

Market Transparency Report

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

June 2023

www.tradeweb.com

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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.

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Market Commentary

Monthly Change Table for June 2023

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	22	15.8%	1.7
CD	20	-7.7%	-4.2
Corp	16	-0.8%	-0.2
Municipal	-5	3.2%	0.0
Treasury	9	-3.1%	0.8

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

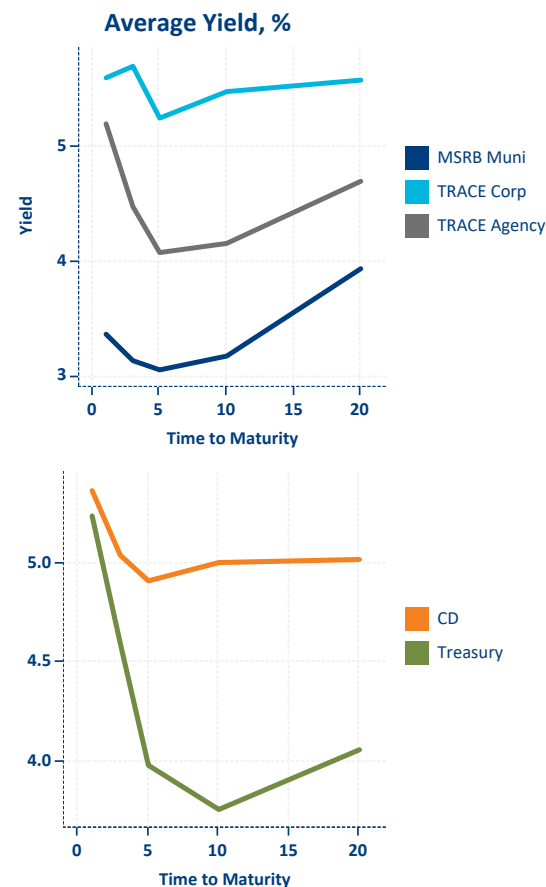
Yield Matrix

Average Yield, % for June 2023

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	3.4	3.1	3.1	3.2	3.9	9
TRACE Corp	5.6	5.7	5.3	5.5	5.6	3
TRACE Agency	5.2	4.5	4.1	4.2	4.7	2
CD	5.4	5.0	4.9	5.0	5.0	1
Treasury	5.2	4.6	4.0	3.8	4.1	0

Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	5.4	5.0	4.9			5
		A	5.4	5.0	4.7	4.8	5.3	2
		BBB	6.2	6.1	6.5	5.6	6.8	3
		HY	6.9	8.1	11.1	9.5		4
	Non-Financial	AAA	1.2				4.5	17
		AA	4.1	4.2	4.5	4.4	4.9	9
		A	4.9	4.6	4.7	5.0	5.4	5
		BBB	5.7	5.4	5.0	5.2	6.4	4
		HY		14.0	7.0	7.1	7.0	4
MSRB Muni	GO	AAA	3.3	3.0	2.9	3.0	3.7	7
		AA	3.3	3.1	3.0	3.1	3.9	8
		A	3.5	3.3	3.3	3.4	4.1	6
		BBB	4.1	4.0	3.9	4.0	4.6	10
	Revenue	HY		5.5	5.6	5.0	5.5	15
		AAA	3.3	3.0	3.0	3.0	3.8	8
		AA	3.4	3.1	3.0	3.1	3.8	10
		A	3.5	3.4	3.3	3.4	4.1	12
		BBB	4.0	4.2	4.1	4.3	4.7	13
		HY	4.8	5.0	6.3	6.1	6.1	16



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.

