



Municipal Securities Rulemaking Board



# 2020 FACT BOOK

# About the MSRB Fact Book

As the self-regulatory organization for the municipal securities market, the Municipal Securities Rulemaking Board (MSRB) collects market data and disclosures to support market transparency and the surveillance functions of regulatory enforcement agencies. The MSRB makes its data, documents and related statistics available in multiple formats to facilitate widespread access to 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 2020 *Fact Book* includes monthly, quarterly and yearly aggregate market information from 2016 to 2020, 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 2016 is included.<sup>1</sup> 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 ICE Data Pricing & Reference Data, LLC and CUSIP databases furnished by CUSIP Global Services.<sup>2</sup>

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<sup>®</sup>) website at [emma.msrb.org](http://emma.msrb.org).

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

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## WHY THE MSRB COLLECTS TRADE DATA AND DISCLOSURE DOCUMENTS

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

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

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

The EMMA website provides, at no charge, real-time access to primary market and continuing disclosure documents, as well as documents related to variable rate security liquidity provisions and auction procedures. EMMA’s database contains primary market documents including official statements and advanced refunding documents since 1990. EMMA’s database also contains continuing disclosure documents produced in connection with municipal securities since July 1, 2009, based on EMMA’s designation by the Securities and Exchange Commission 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, and conducts extensive education and outreach to market stakeholders. The MSRB is a Congressionally-chartered, self-regulatory organization governed by a board of directors that has a majority of public members, in addition to representatives of regulated entities. The MSRB is subject to oversight by the Securities and Exchange Commission.

## ABOUT EMMA®

The MSRB’s EMMA website, [emma.msrb.org](http://emma.msrb.org), is designated by the U. S. Securities and Exchange Commission as the official source for municipal securities data and disclosure documents. The website provides free public access to objective municipal market information and interactive tools for investors, municipal entities and others. EMMA supports municipal market transparency but is not a platform for buying or selling bonds.

EMMA houses municipal disclosure documents including offering documents, called official statements, for most new offerings of municipal bonds, notes, 529 plans and other municipal securities issued since 1990. EMMA also provides access to advance refunding documents, which detail arrangements made when new bonds are issued to establish escrows to pay off existing bonds (usually to refinance their debt

at a lower interest rate). Ongoing disclosures about municipal bonds throughout the life of the bonds also are available on EMMA. These continuing disclosures, which include annual financial statements and notices of material events, reflect the financial or operating condition of the issuer and events that can affect the ability of an issuer to repay its bonds and the value of the bond, among other things. Current municipal securities credit ratings 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 free service of the Municipal Securities Rulemaking Board.

#### DATA AVAILABLE FROM THE MSRB

### Get Real-Time Feeds of Municipal Securities Market Disclosures

The MSRB offers subscriptions to two feeds of disclosure data:\*

- **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 [EMMA@ website](#).

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# Part One

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## Municipal Market Trade Summary, 2016–2020

## Transaction Summary

Total par amount traded in \$ millions

	2016	2017	2018	2019	2020
<b>Total</b>	<b>3,135,100</b>	<b>2,980,146</b>	<b>3,091,206</b>	<b>3,014,104</b>	<b>3,139,655</b>
<b>By Trade Type</b>					
Customer Bought	1,578,495	1,526,641	1,543,192	1,547,610	1,656,201
Customer Sold	947,081	925,050	1,023,351	945,111	994,602
Inter-Dealer	609,524	528,455	524,664	521,383	488,852
<b>By Coupon Type</b>					
Fixed Rate	1,782,334	1,773,113	1,844,298	1,797,962	1,971,761
Variable	1,014,906	940,777	989,411	955,384	881,015
Zero Coupon	107,337	98,167	70,692	71,142	106,282
Other <sup>1</sup>	230,522	168,089	186,806	189,616	180,598
<b>By Source of Repayment</b>					
General Obligation	801,361	795,978	787,852	773,360	797,448
Revenue	2,003,835	1,950,388	2,111,380	2,016,916	2,102,690
Double Barrel	71,396	56,475	62,337	64,169	69,536
Other <sup>1</sup>	258,507	177,306	129,637	159,660	169,980
<b>By Tax Status</b>					
Tax Exempt	2,709,773	2,527,506	2,573,742	2,480,940	2,520,388
Taxable	256,213	253,406	199,764	289,093	441,882
AMT	136,643	153,418	180,379	178,164	146,894
Other <sup>1</sup>	32,470	45,816	137,321	65,908	30,491

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



## Transaction Summary

Total number of trades

	2016	2017	2018	2019	2020
<b>Total</b>	<b>9,358,046</b>	<b>9,888,673</b>	<b>10,173,826</b>	<b>8,753,702</b>	<b>8,501,457</b>
<b>By Trade Type</b>					
Customer Bought	3,796,034	3,946,262	3,949,571	3,327,806	3,153,011
Customer Sold	1,917,322	2,116,210	2,332,120	2,045,963	2,171,562
Inter-Dealer	3,644,690	3,826,201	3,892,135	3,379,933	3,176,884
<b>By Coupon Type</b>					
Fixed Rate	8,812,788	9,312,611	9,576,565	8,135,966	7,979,207
Variable	195,228	274,551	334,277	316,264	279,181
Zero Coupon	333,432	284,621	241,246	276,991	223,749
Other <sup>1</sup>	16,598	16,890	21,738	24,481	19,320
<b>By Source of Repayment</b>					
General Obligation	3,343,552	3,649,601	3,761,095	3,304,017	3,031,125
Revenue	5,674,679	5,897,655	6,071,101	5,159,263	5,185,055
Double Barrel	320,850	324,851	327,002	271,265	267,725
Other <sup>1</sup>	18,965	16,566	14,628	19,157	17,552
<b>By Tax Status</b>					
Tax Exempt	8,598,898	9,120,571	9,437,546	8,008,023	7,695,493
Taxable	625,848	635,843	587,926	615,982	676,248
AMT	129,843	127,083	132,014	120,378	124,809
Other <sup>1</sup>	3,457	5,176	16,340	9,319	4,907

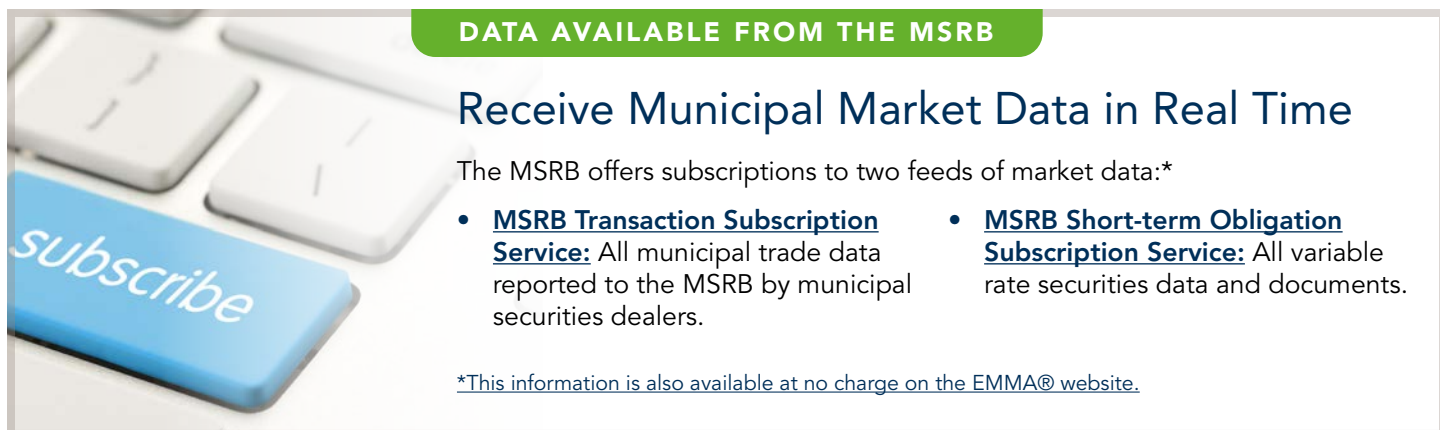
### DATA AVAILABLE FROM THE MSRB

## Receive Municipal Market Data in Real Time

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

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

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



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

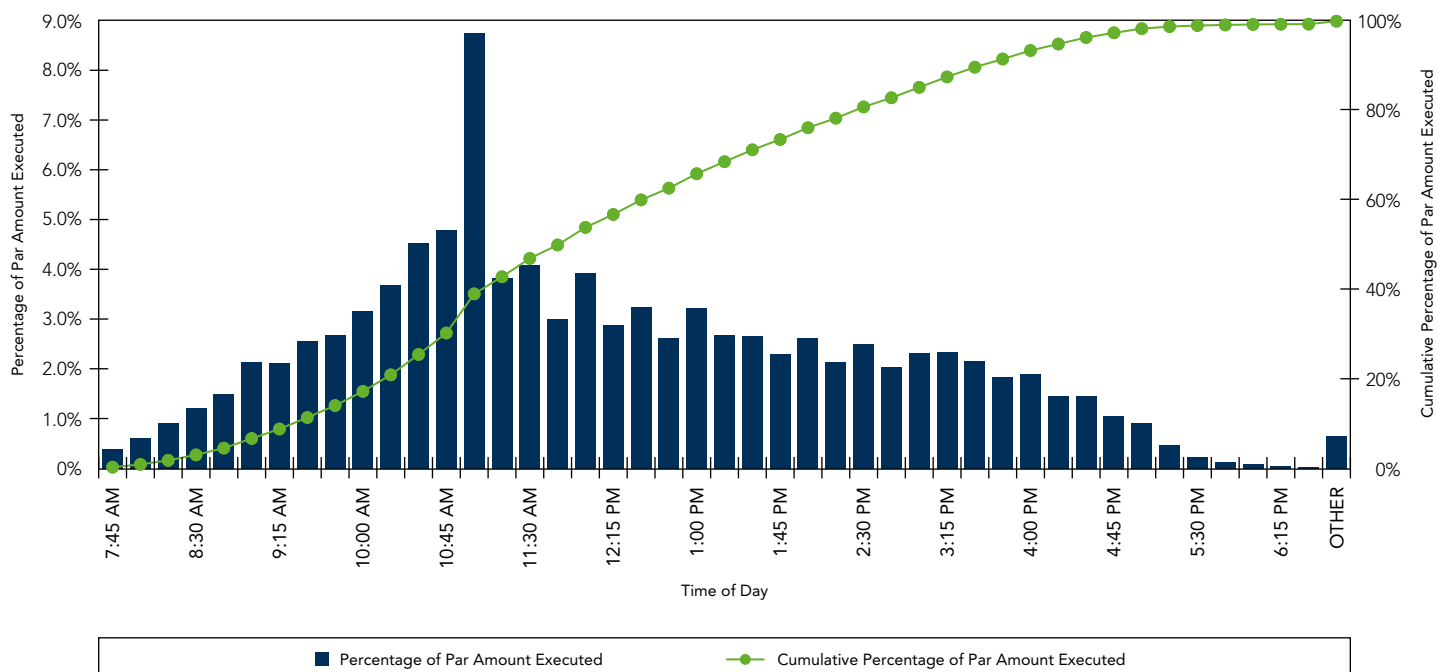
# Part Two

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# Municipal Market Trade Distribution Trends, 2020

### Par Amount Traded by Time of Day, 2020

Trades executed within 15 minutes prior to time shown<sup>1</sup>



continued >

Time of Execution	Average Par Value (\$ Millions)
7:45 AM	49.9
8:00 AM	76.7
8:15 AM	112.6
8:30 AM	151.9
8:45 AM	186.6
9:00 AM	265.7
9:15 AM	264.8
9:30 AM	317.7
9:45 AM	332.3
10:00 AM	393.0
10:15 AM	458.4
10:30 AM	562.2
10:45 AM	596.1
11:00 AM	1,085.5
11:15 AM	474.2
11:30 AM	508.3
11:45 AM	372.4
12:00 PM	486.4
12:15 PM	358.8
12:30 PM	403.8
12:45 PM	326.0
1:00 PM	400.3
1:15 PM	332.9

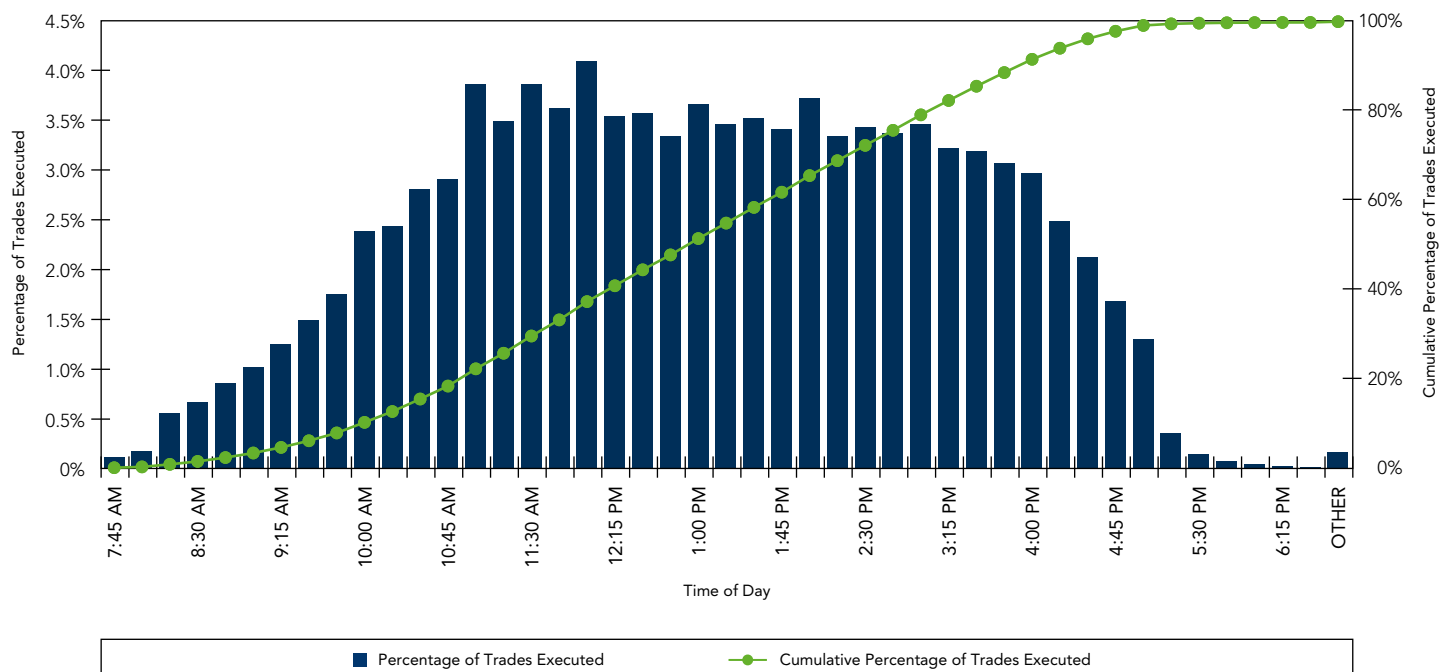
Time of Execution	Average Par Value (\$ Millions)
1:30 PM	329.6
1:45 PM	286.5
2:00 PM	325.0
2:15 PM	266.0
2:30 PM	311.1
2:45 PM	253.3
3:00 PM	288.3
3:15 PM	290.0
3:30 PM	269.1
3:45 PM	227.5
4:00 PM	235.1
4:15 PM	180.4
4:30 PM	180.1
4:45 PM	130.2
5:00 PM	114.6
5:15 PM	59.1
5:30 PM	28.0
5:45 PM	16.9
6:00 PM	12.7
6:15 PM	6.4
6:30 PM	3.3
Other <sup>2</sup>	80.1
<b>Total</b>	<b>12,409.7</b>

<sup>1</sup> Eastern time.

<sup>2</sup> Trades reported after 6:30 p.m. and before 7:30 a.m.

### Number of Trades by Time of Day, 2020

Trades executed within 15 minutes prior to time shown<sup>1</sup>



Time of Execution	Average Number of Trades
7:45 AM	41
8:00 AM	60
8:15 AM	190
8:30 AM	224
8:45 AM	288
9:00 AM	344
9:15 AM	420
9:30 AM	499
9:45 AM	587
10:00 AM	799
10:15 AM	815
10:30 AM	941
10:45 AM	974
11:00 AM	1,297
11:15 AM	1,173
11:30 AM	1,298
11:45 AM	1,215
12:00 PM	1,374
12:15 PM	1,191
12:30 PM	1,200
12:45 PM	1,121
1:00 PM	1,231
1:15 PM	1,161

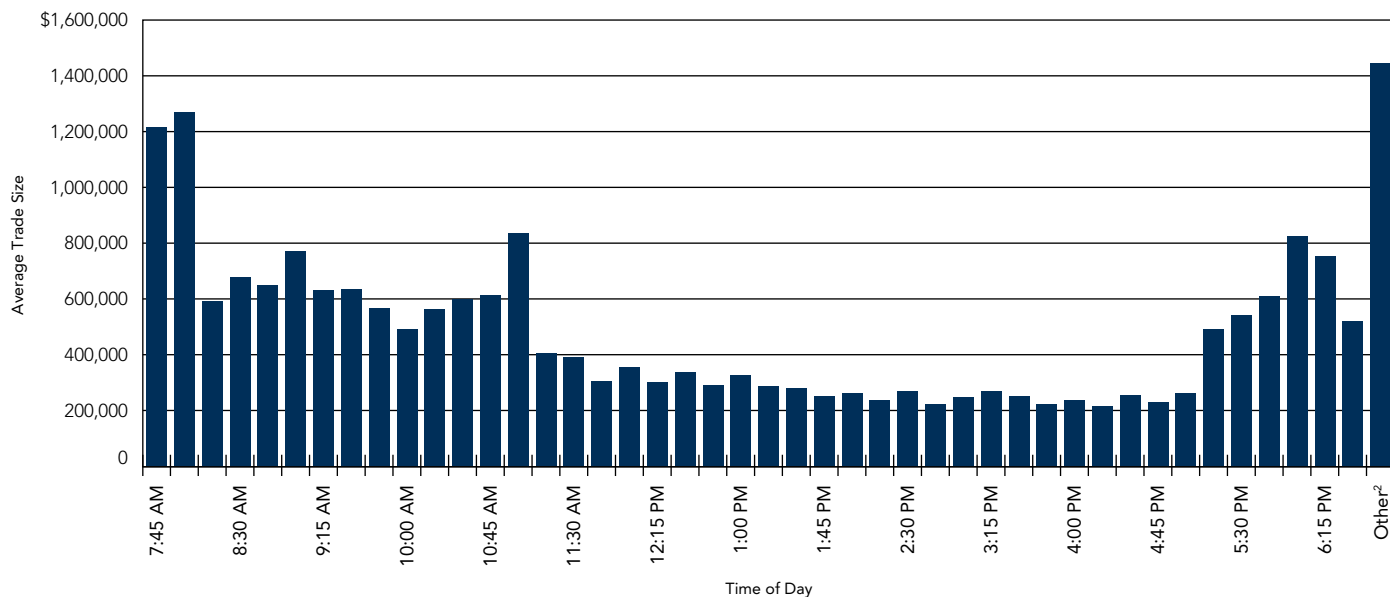
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Time of Execution	Average Number of Trades
1:30 PM	1,183
1:45 PM	1,145
2:00 PM	1,250
2:15 PM	1,121
2:30 PM	1,153
2:45 PM	1,134
3:00 PM	1,161
3:15 PM	1,083
3:30 PM	1,071
3:45 PM	1,030
4:00 PM	995
4:15 PM	834
4:30 PM	712
4:45 PM	566
5:00 PM	438
5:15 PM	120
5:30 PM	52
5:45 PM	28
6:00 PM	15
6:15 PM	8
6:30 PM	6
Other <sup>2</sup>	55
<b>Total</b>	<b>33,603</b>

<sup>1</sup> Eastern time.

<sup>2</sup> Trades reported after 6:30 p.m. and before 7:30 a.m.

## Average Daily Trade Size by Time of Day, 2020

Trades executed within 15 minutes prior to time shown<sup>1</sup>

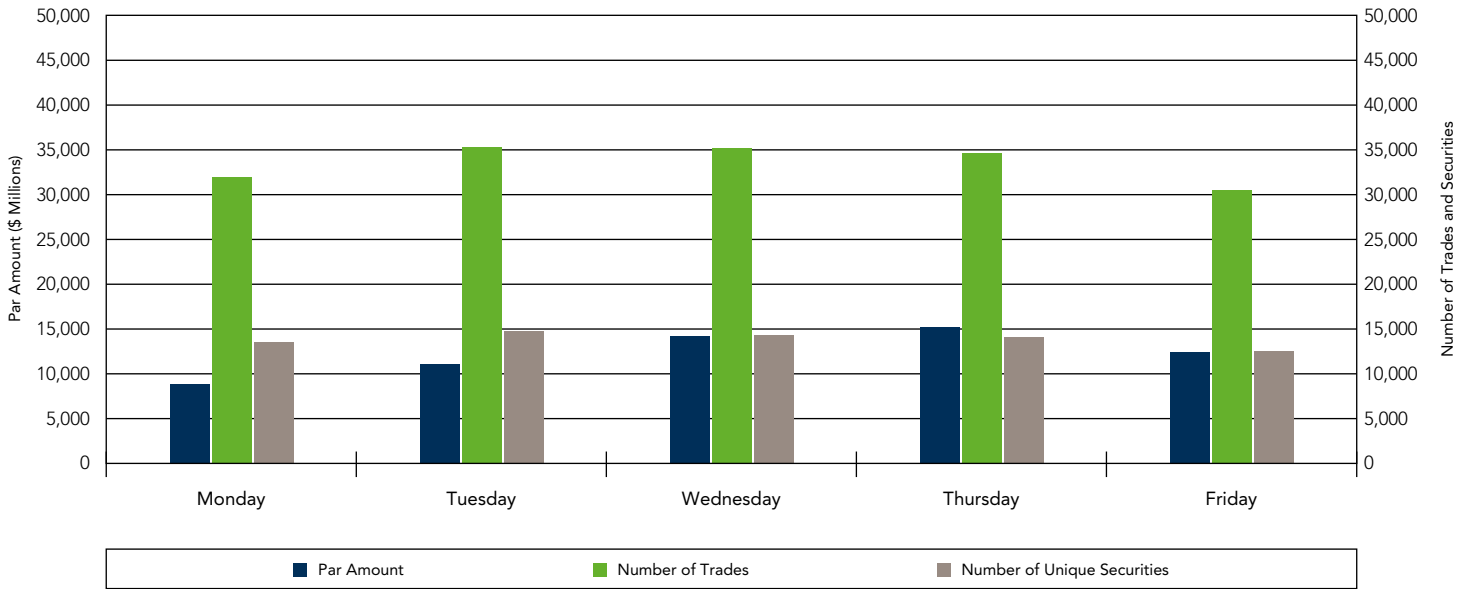
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Time of Execution	Average Trade Size (\$)
7:45 AM	1,214,555
8:00 AM	1,267,991
8:15 AM	593,392
8:30 AM	679,120
8:45 AM	647,675
9:00 AM	772,279
9:15 AM	630,630
9:30 AM	636,467
9:45 AM	566,264
10:00 AM	492,045
10:15 AM	562,374
10:30 AM	597,687
10:45 AM	611,716
11:00 AM	837,166
11:15 AM	404,126
11:30 AM	391,718
11:45 AM	306,577
12:00 PM	353,923
12:15 PM	301,339
12:30 PM	336,434
12:45 PM	290,769
1:00 PM	325,052
1:15 PM	286,632

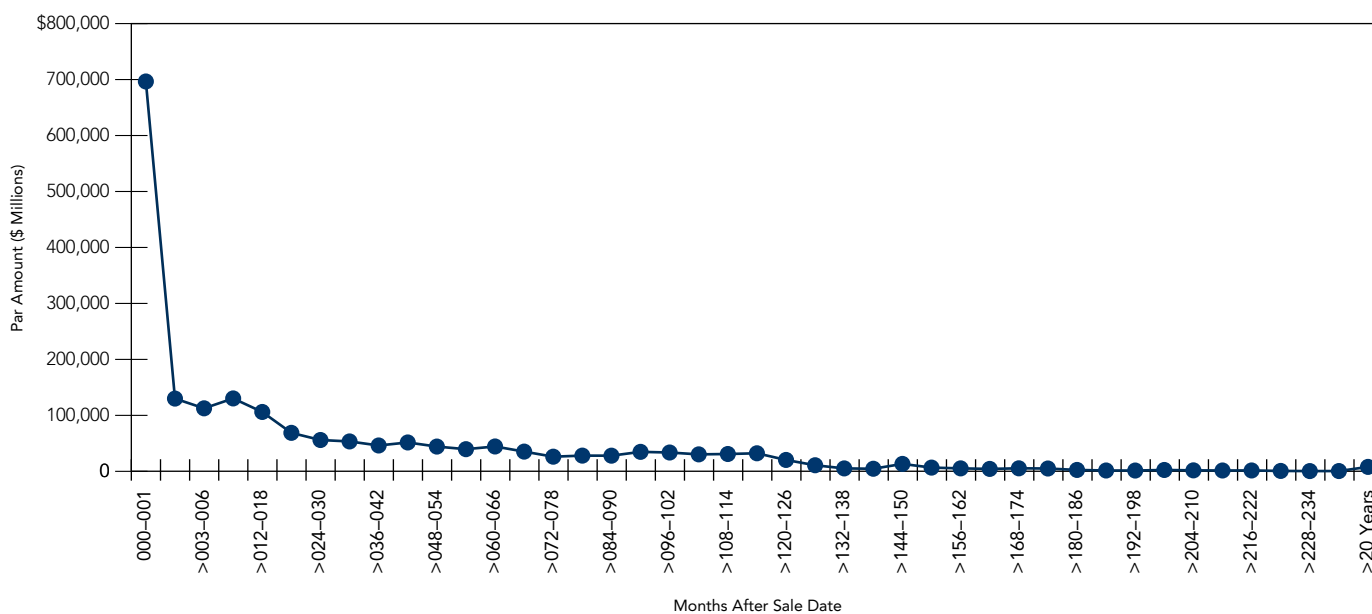
Time of Execution	Average Trade Size (\$)
1:30 PM	278,748
1:45 PM	250,300
2:00 PM	260,023
2:15 PM	237,315
2:30 PM	269,755
2:45 PM	223,375
3:00 PM	248,239
3:15 PM	267,866
3:30 PM	251,389
3:45 PM	220,803
4:00 PM	236,214
4:15 PM	216,455
4:30 PM	253,113
4:45 PM	230,162
5:00 PM	261,440
5:15 PM	492,620
5:30 PM	543,165
5:45 PM	608,330
6:00 PM	825,502
6:15 PM	751,318
6:30 PM	521,717
Other <sup>2</sup>	1,443,685
Overall	369,308

<sup>1</sup> Eastern time.<sup>2</sup> Trades reported after 6:30 p.m. and before 7:30 a.m.

