



Municipal Securities Rulemaking Board

PAGE 34

Capital Market Trading Activity

**Average Daily Trading Volume, 2018-2022**  
By par amount, number of trades and number of unique securities



# 2022 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](https://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 2022 *Fact Book* includes monthly, quarterly and yearly aggregate market information from 2018 through 2022, 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 2018 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](https://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 Municipal Securities Rulemaking Board (MSRB) protects and strengthens the municipal bond market, enabling access to capital, economic growth, and societal progress in tens of thousands of communities across the country. The MSRB fulfills this mission by creating trust in our market through informed regulation of dealers and municipal advisors that protects investors, issuers and the public interest; building technology systems that power our market and provide transparency for issuers, institutions, and the investing public; and serving as the steward of market data that empowers better decisions and fuels innovation for the future. The MSRB is a 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 overseen by the Securities and Exchange Commission and Congress.

## 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 from Kroll Bond Ratings, Fitch Ratings, Moody's Investors Service and Standard & Poor's also are provided on EMMA.

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

EMMA is a service of the MSRB.



**MSRB**  
Municipal Securities Rulemaking Board

RESEARCH AVAILABLE FROM THE MSRB



## The MSRB's 2022 Year-in-Review report reveals significant changes in the municipal bond market compared with 2021 and prior years:

- Record trading volume in municipal bonds
- Dramatic decline in new issuance volume
- Unprecedented outflow from tax-exempt mutual funds
- Record inflows into tax-exempt ETFs

**To learn more, read the [report](#)**  
**Or listen to the latest [MSRB Podcast episode](#).**

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# Part One

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## Municipal Market Trade Summary, 2018–2022

## Transaction Summary

Total par amount traded in \$ millions

	2018	2019	2020	2021	2022
<b>Total</b>	<b>3,091,206</b>	<b>3,014,104</b>	<b>3,139,655</b>	<b>2,259,105</b>	<b>3,633,317</b>
<b>By Trade Type</b>					
Customer Bought	1,543,192	1,547,610	1,656,201	1,232,274	1,813,577
Customer Sold	1,023,351	945,111	994,602	621,565	1,223,928
Inter-Dealer	524,664	521,383	488,852	405,265	595,811
<b>By Coupon Type</b>					
Fixed Rate	1,844,298	1,797,962	1,971,761	1,562,622	2,486,348
Variable	989,411	955,384	881,015	466,944	813,915
Zero Coupon	70,692	71,142	106,282	73,176	91,427
Other <sup>1</sup>	186,806	189,616	180,598	156,362	241,626
<b>By Source of Repayment</b>					
General Obligation	787,852	773,360	797,448	605,326	875,404
Revenue	2,111,380	2,016,916	2,102,690	1,567,123	2,620,603
Double Barrel	62,337	64,169	69,536	55,968	84,954
Other <sup>1</sup>	129,637	159,660	169,980	30,688	52,356
<b>By Tax Status</b>					
Tax Exempt	2,573,742	2,480,940	2,520,388	1,738,644	3,023,876
Taxable	199,764	289,093	441,882	392,096	349,476
AMT	180,379	178,164	146,894	114,177	206,848
Other <sup>1</sup>	137,321	65,908	30,491	14,188	53,118

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



## Transaction Summary

Total number of trades

	2018	2019	2020	2021	2022
<b>Total</b>	<b>10,173,826</b>	<b>8,753,702</b>	<b>8,501,457</b>	<b>7,647,333</b>	<b>12,698,872</b>
<b>By Trade Type</b>					
Customer Bought	3,949,571	3,327,806	3,153,011	2,744,256	4,607,039
Customer Sold	2,332,120	2,045,963	2,171,562	2,125,218	3,234,025
Inter-Dealer	3,892,135	3,379,933	3,176,884	2,777,859	4,857,808
<b>By Coupon Type</b>					
Fixed Rate	9,576,565	8,135,966	7,979,207	7,304,116	12,268,362
Variable	334,277	316,264	279,181	147,603	230,809
Zero Coupon	241,246	276,991	223,749	178,953	182,395
Other <sup>1</sup>	21,738	24,481	19,320	16,661	17,306
<b>By Source of Repayment</b>					
General Obligation	3,761,095	3,304,017	3,031,125	2,874,398	4,695,438
Revenue	6,071,101	5,159,263	5,185,055	4,507,712	7,546,521
Double Barrel	327,002	271,265	267,725	260,598	453,096
Other <sup>1</sup>	14,628	19,157	17,552	4,623	3,817
<b>By Tax Status</b>					
Tax Exempt	9,437,546	8,008,023	7,695,493	6,914,058	11,793,028
Taxable	587,926	615,982	676,248	634,098	672,558
AMT	132,014	120,378	124,809	96,049	229,454
Other <sup>1</sup>	16,340	9,319	4,907	3,128	3,832

### 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](https://emma.msrb.org/).

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

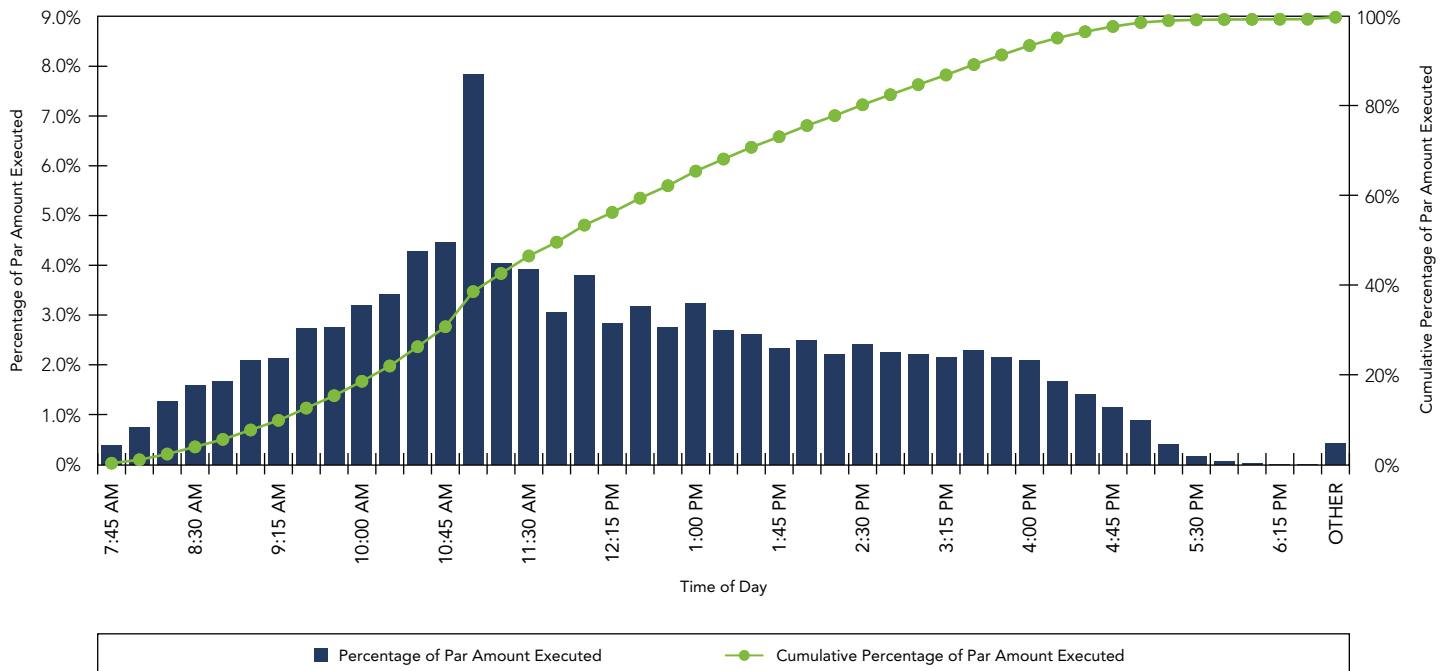
## Part Two

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# Municipal Market Trade Distribution Trends, 2022

### Par Amount Traded by Time of Day, 2022

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



Time of Execution	Average Par Value (\$ Millions)
7:45 AM	57.0
8:00 AM	110.6
8:15 AM	185.6
8:30 AM	231.2
8:45 AM	242.3
9:00 AM	304.0
9:15 AM	311.3
9:30 AM	396.8
9:45 AM	401.2
10:00 AM	465.0
10:15 AM	495.6
10:30 AM	622.2
10:45 AM	646.6
11:00 AM	1,134.8
11:15 AM	585.6
11:30 AM	567.6
11:45 AM	444.9
12:00 PM	550.9
12:15 PM	412.8
12:30 PM	460.4
12:45 PM	401.7
1:00 PM	471.1
1:15 PM	390.4

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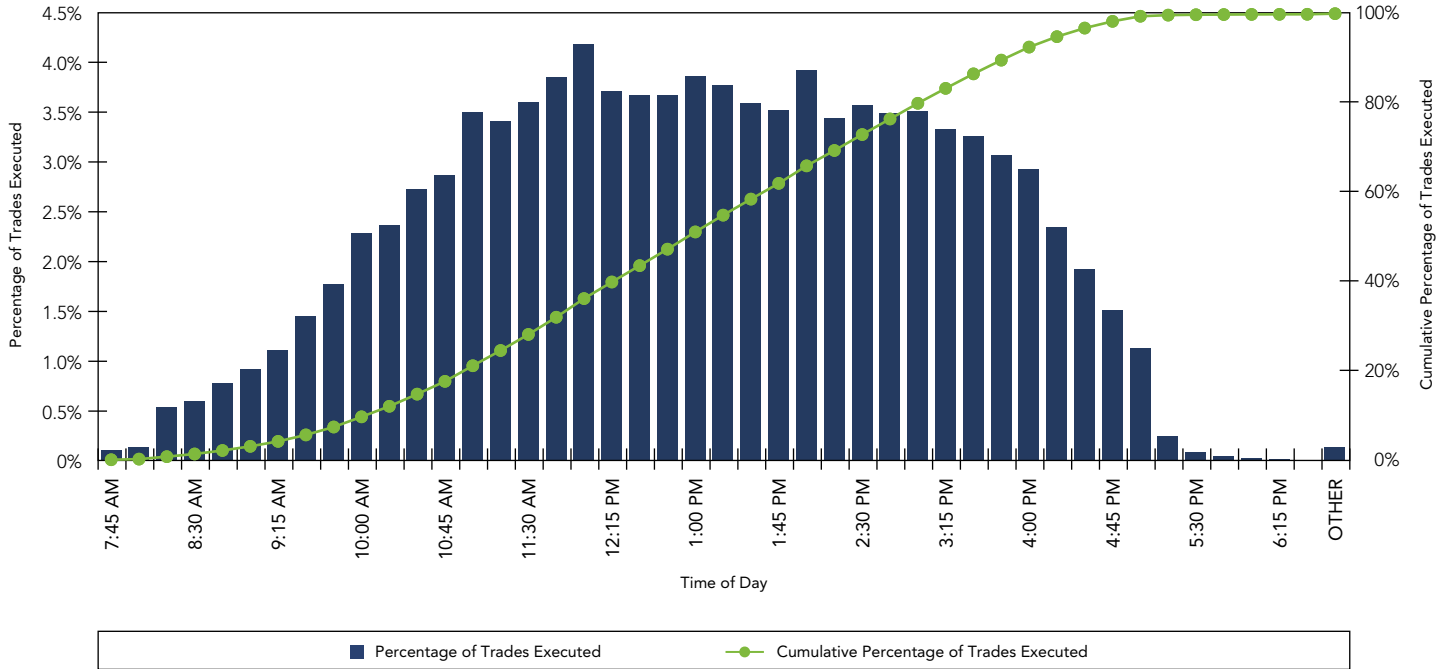
Time of Execution	Average Par Value (\$ Millions)
1:30 PM	380.2
1:45 PM	340.5
2:00 PM	362.2
2:15 PM	321.0
2:30 PM	350.6
2:45 PM	326.6
3:00 PM	323.4
3:15 PM	314.3
3:30 PM	335.1
3:45 PM	312.2
4:00 PM	303.4
4:15 PM	243.9
4:30 PM	203.9
4:45 PM	168.2
5:00 PM	128.6
5:15 PM	60.8
5:30 PM	25.4
5:45 PM	11.0
6:00 PM	5.5
6:15 PM	3.5
6:30 PM	1.4
Other <sup>2</sup>	63.9
<b>Total</b>	<b>14,475.4</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, 2022

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



Time of Execution	Average Number of Trades
7:45 AM	57
8:00 AM	72
8:15 AM	274
8:30 AM	304
8:45 AM	397
9:00 AM	468
9:15 AM	563
9:30 AM	733
9:45 AM	895
10:00 AM	1,155
10:15 AM	1,195
10:30 AM	1,376
10:45 AM	1,445
11:00 AM	1,771
11:15 AM	1,727
11:30 AM	1,821
11:45 AM	1,949
12:00 PM	2,116
12:15 PM	1,876
12:30 PM	1,858
12:45 PM	1,859
1:00 PM	1,951
1:15 PM	1,907

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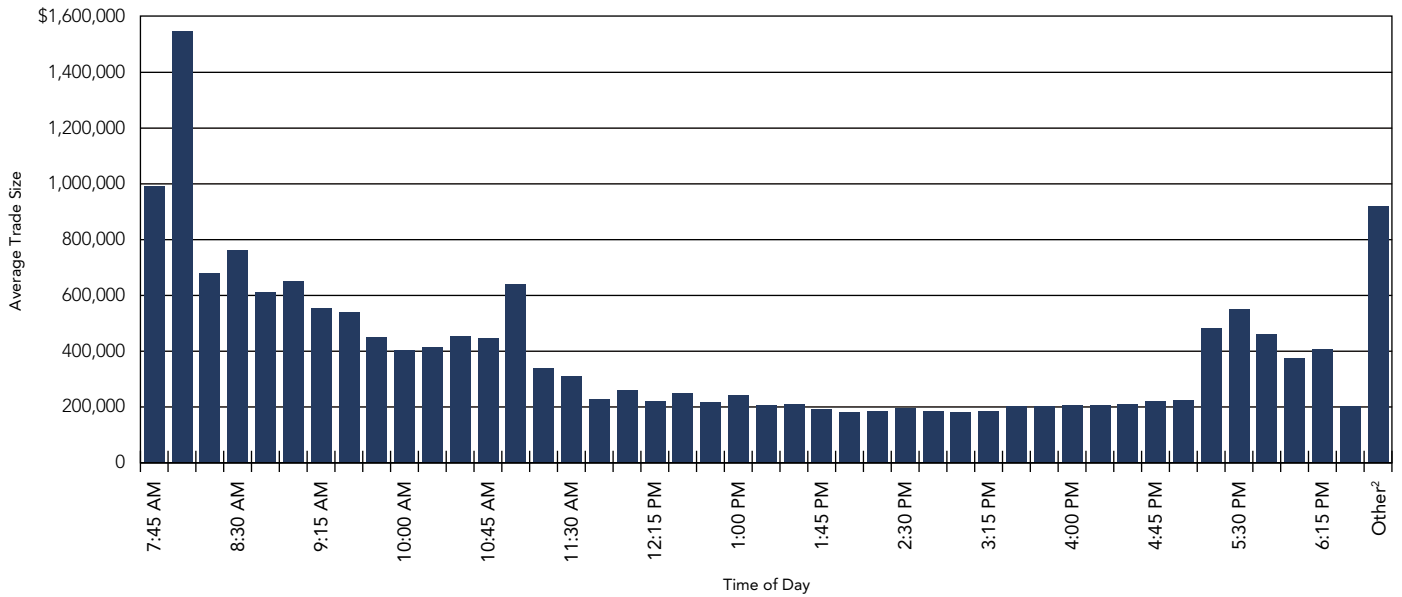
Time of Execution	Average Number of Trades
1:30 PM	1,816
1:45 PM	1,783
2:00 PM	1,983
2:15 PM	1,743
2:30 PM	1,807
2:45 PM	1,764
3:00 PM	1,778
3:15 PM	1,687
3:30 PM	1,647
3:45 PM	1,554
4:00 PM	1,477
4:15 PM	1,183
4:30 PM	972
4:45 PM	763
5:00 PM	574
5:15 PM	126
5:30 PM	46
5:45 PM	24
6:00 PM	15
6:15 PM	9
6:30 PM	7
Other <sup>2</sup>	69
<b>Total</b>	<b>50,593</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, 2022

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



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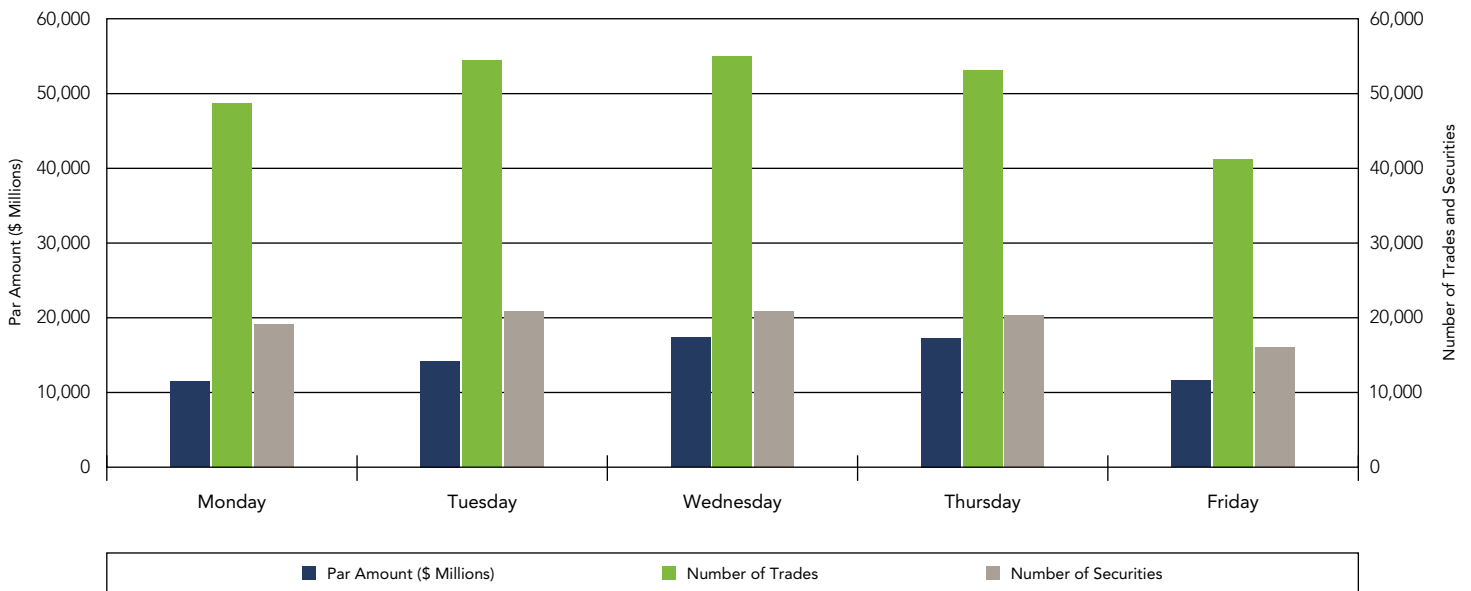
Time of Execution	Average Trade Size (\$)
7:45 AM	992,061
8:00 AM	1,546,077
8:15 AM	678,654
8:30 AM	760,287
8:45 AM	610,569
9:00 AM	650,060
9:15 AM	553,085
9:30 AM	541,148
9:45 AM	448,423
10:00 AM	402,737
10:15 AM	414,824
10:30 AM	452,025
10:45 AM	447,498
11:00 AM	640,577
11:15 AM	338,997
11:30 AM	311,684
11:45 AM	228,306
12:00 PM	260,359
12:15 PM	220,080
12:30 PM	247,814
12:45 PM	216,124
1:00 PM	241,440
1:15 PM	204,714

Time of Execution	Average Trade Size (\$)
1:30 PM	209,419
1:45 PM	190,997
2:00 PM	182,700
2:15 PM	184,172
2:30 PM	194,045
2:45 PM	185,193
3:00 PM	181,877
3:15 PM	186,308
3:30 PM	203,395
3:45 PM	200,912
4:00 PM	205,434
4:15 PM	206,145
4:30 PM	209,817
4:45 PM	220,454
5:00 PM	224,080
5:15 PM	483,273
5:30 PM	551,846
5:45 PM	461,182
6:00 PM	375,504
6:15 PM	405,590
6:30 PM	202,704
Other <sup>2</sup>	921,530
Overall	286,113

<sup>1</sup> Eastern time.

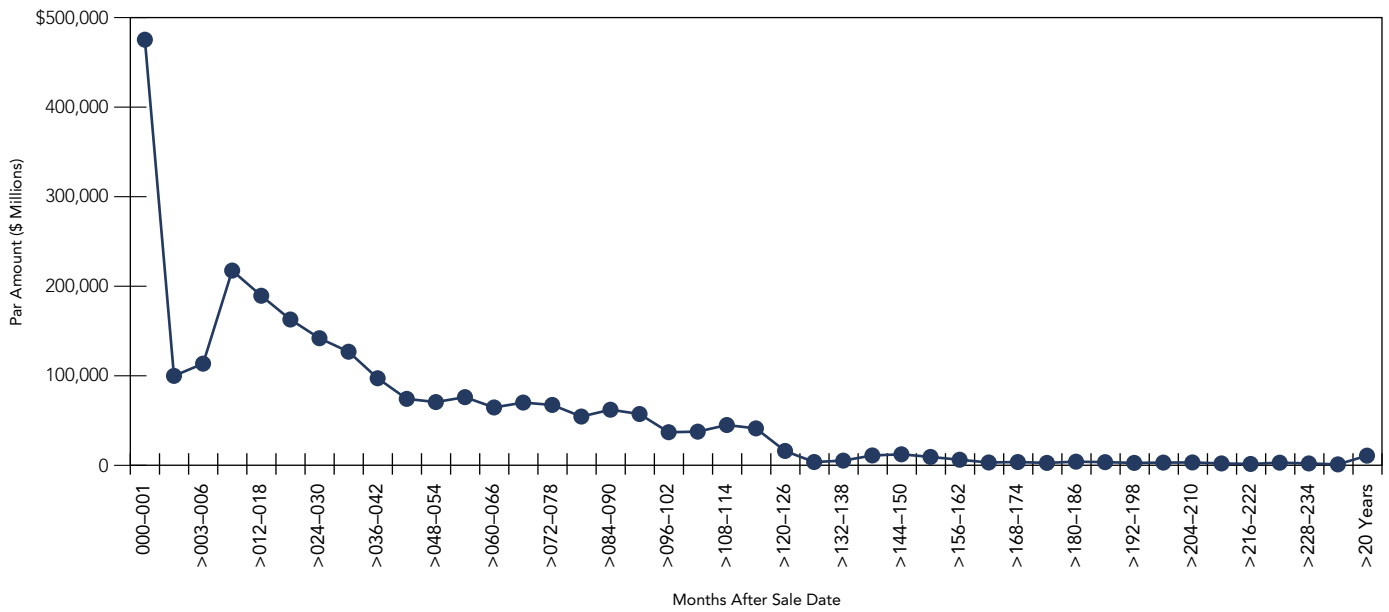
<sup>2</sup> Trades reported after 6:30 p.m. and before 7:30 a.m.

### Average Trading Volume by Day of Week, 2022



Weekday	Par Amount (\$ Millions)	Number of Trades	Number of Securities
Monday	11,466.5	48,728	19,062
Tuesday	14,219.8	54,447	20,865
Wednesday	17,357.4	55,027	20,844
Thursday	17,315.6	53,147	20,301
Friday	11,612.0	41,234	16,046

### Par Amount Traded by Months After Sale Date<sup>1</sup>, 2022



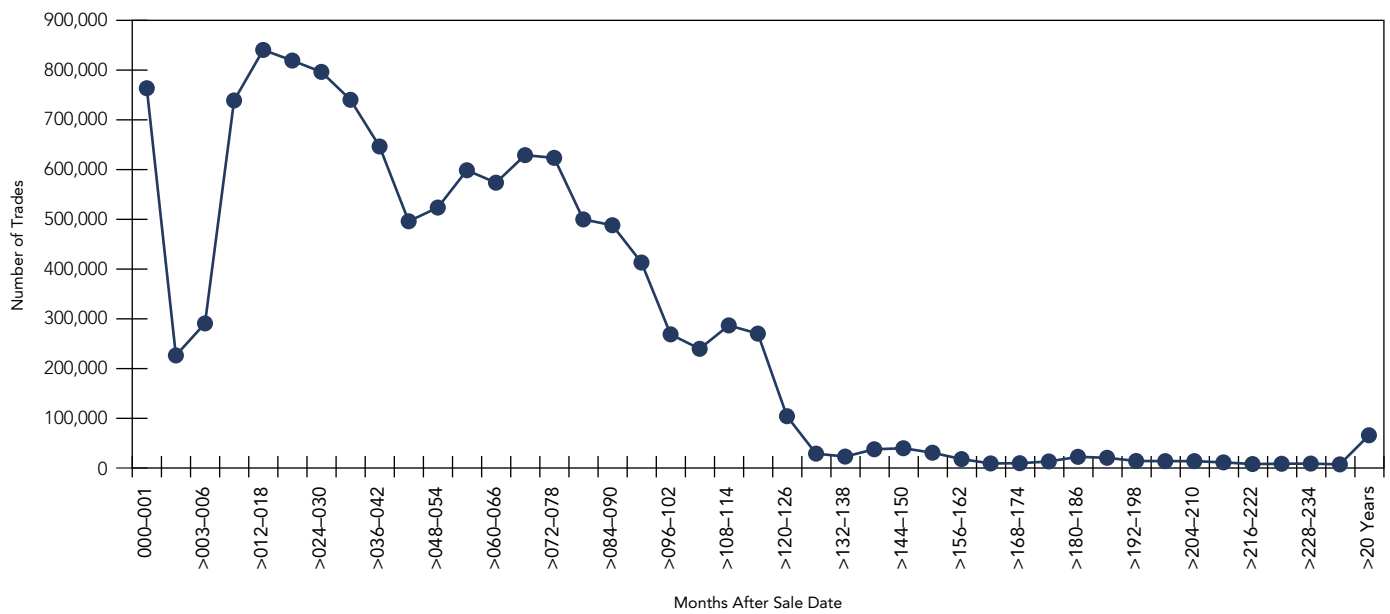
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Months After Sale Date	Par Amount (\$ Millions)	% of Total Par	Cumulative Percentage of Par Value
000-001	475,293.7	19.1%	19.1%
>001-003	99,888.8	4.0%	23.1%
>003-006	113,538.9	4.6%	27.6%
>006-012	217,499.3	8.7%	36.3%
>012-018	189,362.8	7.6%	43.9%
>018-024	162,842.6	6.5%	50.5%
>024-030	141,943.4	5.7%	56.2%
>030-036	126,864.1	5.1%	61.3%
>036-042	97,217.1	3.9%	65.2%
>042-048	74,217.4	3.0%	68.1%
>048-054	70,652.2	2.8%	71.0%
>054-060	76,143.4	3.1%	74.0%
>060-066	64,623.0	2.6%	76.6%
>066-072	70,090.4	2.8%	79.4%
>072-078	67,434.0	2.7%	82.1%
>078-084	54,467.8	2.2%	84.3%
>084-090	62,113.4	2.5%	86.8%
>090-096	57,309.2	2.3%	89.1%
>096-102	36,984.7	1.5%	90.6%
>102-108	37,613.9	1.5%	92.1%
>108-114	45,014.1	1.8%	93.9%
>114-120	41,256.5	1.7%	95.6%

Months After Sale Date	Par Amount (\$ Millions)	% of Total Par	Cumulative Percentage of Par Value
>120-126	16,061.9	0.6%	96.2%
>126-132	3,684.0	0.1%	96.3%
>132-138	5,260.4	0.2%	96.6%
>138-144	11,036.6	0.4%	97.0%
>144-150	12,298.5	0.5%	97.5%
>150-156	9,390.4	0.4%	97.9%
>156-162	6,256.6	0.3%	98.1%
>162-168	3,175.5	0.1%	98.2%
>168-174	3,679.9	0.1%	98.4%
>174-180	2,718.8	0.1%	98.5%
>180-186	4,097.0	0.2%	98.7%
>186-192	3,549.2	0.1%	98.8%
>192-198	2,715.0	0.1%	98.9%
>198-204	3,053.7	0.1%	99.0%
>204-210	3,216.7	0.1%	99.2%
>210-216	2,124.7	0.1%	99.3%
>216-222	1,540.4	0.1%	99.3%
>222-228	2,962.9	0.1%	99.4%
>228-234	2,115.2	0.1%	99.5%
>234-240	1,054.8	0.0%	99.6%
>20 Years	10,803.0	0.4%	100.0%
<b>Total</b>	<b>2,493,165.9</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 \$895 million par amount traded for which the date of sale was not available.