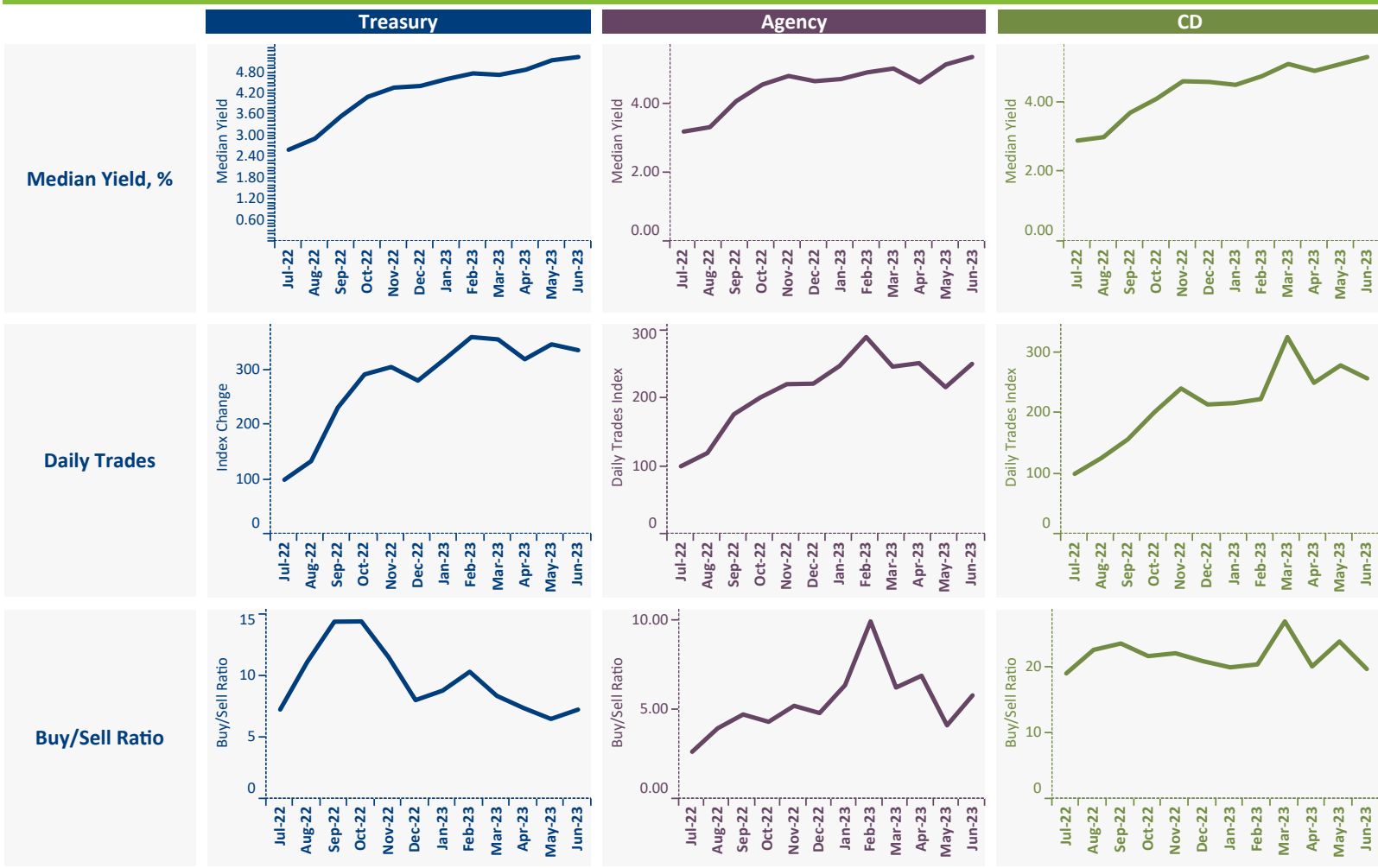
-The weights are based on transaction size.

