

# Market Transparency Report

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

July 2024

[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 2024

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-8	18.2%	1.7
CD	-25	-16.8%	-0.7
Corp	-13	-6.5%	0.2
Municipal	-15	-12.5%	0.1
Treasury	-5	-4.4%	0.7

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

# Yield Matrix

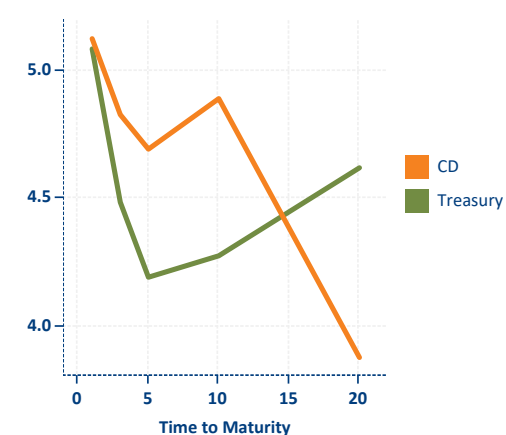
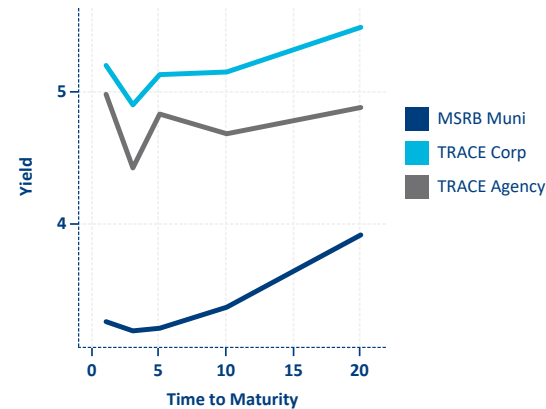
## Average Yield, % for July 2024

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	3.3	3.2	3.2	3.4	3.9	8
TRACE Corp	5.2	4.9	5.1	5.2	5.5	3
TRACE Agency	5.0	4.4	4.8	4.7	4.9	4
CD	5.1	4.8	4.7	4.9	3.9	1
Treasury	5.1	4.5	4.2	4.3	4.6	0

## Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	4.9	4.7	4.7		5.3	4
		A	5.0	4.7	4.7	5.0	5.2	3
		BBB	5.2	5.1	5.4	5.3	6.1	3
		HY	6.7	7.0	7.1	8.5		4
	Non-Financial	AAA			4.3		4.6	15
		AA		4.5	4.3	4.5	5.0	14
		A	4.9	4.8	4.6	5.0	5.4	4
		BBB	5.2	4.9	4.9	5.2	6.3	5
		HY	7.6	6.4	11.3			5
MSRB Muni	GO	AAA	3.2	3.1	3.1	3.3	3.8	7
		AA	3.3	3.2	3.2	3.4	3.9	8
		A	3.4	3.3	3.4	3.6	3.8	6
		BBB	3.9	4.7	4.1	4.1	4.4	7
	Revenue	HY	4.7	5.5	5.5	6.7	5.5	11
		AAA	3.2	3.1	3.1	3.2	3.9	9
		AA	3.2	3.2	3.2	3.3	3.9	9
		A	3.4	3.4	3.4	3.6	4.0	10
		BBB	4.2	4.0	4.0	4.3	4.7	12
		HY	16.8	6.2	8.0	6.0	5.5	9