### Number of Trades by Months After Sale Date<sup>1</sup>, 2022



continued >

Months After Sale Date	Number of Trades	% of Total Trades	Cumulative Percentage of Number of Trades
000-001	763,523	6.2%	6.2%
>001-003	226,471	1.8%	8.1%
>003-006	290,841	2.4%	10.4%
>006-012	738,969	6.0%	16.4%
>012-018	840,505	6.8%	23.3%
>018-024	819,173	6.7%	29.9%
>024-030	796,392	6.5%	36.4%
>030-036	740,274	6.0%	42.5%
>036-042	646,450	5.3%	47.7%
>042-048	496,064	4.0%	51.8%
>048-054	523,670	4.3%	56.0%
>054-060	598,645	4.9%	60.9%
>060-066	573,654	4.7%	65.6%
>066-072	629,038	5.1%	70.7%
>072-078	623,584	5.1%	75.8%
>078-084	499,866	4.1%	79.8%
>084-090	488,172	4.0%	83.8%
>090-096	413,181	3.4%	87.2%
>096-102	268,827	2.2%	89.3%
>102-108	239,760	2.0%	91.3%
>108-114	286,806	2.3%	93.6%
>114-120	270,284	2.2%	95.8%

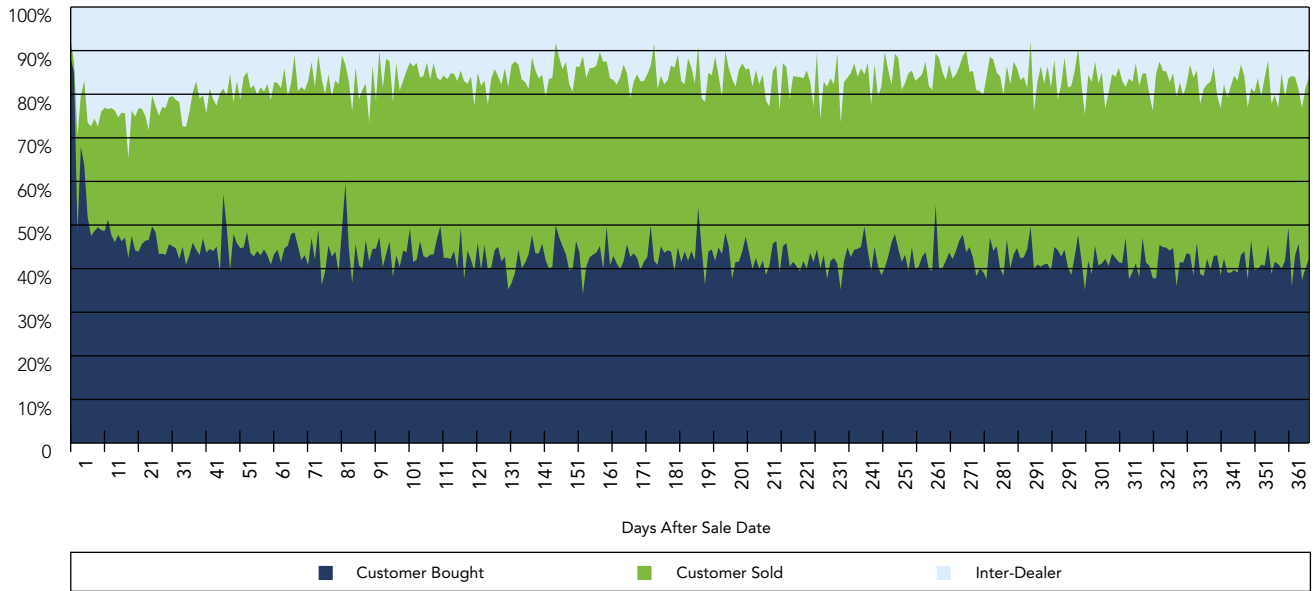
Months After Sale Date	Number of Trades	% of Total Trades	Cumulative Percentage of Number of Trades
>120-126	104,283	0.8%	96.7%
>126-132	29,052	0.2%	96.9%
>132-138	23,157	0.2%	97.1%
>138-144	37,811	0.3%	97.4%
>144-150	39,911	0.3%	97.7%
>150-156	30,942	0.3%	98.0%
>156-162	18,076	0.1%	98.1%
>162-168	9,340	0.1%	98.2%
>168-174	9,825	0.1%	98.3%
>174-180	13,324	0.1%	98.4%
>180-186	22,664	0.2%	98.6%
>186-192	20,743	0.2%	98.8%
>192-198	14,286	0.1%	98.9%
>198-204	13,990	0.1%	99.0%
>204-210	13,992	0.1%	99.1%
>210-216	11,468	0.1%	99.2%
>216-222	8,121	0.1%	99.3%
>222-228	8,723	0.1%	99.3%
>228-234	9,077	0.1%	99.4%
>234-240	7,445	0.1%	99.5%
>20 Years	65,951	0.5%	100.0%
<b>Total</b>	<b>12,286,330</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 1,133 trades for which the date of sale was not available.

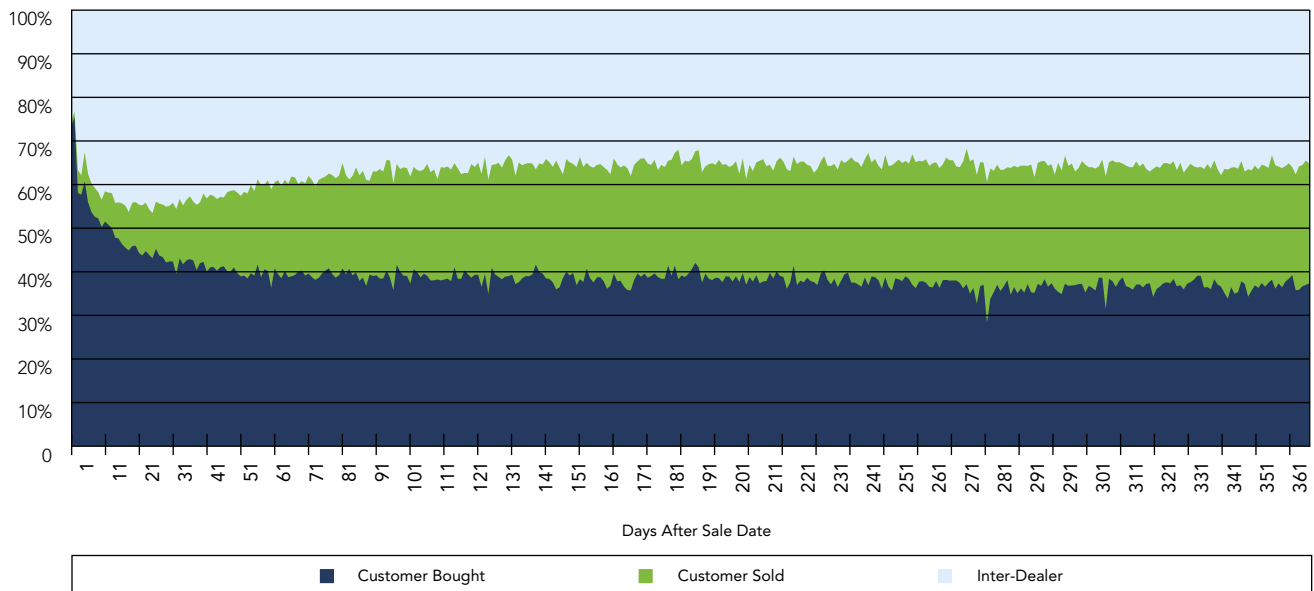


### Distribution of Trades by Type After Sale Date<sup>1</sup>, 2022

Par Amount

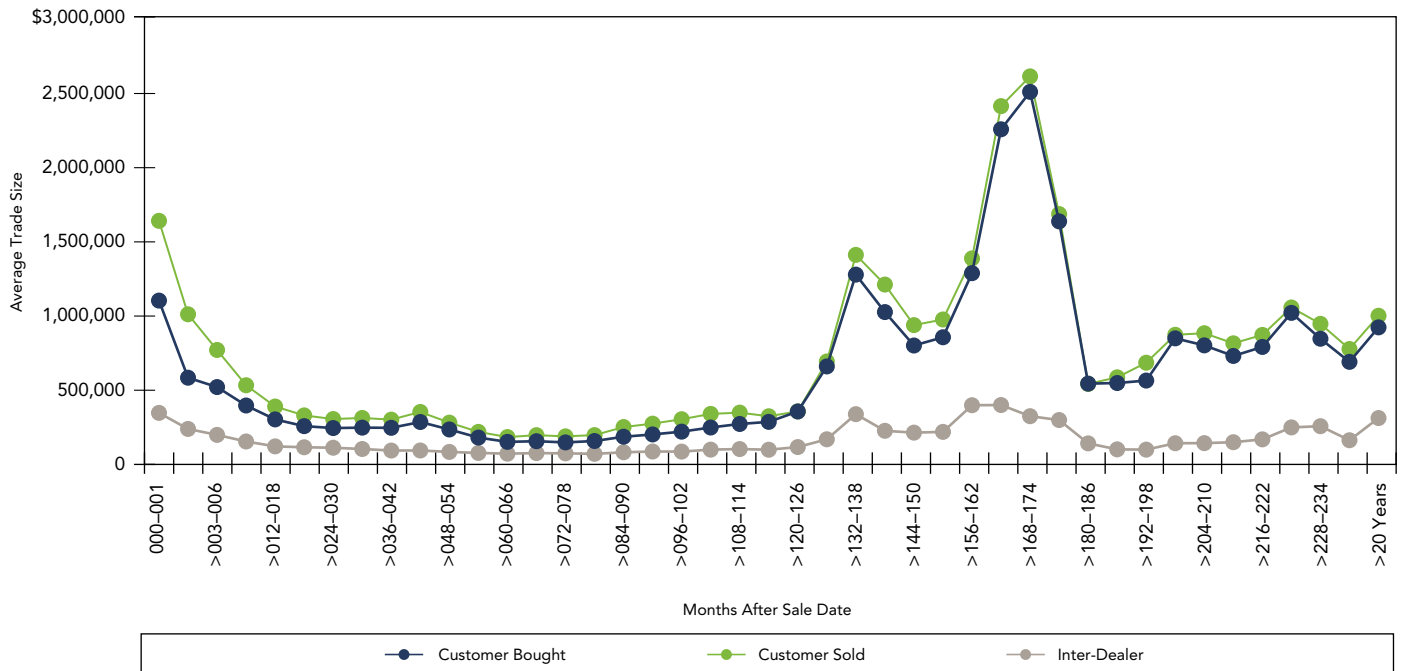


Number of Trades



<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>, 2022 All trades



Months After Sale Date	Customer Bought	Customer Sold	Inter-dealer
000-001	1,104,216	1,641,682	347,343
>001-003	584,449	1,011,844	239,071
>003-006	521,325	771,331	198,961
>006-012	397,022	533,427	154,540
>012-018	303,391	390,109	121,578
>018-024	257,928	330,323	115,579
>024-030	245,083	305,760	112,354
>030-036	247,833	313,085	103,896
>036-042	246,657	301,830	93,471
>042-048	285,812	353,585	93,934
>048-054	235,473	281,533	84,251
>054-060	180,899	219,304	77,346
>060-066	151,940	184,330	72,299
>066-072	156,300	197,092	76,369
>072-078	148,281	189,040	74,576
>078-084	157,773	197,521	71,044
>084-090	186,530	251,795	81,834
>090-096	201,965	274,775	87,000
>096-102	220,861	304,547	86,371
>102-108	248,789	340,495	99,680
>108-114	272,545	349,001	103,551
>114-120	286,676	324,556	98,913

continued >

Months After Sale Date	Customer Bought	Customer Sold	Inter-dealer
>120-126	356,805	357,275	116,851
>126-132	660,431	693,857	169,345
>132-138	1,279,314	1,412,310	338,710
>138-144	1,026,824	1,212,204	226,608
>144-150	801,389	938,863	214,135
>150-156	857,025	976,843	219,268
>156-162	1,288,998	1,388,485	398,929
>162-168	2,258,814	2,414,946	400,230
>168-174	2,510,955	2,615,327	325,085
>174-180	1,638,179	1,687,305	299,103
>180-186	544,429	542,710	141,781
>186-192	548,509	586,909	101,426
>192-198	565,185	685,399	99,696
>198-204	849,646	873,641	142,752
>204-210	802,360	884,217	143,482
>210-216	731,013	816,153	149,637
>216-222	791,832	872,704	168,858
>222-228	1,021,415	1,057,656	249,480
>228-234	847,068	947,445	257,648
>234-240	691,273	777,907	162,870
>20 Years	923,730	1,002,039	312,577

<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, 2022

## Top 50 Most Active Securities, 2022

By par amount

Rank	CUSIP <sup>1</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	38122NB84	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	-	6/1/66	11,816.5	475
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	-	11/1/41	10,236.9	578
3	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	8/1/35	8,825.4	584
4	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/46	8,781.3	2,451
5	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/30	8,763.7	365
6	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/51	7,925.7	2,178
7	467229AF7	JACKSON CNTY MISS PORT FAC REV	-	6/1/23	5,669.9	560
8	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/45	5,127.8	487
9	414009PV6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	-	12/1/59	4,569.2	789
10	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/42	4,376.6	604
11	89602HAB3	TRIBOROUGH BRDG & TUNL AUTH N Y PAYROLL MOBILITY TAX	5.00	5/15/51	4,216.5	765
12	64966KTD5	NEW YORK N Y	-	3/1/42	4,110.0	455
13	888805CJ5	TOBACCO SETTLEMENT AUTH IOWA TOB SETTLEMENT REV	-	6/1/65	3,854.7	120
14	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	3,816.0	2,002
15	64972GZB3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/45	3,723.2	432
16	20775DTS1	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	-	7/1/42	3,715.9	244
17	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	-	11/1/29	3,162.2	226
18	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	12/1/40	3,153.8	213
19	64966ML98	NEW YORK N Y	-	12/1/47	3,115.4	333
20	544351PL7	LOS ANGELES CALIF	4.00	6/23/22	3,053.0	921
21	914455UH1	UNIVERSITY MICH UNIV REVS	3.50	4/1/52	3,047.9	368
22	74514L3T2	PUERTO RICO COMWLTH	-	11/1/43	3,002.1	5,049
23	64966LU41	NEW YORK N Y	-	6/1/44	2,963.9	459
24	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	2,963.0	3,176
25	544351QM4	LOS ANGELES CALIF	4.00	6/29/23	2,962.3	1,341
26	64972F4W3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/44	2,942.0	555
27	91412GSK2	UNIVERSITY CALIF REVS	-	5/15/48	2,934.2	715
28	19648FVN1	COLORADO HEALTH FACS AUTH REV	-	5/15/62	2,879.8	151
29	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	-	7/1/49	2,767.5	216
30	64971WEY2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	2/1/44	2,757.9	418
31	650028ZA4	NEW YORK ST TWY AUTH ST PERS INCOME TAX REV	5.00	3/15/48	2,753.1	385
32	20775DTU6	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	-	7/1/42	2,739.1	151
33	91412GSJ5	UNIVERSITY CALIF REVS	-	5/15/48	2,716.8	562
34	64986UA72	NEW YORK ST HSG FIN AGY REV	-	11/1/46	2,678.2	300
35	64971XKS6	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	11/1/44	2,628.2	339
36	38122NC91	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	2.69	6/1/30	2,609.9	134
37	914455UJ7	UNIVERSITY MICH UNIV REVS	4.45	4/1/22	2,551.1	661
38	160853VA2	CHARLOTTE-MECKLENBURG HOSP AUTH N C HEALTH CARE SYS REV	-	1/15/42	2,507.0	304
39	915217XM0	UNIVERSITY VA UNIV REVS	2.58	11/1/51	2,500.5	206
40	13063DL22	CALIFORNIA ST	-	10/1/28	2,498.3	149
41	733908AL1	PORT CORPUS CHRISTI AUTH TEX NUECES CNTY SOLID WASTE DISP REV	2.00	7/1/29	2,460.8	238
42	13032UB23	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	8/15/48	2,457.1	2,045
43	59261AM53	METROPOLITAN TRANSN AUTH N Y REV	-	11/15/50	2,384.9	274
44	64966LU25	NEW YORK N Y	-	6/1/44	2,383.4	520
45	583022AE8	MEADE CNTY KY INDL BLDG REV	2.40	8/1/61	2,370.0	363
46	57604TKD7	MASSACHUSETTS ST TRANSN FD REV	5.00	6/1/52	2,367.9	223
47	45204FAG0	ILLINOIS FIN AUTH REV	-	8/15/49	2,333.7	237
48	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	-	6/1/42	2,318.7	130
49	362848RR6	GAINESVILLE FLA UTILS SYS REV	-	10/1/42	2,310.1	265
50	64972F2J4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/44	2,218.1	332

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

## Top 50 Most Active Securities, 2022

By number of trades

Rank	CUSIP <sup>1</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74514L3T2	PUERTO RICO COMWLTH	-	11/1/43	3,002.1	5,049
2	74514L3R6	PUERTO RICO COMWLTH	-	7/1/33	1,168.0	4,003
3	74514L3F2	PUERTO RICO COMWLTH	5.38	7/1/25	1,339.5	3,683
4	74514L3G0	PUERTO RICO COMWLTH	5.63	7/1/27	1,214.9	3,596
5	74514L3H8	PUERTO RICO COMWLTH	5.63	7/1/29	1,137.1	3,537
6	74514L3P0	PUERTO RICO COMWLTH	4.00	7/1/46	1,477.6	3,488
7	74514L3N5	PUERTO RICO COMWLTH	4.00	7/1/41	1,513.4	3,419
8	646140DK6	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/51	805.1	3,367
9	74514L3J4	PUERTO RICO COMWLTH	5.75	7/1/31	1,032.0	3,351
10	74514L3E5	PUERTO RICO COMWLTH	5.25	7/1/23	1,021.6	3,274
11	74514L3K1	PUERTO RICO COMWLTH	4.00	7/1/33	1,239.3	3,257
12	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	2,963.0	3,176
13	74514L3Q8	PUERTO RICO COMWLTH	-	7/1/24	470.4	3,173
14	74514L3M7	PUERTO RICO COMWLTH	4.00	7/1/37	1,110.4	3,103
15	74514L3L9	PUERTO RICO COMWLTH	4.00	7/1/35	1,335.4	3,056
16	74514L4G9	PUERTO RICO COMWLTH	-	11/1/51	1,205.5	2,737
17	546399KS4	LOUISIANA PUB FACS AUTH REV	4.00	5/15/49	517.0	2,604
18	592643DR8	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	4.00	10/1/52	1,559.5	2,565
19	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	594.3	2,458
20	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/46	8,781.3	2,451
21	649835JX4	NEW YORK ST DORM AUTH REVS SECONDARILY INSD	4.25	5/1/52	445.9	2,274
22	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,163.6	2,250
23	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/51	7,925.7	2,178
24	60637AGQ9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.25	11/15/48	246.5	2,167
25	13032UB23	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	8/15/48	2,457.1	2,045
26	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	3,816.0	2,002
27	13063DWS3	CALIFORNIA ST	5.00	11/1/30	659.9	1,960
28	010685KF1	ALACHUA CNTY FLA HEALTH FACS AUTH HEALTH FACS REV	5.00	12/1/44	311.0	1,935
29	348430PV5	FORT PIERCE FLA UTILS AUTH REV	4.00	10/1/52	313.0	1,899
30	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	785.3	1,890
31	65821DWM9	NORTH CAROLINA MED CARE COMMN HEALTH CARE FACS REV	4.00	11/1/52	343.4	1,837
32	646140DJ9	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/42	487.4	1,793
33	64990FPV0	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	4.00	2/15/47	1,167.7	1,747
34	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/35	327.4	1,733
35	68450LGQ2	ORANGE CNTY FLA HEALTH FACS AUTH REV	4.00	10/1/52	1,519.6	1,700
36	83703FLP5	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	5.00	5/1/48	210.0	1,676
37	207098MD3	CONESTOGA VALLEY SCH DIST PA	4.00	2/1/51	238.0	1,665
38	451295D22	IDAHO HEALTH FACS AUTH REV	3.00	3/1/51	352.8	1,654
39	87638TGV9	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP REV	4.00	7/1/53	411.1	1,637
40	13062TH72	CALIFORNIA ST	5.25	8/1/32	1,233.9	1,628
41	64966QKD1	NEW YORK N Y	4.00	3/1/50	925.7	1,626
42	362762PS9	GAINESVILLE & HALL CNTY GA HOSP AUTH REV ANTIC CTF5	4.00	2/15/45	183.5	1,582
43	913366KT6	UNIV CALIF REGTS MED CTR POOLED REV	4.00	5/15/53	1,622.1	1,557
44	64966QXX3	NEW YORK N Y	4.00	8/1/50	739.0	1,537
45	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	415.7	1,516
46	59335KDH7	MIAMI-DADE CNTY FLA SEAPORT REV	4.00	10/1/49	228.1	1,480
47	65000BNG9	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.25	5/1/52	707.5	1,442
48	837151ZZ5	SOUTH CAROLINA ST PUB SVC AUTH REV	4.00	12/1/52	736.6	1,440
49	896035BF8	TRIBOROUGH BRDG & TUNL AUTH N Y SALES TAX REV	4.00	5/15/57	382.4	1,405
50	48504NCG2	KANSAS CITY MO INDL DEV AUTH ARPT SPL OBLIG	4.00	3/1/45	348.4	1,403

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

Top 50 Most Active Fixed Rate<sup>1</sup> Securities, 2022

By par amount

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	89602HAB3	TRIBOROUGH BRDG & TUNL AUTH N Y PAYROLL MOBILITY TAX	5.00	5/15/51	4,216.5	765
2	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	3,816.0	2,002
3	544351PL7	LOS ANGELES CALIF	4.00	6/23/22	3,053.0	921
4	914455UH1	UNIVERSITY MICH UNIV REVS	3.50	4/1/52	3,047.9	368
5	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	2,963.0	3,176
6	544351QM4	LOS ANGELES CALIF	4.00	6/29/23	2,962.3	1,341
7	650028ZA4	NEW YORK ST TWY AUTH ST PERS INCOME TAX REV	5.00	3/15/48	2,753.1	385
8	38122NC91	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	2.69	6/1/30	2,609.9	134
9	914455UJ7	UNIVERSITY MICH UNIV REVS	4.45	4/1/22	2,551.1	661
10	915217XM0	UNIVERSITY VA UNIV REVS	2.58	11/1/51	2,500.5	206
11	13063DL22	CALIFORNIA ST	1.75	10/1/28	2,498.3	149
12	13032UB23	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	8/15/48	2,457.1	2,045
13	57604TKD7	MASSACHUSETTS ST TRANSN FD REV	5.00	6/1/52	2,367.9	223
14	311450FZ8	FARMINGTON N MEX POLLUTN CTL REV	1.80	4/1/29	2,190.9	140
15	89602HDR5	TRIBOROUGH BRDG & TUNL AUTH N Y PAYROLL MOBILITY TAX	5.25	5/15/52	2,094.9	406
16	311450GA2	FARMINGTON N MEX POLLUTN CTL REV	1.80	4/1/29	1,990.9	74
17	576004HB4	MASSACHUSETTS ST SPL OBLIG REV	3.68	7/15/26	1,981.2	88
18	914460WT3	UNIVERSITY MINN	4.05	4/1/52	1,931.4	267
19	745160SJ1	PUERTO RICO COMWLTH AQUEDUCT & SWR AUTH REV	5.00	7/1/47	1,927.2	155
20	57604TKC9	MASSACHUSETTS ST TRANSN FD REV	5.00	6/1/50	1,806.5	243
21	544657HZ5	LOS ANGELES CNTY CALIF	4.00	6/30/23	1,635.9	986
22	913366KT6	UNIV CALIF REGTS MED CTR POOLED REV	4.00	5/15/53	1,622.1	1,557
23	38122ND66	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	4.21	6/1/50	1,571.6	595
24	592643DR8	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	4.00	10/1/52	1,559.5	2,565
25	73358W4V3	PORT AUTH N Y & N J	1.09	7/1/23	1,551.5	1,312
26	64990FW83	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	4.00	3/15/39	1,536.0	344
27	68450LGQ2	ORANGE CNTY FLA HEALTH FACS AUTH REV	4.00	10/1/52	1,519.6	1,700
28	74514L3N5	PUERTO RICO COMWLTH	4.00	7/1/41	1,513.4	3,419
29	74514L3P0	PUERTO RICO COMWLTH	4.00	7/1/46	1,477.6	3,488
30	23503CAN7	DALLAS FORT WORTH TEX INTL ARPT REV	4.51	11/1/51	1,466.5	379
31	79766DMB2	SAN FRANCISCO CALIF CITY & CNTY ARPTS COMMN INTL ARPT REV	5.00	5/1/49	1,464.5	299
32	605581QV2	MISSISSIPPI ST	2.49	10/1/35	1,460.8	79
33	59333RLR3	MIAMI-DADE CNTY FLA SCH DIST	5.00	3/15/52	1,427.4	282
34	544657HY8	LOS ANGELES CNTY CALIF	4.00	6/30/22	1,398.5	672
35	40934TAV5	HAMPTON RDS VA TRANSN ACCOUNTABILITY COMMN REV	5.00	7/1/26	1,395.2	1,181
36	89602HDT1	TRIBOROUGH BRDG & TUNL AUTH N Y PAYROLL MOBILITY TAX	5.00	8/15/24	1,354.4	832
37	74529JRH0	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.33	7/1/40	1,354.1	1,273
38	74514L3F2	PUERTO RICO COMWLTH	5.38	7/1/25	1,339.5	3,683
39	74514L3L9	PUERTO RICO COMWLTH	4.00	7/1/35	1,335.4	3,056
40	913366KS8	UNIV CALIF REGTS MED CTR POOLED REV	5.00	5/15/47	1,332.9	691
41	452252PQ6	ILLINOIS ST TOLL HWY AUTH TOLL HIGHWAY REV	5.00	1/1/45	1,326.7	1,022
42	452151LF8	ILLINOIS ST	5.10	6/1/33	1,286.7	1,322
43	64989KLE4	NEW YORK ST PWR AUTH REV	4.00	11/15/50	1,282.1	1,040
44	576004HG3	MASSACHUSETTS ST SPL OBLIG REV	4.11	7/15/31	1,250.3	216
45	650028ZN6	NEW YORK ST TWY AUTH ST PERS INCOME TAX REV	5.00	3/15/53	1,244.1	129
46	74514L3K1	PUERTO RICO COMWLTH	4.00	7/1/33	1,239.3	3,257
47	13062TH72	CALIFORNIA ST	5.25	8/1/32	1,233.9	1,628
48	13063DE53	CALIFORNIA ST	5.00	9/1/41	1,230.5	642
49	54627RAP5	LOUISIANA LOC GOVT ENVIRONMENTAL FACS & CMNTY DEV AUTH SYS RESTORATION	4.48	8/1/39	1,217.4	180
50	74514L3G0	PUERTO RICO COMWLTH	5.63	7/1/27	1,214.9	3,596