### Average Trading Volume by Day of Week, 2020



Weekday	Par Amount (\$ Millions)	Number of Trades	Number of Unique Securities
Monday	8,907.0	31,993	13,558
Tuesday	11,037.1	35,313	14,758
Wednesday	14,248.5	35,217	14,366
Thursday	15,163.1	34,632	14,061
Friday	12,424.2	30,558	12,499

Par Amount Traded by Months After Sale Date<sup>1</sup>, 2020

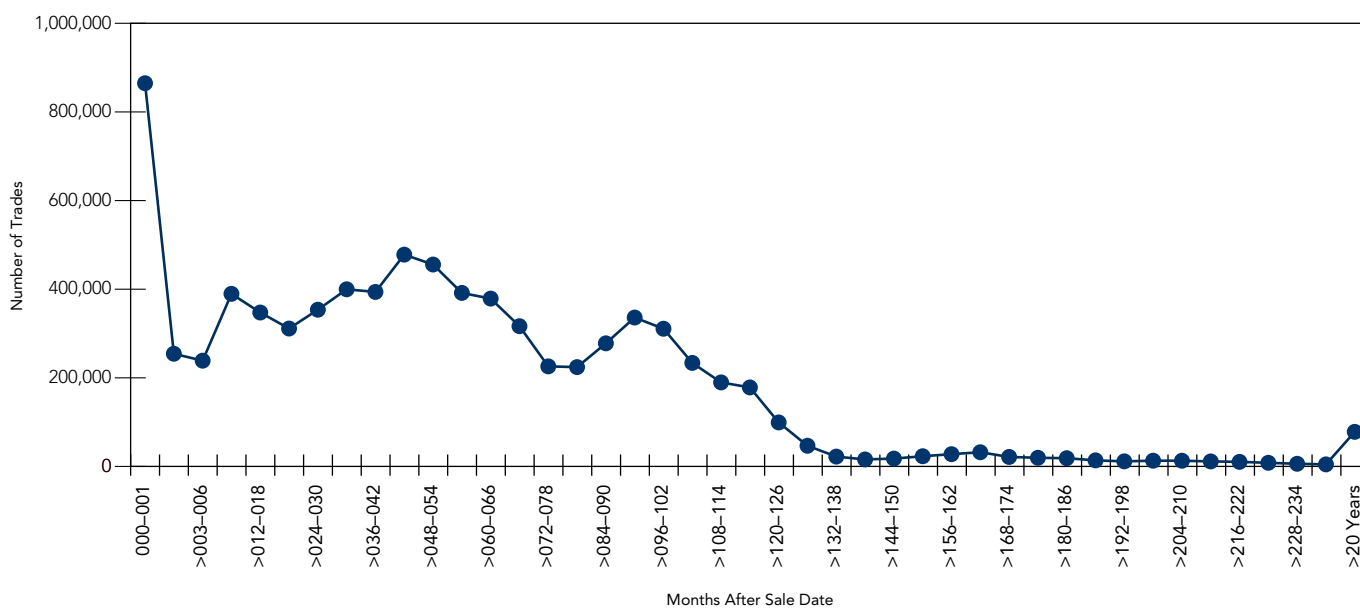
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Months After Sale Date	Par Amount (\$ Millions)	% of Total Par	Cumulative Percentage of Par Value
000-001	696,525.1	35.5%	35.5%
>001-003	129,988.6	6.6%	42.1%
>003-006	112,585.7	5.7%	47.9%
>006-012	130,260.3	6.6%	54.5%
>012-018	106,076.6	5.4%	59.9%
>018-024	68,767.4	3.5%	63.4%
>024-030	55,963.6	2.9%	66.3%
>030-036	53,414.7	2.7%	69.0%
>036-042	46,197.0	2.4%	71.3%
>042-048	51,581.2	2.6%	74.0%
>048-054	44,250.6	2.3%	76.2%
>054-060	39,585.1	2.0%	78.2%
>060-066	44,414.3	2.3%	80.5%
>066-072	35,249.7	1.8%	82.3%
>072-078	26,175.8	1.3%	83.6%
>078-084	28,074.6	1.4%	85.1%
>084-090	27,983.2	1.4%	86.5%
>090-096	34,802.4	1.8%	88.3%
>096-102	33,625.2	1.7%	90.0%
>102-108	30,308.2	1.5%	91.5%
>108-114	30,960.0	1.6%	93.1%
>114-120	32,255.7	1.6%	94.7%

Months After Sale Date	Par Amount (\$ Millions)	% of Total Par	Cumulative Percentage of Par Value
>120-126	20,353.7	1.0%	95.8%
>126-132	10,872.4	0.6%	96.3%
>132-138	5,230.7	0.3%	96.6%
>138-144	4,612.2	0.2%	96.8%
>144-150	13,263.6	0.7%	97.5%
>150-156	6,675.6	0.3%	97.8%
>156-162	5,297.4	0.3%	98.1%
>162-168	4,342.9	0.2%	98.3%
>168-174	5,392.9	0.3%	98.6%
>174-180	5,048.7	0.3%	98.9%
>180-186	2,487.9	0.1%	99.0%
>186-192	1,491.9	0.1%	99.1%
>192-198	1,429.9	0.1%	99.1%
>198-204	2,428.2	0.1%	99.3%
>204-210	1,739.6	0.1%	99.4%
>210-216	1,506.4	0.1%	99.4%
>216-222	1,565.9	0.1%	99.5%
>222-228	729.1	0.0%	99.5%
>228-234	468.2	0.0%	99.6%
>234-240	523.9	0.0%	99.6%
>20 Years	7,939.3	0.4%	100.0%
<b>Total</b>	<b>1,962,445.3</b>	<b>100%</b>	

<sup>1</sup> Includes only Bonds—securities with maturities of two or more years (maturity date less dated date) with fixed or zero interest rate. Excludes \$829 million par amount traded for which the date of sale was not available.

### Number of Trades by Months After Sale Date<sup>1</sup>, 2020



continued >

Months After Sale Date	Number of Trades	% of Total Trades	Cumulative Percentage of Number of Trades
000-001	864,770	10.7%	10.7%
>001-003	254,381	3.2%	13.9%
>003-006	238,775	3.0%	16.8%
>006-012	389,575	4.8%	21.7%
>012-018	347,416	4.3%	26.0%
>018-024	311,283	3.9%	29.8%
>024-030	353,700	4.4%	34.2%
>030-036	399,786	5.0%	39.2%
>036-042	393,840	4.9%	44.1%
>042-048	478,013	5.9%	50.0%
>048-054	455,651	5.6%	55.6%
>054-060	391,628	4.9%	60.5%
>060-066	378,817	4.7%	65.2%
>066-072	316,553	3.9%	69.1%
>072-078	225,888	2.8%	71.9%
>078-084	224,243	2.8%	74.7%
>084-090	277,882	3.4%	78.1%
>090-096	336,078	4.2%	82.3%
>096-102	310,814	3.9%	86.1%
>102-108	233,705	2.9%	89.0%
>108-114	189,731	2.4%	91.4%
>114-120	178,398	2.2%	93.6%

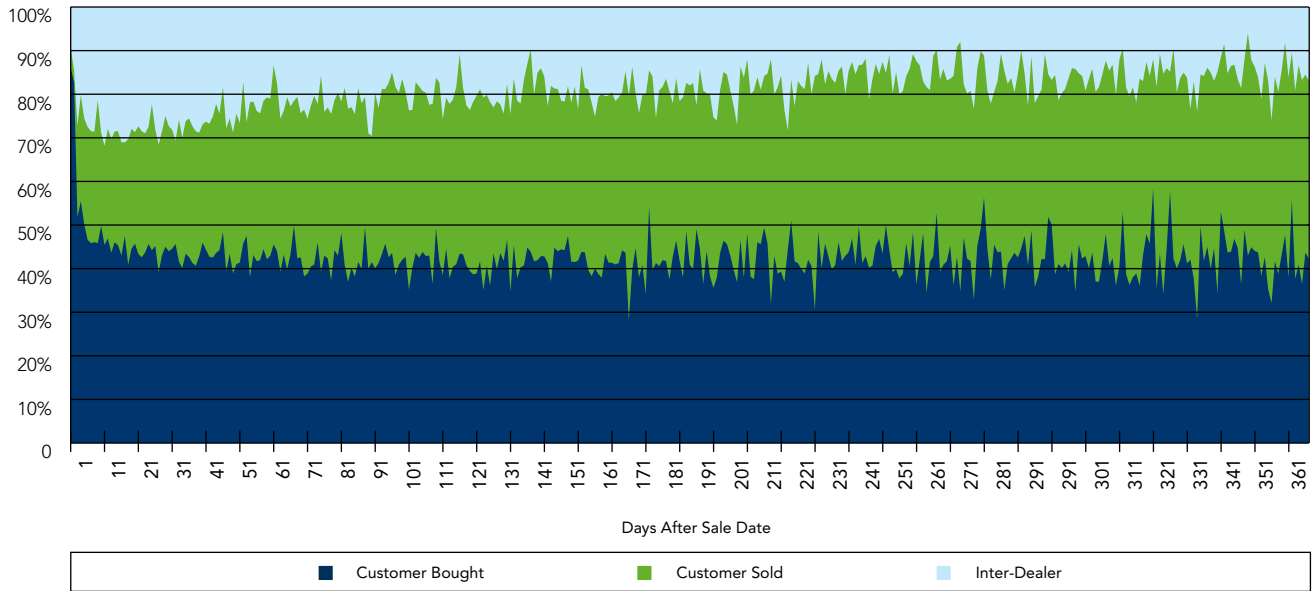
Months After Sale Date	Number of Trades	% of Total Trades	Cumulative Percentage of Number of Trades
>120-126	99,361	1.2%	94.8%
>126-132	46,760	0.6%	95.4%
>132-138	22,339	0.3%	95.7%
>138-144	15,883	0.2%	95.9%
>144-150	17,830	0.2%	96.1%
>150-156	23,146	0.3%	96.4%
>156-162	27,799	0.3%	96.7%
>162-168	32,121	0.4%	97.1%
>168-174	21,566	0.3%	97.4%
>174-180	19,647	0.2%	97.7%
>180-186	18,714	0.2%	97.9%
>186-192	13,825	0.2%	98.1%
>192-198	11,576	0.1%	98.2%
>198-204	13,075	0.2%	98.4%
>204-210	12,997	0.2%	98.5%
>210-216	11,440	0.1%	98.7%
>216-222	10,444	0.1%	98.8%
>222-228	8,300	0.1%	98.9%
>228-234	6,139	0.1%	99.0%
>234-240	4,731	0.1%	99.0%
>20 Years	78,153	1.0%	100.0%
<b>Total</b>	<b>8,066,773</b>	<b>100%</b>	

<sup>1</sup> Includes only Bonds—securities with maturities of two or more years (maturity date less dated date) with fixed or zero interest rate. Excludes 746 trades for which the date of sale was not available.

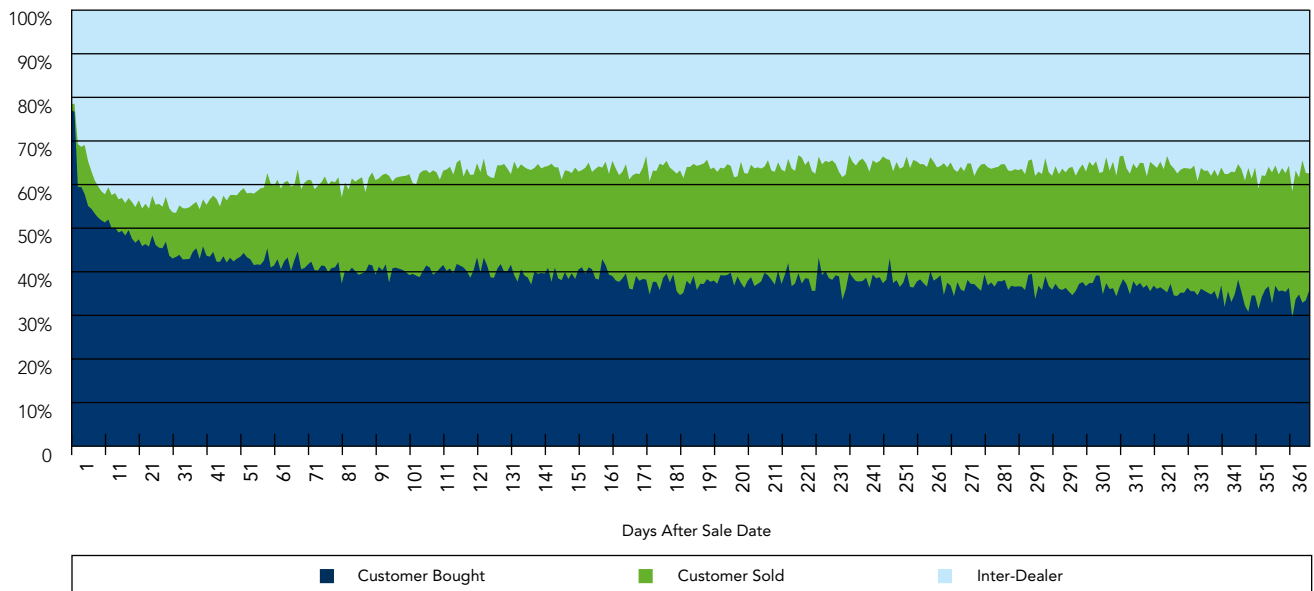


### Distribution of Trades by Type After Sale Date<sup>1</sup>, 2020

Par Amount

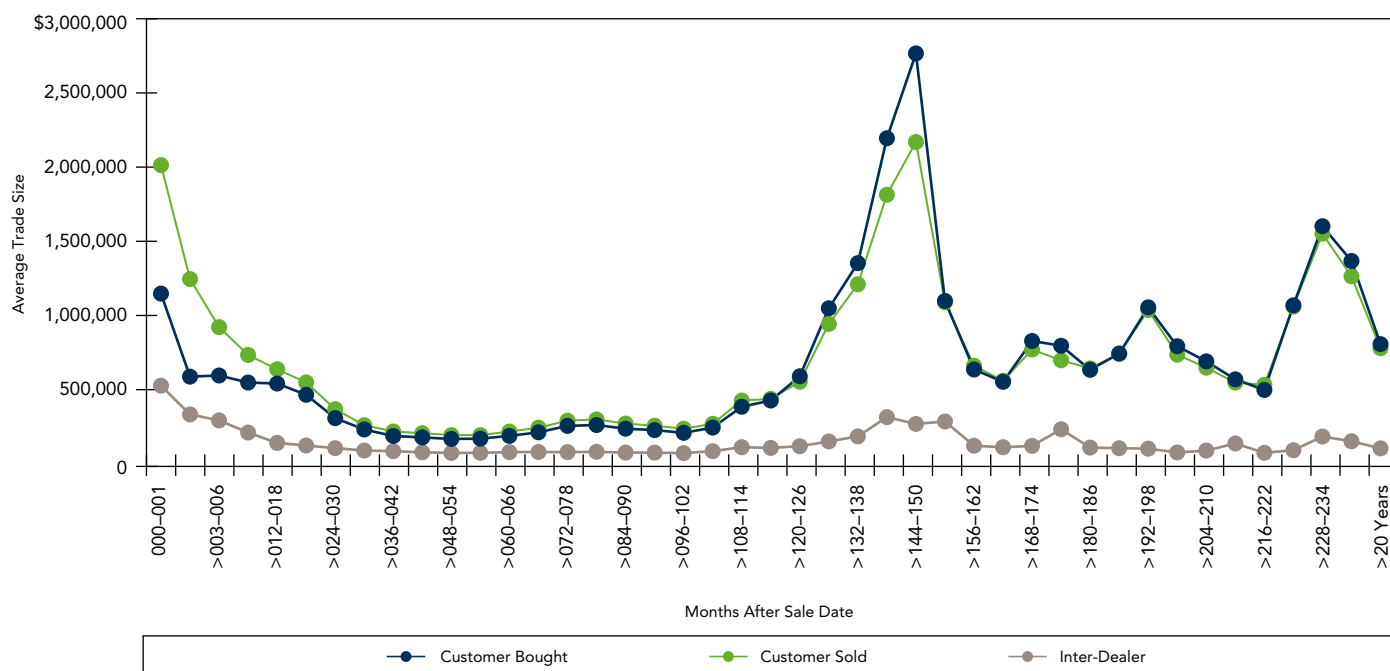


Number of Trades



<sup>1</sup> Excludes transactions for which the date of sale was not available.

Average Trade Size by Trade Type by Months After Sale Date<sup>1</sup>, 2020  
All trades



Months After Sale Date	Customer Bought	Customer Sold	Inter-dealer
000-001	1,147,471	2,013,653	526,888
>001-003	587,777	1,245,286	332,974
>003-006	595,508	921,447	292,896
>006-012	547,972	733,974	210,917
>012-018	541,311	637,530	140,876
>018-024	465,368	548,777	123,796
>024-030	308,024	368,237	105,680
>030-036	231,632	260,763	89,867
>036-042	187,735	218,282	85,313
>042-048	178,101	206,459	77,568
>048-054	167,808	193,654	73,525
>054-060	169,801	193,800	74,066
>060-066	188,395	217,560	79,020
>066-072	212,418	243,770	79,792
>072-078	255,895	290,875	78,910
>078-084	261,557	299,334	80,939
>084-090	236,988	271,454	75,802
>090-096	227,382	256,846	75,772
>096-102	209,171	236,573	72,213
>102-108	244,160	269,872	85,443
>108-114	384,851	426,564	112,055
>114-120	426,849	438,162	107,430

continued >

Months After Sale Date	Customer Bought	Customer Sold	Inter-dealer
>120-126	590,159	552,972	118,914
>126-132	1,048,691	943,169	151,063
>132-138	1,352,644	1,210,370	185,161
>138-144	2,194,601	1,813,903	314,787
>144-150	2,766,516	2,169,218	269,015
>150-156	1,098,197	1,088,972	285,496
>156-162	635,949	661,338	121,969
>162-168	552,882	560,051	111,996
>168-174	828,242	770,639	121,163
>174-180	795,950	697,925	233,165
>180-186	633,836	643,765	109,511
>186-192	743,155	742,098	105,197
>192-198	1,054,799	1,036,460	102,251
>198-204	792,646	736,085	76,688
>204-210	690,604	648,144	89,184
>210-216	569,411	547,786	137,179
>216-222	497,820	532,854	74,251
>222-228	1,068,284	1,060,073	91,842
>228-234	1,601,671	1,551,272	184,113
>234-240	1,367,330	1,263,625	152,281
>20 Years	806,891	779,398	104,138

<sup>1</sup> Excludes transactions for which the date of sale was not available.

## Part Three

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# Most Actively Traded Municipal Securities, 2020

## Top 50 Most Active Securities, 2020

By par amount

Rank	CUSIP <sup>1</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/46	20,936.1	4,537
2	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/51	18,176.0	4,537
3	882724PY7	TEXAS ST	4.00	8/27/20	11,011.7	3,697
4	402207AD6	GULF COAST INDL DEV AUTH TEX REV	-	11/1/41	10,094.1	877
5	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	9,555.5	2,965
6	882724SY4	TEXAS ST	4.00	8/26/21	9,041.6	1,580
7	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	8/1/35	6,591.8	459
8	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,487.6	5,855
9	118217DA3	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	-	6/1/57	6,062.0	191
10	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/30	5,306.3	256
11	467229AF7	JACKSON CNTY MISS PORT FAC REV	-	6/1/23	5,118.1	625
12	64990FXG4	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/31/21	4,900.1	1,705
13	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,567.7	1,236
14	64966ML98	NEW YORK N Y	-	12/1/47	4,434.9	581
15	91412GSK2	UNIVERSITY CALIF REVS	-	5/15/48	4,264.5	711
16	64966JE77	NEW YORK N Y	-	4/1/42	4,151.2	1,268
17	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	12/1/40	3,860.4	318
18	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	-	6/1/42	3,598.5	371
19	594751AM1	MICHIGAN TOB SETTLEMENT FIN AUTH TOB SETTLEMENT ASSET BACKED REV	-	6/1/58	3,467.4	198
20	13063DUD8	CALIFORNIA ST	4.00	3/1/36	3,434.7	1,004
21	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/42	3,314.9	583
22	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/35	3,306.4	739
23	64966FA87	NEW YORK N Y	-	4/1/36	3,203.9	568
24	64971XKS6	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	11/1/44	3,112.0	417
25	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	-	7/1/49	3,110.1	283
26	677561LA8	OHIO ST HOSP FAC REV	-	1/1/52	3,050.9	318
27	91412GSJ5	UNIVERSITY CALIF REVS	-	5/15/48	3,008.0	355
28	64966KTD5	NEW YORK N Y	-	3/1/42	2,961.6	609
29	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	-	11/15/50	2,943.1	551
30	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	2,876.5	3,617
31	13063A5Y6	CALIFORNIA ST	-	5/1/34	2,697.9	495
32	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	-	10/1/41	2,673.1	301
33	62947YAK7	NEW YORK CNTYS TOB TR IV	-	6/1/60	2,646.1	29
34	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	-	11/15/52	2,629.0	381
35	16876QBM0	CHILDRENS TR FD P R TOB SETTLEMENT REV	-	5/15/57	2,593.2	17
36	64972GEL4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/49	2,572.3	212
37	414009PV6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	-	12/1/59	2,510.1	164
38	91412GSH9	UNIVERSITY CALIF REVS	-	5/15/48	2,482.9	471
39	915137U35	UNIVERSITY TEX UNIV REVS	-	8/1/39	2,468.4	336
40	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/30	2,443.5	391
41	64966KCW1	NEW YORK N Y	-	10/1/38	2,438.1	290
42	13063A5V2	CALIFORNIA ST	-	5/1/34	2,433.7	560
43	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/35	2,430.5	502
44	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	-	1/1/32	2,406.0	665
45	41315RGU2	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	-	12/1/41	2,394.8	446
46	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,392.6	4,085
47	118217CX4	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	4.00	6/1/48	2,371.5	436
48	544351PK9	LOS ANGELES CALIF TAX AND REV ANTIC NTS 2020	4.00	6/24/21	2,366.0	483
49	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV FUTURE TAX SECD SUB BDS	-	8/1/45	2,363.6	430
50	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP	-	11/1/29	2,354.3	148

<sup>1</sup> See page 1 for information on CUSIP identifiers.

## Top 50 Most Active Securities, 2020

By number of trades

Rank	CUSIP <sup>1</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,487.6	5,855
2	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/51	18,176.0	4,537
3	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/46	20,936.1	4,537
4	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,392.6	4,085
5	60637ARG9	MISSOURI ST HEALTH EDL FACS AUTH HEALTH FACS REV	3.00	6/1/53	484.0	3,800
6	882724PY7	TEXAS ST	4.00	8/27/20	11,011.7	3,697
7	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	2,876.5	3,617
8	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	9,555.5	2,965
9	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	2,284.7	2,459
10	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	608.2	2,294
11	88880LAA1	TOBACCO SETTLEMENT FIN AUTH WEST VA ASSET BACKED	7.47	6/1/47	544.2	2,183
12	546399KR6	LOUISIANA PUB FACS AUTH REV	3.00	5/15/47	354.7	2,055
13	59259YSK6	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/38	116.4	2,050
14	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/46	179.9	2,027
15	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	811.3	2,017
16	54714FAA8	LOVE FIELD ARPT MODERNIZATION CORP TEX SPL FACS REV	5.25	11/1/40	212.3	1,990
17	646136E31	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	398.4	1,978
18	452151LF8	ILLINOIS ST	5.10	6/1/33	1,400.9	1,939
19	74529JQF5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/33	368.4	1,875
20	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,817.1	1,849
21	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	397.4	1,831
22	74529JQE8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/31	488.3	1,792
23	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/35	270.2	1,784
24	59261AFR3	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/36	174.4	1,773
25	59261AE86	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/1/22	1,837.2	1,742
26	59260XAA6	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	5.00	3/1/22	381.2	1,741
27	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	1,168.4	1,735
28	59259Y3Q0	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/45	259.2	1,706
29	64990FXG4	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/31/21	4,900.1	1,705
30	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	24.8	1,666
31	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/49	138.3	1,663
32	59261AXD4	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/21	341.5	1,661
33	64971PFH3	NEW YORK N Y CITY INDL DEV AGY REV	5.00	3/1/46	145.4	1,656
34	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/34	300.2	1,629
35	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/44	87.5	1,611
36	59261AZB6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/22	1,006.1	1,604
37	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	396.0	1,597
38	74529JRL1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.78	7/1/58	804.3	1,587
39	882724SY4	TEXAS ST	4.00	8/26/21	9,041.6	1,580
40	64990GGK2	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.95	8/1/48	309.0	1,578
41	13033LW52	CALIFORNIA HEALTH FACS FING AUTH REV	5.00	8/15/52	197.4	1,536
42	74529JRJ6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	578.7	1,494
43	59261AQK6	METROPOLITAN TRANSN AUTH N Y REV	3.25	11/15/36	69.9	1,471
44	74529JQC2	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/27	190.6	1,460
45	645913BB9	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	-	2/15/23	79.1	1,446
46	44706HDV6	HUNTSVILLE ALA HEALTH CARE AUTH	3.00	6/1/50	321.7	1,352
47	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/44	149.3	1,346
48	19648FKT0	COLORADO HEALTH FACS AUTH REV	4.00	8/1/49	1,111.2	1,342
49	74529JQD0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/29	161.2	1,333
50	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	86.7	1,329

<sup>1</sup> See page 1 for information on CUSIP identifiers.

Top 50 Most Active Fixed Rate<sup>1</sup> Securities, 2020

By par amount

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/20	11,011.7	3,697
2	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	9,555.5	2,965
3	882724SY4	TEXAS ST	4.00	8/26/21	9,041.6	1,580
4	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,487.6	5,855
5	64990FXG4	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/31/21	4,900.1	1,705
6	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,567.7	1,236
7	4521527U9	CALIFORNIA ST	4.00	3/1/36	3,434.7	1,004
8	13063DUD8	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	2,876.5	3,617
9	36829QAA3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,392.6	4,085
10	74529JPW9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	4.00	6/1/48	2,371.5	436
11	118217CX4	LOS ANGELES CALIF	4.00	6/24/21	2,366.0	483
12	544351PK9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	2,284.7	2,459
13	74529JRH0	CALIFORNIA ST	5.00	3/1/35	2,204.0	724
14	13063DUC0	UNIVERSITY VA UNIV REVS	2.26	9/1/50	2,122.6	276
15	915217XF5	FLORIDA ST BRD ADMIN FIN CORP REV	2.15	7/1/30	2,099.0	615
16	341271AF1	GRAND PARKWAY TRANSN CORP TEX SYS TOLL REV	3.24	10/1/52	2,004.4	423
17	38611TDL8	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/1/22	1,837.2	1,742
18	59261AE86	CALIFORNIA ST	7.55	4/1/39	1,817.1	1,849
19	13063A5G5	FLORIDA ST BRD ADMIN FIN CORP REV	1.26	7/1/25	1,757.8	358
20	341271AD6	GRAND PARKWAY TRANSN CORP TEX SYS TOLL REV	4.00	10/1/49	1,750.3	1,033
21	38611TCC9	CALIFORNIA ST	5.25	8/1/32	1,734.2	922
22	13062TH72	TEXAS WTR DEV BRD REV	5.00	4/15/49	1,728.7	768
23	882854Q70	METROPOLITAN TRANSN AUTH N Y REV	5.00	2/1/23	1,716.2	1,223
24	59261AE78	LOS ANGELES CNTY CALIF	4.00	6/30/21	1,708.5	528
25	544657HX0	CALIFORNIA ST UNIV REV	2.98	11/1/51	1,634.2	316
26	13077DKU5	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.80	8/1/29	1,531.8	105
27	64971XGE2	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	1/1/50	1,512.8	1,294
28	650010CK5	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	4.00	2/15/47	1,501.5	959
29	64990FPV0	NEW JERSEY ST	4.00	6/25/20	1,500.0	4
30	646039XF9	PORT AUTH N Y & N J	1.09	7/1/23	1,493.9	263
31	73358W4V3	FLORIDA ST BRD ADMIN FIN CORP REV	1.71	7/1/27	1,422.3	335
32	341271AE4	SAN FRANCISCO CALIF CITY & CNTY MULTIFAMILY HSG REV	5.63	12/1/52	1,417.6	6
33	79765PDV2	ILLINOIS ST	5.10	6/1/33	1,400.9	1,939
34	452151LF8	SALES TAX SECURITIZATION CORP ILL	5.00	1/1/28	1,309.9	118
35	79467BCT0	CALIFORNIA ST	2.50	10/1/29	1,285.7	296
36	13063DRE0	LOS ANGELES CALIF	5.00	6/25/20	1,273.1	479
37	544351PJ2	MISSOURI ST HEALTH & EDL FACS AUTH EDL FACS REV	3.23	5/15/50	1,270.4	318
38	60636AVL4	UNIV CALIF REGTS MED CTR POOLED REV	3.01	5/15/50	1,225.1	254
39	913366KB5	FLORIDA DEV FIN CORP SURFACE TRANSN FAC REV	7.38	1/1/49	1,214.1	505
40	34061YAH3	METROPOLITAN TRANSN AUTH N Y REV	5.18	11/15/49	1,212.4	263
41	59261AG76	NEW JERSEY ST TRANSN TR FD AUTH	4.13	6/15/42	1,194.2	607
42	6461366S5	TEXAS PRIVATE ACTIVITY BD SURFACE TRANSN CORP REV	3.92	12/31/49	1,193.0	335
43	882667AZ1	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	3.73	8/1/29	1,184.9	79
44	64971XEN4	COLORADO ST ED LN PROG	5.00	6/29/20	1,171.9	34
45	19672MCH9	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	1,168.4	1,735
46	59261AA49	NEW YORK TRANSN DEV CORP SPL FAC REV	4.38	10/1/45	1,160.4	840
47	650116DA1	MICHIGAN ST BLDG AUTH REV	2.71	10/15/40	1,159.8	148
48	594615HY5	CALIFORNIA ST	7.60	11/1/40	1,143.3	547
49	544351PJ2	LOS ANGELES CALIF TAX AND REV ANTIC NTS	5.00	6/25/20	1,137.1	471
50	650010CK5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	1/1/50	1,136.8	1,256

<sup>1</sup> Excludes zero-coupon securities.<sup>2</sup> See page 1 for information on CUSIP identifiers.

