

# Market Transparency Report

Monthly Guide to the U.S. Retail Fixed Income Markets

July 2020

[www.tradeweb.com](http://www.tradeweb.com)

1177 Avenue of the Americas  
New York, NY 10036  
212.852.1234

## Overview

### About the Market Transparency Report

The data and analysis contained in this monthly report are intended to provide transparency into the dynamics of the U.S. Fixed Income markets for retail investors. The report presents the important trends in the market, including trade volumes, most active issuers, yield/spread movements and buy/sell ratios. Retail trades are defined as odd-lot transactions under 100 bonds (i.e. less than \$100,000 par value). The retail market is much smaller than the institutional market on a par value basis, but it accounts for more than 2/3 of the trades that occur in the marketplace.

### Page Reference

3. Market Commentary
4. Yield Matrix
5. Treasury, Agency, CD Transaction Trend Summary
6. Corporate Bonds: Odd-Lot Customer Transaction Trend Summary
7. Municipal Bonds: Odd-Lot Customer Transaction Trend Summary
8. Corporate Bonds: Top 20 Most Active Issuers
9. Corporate Bonds: Top 20 Issuers with Highest Buy/Sell Ratio
10. Corporate Bonds: Top 20 Issuers with Lowest Buy/Sell Ratio
11. Corporate Bonds: Top 20 Most Bought Issues
12. Corporate Bonds: Top 20 Most Sold Issues
13. Appendix
14. Disclosures

## Market Commentary

Monthly Change Table for July 2020

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-5	-1.2%	0.2
CD	-5	-3.9%	0.2
Corp	-35	-13.5%	-0.1
Municipal	-26	-5.1%	0.0
Treasury	-4	-12.4%	0.1

For monthly security trend data, see slides 5, 6 and 7

# Yield Matrix

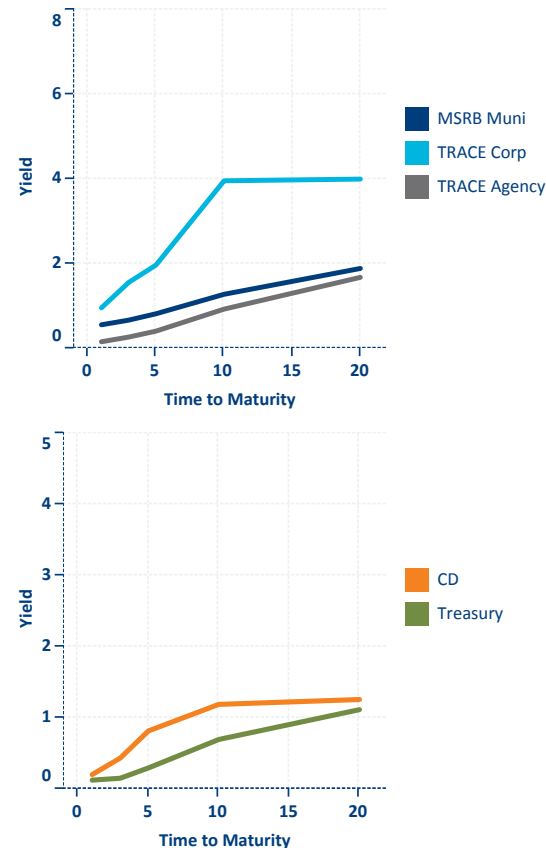
## Average Yield, % for July 2020

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	0.6	0.7	0.8	1.3	1.9	10
TRACE Corp	1.0	1.6	2.0	4.0	4.0	4
TRACE Agency	0.2	0.3	0.4	0.9	1.7	4
CD	0.2	0.4	0.8	1.2	1.3	1
Treasury	0.1	0.2	0.3	0.7	1.1	1

## Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	0.2	0.6	0.8	1.6	1.6	1
		A	0.3	0.6	0.9	1.8	3.0	3
		BBB	1.3	1.3	1.6	3.3	4.2	5
		HY		3.0	9.7	9.6	5.9	7
		AAA	0.1	0.2		1.2	2.0	9
	Non-Financial	AA	0.4	1.1	0.5	1.6	2.2	7
		A	0.5	0.6	1.0	1.5	2.7	4
		BBB	0.9	2.2	1.9	5.7	4.5	8
		HY	3.6	9.7	6.7	7.1	7.1	5
MSRB Muni	GO	AAA	0.4	0.4	0.5	0.8	1.4	7
		AA	0.4	0.5	0.6	1.1	1.7	9
		A	0.6	0.7	0.9	1.3	2.0	8
		BBB	1.9	2.3	2.3	2.9	3.3	9
		HY	2.6	3.0	3.4	3.2	2.9	10
	Revenue	AAA	0.4	0.4	0.6	1.1	1.5	7
		AA	0.5	0.5	0.7	1.1	1.6	10
		A	0.7	0.9	1.1	1.5	1.9	12
		BBB	1.7	2.0	2.4	2.7	2.9	14
		HY	9.7	5.3	5.3	5.3	4.5	10