## 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.

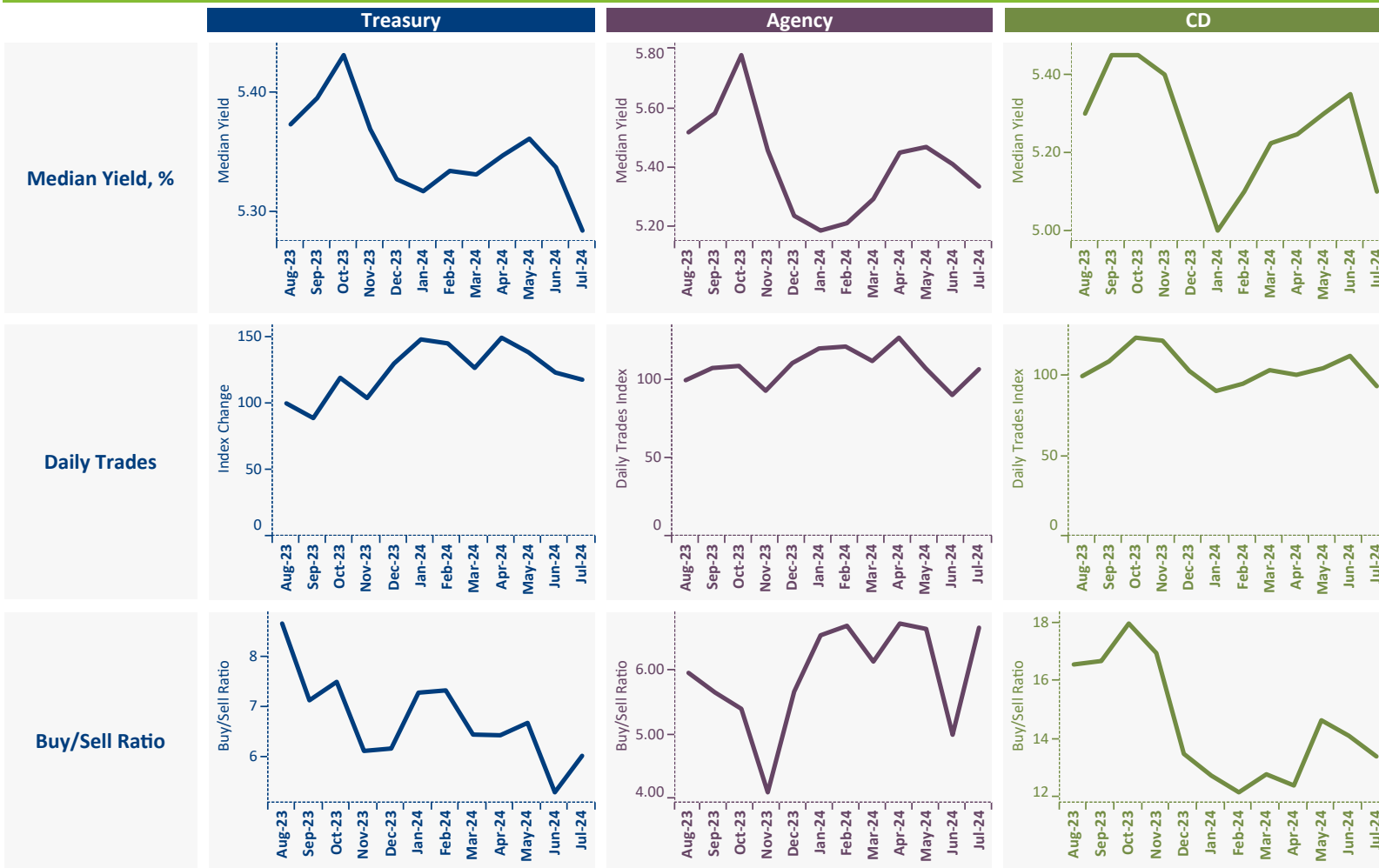
-The weights are based on transaction size.