<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, 2022

By number of trades

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74514L3F2	PUERTO RICO COMWLTH	5.38	7/1/25	1,339.5	3,683
2	74514L3G0	PUERTO RICO COMWLTH	5.63	7/1/27	1,214.9	3,596
3	74514L3H8	PUERTO RICO COMWLTH	5.63	7/1/29	1,137.1	3,537
4	74514L3P0	PUERTO RICO COMWLTH	4.00	7/1/46	1,477.6	3,488
5	74514L3N5	PUERTO RICO COMWLTH	4.00	7/1/41	1,513.4	3,419
6	646140DK6	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/51	805.1	3,367
7	74514L3J4	PUERTO RICO COMWLTH	5.75	7/1/31	1,032.0	3,351
8	74514L3E5	PUERTO RICO COMWLTH	5.25	7/1/23	1,021.6	3,274
9	74514L3K1	PUERTO RICO COMWLTH	4.00	7/1/33	1,239.3	3,257
10	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	2,963.0	3,176
11	74514L3M7	PUERTO RICO COMWLTH	4.00	7/1/37	1,110.4	3,103
12	74514L3L9	PUERTO RICO COMWLTH	4.00	7/1/35	1,335.4	3,056
13	546399KS4	LOUISIANA PUB FACS AUTH REV	4.00	5/15/49	517.0	2,604
14	592643DR8	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	4.00	10/1/52	1,559.5	2,565
15	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	594.3	2,458
16	64983SJK4	NEW YORK ST DORM AUTH REVS SECONDARILY INSD	4.25	5/1/52	445.9	2,274
17	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,163.6	2,250
18	60637AGQ9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.25	11/15/48	246.5	2,167
19	13032UB23	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	8/15/48	2,457.1	2,045
20	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	3,816.0	2,002
21	13063DWS3	CALIFORNIA ST	5.00	11/1/30	659.9	1,960
22	010685KF1	ALACHUA CNTY FLA HEALTH FACS AUTH HEALTH FACS REV	5.00	12/1/44	311.0	1,935
23	348430PV5	FORT PIERCE FLA UTILS AUTH REV	4.00	10/1/52	313.0	1,899
24	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	785.3	1,890
25	65821DWM9	NORTH CAROLINA MED CARE COMMN HEALTH CARE FACS REV	4.00	11/1/52	343.4	1,837
26	646140DJ9	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/42	487.4	1,793
27	64990FPV0	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	4.00	2/15/47	1,167.7	1,747
28	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/35	327.4	1,733
29	68450LGQ2	ORANGE CNTY FLA HEALTH FACS AUTH REV	4.00	10/1/52	1,519.6	1,700
30	83703FLP5	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	5.00	5/1/48	210.0	1,676
31	207098MD3	CONESTOGA VALLEY SCH DIST PA	4.00	2/1/51	238.0	1,665
32	451295D22	IDAHO HEALTH FACS AUTH REV	3.00	3/1/51	352.8	1,654
33	87638TGV9	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP REV	4.00	7/1/53	411.1	1,637
34	13062TH72	CALIFORNIA ST	5.25	8/1/32	1,233.9	1,628
35	64966QKD1	NEW YORK N Y	4.00	3/1/50	925.7	1,626
36	362762PS9	GAINESVILLE & HALL CNTY GA HOSP AUTH REV ANTIC CTF5	4.00	2/15/45	183.5	1,582
37	913366KT6	UNIV CALIF REGTS MED CTR POOLED REV	4.00	5/15/53	1,622.1	1,557
38	64966QXX3	NEW YORK N Y	4.00	8/1/50	739.0	1,537
39	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	415.7	1,516
40	59335KDH7	MIAMI-DADE CNTY FLA SEAPORT REV	4.00	10/1/49	228.1	1,480
41	65000BNG9	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.25	5/1/52	707.5	1,442
42	837151ZZ5	SOUTH CAROLINA ST PUB SVC AUTH REV	4.00	12/1/52	736.6	1,440
43	896035BF8	TRIBOROUGH BRDG & TUNL AUTH N Y SALES TAX REV	4.00	5/15/57	382.4	1,405
44	48504NCG2	KANSAS CITY MO INDL DEV AUTH ARPT SPL OBLIG	4.00	3/1/45	348.4	1,403
45	267045DB5	DUTCHESS CNTY N Y LOC DEV CORP REV	4.13	1/1/49	196.3	1,402
46	13063A5E0	CALIFORNIA ST	7.50	4/1/34	1,123.1	1,391
47	68608JZA2	OREGON ST FACS AUTH REV	4.13	6/1/52	169.4	1,388
48	13032UMR6	CALIFORNIA HEALTH FACS FING AUTH REV	5.00	11/1/27	247.1	1,382
49	60637ACW0	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.00	11/15/42	173.5	1,360
50	650036AP1	NEW YORK ST URBAN DEV CORP REV	4.00	3/15/49	709.5	1,349

<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, 2022

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	10,236.9	578
2	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/35	8,825.4	584
3	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	8,763.7	365
4	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/23	5,669.9	560
5	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/45	5,127.8	487
6	414009PV6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	12/1/59	4,569.2	789
7	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/42	4,376.6	604
8	64966KTD5	NEW YORK N Y	3/1/42	4,110.0	455
9	64972GZB3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/45	3,723.2	432
10	20775DTS1	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	7/1/42	3,715.9	244
11	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	11/1/29	3,162.2	226
12	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	12/1/40	3,153.8	213
13	64966ML98	NEW YORK N Y	12/1/47	3,115.4	333
14	74514L3T2	PUERTO RICO COMWLTH	11/1/43	3,002.1	5,049
15	64966LU41	NEW YORK N Y	6/1/44	2,963.9	459
16	64972F4W3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	2,942.0	555
17	91412GSK2	UNIVERSITY CALIF REVS	5/15/48	2,934.2	715
18	19648FVN1	COLORADO HEALTH FACS AUTH REV	5/15/62	2,879.8	151
19	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	7/1/49	2,767.5	216
20	64971WEY2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/44	2,757.9	418
21	20775DTU6	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	7/1/42	2,739.1	151
22	91412GSJ5	UNIVERSITY CALIF REVS	5/15/48	2,716.8	562
23	64986UA72	NEW YORK ST HSG FIN AGY REV	11/1/46	2,678.2	300
24	64971XKS6	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/44	2,628.2	339
25	160853VA2	CHARLOTTE-MECKLENBURG HOSP AUTH N C HEALTH CARE SYS REV	1/15/42	2,507.0	304
26	733908AL1	PORT CORPUS CHRISTI AUTH TEX NUECES CNTY SOLID WASTE DISP REV	7/1/29	2,460.8	238
27	59261AM53	METROPOLITAN TRANSN AUTH N Y REV	11/15/50	2,384.9	274
28	64966LU25	NEW YORK N Y	6/1/44	2,383.4	520
29	583022AE8	MEADE CNTY KY INDL BLDG REV	8/1/61	2,370.0	363
30	45204FAG0	ILLINOIS FIN AUTH REV	8/15/49	2,333.7	237
31	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	6/1/42	2,318.7	130
32	362848RR6	GAINESVILLE FLA UTILS SYS REV	10/1/42	2,310.1	265
33	64972F2J4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	2,218.1	332
34	64972GMJ0	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/49	2,216.1	291
35	60528ACA0	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	2,214.0	178
36	91412GSG1	UNIVERSITY CALIF REVS	5/15/48	2,192.5	303
37	59261AWK9	METROPOLITAN TRANSN AUTH N Y REV	11/15/50	2,187.7	294
38	544525YL6	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	7/1/45	2,156.3	609
39	64971WUS7	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/41	2,152.1	325
40	64972GCQ5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/48	2,129.8	315
41	915260CL5	UNIVERSITY WIS HOSPS & CLINICS AUTH REV	4/1/48	2,065.4	235
42	915260CN1	UNIVERSITY WIS HOSPS & CLINICS AUTH REV	4/1/48	2,050.1	200
43	64966MSB6	NEW YORK N Y	10/1/46	2,046.0	334
44	64966LLS8	NEW YORK N Y	3/1/40	2,031.5	383
45	792070BH6	ST LUCIE CNTY FLA POLLUTN CTL REV	9/1/28	2,029.9	174
46	59261AM38	METROPOLITAN TRANSN AUTH N Y REV	11/1/35	2,027.8	146
47	64966J5Y8	NEW YORK N Y	10/1/40	2,000.4	616
48	68608JXF3	OREGON ST FACS AUTH REV	8/1/34	1,988.4	413
49	915137U35	UNIVERSITY TEX UNIV REVS	8/1/39	1,968.3	271
50	44244CN94	HOUSTON TEX UTIL SYS REV	5/15/34	1,954.8	163

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



## Top 50 Most Active Variable Rate Securities, 2022

By number of trades

Rank	CUSIP <sup>1</sup>	Issuer Name	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74514L3T2	PUERTO RICO COMWLTH	11/1/43	3,002.1	5,049
2	74514L4G9	PUERTO RICO COMWLTH	11/1/51	1,205.5	2,737
3	60637ALD2	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	1/1/50	124.8	1,169
4	74514L4C8	PUERTO RICO COMWLTH	11/1/51	698.9	1,078
5	91412GST3	UNIVERSITY CALIF REVS	5/15/48	746.9	881
6	414009PV6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	12/1/59	4,569.2	789
7	64966GMR0	NEW YORK N Y	8/1/26	284.1	729
8	91412GSK2	UNIVERSITY CALIF REVS	5/15/48	2,934.2	715
9	64971MLS9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	11/1/27	342.4	704
10	74440DCM4	KENTUCKY INC KY PUB ENERGY AUTH GAS SUPPLY REV	2/1/50	1,476.0	695
11	13032UWU6	CALIFORNIA HEALTH FACS FING AUTH REV	6/1/41	615.8	682
12	60528ABX1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	11/1/35	1,865.1	631
13	64972GCM4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/50	1,778.0	623
14	64966J5Y8	NEW YORK N Y	10/1/40	2,000.4	616
15	544525YL6	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	7/1/45	2,156.3	609
16	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/42	4,376.6	604
17	64966G4P4	NEW YORK N Y	4/1/38	1,107.9	584
18	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	8/1/35	8,825.4	584
19	402207AD6	GULF COAST INDL DEV AUTH TEX REV	11/1/41	10,236.9	578
20	880397BW3	TENNERGY CORP TENN GAS REV	12/1/51	1,942.3	568
21	91412GSJ5	UNIVERSITY CALIF REVS	5/15/48	2,716.8	562
22	467229AF7	JACKSON CNTY MISS PORT FAC REV	6/1/23	5,669.9	560
23	64972F4W3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/44	2,942.0	555
24	59259N8Q9	METROPOLITAN TRANSN AUTH N Y DEDICATED TAX FD	11/1/31	1,677.5	553
25	13013JAP1	CALIFORNIA CMNTY CHOICE FING AUTH CLEAN ENERGY PROJ REV	2/1/52	1,910.4	552
26	09182NBR0	BLACK BELT ENERGY GAS DIST ALA GAS SUPPLY REV	6/1/51	359.3	552
27	56035DCZ3	MAIN STR NAT GAS INC GA GAS SUPPLY REV	5/1/52	1,611.1	552
28	649845FA7	NEW YORK ST ENERGY RESH & DEV AUTH POLLUTN CTL REV	10/1/28	45.1	534
29	64971WE63	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	1,940.8	526
30	64966LU25	NEW YORK N Y	6/1/44	2,383.4	520
31	6133408D3	MONTGOMERY CNTY MD	11/1/37	1,407.0	514
32	57586CFZ3	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/40	371.4	513
33	603695FV4	MINNEAPOLIS & ST PAUL MINN HSG & REDEV AUTH HEALTH CARE REV	11/15/35	885.7	511
34	64966FHP2	NEW YORK N Y	8/1/34	311.7	506
35	64970KYY7	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/35	794.8	501
36	13048TGV9	CALIFORNIA MUN FIN AUTH REV	11/1/35	722.8	500
37	57586CGA7	MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	7/1/40	272.0	500
38	64966MFY0	NEW YORK N Y	8/1/44	1,024.1	499
39	13080SYA6	CALIFORNIA STATEWIDE CMNTYS DEV AUTH REV	4/1/38	108.0	499
40	64972FPP5	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	6/15/33	696.4	497
41	60528AAT1	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	12/1/30	833.4	487
42	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	8/1/45	5,127.8	487
43	71884SAC4	PHOENIX ARIZ INDL DEV AUTH HEALTH CARE FACS REV	11/15/52	1,283.1	482
44	45471ABR2	INDIANA FIN AUTH HOSP REV	11/1/39	1,053.5	480
45	09182TAM9	BLACK BELT ENERGY GAS DIST ALA GAS PROJ REV	10/1/52	1,242.8	476
46	64966GMS8	NEW YORK N Y	8/1/26	84.9	465
47	70556CAB0	PEFA INC IOWA GAS PROJ REV	9/1/49	1,558.8	465
48	64966LU41	NEW YORK N Y	6/1/44	2,963.9	459
49	64579FYJ6	NEW JERSEY HEALTH CARE FACS FING AUTH REV	7/1/43	1,125.0	458
50	64971WUK4	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	2/1/45	1,728.4	456

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

## Top 50 Most Active Short-Term<sup>1</sup> Securities, 2022

By par amount

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	467229AF7	JACKSON CNTY MISS PORT FAC REV	-	6/1/23	5,669.9	560
2	544351PL7	LOS ANGELES CALIF	4.00	6/23/22	3,053.0	921
3	544351QM4	LOS ANGELES CALIF	4.00	6/29/23	2,962.3	1,341
4	544657HZ5	LOS ANGELES CNTY CALIF	4.00	6/30/23	1,635.9	986
5	73358W4V3	PORT AUTH N Y & N J	1.09	7/1/23	1,551.5	1,312
6	79208EBY8	ST LUCIE CNTY FLA SOLID WASTE DISP REV	1.90	5/1/24	1,528.3	228
7	544657HY8	LOS ANGELES CNTY CALIF	4.00	6/30/22	1,398.5	672
8	89602HDT1	TRIBOROUGH BRDG & TUNL AUTH N Y PAYROLL MOBILITY TAX	5.00	8/15/24	1,354.4	832
9	59261AE78	METROPOLITAN TRANSN AUTH N Y REV	5.00	2/1/23	1,114.0	1,037
10	38612PAA2	GRAND PKWY TRANSN CORP TEX	5.00	2/1/23	1,049.4	428
11	74514L3E5	PUERTO RICO COMWLTH	5.25	7/1/23	1,021.6	3,274
12	576004GV1	MASSACHUSETTS ST SPL OBLIG REV	3.56	7/15/23	914.4	283
13	928104QM3	VIRGINIA SMALL BUSINESS FING AUTH REV	2.50	12/31/23	846.0	47
14	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	841.3	922
15	797400MN5	SAN DIEGO CNTY CALIF REGL TRANSN COMMN SALES TAX REV	5.00	10/1/22	796.2	610
16	467222CJ2	JACKSON CNTY MISS POLLUTN CTL REV	1.70	6/1/23	795.5	337
17	65830RCW7	NORTH CAROLINA TPK AUTH TRIANGLE EXPWY SYS REV	5.00	2/1/24	685.1	357
18	573202AY4	MARTIN CNTY FLA POLLUTN CTL REV	-	7/15/22	618.3	90
19	59333RLS1	MIAMI-DADE CNTY FLA SCH DIST	4.00	2/23/23	604.1	224
20	769110CV7	RIVERSIDE CNTY CALIF	2.00	6/30/22	559.6	195
21	130536PR0	CALIFORNIA POLLUTN CTL FING AUTH SOLID WASTE DISP REV	4.10	8/1/23	559.5	35
22	769110CW5	RIVERSIDE CNTY CALIF	5.00	6/30/23	531.1	226
23	19672MVC8	COLORADO ST ED LN PROG	-	6/29/22	506.7	31
24	01183QG78	ALASKA ST HSG FIN CORP TAXABLE DISC COML PAPER NTS 3/A2 YRS 3&4	-	-	471.8	13
25	41386RLB2	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	3.75	12/29/22	450.0	4
26	41386RLC0	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	3.75	12/30/22	450.0	4
27	41386RLD8	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	3.70	1/3/23	450.0	4
28	41386RH43	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	8/4/22	450.0	7
29	41386RH76	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	8/8/22	450.0	5
30	41386RHK7	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	8/24/22	450.0	5
31	41386RHL5	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	8/25/22	450.0	6
32	41386RHM3	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	8/26/22	450.0	6
33	41386RHN1	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	8/29/22	450.0	6
34	41386RHR2	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/1/22	450.0	6
35	41386RHU5	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/7/22	450.0	6
36	41386RHW1	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/9/22	450.0	6
37	41386RHX9	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/12/22	450.0	6
38	41386RJ74	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/22/22	450.0	6
39	41386RJ82	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/23/22	450.0	8
40	41386RJ90	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/26/22	450.0	7
41	41386RJC3	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/29/22	450.0	5
42	41386JRD1	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	9/30/22	450.0	5
43	41386RJE9	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/3/22	450.0	5
44	41386RJF6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/4/22	450.0	5
45	41386RJG4	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/5/22	450.0	5
46	41386RJJ8	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/7/22	450.0	5
47	41386RJK5	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/11/22	450.0	5
48	41386JL3	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/12/22	450.0	5
49	41386RJM1	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/13/22	450.0	5
50	41386RJN9	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV IAM COML PAPER 3/A2 SER C-1	-	10/14/22	450.0	5

<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, 2022

By number of trades

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74514L3E5	PUERTO RICO COMWLTH	5.25	7/1/23	1,021.6	3,274
2	74514L3Q8	PUERTO RICO COMWLTH	–	7/1/24	196.5	1,650
3	544351QM4	LOS ANGELES CALIF	4.00	6/29/23	2,962.3	1,341
4	73358W4V3	PORT AUTH N Y & N J	–	7/1/23	1,551.5	1,312
5	59261AE78	METROPOLITAN TRANSN AUTH N Y REV	5.00	2/1/23	1,114.0	1,037
6	544657HZ5	LOS ANGELES CNTY CALIF	4.00	6/30/23	1,635.9	986
7	645913BB9	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	–	2/15/23	143.6	979
8	59261AA49	METROPOLITAN TRANSN AUTH N Y REV	5.00	9/1/22	841.3	922
9	544351PL7	LOS ANGELES CALIF	4.00	6/23/22	3,053.0	921
10	89602HDT1	TRIBOROUGH BRDG & TUNL AUTH N Y PAYROLL MOBILITY TAX	5.00	8/15/24	1,354.4	832
11	574193LE6	MARYLAND ST	4.00	8/1/23	183.8	679
12	82707BDG1	SILICON VY CLEAN WTR CALIF WASTEWTR REV	3.00	3/1/24	118.2	678
13	544657HY8	LOS ANGELES CNTY CALIF	4.00	6/30/22	1,398.5	672
14	646039YG6	NEW JERSEY ST	4.00	6/1/23	282.9	643
15	650035W61	NEW YORK ST URBAN DEV CORP REV	5.00	3/15/23	113.1	631
16	574193KM9	MARYLAND ST	5.00	8/1/23	115.1	618
17	645913BC7	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	–	2/15/24	95.7	613
18	797400MN5	SAN DIEGO CNTY CALIF REGL TRANSN COMMN SALES TAX REV	5.00	10/1/22	796.2	610
19	649717VP7	NEW YORK N Y CITY TR CULTURAL RES REV	4.00	2/1/23	63.8	580
20	70914PYP1	PENNSYLVANIA ST	5.00	8/15/23	136.5	569
21	467229AF7	JACKSON CNTY MISS PORT FAC REV	–	6/1/23	5,669.9	560
22	70914PJ78	PENNSYLVANIA ST	5.00	1/1/24	106.6	544
23	239427AG2	DAWSON RIDGE MET DIST NO 1 COLO	–	10/1/22	370.0	527
24	59261ANC7	METROPOLITAN TRANSN AUTH N Y REV	5.00	11/15/23	235.9	526
25	13063DN20	CALIFORNIA ST	5.00	4/1/23	141.9	510
26	794665FZ7	SALES TAX ASSET RECEIVABLE CORP N Y REV	5.00	10/15/23	34.5	507
27	7962532J0	SAN ANTONIO TEX ELEC & GAS REV	5.25	2/1/24	78.7	505
28	13063CY95	CALIFORNIA ST	5.00	9/1/23	114.5	504
29	594612DF7	MICHIGAN ST	5.00	3/15/24	48.5	503
30	646136YC9	NEW JERSEY ST TRANSN TR FD AUTH	5.25	12/15/23	51.1	493
31	64972GSA3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	5.00	6/15/23	36.7	492
32	5446465H1	LOS ANGELES CALIF UNI SCH DIST	5.00	7/1/23	156.7	487
33	650035W79	NEW YORK ST URBAN DEV CORP REV	5.00	3/15/24	81.6	483
34	602366XZ4	MILWAUKEE WIS	5.00	2/1/23	97.9	482
35	684421FB1	ORANGE CNTY CALIF WTR DIST REV CTFS PARTN	2.00	8/15/23	174.0	477
36	938823AS0	WASHINGTON FED HWY GRNT ANTIC REV	5.00	9/1/22	30.8	468
37	13066YSX8	CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	5.00	5/1/22	168.3	461
38	646039YH4	NEW JERSEY ST	5.00	6/1/24	165.3	458
39	89602NZZ0	TRIBOROUGH BRDG & TUNL AUTH N Y REVS	5.00	11/15/22	42.2	454
40	64966MJG5	NEW YORK N Y	5.00	8/1/23	60.9	447
41	64971XA65	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	5.00	11/1/22	84.5	442
42	010609AS4	ALABAMA ST PUB SCH & COLLEGE AUTH	5.00	1/1/23	81.9	438
43	5446527W4	LOS ANGELES CALIF WASTEWTR SYS REV	5.00	6/1/23	49.4	436
44	38612PAA2	GRAND PKWY TRANSN CORP TEX	5.00	2/1/23	1,049.4	428
45	13063DBJ6	CALIFORNIA ST	5.00	11/1/23	54.1	422
46	79730AHZ4	SAN DIEGO CALIF PUB FACS FING AUTH SWR REV	5.00	5/15/23	33.6	417
47	57582RJS6	MASSACHUSETTS ST	5.00	7/1/23	58.6	413
48	13063DR59	CALIFORNIA ST	5.00	9/1/23	146.8	410
49	546589S86	LOUISVILLE & JEFFERSON CNTY KY MET SWR DIST SWR & DRAIN SYS REV	3.00	10/14/22	222.2	408
50	57582RHS8	MASSACHUSETTS ST	5.00	7/1/23	22.3	406

<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, 2022

By par amount

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	38122NB84	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	-	6/1/66	11,816.5	475
2	402207AD6	GULF COAST INDL DEV AUTH TEX REV	-	11/1/41	10,236.9	578
3	270777AC9	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	8/1/35	8,825.4	584
4	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/46	8,781.3	2,451
5	60528AAS3	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	12/1/30	8,763.7	365
6	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	-	7/1/51	7,925.7	2,178
7	64971XFY9	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/45	5,127.8	487
8	414009PV6	HARRIS CNTY TEX CULTURAL ED FACS FIN CORP REV	-	12/1/59	4,569.2	789
9	64971XHT8	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	8/1/42	4,376.6	604
10	89602HAB3	TRIBOROUGH BRDG & TUNL AUTH N Y PAYROLL MOBILITY TAX	5.00	5/15/51	4,216.5	765
11	64966KTD5	NEW YORK N Y	-	3/1/42	4,110.0	455
12	888805CJ5	TOBACCO SETTLEMENT AUTH IOWA TOB SETTLEMENT REV	-	6/1/65	3,854.7	120
13	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	3,816.0	2,002
14	64972GZB3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/45	3,723.2	432
15	20775DTS1	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	-	7/1/42	3,715.9	244
16	54834RAC3	LOWER NECHES VALLEY AUTH TEX INDL DEV CORP EXEMPT FACS REV	-	11/1/29	3,162.2	226
17	270777AD7	EAST BATON ROUGE PARISH LA INC INDL DEV BRD REV	-	12/1/40	3,153.8	213
18	64966ML98	NEW YORK N Y	-	12/1/47	3,115.4	333
19	914455UH1	UNIVERSITY MICH UNIV REVS	3.50	4/1/52	3,047.9	368
20	74514L3T2	PUERTO RICO COMWLTH	-	11/1/43	3,002.1	5,049
21	64966LU41	NEW YORK N Y	-	6/1/44	2,963.9	459
22	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	2,963.0	3,176
23	64972F4W3	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/44	2,942.0	555
24	91412GSK2	UNIVERSITY CALIF REVS	-	5/15/48	2,934.2	715
25	19648FVN1	COLORADO HEALTH FACS AUTH REV	-	5/15/62	2,879.8	151
26	544525YN2	LOS ANGELES CALIF DEPT WTR & PWR WTRWKS REV	-	7/1/49	2,767.5	216
27	64971WEY2	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	2/1/44	2,757.9	418
28	650028ZA4	NEW YORK ST TWY AUTH ST PERS INCOME TAX REV	5.00	3/15/48	2,753.1	385
29	20775DTU6	CONNECTICUT ST HEALTH & EDL FACS AUTH REV	-	7/1/42	2,739.1	151
30	91412GSJ5	UNIVERSITY CALIF REVS	-	5/15/48	2,716.8	562
31	64986UA72	NEW YORK ST HSG FIN AGY REV	-	11/1/46	2,678.2	300
32	64971XKS6	NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	-	11/1/44	2,628.2	339
33	38122NC91	GOLDEN ST TOB SECURITIZATION CORP CALIF TOB SETTLEMENT REV	2.69	6/1/30	2,609.9	134
34	914455UJ7	UNIVERSITY MICH UNIV REVS	4.45	4/1/22	2,551.1	661
35	160853VA2	CHARLOTTE-MECKLENBURG HOSP AUTH N C HEALTH CARE SYS REV	-	1/15/42	2,507.0	304
36	915217XM0	UNIVERSITY VA UNIV REVS	2.58	11/1/51	2,500.5	206
37	13063DL22	CALIFORNIA ST	-	10/1/28	2,498.3	149
38	733908AL1	PORT CORPUS CHRISTI AUTH TEX NUECES CNTY SOLID WASTE DISP REV	2.00	7/1/29	2,460.8	238
39	13032UB23	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	8/15/48	2,457.1	2,045
40	59261AM53	METROPOLITAN TRANSN AUTH N Y REV	-	11/15/50	2,384.9	274
41	64966LU25	NEW YORK N Y	-	6/1/44	2,383.4	520
42	583022AE8	MEADE CNTY KY INDL BLDG REV	2.40	8/1/61	2,370.0	363
43	57604TKD7	MASSACHUSETTS ST TRANSN FD REV	5.00	6/1/52	2,367.9	223
44	45204FAG0	ILLINOIS FIN AUTH REV	-	8/15/49	2,333.7	237
45	821697L23	SHELBY CNTY TENN HEALTH EDL & HSG FACS BRD REV	-	6/1/42	2,318.7	130
46	362848RR6	GAINESVILLE FLA UTILS SYS REV	-	10/1/42	2,310.1	265
47	64972F2J4	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/44	2,218.1	332
48	64972GMJ0	NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS REV	-	6/15/49	2,216.1	291
49	60528ACA0	MISSISSIPPI BUSINESS FIN CORP MISS GULF OPPORTUNITY ZONE INDL DEV REV	-	11/1/35	2,214.0	178
50	118217DA3	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	-	6/1/57	2,206.8	76