Top 50 Most Active Fixed Rate<sup>1</sup> Securities, 2020

By number of trades

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,487.6	5,855
2	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,392.6	4,085
3	60637ARG9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	3.00	6/1/53	484.0	3,800
4	882724PY7	TEXAS ST	4.00	8/27/20	11,011.7	3,697
5	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	2,876.5	3,617
6	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	9,555.5	2,965
7	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	2,284.7	2,459
8	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	608.2	2,294
9	88880LAA1	TOBACCO SETTLEMENT FIN AUTH WEST VA ASSET BACKED	7.47	6/1/47	544.2	2,183
10	546399KR6	LOUISIANA PUB FACS AUTH REV	3.00	5/15/47	354.7	2,055
11	59259YSK6	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/38	116.4	2,050
12	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/46	179.9	2,027
13	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	811.3	2,017
14	54714FAA8	LOVE FIELD ARPT MODERNIZATION CORP TEX SPL FACS REV	5.25	11/1/40	212.3	1,990
15	646136E31	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	398.4	1,978
16	452151LF8	ILLINOIS ST	5.10	6/1/33	1,400.9	1,939
17	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,817.1	1,849
18	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	397.4	1,831
19	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/35	270.2	1,784
20	59261AFR3	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/36	174.4	1,773
21	59261AE86	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/1/22	1,837.2	1,742
22	59260XAA6	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	5.00	3/1/22	381.2	1,741
23	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	1,168.4	1,735
24	59259Y3Q0	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/45	259.2	1,706
25	64990FXG4	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/31/21	4,900.1	1,705
26	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	24.8	1,666
27	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/49	138.3	1,663
28	59261AXD4	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/21	341.5	1,661
29	64971PFH3	NEW YORK N Y CITY INDL DEV AGY REV	5.00	3/1/46	145.4	1,656
30	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/34	300.2	1,629
31	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/44	87.5	1,611
32	59261AZB6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/22	1,006.1	1,604
33	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	396.0	1,597
34	74529JRL1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.78	7/1/58	804.3	1,587
35	882724SY4	TEXAS ST	4.00	8/26/21	9,041.6	1,580
36	64990GGK2	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.95	8/1/48	309.0	1,578
37	13033LW52	CALIFORNIA HEALTH FACS FING AUTH REV	5.00	8/15/52	197.4	1,536
38	74529JRJ6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	578.7	1,494
39	59261AQK6	METROPOLITAN TRANSN AUTH N Y REV	3.25	11/15/36	69.9	1,471
40	44706HDV6	HUNTSVILLE ALA HEALTH CARE AUTH	3.00	6/1/50	321.7	1,352
41	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/44	149.3	1,346
42	19648FKT0	COLORADO HEALTH FACS AUTH REV	4.00	8/1/49	1,111.2	1,342
43	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	86.7	1,329
44	70870JCL0	PENNSYLVANIA ECONOMIC DEV FING AUTH UPMC REV	3.50	4/15/50	158.0	1,327
45	650010CK5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	1/1/50	1,512.8	1,294
46	592643DG2	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	3.00	10/1/50	342.4	1,262
47	650010CH2	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	3.00	1/1/53	150.2	1,249
48	59259Y5J4	METROPOLITAN TRANSN AUTH N Y REV	5.25	11/15/55	73.2	1,243
49	59261AUW5	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/43	117.8	1,241
50	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,567.7	1,236

<sup>1</sup> Excludes zero-coupon securities.<sup>2</sup> See page 1 for information on CUSIP identifiers.

## Top 50 Most Active Variable Rate Securities, 2020

By par amount

Rank	CUSIP <sup>1</sup>	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/41	10,094.1	877
2	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/35	6,591.8	459
3	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	5,306.3	256
4	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/23	5,118.1	625
5	64966ML98	NEW YORK N Y	12/1/47	4,434.9	581
6	91412GSK2	UNIVERSITY CALIF REVS	5/15/48	4,264.5	711
7	64966JE77	NEW YORK N Y	4/1/42	4,151.2	1,268
8	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/40	3,860.4	318
9	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	6/1/42	3,598.5	371
10	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/42	3,314.9	583
11	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	3,306.4	739
12	64966FA87	NEW YORK N Y	4/1/36	3,203.9	568
13	64971XKS6	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/44	3,112.0	417
14	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	7/1/49	3,110.1	283
15	677561LA8	OHIO ST HOSP FAC REV	1/1/52	3,050.9	318
16	91412GSJ5	UNIVERSITY CALIF REVS	5/15/48	3,008.0	355
17	64966KTD5	NEW YORK N Y	3/1/42	2,961.6	609
18	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	11/15/50	2,943.1	551
19	13063A5Y6	CALIFORNIA ST	5/1/34	2,697.9	495
20	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	10/1/41	2,673.1	301
21	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	2,629.0	381
22	64972GEL4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/49	2,572.3	212
23	414009PV6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	12/1/59	2,510.1	164
24	91412GSH9	UNIVERSITY CALIF REVS	5/15/48	2,482.9	471
25	915137U35	UNIVERSITY TEX UNIV REVS	8/1/39	2,468.4	336
26	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	2,443.5	391
27	64966KCW1	NEW YORK N Y	10/1/38	2,438.1	290
28	13063A5V2	CALIFORNIA ST	5/1/34	2,433.7	560
29	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	2,430.5	502
30	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	2,406.0	665
31	41315RGU2	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	12/1/41	2,394.8	446
32	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/45	2,363.6	430
33	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	11/1/29	2,354.3	148
34	64971WEY2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/44	2,324.7	418
35	64971M2B7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	5/1/34	2,315.7	348
36	91412GSG1	UNIVERSITY CALIF REVS	5/15/48	2,294.9	426
37	64972F2J4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	2,293.1	416
38	913366KA7	UNIV CALIF REGTS MED CTR POOLED REV	5/15/45	2,271.0	214
39	67756AH96	OHIO ST HIGHER EDL FAC COMMN REV	1/1/43	2,253.3	414
40	64966LU41	NEW YORK N Y	6/1/44	2,218.5	286
41	71884SAA8	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	2,173.5	342
42	818200VF1	SEVIER CNTY TENN PUB BLDG AUTH	6/1/34	2,155.1	204
43	64966G4Q2	NEW YORK N Y	4/1/35	2,129.2	535
44	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	2,126.3	703
45	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/38	2,124.3	510
46	64972GCQ5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/48	2,071.2	674
47	13063BCF7	CALIFORNIA ST	5/1/33	2,021.3	303
48	64972FWL6	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/39	1,982.7	373
49	57586CV69	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	12/1/37	1,978.3	291
50	60528ABY9	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE	11/1/35	1,928.0	316

<sup>1</sup> See page 1 for information on CUSIP identifiers.



## Top 50 Most Active Variable Rate Securities, 2020

By number of trades

Rank	CUSIP <sup>1</sup>	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	64966JE77	NEW YORK N Y	4/1/42	4,151.2	1,268
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/41	10,094.1	877
3	64971MLS9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/27	341.3	859
4	64966GMR0	NEW YORK N Y	8/1/26	253.3	823
5	64966FHM9	NEW YORK N Y	8/1/34	618.7	805
6	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	3,306.4	739
7	64970KYY7	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/35	837.7	723
8	91412GSK2	UNIVERSITY CALIF REVS	5/15/48	4,264.5	711
9	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	2,126.3	703
10	64972GCN2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/50	1,889.5	701
11	64966G4N9	NEW YORK N Y	4/1/36	514.4	679
12	89602RFA8	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	11/1/32	1,429.2	677
13	64972GCQ5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/48	2,071.2	674
14	89602RDT9	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	1,555.8	672
15	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	2,406.0	665
16	64966MFY0	NEW YORK N Y	8/1/44	1,251.7	654
17	64966G4P4	NEW YORK N Y	4/1/38	810.2	634
18	64971QV26	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/36	1,394.4	626
19	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/23	5,118.1	625
20	64966KTD5	NEW YORK N Y	3/1/42	2,961.6	609
21	64972GCM4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/50	1,483.0	596
22	89602RED3	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/32	1,317.8	585
23	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/42	3,314.9	583
24	64983M4P0	NEW YORK ST DORM AUTH REVS ST SUPPORTED DEBT	7/1/31	965.6	582
25	64972F6R2	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/45	778.5	581
26	64966ML98	NEW YORK N Y	12/1/47	4,434.9	581
27	57586CFZ3	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/40	303.0	578
28	64966FA87	NEW YORK N Y	4/1/36	3,203.9	568
29	89602RDR3	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	1/1/33	1,837.6	561
30	13063A5V2	CALIFORNIA ST	5/1/34	2,433.7	560
31	6133408D3	MONTGOMERY CNTY MD	11/1/37	1,318.9	558
32	544495DH4	LOS ANGELES CALIF DEPT WTR & PWR REV	7/1/34	1,549.4	554
33	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	11/15/50	2,943.1	551
34	64966JB47	NEW YORK N Y	4/1/42	806.2	550
35	64972F6T8	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/45	1,258.7	542
36	13048TGU1	CALIFORNIA MUN FIN AUTH REV	11/1/35	1,288.9	538
37	161045FL8	CHARLOTTE N C WTR & SWR SYS REV	7/1/36	620.6	536
38	59259Y7K9	METROPOLITAN TRANSN AUTH N Y REV	11/15/50	486.7	536
39	64966G4Q2	NEW YORK N Y	4/1/35	2,129.2	535
40	57586CZW8	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/42	233.7	531
41	64972F4W3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	783.2	529
42	64966FHN7	NEW YORK N Y	8/1/34	581.3	519
43	548351AC9	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP REV	11/1/38	2,124.3	510
44	64966FHP2	NEW YORK N Y	8/1/34	553.8	509
45	9151153V9	UNIVERSITY TEX PERM UNIV FD	7/1/38	1,506.2	507
46	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	2,430.5	502
47	97710BDK5	WISCONSIN ST HEALTH & EDL FACS AUTH REV	12/1/33	1,327.3	502
48	13057EBD5	CALIFORNIA PUB FIN AUTH REV	8/1/52	1,835.5	501
49	649845FA7	NEW YORK ST ENERGY RESH & DEV AUTH POLLUTN CTL REV	10/1/28	131.3	499
50	64579FYJ6	NEW JERSEY HEALTH CARE FACS FING AUTH REV	7/1/43	1,545.9	495

<sup>1</sup> See page 1 for information on CUSIP identifiers.

Top 50 Most Active Short-Term<sup>1</sup> Securities, 2020

By par amount

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/20	11,011.7	3,697
2	882724SY4	TEXAS ST	4.00	8/26/21	9,041.6	1,580
3	64990FXG4	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/31/21	4,900.1	1,705
4	544351PK9	LOS ANGELES CALIF	4.00	6/24/21	2,366.0	483
5	544657HX0	LOS ANGELES CNTY CALIF	4.00	6/30/21	1,708.5	528
6	270838AJ4	EAST BATON ROUGE PARISH LA POLLUTION CTL REV	0.02	3/1/22	1,572.9	117
7	903592AQ6	UINTA CNTY WYO POLLUTION CTL REV	0.06	8/15/20	1,500.4	299
8	646039XF9	NEW JERSEY ST	4.00	6/25/20	1,500.0	4
9	544351PJ2	LOS ANGELES CALIF	5.00	6/25/20	1,273.1	479
10	19672MCH9	COLORADO ST ED LN PROG	5.00	6/29/20	1,171.9	34
11	59261AE86	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/1/22	1,116.9	1,541
12	95736U8Q0	WESTCHESTER CNTY N Y	1.50	5/27/20	976.6	17
13	196729CL9	COLORADO ST GEN FD REV	4.00	6/25/21	853.5	290
14	59261AA98	METROPOLITAN TRANSN AUTH N Y REV	4.00	9/1/20	704.3	439
15	13049VAC1	CALIFORNIA MUN FIN AUTH SOLID WASTE REV	0.18	3/1/27	680.4	148
16	769110CU9	RIVERSIDE CNTY CALIF	4.00	6/30/21	679.8	136
17	59261AZB6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/22	639.6	966
18	57582RM45	MASSACHUSETTS ST	0.25	6/17/21	634.0	61
19	13017HAF3	CALIFORNIA EARTHQUAKE AUTH REV	1.30	7/1/20	630.0	59
20	717883XP2	PHILADELPHIA PA SCH DIST	4.00	6/30/21	613.1	143
21	573202AY4	MARTIN CNTY FLA POLLUTN CTL REV	0.03	7/15/22	605.0	91
22	59261AVL8	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/20	567.5	286
23	197212AA1	COLUMBIA ALA INDL DEV BRD REV	0.05	11/1/21	533.9	47
24	57582RM29	MASSACHUSETTS ST	2.00	4/21/21	509.7	64
25	797400KY3	SAN DIEGO CNTY CALIF REGL TRANSN COMMN SALES TAX REV	4.00	4/1/21	497.8	1,165
26	544657HW2	LOS ANGELES CNTY CALIF	5.00	6/30/20	483.6	369
27	59333RJJ4	MIAMI-DADE CNTY FLA SCH DIST	2.00	2/25/21	453.3	103
28	717813YG8	PHILADELPHIA PA	4.00	6/30/21	434.5	57
29	57582RM37	MASSACHUSETTS ST	0.23	5/20/21	404.9	44
30	86476PZY7	SUFFOLK CNTY N Y	2.50	7/23/20	373.7	73
31	546589S60	LOUISVILLE & JEFFERSON CNTY KY MET SWR DIST SWR & DRAIN SYS REV	5.00	10/20/21	367.8	15
32	59336HDH3	MIAMI-DADE CNTY FLA SEAPORT REV IAM COML PAPER NTS 3/A2 AMT SER A-1	0.24	10/20/20	363.2	6
33	476576PT4	JERSEY CITY N J	3.00	1/13/21	362.8	170
34	59260XAA6	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	5.00	3/1/22	360.9	1,644
35	402230EP7	GULF COAST WASTE DISP AUTH TEX POLLUTN CTL REV	0.07	6/1/20	358.0	138
36	59336HDL4	MIAMI-DADE CNTY FLA SEAPORT REV IAM COML PAPER NTS 3/A2 AMT SER A-1	0.27	12/16/20	357.2	4
37	59336HDN0	MIAMI-DADE CNTY FLA SEAPORT REV IAM COML PAPER NTS 3/A2 AMT SER A-1	0.20	2/4/21	357.2	4
38	59336HDF7	MIAMI-DADE CNTY FLA SEAPORT REV IAM COML PAPER NTS 3/A2 AMT SER A-1	0.33	8/11/20	357.2	5
39	05248NMU1	AUSTIN TEX UTIL SYS REV IAM COML PAPER 3/A2 SER A	0.15	11/10/20	347.0	8
40	57582RZS8	MASSACHUSETTS ST	4.00	4/23/20	345.1	133
41	544525YM4	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	0.07	7/1/20	343.3	144
42	59261AXD4	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/21	341.5	1,661
43	379697AK1	GLOUCESTER CNTY N J INDL POLLUTN CTL FING AUTH REV	0.01	1/1/22	340.0	96
44	86476PF86	SUFFOLK CNTY N Y	2.00	7/22/21	338.1	61
45	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	326.8	598
46	23530RAL5	DALLAS TEX IAM COML PAPER NTS 3/A2 SER A	0.18	11/13/20	320.0	4
47	59261AVV6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/21	317.9	919
48	631663KG5	NASSAU CNTY N Y INTERIM FIN AUTH	0.12	11/15/21	315.2	105
49	05914F6D7	BALTIMORE CNTY MD	4.00	3/22/21	306.9	120
50	797356AY8	SAN DIEGO CALIF UNI SCH DIST	5.00	6/30/21	306.3	191

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

Top 50 Most Active Short-Term<sup>1</sup> Securities, 2020

By number of trades

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	882724PY7	TEXAS ST	4.00	8/27/20	11,011.7	3,697
2	64990FXG4	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	3/31/21	4,900.1	1,705
3	59261AXD4	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/21	341.5	1,661
4	59260XAA6	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	5.00	3/1/22	360.9	1,644
5	882724SY4	TEXAS ST	4.00	8/26/21	9,041.6	1,580
6	59261AE86	METROPOLITAN TRANSN AUTH N Y REV	4.00	2/1/22	1,116.9	1,541
7	797400KY3	SAN DIEGO CNTY CALIF REGL TRANSN COMMN SALES TAX REV	4.00	4/1/21	497.8	1,165
8	59261AXC6	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/20	279.4	1,057
9	59261AVX2	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/21	68.7	1,018
10	34074GDH4	FLORIDA HURRICANE CATASTROPHE FD FIN CORP REV	3.00	7/1/20	206.0	983
11	59261AZB6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/22	639.6	966
12	59261AVV6	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/21	317.9	919
13	59261AVU8	METROPOLITAN TRANSN AUTH N Y REV	5.00	5/15/21	290.9	870
14	645913BA1	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	–	2/15/22	100.3	859
15	341271AB0	FLORIDA ST BRD ADMIN FIN CORP REV	2.64	7/1/21	263.6	802
16	13066YSW0	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/21	203.1	742
17	542424VF0	LONG BEACH CALIF HBR REV	5.00	12/15/20	178.6	666
18	575579E61	MASSACHUSETTS BAY TRANSN AUTH MASS SALES TAX REV	4.00	12/1/21	128.1	628
19	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	326.8	598
20	13066YSN0	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/21	162.3	579
21	13066YSX8	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/22	139.3	538
22	544657HX0	LOS ANGELES CNTY CALIF	4.00	6/30/21	1,708.5	528
23	645913AZ7	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	–	2/15/21	80.4	526
24	646136EC1	NEW JERSEY ST TRANSN TR FD AUTH	5.50	12/15/21	52.6	501
25	544351PK9	LOS ANGELES CALIF	4.00	6/24/21	2,366.0	483
26	13033W7L1	CALIFORNIA INFRASTRUCTURE & ECONOMIC DEV BK REV	5.00	6/1/21	65.7	479
27	544351PJ2	LOS ANGELES CALIF	5.00	6/25/20	1,273.1	479
28	64990ADM4	NEW YORK ST DORM AUTH SALES TAX REV ST SUPPORTED DEBT	5.00	3/15/21	227.7	474
29	13063BJA1	CALIFORNIA ST	5.70	11/1/21	142.0	472
30	59261AA98	METROPOLITAN TRANSN AUTH N Y REV	4.00	9/1/20	704.3	439
31	041042VB5	ARKANSAS ST	5.00	6/15/21	39.0	422
32	646136DY4	NEW JERSEY ST TRANSN TR FD AUTH	5.25	12/15/20	26.2	406
33	794665FY0	SALES TAX ASSET RECEIVABLE CORP N Y REV	5.00	10/15/21	35.9	389
34	13066YSP5	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/20	230.8	386
35	59261AJH1	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/21	58.1	385
36	373385AZ6	GEORGIA ST	5.00	7/1/21	33.6	383
37	29270CXR1	ENERGY NORTHWEST WASH ELEC REV	5.00	7/1/21	62.5	381
38	59261AZH3	METROPOLITAN TRANSN AUTH N Y REV	4.00	7/1/20	142.5	381
39	1301783X2	CALIFORNIA EDL FACS AUTH REV	5.00	5/1/21	72.8	380
40	544657HW2	LOS ANGELES CNTY CALIF	5.00	6/30/20	483.6	369
41	59259YRW1	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/21	15.7	369
42	18085PRD8	CLARK CNTY NEV ARPT REV	5.00	7/1/21	89.9	364
43	64711RJS6	NEW MEXICO FIN AUTH ST TRANSN REV	5.00	6/15/21	48.4	362
44	574193KK3	MARYLAND ST	5.00	8/1/21	60.8	361
45	13063DFD5	CALIFORNIA ST	5.00	10/1/21	195.5	361
46	64990EDB0	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	5.00	12/15/20	42.6	360
47	59259YQW2	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/20	73.8	360
48	7962532F8	SAN ANTONIO TEX ELEC & GAS REV	5.00	2/1/22	35.0	357
49	658268DN4	NORTH CAROLINA ST GRNT ANTIC REV	5.00	3/1/21	27.1	356
50	88283LHZ2	TEXAS TRANSN COMMN ST HWY FD REV	5.00	4/1/21	112.5	354

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

Top 50 Most Active Long-Term<sup>1</sup> Securities, 2020

By par amount

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/46	20,936.1	4,537
2	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/51	18,176.0	4,537
3	402207AD6	GULF COAST INDL DEV AUTH TEX REV	-	11/1/41	10,094.1	877
4	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	9,555.5	2,965
5	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	8/1/35	6,591.8	459
6	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,487.6	5,855
7	118217DA3	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	-	6/1/57	6,062.0	191
8	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/30	5,306.3	256
9	467229AF7	JACKSON CNTY MISS PORT FAC REV	-	6/1/23	5,118.1	625
10	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,567.7	1,236
11	64966ML98	NEW YORK N Y	-	12/1/47	4,434.9	581
12	91412GSK2	UNIVERSITY CALIF REVS	-	5/15/48	4,264.5	711
13	64966JE77	NEW YORK N Y	-	4/1/42	4,151.2	1,268
14	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	12/1/40	3,860.4	318
15	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	-	6/1/42	3,598.5	371
16	594751AM1	MICHIGAN TOB SETTLEMENT FIN AUTH TOB SETTLEMENT ASSET BACKED REV	-	6/1/58	3,467.4	198
17	13063DUD8	CALIFORNIA ST	4.00	3/1/36	3,434.7	1,004
18	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/42	3,314.9	583
19	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/35	3,306.4	739
20	64966FA87	NEW YORK N Y	-	4/1/36	3,203.9	568
21	64971XKS6	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	11/1/44	3,112.0	417
22	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	-	7/1/49	3,110.1	283
23	677561LA8	OHIO ST HOSP FAC REV	-	1/1/52	3,050.9	318
24	91412GSJ5	UNIVERSITY CALIF REVS	-	5/15/48	3,008.0	355
25	64966KTD5	NEW YORK N Y	-	3/1/42	2,961.6	609
26	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	-	11/15/50	2,943.1	551
27	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	2,876.5	3,617
28	13063A5Y6	CALIFORNIA ST	-	5/1/34	2,697.9	495
29	87638QBF5	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP HOSP REV	-	10/1/41	2,673.1	301
30	62947YAK7	NEW YORK CNTYS TOB TR IV	-	6/1/60	2,646.1	29
31	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	-	11/15/52	2,629.0	381
32	16876QBM0	CHILDRENS TR FD P R TOB SETTLEMENT REV	-	5/15/57	2,593.2	17
33	64972GEL4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/49	2,572.3	212
34	414009PV6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	-	12/1/59	2,510.1	164
35	91412GSH9	UNIVERSITY CALIF REVS	-	5/15/48	2,482.9	471
36	915137U35	UNIVERSITY TEX UNIV REVS	-	8/1/39	2,468.4	336
37	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/30	2,443.5	391
38	64966KCW1	NEW YORK N Y	-	10/1/38	2,438.1	290
39	13063A5V2	CALIFORNIA ST	-	5/1/34	2,433.7	560
40	60528ACC6	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/35	2,430.5	502
41	89602REB7	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	-	1/1/32	2,406.0	665
42	41315RGU2	HARRIS CNTY TEX HEALTH FACS DEV CORP REV	-	12/1/41	2,394.8	446
43	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,392.6	4,085
44	118217CX4	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	4.00	6/1/48	2,371.5	436
45	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/45	2,363.6	430
46	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	-	11/1/29	2,354.3	148
47	64971WEY2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	2/1/44	2,324.7	418
48	64971M2B7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	5/1/34	2,315.7	348
49	91412GSG1	UNIVERSITY CALIF REVS	-	5/15/48	2,294.9	426
50	64972F2J4	NEW YORK N Y CITY MUN WTR FIN AUTH	-	6/15/44	2,293.1	416

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

Top 50 Most Active Long-Term<sup>1</sup> Securities, 2020

By number of trades

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	6,487.6	5,855
2	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/46	20,936.1	4,537
3	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/51	18,176.0	4,537
4	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	2,392.6	4,085
5	60637ARG9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	3.00	6/1/53	484.0	3,800
6	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	2,876.5	3,617
7	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	9,555.5	2,965
8	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	2,284.7	2,459
9	74514LB89	PUERTO RICO COMWLTH	5.00	7/1/41	608.2	2,294
10	88880LAA1	TOBACCO SETTLEMENT FIN AUTH WEST VA ASSET BACKED	7.47	6/1/47	544.2	2,183
11	546399KR6	LOUISIANA PUB FACS AUTH REV	3.00	5/15/47	354.7	2,055
12	59259YSK6	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/38	116.4	2,050
13	6461365P2	NEW JERSEY ST TRANSN TR FD AUTH	3.50	6/15/46	179.9	2,027
14	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	811.3	2,017
15	54714FAA8	LOVE FIELD ARPT MODERNIZATION CORP TEX SPL FACS REV	5.25	11/1/40	212.3	1,990
16	646136E31	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	398.4	1,978
17	452151LF8	ILLINOIS ST	5.10	6/1/33	1,400.9	1,939
18	74529JQF5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/33	368.4	1,875
19	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,817.1	1,849
20	646136XT3	NEW JERSEY ST TRANSN TR FD AUTH	6.10	12/15/28	397.4	1,831
21	74529JQE8	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/31	488.3	1,792
22	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/35	270.2	1,784
23	59261AFR3	METROPOLITAN TRANSN AUTH N Y REV	4.00	11/15/36	174.4	1,773
24	59259Y3Q0	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/45	259.2	1,706
25	74529JPY5	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.55	7/1/40	24.8	1,666
26	19648FKU7	COLORADO HEALTH FACS AUTH REV	3.25	8/1/49	138.3	1,663
27	64971PFH3	NEW YORK N Y CITY INDL DEV AGY REV	5.00	3/1/46	145.4	1,656
28	74529JPU3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.50	7/1/34	300.2	1,629
29	646136U66	NEW JERSEY ST TRANSN TR FD AUTH	4.25	6/15/44	87.5	1,611
30	745235R37	PUERTO RICO PUB BLDGS AUTH REV GTD	5.25	7/1/42	396.0	1,597
31	74529JRL1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.78	7/1/58	804.3	1,587
32	64990GGK2	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.95	8/1/48	309.0	1,578
33	13033LW52	CALIFORNIA HEALTH FACS FING AUTH REV	5.00	8/15/52	197.4	1,536
34	74529JRJ6	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	578.7	1,494
35	59261AQK6	METROPOLITAN TRANSN AUTH N Y REV	3.25	11/15/36	69.9	1,471
36	74529JQC2	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/27	190.6	1,460
37	645913BB9	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	-	2/15/23	79.1	1,446
38	44706HDV6	HUNTSVILLE ALA HEALTH CARE AUTH	3.00	6/1/50	321.7	1,352
39	44420RBF6	HUDSON YDS INFRASTRUCTURE CORP N Y SECOND INDENTURE REV	4.00	2/15/44	149.3	1,346
40	19648FKT0	COLORADO HEALTH FACS AUTH REV	4.00	8/1/49	1,111.2	1,342
41	74529JQD0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/29	161.2	1,333
42	646136J85	NEW JERSEY ST TRANSN TR FD AUTH	5.00	6/15/42	86.7	1,329
43	70870JCL0	PENNSYLVANIA ECONOMIC DEV FING AUTH UPMC REV	3.50	4/15/50	158.0	1,327
44	650010CK5	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	4.00	1/1/50	1,512.8	1,294
45	64966JE77	NEW YORK N Y	-	4/1/42	4,151.2	1,268
46	592643DG2	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	3.00	10/1/50	342.4	1,262
47	650010CH2	NEW YORK ST TWY AUTH GEN REV JR INDBT OBLIGS	3.00	1/1/53	150.2	1,249
48	59259Y5J4	METROPOLITAN TRANSN AUTH N Y REV	5.25	11/15/55	73.2	1,243
49	59261AUW5	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/43	117.8	1,241
50	74514LE86	PUERTO RICO COMWLTH	8.00	7/1/35	4,567.7	1,236

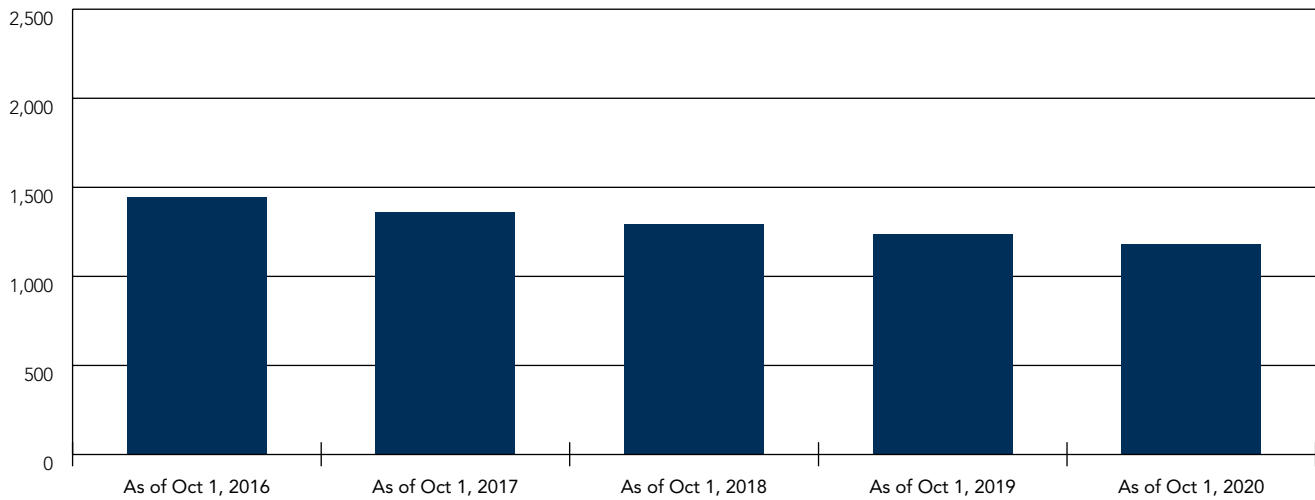
<sup>1</sup> Securities with two years or more in remaining maturity.<sup>2</sup> See page 1 for information on CUSIP identifiers.