-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

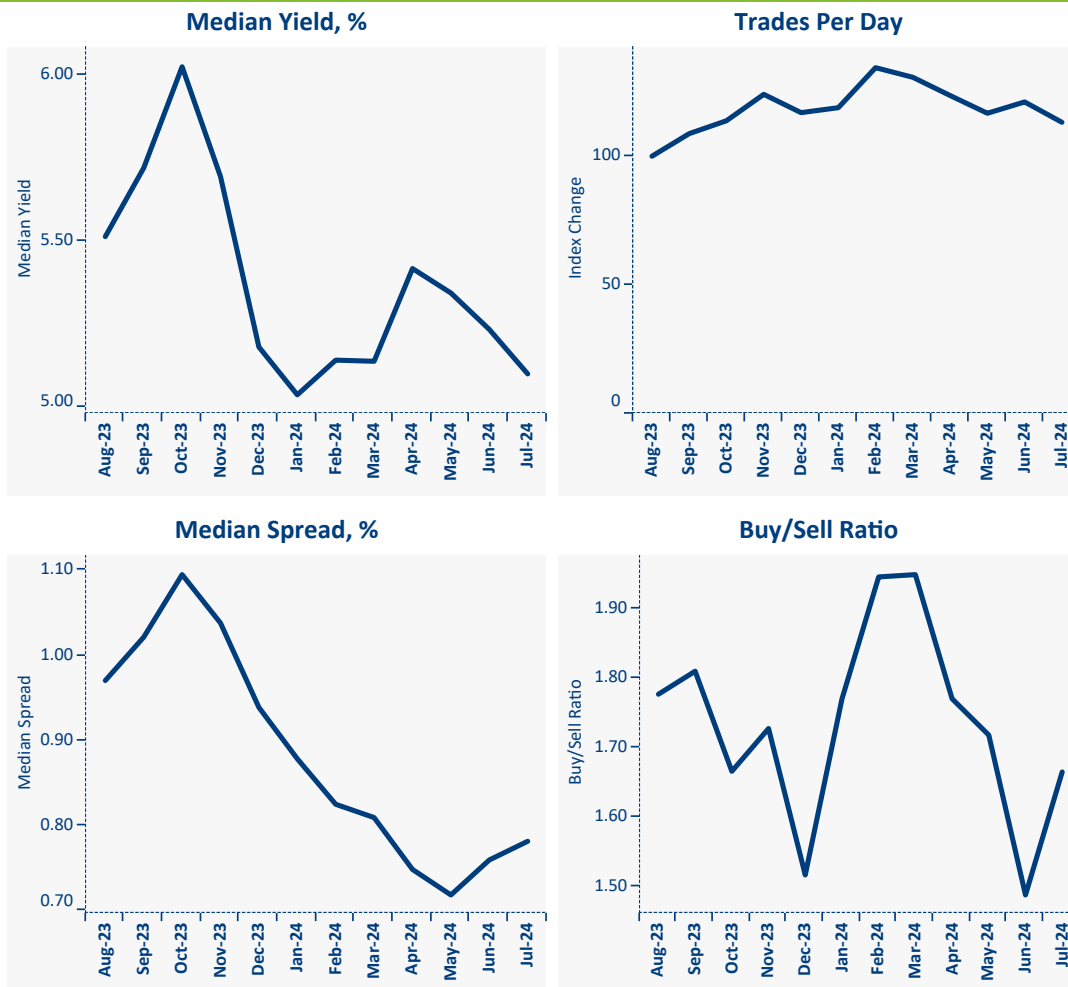
-Treasury and CD are based on transactions on the Tradeweb Direct Platform. Median yields are based on all customer buy transactions.

-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 2024

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	A	1,210	2.5%	25,734	1.4	477	5.2	4.9	5.0	5.4	5.3
2	C	CITIGROUP	BBB	890	2.5%	25,572	1.5	469	5.4	5.0	5.2	5.3	5.5
3	GS	GOLDMAN SACHS	A	1,411	2.2%	22,667	1.3	388	5.4	5.0	4.9	5.0	5.4
4	MS	MORGAN STANLEY	A	1,245	2.0%	20,312	1.2	342	5.2	4.9	5.1	5.2	5.3
5	BAC	BANK OF AMERICA	A	523	1.9%	19,794	1.3	414	5.3	5.0	5.3	5.2	5.3
6	WFC	WELLS FARGO	A	239	1.9%	19,706	1.5	326	5.3	5.0	4.8	5.4	5.7
7	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	90	1.8%	18,749	3.4	256	5.4	5.1	5.2	5.7	6.1
8	CVS	CVS CAREMARK CORP	BBB	50	1.7%	17,779	1.5	227	5.4	5.1	5.1	5.5	6.0
9	PM	PHILIP MORRIS INTL INC	A	33	1.6%	16,717	7.5	126	5.1	4.8	4.8	5.3	5.7
10	ORCL	ORACLE CORP	BBB	38	1.2%	11,905	1.4	192	5.4	4.9	4.9	5.2	5.7
11	AMGN	AMGEN INC	BBB	41	1.1%	11,353	0.7	123	5.4	4.9	4.8	5.0	5.6
12	VZ	VERIZON	BBB	161	1.1%	11,162	1.4	155	5.4	4.9	4.8	5.1	5.5
13	AAPL	APPLE INC	AA	50	1.1%	10,805	2.0	164	5.0	4.4	4.4	4.5	5.1
14	T	AT&T	BBB	104	1.0%	10,364	1.3	148	5.1	4.9	4.9	5.2	5.6
15	CMCS	COMCAST	A	68	1.0%	10,243	1.5	151	5.0	4.8	4.8	5.1	5.5
16	HD	HOME DEPOT	A	46	1.0%	9,700	2.9	130	5.1	4.7	4.6	4.9	5.3
17	UNH	UNITEDHEALTH	A	69	0.9%	9,511	2.4	171	5.0	4.6	4.7	5.0	5.4
18	BRK	BERKSHIRE HATHAWAY	A	150	0.9%	9,202	2.0	186	5.2	4.8	4.8	5.2	5.4
19	DUK	DUKE ENERGY	BBB	133	0.9%	9,149	2.0	157	5.0	5.0	4.9	5.2	5.6
20	ABBV	ABBVIE INC	A	26	0.9%	8,796	1.5	120	5.3	4.7	4.7	5.0	5.4