<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, 2022

By number of trades

Rank	CUSIP <sup>2</sup>	Issuer Name	Coupon	Maturity	Par Amount (\$ Millions)	Number of Trades
1	74514L3T2	PUERTO RICO COMWLTH	–	11/1/43	3,002.1	5,049
2	74514L3R6	PUERTO RICO COMWLTH	–	7/1/33	1,168.0	4,003
3	74514L3F2	PUERTO RICO COMWLTH	5.38	7/1/25	1,339.5	3,683
4	74514L3G0	PUERTO RICO COMWLTH	5.63	7/1/27	1,214.9	3,596
5	74514L3H8	PUERTO RICO COMWLTH	5.63	7/1/29	1,137.1	3,537
6	74514L3P0	PUERTO RICO COMWLTH	4.00	7/1/46	1,477.6	3,488
7	74514L3N5	PUERTO RICO COMWLTH	4.00	7/1/41	1,513.4	3,419
8	646140DK6	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/51	805.1	3,367
9	74514L3J4	PUERTO RICO COMWLTH	5.75	7/1/31	1,032.0	3,351
10	74514L3K1	PUERTO RICO COMWLTH	4.00	7/1/33	1,239.3	3,257
11	74529JPX7	PUERTO RICO SALES TAX FING CORP SALES TAX REV	5.00	7/1/58	2,963.0	3,176
12	74514L3M7	PUERTO RICO COMWLTH	4.00	7/1/37	1,110.4	3,103
13	74514L3L9	PUERTO RICO COMWLTH	4.00	7/1/35	1,335.4	3,056
14	74514L4G9	PUERTO RICO COMWLTH	–	11/1/51	1,205.5	2,737
15	546399KS4	LOUISIANA PUB FACS AUTH REV	4.00	5/15/49	517.0	2,604
16	592643DR8	METROPOLITAN WASH D C ARPTS AUTH DULLES TOLL RD REV	4.00	10/1/52	1,559.5	2,565
17	645913AA2	NEW JERSEY ECONOMIC DEV AUTH ST PENSION FDG REV	7.43	2/15/29	594.3	2,458
18	74529JQG3	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/46	8,781.3	2,451
19	649835JX4	NEW YORK ST DORM AUTH REVS SECONDARILY INSD	4.25	5/1/52	445.9	2,274
20	13063A5G5	CALIFORNIA ST	7.55	4/1/39	1,163.6	2,250
21	74529JQH1	PUERTO RICO SALES TAX FING CORP SALES TAX REV	–	7/1/51	7,925.7	2,178
22	60637AGQ9	MISSOURI ST HEALTH & EDL FACS AUTH HEALTH FACS REV	4.25	11/15/48	246.5	2,167
23	13032UB23	CALIFORNIA HEALTH FACS FING AUTH REV	4.00	8/15/48	2,457.1	2,045
24	118217CZ9	BUCKEYE OHIO TOB SETTLEMENT FING AUTH	5.00	6/1/55	3,816.0	2,002
25	13063DWS3	CALIFORNIA ST	5.00	11/1/30	659.9	1,960
26	010685KF1	ALACHUA CNTY FLA HEALTH FACS AUTH HEALTH FACS REV	5.00	12/1/44	311.0	1,935
27	348430PV5	FORT PIERCE FLA UTILS AUTH REV	4.00	10/1/52	313.0	1,899
28	74529JPW9	PUERTO RICO SALES TAX FING CORP SALES TAX REV	4.75	7/1/53	785.3	1,890
29	65821DWM9	NORTH CAROLINA MED CARE COMMN HEALTH CARE FACS REV	4.00	11/1/52	343.4	1,837
30	646140DJ9	NEW JERSEY ST TPK AUTH TPK REV	4.00	1/1/42	487.4	1,793
31	64990FPV0	NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	4.00	2/15/47	1,167.7	1,747
32	531127AC2	LIBERTY N Y DEV CORP REV	5.25	10/1/35	327.4	1,733
33	68450LGQ2	ORANGE CNTY FLA HEALTH FACS AUTH REV	4.00	10/1/52	1,519.6	1,700
34	83703FLP5	SOUTH CAROLINA JOBS-ECONOMIC DEV AUTH HOSP REV	5.00	5/1/48	210.0	1,676
35	207098MD3	CONESTOGA VALLEY SCH DIST PA	4.00	2/1/51	238.0	1,665
36	451295D22	IDAHO HEALTH FACS AUTH REV	3.00	3/1/51	352.8	1,654
37	87638TGV9	TARRANT CNTY TEX CULTURAL ED FACS FIN CORP REV	4.00	7/1/53	411.1	1,637
38	13062TH72	CALIFORNIA ST	5.25	8/1/32	1,233.9	1,628
39	64966QKD1	NEW YORK N Y	4.00	3/1/50	925.7	1,626
40	362762PS9	GAINESVILLE & HALL CNTY GA HOSP AUTH REV ANTIC CTF5	4.00	2/15/45	183.5	1,582
41	913366KT6	UNIV CALIF REGTS MED CTR POOLED REV	4.00	5/15/53	1,622.1	1,557
42	64966QXX3	NEW YORK N Y	4.00	8/1/50	739.0	1,537
43	74514L3Q8	PUERTO RICO COMWLTH	–	7/1/24	273.9	1,523
44	36829QAA3	GDB DEBT RECOVERY AUTH OF COMWLTH PUERTO RICO	7.50	8/20/40	415.7	1,516
45	59335KDH7	MIAMI-DADE CNTY FLA SEAPORT REV	4.00	10/1/49	228.1	1,480
46	65000BNG9	NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	4.25	5/1/52	707.5	1,442
47	837151ZZ5	SOUTH CAROLINA ST PUB SVC AUTH REV	4.00	12/1/52	736.6	1,440
48	896035BF8	TRIBOROUGH BRDG & TUNL AUTH N Y SALES TAX REV	4.00	5/15/57	382.4	1,405
49	48504NCG2	KANSAS CITY MO INDL DEV AUTH ARPT SPL OBLIG	4.00	3/1/45	348.4	1,403
50	267045DB5	DUTCHESS CNTY N Y LOC DEV CORP REV	4.13	1/1/49	196.3	1,402

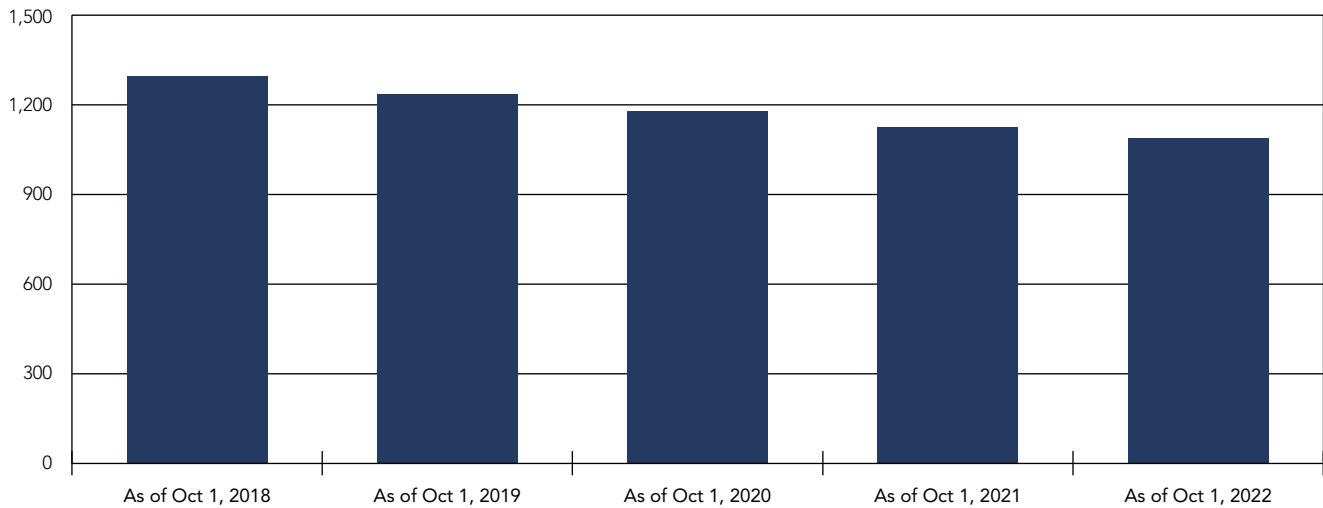
<sup>1</sup> Securities with two years or more in remaining maturity.<sup>2</sup> See page 1 for information on CUSIP identifiers.

## Part Four

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# Dealer Activity and Distribution of Municipal Trades, 2018–2022

### Number of MSRB Registered Dealers



	Number of Registered Dealers	% Change from Prior Period <sup>1</sup>
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%
As of Oct 1, 2021	1,125	-4.7%
As of Oct 1, 2022	1,089	-3.2%

<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

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

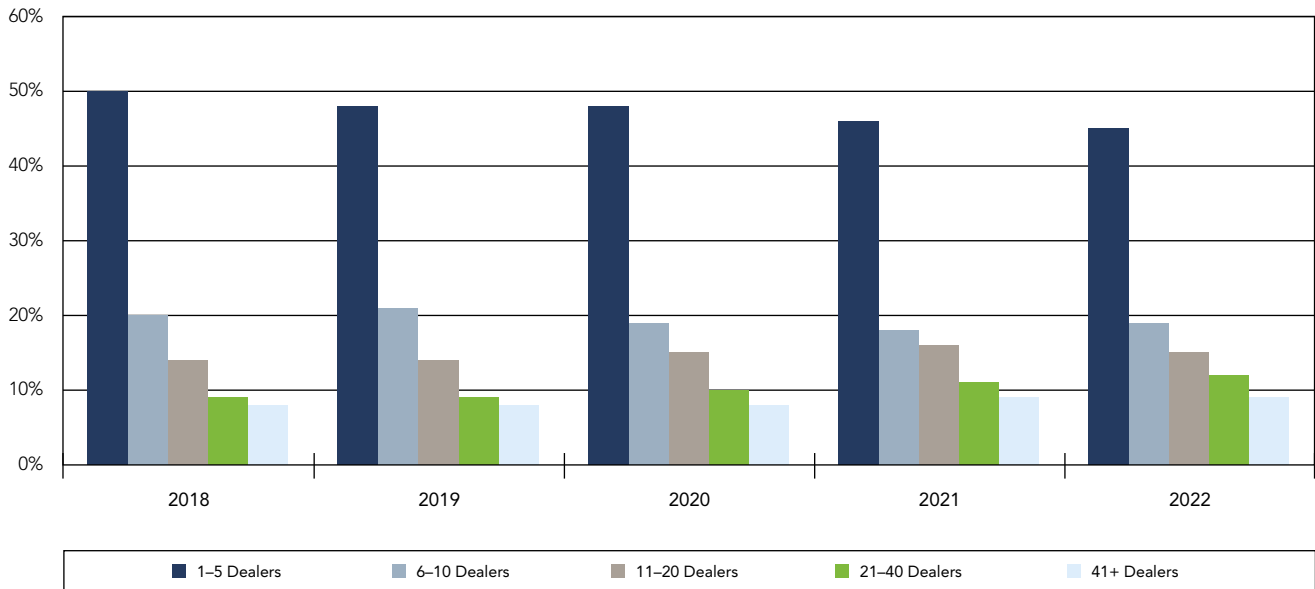
The MSRB offers subscriptions to two feeds of disclosure data:\*

- 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.

### Distribution of Customer Trades by Number of Dealers

Par amount

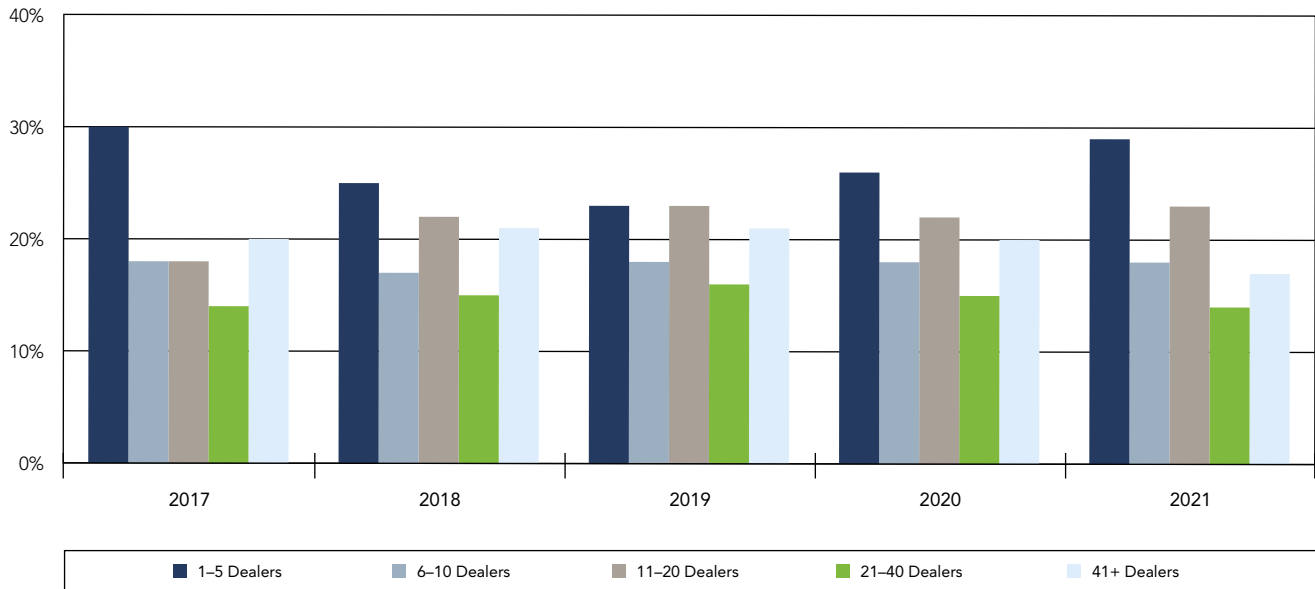


	2018	2019	2020	2021	2022
1-5 Dealers	50%	48%	48%	46%	45%
6-10 Dealers	20%	21%	19%	18%	19%
11-20 Dealers	14%	14%	15%	16%	15%
21-40 Dealers	9%	9%	10%	11%	12%
41+ Dealers	8%	8%	8%	9%	9%



### Distribution of Customer Trades by Number of Dealers

Number of trades



	2018	2019	2020	2021	2022
1-5 Dealers	30%	25%	23%	26%	29%
6-10 Dealers	18%	17%	18%	18%	18%
11-20 Dealers	18%	22%	23%	22%	23%
21-40 Dealers	14%	15%	16%	15%	14%
41+ Dealers	20%	21%	21%	20%	17%

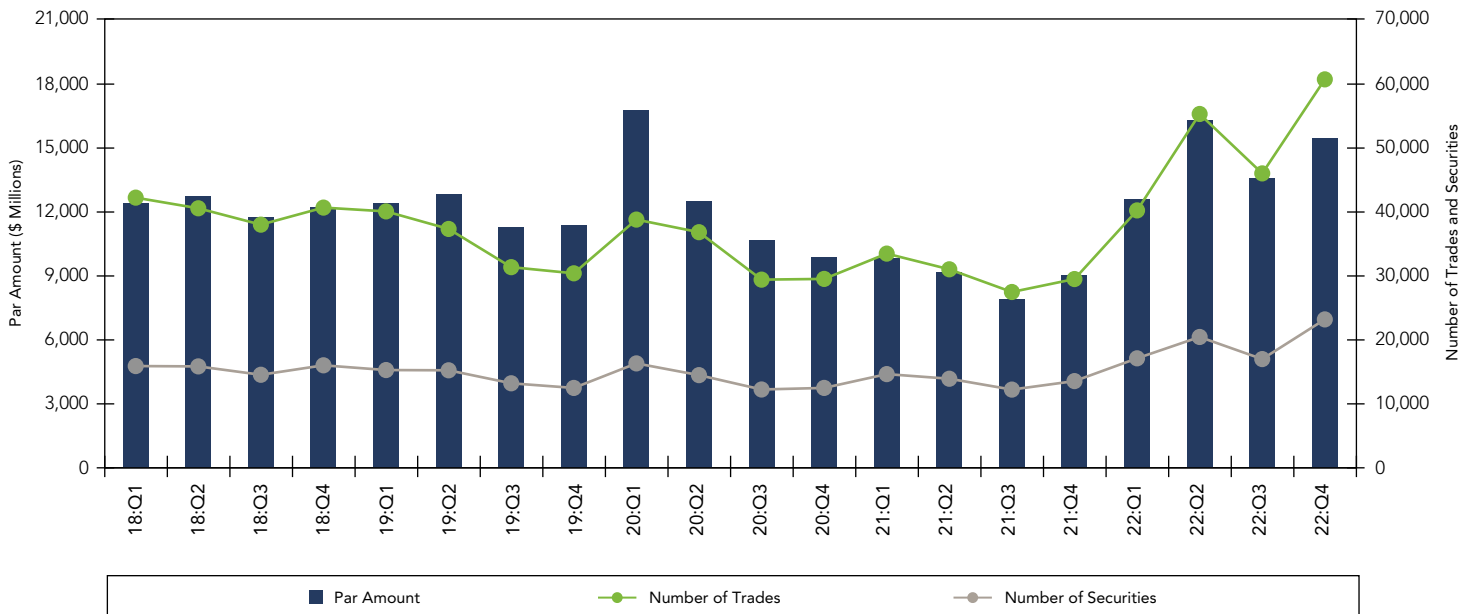
## Part Five

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# Overall Municipal Market Trading Activity, 2018–2022

### Average Daily Trading Volume, 2018–2022

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

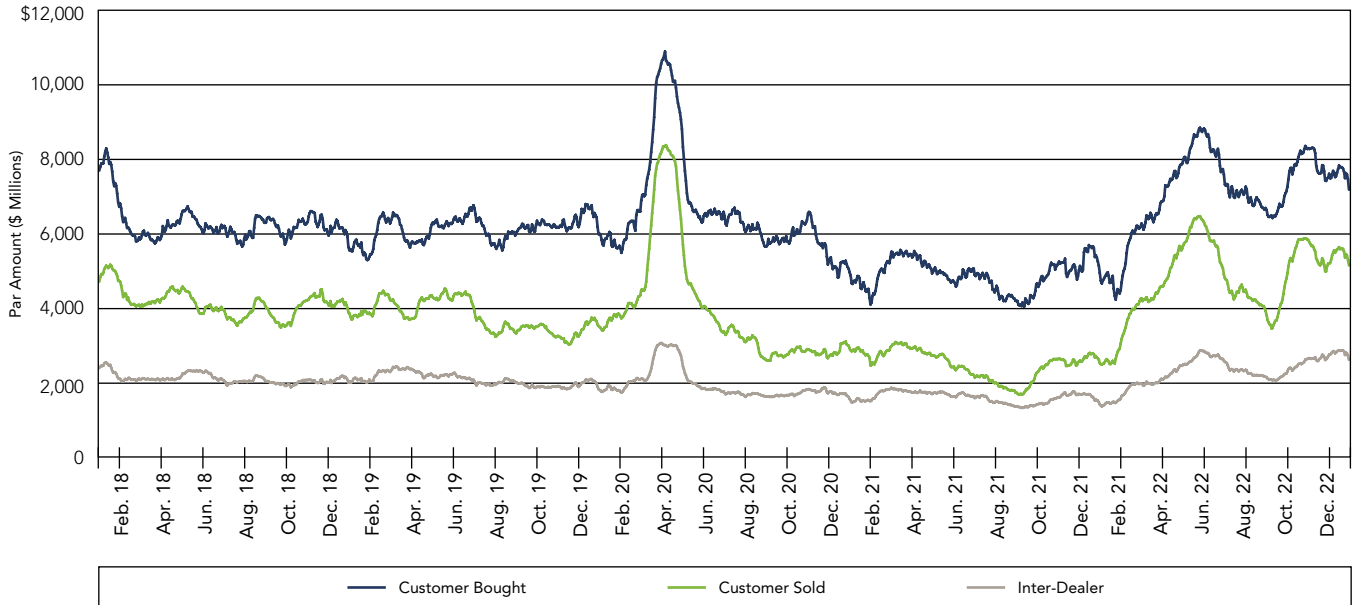


Quarter	Par Amount (\$ Millions)	Number of Trades	Number of Unique Securities
18:Q1	12,407.8	42,247	15,911
18:Q2	12,728.1	40,582	15,860
18:Q3	11,729.3	38,023	14,549
18:Q4	12,199.8	40,689	16,029
2018	12,266.7	40,372	15,588
19:Q1	12,396.0	40,096	15,288
19:Q2	12,813.6	37,351	15,248
19:Q3	11,295.8	31,377	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
21:Q1	9,825.8	33,496	14,653
21:Q2	9,156.5	31,041	13,930
21:Q3	7,887.1	27,491	12,232
21:Q4	9,032.8	29,517	13,560
2021	8,964.7	30,347	13,580
21:Q1	12,591.8	40,250	17,123
21:Q2	16,282.5	55,329	20,459
21:Q3	13,598.1	46,037	17,003
21:Q4	15,441.8	60,740	23,207
2022	14,475.4	50,593	19,444

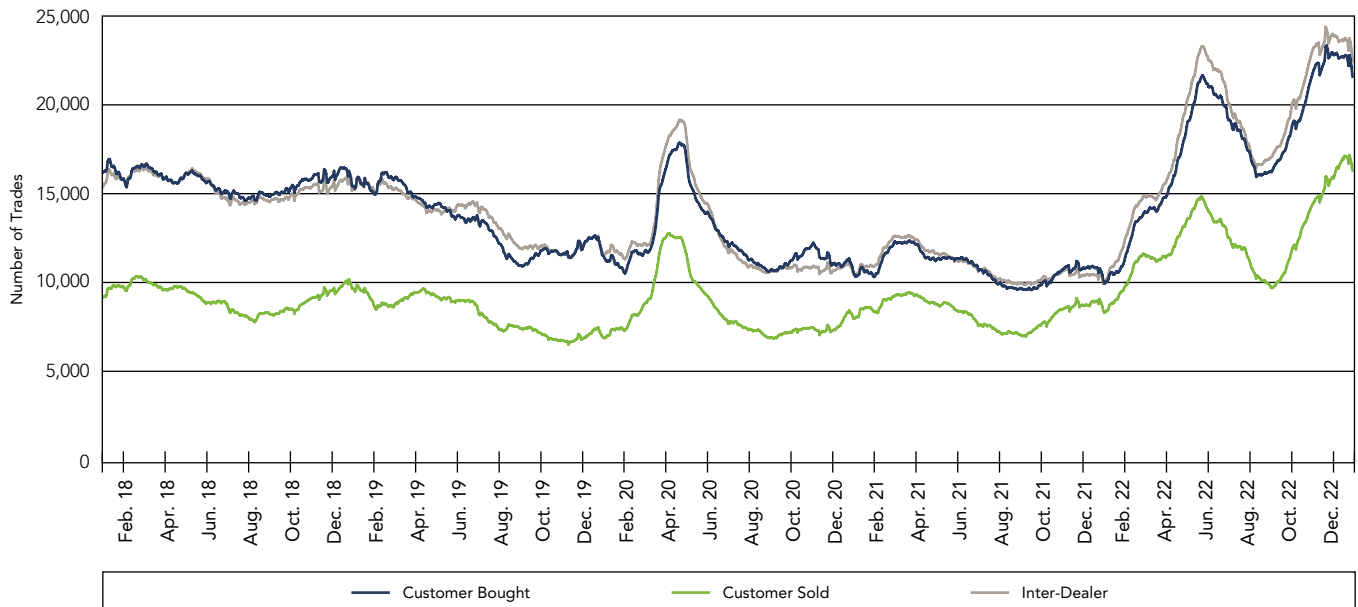
### Daily Trading Volume, 2018–2022

30-day trailing average by trade type

#### Par Amount



#### Number of Trades



### Trade Type and Size, 2018–2022

Average daily par amount in \$ millions

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>All Trades</b>									
<b>Total</b>	<b>12,266.7</b>	<b>11,960.7</b>	<b>12,409.7</b>	<b>8,964.7</b>	<b>14,475.4</b>	<b>12,591.8</b>	<b>16,282.5</b>	<b>13,598.1</b>	<b>15,441.8</b>
0–\$25,000	310.7	253.3	244.9	228.2	383.4	311.0	423.6	347.8	451.2
\$25,001–\$50,000	335.6	275.1	252.1	226.0	419.0	307.1	451.7	383.5	533.2
\$50,001–\$75,000	134.3	114.7	110.8	105.0	191.9	147.3	200.2	168.5	251.4
\$75,001–\$100,000	299.8	250.6	226.4	188.0	345.6	243.4	369.0	327.7	441.3
\$100,001–\$500,000	1,266.9	1,194.2	1,153.8	962.0	1,429.9	1,067.3	1,527.6	1,347.2	1,774.4
\$500,001–\$1,000,000	767.6	812.5	844.4	685.2	837.4	705.9	910.7	792.0	940.9
\$1,000,001–\$2,000,000	906.9	961.7	1,033.2	813.2	1,071.9	896.9	1,225.9	990.0	1,175.8
More than \$2,000,000	8,244.8	8,098.5	8,544.1	5,757.2	9,796.2	8,912.8	11,173.8	9,241.4	9,873.5
<b>Customer Bought</b>									
<b>Total</b>	<b>6,123.8</b>	<b>6,141.3</b>	<b>6,546.2</b>	<b>4,890.0</b>	<b>7,225.4</b>	<b>6,357.6</b>	<b>8,044.1</b>	<b>6,974.0</b>	<b>7,529.1</b>
0–\$25,000	118.2	93.2	86.1	75.7	136.3	102.4	151.0	129.2	162.2
\$25,001–\$50,000	131.5	105.2	89.7	77.8	152.2	106.7	165.5	144.6	191.7
\$50,001–\$75,000	51.6	43.7	39.4	37.3	66.9	51.2	69.3	60.3	86.8
\$75,001–\$100,000	118.2	96.0	80.7	67.1	127.2	87.2	138.5	123.4	159.2
\$100,001–\$500,000	509.1	482.9	484.3	420.0	553.8	439.4	603.8	508.7	663.2
\$500,001–\$1,000,000	334.9	363.9	414.8	348.1	371.0	335.4	417.0	334.7	397.5
\$1,000,001–\$2,000,000	425.0	471.4	536.2	438.0	509.3	446.8	587.4	465.4	538.5
More than \$2,000,000	4,435.3	4,484.9	4,815.2	3,426.0	5,308.7	4,788.5	5,911.6	5,207.8	5,329.9
<b>Customer Sold</b>									
<b>Total</b>	<b>4,060.9</b>	<b>3,750.4</b>	<b>3,931.2</b>	<b>2,466.5</b>	<b>4,876.2</b>	<b>4,224.9</b>	<b>5,630.9</b>	<b>4,403.0</b>	<b>5,255.1</b>
0–\$25,000	68.7	58.0	61.5	65.2	93.0	86.9	99.9	76.9	108.7
\$25,001–\$50,000	70.2	58.7	63.0	62.4	98.2	82.9	102.3	80.8	127.0
\$50,001–\$75,000	31.6	26.3	29.9	30.5	54.2	43.5	55.7	44.1	73.6
\$75,001–\$100,000	67.3	57.4	60.5	52.1	80.6	64.6	82.3	68.8	106.7
\$100,001–\$500,000	302.0	273.9	281.0	232.1	377.7	278.3	388.2	338.0	505.4
\$500,001–\$1,000,000	212.4	204.0	204.0	154.2	238.8	182.7	248.5	227.6	295.9
\$1,000,001–\$2,000,000	278.7	264.5	275.5	198.2	348.8	268.3	391.3	322.2	413.1
More than \$2,000,000	3,030.1	2,807.6	2,955.9	1,671.9	3,584.9	3,217.7	4,262.7	3,244.9	3,624.7
<b>Inter-Dealer</b>									
<b>Total</b>	<b>2,082.0</b>	<b>2,069.0</b>	<b>1,932.2</b>	<b>1,608.2</b>	<b>2,373.7</b>	<b>2,009.2</b>	<b>2,607.5</b>	<b>2,221.0</b>	<b>2,657.6</b>
0–\$25,000	123.8	102.0	97.3	87.2	154.1	121.7	172.7	141.6	180.4
\$25,001–\$50,000	133.8	111.3	99.4	85.7	168.6	117.6	183.9	158.2	214.5
\$50,001–\$75,000	51.2	44.7	41.5	37.2	70.8	52.6	75.3	64.1	90.9
\$75,001–\$100,000	114.4	97.2	85.2	68.8	137.8	91.6	148.2	135.5	175.4
\$100,001–\$500,000	455.8	437.4	388.5	310.0	498.4	349.6	535.6	500.6	605.8
\$500,001–\$1,000,000	220.3	244.5	225.6	183.0	227.6	187.8	245.1	229.8	247.5
\$1,000,001–\$2,000,000	203.2	225.8	221.6	176.9	213.8	181.8	247.1	202.4	224.2
More than \$2,000,000	779.5	806.0	773.0	659.3	902.6	906.5	999.5	788.8	919.0