## Part Four

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# Dealer Activity and Distribution of Municipal Trades, 2016–2020

### Number of MSRB Registered Dealers



	Number of Registered Dealers	% Change from Prior Period <sup>1</sup>
As of Oct 1, 2016	1,448	-6.0%
As of Oct 1, 2017	1,363	-5.9%
As of Oct 1, 2018	1,295	-5.0%
As of Oct 1, 2019	1,237	-4.5%
As of Oct 1, 2020	1,180	-4.6%

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

### DATA AVAILABLE FROM THE MSRB

## See the Latest Aggregate Data with the MSRB’s Quarterly Statistical Summaries

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

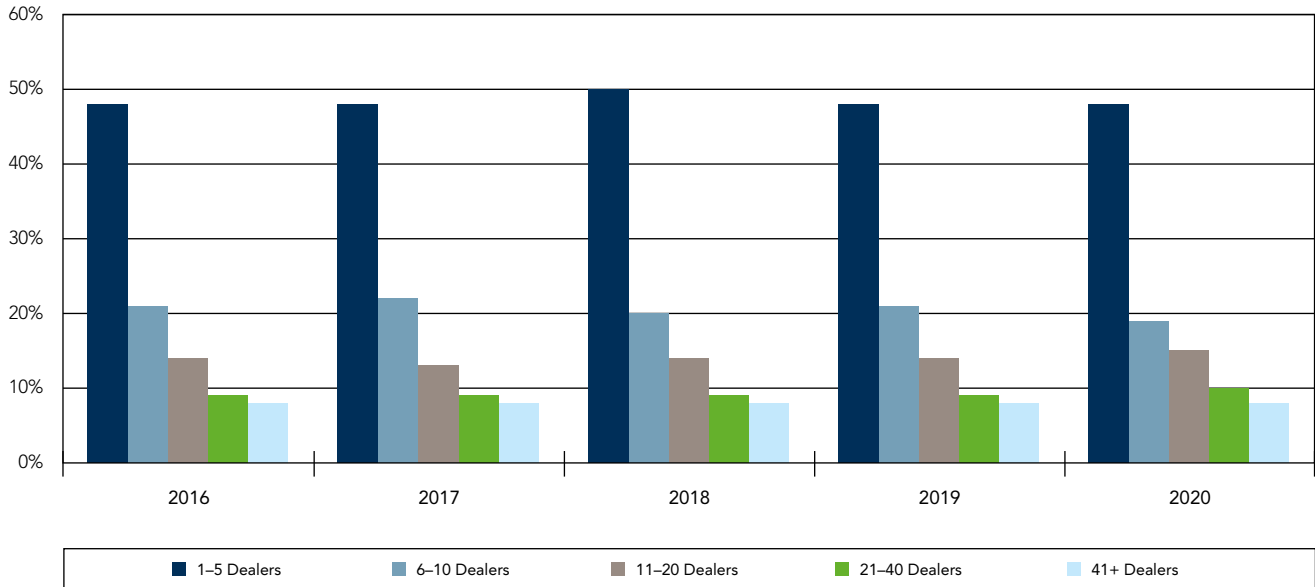
- Trading activity,
- The number of interest rate resets for variable rate demand obligations and auction rate securities, and
- Statistics about the continuing disclosure documents received through the MSRB’s EMMA® website.

[View the quarterly statistical summaries.](#)



### Distribution of Customer Trades by Number of Dealers

Par amount

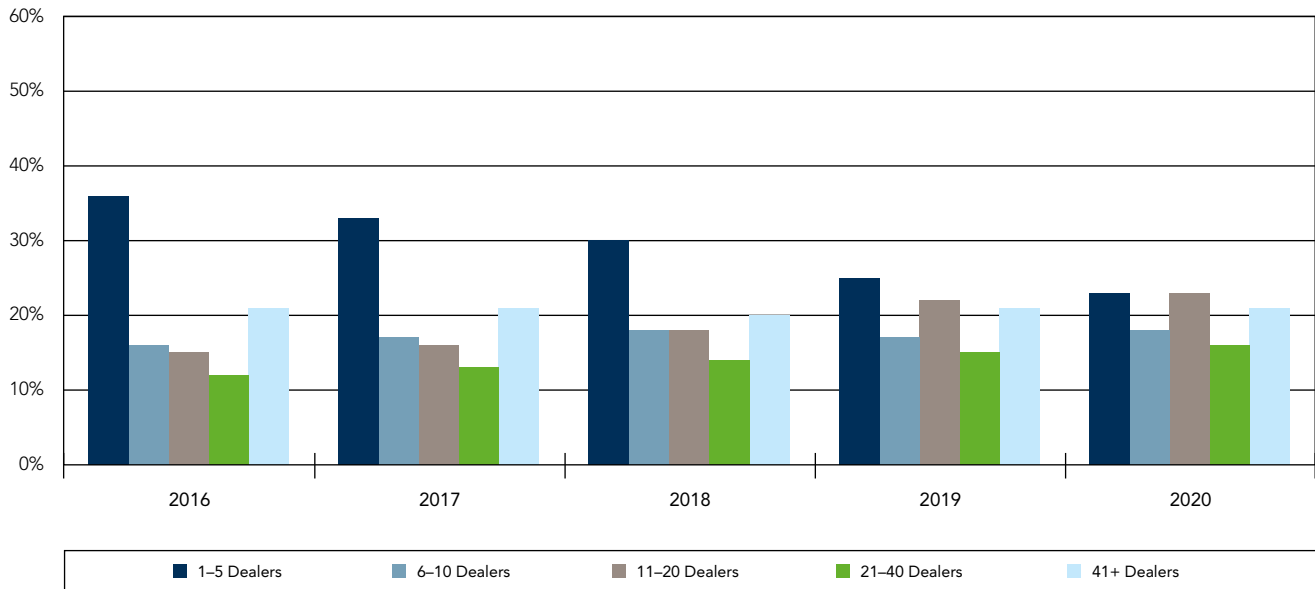


	2016	2017	2018	2019	2020
1-5 Dealers	48%	48%	50%	48%	48%
6-10 Dealers	21%	22%	20%	21%	19%
11-20 Dealers	14%	13%	14%	14%	15%
21-40 Dealers	9%	9%	9%	9%	10%
41+ Dealers	8%	8%	8%	8%	8%



### Distribution of Customer Trades by Number of Dealers

Number of trades



	2016	2017	2018	2019	2020
1-5 Dealers	36%	33%	30%	25%	23%
6-10 Dealers	16%	17%	18%	17%	18%
11-20 Dealers	15%	16%	18%	22%	23%
21-40 Dealers	12%	13%	14%	15%	16%
41+ Dealers	21%	21%	20%	21%	21%

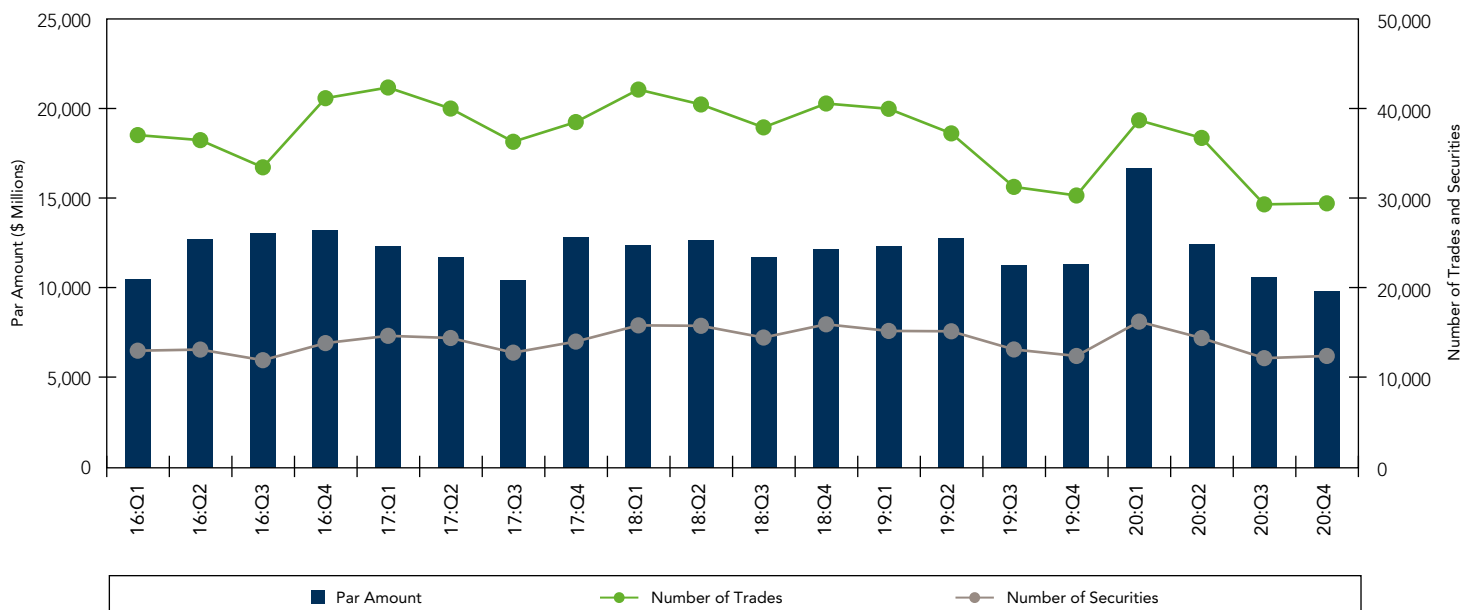
## Part Five

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# Overall Municipal Market Trading Activity, 2016–2020

### Average Daily Trading Volume, 2016–2020

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

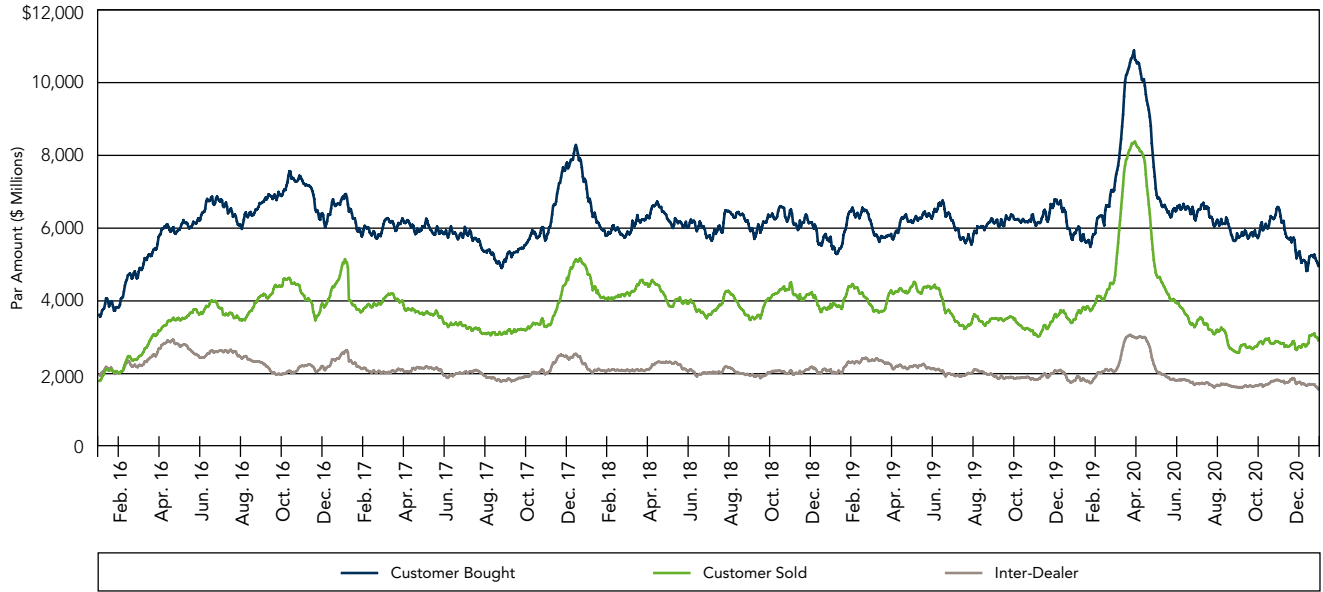


Quarter	Par Amount (\$ Millions)	Number of Trades	Number of Unique Securities
16:Q1	10,545.6	37,162	13,081
16:Q2	12,786.5	36,599	13,206
16:Q3	13,093.9	33,562	12,020
16:Q4	13,261.4	41,283	13,929
2016	12,440.9	37,135	13,055
17:Q1	12,363.8	42,478	14,743
17:Q2	11,748.8	40,125	14,499
17:Q3	10,492.5	36,417	12,862
17:Q4	12,895.1	38,616	14,099
2017	11,873.1	39,397	14,048
18:Q1	12,407.8	42,247	15,911
18:Q2	12,728.1	40,582	15,860
18:Q3	11,729.3	38,023	14,549
18:Q4	12,199.8	40,689	16,029
2018	12,266.7	40,372	15,588
19:Q1	12,396.0	40,096	15,288
19:Q2	12,813.6	37,351	15,248
19:Q3	11,295.8	31,377	13,218
19:Q4	11,371.3	30,415	12,491
2019	11,960.7	34,737	14,042
20:Q1	16,751.5	38,816	16,328
20:Q2	12,491.4	36,845	14,493
20:Q3	10,653.9	29,424	12,248
20:Q4	9,878.9	29,539	12,494
2020	12,409.7	33,603	13,869

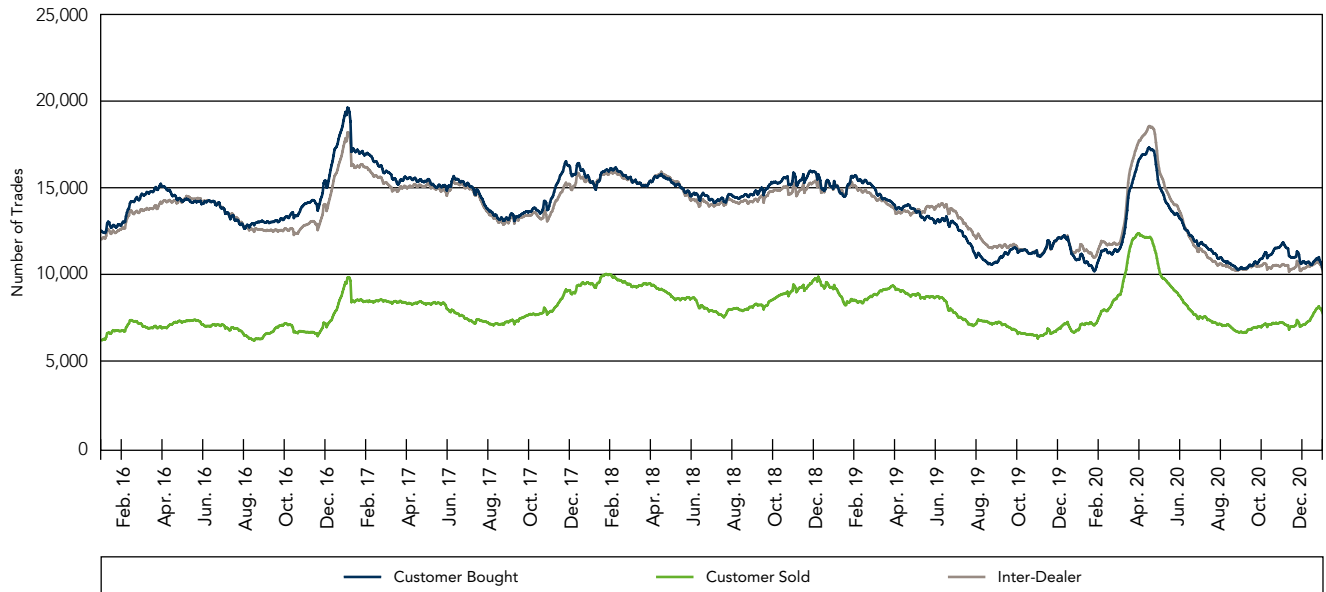
### Daily Trading Volume, 2016–2020

30-day trailing average by trade type

#### Par Amount



#### Number of Trades



## Trade Type and Size, 2016–2020

Average daily par amount in \$ millions

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>All Trades</b>									
<b>Total</b>	<b>12,440.9</b>	<b>11,873.1</b>	<b>12,266.7</b>	<b>11,960.7</b>	<b>12,409.7</b>	<b>16,751.5</b>	<b>12,491.4</b>	<b>10,653.9</b>	<b>9,878.9</b>
0–\$25,000	282.7	304.3	310.7	253.3	244.9	279.6	271.1	215.7	214.9
\$25,001–\$50,000	312.0	327.8	335.6	275.1	252.1	295.2	278.7	216.5	219.8
\$50,001–\$75,000	117.7	125.2	134.3	114.7	110.8	131.8	119.4	94.0	98.6
\$75,001–\$100,000	280.5	291.2	299.8	250.6	226.4	275.5	250.6	188.6	192.9
\$100,001–\$500,000	1,227.0	1,268.4	1,266.9	1,194.2	1,153.8	1,329.6	1,255.7	1,014.9	1,022.2
\$500,001–\$1,000,000	772.3	815.5	767.6	812.5	844.4	914.5	912.1	788.7	765.4
\$1,000,001–\$2,000,000	883.8	924.3	906.9	961.7	1,033.2	1,141.6	1,112.5	953.3	930.2
More than \$2,000,000	8,564.9	7,816.5	8,244.8	8,098.5	8,544.1	12,383.6	8,291.3	7,182.3	6,435.0
<b>Customer Bought</b>									
<b>Total</b>	<b>6,263.9</b>	<b>6,082.2</b>	<b>6,123.8</b>	<b>6,141.3</b>	<b>6,546.2</b>	<b>8,239.3</b>	<b>6,601.4</b>	<b>6,013.5</b>	<b>5,384.6</b>
0–\$25,000	114.2	119.5	118.2	93.2	86.1	95.5	97.5	76.3	75.8
\$25,001–\$50,000	126.6	131.8	131.5	105.2	89.7	103.7	99.2	77.5	79.0
\$50,001–\$75,000	46.2	48.9	51.6	43.7	39.4	46.0	41.8	34.0	35.9
\$75,001–\$100,000	113.5	117.0	118.2	96.0	80.7	95.2	87.9	68.6	71.6
\$100,001–\$500,000	492.1	511.7	509.1	482.9	484.3	508.6	517.9	456.7	455.3
\$500,001–\$1,000,000	334.2	363.0	334.9	363.9	414.8	403.4	451.3	414.4	390.2
\$1,000,001–\$2,000,000	413.8	446.1	425.0	471.4	536.2	539.4	579.8	525.7	500.5
More than \$2,000,000	4,623.3	4,344.3	4,435.3	4,484.9	4,815.2	6,447.7	4,726.1	4,360.3	3,776.2
<b>Customer Sold</b>									
<b>Total</b>	<b>3,758.3</b>	<b>3,685.5</b>	<b>4,060.9</b>	<b>3,750.4</b>	<b>3,931.2</b>	<b>6,005.4</b>	<b>3,993.6</b>	<b>2,964.7</b>	<b>2,827.1</b>
0–\$25,000	56.6	63.5	68.7	58.0	61.5	72.2	63.1	54.3	56.7
\$25,001–\$50,000	59.7	64.3	70.2	58.7	63.0	74.0	67.0	53.9	57.3
\$50,001–\$75,000	24.9	27.4	31.6	26.3	29.9	35.6	31.7	24.8	27.5
\$75,001–\$100,000	55.7	60.4	67.3	57.4	60.5	74.6	67.1	49.5	51.5
\$100,001–\$500,000	235.0	265.1	302.0	273.9	281.0	348.8	319.5	223.5	235.0
\$500,001–\$1,000,000	160.4	190.6	212.4	204.0	204.0	246.6	233.4	170.0	167.7
\$1,000,001–\$2,000,000	213.8	249.8	278.7	264.5	275.5	336.7	317.9	225.2	224.7
More than \$2,000,000	2,952.1	2,764.2	3,030.1	2,807.6	2,955.9	4,816.9	2,893.9	2,163.5	2,006.7
<b>Inter-Dealer</b>									
<b>Total</b>	<b>2,418.7</b>	<b>2,105.4</b>	<b>2,082.0</b>	<b>2,069.0</b>	<b>1,932.2</b>	<b>2,506.8</b>	<b>1,896.4</b>	<b>1,675.7</b>	<b>1,667.3</b>
0–\$25,000	111.9	121.2	123.8	102.0	97.3	111.9	110.6	85.0	82.5
\$25,001–\$50,000	125.7	131.6	133.8	111.3	99.4	117.5	112.6	85.0	83.5
\$50,001–\$75,000	46.6	49.0	51.2	44.7	41.5	50.2	45.9	35.1	35.1
\$75,001–\$100,000	111.3	113.8	114.4	97.2	85.2	105.8	95.6	70.6	69.9
\$100,001–\$500,000	499.9	491.6	455.8	437.4	388.5	472.2	418.3	334.7	331.9
\$500,001–\$1,000,000	277.8	261.9	220.3	244.5	225.6	264.6	227.4	204.3	207.4
\$1,000,001–\$2,000,000	256.1	228.4	203.2	225.8	221.6	265.6	214.9	202.4	204.9
More than \$2,000,000	989.5	708.0	779.5	806.0	773.0	1,119.1	671.3	658.6	652.1

## Trade Type and Size, 2016–2020

Average daily number of trades

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>All Trades Total</b>	<b>37,135</b>	<b>39,397</b>	<b>40,372</b>	<b>34,737</b>	<b>33,603</b>	<b>38,816</b>	<b>36,845</b>	<b>29,424</b>	<b>29,539</b>
0–\$25,000	17,739	19,148	19,594	16,412	16,161	18,305	17,818	14,352	14,261
\$25,001–\$50,000	7,329	7,728	7,945	6,533	6,029	7,044	6,656	5,189	5,268
\$50,001–\$75,000	1,763	1,876	2,014	1,723	1,668	1,982	1,798	1,417	1,486
\$75,001–\$100,000	2,881	2,993	3,085	2,584	2,341	2,844	2,589	1,952	1,998
\$100,001–\$500,000	4,911	5,080	5,175	4,802	4,611	5,364	5,030	3,998	4,083
\$500,001–\$1,000,000	964	1,020	969	1,029	1,051	1,141	1,135	981	952
\$1,000,001–\$2,000,000	582	610	600	639	679	747	731	626	614
More than \$2,000,000	965	942	992	1,016	1,063	1,390	1,089	910	875
<b>Customer Bought Total</b>	<b>15,064</b>	<b>15,722</b>	<b>15,673</b>	<b>13,206</b>	<b>12,462</b>	<b>13,812</b>	<b>13,767</b>	<b>11,175</b>	<b>11,158</b>
0–\$25,000	7,096	7,413	7,313	5,836	5,574	6,122	6,311	4,974	4,917
\$25,001–\$50,000	2,963	3,097	3,102	2,491	2,143	2,467	2,370	1,856	1,893
\$50,001–\$75,000	689	729	771	655	593	692	629	513	541
\$75,001–\$100,000	1,164	1,200	1,214	989	834	982	908	710	741
\$100,001–\$500,000	1,967	2,042	2,071	1,933	1,879	2,009	2,015	1,738	1,759
\$500,001–\$1,000,000	415	451	421	459	515	501	559	515	486
\$1,000,001–\$2,000,000	271	292	280	312	352	352	381	345	330
More than \$2,000,000	498	497	501	531	574	688	595	524	491
<b>Customer Sold Total</b>	<b>7,608</b>	<b>8,431</b>	<b>9,254</b>	<b>8,119</b>	<b>8,583</b>	<b>10,282</b>	<b>9,083</b>	<b>7,343</b>	<b>7,686</b>
0–\$25,000	3,659	4,095	4,382	3,866	4,064	4,735	4,144	3,628	3,770
\$25,001–\$50,000	1,409	1,528	1,678	1,405	1,513	1,778	1,606	1,298	1,378
\$50,001–\$75,000	372	409	472	394	448	533	476	373	414
\$75,001–\$100,000	573	621	693	591	625	769	693	511	534
\$100,001–\$500,000	955	1,068	1,230	1,099	1,154	1,430	1,300	917	981
\$500,001–\$1,000,000	196	235	263	254	251	306	288	209	205
\$1,000,001–\$2,000,000	139	163	182	174	180	219	208	147	147
More than \$2,000,000	305	311	353	336	348	513	368	259	256
<b>Inter-Dealer Total</b>	<b>14,463</b>	<b>15,244</b>	<b>15,445</b>	<b>13,412</b>	<b>12,557</b>	<b>14,721</b>	<b>13,995</b>	<b>10,907</b>	<b>10,695</b>
0–\$25,000	6,983	7,640	7,898	6,710	6,523	7,447	7,363	5,750	5,574
\$25,001–\$50,000	2,957	3,103	3,165	2,637	2,373	2,799	2,681	2,035	1,997
\$50,001–\$75,000	702	737	770	674	627	757	693	531	531
\$75,001–\$100,000	1,145	1,172	1,178	1,004	882	1,093	987	731	724
\$100,001–\$500,000	1,988	1,970	1,874	1,770	1,578	1,925	1,715	1,342	1,343
\$500,001–\$1,000,000	353	334	284	316	285	335	288	258	261
\$1,000,001–\$2,000,000	172	154	137	153	147	176	142	134	137
More than \$2,000,000	163	133	138	148	142	189	126	126	128