-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

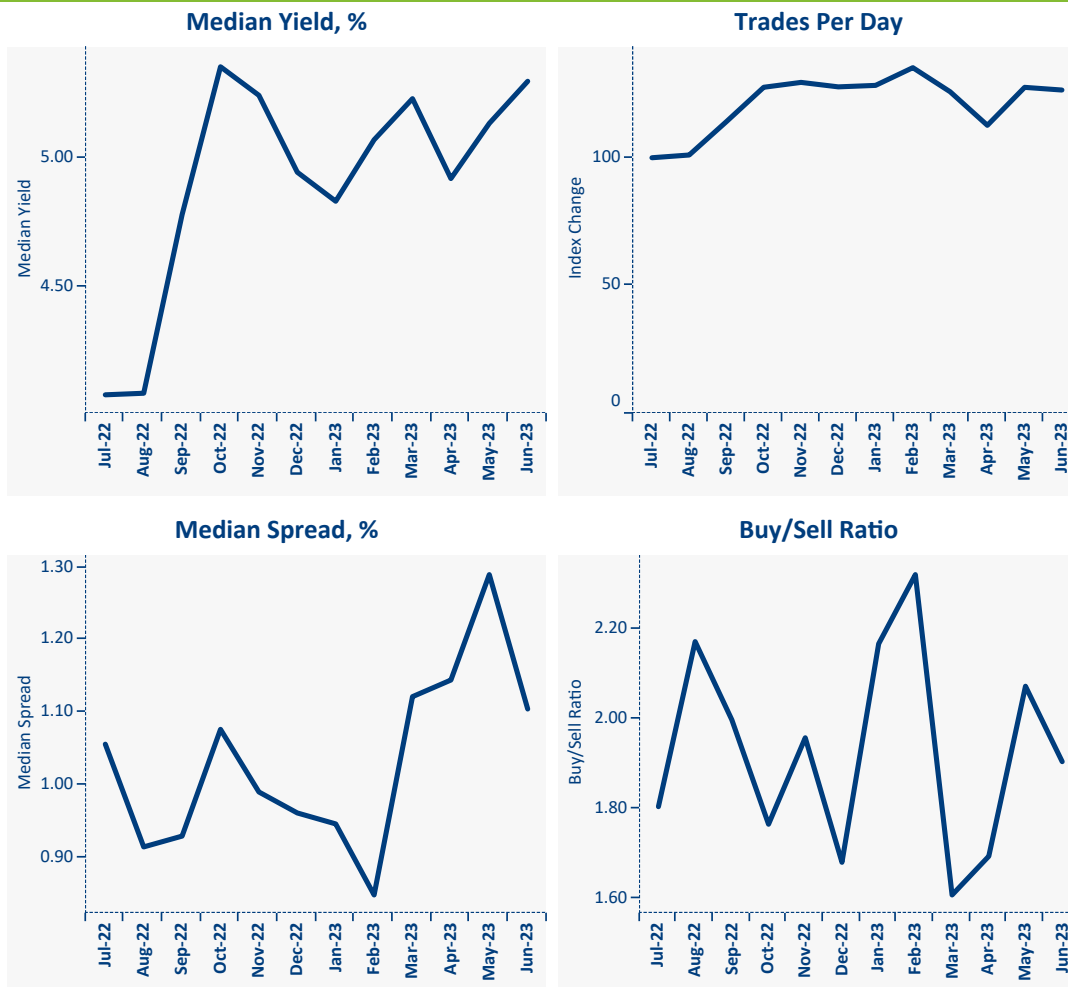
-Treasury and CD are based on transactions on the Tradeweb Direct Platform. Median yields are based on all customer buy transactions.

-Agency is based on odd-lot customer transactions (<100M) reported in TRACE. Median yields are based on all odd-lot customer buy transactions.

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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...

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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.

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Corporate Bonds: Top 20 Most Active Issuers