### Trade Type and Size, 2018–2022

Average daily number of trades

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>All Trades</b>									
<b>Total</b>	<b>40,372</b>	<b>34,737</b>	<b>33,603</b>	<b>30,347</b>	<b>50,593</b>	<b>40,250</b>	<b>55,329</b>	<b>46,037</b>	<b>60,740</b>
0–\$25,000	19,594	16,412	16,161	15,266	24,899	20,901	27,755	22,432	28,531
\$25,001–\$50,000	7,945	6,533	6,029	5,452	10,090	7,467	10,866	9,186	12,827
\$50,001–\$75,000	2,014	1,723	1,668	1,583	2,905	2,231	3,032	2,548	3,805
\$75,001–\$100,000	3,085	2,584	2,341	1,952	3,589	2,538	3,826	3,395	4,588
\$100,001–\$500,000	5,175	4,802	4,611	3,927	6,133	4,546	6,505	5,713	7,755
\$500,001–\$1,000,000	969	1,029	1,051	860	1,058	885	1,148	1,001	1,198
\$1,000,001–\$2,000,000	600	639	679	539	710	594	810	657	782
More than \$2,000,000	992	1,016	1,063	768	1,209	1,088	1,388	1,106	1,255
<b>Customer Bought</b>									
<b>Total</b>	<b>15,673</b>	<b>13,206</b>	<b>12,462</b>	<b>10,890</b>	<b>18,355</b>	<b>14,046</b>	<b>20,165</b>	<b>17,210</b>	<b>21,977</b>
0–\$25,000	7,313	5,836	5,574	4,942	8,634	6,689	9,622	8,153	10,066
\$25,001–\$50,000	3,102	2,491	2,143	1,874	3,644	2,582	3,949	3,442	4,592
\$50,001–\$75,000	771	655	593	562	1,012	774	1,048	911	1,315
\$75,001–\$100,000	1,214	989	834	697	1,318	909	1,431	1,276	1,652
\$100,001–\$500,000	2,071	1,933	1,879	1,658	2,335	1,817	2,502	2,138	2,879
\$500,001–\$1,000,000	421	459	515	437	466	420	522	421	502
\$1,000,001–\$2,000,000	280	312	352	291	337	296	387	307	358
More than \$2,000,000	501	531	574	429	609	559	704	561	613
<b>Customer Sold</b>									
<b>Total</b>	<b>9,254</b>	<b>8,119</b>	<b>8,583</b>	<b>8,433</b>	<b>12,885</b>	<b>11,295</b>	<b>13,732</b>	<b>10,834</b>	<b>15,698</b>
0–\$25,000	4,382	3,866	4,064	4,393	6,171	5,911	6,711	5,103	6,982
\$25,001–\$50,000	1,678	1,405	1,513	1,515	2,415	2,040	2,520	1,984	3,120
\$50,001–\$75,000	472	394	448	458	821	658	844	668	1,114
\$75,001–\$100,000	693	591	625	542	845	677	863	720	1,120
\$100,001–\$500,000	1,230	1,099	1,154	986	1,654	1,224	1,710	1,455	2,226
\$500,001–\$1,000,000	263	254	251	191	301	227	314	286	376
\$1,000,001–\$2,000,000	182	174	180	130	231	177	258	214	273
More than \$2,000,000	353	336	348	218	446	381	512	404	486
<b>Inter-Dealer</b>									
<b>Total</b>	<b>15,445</b>	<b>13,412</b>	<b>12,557</b>	<b>11,023</b>	<b>19,354</b>	<b>14,909</b>	<b>21,433</b>	<b>17,994</b>	<b>23,064</b>
0–\$25,000	7,898	6,710	6,523	5,932	10,094	8,301	11,422	9,176	11,483
\$25,001–\$50,000	3,165	2,637	2,373	2,063	4,031	2,845	4,397	3,760	5,114
\$50,001–\$75,000	770	674	627	563	1,071	798	1,140	969	1,376
\$75,001–\$100,000	1,178	1,004	882	713	1,426	952	1,532	1,399	1,815
\$100,001–\$500,000	1,874	1,770	1,578	1,283	2,144	1,506	2,293	2,120	2,650
\$500,001–\$1,000,000	284	316	285	232	291	238	312	294	320
\$1,000,001–\$2,000,000	137	153	147	118	143	121	164	135	150
More than \$2,000,000	138	148	142	120	154	149	172	141	155

### Trade Type and Size, 2018–2022

Average daily number of unique securities

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>All Trades</b>									
<b>Total</b>	<b>15,588</b>	<b>14,042</b>	<b>13,869</b>	<b>13,580</b>	<b>19,444</b>	<b>17,123</b>	<b>20,459</b>	<b>17,003</b>	<b>23,207</b>
0–\$25,000	8,323	7,151	7,171	7,253	10,447	9,487	11,296	9,096	11,930
\$25,001–\$50,000	3,647	3,119	2,937	2,776	4,568	3,625	4,766	4,000	5,876
\$50,001–\$75,000	1,064	937	915	888	1,539	1,203	1,576	1,323	2,051
\$75,001–\$100,000	1,552	1,347	1,219	1,048	1,709	1,291	1,772	1,545	2,227
\$100,001–\$500,000	2,532	2,441	2,318	2,052	2,996	2,320	3,099	2,697	3,861
\$500,001–\$1,000,000	588	617	585	485	606	505	655	574	690
\$1,000,001–\$2,000,000	392	409	399	318	429	356	488	399	475
More than \$2,000,000	593	584	554	409	642	578	726	589	677
<b>Customer Bought</b>									
<b>Total</b>	<b>10,508</b>	<b>9,207</b>	<b>9,048</b>	<b>8,560</b>	<b>12,968</b>	<b>11,034</b>	<b>13,769</b>	<b>11,540</b>	<b>15,532</b>
0–\$25,000	5,588	4,636	4,539	4,337	6,779	5,733	7,380	6,145	7,862
\$25,001–\$50,000	2,494	2,076	1,859	1,706	2,996	2,290	3,155	2,705	3,829
\$50,001–\$75,000	690	597	559	539	948	741	971	843	1,237
\$75,001–\$100,000	1,021	859	740	641	1,121	824	1,179	1,047	1,430
\$100,001–\$500,000	1,595	1,526	1,493	1,347	1,924	1,542	2,000	1,729	2,423
\$500,001–\$1,000,000	349	373	396	335	388	348	429	350	425
\$1,000,001–\$2,000,000	238	257	277	226	289	253	332	261	311
More than \$2,000,000	387	389	408	297	465	427	537	413	483
<b>Customer Sold</b>									
<b>Total</b>	<b>8,114</b>	<b>7,056</b>	<b>7,672</b>	<b>7,733</b>	<b>11,533</b>	<b>10,290</b>	<b>12,242</b>	<b>9,731</b>	<b>13,889</b>
0–\$25,000	4,015	3,445	3,797	4,143	5,750	5,553	6,228	4,758	6,480
\$25,001–\$50,000	1,579	1,338	1,458	1,472	2,332	1,982	2,433	1,912	3,004
\$50,001–\$75,000	452	382	440	451	808	650	831	658	1,095
\$75,001–\$100,000	659	570	606	531	824	665	841	697	1,092
\$100,001–\$500,000	1,143	1,032	1,088	948	1,596	1,192	1,648	1,396	2,146
\$500,001–\$1,000,000	252	244	239	184	294	221	306	279	368
\$1,000,001–\$2,000,000	176	167	171	126	225	173	253	208	267
More than \$2,000,000	320	297	305	199	402	341	460	364	443
<b>Inter-Dealer</b>									
<b>Total</b>	<b>8,905</b>	<b>7,879</b>	<b>7,473</b>	<b>7,103</b>	<b>11,018</b>	<b>9,293</b>	<b>11,871</b>	<b>9,955</b>	<b>12,957</b>
0–\$25,000	5,022	4,317	4,214	4,100	6,328	5,530	7,029	5,652	7,112
\$25,001–\$50,000	2,047	1,729	1,562	1,426	2,587	1,934	2,767	2,357	3,287
\$50,001–\$75,000	535	469	435	401	752	569	791	677	969
\$75,001–\$100,000	763	659	577	480	892	628	941	850	1,148
\$100,001–\$500,000	1,166	1,113	991	838	1,326	973	1,381	1,292	1,654
\$500,001–\$1,000,000	192	208	188	154	195	158	209	198	213
\$1,000,001–\$2,000,000	97	104	100	81	100	84	116	96	105
More than \$2,000,000	100	102	96	81	106	100	119	99	108

### Average Daily Trade Size, 2018–2022 By customer trade



Quarter	Customer Bought (\$)	Customer Sold (\$)
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>
21:Q1	435,553	309,724
21:Q2	441,866	293,541
21:Q3	448,529	272,908
21:Q4	471,612	290,684
<b>2021</b>	<b>449,038</b>	<b>292,471</b>
22:Q1	452,643	374,051
22:Q2	398,916	410,070
22:Q3	405,241	406,403
22:Q4	342,583	334,759
<b>2022</b>	<b>393,654</b>	<b>378,454</b>



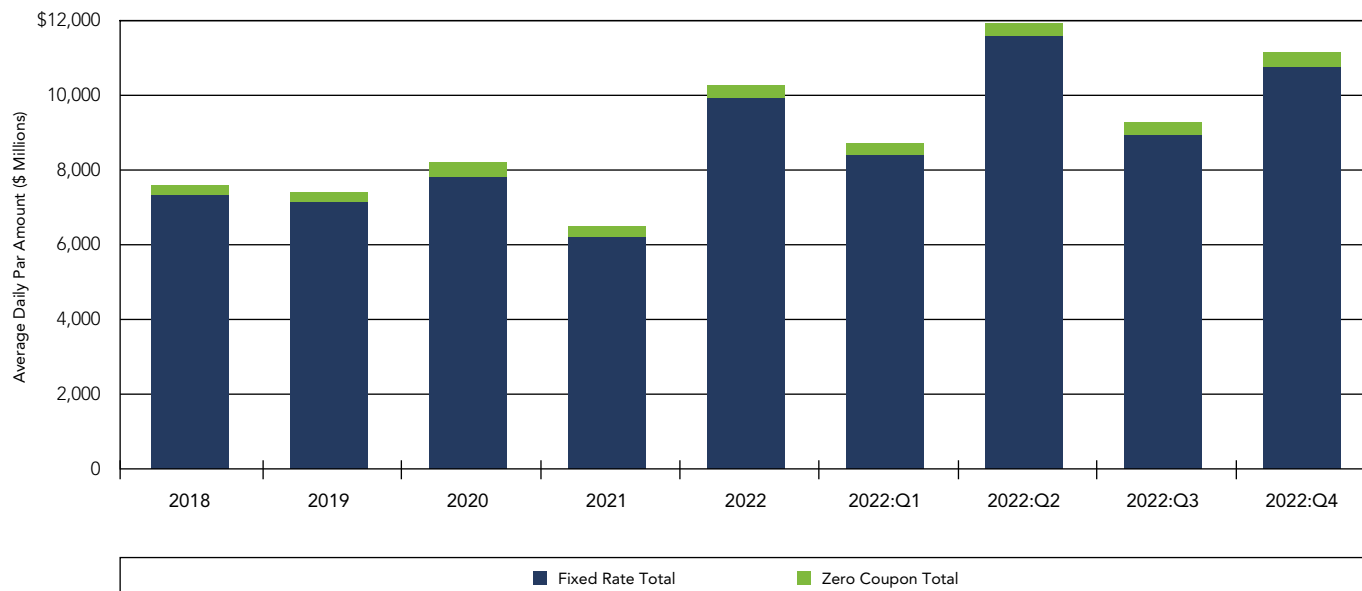
## Part Six

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# Municipal Fixed Rate Securities—Par Amount Traded and Number of Trades, 2018–2022

### Transaction Summary—Fixed Rate Securities, 2018–2022

Average daily par amount in \$ millions



	2018	2019	2020	2021	2022
<b>Fixed Rate Total</b>	<b>7,318.6</b>	<b>7,134.8</b>	<b>7,793.5</b>	<b>6,200.9</b>	<b>9,905.8</b>
0–\$25,000	302.6	245.1	238.0	222.4	377.2
\$25,001–\$50,000	325.4	265.2	243.6	219.1	411.2
\$50,001–\$75,000	129.4	109.7	106.5	101.5	188.1
\$75,001–\$100,000	273.2	225.5	205.3	176.5	330.9
\$100,001–\$500,000	1,115.1	1,052.0	1,032.4	900.5	1,346.6
\$500,001–\$1,000,000	627.7	673.8	724.0	622.7	752.9
\$1,000,001–\$2,000,000	699.3	751.3	840.9	704.5	926.3
More than \$2,000,000	3,845.9	3,812.1	4,402.9	3,253.8	5,572.5

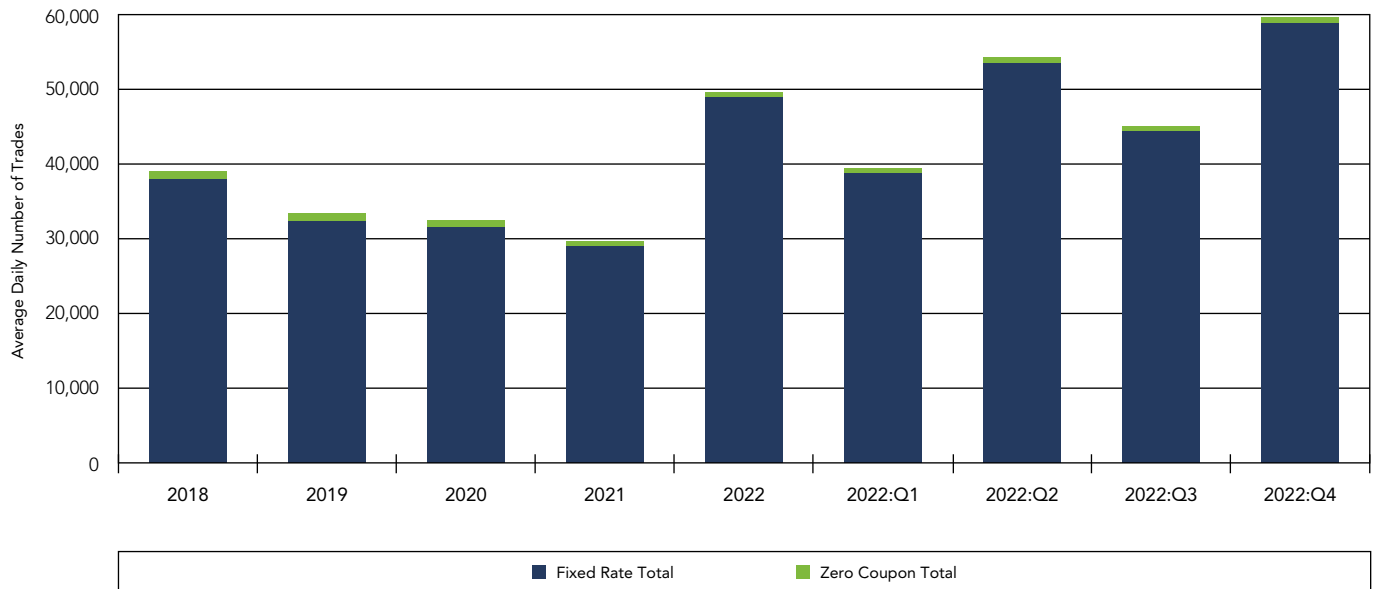
	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>8,394.0</b>	<b>11,579.8</b>	<b>8,915.4</b>	<b>10,752.3</b>
0–\$25,000	305.3	417.0	342.1	444.3
\$25,001–\$50,000	300.2	443.4	376.7	524.0
\$50,001–\$75,000	144.1	196.3	165.0	246.8
\$75,001–\$100,000	232.4	353.7	313.2	423.5
\$100,001–\$500,000	1,006.6	1,438.9	1,263.0	1,675.4
\$500,001–\$1,000,000	640.1	821.7	703.1	846.6
\$1,000,001–\$2,000,000	772.1	1,073.9	846.5	1,013.8
More than \$2,000,000	4,993.2	6,835.0	4,905.6	5,577.8

	2018	2019	2020	2021	2022
<b>Zero Coupon Total</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>290.4</b>	<b>364.3</b>
0–\$25,000	6.9	7.1	6.0	5.0	4.8
\$25,001–\$50,000	8.4	8.4	7.3	5.8	5.9
\$50,001–\$75,000	3.9	4.1	3.5	2.7	2.7
\$75,001–\$100,000	7.3	7.0	6.1	4.7	5.0
\$100,001–\$500,000	26.2	27.4	24.6	16.8	18.4
\$500,001–\$1,000,000	12.3	14.6	14.1	9.2	10.9
\$1,000,001–\$2,000,000	12.2	15.7	14.7	10.5	12.4
More than \$2,000,000	203.3	198.0	343.8	235.7	304.2

	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Zero Coupon Total</b>	<b>337.9</b>	<b>363.2</b>	<b>351.1</b>	<b>404.6</b>
0–\$25,000	4.7	5.0	4.3	5.1
\$25,001–\$50,000	5.6	6.0	5.2	6.8
\$50,001–\$75,000	2.4	2.6	2.4	3.2
\$75,001–\$100,000	4.3	5.2	4.8	5.8
\$100,001–\$500,000	18.0	17.0	18.1	20.6
\$500,001–\$1,000,000	8.6	11.0	12.8	11.0
\$1,000,001–\$2,000,000	9.7	12.3	13.8	13.7
More than \$2,000,000	284.7	304.0	289.6	338.4

### Transaction Summary—Fixed Rate Securities, 2018–2022

Average daily number of trades



	2018	2019	2020	2021	2022
<b>Fixed Rate Total</b>	<b>38,002</b>	<b>32,286</b>	<b>31,538</b>	<b>28,985</b>	<b>48,878</b>
0–\$25,000	19,053	15,761	15,668	14,841	24,421
\$25,001–\$50,000	7,700	6,293	5,824	5,286	9,902
\$50,001–\$75,000	1,939	1,647	1,603	1,531	2,847
\$75,001–\$100,000	2,815	2,329	2,127	1,834	3,440
\$100,001–\$500,000	4,624	4,275	4,166	3,697	5,827
\$500,001–\$1,000,000	794	856	900	781	953
\$1,000,001–\$2,000,000	464	500	552	467	616
More than \$2,000,000	612	623	698	547	872

	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>38,771</b>	<b>53,503</b>	<b>44,408</b>	<b>58,813</b>
0–\$25,000	20,469	27,234	21,999	28,000
\$25,001–\$50,000	7,299	10,667	9,022	12,605
\$50,001–\$75,000	2,182	2,973	2,495	3,735
\$75,001–\$100,000	2,426	3,670	3,247	4,407
\$100,001–\$500,000	4,320	6,181	5,406	7,390
\$500,001–\$1,000,000	804	1,037	891	1,080
\$1,000,001–\$2,000,000	513	712	564	676
More than \$2,000,000	759	1,029	784	919

	2018	2019	2020	2021	2022
<b>Zero Coupon Total</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>710</b>	<b>727</b>
0–\$25,000	465	590	441	375	368
\$25,001–\$50,000	204	205	176	141	143
\$50,001–\$75,000	60	63	53	41	41
\$75,001–\$100,000	75	73	64	49	52
\$100,001–\$500,000	113	120	103	73	79
\$500,001–\$1,000,000	16	19	18	12	14
\$1,000,001–\$2,000,000	8	11	10	7	8
More than \$2,000,000	16	17	20	12	21

	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Zero Coupon Total</b>	<b>687</b>	<b>747</b>	<b>665</b>	<b>808</b>
0–\$25,000	356	391	328	398
\$25,001–\$50,000	137	146	125	164
\$50,001–\$75,000	37	40	37	49
\$75,001–\$100,000	44	54	50	60
\$100,001–\$500,000	76	75	77	89
\$500,001–\$1,000,000	11	14	16	14
\$1,000,001–\$2,000,000	6	8	9	9
More than \$2,000,000	19	20	22	25

## Source of Repayment and Trade Size, 2018–2022

Average daily par amount in \$ millions

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>7,315.7</b>	<b>7,133.8</b>	<b>7,793.0</b>	<b>6,200.9</b>	<b>9,905.8</b>	<b>8,394.0</b>	<b>11,579.8</b>	<b>8,915.4</b>	<b>10,752.2</b>
General Obligation	2,619.7	2,627.2	2,707.9	2,160.0	3,081.6	2,801.2	3,412.7	2,808.2	3,309.5
Revenue	4,465.6	4,294.0	4,860.6	3,841.0	6,522.1	5,328.2	7,820.7	5,842.3	7,109.5
Double Barrel	230.5	212.5	224.5	199.9	302.1	264.6	346.4	264.9	333.2
<b>Zero Coupon Total</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>384.5</b>	<b>550.4</b>	<b>506.2</b>	<b>573.6</b>	<b>570.0</b>	<b>551.0</b>
General Obligation	80.9	76.7	75.5	142.8	267.6	230.8	303.2	297.4	238.5
Revenue	196.8	202.3	342.5	239.5	278.5	274.1	265.3	270.7	303.7
Double Barrel	2.9	3.2	2.1	2.2	4.3	1.4	5.0	2.0	8.9

Average daily number of trades

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>38,002</b>	<b>32,285</b>	<b>31,538</b>	<b>28,985</b>	<b>48,878</b>	<b>38,771</b>	<b>53,503</b>	<b>44,408</b>	<b>58,813</b>
General Obligation	14,262	12,470	11,395	10,967	18,164	14,747	19,556	16,489	21,858
Revenue	22,470	18,767	19,109	17,000	28,929	22,612	32,066	26,280	34,752
Double Barrel	1,270	1,048	1,034	1,018	1,784	1,412	1,881	1,639	2,203
<b>Zero Coupon Total</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>402</b>	<b>437</b>	<b>389</b>	<b>445</b>	<b>415</b>	<b>500</b>
General Obligation	502	487	446	63	124	84	146	131	134
Revenue	431	592	423	326	298	290	284	273	347
Double Barrel	24	20	16	13	15	16	15	11	20

## Tax Status and Trade Size, 2018–2022

Average daily par amount in \$ millions

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>7,317.0</b>	<b>7,133.9</b>	<b>7,793.4</b>	<b>6,200.9</b>	<b>9,905.8</b>	<b>8,394.0</b>	<b>11,579.8</b>	<b>8,915.4</b>	<b>10,752.2</b>
Tax Exempt	6,379.2	5,898.2	6,010.3	4,652.3	8,275.1	6,641.5	9,843.1	7,451.7	9,176.3
Taxable	676.4	979.5	1,554.4	1,378.3	1,132.9	1,397.6	1,177.1	978.7	985.4
AMT	261.5	256.3	228.7	170.3	497.8	354.9	559.6	484.9	590.5
<b>Zero Coupon Total</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>290.4</b>	<b>364.2</b>	<b>337.9</b>	<b>363.2</b>	<b>351.1</b>	<b>404.6</b>
Tax Exempt	265.5	262.6	396.8	269.6	341.2	298.7	350.0	327.0	388.9
Taxable	15.0	19.7	23.1	20.6	23.0	39.2	13.2	24.0	15.7
AMT	<0.1	<0.1	0.2	0.1	<0.1	–	–	<0.1	<0.1

Average daily number of trades

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>38,002</b>	<b>32,285</b>	<b>31,538</b>	<b>28,985</b>	<b>48,878</b>	<b>38,771</b>	<b>53,503</b>	<b>44,408</b>	<b>58,813</b>
Tax Exempt	35,324	29,538	28,535	26,221	45,449	35,882	49,951	41,245	54,703.0
Taxable	2,214	2,337	2,563	2,424	2,566	2,398	2,668	2,263	2,938.7
AMT	465	410	440	340	863	492	885	900	1,171.5
<b>Zero Coupon Total</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>710</b>	<b>727</b>	<b>687</b>	<b>747</b>	<b>665</b>	<b>808</b>
Tax Exempt	862	1,018	800	639	674	625	704	616	751.2
Taxable	95	81	84	71	53	61	44	48	57.1
AMT	<1	<1	<1	<1	<1	–	–	<1	<1

## Sector—Fixed Rate Securities, 2018–2022

Average daily par amount in \$ millions

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>7,318.6</b>	<b>7,134.8</b>	<b>7,793.5</b>	<b>6,200.9</b>	<b>9,905.8</b>	<b>8,394.0</b>	<b>11,579.8</b>	<b>8,915.4</b>	<b>10,752.2</b>
Education	1,475.3	1,548.3	1,683.8	1,373.8	1,968.1	1,739.0	2,271.6	1,751.0	2,115.6
Health	490.6	459.1	511.5	349.0	805.8	550.8	1,127.8	701.4	845.9
Housing	134.1	185.3	190.0	235.6	232.8	210.9	261.8	210.6	248.3
Tax-Revenue	921.5	835.7	908.7	724.1	1,374.4	1,167.8	1,578.4	1,277.9	1,474.9
Transportation	779.7	831.5	875.6	658.9	1,271.0	948.6	1,455.2	1,193.0	1,486.1
Utility	874.1	828.8	911.2	735.6	1,234.6	1,021.7	1,453.9	1,056.2	1,409.6
Various Purpose	1,132.5	1,157.0	1,305.1	1,035.3	1,536.2	1,491.1	1,742.1	1,354.7	1,562.5
Other Sectors	1,510.9	1,289.1	1,407.5	1,088.6	1,482.9	1,264.1	1,689.0	1,370.5	1,609.4
<b>Zero Coupon Total</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>290.4</b>	<b>364.3</b>	<b>337.9</b>	<b>363.2</b>	<b>351.1</b>	<b>404.6</b>
Education	76.2	72.1	74.3	52.6	74.9	51.5	72.5	79.2	95.9
Health	2.8	5.3	4.5	2.7	3.4	1.5	5.3	2.4	4.3
Housing	0.4	0.1	0.5	0.1	4.6	1.8	9.7	0.0	7.2
Tax-Revenue	75.9	102.8	200.0	63.1	100.3	76.5	115.5	87.8	121.4
Transportation	28.3	28.0	19.9	12.6	41.2	20.4	29.1	57.0	57.7
Utility	3.2	3.6	2.6	2.2	2.8	2.0	2.9	2.6	3.8
Various Purpose	7.5	8.3	3.7	8.5	12.8	10.4	15.9	12.8	12.2
Other Sectors	86.1	62.1	114.6	148.6	124.2	174.0	112.2	109.4	102.0

Average daily number of trades

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>38,002</b>	<b>32,286</b>	<b>31,538</b>	<b>28,985</b>	<b>48,878</b>	<b>38,771</b>	<b>53,503</b>	<b>44,408</b>	<b>58,813</b>
Education	9,531	8,381	7,974	7,568	12,549	10,306	13,750	11,391	14,750
Health	2,742	2,251	2,242	1,765	3,458	2,363	4,023	3,276	4,163
Housing	804	811	717	736	1,171	944	1,252	1,030	1,458
Tax-Revenue	3,915	3,301	5,812	3,015	5,253	4,164	5,758	4,815	6,273
Transportation	3,145	2,643	3,294	2,438	4,516	3,292	4,956	4,192	5,616
Utility	5,247	4,274	3,156	4,058	6,783	5,389	7,445	6,030	8,269
Various Purpose	4,972	4,271	4,110	4,146	7,261	5,875	7,998	6,503	8,671
Other Sectors	7,646	6,353	4,235	5,258	7,887	6,439	8,322	7,171	9,612
<b>Zero Coupon Total</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>710</b>	<b>727</b>	<b>687</b>	<b>747</b>	<b>665</b>	<b>808</b>
Education	459	453	416	348	369	346	384	342	404
Health	27	23	20	18	11	11	14	9	12
Housing	2	1	1	1	1	0	1	0	0
Tax-Revenue	135	317	86	124	100	104	100	85	110
Transportation	112	109	161	79	92	80	89	87	112
Utility	59	56	109	40	35	39	33	29	39
Various Purpose	63	52	48	34	56	44	66	53	61
Other Sectors	100	88	43	66	63	62	61	59	70