## Average Yield, %



WA Yield = "Weighted Average Yield"

Source: TRACE, RTRS (MSRB's Real-time Transactional Reporting System) and Tradeweb Direct

-The yields in each cell for Corporate/Agency/Municipal are the weighted average yield based on odd-lot customer buy transactions reported in TRACE/MSRB.

-The yields in each cell for Treasury/CD are the weighted average yield based on buy transactions on the Tradeweb Direct Platform.

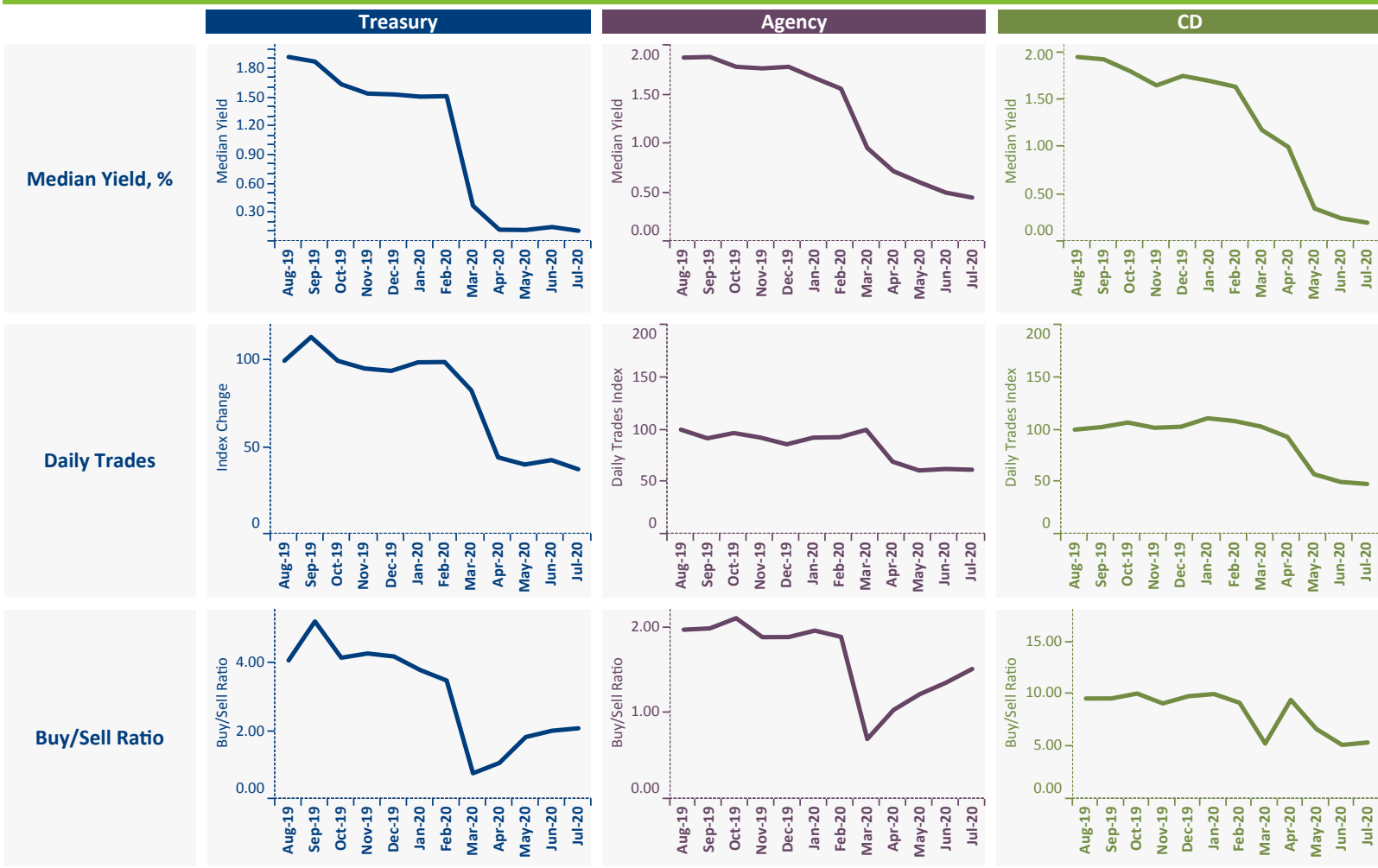
-The weights are based on transaction size.

