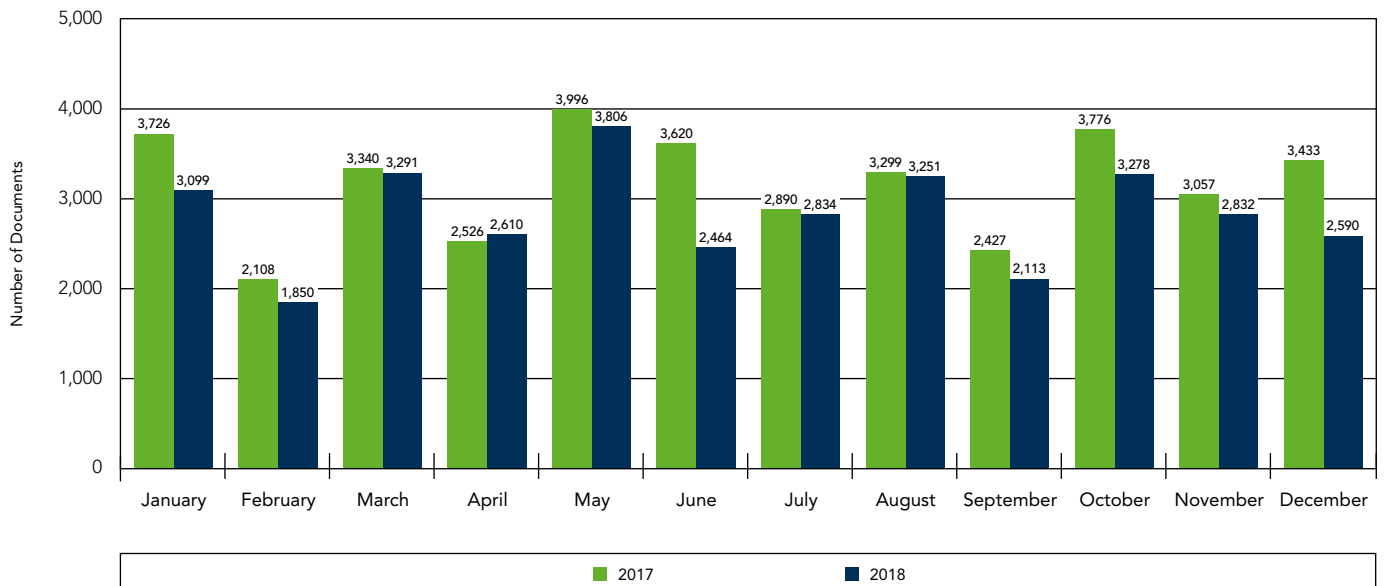
All Event Disclosures, 2017–2018

By number of documents



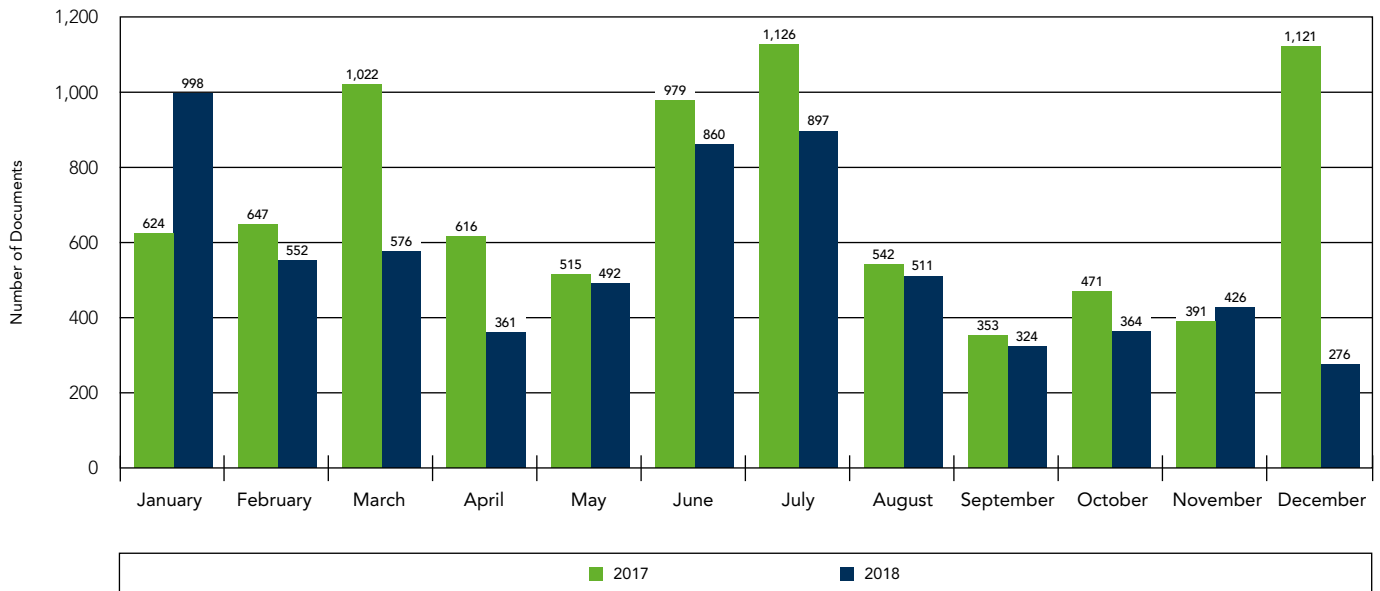
Bond Call Submissions, 2017–2018

By number of documents



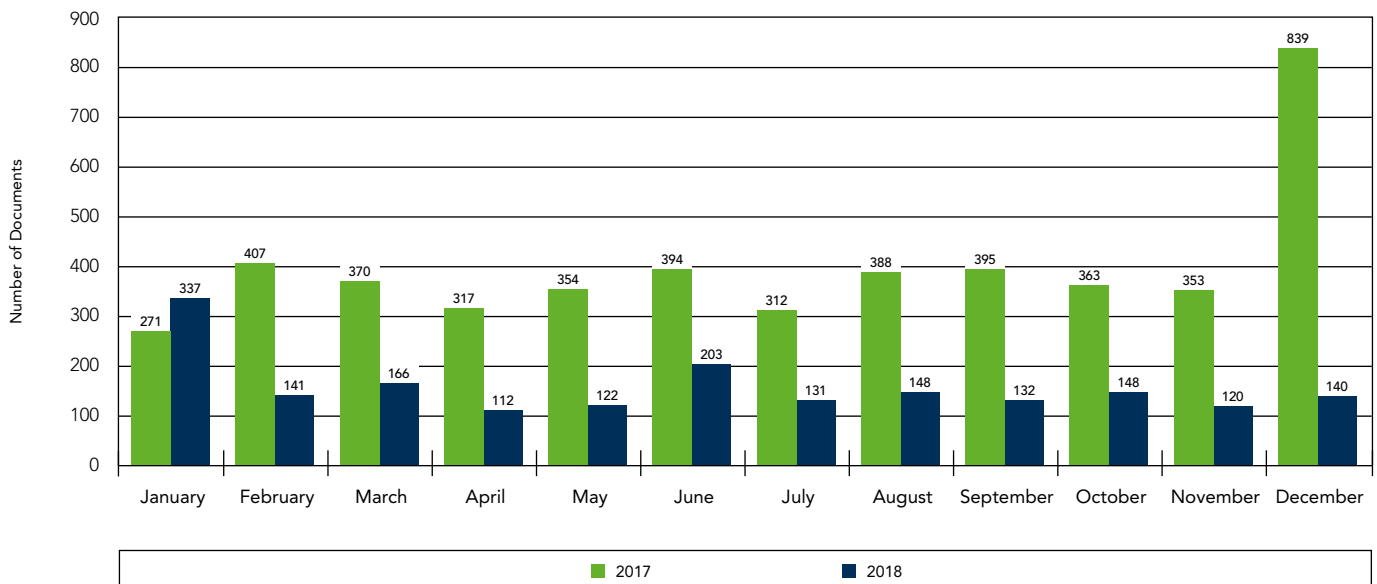
Rating Change Submissions, 2017–2018

By number of documents



Defeasance Submissions, 2017–2018

By number of documents



Other Event Disclosures, 2017–2018

Event Disclosures

By number of documents	2017	2018
ADVERSE TAX OPINION OR EVENT AFFECTING TAX-EXEMPT STATUS	9	3
AMENDMENT TO CONTINUING DISCLOSURE UNDERTAKING	64	47
BANKRUPTCY, INSOLVENCY, RECEIVERSHIP	87	65
BID FOR AUCTION RATE OR OTHER SECURITIES	106	103
CAPITAL OR OTHER FINANCING PLAN	47	30
CHANGE IN OBLIGATED PERSON	37	33
CHANGE OF TENDER AGENT, REMARKETING AGENT, OR OTHER ON-GOING PARTY	51	42
COMMUNICATION FROM THE INTERNAL REVENUE SERVICE	18	10
DERIVATIVE OR OTHER SIMILAR TRANSACTION	3	5
LITIGATION/ENFORCEMENT ACTION	34	46
MERGER, CONSOLIDATION, ACQUISITION AND SALE OF ASSETS	134	102
MODIFICATION TO THE RIGHTS OF SECURITY HOLDERS	51	52
NON-PAYMENT RELATED DEFAULT	113	104
NOTICE TO INVESTOR PURSUANT TO BOND DOCUMENTS	650	582
OTHER EVENT-BASED DISCLOSURES	5,645	5,089
P&I PAYMENT DELINQUENCY	399	432
RELEASE, SUBSTITUTION OR SALE OF PROPERTY	60	39
SUBSTITUTION OF CREDIT OR LIQUIDITY PROVIDER OR ITS FAILURE TO PERFORM	81	91
SUCCESSOR, ADDITIONAL OR CHANGE IN TRUSTEE	194	121
TENDER OFFER/SECONDARY MARKET PURCHASES	360	320
UNSCHEDULED DRAW ON CREDIT ENHANCEMENT	44	44
UNSCHEDULED DRAW ON DEBT SERVICE RESERVE	126	84

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.

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.

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.

Continuing Disclosure Definitions

FINANCIAL/OPERATING-BASED DISCLOSURES

Rule 15c2-12-Based Financial/Operating Data

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

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

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

Additional/Voluntary Financial/Operating Data

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

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

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

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

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

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

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

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

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

EVENT-BASED DISCLOSURES

Rule 15c2-12 Material Event Notices

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

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

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

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

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

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

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

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

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

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

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

Rating Change—a notice that a rating assigned by a rating agency on the municipal securities, the issuer of municipal securities, an obligated person or other rating relating to the municipal securities has been changed—see Exchange Act Rule 15c2—12(b)(5)(i)(C)(11).

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

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

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

Additional/Voluntary Event—Based Disclosures

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

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

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

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

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

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

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

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

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

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



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