June 2023

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	GS	GOLDMAN SACHS	A	1,164	3.0%	25,166	1.9	411	5.7	5.3	5.5	5.2	5.5
2	C	CITIGROUP	BBB	810	2.7%	23,321	1.2	359	5.5	5.5	5.4	5.7	5.6
3	JPM	JP MORGAN CHASE	A	970	2.6%	22,049	1.6	387	5.5	5.0	5.0	5.5	5.3
4	BAC	BANK OF AMERICA	A	450	2.3%	19,698	1.9	393	5.6	5.3	5.3	5.7	5.3
5	MS	MORGAN STANLEY	A	1,336	1.9%	16,489	1.6	274	5.5	5.2	5.5	5.2	5.3
6	WFC	WELLS FARGO	A	161	1.7%	14,225	1.6	205	5.4	5.3	5.3	5.6	5.9
7	AAPL	APPLE INC	AA	53	1.5%	12,743	1.2	192	5.2	4.4	4.3	4.2	4.7
8	TFC	Null	A	41	1.5%	12,478	5.3	140	5.8	5.8	5.3		
9	CVS	CVS CAREMARK CORP	BBB	49	1.3%	11,309	2.9	133	5.5	5.0	5.0	5.3	5.7
10	EDP	ENTERPRISE PRODS OPER LLC	BBB	34	1.3%	11,270	6.5	51	5.6	4.9	5.0	5.1	5.5
11	ORCL	ORACLE CORP	BBB	40	1.3%	11,189	1.4	159	5.5	5.2	5.0	5.4	5.8
12	BMJ	BRISTOL MYERS SQUIBB CO	A	36	1.3%	11,124	9.8	53	5.3	4.6	4.4	4.6	5.0
13	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	85	1.3%	10,915	2.4	235	5.8	5.6	5.6	6.0	6.5
14	VZ	VERIZON	BBB	134	1.3%	10,664	1.8	149	5.4	4.9	5.1	5.2	5.5
15	CMCS	COMCAST	A	67	1.1%	9,666	1.2	134	5.2	4.8	4.8	4.9	5.3
16	T	AT&T	BBB	95	1.1%	9,422	1.8	129	5.5	5.1	5.1	5.3	5.6
17	DUK	DUKE ENERGY	BBB	124	0.9%	7,764	2.6	121	5.5	5.1	5.1	5.3	5.6
18	TMUS	T-MOBILE USA INC	BBB	36	0.9%	7,623	1.7	122	5.8	5.4	5.2	5.3	5.4
19	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	A	30	0.8%	7,088	2.5	104	5.7	5.4	5.1		
20	AMGN	AMGEN INC	BBB	43	0.8%	6,856	2.3	109	5.6	4.9	5.1	5.1	5.5

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

June 2023

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	X	UNITED STS STL CORP NEW	B	3	0.3%	2,743	2,564	179	14.3	23			7.2		
2	BMY	BRISTOL MYERS SQUIBB CO	A	36	1.3%	11,124	10,089	1,035	9.8	53	5.3	4.6	4.4	4.6	5.0
3	NRG	NRG ENERGY	N/R	11	0.4%	3,122	2,800	322	8.7	19		6.7	7.3		1.2
4	EDP	ENTERPRISE PRODS OPER LLC	BBB	34	1.3%	11,270	9,766	1,504	6.5	51	5.6	4.9	5.0	5.1	5.5
5	LUV	SOUTHWEST AIRLS CO	BBB	7	0.4%	3,238	2,766	472	5.9	36		5.3	5.3		
6	TFC	Null	A	41	1.5%	12,478	10,509	1,969	5.3	140	5.8	5.8	5.3		
7	DWDP	Null	BBB	9	0.3%	2,156	1,769	387	4.6	22		5.1	5.0	5.0	5.4
8	CI	CIGNA CORP	BBB	36	0.7%	5,911	4,679	1,232	3.8	69	5.5	5.1	5.0	5.0	5.4
9	F	FORD	BB	146	0.7%	6,257	4,899	1,358	3.6	93	6.3	6.5	6.6	6.5	6.9
10	APC	ANADARKO PETE CORP	BBB	59	0.3%	2,778	2,131	647	3.3	62	5.8	5.9	5.8	5.9	6.4
11	FB	Null	AA	10	0.2%	2,119	1,622	497	3.3	50			4.7	4.9	
12	PFE	PFIZER	A	53	0.7%	6,033	4,535	1,498	3.0	101	5.3	4.8	4.5	4.7	4.9
13	CVS	CVS CAREMARK CORP	BBB	49	1.3%	11,309	8,428	2,881	2.9	133	5.5	5.0	5.0	5.3	5.7
14	PCG	PACIFIC GAS & ELEC CO	BBB	53	0.3%	2,177	1,619	558	2.9	47	6.1	6.1	6.2	6.3	6.7
15	NEE	FPL GROUP CAP INC	BBB	64	0.7%	6,131	4,551	1,580	2.9	120	5.5	5.1	5.0	4.9	5.1
16	EIX	EDISON MISSION	A	57	0.4%	3,663	2,717	946	2.9	72	5.8	5.3	5.1	5.3	5.6
17	LOW	LOWES COS INC	BBB	43	0.7%	6,343	4,694	1,649	2.9	86	5.3	4.9	4.9	5.1	5.6
18	TRP	TRANSCANADA PIPELINES LTD	BBB	31	0.3%	2,477	1,826	651	2.8	42	5.8	5.6	5.2	5.5	5.9
19	AVGO	Null	BBB	22	0.2%	1,975	1,450	525	2.8	35	5.5	5.3	5.3	5.5	
20	SCHW	SCHWAB CHARLES CORP NEW	A	37	0.6%	5,211	3,822	1,389	2.8	106	5.7	5.5	5.3	5.5	