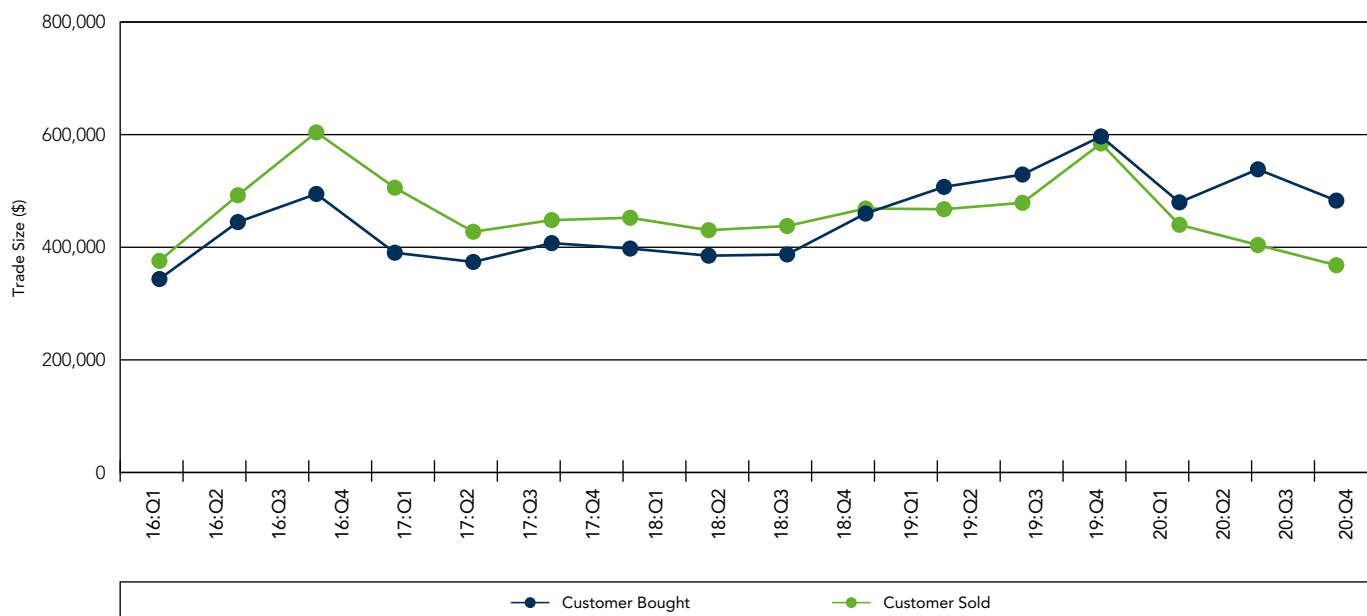
## Trade Type and Size, 2016–2020

Average daily number of unique securities

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>All Trades</b>									
<b>Total</b>	<b>13,055</b>	<b>14,048</b>	<b>15,588</b>	<b>14,042</b>	<b>13,869</b>	<b>16,328</b>	<b>14,493</b>	<b>12,248</b>	<b>12,494</b>
0–\$25,000	6,989	7,602	8,323	7,151	7,171	8,304	7,504	6,449	6,467
\$25,001–\$50,000	3,143	3,327	3,647	3,119	2,937	3,505	3,114	2,548	2,600
\$50,001–\$75,000	907	956	1,064	937	915	1,100	954	784	827
\$75,001–\$100,000	1,363	1,444	1,552	1,347	1,219	1,492	1,310	1,030	1,054
\$100,001–\$500,000	2,251	2,369	2,532	2,441	2,318	2,736	2,461	2,010	2,082
\$500,001–\$1,000,000	544	588	588	617	585	655	619	542	527
\$1,000,001–\$2,000,000	356	385	392	409	399	454	421	366	356
More than \$2,000,000	562	567	593	584	554	745	562	461	456
<b>Customer Bought</b>									
<b>Total</b>	<b>9,067</b>	<b>9,748</b>	<b>10,508</b>	<b>9,207</b>	<b>9,048</b>	<b>10,214</b>	<b>9,889</b>	<b>8,016</b>	<b>8,123</b>
0–\$25,000	4,832	5,275	5,588	4,636	4,539	5,051	5,025	4,083	4,019
\$25,001–\$50,000	2,204	2,350	2,494	2,076	1,859	2,152	2,045	1,616	1,634
\$50,001–\$75,000	606	643	690	597	559	656	592	483	509
\$75,001–\$100,000	934	979	1,021	859	740	874	802	631	659
\$100,001–\$500,000	1,494	1,534	1,595	1,526	1,493	1,644	1,604	1,333	1,396
\$500,001–\$1,000,000	337	356	349	373	396	405	427	380	372
\$1,000,001–\$2,000,000	225	237	238	257	277	290	302	262	256
More than \$2,000,000	385	375	387	389	408	510	435	345	344
<b>Customer Sold</b>									
<b>Total</b>	<b>6,557</b>	<b>7,352</b>	<b>8,114</b>	<b>7,056</b>	<b>7,672</b>	<b>9,066</b>	<b>8,076</b>	<b>6,626</b>	<b>6,969</b>
0–\$25,000	3,260	3,726	4,015	3,445	3,797	4,413	3,857	3,400	3,537
\$25,001–\$50,000	1,325	1,442	1,579	1,338	1,458	1,715	1,541	1,252	1,333
\$50,001–\$75,000	361	397	452	382	440	523	467	366	407
\$75,001–\$100,000	545	594	659	570	606	740	671	496	522
\$100,001–\$500,000	885	995	1,143	1,032	1,088	1,334	1,221	872	936
\$500,001–\$1,000,000	187	223	252	244	239	290	272	200	196
\$1,000,001–\$2,000,000	133	157	176	167	171	207	198	140	141
More than \$2,000,000	278	284	320	297	305	436	326	231	231
<b>Inter-Dealer</b>									
<b>Total</b>	<b>7,478</b>	<b>8,082</b>	<b>8,905</b>	<b>7,879</b>	<b>7,473</b>	<b>8,765</b>	<b>7,981</b>	<b>6,646</b>	<b>6,547</b>
0–\$25,000	4,123	4,562	5,022	4,317	4,214	4,839	4,540	3,808	3,693
\$25,001–\$50,000	1,772	1,887	2,047	1,729	1,562	1,854	1,699	1,362	1,345
\$50,001–\$75,000	462	491	535	469	435	528	464	373	376
\$75,001–\$100,000	692	724	763	659	577	717	632	486	480
\$100,001–\$500,000	1,127	1,155	1,166	1,113	991	1,196	1,065	855	856
\$500,001–\$1,000,000	223	217	192	208	188	217	193	171	172
\$1,000,001–\$2,000,000	112	104	97	104	100	119	97	92	93
More than \$2,000,000	106	91	100	102	96	129	89	83	83

### Average Daily Trade Size, 2016–2020

By customer trade



Quarter	Customer Bought (\$)	Customer Sold (\$)
16:Q1	343,387	375,567
16:Q2	444,454	492,143
16:Q3	494,375	603,730
16:Q4	390,052	505,511
<b>2016</b>	<b>415,827</b>	<b>493,960</b>
17:Q1	358,804	451,250
17:Q2	379,215	421,387
17:Q3	372,358	417,310
17:Q4	439,631	456,033
<b>2017</b>	<b>386,857</b>	<b>437,126</b>
18:Q1	373,632	427,266
18:Q2	407,117	447,947
18:Q3	397,458	452,122
18:Q4	384,782	430,054
<b>2018</b>	<b>390,724</b>	<b>438,807</b>
19:Q1	386,948	437,483
19:Q2	459,644	468,504
19:Q3	506,954	467,321
19:Q4	528,878	478,646
<b>2019</b>	<b>465,054</b>	<b>461,939</b>
20:Q1	596,512	584,055
20:Q2	479,497	439,682
20:Q3	538,134	403,755
20:Q4	482,574	367,821
<b>2020</b>	<b>525,276</b>	<b>458,012</b>



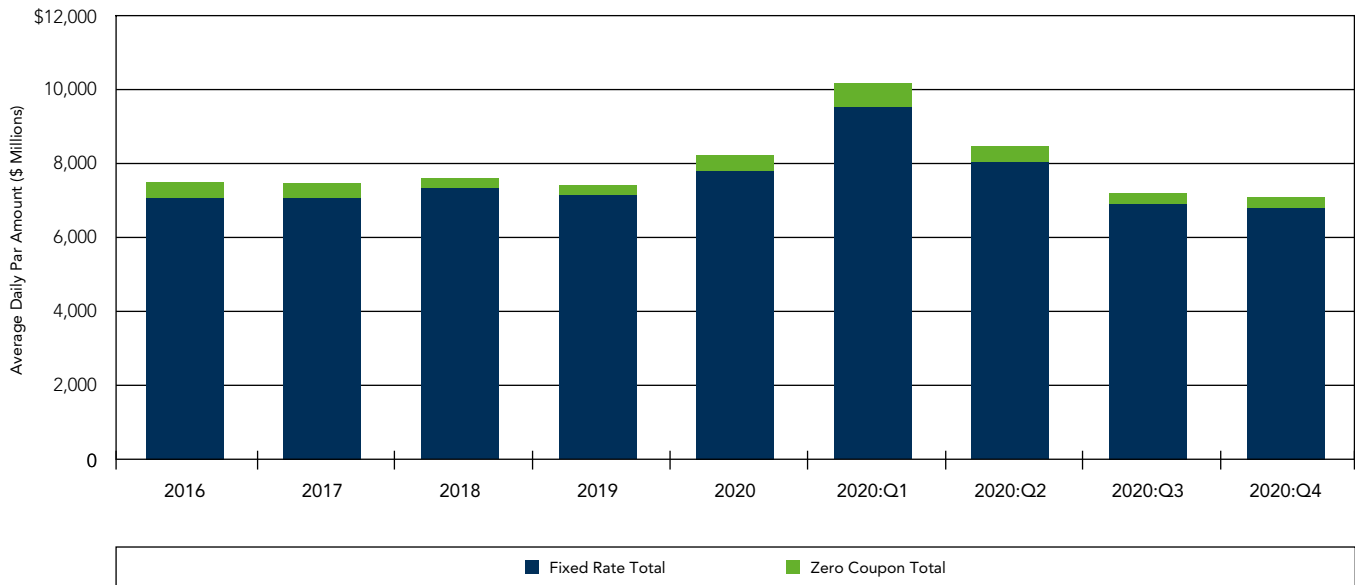
## Part Six

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# Municipal Fixed Rate Securities—Par Amount Traded and Number of Trades, 2016–2020

## Transaction Summary—Fixed Rate Securities, 2016–2020

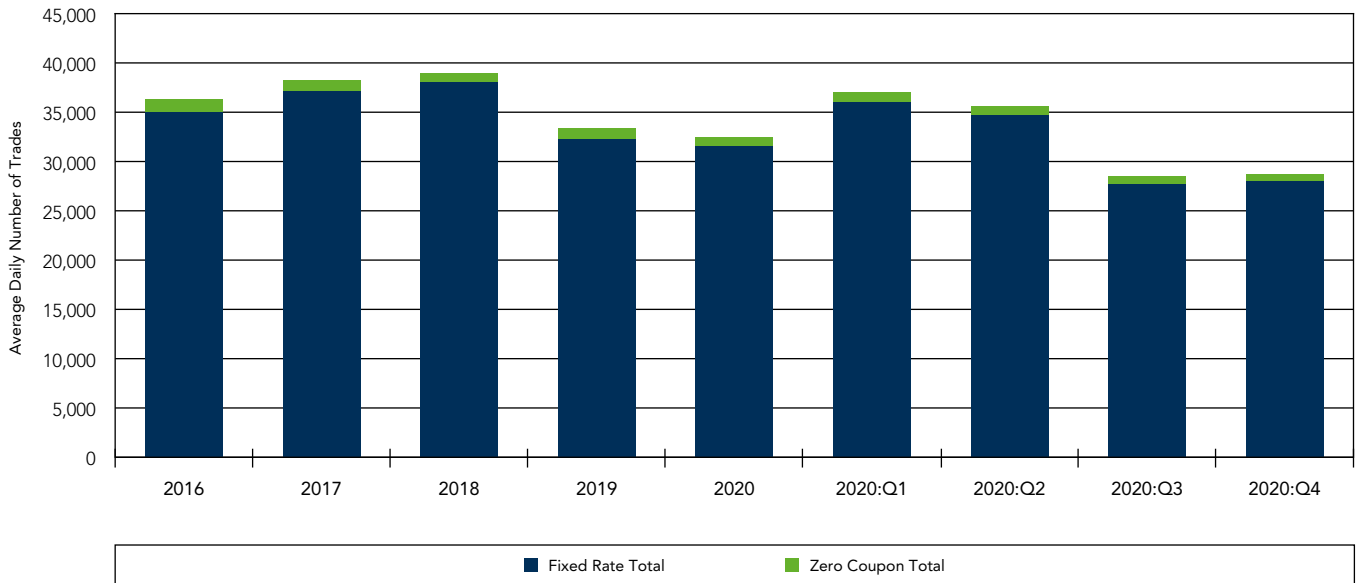
Average daily par amount in \$ millions



	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>7,072.8</b>	<b>7,064.2</b>	<b>7,318.6</b>	<b>7,134.8</b>	<b>7,793.5</b>	<b>9,508.9</b>	<b>8,024.9</b>	<b>6,900.2</b>	<b>6,797.3</b>
0–\$25,000	272.4	295.2	302.6	245.1	238.0	271.5	264.1	209.0	209.0
\$25,001–\$50,000	298.2	315.7	325.4	265.2	243.6	284.7	270.1	208.5	212.7
\$50,001–\$75,000	111.5	119.7	129.4	109.7	106.5	126.6	115.1	90.1	95.0
\$75,001–\$100,000	262.6	267.6	273.2	225.5	205.3	243.8	228.2	171.9	178.9
\$100,001–\$500,000	1,144.3	1,143.7	1,115.1	1,052.0	1,032.4	1,146.8	1,126.0	922.5	939.2
\$500,001–\$1,000,000	694.9	696.8	627.7	673.8	724.0	737.3	783.8	696.4	679.8
\$1,000,001–\$2,000,000	749.3	744.1	699.3	751.3	840.9	867.6	909.7	799.2	788.7
More than \$2,000,000	3,539.5	3,481.5	3,845.9	3,812.1	4,402.9	5,830.5	4,327.9	3,802.6	3,693.9
<b>Zero Coupon Total</b>	<b>425.9</b>	<b>391.1</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>655.9</b>	<b>456.9</b>	<b>285.3</b>	<b>290.2</b>
0–\$25,000	9.1	7.9	6.9	7.1	6.0	7.0	6.1	5.8	5.1
\$25,001–\$50,000	11.9	10.3	8.4	8.4	7.3	9.0	7.3	6.8	6.0
\$50,001–\$75,000	5.5	4.8	3.9	4.1	3.5	4.4	3.4	3.2	2.9
\$75,001–\$100,000	11.1	9.4	7.3	7.0	6.1	8.0	6.0	5.6	4.8
\$100,001–\$500,000	38.7	32.1	26.2	27.4	24.6	29.3	25.8	22.9	20.4
\$500,001–\$1,000,000	21.2	17.6	12.3	14.6	14.1	15.5	16.7	11.9	12.5
\$1,000,001–\$2,000,000	21.2	18.7	12.2	15.7	14.7	14.5	19.1	11.5	13.8
More than \$2,000,000	307.3	290.5	203.3	198.0	343.8	568.1	372.5	217.4	224.7

### Transaction Summary—Fixed Rate Securities, 2016–2020

Average daily number of trades



	2016	2017	2018	2019	2020
<b>Fixed Rate Total</b>	<b>34,971</b>	<b>37,102</b>	<b>38,002</b>	<b>32,286</b>	<b>31,538</b>
0–\$25,000	17,057	18,550	19,053	15,761	15,668
\$25,001–\$50,000	7,002	7,439	7,700	6,293	5,824
\$50,001–\$75,000	1,669	1,792	1,939	1,647	1,603
\$75,001–\$100,000	2,697	2,753	2,815	2,329	2,127
\$100,001–\$500,000	4,596	4,624	4,624	4,275	4,166
\$500,001–\$1,000,000	870	874	794	856	900
\$1,000,001–\$2,000,000	496	493	464	500	552
More than \$2,000,000	584	577	612	623	698

	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>35,976</b>	<b>34,717</b>	<b>27,673</b>	<b>27,975</b>
0–\$25,000	17,735	17,318	13,877	13,832
\$25,001–\$50,000	6,792	6,450	4,998	5,098
\$50,001–\$75,000	1,902	1,733	1,357	1,430
\$75,001–\$100,000	2,523	2,362	1,782	1,856
\$100,001–\$500,000	4,693	4,557	3,658	3,780
\$500,001–\$1,000,000	919	974	866	845
\$1,000,001–\$2,000,000	566	596	524	521
More than \$2,000,000	845	728	611	613

	2016	2017	2018	2019	2020
<b>Zero Coupon Total</b>	<b>1,323</b>	<b>1,134</b>	<b>957</b>	<b>1,099</b>	<b>884</b>
0–\$25,000	614	525	465	590	441
\$25,001–\$50,000	286	248	204	205	176
\$50,001–\$75,000	83	72	60	63	53
\$75,001–\$100,000	115	98	75	73	64
\$100,001–\$500,000	163	136	113	120	103
\$500,001–\$1,000,000	27	22	16	19	18
\$1,000,001–\$2,000,000	14	12	8	11	10
More than \$2,000,000	22	21	16	17	20

	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Zero Coupon Total</b>	<b>1,063</b>	<b>903</b>	<b>835</b>	<b>743</b>
0–\$25,000	511	447	427	379
\$25,001–\$50,000	218	176	167	146
\$50,001–\$75,000	67	53	50	44
\$75,001–\$100,000	83	62	59	51
\$100,001–\$500,000	127	107	96	84
\$500,001–\$1,000,000	20	21	15	16
\$1,000,001–\$2,000,000	9	13	8	9
More than \$2,000,000	28	25	14	14

## Source of Repayment and Trade Size, 2016–2020

Average daily par amount in \$ millions

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>7,072.7</b>	<b>7,064.2</b>	<b>7,315.7</b>	<b>7,133.8</b>	<b>7,793.0</b>	<b>9,507.8</b>	<b>8,024.0</b>	<b>6,900.2</b>	<b>6,797.3</b>
General Obligation	2,598.8	2,654.8	2,619.7	2,627.2	2,707.9	3,290.0	2,721.9	2,286.0	2,552.3
Revenue	4,221.5	4,205.2	4,465.6	4,294.0	4,860.6	5,915.0	5,084.0	4,426.0	4,053.8
Double Barrel	252.5	204.1	230.5	212.5	224.5	302.8	218.1	188.1	191.2
<b>Zero Coupon Total</b>	<b>425.9</b>	<b>391.1</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>655.9</b>	<b>456.9</b>	<b>285.3</b>	<b>290.2</b>
General Obligation	143.2	114.1	80.9	76.7	75.5	90.5	94.2	58.3	59.7
Revenue	277.2	274.9	196.8	202.3	342.5	563.7	360.7	225.5	227.5
Double Barrel	5.5	2.1	2.9	3.2	2.1	1.7	2.0	1.5	3.0

Average daily number of trades

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>34,971</b>	<b>37,102</b>	<b>38,002</b>	<b>32,285</b>	<b>31,538</b>	<b>35,976</b>	<b>34,717</b>	<b>27,673</b>	<b>27,975</b>
General Obligation	12,495	13,790	14,262	12,470	11,395	13,738	11,946	9,811	10,168
Revenue	21,249	22,042	22,470	18,767	19,109	20,971	21,721	16,985	16,858
Double Barrel	1,227	1,271	1,270	1,048	1,034	1,267	1,050	877	950
<b>Zero Coupon Total</b>	<b>1,323</b>	<b>1,134</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>1,063</b>	<b>903</b>	<b>835</b>	<b>743</b>
General Obligation	675	606	502	487	446	538	451	428	369
Revenue	607	510	431	592	423	505	435	393	360
Double Barrel	41	18	24	20	16	20	16	15	13

## Tax Status and Trade Size, 2016–2020

Average daily par amount in \$ millions

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>7,072.7</b>	<b>7,064.2</b>	<b>7,317.0</b>	<b>7,133.9</b>	<b>7,793.4</b>	<b>9,508.5</b>	<b>8,024.9</b>	<b>6,900.1</b>	<b>6,797.3</b>
Tax Exempt	6,181.5	6,113.2	6,379.2	5,898.2	6,010.3	7,754.1	6,480.3	4,916.9	4,951.6
Taxable	736.2	789.8	676.4	979.5	1,554.4	1,467.1	1,288.7	1,770.7	1,684.4
AMT	155.0	161.2	261.5	256.3	228.7	287.4	255.9	212.5	161.3
<b>Zero Coupon Total</b>	<b>425.9</b>	<b>391.1</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>655.8</b>	<b>456.9</b>	<b>285.3</b>	<b>290.2</b>
Tax Exempt	401.6	359.5	265.5	262.6	396.8	637.6	437.5	267.9	252.4
Taxable	24.3	31.6	15.0	19.7	23.1	18.3	19.4	16.8	37.7
AMT	0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	0.7	0.1

Average daily number of trades

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>34,971</b>	<b>37,102</b>	<b>38,002</b>	<b>32,285</b>	<b>31,538</b>	<b>35,976</b>	<b>34,717</b>	<b>27,673</b>	<b>27,975</b>
Tax Exempt	32,184	34,260	35,324	29,538	28,535	32,957	31,781	24,724	24,868.5
Taxable	2,322	2,389	2,214	2,337	2,563	2,550	2,432	2,565	2,704.0
AMT	465	453	465	410	440	469	505	385	402.9
<b>Zero Coupon Total</b>	<b>1,323</b>	<b>1,134</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>1,063</b>	<b>903</b>	<b>835</b>	<b>742</b>
Tax Exempt	1,187	1,014	862	1,018	800	974	816	753	662.5
Taxable	136	120	95	81	84	89	86	81	80.0
AMT	<1	<1	<1	<1	<1	<1	<1	<1	<1

## Sector—Fixed Rate Securities, 2016–2020

Average daily par amount in \$ millions

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>7,072.8</b>	<b>7,064.2</b>	<b>7,318.6</b>	<b>7,134.8</b>	<b>7,793.5</b>	<b>9,508.9</b>	<b>8,024.9</b>	<b>6,900.2</b>	<b>6,797.3</b>
Education	1,521.6	1,561.8	1,475.3	1,548.3	1,683.8	1,967.5	1,814.2	1,540.9	1,423.6
Health	529.9	527.5	490.6	459.1	511.5	711.4	566.6	379.0	396.3
Housing	107.6	118.1	134.1	185.3	190.0	184.7	189.1	191.6	194.4
Tax-Revenue	751.4	808.5	921.5	835.7	908.7	1,172.7	824.7	815.1	829.4
Transportation	667.1	703.5	779.7	831.5	875.6	1,159.2	926.2	772.1	654.6
Utility	924.4	817.0	874.1	828.8	911.2	1,048.7	993.6	771.1	836.9
Various Purpose	1,137.3	1,131.0	1,132.5	1,157.0	1,305.1	1,623.7	1,301.1	1,054.1	1,251.4
Other Sectors	1,433.5	1,396.8	1,510.9	1,289.1	1,407.5	1,641.0	1,409.4	1,376.3	1,210.7
<b>Zero Coupon Total</b>	<b>425.9</b>	<b>391.1</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>655.9</b>	<b>456.9</b>	<b>285.3</b>	<b>290.2</b>
Education	136.4	106.7	76.2	72.1	74.3	86.3	89.1	66.7	55.6
Health	9.1	5.5	2.8	5.3	4.5	7.7	4.2	2.1	4.1
Housing	1.0	0.2	0.4	0.1	0.5	0.9	1.1	0.1	<0.1
Tax-Revenue	105.9	87.5	75.9	102.8	200.0	348.2	255.0	96.7	105.6
Transportation	35.8	32.1	28.3	28.0	19.9	21.3	24.8	13.8	19.7
Utility	5.3	3.9	3.2	3.6	2.6	3.3	3.5	2.1	1.7
Various Purpose	11.0	11.4	7.5	8.3	3.7	5.2	3.6	3.0	3.0
Other Sectors	121.4	143.7	86.1	62.1	114.6	183.0	75.6	100.8	100.5

Average daily number of trades

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>34,971</b>	<b>37,102</b>	<b>38,002</b>	<b>32,286</b>	<b>31,538</b>	<b>35,976</b>	<b>34,717</b>	<b>27,673</b>	<b>27,975</b>
Education	8,755	9,448	9,531	8,381	7,974	9,330	8,721	6,985	6,914
Health	2,881	2,972	2,742	2,251	2,242	2,423	2,648	1,913	1,993
Housing	681	713	804	811	717	758	752	684	675
Tax-Revenue	3,378	3,808	3,915	3,301	5,812	6,823	6,265	5,040	5,159
Transportation	2,755	2,935	3,145	2,643	3,294	3,643	3,758	2,901	2,892
Utility	4,838	5,003	5,247	4,274	3,156	3,236	3,748	2,935	2,718
Various Purpose	4,346	4,736	4,972	4,271	4,110	4,833	4,307	3,602	3,722
Other Sectors	7,336	7,486	7,646	6,353	4,235	4,931	4,517	3,614	3,903
<b>Zero Coupon Total</b>	<b>1,323</b>	<b>1,134</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>1,063</b>	<b>903</b>	<b>835</b>	<b>743</b>
Education	630	546	459	453	416	502	420	400	345
Health	32	30	27	23	20	23	20	18	19
Housing	5	2	2	1	1	1	1	1	1
Tax-Revenue	181	157	135	317	86	104	88	84	70
Transportation	149	129	112	109	161	187	166	149	143
Utility	81	67	59	56	109	132	110	105	91
Various Purpose	100	80	63	52	48	61	49	43	41
Other Sectors	146	124	100	88	43	53	49	35	34