-Yield summaries for Corporate and Agency exclude transactions in callable or floating-rate coupon bonds.

-Yield summaries for Municipal exclude transactions in taxable bonds.

-See appendix for the definition of maturity and rating buckets.

# Treasury, Agency, CD Transaction Trend Summary

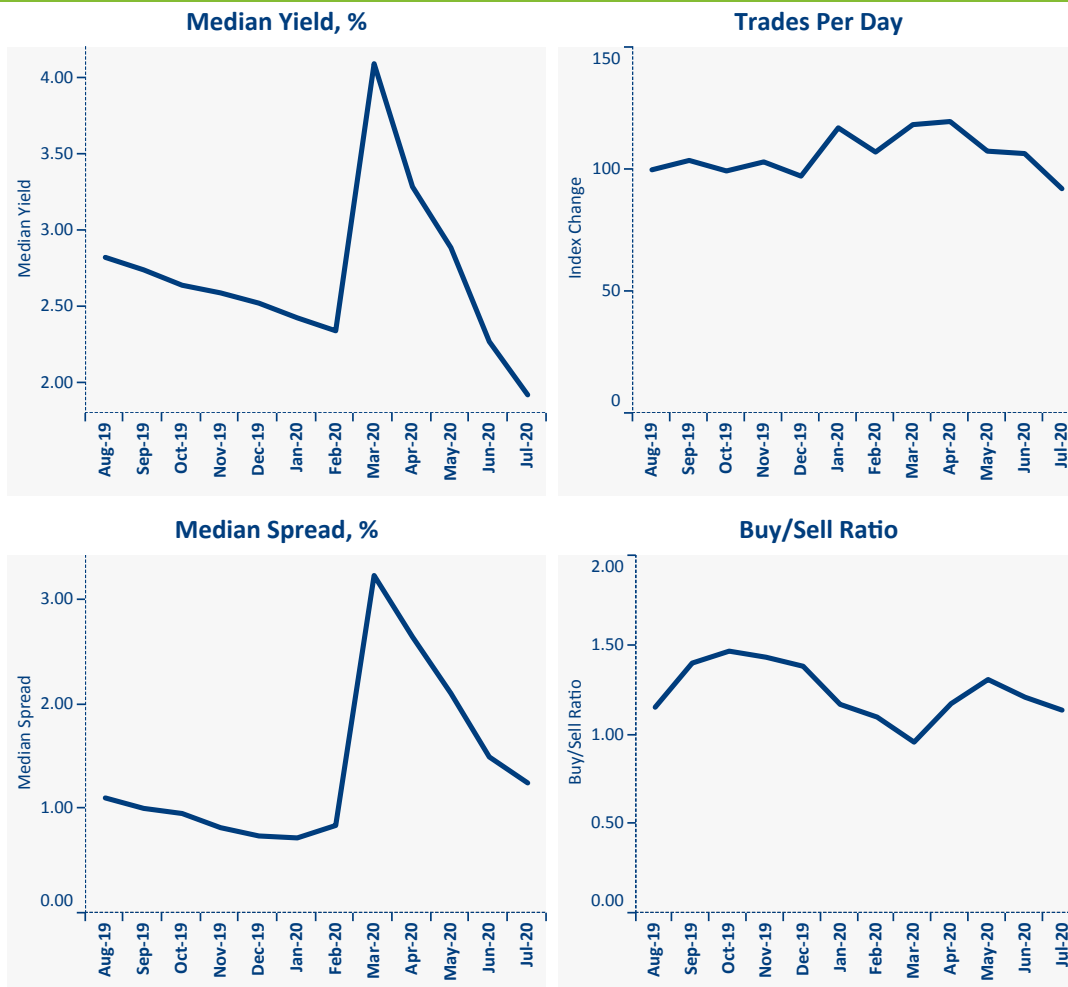


Daily Trades: First month = 100  
 Source: TRACE and Tradeweb Direct  
 -Treasury and CD are based on transactions on the Tradeweb Direct Platform. Median yields are based on all customer buy transactions.  
 -Agency is based on odd-lot customer transactions (<100M) reported in TRACE. Median yields are based on all odd-lot customer buy transactions.