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

June 2023

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	ETP	ENERGY TRANSFER PARTNERS L P	BBB	29	0.4%	3,076	1,297	1,779	0.73	50	6.2	5.6	5.6	5.9	6.5
2	ABBV	ABBVIE INC	BBB	21	0.7%	6,339	3,302	3,037	1.09	90	5.6	5.0	4.8	5.1	5.5
3	HMC	AMERICAN HONDA FIN CORP MED TERM NTS BOO	A	31	0.3%	2,140	1,132	1,008	1.12	40	5.6	4.9	4.8	4.8	
4	AL	AIR LEASE CORP	BBB	24	0.2%	1,851	987	864	1.14	36	6.2	5.9	5.8	5.8	
5	AAPL	APPLE INC	AA	53	1.5%	12,743	6,902	5,841	1.18	192	5.4	4.5	4.3	4.2	4.7
6	CMCS	COMCAST	A	67	1.1%	9,666	5,302	4,364	1.21	134	5.6	4.8	4.8	4.9	5.3
7	RDS	SHELL	AA	25	0.3%	2,843	1,557	1,286	1.21	41	5.2	4.6	4.5	4.9	5.2
8	BMO	BANK MONTREAL MEDIUM TERM SR NTS BOOK EN	A	231	0.5%	4,157	2,283	1,874	1.22	74	5.8	5.3	5.3		
9	C	CITIGROUP	BBB	810	2.7%	23,321	12,797	10,524	1.22	359	5.8	5.6	5.6	5.8	5.9
10	MSFT	MICROSOFT CORP	AAA	29	0.4%	3,762	2,095	1,667	1.26	69	5.3	4.5		4.2	4.5
11	STT	STATE STR CORP	A	29	0.2%	1,937	1,111	826	1.35	35	5.5	5.1		5.2	
12	ORCL	ORACLE CORP	BBB	40	1.3%	11,189	6,528	4,661	1.40	159	5.6	5.2	5.1	5.4	5.9
13	PEP	PEPSICO	A	38	0.3%	2,376	1,391	985	1.41	44	5.5	4.4	4.4	4.4	4.7
14	SO	GEORGIA POWER CO	BBB	74	0.3%	2,953	1,729	1,224	1.41	55	6.1	5.2	5.2	5.2	5.7
15	EXC	EXELON GENERATION CO LLC	BBB	84	0.2%	1,769	1,039	730	1.42	37	6.0	5.3	4.9	5.4	5.7
16	HPQ	HEWLETT PACKARD	BBB	20	0.7%	5,546	3,295	2,251	1.46	82	5.9	5.4	5.3	5.8	6.0
17	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	BBB	223	0.6%	4,839	2,897	1,942	1.49	79	7.2	6.1	5.5	5.5	5.5
18	SBUX	STARBUCKS CORP	BBB	19	0.2%	1,844	1,115	729	1.53	31		5.1	4.8	4.9	5.3
19	BK	BANK NEW YORK INC MEDIUM TERM SR NTS BOO	A	51	0.5%	4,355	2,663	1,692	1.57	67	5.9	5.1	5.0	4.9	
20	ANTM	Null	A	27	0.3%	2,612	1,605	1,007	1.59	33	5.7	5.2	5.0	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.