## Remaining Maturity—Fixed Rate Securities, 2016–2020

Average daily par amount in \$ millions

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>7,072.8</b>	<b>7,064.2</b>	<b>7,318.6</b>	<b>7,134.8</b>	<b>7,793.5</b>	<b>9,508.9</b>	<b>8,024.9</b>	<b>6,900.2</b>	<b>6,797.3</b>
0–9 Months	363.0	298.4	338.5	317.4	354.3	539.8	362.7	227.7	292.8
>9 Months–2 Years	409.3	459.4	547.7	502.2	491.9	472.9	545.0	607.8	342.1
>2 Years–5 Years	693.3	753.6	801.7	754.0	835.3	886.1	820.1	693.0	943.3
>5 Years–10 Years	1,299.9	1,308.8	1,401.8	1,347.4	1,383.5	1,531.0	1,449.5	1,245.8	1,313.5
>10 Years–15 Years	1,265.6	1,208.3	1,212.9	1,141.1	1,302.7	1,495.6	1,322.0	1,203.5	1,196.0
>15 Years–20 Years	1,172.4	1,141.2	1,028.3	1,025.8	1,152.3	1,351.1	1,176.9	1,073.3	1,014.5
>20 Years–30 Years	1,515.2	1,570.2	1,676.0	1,653.1	1,816.5	2,521.2	1,883.2	1,496.0	1,388.6
More than 30 Years	353.3	321.1	304.0	388.6	453.4	703.5	465.0	351.4	301.7
Unavailable	0.8	3.3	7.7	5.3	3.7	7.8	0.5	1.7	4.8
<b>Zero Coupon Total</b>	<b>425.9</b>	<b>391.1</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>655.9</b>	<b>456.9</b>	<b>285.3</b>	<b>290.2</b>
0–9 Months	4.7	4.2	3.8	5.0	5.2	7.8	5.4	2.2	5.8
>9 Months–2 Years	6.4	5.3	5.6	4.4	5.7	4.6	6.2	4.9	7.1
>2 Years–5 Years	14.6	14.9	13.3	12.6	15.7	18.6	20.5	11.8	12.1
>5 Years–10 Years	39.2	31.0	25.3	30.2	23.2	22.3	27.9	18.2	24.4
>10 Years–15 Years	59.6	42.1	26.0	34.6	27.1	29.0	28.7	25.1	25.5
>15 Years–20 Years	63.1	40.0	35.7	18.0	22.3	21.1	28.3	20.6	19.1
>20 Years–30 Years	90.1	92.8	88.9	93.5	132.3	218.3	175.9	73.6	64.8
More than 30 Years	148.2	160.7	81.8	80.8	188.6	333.9	164.1	129.0	131.4
Unavailable	<0.1	0.1	0.1	3.2	0.1	0.2	<0.1	0.1	0.1

## Average daily number of trades

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Fixed Rate Total</b>	<b>34,971</b>	<b>37,102</b>	<b>38,002</b>	<b>32,286</b>	<b>31,538</b>	<b>35,976</b>	<b>34,717</b>	<b>27,673</b>	<b>27,975</b>
0–9 Months	1,025	1,167	1,507	1,526	1,608	2,248	1,621	1,062	1,521
>9 Months–2 Years	1,768	2,091	2,633	2,271	2,490	2,893	2,698	2,120	2,265
>2 Years–5 Years	4,388	5,000	5,736	4,854	5,263	5,910	6,092	4,442	4,642
>5 Years–10 Years	7,172	8,105	9,083	7,532	7,649	8,608	8,527	6,686	6,818
>10 Years–15 Years	6,435	6,799	6,864	5,707	5,521	6,140	6,099	4,998	4,873
>15 Years–20 Years	6,193	6,309	5,325	4,380	3,926	4,402	4,219	3,713	3,388
>20 Years–30 Years	7,149	6,849	6,183	5,254	4,479	5,120	4,823	4,111	3,889
More than 30 Years	837	768	648	737	587	630	632	531	559
Unavailable	5	14	24	25	16	25	7	11	21
<b>Zero Coupon Total</b>	<b>1,323</b>	<b>1,134</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>1,063</b>	<b>902</b>	<b>835</b>	<b>743</b>
0–9 Months	41	39	43	42	40	55	44	27	33
>9 Months–2 Years	82	74	80	62	75	86	75	71	70
>2 Years–5 Years	205	187	179	162	171	200	181	155	150
>5 Years–10 Years	322	272	234	278	232	268	236	231	194
>10 Years–15 Years	273	229	178	238	154	186	150	153	127
>15 Years–20 Years	182	160	117	102	92	111	97	85	74
>20 Years–30 Years	184	146	107	148	89	115	90	85	68
More than 30 Years	34	27	18	64	30	40	28	27	26
Unavailable	<1	<1	1	2	1	2	<1	1	1

## Part Seven

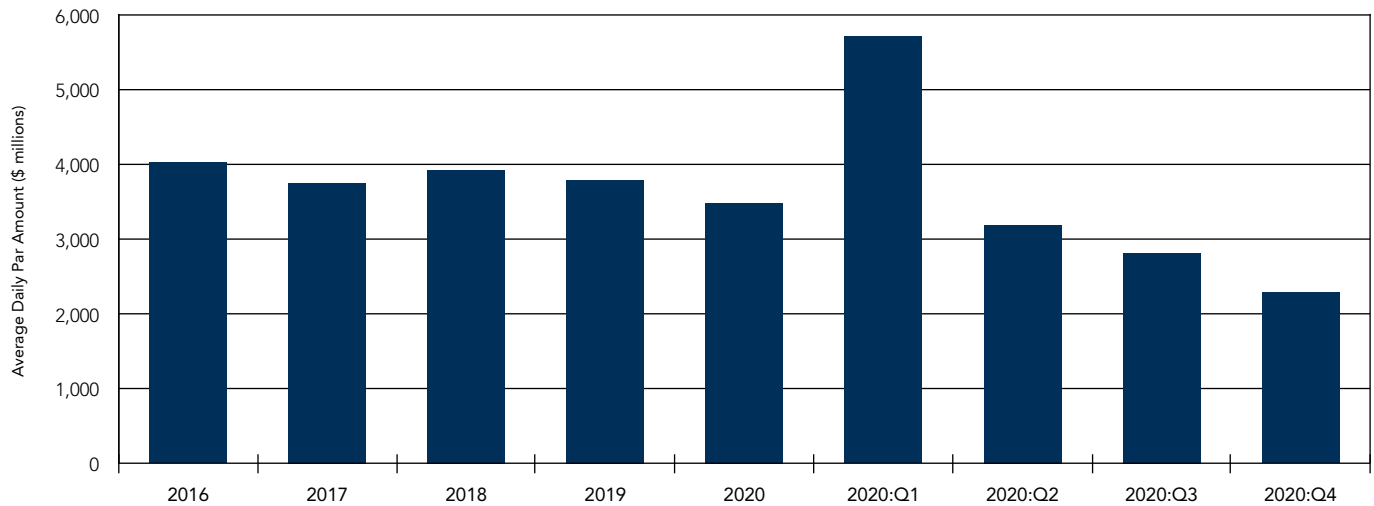
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# Municipal Variable Rate Securities—Par Amount Traded and Number of Trades, 2016–2020



## Transaction Summary—Variable Rate Securities, 2016–2020

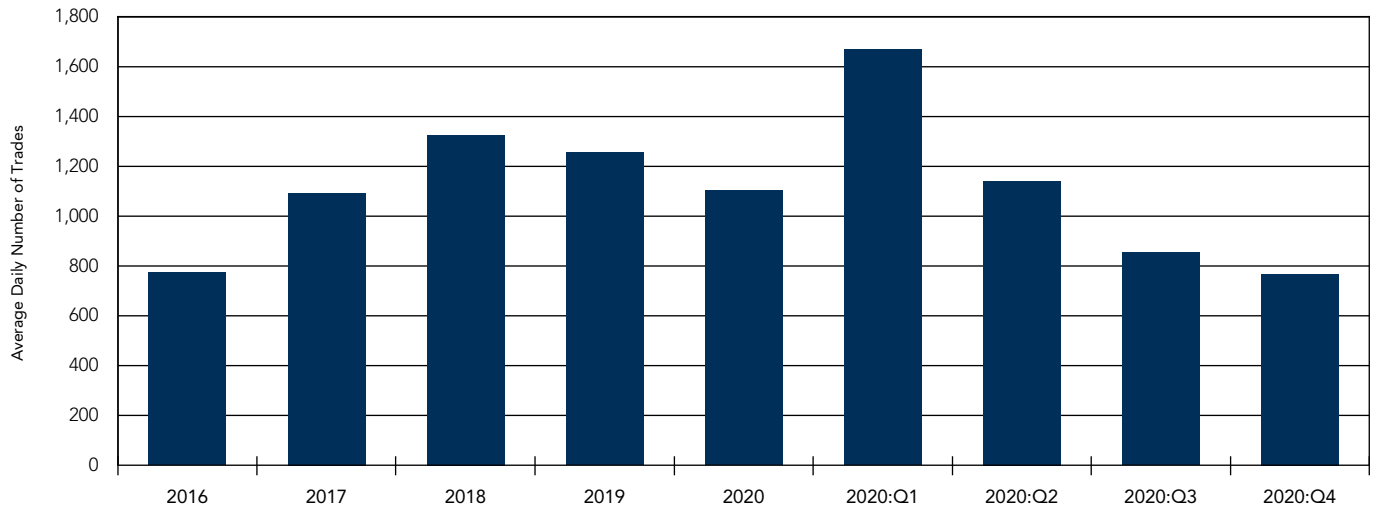
Average daily par amount in \$ millions



	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Total</b>	<b>4,027.4</b>	<b>3,748.1</b>	<b>3,926.2</b>	<b>3,791.2</b>	<b>3,482.3</b>	<b>5,708.6</b>	<b>3,191.0</b>	<b>2,812.5</b>	<b>2,282.0</b>
0–\$25,000	1.1	1.2	1.2	1.0	0.9	0.9	0.9	0.9	0.9
\$25,001–\$50,000	1.8	1.8	1.7	1.5	1.2	1.4	1.3	1.1	1.0
\$50,001–\$75,000	0.7	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.8
\$75,001–\$100,000	6.6	13.9	18.8	17.5	14.6	22.9	16.0	10.8	9.1
\$100,001–\$500,000	42.6	89.7	121.1	109.5	93.5	147.5	100.3	67.3	60.6
\$500,001–\$1,000,000	54.1	98.1	121.8	116.3	101.2	154.1	106.2	76.8	69.3
\$1,000,001–\$2,000,000	108.6	156.1	185.9	180.5	167.3	245.6	172.3	134.6	119.4
More than \$2,000,000	3,811.8	3,386.7	3,474.9	3,364.0	3,102.8	5,135.3	2,793.2	2,520.4	2,021.0

### Transaction Summary—Variable Rate Securities, 2016–2020

Average daily number of trades



	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Variable Rate Total</b>	<b>775</b>	<b>1,094</b>	<b>1,326</b>	<b>1,255</b>	<b>1,103</b>	<b>1,669</b>	<b>1,141</b>	<b>855</b>	<b>768</b>
0–\$25,000	66	68	72	58	51	55	51	47	49
\$25,001–\$50,000	41	40	39	33	28	32	30	25	24
\$50,001–\$75,000	10	11	13	12	11	12	11	10	11
\$75,001–\$100,000	67	139	188	176	147	230	160	109	91
\$100,001–\$500,000	146	309	421	386	330	523	354	237	212
\$500,001–\$1,000,000	65	121	151	145	127	193	134	96	87
\$1,000,001–\$2,000,000	69	101	121	119	111	162	115	89	79
More than \$2,000,000	311	305	321	326	300	461	286	243	213

Variable Rate Demand Obligations<sup>1</sup> Trade Type and Size, 2016–2020

Average daily par amount in \$ millions

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Total</b>	<b>3,654.3</b>	<b>3,316.8</b>	<b>3,599.7</b>	<b>3,469.6</b>	<b>3,208.6</b>	<b>5,393.0</b>	<b>2,863.6</b>	<b>2,579.2</b>	<b>2,061.5</b>
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	11.0	16.3	15.6	13.2	21.2	14.7	9.5	7.6
\$100,001–\$500,000	28.2	75.1	108.2	97.3	82.9	136.0	88.8	58.3	50.0
\$500,001–\$1,000,000	42.3	86.5	112.1	105.8	91.6	144.3	96.2	66.8	60.9
\$1,000,001–\$2,000,000	92.4	141.0	173.3	165.1	153.0	232.0	154.0	119.1	109.3
More than \$2,000,000	3,487.7	3,003.2	3,189.8	3,085.7	2,867.9	4,859.3	2,509.7	2,325.4	1,833.7
<b>Customer Bought Total</b>	<b>1,715.7</b>	<b>1,646.8</b>	<b>1,805.3</b>	<b>1,717.2</b>	<b>1,567.1</b>	<b>2,598.1</b>	<b>1,415.8</b>	<b>1,265.9</b>	<b>1,018.3</b>
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	1.6	4.5	6.2	4.9	2.9	5.2	3.2	1.8	1.8
\$100,001–\$500,000	14.5	36.3	49.6	38.8	26.2	43.0	27.2	18.0	17.2
\$500,001–\$1,000,000	21.7	42.7	53.5	47.5	37.2	54.1	40.3	27.1	27.9
\$1,000,001–\$2,000,000	46.6	72.3	86.9	79.8	72.5	102.9	74.5	58.3	55.4
More than \$2,000,000	1,631.1	1,490.9	1,609.1	1,546.2	1,428.2	2,392.9	1,270.6	1,160.8	916.0
<b>Customer Sold Total</b>	<b>1,681.2</b>	<b>1,611.9</b>	<b>1,729.7</b>	<b>1,671.6</b>	<b>1,530.0</b>	<b>2,582.3</b>	<b>1,351.9</b>	<b>1,245.6</b>	<b>970.2</b>
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	1.5	5.4	8.4	8.2	7.5	11.1	8.7	6.0	4.6
\$100,001–\$500,000	11.0	32.1	49.1	46.8	43.5	66.9	49.1	32.5	26.1
\$500,001–\$1,000,000	17.6	37.9	51.2	50.0	44.6	69.8	47.4	34.1	27.9
\$1,000,001–\$2,000,000	39.4	62.4	77.9	77.0	70.2	109.3	71.3	54.1	47.4
More than \$2,000,000	1,611.6	1,474.1	1,543.0	1,489.5	1,364.1	2,325.1	1,175.3	1,118.9	864.2
<b>Inter-Dealer Total</b>	<b>257.4</b>	<b>58.2</b>	<b>64.8</b>	<b>80.9</b>	<b>111.6</b>	<b>212.5</b>	<b>95.9</b>	<b>67.6</b>	<b>73.1</b>
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	0.4	1.1	1.8	2.4	2.7	5.0	2.8	1.7	1.2
\$100,001–\$500,000	2.7	6.6	9.5	11.8	13.2	26.0	12.5	7.9	6.7
\$500,001–\$1,000,000	3.0	5.9	7.3	8.4	9.9	20.4	8.6	5.7	5.1
\$1,000,001–\$2,000,000	6.4	6.4	8.5	8.2	10.3	19.8	8.3	6.7	6.5
More than \$2,000,000	244.9	38.2	37.7	50.1	75.6	141.2	63.8	45.6	53.5

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

Variable Rate Demand Obligations<sup>1</sup> Trade Type and Size, 2016–2020

Average daily number of trades

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Total</b>	<b>526</b>	<b>841</b>	<b>1,088</b>	<b>1,037</b>	<b>917</b>	<b>1,466</b>	<b>942</b>	<b>682</b>	<b>593</b>
0–\$25,000	4	3	2	1	3	4	4	2	1
\$25,001–\$50,000	1	1	1	1	2	3	2	1	1
\$50,001–\$75,000	1	<1	1	<1	1	2	1	1	1
\$75,001–\$100,000	35	110	163	156	132	212	147	95	76
\$100,001–\$500,000	92	253	371	338	288	477	310	202	171
\$500,001–\$1,000,000	51	106	139	132	115	181	122	84	76
\$1,000,001–\$2,000,000	59	91	113	109	102	154	103	79	73
More than \$2,000,000	283	276	297	299	274	433	254	219	194
<b>Customer Bought Total</b>	<b>256</b>	<b>406</b>	<b>504</b>	<b>443</b>	<b>349</b>	<b>543</b>	<b>355</b>	<b>259</b>	<b>245</b>
0–\$25,000	2	1	1	<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	16	45	62	49	29	52	32	18	18
\$100,001–\$500,000	46	120	167	132	86	145	90	57	56
\$500,001–\$1,000,000	26	52	66	59	47	68	51	34	35
\$1,000,001–\$2,000,000	30	47	57	53	48	68	50	39	37
More than \$2,000,000	135	139	150	150	136	208	130	110	100
<b>Customer Sold Total</b>	<b>229</b>	<b>384</b>	<b>511</b>	<b>503</b>	<b>462</b>	<b>718</b>	<b>486</b>	<b>359</b>	<b>294</b>
0–\$25,000	2	1	1	1	1	2	1	1	1
\$25,001–\$50,000	1	1	1	1	1	2	1	1	<1
\$50,001–\$75,000	<1	<1	<1	<1	1	1	1	1	<1
\$75,001–\$100,000	15	54	84	83	76	111	87	60	46
\$100,001–\$500,000	37	109	170	163	153	236	173	115	91
\$500,001–\$1,000,000	21	47	64	63	56	88	60	43	35
\$1,000,001–\$2,000,000	25	40	51	51	47	72	48	36	31
More than \$2,000,000	128	132	141	143	128	207	116	103	89
<b>Inter-Dealer Total</b>	<b>41</b>	<b>51</b>	<b>73</b>	<b>91</b>	<b>106</b>	<b>205</b>	<b>101</b>	<b>65</b>	<b>55</b>
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	4	11	18	24	27	50	28	17	12
\$100,001–\$500,000	9	23	34	44	49	97	47	30	25
\$500,001–\$1,000,000	4	7	9	11	12	26	11	7	7
\$1,000,001–\$2,000,000	4	4	6	6	7	13	5	4	4
More than \$2,000,000	20	5	6	7	9	18	8	6	6

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

Auction Rate Securities<sup>1</sup> Trade Type and Size, 2016–2020

Average daily par amount in \$ millions

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Total</b>	<b>21.5</b>	<b>22.5</b>	<b>27.6</b>	<b>20.4</b>	<b>21.9</b>	<b>32.8</b>	<b>32.7</b>	<b>13.5</b>	<b>9.1</b>
0–\$25,000	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.3	0.3
\$25,001–\$50,000	0.2	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2
\$50,001–\$75,000	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2
\$75,001–\$100,000	0.8	0.8	0.8	0.5	0.4	0.7	0.3	0.3	0.3
\$100,001–\$500,000	3.7	4.4	4.8	4.8	3.3	5.2	3.4	2.3	2.3
\$500,001–\$1,000,000	3.3	3.1	3.1	2.8	2.6	4.0	2.4	2.0	1.9
\$1,000,001–\$2,000,000	3.8	2.9	3.0	2.8	2.6	3.5	4.1	1.8	1.1
More than \$2,000,000	9.5	10.6	15.1	8.8	12.4	18.6	21.9	6.5	2.8
<b>Customer Bought Total</b>	<b>8.1</b>	<b>8.9</b>	<b>10.1</b>	<b>7.2</b>	<b>7.1</b>	<b>6.9</b>	<b>13.7</b>	<b>5.3</b>	<b>2.8</b>
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	0.0	0.0	0.1	0.1
\$75,001–\$100,000	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
\$100,001–\$500,000	1.4	1.7	1.5	1.5	1.1	1.4	1.3	0.8	0.7
\$500,001–\$1,000,000	1.2	1.1	1.1	1.0	0.8	0.9	1.0	0.7	0.7
\$1,000,001–\$2,000,000	1.3	1.0	1.0	0.9	1.0	0.8	1.9	0.8	0.3
More than \$2,000,000	4.0	4.7	5.9	3.3	4.0	3.4	9.2	2.7	0.7
<b>Customer Sold Total</b>	<b>6.9</b>	<b>7.3</b>	<b>9.4</b>	<b>6.5</b>	<b>7.2</b>	<b>12.8</b>	<b>8.2</b>	<b>5.2</b>	<b>2.7</b>
0–\$25,000	<0.1	<0.1	0.1	0.1	0.1	0.1	0.1	0.2	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	0.0	0.0
\$75,001–\$100,000	0.4	0.4	0.4	0.2	0.2	0.4	0.1	0.1	0.1
\$100,001–\$500,000	1.3	1.4	1.8	1.8	1.1	2.0	0.9	0.6	0.6
\$500,001–\$1,000,000	1.1	1.0	1.0	0.9	0.9	1.5	0.7	0.7	0.5
\$1,000,001–\$2,000,000	1.3	0.9	0.8	0.8	0.8	1.2	1.0	0.5	0.4
More than \$2,000,000	2.7	3.4	5.2	2.6	4.1	7.3	5.2	3.0	0.9
<b>Inter-Dealer Total</b>	<b>6.4</b>	<b>6.3</b>	<b>8.1</b>	<b>6.7</b>	<b>7.6</b>	<b>13.1</b>	<b>10.9</b>	<b>3.0</b>	<b>3.6</b>
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	0.0	0.1	0.1
\$75,001–\$100,000	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1
\$100,001–\$500,000	1.0	1.3	1.5	1.6	1.2	1.8	1.2	0.9	1.0
\$500,001–\$1,000,000	1.0	1.1	1.0	0.9	0.9	1.5	0.8	0.6	0.7
\$1,000,001–\$2,000,000	1.2	1.0	1.1	1.0	0.9	1.5	1.2	0.4	0.4
More than \$2,000,000	2.8	2.5	4.0	2.9	4.3	7.9	7.5	0.7	1.2

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

Auction Rate Securities<sup>1</sup> Trade Type and Size, 2016–2020

Average daily number of trades

	2016	2017	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>Total</b>	<b>39</b>	<b>46</b>	<b>53</b>	<b>49</b>	<b>41</b>	<b>54</b>	<b>39</b>	<b>36</b>	<b>35</b>
0–\$25,000	3	6	9	8	10	8	8	13	12
\$25,001–\$50,000	4	6	6	6	5	6	5	4	5
\$50,001–\$75,000	2	2	3	3	2	3	2	2	2
\$75,001–\$100,000	8	8	8	5	4	7	3	3	3
\$100,001–\$500,000	14	16	18	19	13	20	12	9	9
\$500,001–\$1,000,000	4	4	4	4	3	5	3	3	2
\$1,000,001–\$2,000,000	3	2	2	2	2	2	3	1	1
More than \$2,000,000	2	2	2	2	2	3	3	1	1
<b>Customer Bought Total</b>	<b>13</b>	<b>17</b>	<b>18</b>	<b>17</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>12</b>	<b>12</b>
0–\$25,000	1	3	3	4	3	2	2	3	4
\$25,001–\$50,000	1	2	3	2	2	2	2	2	2
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	2	2	2	2	1	1	1	1	1
\$100,001–\$500,000	5	6	6	6	4	5	5	3	3
\$500,001–\$1,000,000	2	1	2	1	1	1	1	1	1
\$1,000,001–\$2,000,000	1	1	1	1	1	1	1	1	<1
More than \$2,000,000	1	1	1	1	1	1	2	<1	<1
<b>Customer Sold Total</b>	<b>15</b>	<b>16</b>	<b>20</b>	<b>17</b>	<b>15</b>	<b>23</b>	<b>14</b>	<b>13</b>	<b>11</b>
0–\$25,000	1	2	3	3	5	4	4	6	5
\$25,001–\$50,000	1	2	2	2	2	2	2	1	1
\$50,001–\$75,000	1	1	1	1	1	1	1	<1	<1
\$75,001–\$100,000	4	4	4	2	2	4	1	1	1
\$100,001–\$500,000	5	5	7	7	4	8	3	3	2
\$500,001–\$1,000,000	1	1	1	1	1	2	1	1	1
\$1,000,001–\$2,000,000	1	1	1	1	1	1	1	<1	<1
More than \$2,000,000	1	1	1	<1	1	1	1	1	<1
<b>Inter-Dealer Total</b>	<b>12</b>	<b>13</b>	<b>15</b>	<b>14</b>	<b>13</b>	<b>18</b>	<b>12</b>	<b>12</b>	<b>12</b>
0–\$25,000	1	1	2	2	3	2	2	3	3
\$25,001–\$50,000	1	1	2	1	1	2	1	1	1
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	2	2	2	1	1	2	1	1	1
\$100,001–\$500,000	4	5	6	6	5	7	4	3	4
\$500,001–\$1,000,000	1	1	1	1	1	2	1	1	1
\$1,000,001–\$2,000,000	1	1	1	1	1	1	1	<1	<1
More than \$2,000,000	1	1	1	1	1	1	1	<1	<1

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

# Part Eight

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## Yield Distributions, 2018–2020

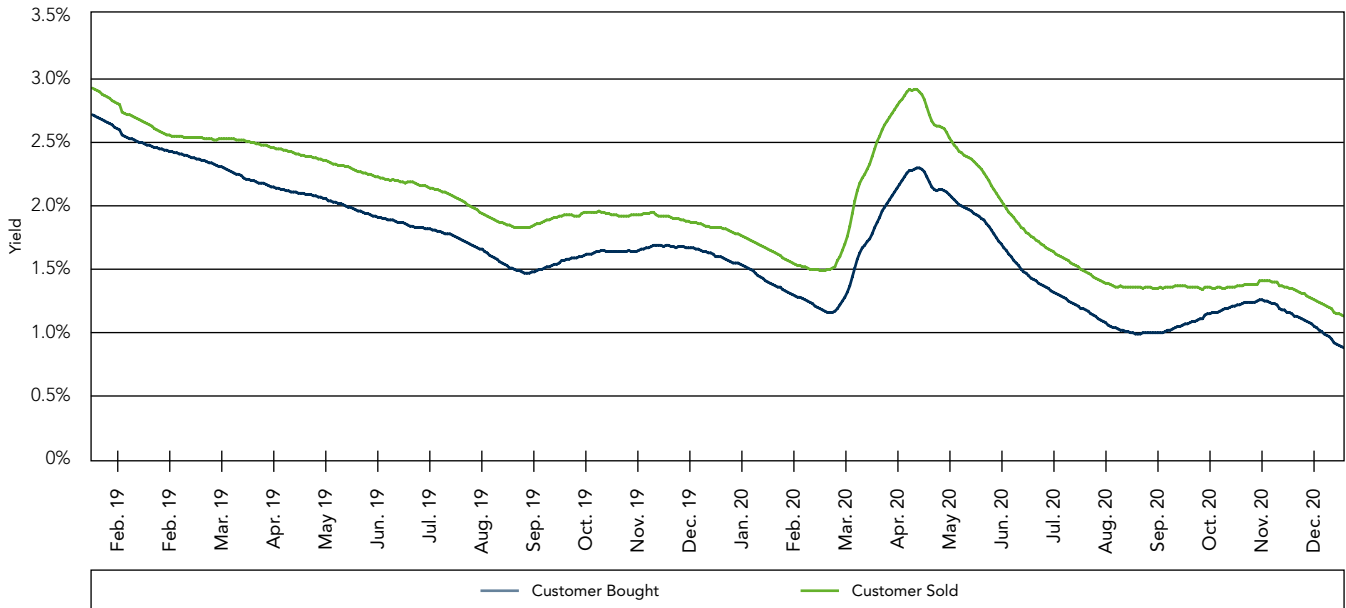
## Customer Trade and Size of Tax Exempt, Fixed Rate Securities, 2018–2020