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 2024

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	AWK	AMERICAN WTR CAP CORP	N/R	20	0.3%	2,593	2,355	238	9.9	22	5.3	4.8	4.8	5.0	5.5
2	PM	PHILIP MORRIS INTL INC	A	33	1.6%	16,717	14,755	1,962	7.5	126	5.1	4.8	4.8	5.3	5.7
3	TKPH	Takeda Pharmaceutical Co Ltd	BBB	12	0.3%	3,441	2,950	491	6.0	13	5.4	4.9	5.0	5.3	5.6
4	AEP	AMERICAN ELEC PWR CO INC	BBB	78	0.5%	5,308	4,340	968	4.5	111	5.3	5.0	5.1	5.4	5.9
5	DTE	DTE ENERGY CO	BBB	38	0.3%	2,984	2,384	600	4.0	40	5.4	5.0	5.0	5.4	5.5
6	BMY	BRISTOL MYERS SQUIBB CO	A	47	0.7%	7,187	5,714	1,473	3.9	107	4.9	4.7	4.7	5.0	5.4
7	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	90	1.8%	18,749	14,515	4,234	3.4	256	5.4	5.1	5.2	5.7	6.1
8	AVGO	Null	BBB	25	0.4%	3,891	2,904	987	2.9	57	5.1	4.8	4.8	5.1	
9	HD	HOME DEPOT	A	46	1.0%	9,700	7,231	2,469	2.9	130	5.1	4.7	4.6	4.9	5.3
10	LUK	JEFFERIES GROUP INC NEW	BBB	115	0.3%	2,567	1,897	670	2.8	54	4.8	5.2	5.5	5.9	6.3
11	MET	METLIFE	A	22	0.3%	3,555	2,596	959	2.7	54	5.3		4.6	5.1	5.5
12	DWDP	Null	BBB	9	0.2%	2,398	1,706	692	2.5	20	5.3		4.7	5.1	5.1
13	MCD	MCDONALDS	BBB	31	0.7%	6,651	4,724	1,927	2.5	86	5.0	4.8	4.7	5.1	5.6
14	INTC	INTEL CORP	A	39	0.7%	7,396	5,249	2,147	2.4	147	5.2	4.8	4.8	5.1	5.5
15	WMT	WAL-MART	AA	36	0.5%	5,127	3,635	1,492	2.4	73	4.9	4.3	4.3	4.5	5.1
16	TGT	TARGET CORP	A	18	0.3%	2,924	2,070	854	2.4	33	5.0	4.5	4.6	4.8	5.2
17	UNH	UNITEDHEALTH	A	69	0.9%	9,511	6,669	2,842	2.4	171	5.0	4.6	4.7	5.0	5.4
18	QCOM	QUALCOMM	A	13	0.3%	2,687	1,874	813	2.3	34	5.2	4.6	4.6	4.7	5.3
19	BMO	BANK MONTREAL MEDIUM TERM SR NTS BOOK EN	A	337	0.4%	4,002	2,791	1,211	2.3	83	5.3	4.8	5.0	5.6	
20	D	DOMINION RES INC VA NEW	BBB	81	0.4%	4,576	3,190	1,386	2.3	77	5.2	5.0	5.1	5.3	5.8