©2020 Tradeweb Markets LLC. All rights reserved. The information contained herein is highly confidential and some or all of it may constitute material, non-public information under applicable securities laws. This information must be kept strictly confidential, may not be disclosed or distributed to anyone without the express written consent of Tradeweb Markets LLC, and may only be used as expressly permitted by any applicable non-disclosure, customer, or other written agreement with Tradeweb.



# Corporate Bonds: Odd-Lot Customer Transaction Trend Summary



Daily Trades: First month = 100  
 Source: TRACE and Tradeweb Direct  
 -Based on odd-lot customer transactions (<100M) reported in TRACE.  
 -Median yields and spreads are based on all odd-lot customer buy transactions...

©2020 Tradeweb Markets LLC. All rights reserved. The information contained herein is highly confidential and some or all of it may constitute material, non-public information under applicable securities laws. This information must be kept strictly confidential, may not be disclosed or distributed to anyone without the express written consent of Tradeweb Markets LLC, and may only be used as expressly permitted by any applicable non-disclosure, customer, or other written agreement with Tradeweb.



# Municipal Bonds: Odd-Lot Customer Transaction Trend Summary



Daily Trades: First month = 100

Source: RTRS (MSRB's Real-time Transaction Reporting System) and Tradeweb Direct

-Based on odd-lot customer transactions (<100M) reported in MSRB.

-Median yields and spreads are based on all odd-lot customer buy transactions.

-Spread for each transaction is calculated against the Treasury yield for the same maturity.

©2020 Tradeweb Markets LLC. All rights reserved. The information contained herein is highly confidential and some or all of it may constitute material, non-public information under applicable securities laws. This information must be kept strictly confidential, may not be disclosed or distributed to anyone without the express written consent of Tradeweb Markets LLC, and may only be used as expressly permitted by any applicable non-disclosure, customer, or other written agreement with Tradeweb.



## Corporate Bonds: Top 20 Most Active Issuers

July 2020

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Buy/Sell Ratio	Dollar Vol. Traded (MM)	1Y Yield (Buy)	3Y Yield (Buy)	5Y Yield (Buy)	10Y Yield (Buy)	20Y Yield (Buy)
1	JPM	JP MORGAN CHASE	BBB	658	3.1%	14,624	1.1	334	0.3	0.6	0.9	1.7	2.4
2	GS	GOLDMAN SACHS	BBB	912	2.9%	13,460	1.1	282	0.4	0.9	1.2	2.6	3.6
3	C	CITIGROUP	BBB	476	2.3%	10,628	1.1	241	0.5	0.7	1.4	2.0	2.0
4	BNKQ	Null	A	367	2.2%	10,313	1.1	232	0.3	0.6	1.3	1.4	3.2
5	WFC	WELLS FARGO	A	255	2.0%	9,487	1.3	214	0.3	0.8	1.1	1.7	2.8
6	T	AT&T	BBB	113	1.7%	7,949	1.3	182	1.0	0.7	1.0	2.0	3.2
7	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	BBB	299	1.5%	7,034	1.2	141	0.8	1.4	2.4	3.7	4.3
8	MS	MORGAN STANLEY	BBB	715	1.5%	6,977	0.8	159	0.4	0.8	1.1	1.8	2.5
9	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	99	1.3%	6,256	1.5	140	1.4	2.1	2.6	3.4	5.0
10	VZ	VERIZON	BBB	118	1.2%	5,604	1.4	109	0.4	0.5	0.7	1.4	2.3
11	F	FORD	BB	247	1.2%	5,563	1.0	115	3.2	4.6	5.3	6.3	6.3
12	AAPL	APPLE INC	AA	47	1.2%	5,487	1.0	120	0.2	0.4	0.6	1.1	2.2
13	BA	BOEING CO	BBB	53	0.9%	4,288	3.0	99	1.1	2.3	2.6	3.2	4.4
14	CMCS	COMCAST	A	68	0.9%	4,066	1.2	93		0.6	0.8	1.3	2.3
15	CVS	CVS CAREMARK CORP	BBB	44	0.9%	4,012	1.1	88	0.4	0.7	1.0	1.7	3.0
16	ORCL	ORACLE CORP	A	32	0.8%	3,757	1.3	78	0.3	0.5	0.8	1.5	2.5
17	LUV	SOUTHWEST AIRLNS CO	BBB	11	0.8%	3,617	2.6	75		3.0	3.6	3.6	
18	DAL	DELTA AIR LINES INC DEL	BB	16	0.8%	3,600	2.8	74	4.2	7.0	7.4	6.6	
19	MET	METLIFE	BBB	24	0.8%	3,551	1.2	78		0.5	0.6	3.6	2.6
20	BRK	BERKSHIRE HATHAWAY	A	149	0.8%	3,491	0.8	93	0.2	0.3	1.0	1.4	3.3

Source: TRACE and Tradeweb Direct

-Based on odd-lot customer transactions (<100M) reported in TRACE.