Average daily yields

	2018	2019	2020	2020:Q1	2020:Q2	2020:Q3	2020:Q4
<b>All Trades</b>							
<b>Total</b>	<b>2.64</b>	<b>2.08</b>	<b>1.69</b>	<b>1.95</b>	<b>2.11</b>	<b>1.29</b>	<b>1.21</b>
0–\$25,000	2.71	2.14	1.78	2.05	2.25	1.34	1.27
\$25,001–\$50,000	2.61	2.05	1.64	1.90	2.07	1.23	1.16
\$50,001–\$75,000	2.51	1.95	1.53	1.82	1.94	1.13	1.04
\$75,001–\$100,000	2.56	2.00	1.57	1.84	1.94	1.20	1.10
\$100,001–\$500,000	2.51	1.98	1.51	1.78	1.83	1.17	1.09
\$500,001–\$1,000,000	2.61	2.11	1.66	1.86	1.94	1.38	1.35
\$1,000,001–\$2,000,000	2.66	2.17	1.78	1.98	2.07	1.49	1.46
More than \$2,000,000	2.82	2.31	1.98	2.22	2.31	1.57	1.58
<b>Customer Bought</b>							
<b>Total</b>	<b>2.53</b>	<b>1.95</b>	<b>1.48</b>	<b>1.73</b>	<b>1.86</b>	<b>1.09</b>	<b>1.09</b>
0–\$25,000	2.60	1.98	1.55	1.80	2.01	1.11	1.12
\$25,001–\$50,000	2.50	1.92	1.43	1.67	1.80	1.03	1.03
\$50,001–\$75,000	2.36	1.80	1.29	1.57	1.64	0.91	0.88
\$75,001–\$100,000	2.44	1.87	1.35	1.62	1.63	1.01	0.98
\$100,001–\$500,000	2.36	1.85	1.30	1.59	1.55	1.00	0.98
\$500,001–\$1,000,000	2.56	2.05	1.56	1.78	1.80	1.30	1.33
\$1,000,001–\$2,000,000	2.68	2.16	1.74	1.94	2.00	1.47	1.49
More than \$2,000,000	2.88	2.33	1.95	2.19	2.27	1.56	1.65
<b>Customer Sold</b>							
<b>Total</b>	<b>2.73</b>	<b>2.20</b>	<b>1.82</b>	<b>2.16</b>	<b>2.27</b>	<b>1.40</b>	<b>1.26</b>
0–\$25,000	2.86	2.33	1.95	2.31	2.45	1.52	1.39
\$25,001–\$50,000	2.69	2.13	1.74	2.09	2.21	1.30	1.18
\$50,001–\$75,000	2.59	2.02	1.63	2.02	2.06	1.19	1.06
\$75,001–\$100,000	2.57	2.01	1.63	1.97	2.04	1.22	1.07
\$100,001–\$500,000	2.48	1.95	1.54	1.87	1.92	1.12	0.97
\$500,001–\$1,000,000	2.54	2.04	1.72	1.89	2.10	1.38	1.25
\$1,000,001–\$2,000,000	2.58	2.10	1.85	2.03	2.20	1.53	1.34
More than \$2,000,000	2.76	2.27	2.13	2.34	2.52	1.65	1.48



### Daily Yield of Customer Trades of Tax Exempt, Fixed Rate Securities, 2019–2020 30-day trailing average



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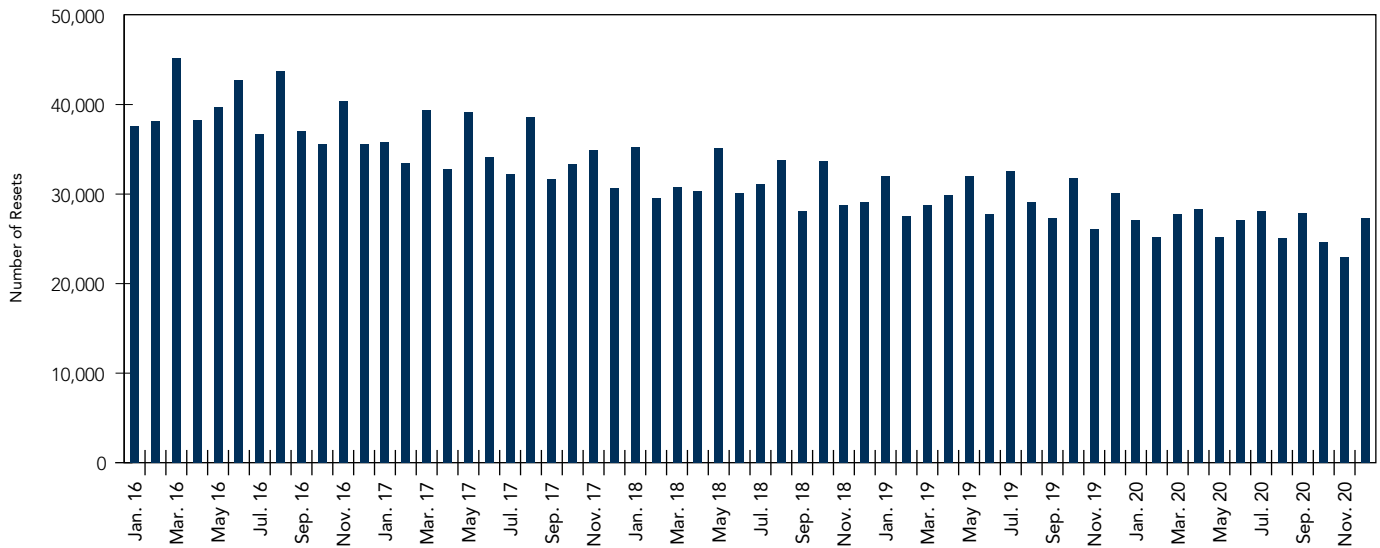
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## Part Nine

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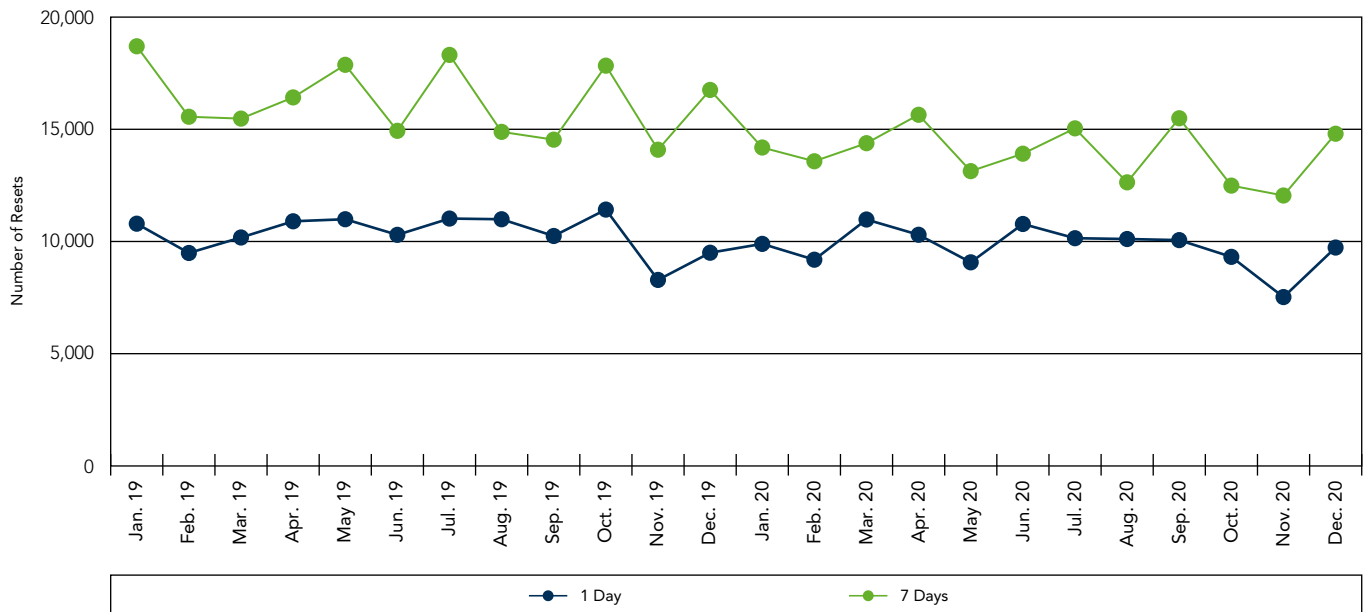
# Municipal Market Variable Securities Rate Resets, 2016–2020

Number of Variable Rate Demand Obligations Rate Resets<sup>1</sup>, 2016–2020

	2016	2017	2018	2019	2020
January	37,600	35,828	35,287	32,017	27,103
February	38,167	33,470	29,509	27,555	25,157
March	45,188	39,420	30,717	28,787	27,767
April	38,295	32,734	30,369	29,853	28,313
May	39,717	39,171	35,111	32,045	25,148
June	42,712	34,169	30,144	27,793	27,056
July	36,692	32,191	31,118	32,541	28,113
August	43,735	38,606	33,772	29,059	25,077
September	37,068	31,678	28,062	27,313	27,869
October	35,620	33,300	33,699	31,768	24,638
November	40,331	34,934	28,740	26,132	22,986
December	35,617	30,658	29,052	30,060	27,302

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

### Number of Variable Rate Demand Obligations Rate Resets by Period<sup>1</sup>, 2019–2020

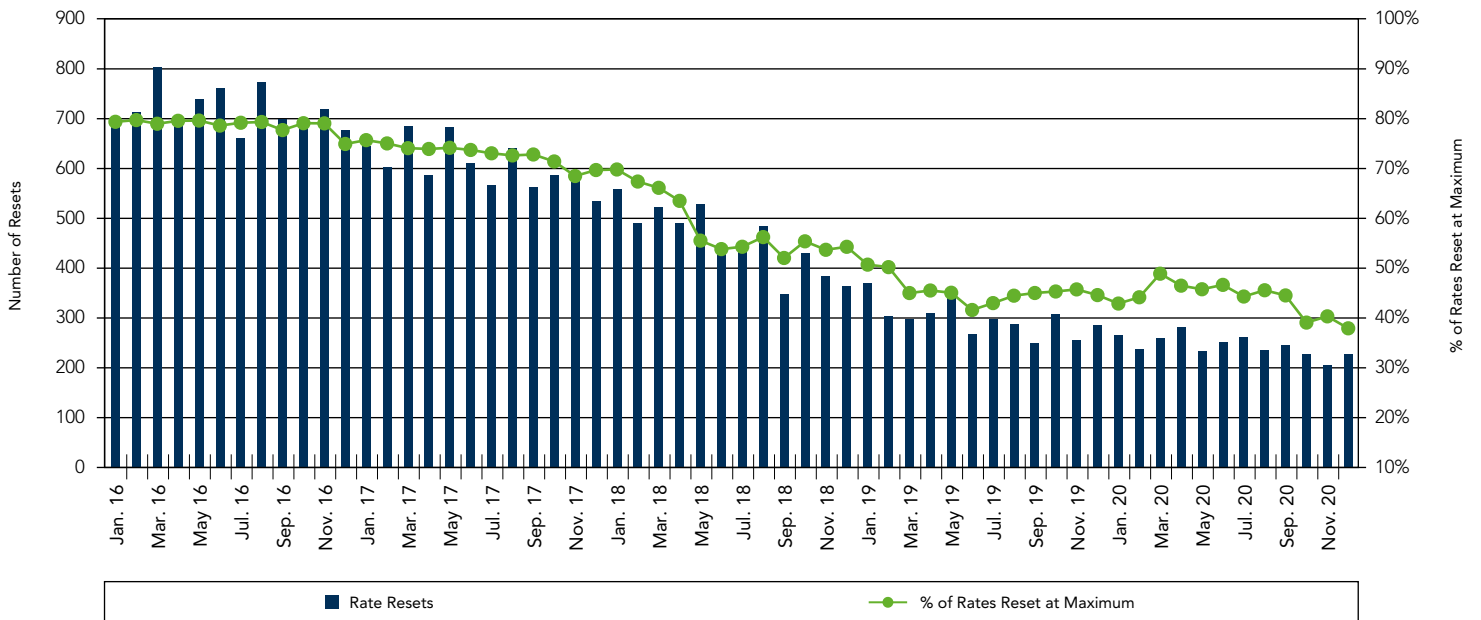


	1 Day	7 Days
Jan. 19	10,793	18,700
Feb. 19	9,488	15,559
Mar. 19	10,178	15,476
Apr. 19	10,900	16,421
May 19	10,992	17,874
Jun. 19	10,296	14,932
Jul. 19	11,022	18,315
Aug. 19	10,991	14,885
Sep. 19	10,245	14,538
Oct. 19	11,422	17,836
Nov. 19	8,287	14,090
Dec. 19	9,499	16,754

	1 Day	7 Days
Jan. 20	9,893	14,188
Feb. 20	9,188	13,575
Mar. 20	10,979	14,381
Apr. 20	10,299	15,647
May 20	9,071	13,135
Jun. 20	10,780	13,912
Jul. 20	10,146	15,042
Aug. 20	10,110	12,636
Sep. 20	10,061	15,492
Oct. 20	9,315	12,490
Nov. 20	7,523	12,049
Dec. 20	9,730	14,802

<sup>1</sup> Based on data submitted to the MSRB's Short-Term Obligation Rate Transparency (SHORT) System. May exclude submissions that could not be categorized based on available data. The remaining 67,478 resets were for securities with other periodic reset frequencies.

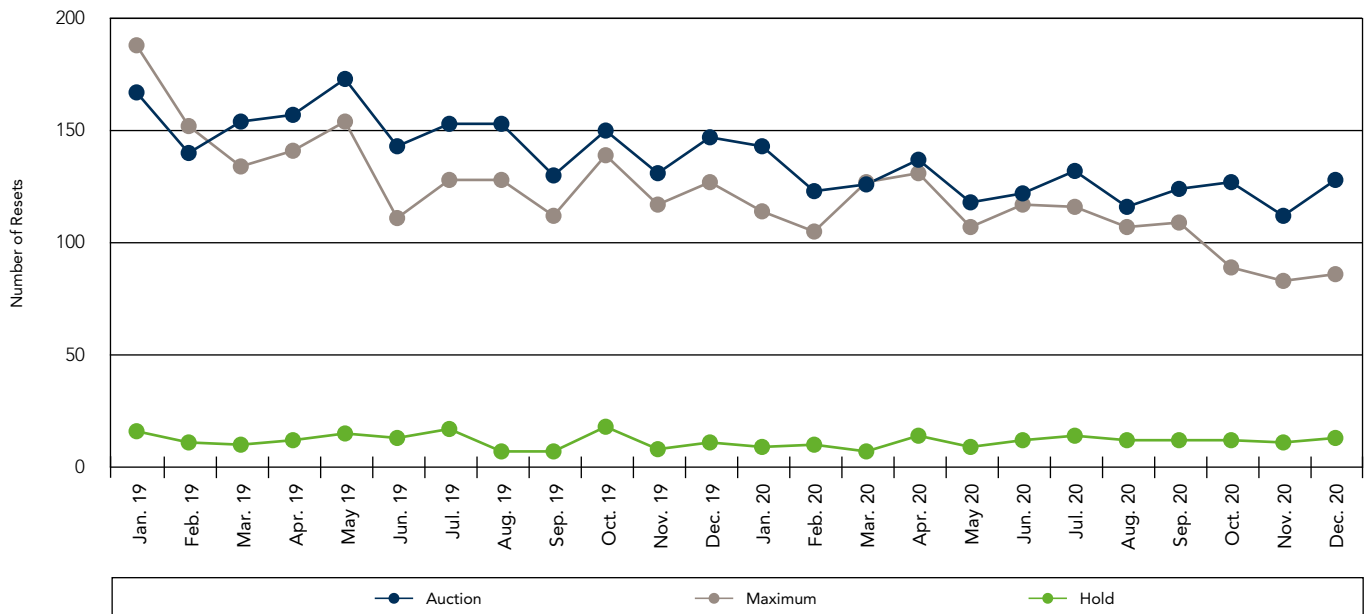
### Number of Auction Rate Securities Rate Resets<sup>1</sup>, 2016–2020



	2016	2017	2018	2019	2020
January	697	645	559	371	266
February	714	604	490	303	238
March	803	686	522	298	260
April	689	586	490	310	282
May	740	684	528	342	234
June	761	612	435	267	251
July	662	567	446	298	262
August	773	642	484	288	235
September	699	562	348	249	245
October	683	587	430	307	228
November	720	577	384	256	206
December	677	534	365	285	227

<sup>1</sup> 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 Type<sup>1</sup>, 2019–2020

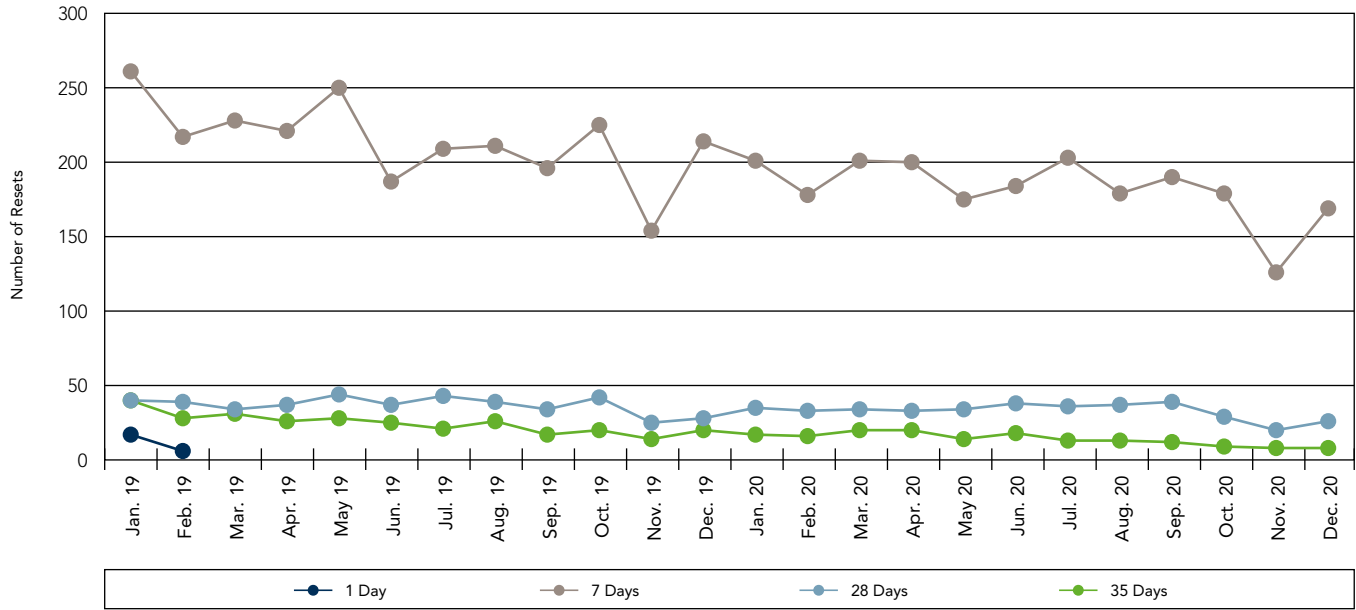


	Auction	Maximum	Hold
Jan. 19	167	188	16
Feb. 19	140	152	11
Mar. 19	154	134	10
Apr. 19	157	141	12
May 19	173	154	15
Jun. 19	143	111	13
Jul. 19	153	128	17
Aug. 19	153	128	7
Sep. 19	130	112	7
Oct. 19	150	139	18
Nov. 19	131	117	8
Dec. 19	147	127	11

	Auction	Maximum	Hold
Jan. 20	143	114	9
Feb. 20	123	105	10
Mar. 20	126	127	7
Apr. 20	137	131	14
May 20	118	107	9
Jun. 20	122	117	12
Jul. 20	132	116	14
Aug. 20	116	107	12
Sep. 20	124	109	12
Oct. 20	127	89	12
Nov. 20	112	83	11
Dec. 19	128	86	13

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

### Number of Auction Rate Securities Rate Resets by Period<sup>1</sup>, 2019–2020



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

	1 Day	7 Days	28 Days	35 Days
Jan. 20	-	201	35	17
Feb. 20	-	178	33	16
Mar. 20	-	201	34	20
Apr. 20	-	200	33	20
May 20	-	175	34	14
Jun. 20	-	184	38	18
Jul. 20	-	203	36	13
Aug. 20	-	179	37	13
Sep. 20	-	190	39	12
Oct. 20	-	179	29	9
Nov. 20	-	126	20	8
Dec. 20	-	169	26	8

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

## Part Ten

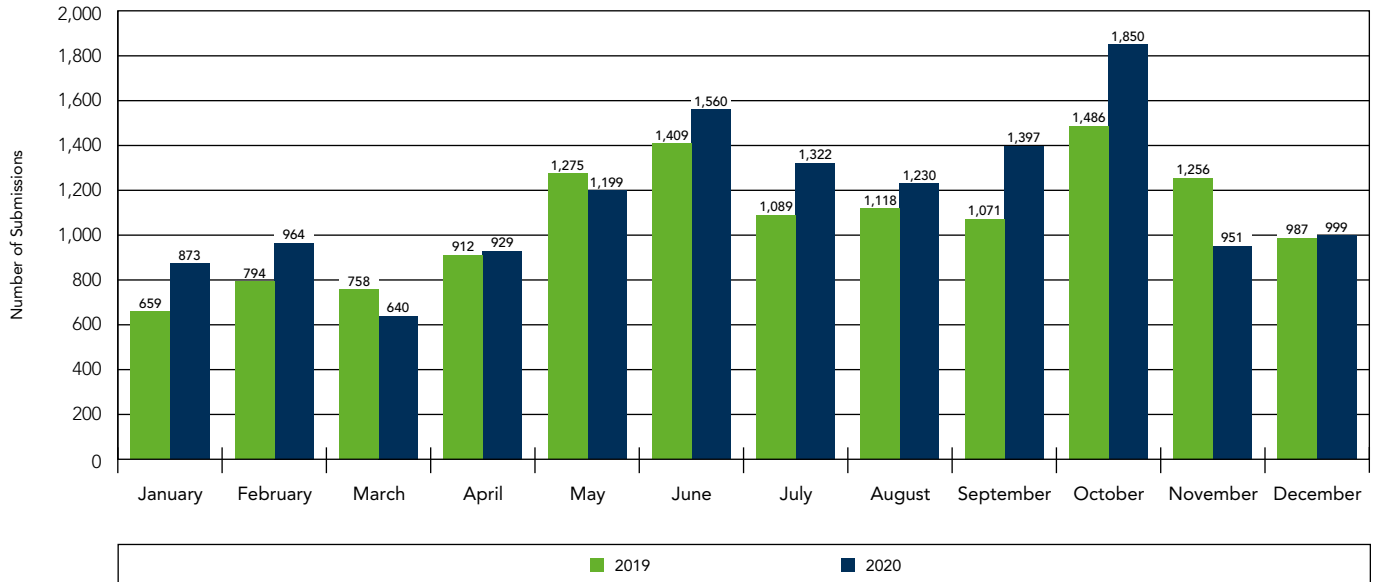
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# Municipal Market Disclosures, 2016–2020



### Number of Primary Market Submissions<sup>1</sup>, 2019–2020

By number of submissions

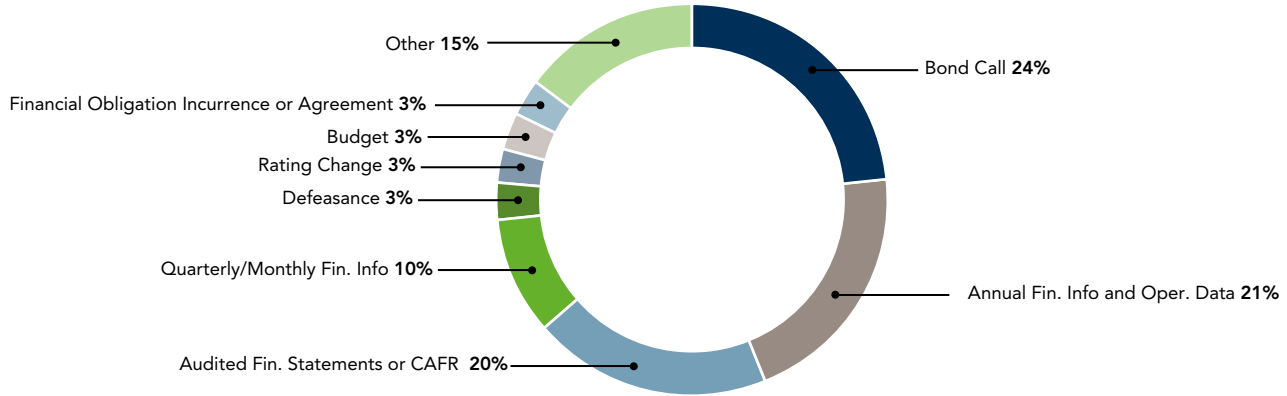


	2019	2020
January	659	873
February	794	964
March	758	640
April	912	929
May	1,275	1,199
June	1,409	1,560
July	1,089	1,322
August	1,118	1,230
September	1,071	1,397
October	1,486	1,850
November	1,256	951
December	987	999
Total	12,814	13,914

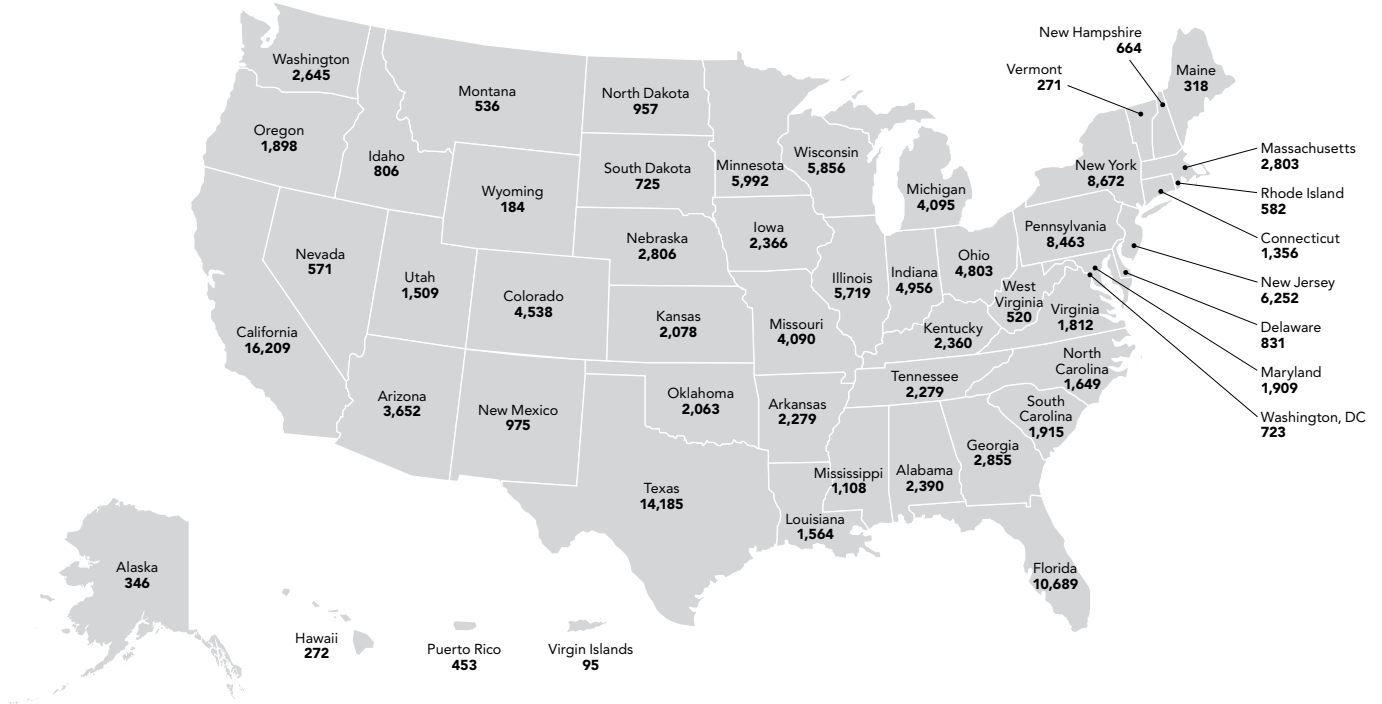
<sup>1</sup> Excludes remarketings.