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 2024

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	FB	Null	AA	10	0.4%	3,974	1,560	2,414	0.65	60		4.6	4.6	4.7	
2	AMGN	AMGEN INC	BBB	41	1.1%	11,353	4,837	6,516	0.74	123	5.6	5.0	4.9	5.1	5.6
3	RDS	SHELL	AA	22	0.3%	2,874	1,423	1,451	0.98	40	5.3	4.8	4.7	5.0	5.4
4	FITB	FIFTH THIRD BANCORP	BBB	18	0.3%	2,584	1,361	1,223	1.11	37	5.8	5.1			
5	BTI	BAT INTERNATIONAL FINANCE PLC	BBB	37	0.3%	3,529	1,865	1,664	1.12	77	5.7	5.1	5.2	5.6	6.3
6	AMT	AMERICAN TOWER CORP NEW	BBB	33	0.3%	2,790	1,485	1,305	1.14	48	5.7	5.1	5.1	5.3	
7	MS	MORGAN STANLEY	A	1,245	2.0%	20,312	10,858	9,454	1.15	342	5.3	5.1	5.5	5.0	5.3
8	EDP	ENTERPRISE PRODS OPER LLC	A	35	0.4%	3,880	2,087	1,793	1.16	54	5.6	4.8	4.8	5.1	5.6
9	DELL	DELL	BBB	25	0.3%	2,999	1,662	1,337	1.24	70	5.6	5.1	5.0	5.3	5.9
10	GS	GOLDMAN SACHS	A	1,411	2.2%	22,667	12,643	10,024	1.26	388	5.6	5.1	4.9	5.4	5.5
11	TMUS	T-MOBILE USA INC	BBB	40	0.5%	5,419	3,026	2,393	1.26	105	5.7	5.0	5.0	5.2	5.5
12	BAC	BANK OF AMERICA	A	523	1.9%	19,794	11,101	8,693	1.28	414	5.7	5.0	5.8	5.5	5.4
13	T	AT&T	BBB	104	1.0%	10,364	5,888	4,476	1.32	148	5.8	4.9	4.9	5.2	5.7
14	AMZN	AMAZON COM INC	AA	32	0.8%	7,689	4,390	3,299	1.33	127	5.0	4.6	4.5	4.7	5.1
15	ANTM	Null	A	31	0.4%	3,626	2,077	1,549	1.34	52	5.7	4.8	4.9	5.1	5.6
16	EIX	EDISON MISSION	BBB	60	0.5%	5,417	3,101	2,316	1.34	100	5.6	5.1	5.1	5.3	5.8
17	SO	GEORGIA POWER CO	BBB	79	0.4%	4,366	2,501	1,865	1.34	88	5.1	4.9	5.0	5.1	5.7
18	VZ	VERIZON	BBB	161	1.1%	11,162	6,411	4,751	1.35	155	5.5	4.9	4.9	5.2	5.7
19	HCA	HCA INC	BBB	33	0.4%	4,136	2,382	1,754	1.36	80	5.8	5.2	5.1	5.5	6.0
20	DIS	DISNEY WALT CO NEW MEDIUM TERM NTS BOOK	A	67	0.5%	5,085	2,947	2,138	1.38	83	5.1	4.7	4.7	5.0	5.4