-Issuer ratings are based on median rating of traded bonds from each issuer. Bond ratings are from Moody's and S&P.



## Corporate Bonds: Top 20 Issuers with Highest Buy/Sell Ratio

July 2020

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Trades (Buy)	Trades (Sell)	Buy/Sell Ratio	Dollar Vol. Traded (MM)	1Y Yield (Buy)	3Y Yield (Buy)	5Y Yield (Buy)	10Y Yield (Buy)	20Y Yield (Buy)
1	ARCC	ARES CAP CORP	BBB	7	0.3%	1,495	1,285	210	6.1	23	2.0	3.4	3.7		
2	MAR	MARRIOTT INTL INC NEW	BBB	25	0.5%	2,099	1,719	380	4.5	50	1.6	2.7	3.2	3.8	
3	JWN	NORDSTROM INC	BBB	7	0.5%	2,250	1,778	472	3.8	43	2.5			7.3	7.6
4	OKE	ONEOK INC NEW	BBB	29	0.3%	1,266	989	277	3.6	28		1.6	2.4	3.8	5.2
5	ALLY	ALLY FINANCIAL	BBB	48	0.3%	1,369	1,060	309	3.4	33	1.5	2.4	2.7	4.3	
6	AL	AIR LEASE CORP	BBB	22	0.2%	1,073	809	264	3.1	23	2.2	2.8	3.2	3.7	
7	AMT	AMERICAN TOWER CORP NEW	BBB	22	0.3%	1,352	1,017	335	3.0	21	0.4	0.7	0.8	1.8	
8	BA	BOEING CO	BBB	53	0.9%	4,288	3,210	1,078	3.0	99	1.1	2.3	2.6	3.2	4.4
9	FITB	FIFTH THIRD BANCORP	BBB	20	0.3%	1,512	1,130	382	3.0	32	0.3	0.9	1.0	1.4	3.1
10	DAL	DELTA AIR LINES INC DEL	BB	16	0.8%	3,600	2,659	941	2.8	74	4.2	7.0	7.4	6.6	
11	LUV	SOUTHWEST AIRL CO	BBB	11	0.8%	3,617	2,601	1,016	2.6	75		3.0	3.6	3.6	
12	EIX	EDISON MISSION	A	39	0.2%	1,089	767	322	2.4	23	0.3	1.4	1.2	2.0	3.2
13	PBI	PITNEY BOWES	BB	5	0.3%	1,285	905	380	2.4	14	9.3	13.2			9.4
14	X	UNITED STS STL CORP NEW	C	3	0.2%	1,097	755	342	2.2	11			15.7		11.8
15	TFC	Null	BBB	49	0.7%	3,104	2,103	1,001	2.1	73	0.3	0.6	0.8	1.5	
16	DFS	DISCOVER BK NEW CASTLE DEL	BB	60	0.2%	1,042	693	349	2.0	22	2.1	1.1	1.8	4.0	
17	KSS	KOHL'S CORP	BBB	7	0.3%	1,343	866	477	1.8	25		3.4	4.6	5.8	6.2
18	SCHW	SCHWAB CHARLES CORP NEW	BBB	19	0.3%	1,414	905	509	1.8	34	0.4	0.5	0.8	1.4	
19	SPG	SIMON PPTY GROUP L P	A	22	0.2%	1,062	675	387	1.7	27	0.5	0.9	1.2	2.4	3.3
20	DUK	DUKE ENERGY	BBB	109	0.5%	2,286	1,370	916	1.5	53	0.3	0.6	1.6	1.3	2.5

Source: TRACE and Tradeweb Direct

-Based on odd-lot customer transactions (<100M) reported in TRACE.

-The top 20 issuers are selected among the top 100 most active issuers in odd-lot TRACE.

-Issuer ratings are based on median rating of traded bonds from each issuer. Bond ratings are from Moody's and S&P.