## Remaining Maturity—Fixed Rate Securities, 2018–2022

Average daily par amount in \$ millions

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>7,318.6</b>	<b>7,134.8</b>	<b>7,793.5</b>	<b>6,200.9</b>	<b>9,905.8</b>	<b>8,394.0</b>	<b>11,579.8</b>	<b>8,915.4</b>	<b>10,752.2</b>
0–9 Months	338.5	317.4	354.3	253.3	384.0	435.6	449.2	274.4	380.4
>9 Months–2 Years	547.7	502.2	491.9	399.5	574.2	457.5	639.6	637.3	560.4
>2 Years–5 Years	801.7	754.0	835.3	693.4	1,142.8	953.4	1,325.5	1,004.0	1,290.4
>5 Years–10 Years	1,401.8	1,347.4	1,383.5	1,199.2	1,862.9	1,573.5	2,058.7	1,634.9	2,186.7
>10 Years–15 Years	1,212.9	1,141.1	1,302.7	1,068.8	1,446.3	1,271.4	1,673.7	1,261.0	1,582.9
>15 Years–20 Years	1,028.3	1,025.8	1,152.3	875.2	1,331.6	1,143.3	1,534.4	1,234.4	1,416.2
>20 Years–30 Years	1,676.0	1,653.1	1,816.5	1,357.3	2,651.4	2,073.1	3,250.4	2,429.7	2,856.1
More than 30 Years	304.0	388.6	453.4	345.6	510.4	481.2	646.7	438.5	477.8
Unavailable	7.7	5.3	3.7	8.6	2.2	4.9	1.6	1.2	1.3
<b>Zero Coupon Total</b>	<b>280.5</b>	<b>282.3</b>	<b>420.1</b>	<b>290.4</b>	<b>364.3</b>	<b>337.9</b>	<b>363.2</b>	<b>351.1</b>	<b>404.6</b>
0–9 Months	3.8	5.0	5.2	3.1	9.4	7.9	14.5	6.9	8.4
>9 Months–2 Years	5.6	4.4	5.7	5.9	10.6	7.0	10.0	15.5	9.8
>2 Years–5 Years	13.3	12.6	15.7	10.1	22.3	15.1	27.1	21.1	26.0
>5 Years–10 Years	25.3	30.2	23.2	19.1	27.9	17.1	21.4	31.1	41.6
>10 Years–15 Years	26.0	34.6	27.1	20.2	30.1	22.4	29.5	22.3	46.4
>15 Years–20 Years	35.7	18.0	22.3	13.8	29.6	15.2	22.7	38.6	41.5
>20 Years–30 Years	88.9	93.5	132.3	50.4	103.9	81.2	127.5	100.7	106.0
More than 30 Years	81.8	80.8	188.6	167.6	130.4	172.0	110.4	114.8	124.9
Unavailable	0.1	3.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0

## Average daily number of trades

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Fixed Rate Total</b>	<b>38,002</b>	<b>32,286</b>	<b>31,538</b>	<b>28,985</b>	<b>48,878</b>	<b>38,771</b>	<b>53,503</b>	<b>44,408</b>	<b>58,813</b>
0–9 Months	1,507	1,526	1,608	1,542	2,128	2,288	2,436	1,558	2,248
>9 Months–2 Years	2,633	2,271	2,490	2,296	3,838	3,664	3,991	3,557	4,143
>2 Years–5 Years	5,736	4,854	5,263	4,964	8,518	7,212	9,377	7,158	10,338
>5 Years–10 Years	9,083	7,532	7,649	7,685	12,986	10,324	14,162	10,994	16,472
>10 Years–15 Years	6,864	5,707	5,521	5,151	8,676	6,506	9,683	8,020	10,487
>15 Years–20 Years	5,325	4,380	3,926	3,235	5,308	3,790	5,816	5,237	6,373
>20 Years–30 Years	6,183	5,254	4,479	3,631	6,644	4,455	7,166	7,023	7,900
More than 30 Years	648	737	587	452	772	516	867	857	846
Unavailable	24	25	16	30	8	16	5	6	6
<b>Zero Coupon Total</b>	<b>957</b>	<b>1,099</b>	<b>884</b>	<b>710</b>	<b>727</b>	<b>687</b>	<b>747</b>	<b>665</b>	<b>808</b>
0–9 Months	43	42	40	34	39	38	52	29	38
>9 Months–2 Years	80	62	75	69	72	66	57	79	84
>2 Years–5 Years	179	162	171	142	149	145	166	126	158
>5 Years–10 Years	234	278	232	195	190	182	189	171	220
>10 Years–15 Years	178	238	154	118	126	118	133	113	142
>15 Years–20 Years	117	102	92	67	71	64	75	70	74
>20 Years–30 Years	107	148	89	67	68	65	67	65	76
More than 30 Years	18	64	30	16	12	10	9	11	17
Unavailable	1	2	1	1	0	1	0	0	0

## Part Seven

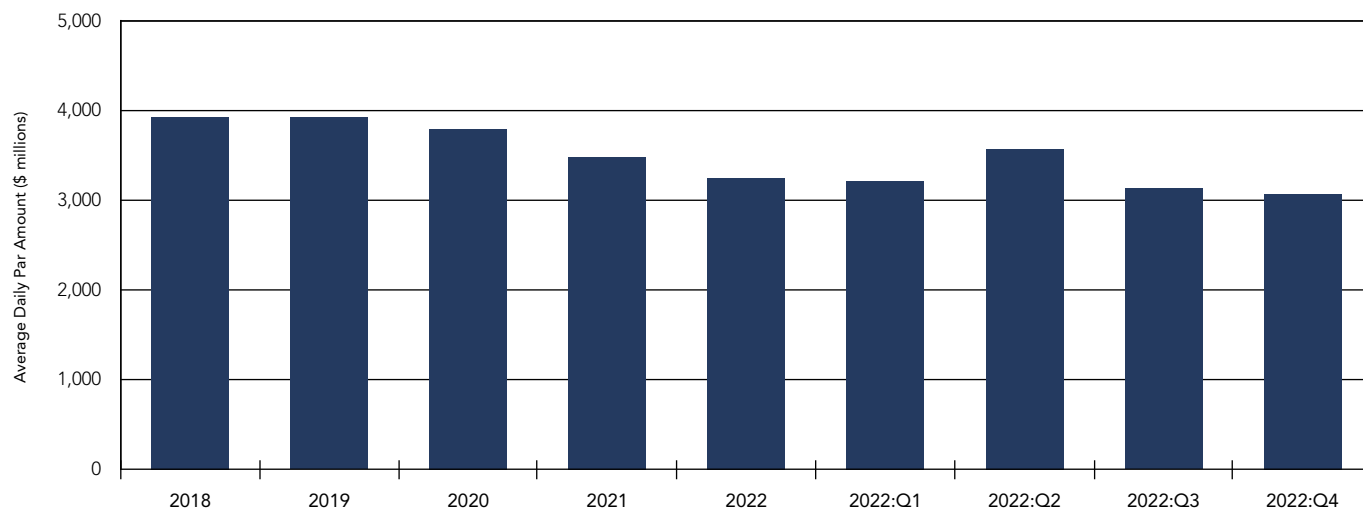
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# Municipal Variable Rate Securities—Par Amount Traded and Number of Trades, 2018–2022



### Transaction Summary—Variable Rate Securities, 2018–2022

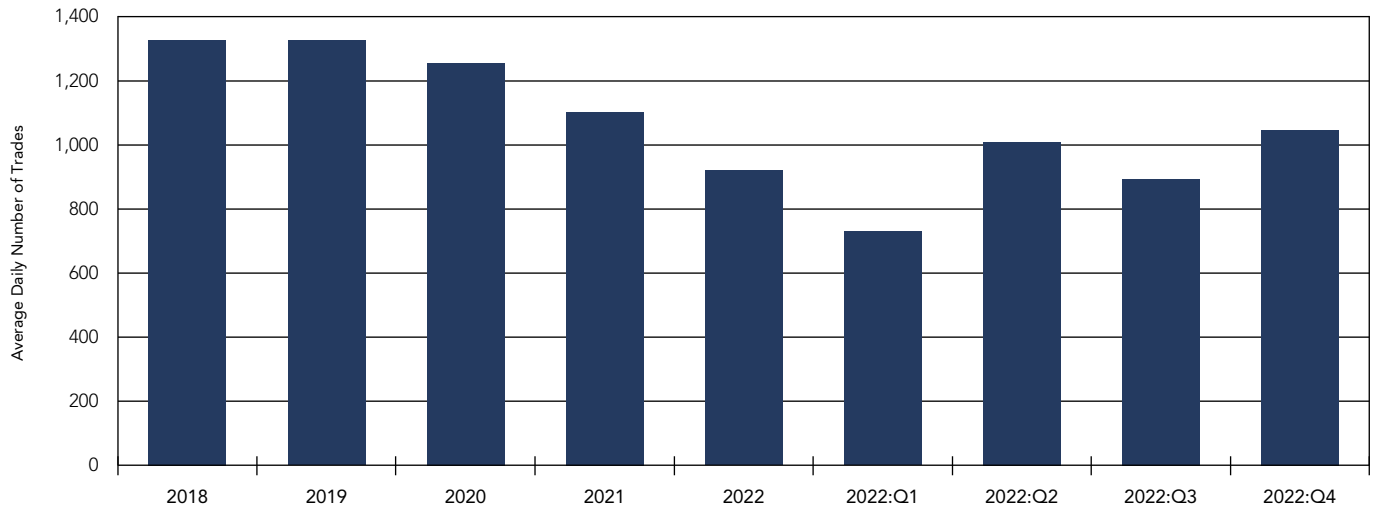
Average daily par amount in \$ millions



	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Total</b>	<b>3,926.2</b>	<b>3,791.2</b>	<b>3,482.3</b>	<b>1,853.0</b>	<b>3,242.7</b>	<b>3,216.2</b>	<b>3,567.0</b>	<b>3,128.8</b>	<b>3,065.2</b>
0–\$25,000	1.2	1.0	0.9	0.8	1.4	1.0	1.6	1.3	1.7
\$25,001–\$50,000	1.7	1.5	1.2	1.0	1.8	1.2	2.2	1.5	2.3
\$50,001–\$75,000	0.9	0.8	0.8	0.7	1.1	0.8	1.2	1.0	1.4
\$75,001–\$100,000	18.8	17.5	14.6	6.6	9.4	6.6	9.9	9.4	11.5
\$100,001–\$500,000	121.1	109.5	93.5	42.3	62.8	41.3	69.8	63.9	76.0
\$500,001–\$1,000,000	121.8	116.3	101.2	48.9	70.4	54.2	74.7	72.3	80.2
\$1,000,001–\$2,000,000	185.9	180.5	167.3	88.0	125.9	108.1	132.0	122.6	141.0
More than \$2,000,000	3,474.9	3,364.0	3,102.8	1,664.6	2,969.8	3,003.0	3,275.7	2,856.8	2,751.0

### Transaction Summary—Variable Rate Securities, 2018–2022

Average daily number of trades



	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2021:Q4
<b>Variable Rate Total</b>	<b>1,326</b>	<b>1,255</b>	<b>1,103</b>	<b>586</b>	<b>920</b>	<b>730</b>	<b>1,008</b>	<b>894</b>	<b>1,045</b>
0–\$25,000	72	58	51	49	107	72	124	102	129
\$25,001–\$50,000	39	33	28	24	43	29	52	37	55
\$50,001–\$75,000	13	12	11	11	16	11	18	15	21
\$75,001–\$100,000	188	176	147	67	94	66	99	95	117
\$100,001–\$500,000	421	386	330	149	220	145	243	222	268
\$500,001–\$1,000,000	151	145	127	61	87	66	93	89	100
\$1,000,001–\$2,000,000	121	119	111	58	82	70	85	80	92
More than \$2,000,000	321	326	300	167	270	270	294	254	264

Variable Rate Demand Obligations<sup>1</sup> Trade Type and Size, 2018–2022

Average daily par amount in \$ millions

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Total</b>	<b>3,599.7</b>	<b>3,469.6</b>	<b>3,208.6</b>	<b>1,626.7</b>	<b>2,818.7</b>	<b>2,814.9</b>	<b>3,105.3</b>	<b>2,759.8</b>	<b>2,600.3</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	16.3	15.6	13.2	5.6	7.4	5.2	7.6	7.6	9.0
\$100,001–\$500,000	108.2	97.3	82.9	34.9	49.6	32.7	55.4	51.5	58.4
\$500,001–\$1,000,000	112.1	105.8	91.6	42.6	59.0	45.7	63.6	59.8	66.9
\$1,000,001–\$2,000,000	173.3	165.1	153.0	77.6	108.0	95.0	114.9	102.9	119.1
More than \$2,000,000	3,189.8	3,085.7	2,867.9	1,466.2	2,594.8	2,636.3	2,863.9	2,537.9	2,346.8
<b>Customer Bought Total</b>	<b>1,805.3</b>	<b>1,717.2</b>	<b>1,567.1</b>	<b>786.0</b>	<b>1,349.9</b>	<b>1,334.0</b>	<b>1,494.0</b>	<b>1,290.0</b>	<b>1,284.4</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	6.2	4.9	2.9	1.1	2.2	1.2	2.5	2.3	2.6
\$100,001–\$500,000	49.6	38.8	26.2	11.2	20.1	12.1	24.6	20.3	23.3
\$500,001–\$1,000,000	53.5	47.5	37.2	18.1	26.4	20.1	30.5	24.9	30.0
\$1,000,001–\$2,000,000	86.9	79.8	72.5	37.3	52.4	46.1	58.9	47.7	57.1
More than \$2,000,000	1,609.1	1,546.2	1,428.2	718.2	1,248.8	1,254.5	1,377.4	1,194.8	1,171.4
<b>Customer Sold Total</b>	<b>1,729.7</b>	<b>1,671.6</b>	<b>1,530.0</b>	<b>754.8</b>	<b>1,307.1</b>	<b>1,315.3</b>	<b>1,442.5</b>	<b>1,314.2</b>	<b>1,158.4</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	8.4	8.2	7.5	3.5	3.7	3.0	3.4	3.8	4.7
\$100,001–\$500,000	49.1	46.8	43.5	18.7	20.9	15.0	19.8	22.4	26.3
\$500,001–\$1,000,000	51.2	50.0	44.6	20.6	25.3	20.1	24.5	27.0	29.4
\$1,000,001–\$2,000,000	77.9	77.0	70.2	35.0	46.7	40.9	47.6	45.8	52.5
More than \$2,000,000	1,543.0	1,489.5	1,364.1	676.9	1,210.4	1,236.2	1,347.1	1,215.3	1,045.4
<b>Inter-Dealer Total</b>	<b>64.8</b>	<b>80.9</b>	<b>111.6</b>	<b>86.1</b>	<b>161.9</b>	<b>165.6</b>	<b>168.9</b>	<b>155.6</b>	<b>157.6</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	<0.1	<0.1	<0.1
\$75,001–\$100,000	1.8	2.4	2.7	1.0	1.5	0.9	1.7	1.5	1.7
\$100,001–\$500,000	9.5	11.8	13.2	4.9	8.6	5.6	10.9	8.9	8.9
\$500,001–\$1,000,000	7.3	8.4	9.9	3.9	7.4	5.5	8.5	7.9	7.5
\$1,000,001–\$2,000,000	8.5	8.2	10.3	5.2	8.8	8.0	8.3	9.5	9.5
More than \$2,000,000	37.7	50.1	75.6	71.0	135.6	145.6	139.4	127.8	130.0

<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, 2018–2022

Average daily number of trades

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Total</b>	<b>1,088</b>	<b>1,037</b>	<b>917</b>	<b>430</b>	<b>618</b>	<b>516</b>	<b>671</b>	<b>613</b>	<b>669</b>
0–\$25,000	2	1	3	1	1	1	1	1	1
\$25,001–\$50,000	1	1	2	1	1	1	1	1	2
\$50,001–\$75,000	1	<1	1	1	1	1	<1	1	1
\$75,001–\$100,000	163	156	132	56	74	52	77	76	90
\$100,001–\$500,000	371	338	288	119	166	109	185	173	197
\$500,001–\$1,000,000	139	132	115	54	73	56	79	74	83
\$1,000,001–\$2,000,000	113	109	102	52	70	62	75	67	78
More than \$2,000,000	297	299	274	147	231	234	254	220	217
<b>Customer Bought Total</b>	<b>504</b>	<b>443</b>	<b>349</b>	<b>168</b>	<b>266</b>	<b>219</b>	<b>307</b>	<b>254</b>	<b>286</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	62	49	29	11	22	12	25	23	26
\$100,001–\$500,000	167	132	86	36	66	39	80	67	77
\$500,001–\$1,000,000	66	59	47	23	33	25	38	31	37
\$1,000,001–\$2,000,000	57	53	48	25	34	30	38	31	38
More than \$2,000,000	150	150	136	73	112	112	125	102	108
<b>Customer Sold Total</b>	<b>511</b>	<b>503</b>	<b>462</b>	<b>217</b>	<b>277</b>	<b>241</b>	<b>278</b>	<b>282</b>	<b>305</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	84	83	76	35	37	30	34	38	47
\$100,001–\$500,000	170	163	153	65	71	51	67	75	89
\$500,001–\$1,000,000	64	63	56	26	32	25	31	33	37
\$1,000,001–\$2,000,000	51	51	47	23	30	27	31	30	34
More than \$2,000,000	141	143	128	66	106	107	115	105	97
<b>Inter-Dealer Total</b>	<b>73</b>	<b>91</b>	<b>106</b>	<b>45</b>	<b>74</b>	<b>56</b>	<b>86</b>	<b>77</b>	<b>78</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	18	24	27	10	15	9	17	15	17
\$100,001–\$500,000	34	44	49	18	30	20	38	31	32
\$500,001–\$1,000,000	9	11	12	5	9	7	10	10	9
\$1,000,001–\$2,000,000	6	6	7	3	6	5	5	6	6
More than \$2,000,000	6	7	9	8	14	15	14	13	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.

Auction Rate Securities<sup>1</sup> Trade Type and Size, 2018–2022

Average daily par amount in \$ millions

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Total</b>	<b>27.6</b>	<b>20.4</b>	<b>21.9</b>	<b>6.8</b>	<b>13.3</b>	<b>10.9</b>	<b>12.4</b>	<b>18.8</b>	<b>10.8</b>
0–\$25,000	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.1	0.1
\$25,001–\$50,000	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
\$50,001–\$75,000	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1
\$75,001–\$100,000	0.8	0.5	0.4	0.2	0.4	0.3	0.4	0.4	0.3
\$100,001–\$500,000	4.8	4.8	3.3	1.8	3.6	2.5	3.8	4.0	4.2
\$500,001–\$1,000,000	3.1	2.8	2.6	0.9	2.2	1.4	1.8	3.3	2.2
\$1,000,001–\$2,000,000	3.0	2.8	2.6	1.2	1.8	2.0	1.1	2.4	1.7
More than \$2,000,000	15.1	8.8	12.4	2.2	4.9	4.3	4.8	8.3	2.1
<b>Customer Bought Total</b>	<b>10.1</b>	<b>7.2</b>	<b>7.1</b>	<b>2.2</b>	<b>3.9</b>	<b>3.5</b>	<b>3.8</b>	<b>5.1</b>	<b>3.3</b>
0–\$25,000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
\$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	0.0	0.1	0.1	0.1	0.1	0.0
\$75,001–\$100,000	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1
\$100,001–\$500,000	1.5	1.5	1.1	0.5	1.0	0.7	1.0	1.2	1.2
\$500,001–\$1,000,000	1.1	1.0	0.8	0.3	0.6	0.4	0.5	0.8	0.6
\$1,000,001–\$2,000,000	1.0	0.9	1.0	0.5	0.6	0.6	0.4	0.8	0.6
More than \$2,000,000	5.9	3.3	4.0	0.7	1.4	1.5	1.4	2.0	0.5
<b>Customer Sold Total</b>	<b>9.4</b>	<b>6.5</b>	<b>7.2</b>	<b>2.2</b>	<b>3.9</b>	<b>3.4</b>	<b>3.7</b>	<b>5.1</b>	<b>3.3</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	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
\$100,001–\$500,000	1.8	1.8	1.1	0.6	1.1	0.7	1.2	1.2	1.3
\$500,001–\$1,000,000	1.0	0.9	0.9	0.3	0.6	0.4	0.6	0.9	0.6
\$1,000,001–\$2,000,000	0.8	0.8	0.8	0.3	0.5	0.8	0.3	0.5	0.4
More than \$2,000,000	5.2	2.6	4.1	0.8	1.4	1.3	1.4	2.2	0.8
<b>Inter-Dealer Total</b>	<b>8.1</b>	<b>6.7</b>	<b>7.6</b>	<b>2.4</b>	<b>5.5</b>	<b>4.1</b>	<b>4.9</b>	<b>8.6</b>	<b>4.2</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	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
\$100,001–\$500,000	1.5	1.6	1.2	0.7	1.5	1.1	1.6	1.7	1.6
\$500,001–\$1,000,000	1.0	0.9	0.9	0.3	1.0	0.6	0.7	1.5	1.0
\$1,000,001–\$2,000,000	1.1	1.0	0.9	0.4	0.7	0.6	0.4	1.1	0.7
More than \$2,000,000	4.0	2.9	4.3	0.8	2.1	1.5	1.9	4.0	0.8

<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.

Auction Rate Securities<sup>1</sup> Trade Type and Size, 2018–2022

Average daily number of trades

	2018	2019	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>Total</b>	<b>53</b>	<b>49</b>	<b>41</b>	<b>25</b>	<b>33</b>	<b>29</b>	<b>34</b>	<b>37</b>	<b>31</b>
0–\$25,000	9	8	10	8	6	6	6	6	4
\$25,001–\$50,000	6	6	5	3	3	3	4	3	3
\$50,001–\$75,000	3	3	2	2	2	2	2	3	2
\$75,001–\$100,000	8	5	4	2	4	3	4	4	3
\$100,001–\$500,000	18	19	13	7	13	9	14	14	15
\$500,001–\$1,000,000	4	4	3	1	3	2	2	4	3
\$1,000,001–\$2,000,000	2	2	2	1	1	1	1	2	1
More than \$2,000,000	2	2	2	0	1	1	1	2	1
<b>Customer Bought Total</b>	<b>18</b>	<b>17</b>	<b>13</b>	<b>8</b>	<b>12</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>11</b>
0–\$25,000	3	4	3	3	2	3	3	3	1
\$25,001–\$50,000	3	2	2	1	1	1	2	1	1
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	2	2	1	1	1	1	2	2	1
\$100,001–\$500,000	6	6	4	2	4	3	4	4	5
\$500,001–\$1,000,000	2	1	1	<1	1	1	1	1	1
\$1,000,001–\$2,000,000	1	1	1	<1	<1	<1	<1	1	<1
More than \$2,000,000	1	1	1	<1	<1	<1	<1	<1	<1
<b>Customer Sold Total</b>	<b>20</b>	<b>17</b>	<b>15</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>10</b>	<b>10</b>	<b>9</b>
0–\$25,000	3	3	5	3	1	2	1	2	1
\$25,001–\$50,000	2	2	2	1	1	1	1	1	1
\$50,001–\$75,000	1	1	1	1	1	0	1	1	0
\$75,001–\$100,000	4	2	2	1	1	1	1	1	1
\$100,001–\$500,000	7	7	4	2	4	3	4	4	4
\$500,001–\$1,000,000	1	1	1	<1	1	1	1	1	1
\$1,000,001–\$2,000,000	1	1	1	<1	<1	1	<1	<1	<1
More than \$2,000,000	1	<1	1	<1	<1	<1	<1	<1	<1
<b>Inter-Dealer Total</b>	<b>15</b>	<b>14</b>	<b>13</b>	<b>8</b>	<b>12</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>11</b>
0–\$25,000	2	2	3	2	2	2	2	2	2
\$25,001–\$50,000	2	1	1	1	1	1	1	1	1
\$50,001–\$75,000	1	1	1	1	1	1	1	1	1
\$75,001–\$100,000	2	1	1	1	1	1	1	1	1
\$100,001–\$500,000	6	6	5	3	5	4	6	6	5
\$500,001–\$1,000,000	1	1	1	<1	1	1	1	2	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, 2020–2022

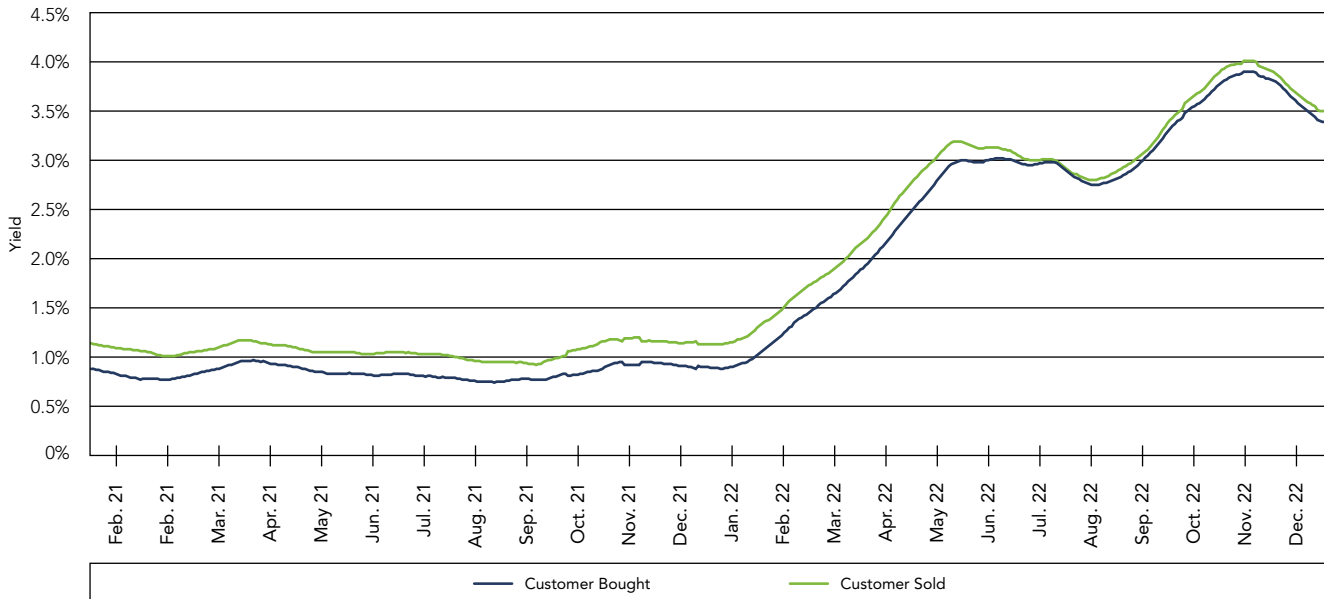
## Customer Trade and Size of Tax Exempt, Fixed Rate Securities, 2020–2022