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 2024

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	PM	PHILIP MORRIS INTL INC	Nov-29	A	5.625	11,822	346	12,168	30	4.8	4.8	103.9	103.5
2	GM	GENERAL MOTORS FINANCIAL COMPANY INC	Apr-29	BBB	4.300	7,370	101	7,471	29	5.2	5.2	96.5	96.2
3	BMY	BRISTOL MYERS SQUIBB CO	Feb-34	A	5.200	3,243	80	3,323	29	5.0	5.1	101.5	101.0
4	TKPH	Takeda Pharmaceutical Co Ltd	Sep-26	BBB	3.200	2,893	457	3,350	10	4.9	5.0	96.6	96.5
5	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	2,467	1,204	3,671	29	5.1	5.1	97.4	97.4
6	HD	HOME DEPOT	Jun-34	A	4.950	2,455	50	2,505	15	4.9	4.9	100.5	100.2
7	AWK	AMERICAN WTR CAP CORP	Jun-26	N/R	3.625	2,080	13	2,093	13	3.2	3.6	100.7	100.1
8	CMCS	COMCAST	Oct-28	A	4.150	1,980	971	2,951	24	4.7	4.8	97.8	97.6
9	AAPL	APPLE INC	Nov-27	AA	3.000	1,823	419	2,242	10	4.4	4.5	95.7	95.6
10	CVS	CVS CAREMARK CORP	Jun-34	BBB	5.700	1,785	55	1,840	19	5.5	5.6	101.5	100.7
11	LOW	LOWES COS INC	Apr-26	BBB	2.500	1,703	517	2,220	11	4.9	5.0	96.0	96.0
12	UTX	UNITED TECHNOLOGIES CORP	Aug-25	BBB	3.950	1,670	478	2,148	9	5.2	5.3	98.7	98.6
13	HPQ	HEWLETT PACKARD	Oct-25	BBB	4.900	1,647	518	2,165	13	5.3	5.3	99.6	99.5
14	AVGO	Null	Jul-27	BBB	5.050	1,611	67	1,678	15	4.8	4.9	100.2	100.5
15	BP	BP	Sep-27	A	3.279	1,592	419	2,011	11	4.7	4.8	95.8	95.7
16	WFC	WELLS FARGO	Null	BBB	6.850	1,581	64	1,645	49			101.3	101.2
17	MS	MORGAN STANLEY	Jul-35	A	5.320	1,579	26	1,605	13			99.8	99.7
18	XP	Null	Jul-29	BB	6.750	1,530	11	1,541	11			103.1	101.2
19	DWDP	Null	Nov-28	BBB	4.725	1,500	438	1,938	11	4.7	4.7	100.3	100.1
20	DTE	DTE ENERGY CO	Jun-34	BBB	5.850	1,479	17	1,496	13	5.4	5.5	103.0	102.9

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).

## Corporate Bonds: Top 20 Most Sold Issues

July 2024

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	AMGN	AMGEN INC	Mar-33	BBB	5.250	355	3,105	3,460	22	5.1	5.1	100.8	100.8
2	CVS	CVS CAREMARK CORP	Feb-33	BBB	5.250	330	3,055	3,385	31	5.4	5.4	99.0	98.7
3	NRG	NRG ENERGY	Jun-48	N/R	2.750	11	2,016	2,027	13			187.4	183.1
4	MS	MORGAN STANLEY	Jul-25	A	4.000	395	1,742	2,137	28	5.2	5.3	98.8	98.7
5	FB	Null	May-33	AA	4.950	282	1,660	1,942	19	4.7	4.7	101.6	101.9
6	ORCL	ORACLE CORP	May-28	BBB	4.500	111	1,248	1,359	11	4.8	4.9	99.0	98.5
7	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	2,467	1,204	3,671	29	5.1	5.1	97.4	97.4
8	EIX	EDISON MISSION	Nov-24	BBB	3.550	51	1,051	1,102	10	5.5	6.0	99.4	99.2
9	CMCS	COMCAST	Oct-28	A	4.150	1,980	971	2,951	24	4.7	4.8	97.8	97.6
10	AMGN	AMGEN INC	Mar-53	BBB	5.650	135	817	952	10	5.7	5.6	99.8	100.0
11	R	RYDER SYS INC MEDIUM TERM NTS BOOK ENTRY	Jun-28	BBB	5.250	44	766	810	9	5.0	4.9	100.9	101.1
12	T	AT&T	Mar-29	BBB	4.350	786	712	1,498	15	4.9	4.9	97.9	97.9
13	VZ	VERIZON	Mar-27	BBB	4.125	588	702	1,290	14	4.9	4.8	98.2	98.3
14	GS	GOLDMAN SACHS	Mar-30	A	3.800	636	639	1,275	15	4.9	4.9	94.5	94.5
15	CI	CIGNA CORP	Oct-28	BBB	4.375	951	599	1,550	14	4.9	4.9	98.0	98.0
16	ABBV	ABBVIE INC	Nov-28	A	4.250	894	597	1,491	13	4.6	4.6	98.5	98.6
17	C	CITIGROUP	Oct-28	BBB	3.520	814	579	1,393	10			95.4	95.5
18	NOC	NORTHROP GRUMMAN CORP	Jan-28	BBB	3.250	887	576	1,463	12	4.9	4.8	94.9	95.0
19	AMGN	AMGEN INC	Mar-28	BBB	5.150	535	572	1,107	17	4.9	5.0	100.8	100.4
20	WFC	WELLS FARGO	Jul-27	BBB	4.300	969	570	1,539	16	4.9	4.9	98.3	98.2

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.



## 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.