## Corporate Bonds: Top 20 Issuers with Lowest Buy/Sell Ratio

July 2020

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Trades (Buy)	Trades (Sell)	Buy/Sell Ratio	Dollar Vol. Traded (MM)	1Y Yield (Sell)	3Y Yield (Sell)	5Y Yield (Sell)	10Y Yield (Sell)	20Y Yield (Sell)
1	FTR	FRONTIER COMMUNICATIONS CORP	N/R	24	0.3%	1,270	185	1,085	0.17	13					
2	TSLA	TESLA MTRS INC	B	6	0.3%	1,289	306	983	0.31	45				10.2	
3	M	MACYS RETAIL HLDGS INC	B	21	0.3%	1,565	417	1,148	0.36	23	9.7	12.3	15.5	12.9	9.8
4	CTL	CENTURYLINK	B	28	0.3%	1,626	547	1,079	0.51	36	2.4	4.0	4.3	6.3	6.7
5	HBC	HSBC	BBB	397	0.4%	1,777	657	1,120	0.59	42	0.8	1.8	1.8	3.7	3.3
6	XRX	XEROX CORP	BB	8	0.2%	1,044	437	607	0.72	22	2.3	3.8			6.2
7	MO	ALTRIA GROUP INC	BBB	22	0.3%	1,339	576	763	0.75	43	0.5	0.9	1.3	2.3	3.7
8	MSFT	MICROSOFT CORP	AAA	36	0.7%	3,189	1,375	1,814	0.76	69	0.3	0.3	0.6		2.0
9	BRK	BERKSHIRE HATHAWAY	A	149	0.8%	3,491	1,553	1,938	0.80	93	0.4	0.4	0.9	2.9	2.7
10	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	BBB	48	0.5%	2,338	1,038	1,300	0.80	56	0.8	0.7	1.1	1.8	3.1
11	SO	GEORGIA POWER CO	BBB	57	0.2%	1,127	500	627	0.80	26	0.5	0.7	1.0	1.8	3.0
12	AIG	AIG	BBB	32	0.2%	1,159	523	636	0.82	26	0.5	0.8	1.1	2.1	3.1
13	GILD	GILEAD SCIENCES INC	A	17	0.2%	1,083	488	595	0.82	23	0.4	0.5	0.7		2.4
14	MS	MORGAN STANLEY	BBB	715	1.5%	6,977	3,194	3,783	0.84	159	0.5	0.9	1.1	2.2	2.5
15	KO	COCA COLA CO	A	36	0.4%	1,692	780	912	0.86	37	0.3	0.4	0.7	1.2	2.1
16	BNS	BANK NOVA SCOTIA B C	A	114	0.3%	1,279	594	685	0.87	31	0.4	0.7	1.0		
17	PRU	PRUDENTIAL	A	45	0.3%	1,226	576	650	0.89	26	0.5	0.5	0.9	1.9	4.3
18	APC	ANADARKO PETE CORP	BB	72	0.5%	2,490	1,181	1,309	0.90	51	4.7	6.0	5.8	7.7	6.9
19	PEP	PEPSICO	A	40	0.4%	1,644	784	860	0.91	39	0.3	0.4	0.7	1.2	2.2
20	RY	ROYAL BANK OF CANADA	A	218	0.3%	1,414	673	741	0.91	33	0.4	0.7	1.2	2.1	

Source: TRACE and Tradeweb Direct

-Based on odd-lot customer transactions (<100M) reported in TRACE.

-The top 20 issuers are selected among top 100 most active issuers in odd-lot TRACE.

-Issuer ratings are based on median rating of traded bonds from each user. Bond ratings are from Moody's and S&P.

©2020 Tradeweb Markets LLC. All rights reserved. The information contained herein is highly confidential and some or all of it may constitute material, non-public information under applicable securities laws. This information must be kept strictly confidential, may not be disclosed or distributed to anyone without the express written consent of Tradeweb Markets LLC, and may only be used as expressly permitted by any applicable non-disclosure, customer, or other written agreement with Tradeweb.