Average daily yields

	2020	2021	2022	2022:Q1	2022:Q2	2022:Q3	2022:Q4
<b>All Trades</b>							
<b>Total</b>	<b>1.69</b>	<b>0.98</b>	<b>3.01</b>	<b>1.74</b>	<b>3.01</b>	<b>3.14</b>	<b>3.73</b>
0–\$25,000	1.78	1.02	3.03	1.80	3.06	3.17	3.79
\$25,001–\$50,000	1.64	0.92	3.02	1.69	2.99	3.13	3.71
\$50,001–\$75,000	1.53	0.84	2.91	1.64	2.89	3.00	3.60
\$75,001–\$100,000	1.57	0.89	3.00	1.62	2.94	3.14	3.68
\$100,001–\$500,000	1.51	0.92	2.91	1.60	2.87	3.03	3.59
\$500,001–\$1,000,000	1.66	1.23	2.98	1.81	2.97	3.11	3.66
\$1,000,001–\$2,000,000	1.78	1.30	3.05	1.89	3.01	3.20	3.75
More than \$2,000,000	1.98	1.43	3.27	2.10	3.29	3.43	3.98
<b>Customer Bought</b>							
<b>Total</b>	<b>1.48</b>	<b>0.86</b>	<b>2.92</b>	<b>1.60</b>	<b>2.92</b>	<b>3.06</b>	<b>3.63</b>
0–\$25,000	1.55	0.85	2.96	1.64	2.97	3.11	3.71
\$25,001–\$50,000	1.43	0.78	2.94	1.56	2.92	3.07	3.63
\$50,001–\$75,000	1.29	0.70	2.80	1.48	2.79	2.92	3.48
\$75,001–\$100,000	1.35	0.77	2.89	1.46	2.85	3.05	3.56
\$100,001–\$500,000	1.30	0.86	2.75	1.48	2.74	2.89	3.44
\$500,001–\$1,000,000	1.56	1.23	2.86	1.80	2.89	3.00	3.54
\$1,000,001–\$2,000,000	1.74	1.33	3.00	1.92	3.00	3.14	3.69
More than \$2,000,000	1.95	1.48	3.26	2.14	3.31	3.42	3.96
<b>Customer Sold</b>							
<b>Total</b>	<b>1.82</b>	<b>1.06</b>	<b>3.02</b>	<b>1.84</b>	<b>3.07</b>	<b>3.13</b>	<b>3.71</b>
0–\$25,000	1.95	1.18	3.07	1.94	3.19	3.20	3.80
\$25,001–\$50,000	1.74	0.98	2.99	1.78	3.02	3.08	3.69
\$50,001–\$75,000	1.63	0.89	2.92	1.71	2.92	2.98	3.57
\$75,001–\$100,000	1.63	0.87	2.94	1.67	2.91	3.04	3.64
\$100,001–\$500,000	1.54	0.83	2.88	1.59	2.84	2.97	3.54
\$500,001–\$1,000,000	1.72	1.05	2.97	1.71	2.91	3.09	3.62
\$1,000,001–\$2,000,000	1.85	1.14	3.04	1.76	2.97	3.17	3.73
More than \$2,000,000	2.13	1.32	3.29	2.05	3.28	3.44	3.97



### Daily Yield of Customer Trades of Tax Exempt, Fixed Rate Securities, 2021–2022 30-day trailing average



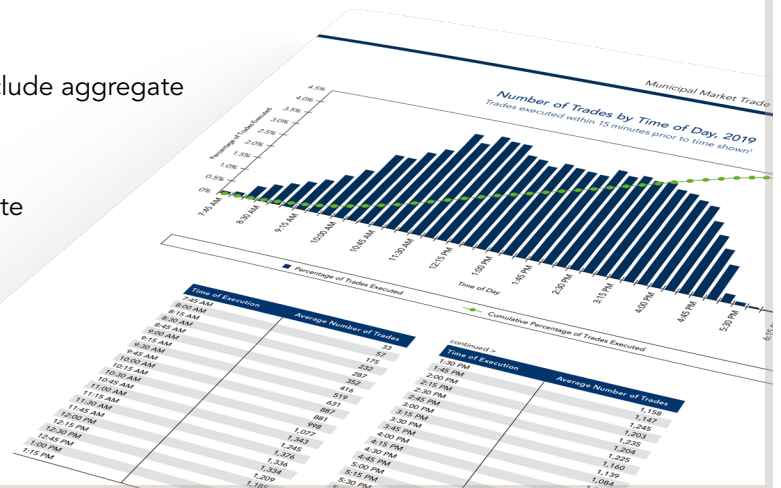
**DATA AVAILABLE FROM THE MSRB**

## 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.](#)

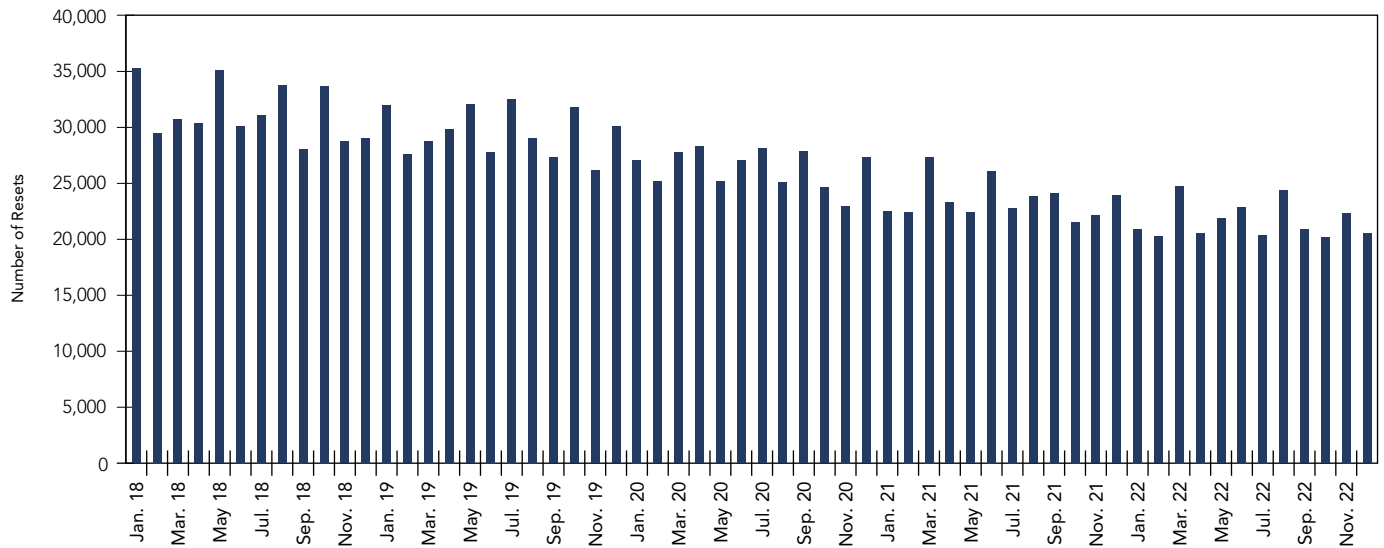


## Part Nine

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# Municipal Market Variable Securities Rate Resets, 2018–2022

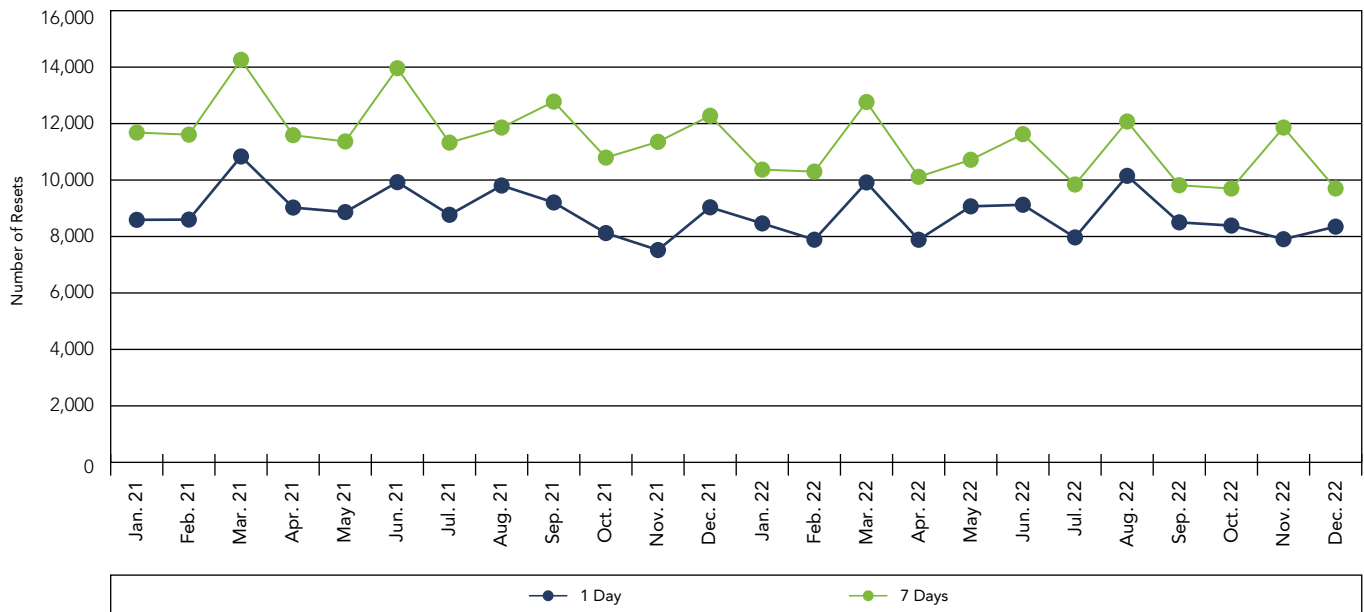
### Number of Variable Rate Demand Obligations Rate Resets<sup>1</sup>, 2018–2022



	2018	2019	2020	2021	2022
January	35,287	32,017	27,103	22,515	20,927
February	29,509	27,555	25,157	22,448	20,250
March	30,717	28,787	27,767	27,353	24,774
April	30,369	29,853	28,313	23,297	20,573
May	35,111	32,045	25,148	22,404	21,885
June	30,144	27,793	27,056	26,098	22,879
July	31,118	32,541	28,113	22,797	20,399
August	33,772	29,059	25,077	23,845	24,338
September	28,062	27,313	27,869	24,144	20,905
October	33,699	31,768	24,638	21,563	20,156
November	28,740	26,132	22,986	22,124	22,364
December	29,052	30,060	27,302	23,928	20,534

<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>, 2021–2022

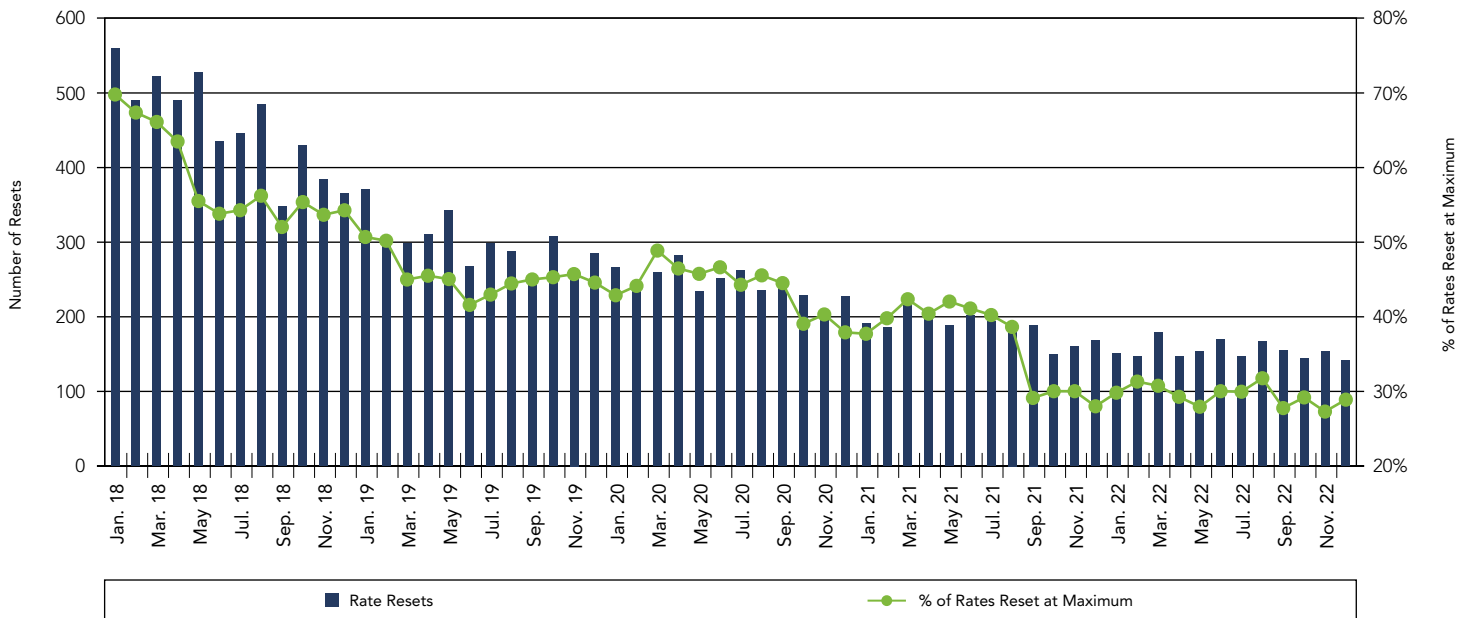


	1 Day	7 Days
Jan. 21	8,594	11,706
Feb. 21	8,603	11,631
Mar. 21	10,853	14,299
Apr. 21	9,032	11,612
May 21	8,871	11,389
Jun. 21	9,937	14,000
Jul. 21	8,774	11,347
Aug. 21	9,817	11,884
Sep. 21	9,213	12,810
Oct. 21	8,122	10,813
Nov. 21	7,518	11,376
Dec. 21	9,041	12,304

	1 Day	7 Days
Jan. 22	8,467	10,385
Feb. 22	7,886	10,314
Mar. 22	9,927	12,795
Apr. 22	7,884	10,127
May 22	9,075	10,736
Jun. 22	9,131	11,649
Jul. 22	7,967	9,854
Aug. 22	10,163	12,100
Sep. 22	8,504	9,828
Oct. 22	8,389	9,709
Nov. 22	7,904	11,885
Dec. 22	8,351	9,711

<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 27,239 resets were for securities with other periodic reset frequencies.

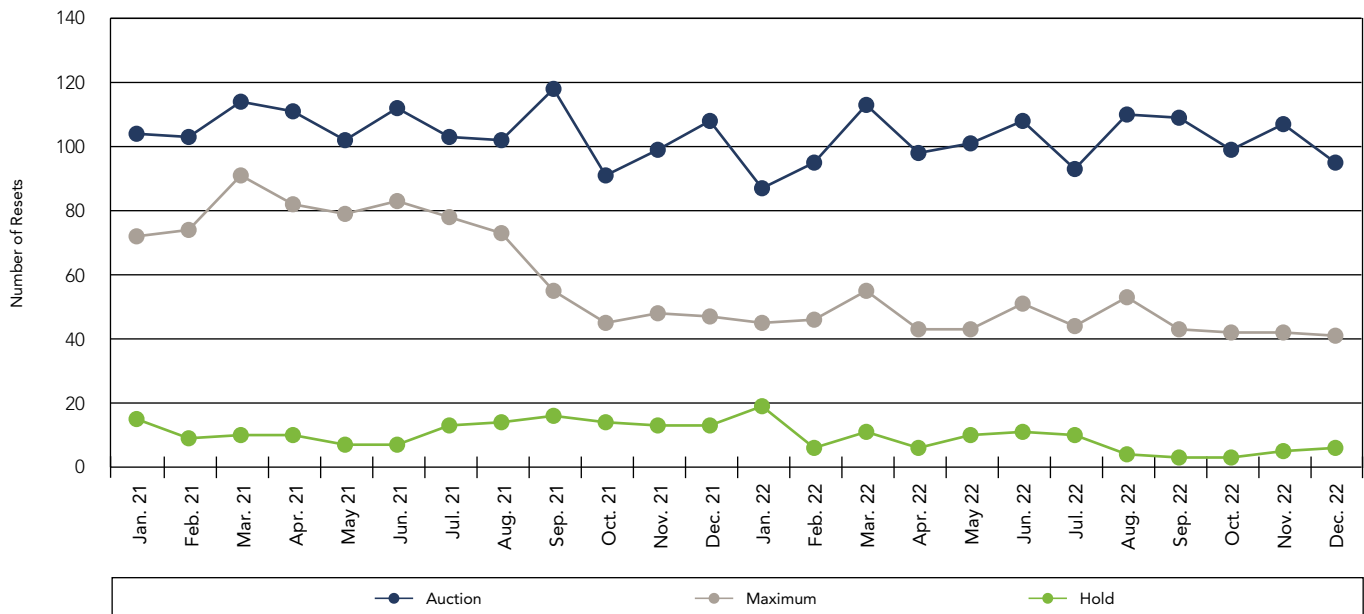
### Number of Auction Rate Securities Rate Resets<sup>1</sup>, 2018–2022



	2018	2019	2020	2021	2022
January	559	371	266	191	151
February	490	303	238	186	147
March	522	298	260	215	179
April	490	310	282	203	147
May	528	342	234	188	154
June	435	267	251	202	170
July	446	298	262	194	147
August	484	288	235	189	167
September	348	249	245	189	155
October	430	307	228	150	144
November	384	256	206	160	154
December	365	285	227	168	142

<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>, 2021–2022

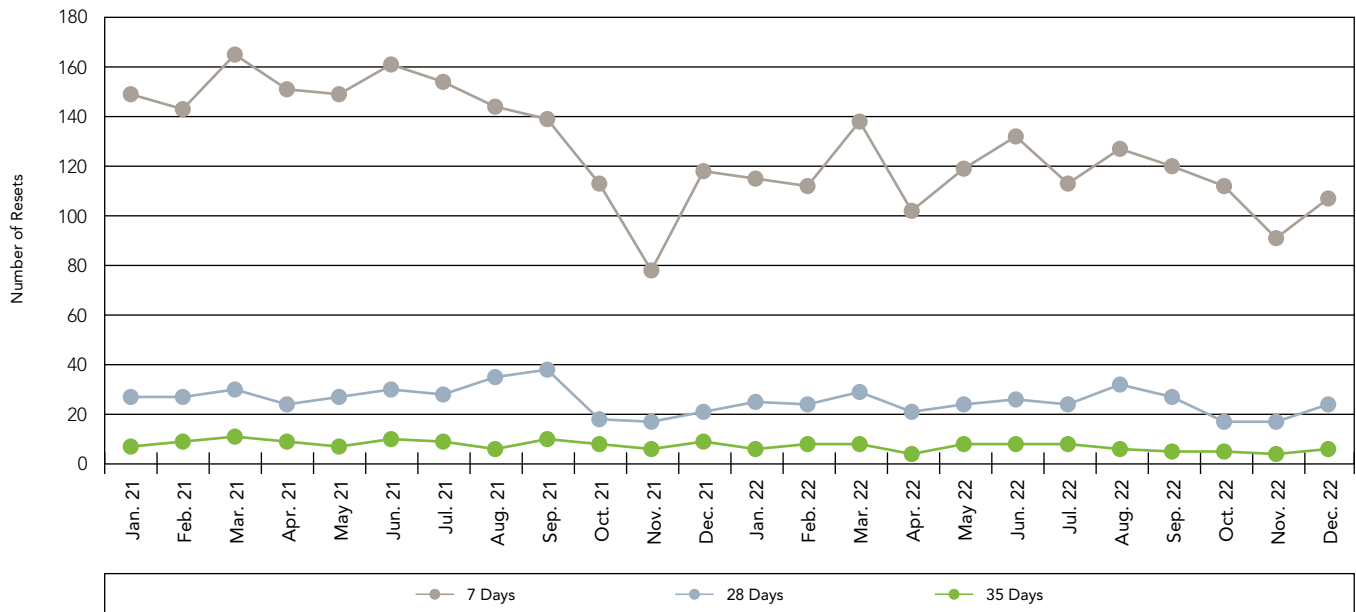


	Auction	Maximum	Hold
Jan. 21	104	72	15
Feb. 21	103	74	9
Mar. 21	114	91	10
Apr. 21	111	82	10
May 21	102	79	7
Jun. 21	112	83	7
Jul. 21	103	78	13
Aug. 21	102	73	14
Sep. 21	118	55	16
Oct. 21	91	45	14
Nov. 21	99	48	13
Dec. 21	108	47	13

	Auction	Maximum	Hold
Jan. 22	87	45	19
Feb. 22	95	46	6
Mar. 22	113	55	11
Apr. 22	98	43	6
May 22	101	43	10
Jun. 22	108	51	11
Jul. 22	93	44	10
Aug. 22	110	53	4
Sep. 22	109	43	3
Oct. 22	99	42	3
Nov. 22	107	42	5
Dec. 22	95	41	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.

### Number of Auction Rate Securities Rate Resets by Period<sup>1</sup>, 2021–2022



	7 Days	28 Days	35 Days
Jan. 21	149	27	7
Feb. 21	143	27	9
Mar. 21	165	30	11
Apr. 21	151	24	9
May 21	149	27	7
Jun. 21	161	30	10
Jul. 21	154	28	9
Aug. 21	144	35	6
Sep. 21	139	38	10
Oct. 21	113	18	8
Nov. 21	78	17	6
Dec. 21	118	21	9

	7 Days	28 Days	35 Days
Jan. 22	115	25	6
Feb. 22	112	24	8
Mar. 22	138	29	8
Apr. 22	102	21	4
May 22	119	24	8
Jun. 22	132	26	8
Jul. 22	113	24	8
Aug. 22	127	32	6
Sep. 22	120	27	5
Oct. 22	112	17	5
Nov. 22	91	17	4
Dec. 22	107	24	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.

# Part Ten

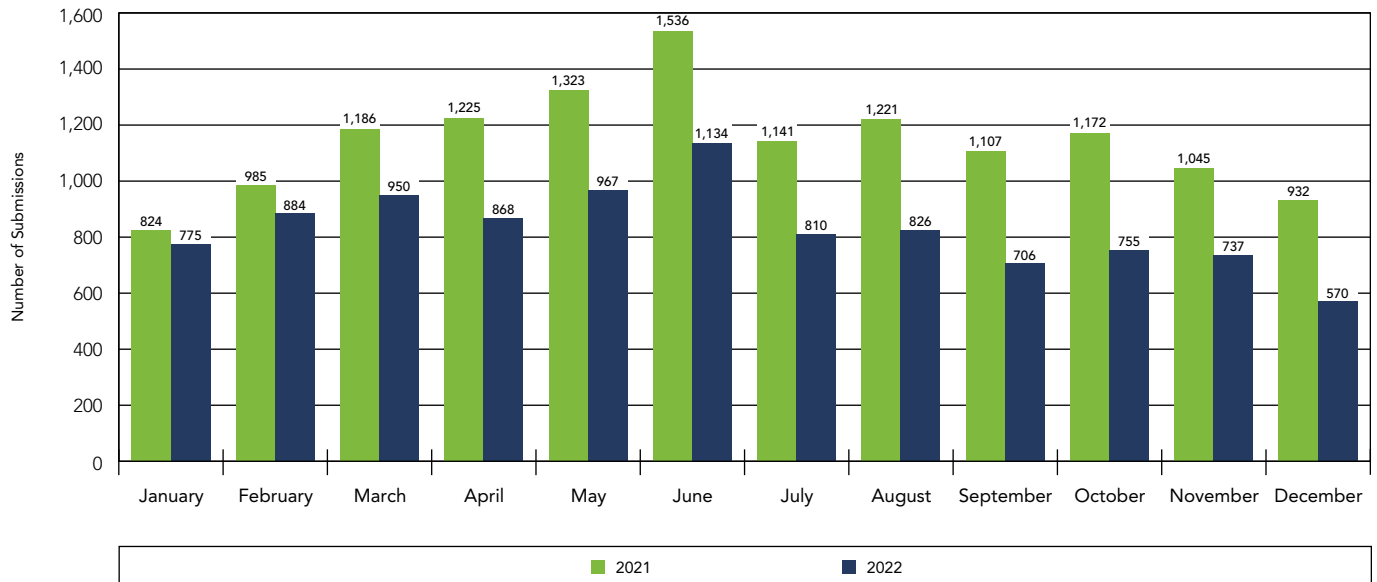
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## Municipal Market Disclosures, 2018–2022



### Number of Primary Market Submissions<sup>1</sup>, 2021–2022

By number of submissions

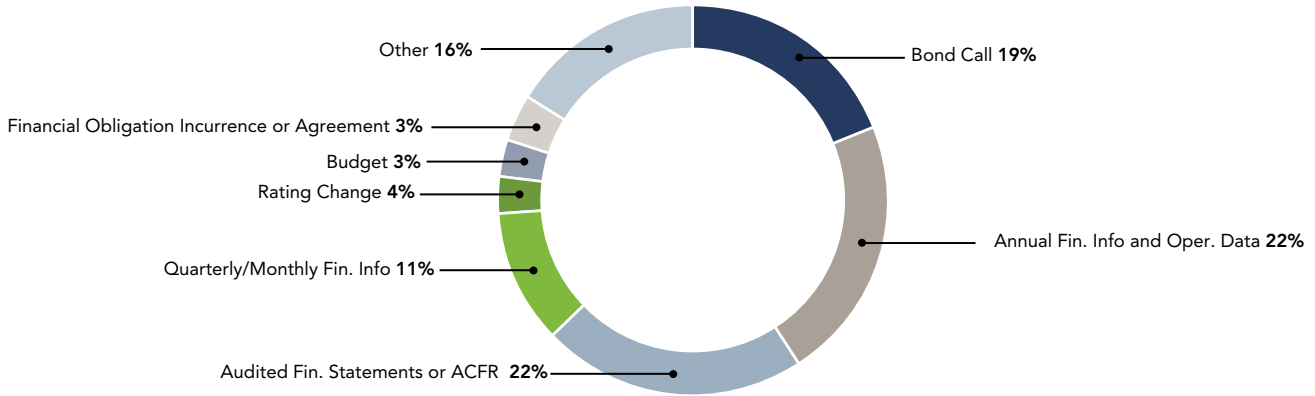


	2021	2022
January	824	775
February	985	884
March	1,186	950
April	1,225	868
May	1,323	967
June	1,536	1,134
July	1,141	810
August	1,221	826
September	1,107	706
October	1,172	755
November	1,045	737
December	932	570
Total	13,697	9,982

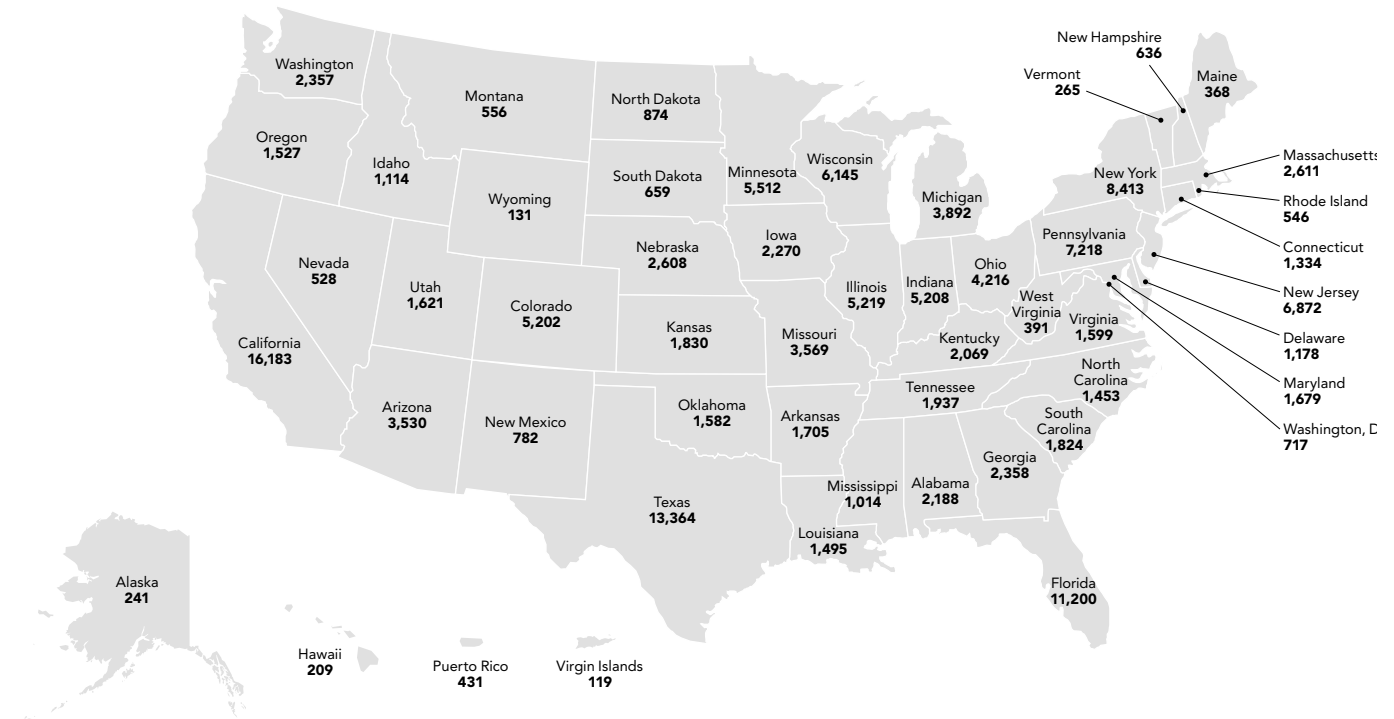
<sup>1</sup> Excludes remarketings.