## Continuing Disclosures Submissions, 2020

By number of documents

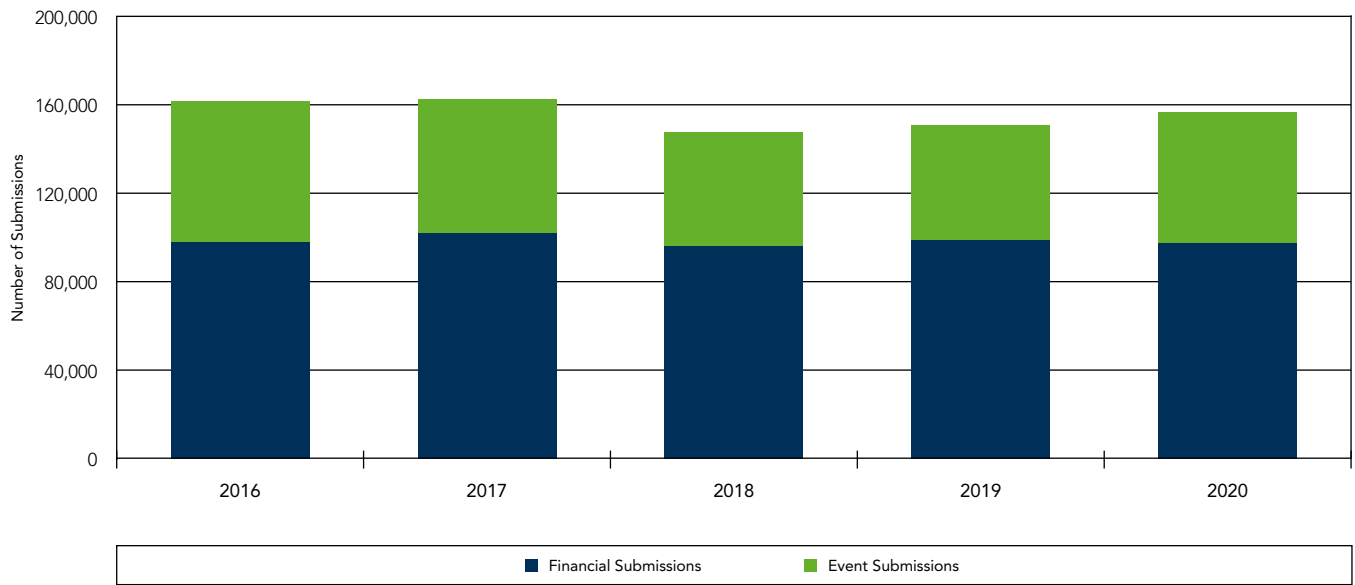


By state<sup>1</sup>



<sup>1</sup> Based on information derived from the CUSIP Service Bureau.

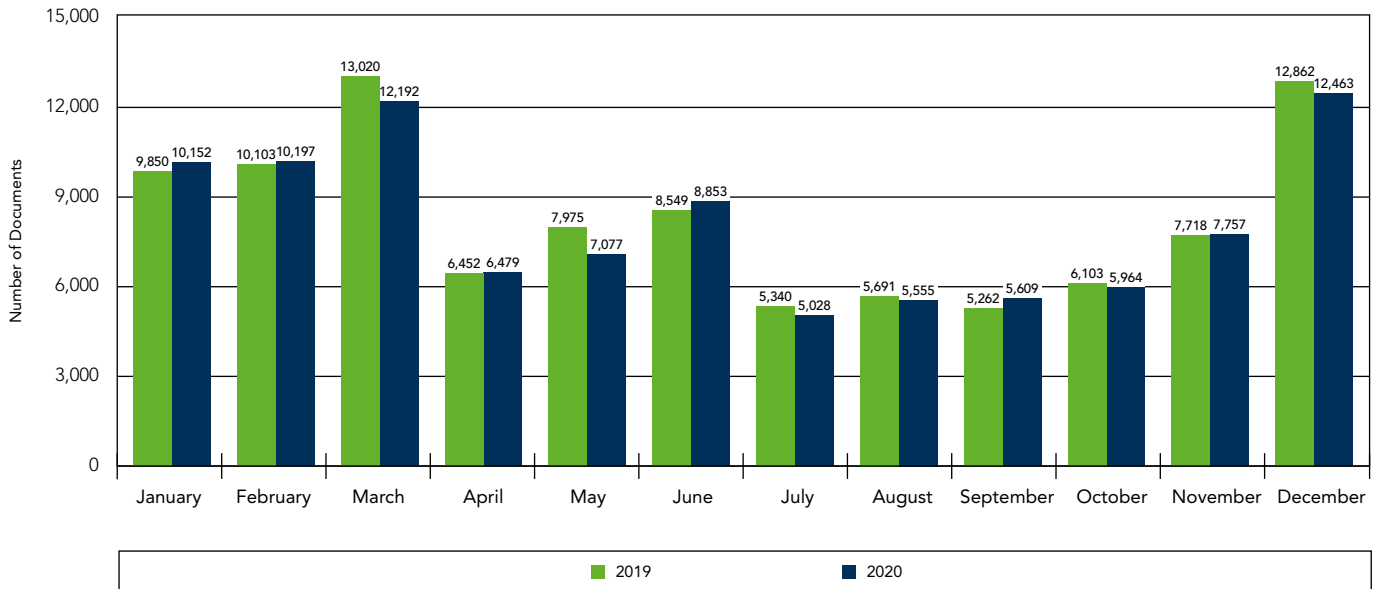
### Number of Continuing Disclosure Submissions, 2016–2020



	Financial Submissions	Event Submissions
2016	98,084	63,586
2017	101,843	60,883
2018	96,098	51,182
2019	98,925	51,660
2020	97,326	59,521

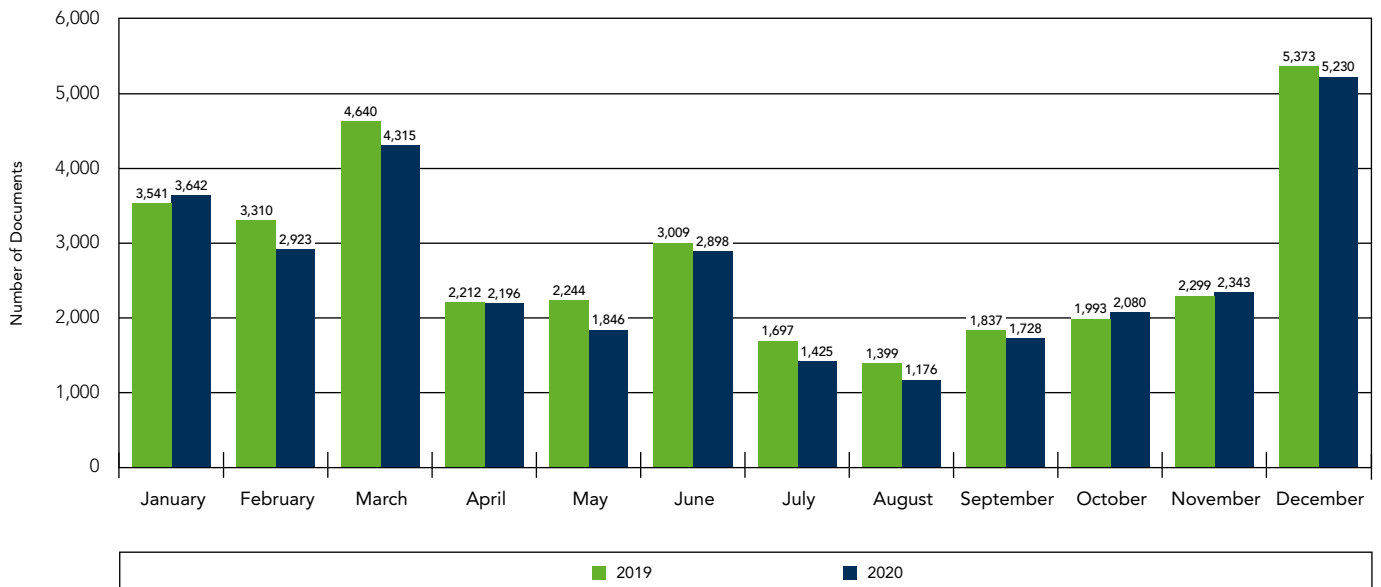
### All Financial Disclosures, 2019–2020

By number of documents



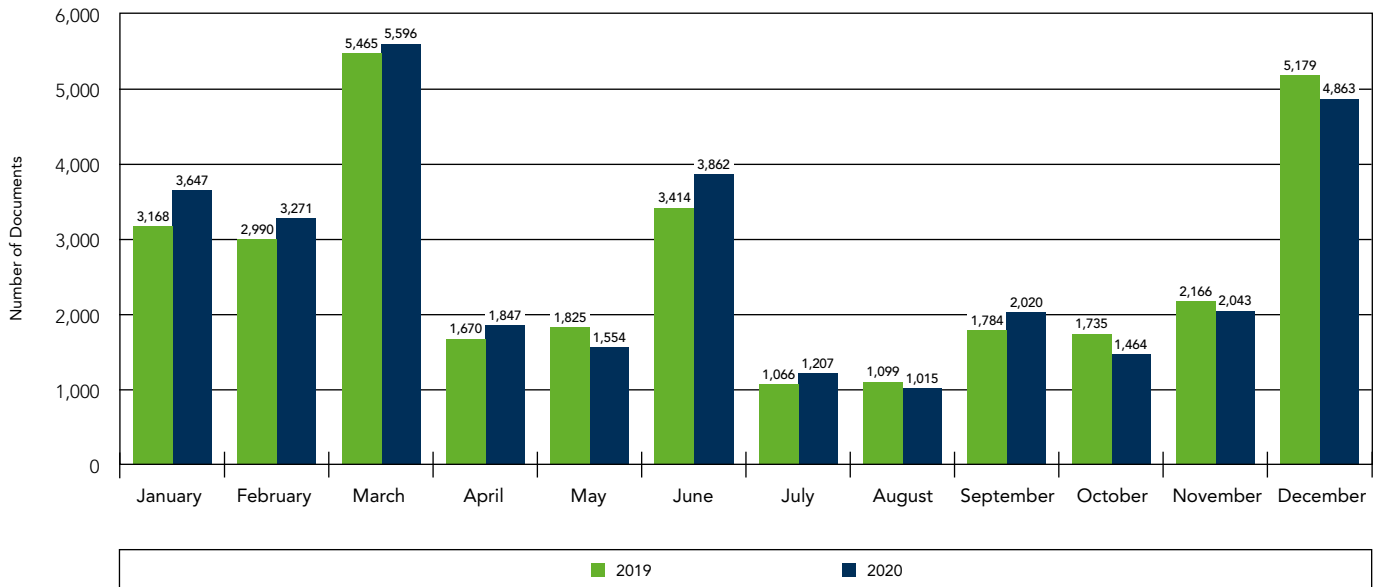
### Audited Financial Statements or CAFR Submissions, 2019–2020

By number of documents



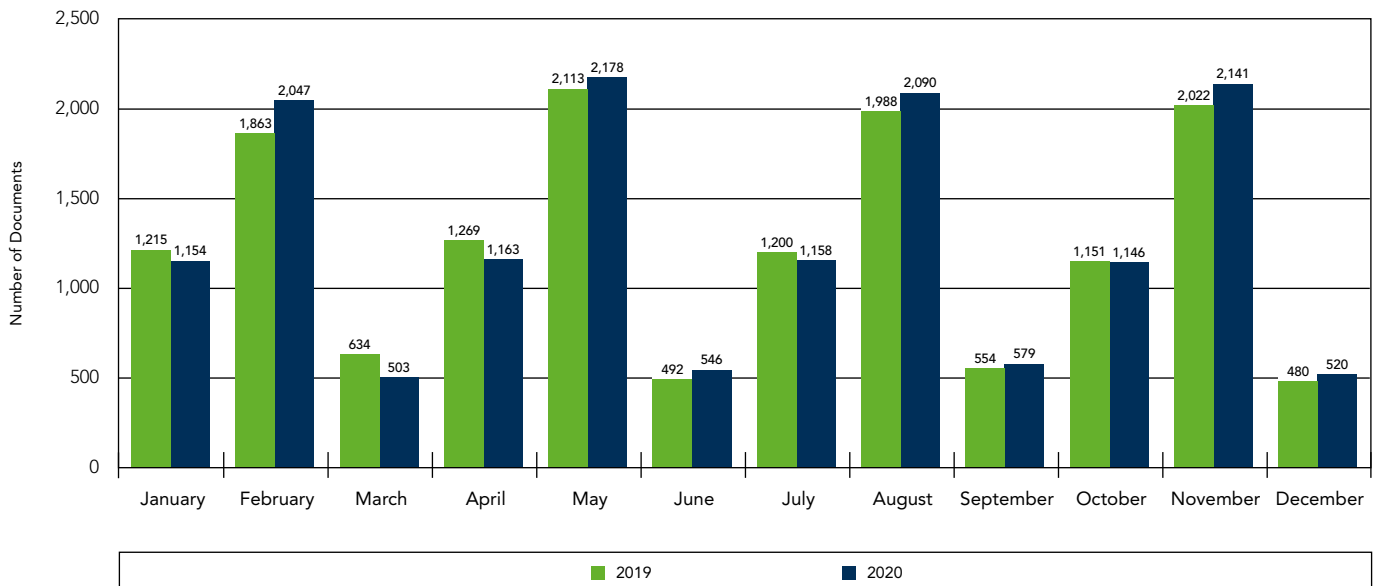
## Annual Financial Information and Operating Data Submissions, 2019–2020

By number of documents



## Quarterly/Monthly Financial Information Submissions, 2019–2020

By number of documents



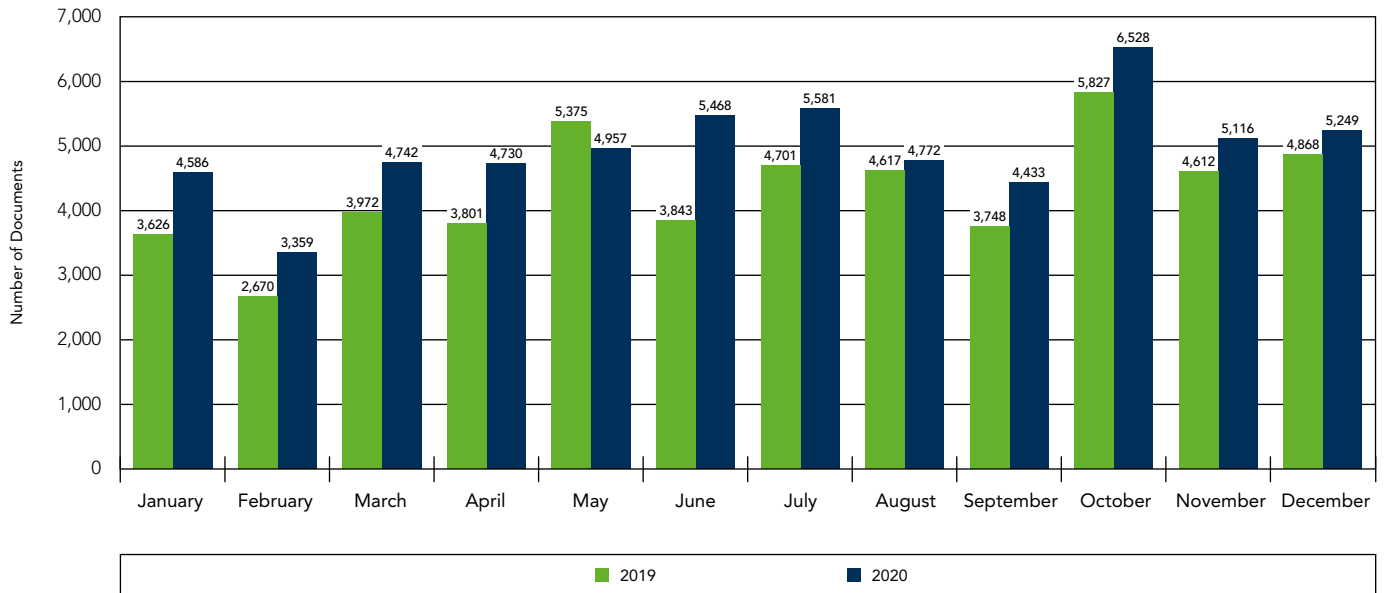
## Other Financial Disclosures, 2019–2020

Financial disclosures

By Number of Documents	2019	2020
BUDGET	4,635	4,201
CHANGE IN ACCOUNTING STANDARD	6	1
CHANGE IN FISCAL YEAR/TIMING OF ANNUAL DISCLOSURE	34	29
CONSULTANT REPORTS	267	285
FAILURE TO PROVIDE ANNUAL FINANCIAL INFORMATION	2,885	2,669
INFORMATION PROVIDED TO RATING AGENCY, CREDIT/LIQUIDITY PROVIDER OR OTHER THIRD PARTY	228	229
INTERIM/ADDITIONAL FINANCIAL INFORMATION/OPERATING DATA	1,482	1,739
INVESTMENT/DEBT/FINANCIAL POLICY	111	128
OTHER FINANCIAL/OPERATING DATA	9,181	8,629

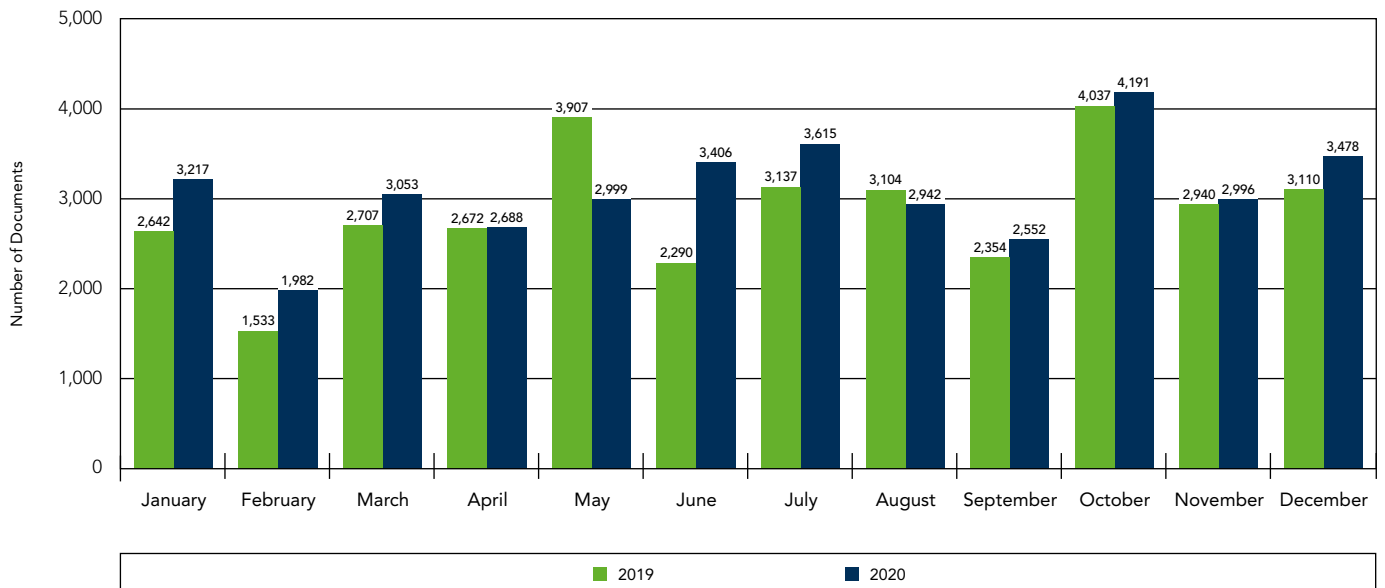
### All Event Disclosures, 2019–2020

By number of documents



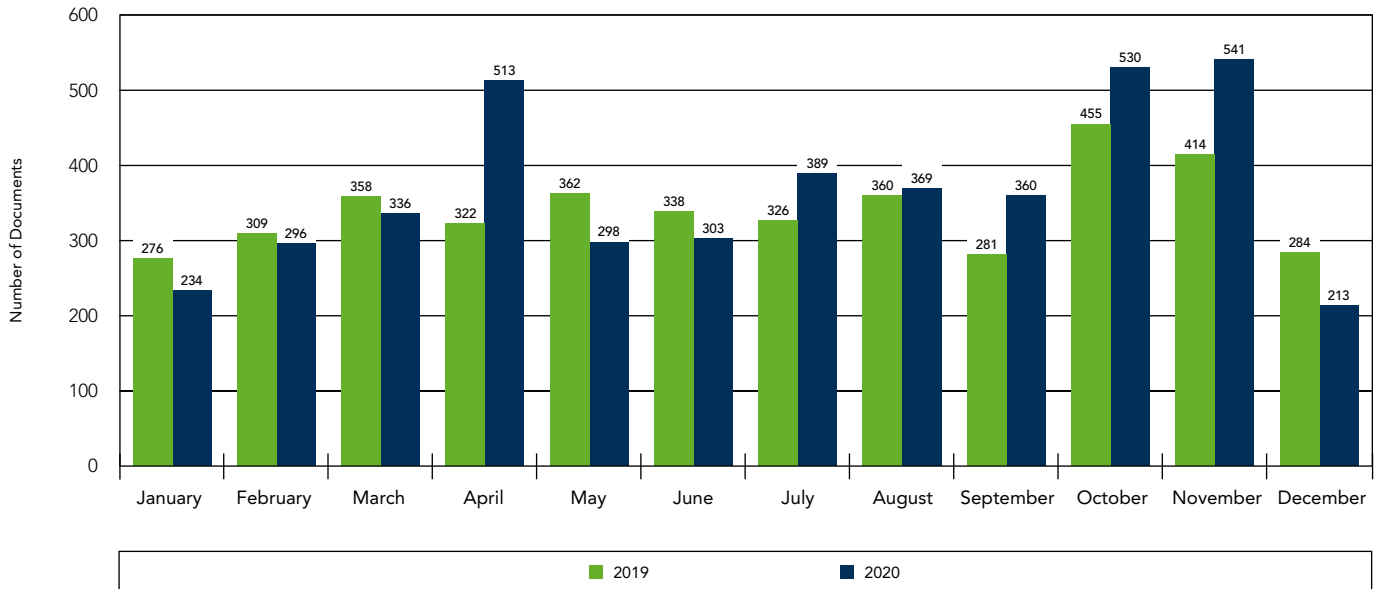
### Bond Call Submissions, 2019–2020

By number of documents



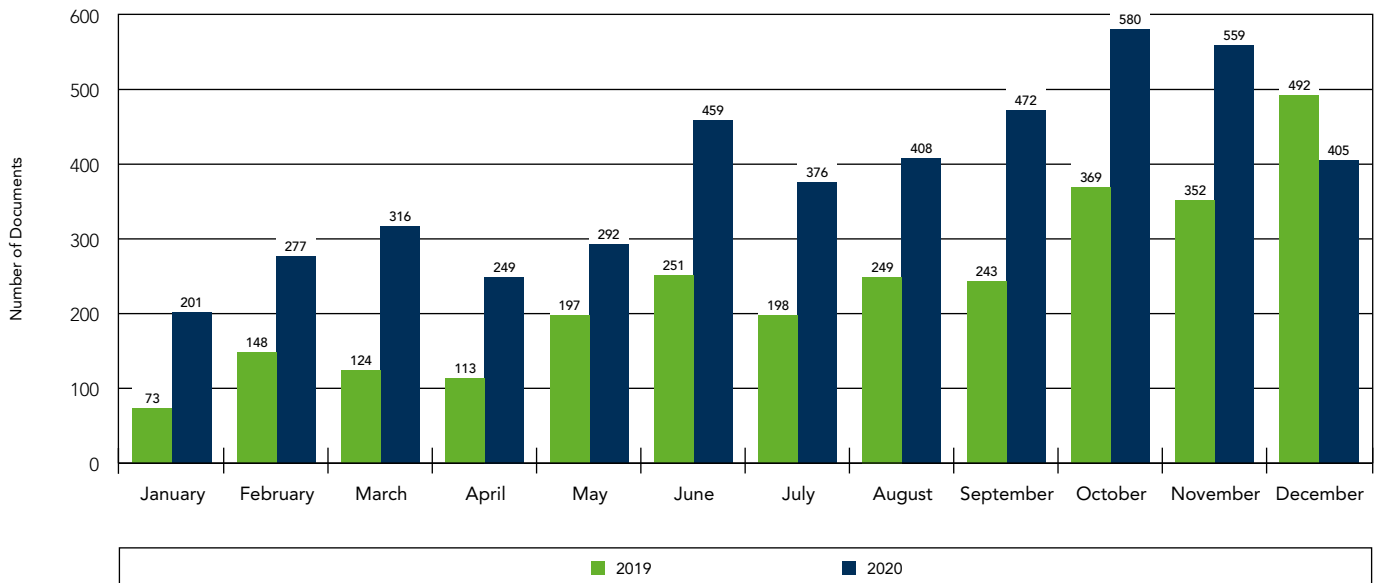
### Rating Change Submissions, 2019–2020

By number of documents



### Defeasance Submissions, 2019–2020

By number of documents





## Other Event Disclosures, 2019–2020

## Event disclosures

By Number of Documents	2019	2020
ADVERSE TAX OPINION OR EVENT AFFECTING TAX-EXEMPT STATUS	2	2
AMENDMENT TO CONTINUING DISCLOSURE UNDERTAKING	59	45
BANKRUPTCY, INSOLVENCY, RECEIVERSHIP	81	52
BID FOR AUCTION RATE OR OTHER SECURITIES	101	109
CAPITAL OR OTHER FINANCING PLAN	68	118
CHANGE IN OBLIGATED PERSON	14	38
CHANGE OF TENDER AGENT, REMARKETING AGENT, OR OTHER ON-GOING PARTY	75	60
COMMUNICATION FROM THE INTERNAL REVENUE SERVICE	13	9
DERIVATIVE OR OTHER SIMILAR TRANSACTION	4	3
FAILURE TO PROVIDE EVENT FILING INFORMATION	754	879
FINANCIAL OBLIGATION - EVENT REFLECTING FINANCIAL DIFFICULTIES	19	23
FINANCIAL OBLIGATION - INCURRENCE OR AGREEMENT	2,059	4,115
LITIGATION/ENFORCEMENT ACTION	49	47
MERGER, CONSOLIDATION, ACQUISITION AND SALE OF ASSETS	97	95
MODIFICATION TO THE RIGHTS OF SECURITY HOLDERS	33	69
NON-PAYMENT RELATED DEFAULT	98	97
NOTICE TO INVESTOR PURSUANT TO BOND DOCUMENTS	694	901
OTHER EVENT-BASED DISCLOSURES	4,698	5,630
P&I PAYMENT DELINQUENCY	401	350
RELEASE, SUBSTITUTION OR SALE OF PROPERTY	51	54
SUBSTITUTION OF CREDIT OR LIQUIDITY PROVIDER OR ITS FAILURE TO PERFORM	80	59
SUCCESSOR, ADDITIONAL OR CHANGE IN TRUSTEE	321	151
TENDER OFFER/SECONDARY MARKET PURCHASES	317	333
UNSCHEDULED DRAW ON CREDIT ENHANCEMENT	55	47
UNSCHEDULED DRAW ON DEBT SERVICE RESERVE	99	140

# Part Eleven

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## Definitions of Terms Used

**Alternative Minimum Tax (AMT) Municipal Security—**

A tax-exempt bond, interest on which is subject to the alternative minimum tax.

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

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

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

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

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

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

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

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

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

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

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

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

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

**General Obligation Municipal Security**—A security that is secured by the full faith, credit and taxing power of an issuer. General obligation securities issued by local units of government are typically secured by a pledge of the

issuer's "ad valorem" taxing power; general obligation securities issued by states are generally based upon appropriations made by the state legislature for the purposes specified.

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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