## Corporate Bonds: Top 20 Most Bought Issues

July 2020

Index	Ticker	Company	Maturity	Rating Key (Med)	Coupon	Trades (Buy)	Trades (Sell)	Trades	Dollar Vol. Traded (MM)	Yield (Buy)	Yield (Sell)	Price (Buy)	Price (Sell)
1	JPM	JP MORGAN CHASE	Dec-49	BBB	4.600	1,010	123	1,133	31	4.9	4.9	93.5	93.5
2	VZ	VERIZON	Sep-28	BBB	4.329	883	103	986	12	1.4	1.4	122.3	122.8
3	DAL	DELTA AIR LINES INC DEL	Jan-26	BB	7.375	874	164	1,038	26	7.5	7.7	99.4	98.7
4	DD	DU PONT	May-23	BBB	2.169	796	48	844	19	1.4	1.4	102.1	102.1
5	T	AT&T	Feb-28	BBB	1.650	789	4	793	10			101.5	101.5
6	JPM	JP MORGAN CHASE	Dec-49	BBB	5.000	776	177	953	21	5.0	5.1	100.2	98.1
7	LUV	SOUTHWEST AIRLS CO	May-25	BBB	5.250	739	183	922	16	3.6	3.6	107.0	107.2
8	AMT	AMERICAN TOWER CORP NEW	Jun-25	BBB	4.000	730	42	772	5	0.8	1.0	114.6	113.3
9	ARCC	ARES CAP CORP	Jul-25	BBB	3.250	705	39	744	9	3.7	3.7	98.1	98.2
10	LUV	SOUTHWEST AIRLS CO	May-23	BBB	4.750	620	318	938	23	3.0	3.1	104.6	104.3
11	BLL	BALL CORP	Nov-23	BB	4.000	616	63	679	5	1.9	2.4	106.8	105.0
12	WFC	WELLS FARGO	Null	BBB	5.900	609	333	942	26	5.9	5.8	100.2	101.5
13	MET	METLIFE	Jun-27	BBB	3.700	588	210	798	16	3.0	3.3	103.9	102.6
14	DUK	DUKE ENERGY	Dec-49	BBB	4.875	544	50	594	11			103.8	101.9
15	BA	BOEING CO	May-23	BBB	4.508	536	57	593	11	2.3	2.4	105.7	105.5
16	VZ	VERIZON	Nov-24	BBB	3.500	534	406	940	11	0.7	0.7	111.3	111.2
17	T	AT&T	May-25	BBB	3.400	512	358	870	14	1.0	1.1	110.6	110.3
18	PBI	PITNEY BOWES	Mar-24	BB	4.625	482	165	647	6	13.1	13.4	76.1	75.4
19	DAL	DELTA AIR LINES INC DEL	Apr-21	BB	3.400	475	201	676	14	4.2	4.4	99.4	99.3
20	MOS	MOSAIC CO NEW	Nov-23	BBB	4.250	469	56	525	7	2.0	2.4	106.5	105.6

Source: TRACE and Tradeweb Direct

-Based on odd-lot customer transactions (<100M) reported in TRACE.

-Ratings (AAA, AA, A, BBB, BB, B, C) are based on aggregate ratings from Moody's and S&P (when available).

©2020 Tradeweb Markets LLC. All rights reserved. The information contained herein is highly confidential and some or all of it may constitute material, non-public information under applicable securities laws. This information must be kept strictly confidential, may not be disclosed or distributed to anyone without the express written consent of Tradeweb Markets LLC, and may only be used as expressly permitted by any applicable non-disclosure, customer, or other written agreement with Tradeweb.



## Corporate Bonds: Top 20 Most Sold Issues

July 2020

Index	Ticker	Company	Maturity	Rating Key (Med)	Coupon	Trades (Buy)	Trades (Sell)	Trades	Dollar Vol. Traded (MM)	Yield (Buy)	Yield (Sell)	Price (Buy)	Price (Sell)
1	TSLA	TESLA MTRS INC	Mar-22	B	2.375	16.0	764.0	780.0	26			462.3	454.2
2	MMLP	Martin Midstream Partners L.P.	Feb-21	C	7.250	275.0	533.0	808.0	10	56.3	57.2	78.6	78.0
3	MET	METLIFE	Jun-47	BBB	4.700	371.0	471.0	842.0	23	4.8	5.1	98.1	93.9
4	COP	CONOCOPHILLIPS	Sep-23	C	2.625		418.0	418.0	0		120.3		7.3
5	OAS	OASIS PETE INC NEW	Sep-23	C	2.625	1.0	16.0	17.0	0	99.4	112.1	10.0	8.0
6	VZ	VERIZON	Nov-24	BBB	3.500	534.0	406.0	940.0	11	0.7	0.7	111.3	111.2
7	JPM	JP MORGAN CHASE	Null	BBB	0.000	191.0	404.0	595.0	12	4.5	4.5	94.9	94.4
8	INTC	INTEL CORP	Dec-22	A	2.700	92.0	400.0	492.0	6	0.3	0.4	105.8	105.5
9	XEC	CIMAREX ENERGY CO	May-27	BBB	3.900	20.0	395.0	415.0	7	3.6	3.8	101.9	100.6
10	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	BBB	5.000	436.0	390.0	826.0	13	6.3	6.3	79.3	78.9
11	TUP	TUPPERWARE BRANDS CORP	Jun-21	C	4.750	43.0	385.0	428.0	7	31.4	33.2	81.3	80.3
12	T	AT&T	May-25	BBB	3.400	512.0	358.0	870.0	14	1.0	1.1	110.6	110.3
13	AAPL	APPLE INC	May-23	AA	2.400	373.0	350.0	723.0	14	0.4	0.4	105.7	105.5
14	JPM	JP MORGAN CHASE	Dec-49	BBB	4.625	99.0	348.0	447.0	11	4.7	4.9	97.8	95.0
15	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	288.0	347.0	635.0	13	1.7	1.7	118.4	118.1
16	JPM	JP MORGAN CHASE	Feb-22	N/R	0.000		343.0	343.0	10				109.7
17	C	CITIGROUP	Null	BB	6.125	292.0	333.0	625.0	12	6.2	6.2	99.6	99.0
18	WFC	WELLS FARGO	Null	BBB	5.900	609.0	333.0	942.0	26	5.9	5.8	100.2	101.5
19	WPG	Null	Aug-24	C	6.450	140.0	329.0	469.0	4	34.4	34.6	41.2	40.9
20	GS	GOLDMAN SACHS	Null	BB	4.370	331.0	318.0	649.0	14	4.6	4.5	94.9	96.6