## Continuing Disclosures Submissions, 2022

By number of documents

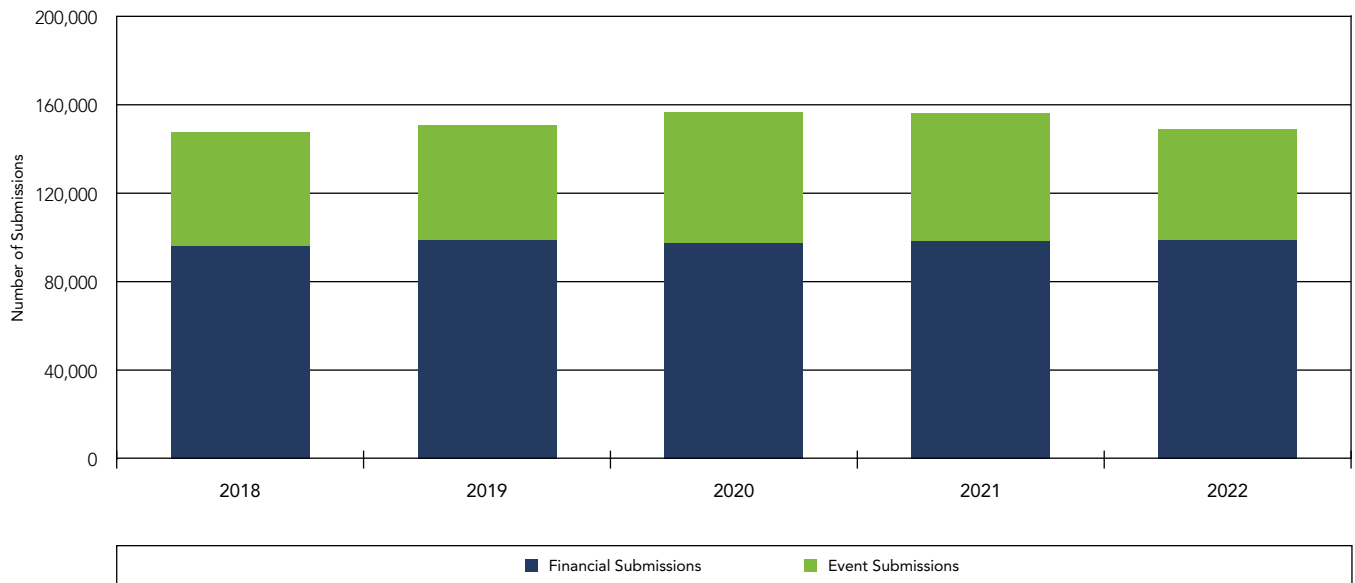


By state<sup>1</sup>



<sup>1</sup> Based on information derived from CUSIP Global Services.

### Number of Continuing Disclosure Submissions, 2018–2022

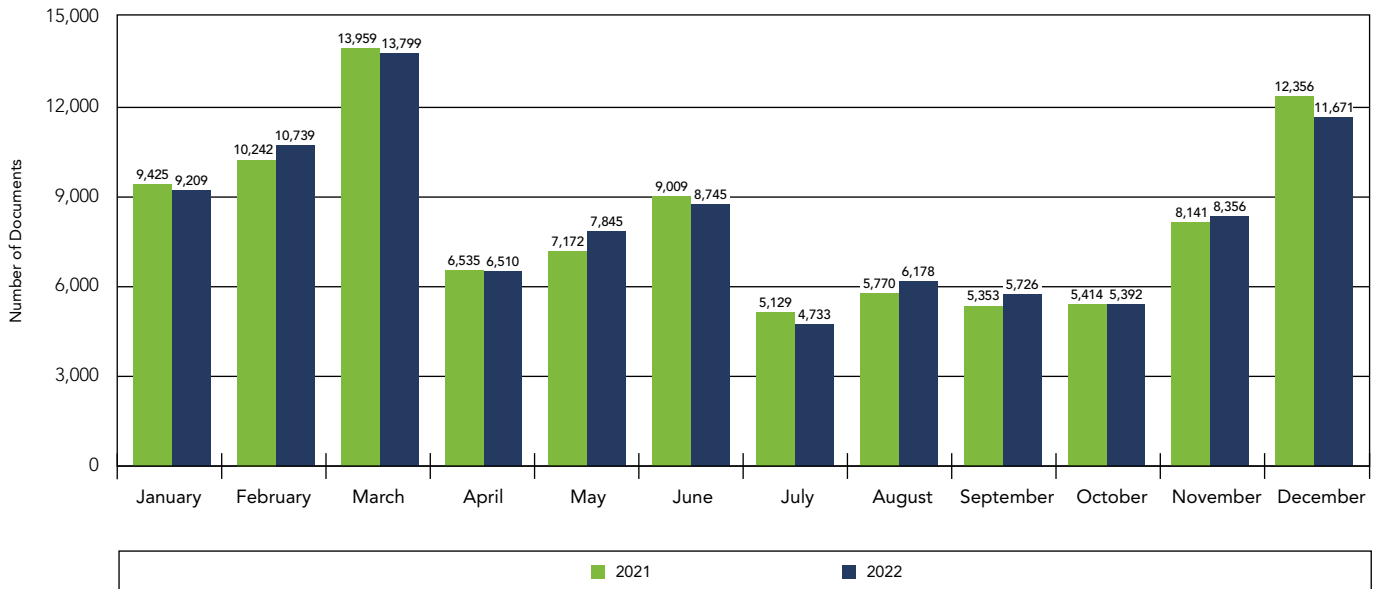


	Financial Submissions	Event Submissions
2018	96,098	51,182
2019	98,925	51,660
2020	97,326	59,521
2021	98,505	57,779
2022	98,903	50,125

<sup>1</sup> CUSIP Global Services.

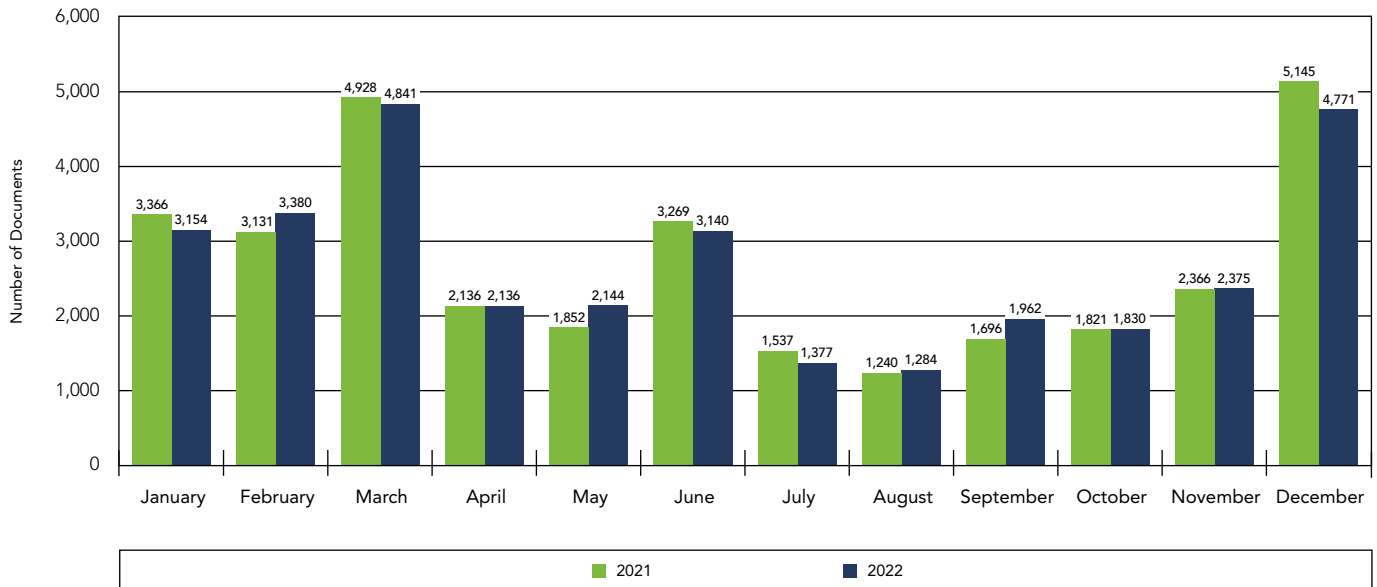
### All Financial Disclosures, 2021–2022

By number of documents



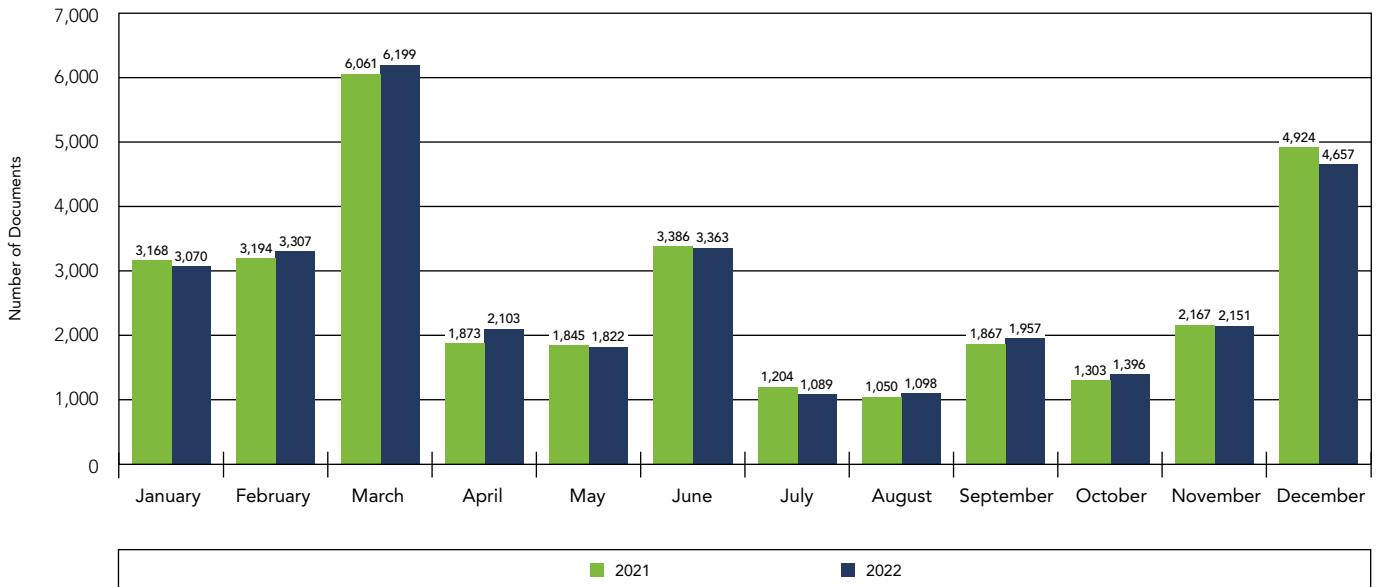
### Audited Financial Statements or ACFR Submissions, 2021–2022

By number of documents



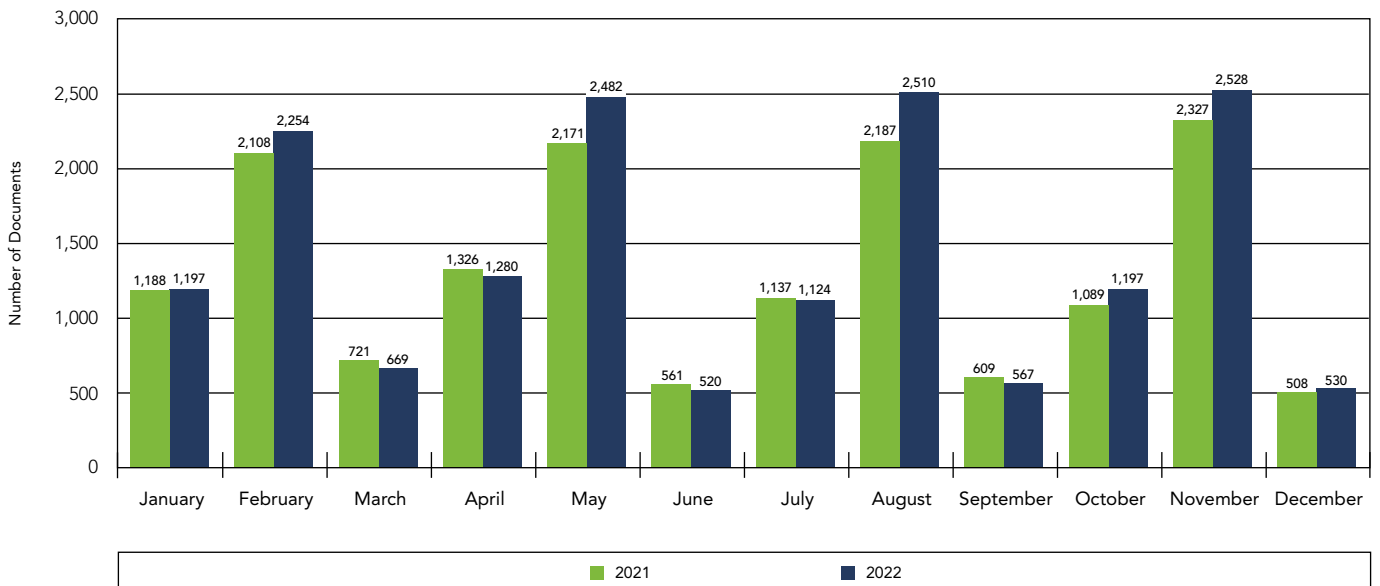
### Annual Financial Information and Operating Data Submissions, 2021–2022

By number of documents



### Quarterly/Monthly Financial Information Submissions, 2021–2022

By number of documents



## Other Financial Disclosures, 2021–2022

Financial disclosures

By Number of Documents	2021	2022
BUDGET	4,233	4,424
CHANGE IN ACCOUNTING STANDARD	1	3
CHANGE IN FISCAL YEAR/TIMING OF ANNUAL DISCLOSURE	53	28
CONSULTANT REPORTS	279	234
FAILURE TO PROVIDE ANNUAL FINANCIAL INFORMATION	2,777	2,782
INFORMATION PROVIDED TO RATING AGENCY, CREDIT/LIQUIDITY PROVIDER OR OTHER THIRD PARTY	214	198
INTERIM/ADDITIONAL FINANCIAL INFORMATION/OPERATING DATA	1,801	1,720
INVESTMENT/DEBT/FINANCIAL POLICY	82	61
OTHER FINANCIAL/OPERATING DATA	8,604	7,989



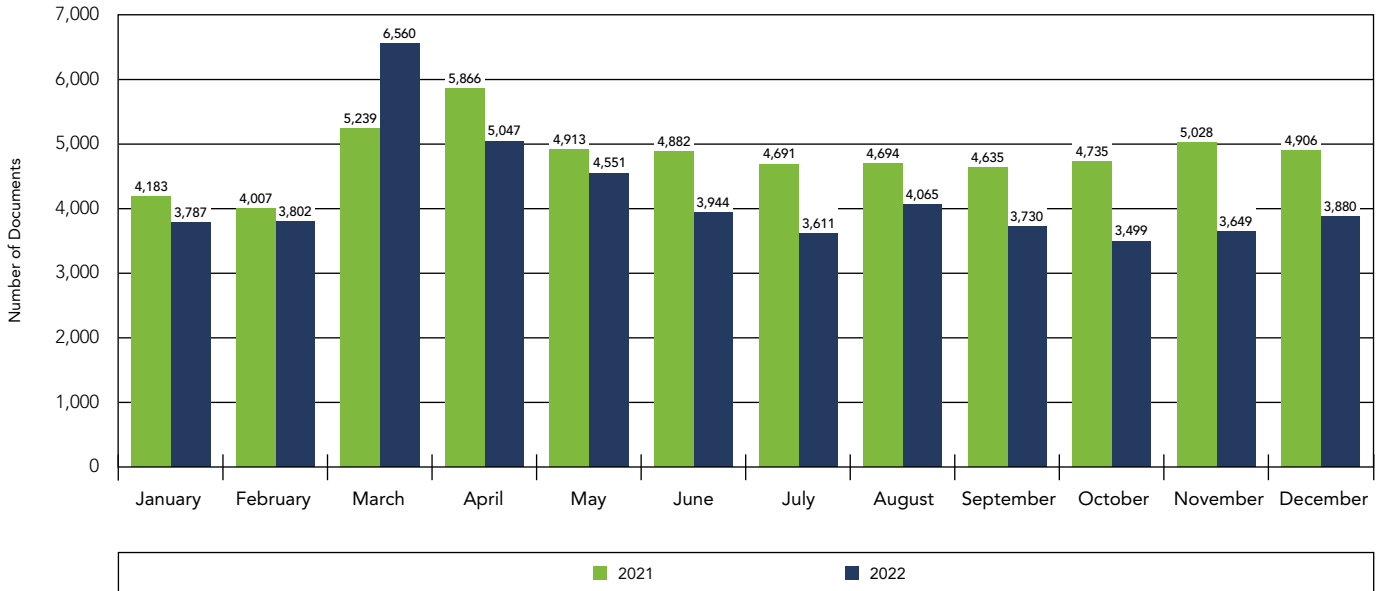
## EMMALabs Pioneering the future of market transparency

- EMMA Labs is the MSRB's innovation sandbox—a proving ground for functional prototypes that could ultimately be deployed on the EMMA website.
- Work with us to co-create the future of municipal bond market transparency. Create a free EMMA Labs account to test these prototypes, or Active Labs, provide feedback and offer ideas for future Active Labs, tools and partnerships.

Get started at [EMMALabs.msrb.org](https://EMMALabs.msrb.org)

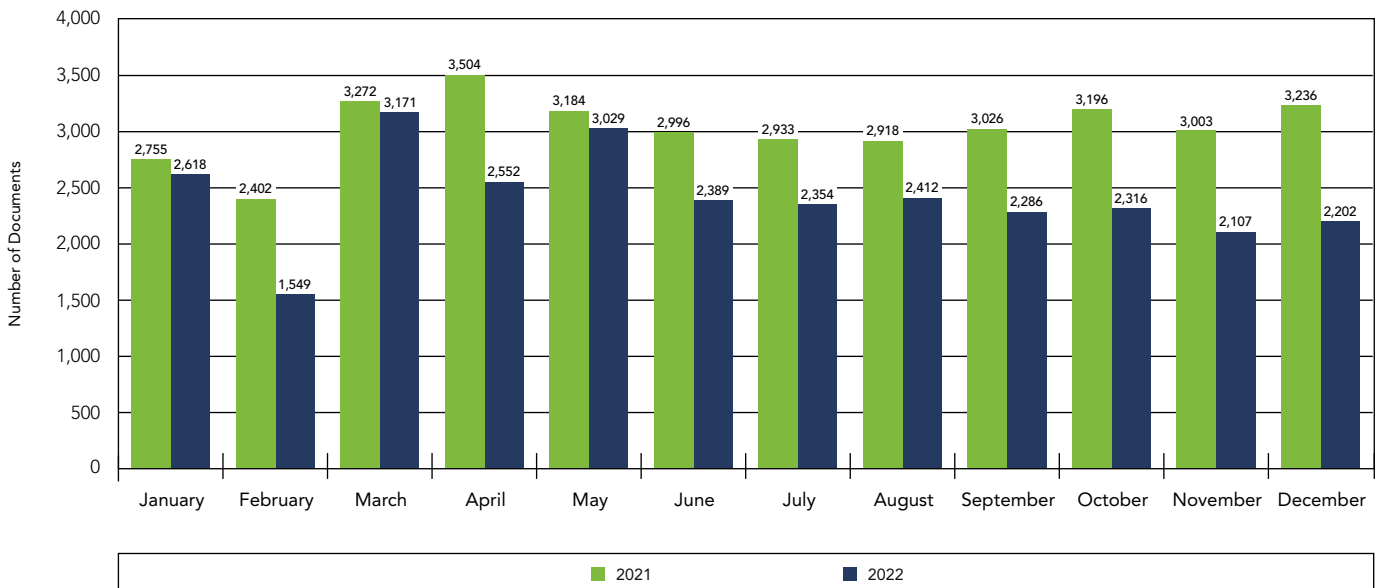
### All Event Disclosures, 2021–2022

By number of documents



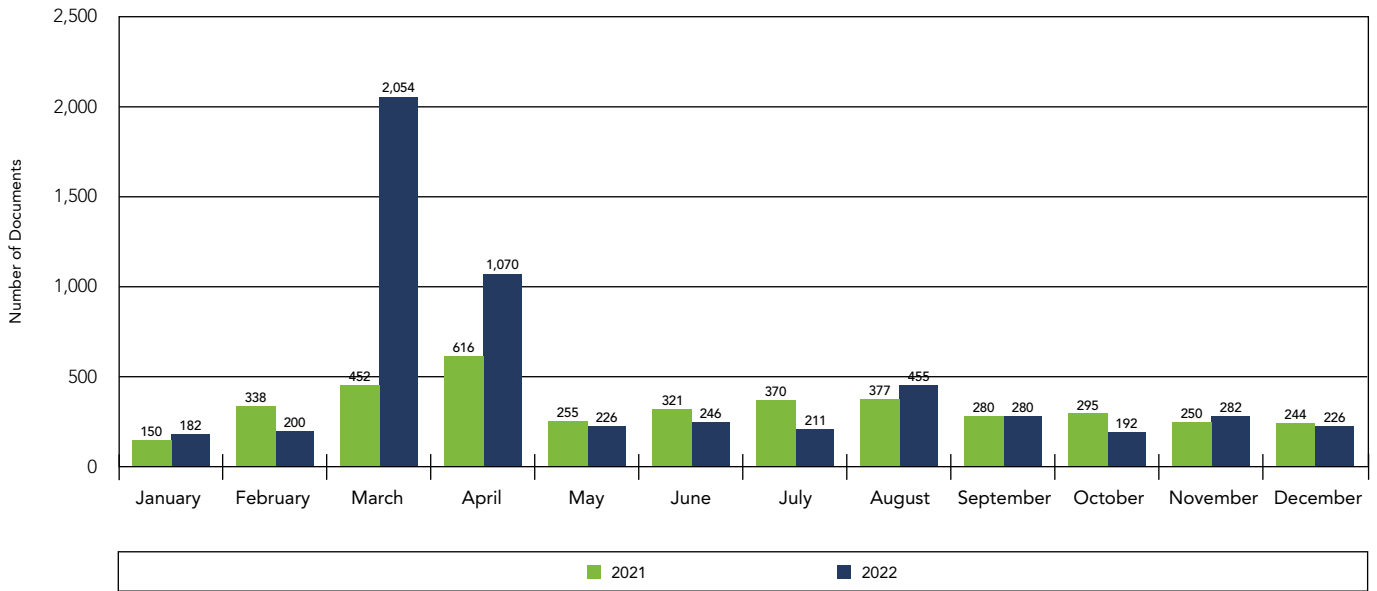
### Bond Call Submissions, 2021–2022

By number of documents



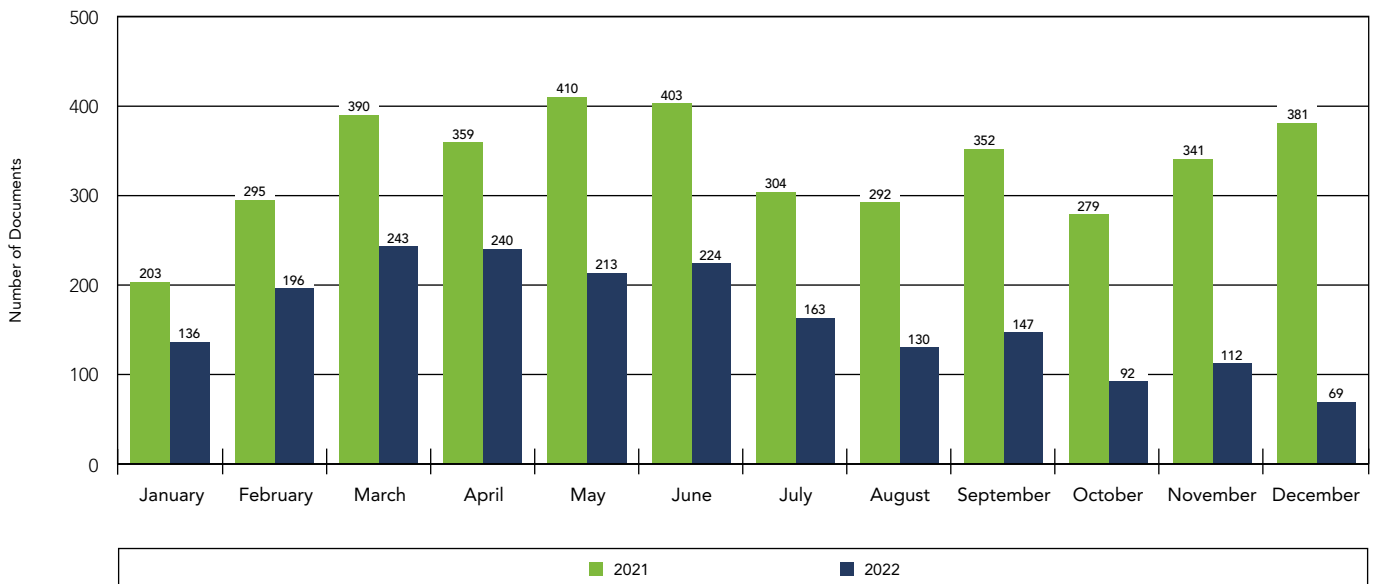
### Rating Change Submissions, 2021–2022

By number of documents



### Defeasance Submissions, 2021–2022

By number of documents





## Other Event Disclosures, 2021–2022

## Event disclosures

By Number of Documents	2021	2022
ADVERSE TAX OPINION OR EVENT AFFECTING TAX-EXEMPT STATUS	22	7
AMENDMENT TO CONTINUING DISCLOSURE UNDERTAKING	35	36
BANKRUPTCY, INSOLVENCY, RECEIVERSHIP	129	58
BID FOR AUCTION RATE OR OTHER SECURITIES	158	103
CAPITAL OR OTHER FINANCING PLAN	132	45
CHANGE IN OBLIGATED PERSON	50	51
CHANGE OF TENDER AGENT, REMARKETING AGENT, OR OTHER ON-GOING PARTY	81	85
COMMUNICATION FROM THE INTERNAL REVENUE SERVICE	4	4
DERIVATIVE OR OTHER SIMILAR TRANSACTION	4	4
FAILURE TO PROVIDE EVENT FILING INFORMATION	940	797
FINANCIAL OBLIGATION - EVENT REFLECTING FINANCIAL DIFFICULTIES	16	14
FINANCIAL OBLIGATION - INCURRENCE OR AGREEMENT	4,109	4,520
LITIGATION/ENFORCEMENT ACTION	60	47
MERGER, CONSOLIDATION, ACQUISITION AND SALE OF ASSETS	88	76
MODIFICATION TO THE RIGHTS OF SECURITY HOLDERS	72	41
NON-PAYMENT RELATED DEFAULT	54	53
NOTICE TO INVESTOR PURSUANT TO BOND DOCUMENTS	967	1,139
OTHER EVENT-BASED DISCLOSURES	4,675	4,339
P&I PAYMENT DELINQUENCY	361	319
RELEASE, SUBSTITUTION OR SALE OF PROPERTY	54	52
SUBSTITUTION OF CREDIT OR LIQUIDITY PROVIDER OR ITS FAILURE TO PERFORM	362	47
SUCCESSOR, ADDITIONAL OR CHANGE IN TRUSTEE	579	1,295
TENDER OFFER/SECONDARY MARKET PURCHASES	277	308
UNSCHEDULED DRAW ON CREDIT ENHANCEMENT	40	29
UNSCHEDULED DRAW ON DEBT SERVICE RESERVE	128	82

# 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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