Source: TRACE and Tradeweb Direct

-Based on odd-lot customer transactions (<100M) reported in TRACE.

-Ratings (AAA, AA, A, BBB, BB, B, C) are based on aggregate ratings from Moody's and S&P (when available).

## Appendix

### Maturity

We consider the following maturity ranges for maturity buckets. TTM is Time to Maturity in years.

1Y:  $0.5 \leq TTM \leq 1.5$   
 3Y:  $2 \leq TTM \leq 4$   
 5Y:  $4 < TTM \leq 6$   
 10Y:  $7.5 \leq TTM \leq 12.5$   
 20Y:  $15 \leq TTM \leq 25$

### Rating

Rating buckets (AAA, AA, A, BBB, HY) in yield matrix are based on aggregate ratings from Moody's and S&P (when available).

For Corporate, we only consider transactions in bonds that are rated by both rating agencies.

-Corporate AAA: Bonds rated AAA by both rating agencies.

-Corporate AA: Bonds rated AA by both rating agencies.

-Corporate A: Bonds rated A by both rating agencies.

-Corporate BBB: Bonds rated BBB by both rating agencies.

-Corporate High Yield: Bonds rated High Yield by both rating agencies.

(Transactions in corporate bonds that are rated as AA by one agency and as A by another agency are excluded.)

-Municipal AAA: Bonds rated AAA by both rating agencies, or AAA by one agency and not rated by another agency.

-Municipal AA: Bonds rated AA by both rating agencies, or AA by one agency and not rated by another agency.

-Municipal A: Bonds rated A by both rating agencies, or A by one agency and not rated by another agency.

-Municipal BBB: Bonds rated High Yield by both rating agencies, or BBB by one agency and not rated by another agency.

-Municipal High Yield: Bonds rated High Yield by both rating agencies, or High Yield by one agency and not rated by another agency.

(Transactions in municipal bonds that are rated as AA by one agency and as A by another agency are excluded.)

(Transactions in municipal bonds that are rated as AA by one agency and not rated by the other agency are included.)

## Disclosures

This report represents certain customer trades in securities that have been reported by dealers to FINRA's Trade Reporting and Compliance Engine ("TRACE"), and the Municipal Securities Rulemaking Board ("MSRB"). The report does not necessarily reflect all transactions that were effected on dates noted. There is the possibility of errors or delays in the trade submission process. Prices for transactions vary with market conditions and can be affected by trade size and other factors. The information provided has been obtained from sources deemed to be reliable, however Tradeweb Direct does not guarantee the accuracy of the information contained in this report.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed-income investments are subject to various risks including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications and other factors. Defaults on interest payments and/or principal may also occur. Projections, results and assumptions contained herein reflect past performance of the referenced securities and asset classes. Past performance is no guarantee of future results. The investment return and principal value of an investment will fluctuate such that an investment, if and when redeemed, may be worth more or less than its original cost.

This information is intended for general informational purposes only, and should not be used as the sole basis for any investment decisions. None of the information in the report constitutes an offer or solicitation to buy or sell any security or financial product, a recommendation concerning any security, financial product or asset class, or an offer to provide investment advice or any other service. Where appropriate, please consult with a qualified financial and tax professional.