Corporate Bonds: Top 20 Most Bought Issues

June 2023

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	BMJ	BRISTOL MYERS SQUIBB CO	Jul-24	A	2.900	8,873	290	9,163	19	5.3	5.4	97.5	97.4
2	EDP	ENTERPRISE PRODS OPER LLC	Feb-53	BBB	3.300	8,422	161	8,583	12	5.2	5.3	71.1	70.8
3	TFC	Null	Jun-27	A	6.047	5,337	75	5,412	26			100.3	100.1
4	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	5,129	989	6,118	28	5.0	5.0	97.0	97.0
5	CI	CIGNA CORP	Oct-28	BBB	4.375	3,113	239	3,352	18	5.0	5.0	97.1	97.0
6	NRG	NRG ENERGY	Jun-48	N/R	2.750	2,341	158	2,499	10	1.2	1.6	103.1	102.3
7	X	UNITED STS STL CORP NEW	Nov-26	B	5.000	2,315	19	2,334	14			187.5	192.0
8	F	FORD	Mar-26	BB	0.000	2,270	160	2,430	8			106.0	104.6
9	LUV	SOUTHWEST AIRLS CO	May-25	BBB	1.250	1,653	184	1,837	9			109.2	111.6
10	CMCS	COMCAST	Oct-28	A	4.150	1,650	693	2,343	18	4.8	4.8	97.0	96.8
11	TMUS	T-MOBILE USA INC	Jul-28	BBB	4.800	1,587	44	1,631	12	5.2	5.2	98.0	98.1
12	GS	GOLDMAN SACHS	Nov-24	A	5.700	1,580	75	1,655	38	5.7	5.8	99.9	99.9
13	GWRE	Null	Mar-25	N/R	1.250	1,526	105	1,631	4	3.7	4.8	95.9	94.1
14	DWDP	Null	Nov-28	BBB	4.725	1,525	217	1,742	12	5.0	5.0	98.9	98.8
15	ORCL	ORACLE CORP	May-28	BBB	4.500	1,477	24	1,501	11	5.0	5.1	97.6	97.5
16	PM	PHILIP MORRIS INTL INC	Nov-27	A	5.125	1,444	104	1,548	12	5.0	5.0	100.4	100.5
17	AAPL	APPLE INC	Nov-27	AA	3.000	1,409	407	1,816	9	4.3	4.3	94.9	94.8
18	HPQ	HEWLETT PACKARD	Oct-25	BBB	4.900	1,368	494	1,862	14	5.4	5.5	98.9	98.8
19	COF	CAPITAL ONE FINL CORP	Oct-24	BBB	3.300	1,364	364	1,728	16	6.2	6.3	96.3	96.2
20	MS	MORGAN STANLEY	Oct-28	A	6.296	1,319	59	1,378	10			103.4	103.2

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).

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Corporate Bonds: Top 20 Most Sold Issues

June 2023

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	AAPL	APPLE INC	Feb-24	AA	3.000	182	2,644	2,826	21	5.1	5.4	98.7	98.4
2	C	CITIGROUP	Null	BB	9.341	201	2,196	2,397	12	9.3	9.4	100.4	100.1
3	ABBV	ABBVIE INC	May-25	BBB	3.600	396	1,526	1,922	19	5.3	5.3	96.9	96.9
4	ORCL	ORACLE CORP	Apr-25	BBB	2.500	181	1,365	1,546	15	5.4	5.4	95.1	95.0
5	TMUS	T-MOBILE USA INC	Apr-25	BBB	3.500	172	1,230	1,402	13	5.5	5.5	96.5	96.5
6	CMCS	COMCAST	Nov-25	A	5.250	132	1,205	1,337	8	4.9	4.8	100.8	100.9
7	PM	PHILIP MORRIS INTL INC	Nov-24	A	5.125	188	1,104	1,292	12	5.3	5.3	99.8	99.7
8	MS	MORGAN STANLEY	Oct-26	A	6.138	101	1,078	1,179	9			101.5	101.7
9	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	5,129	989	6,118	28	5.0	5.0	97.0	97.0
10	HPQ	HEWLETT PACKARD	Oct-23	BBB	4.450	94	988	1,082	8	5.5	6.0	99.7	99.6
11	BMO	BANK MONTREAL MEDIUM TERM SR NTS BOOK EN	Jun-24	A	2.500	228	869	1,097	9	5.7	5.8	96.9	96.7
12	ETP	ENERGY TRANSFER PARTNERS L P	May-30	BBB	3.750	128	855	983	8	5.4	5.5	90.5	90.1
13	BLL	BALL CORP	Nov-23	BB	4.000	65	742	807	6	5.7	5.8	99.3	99.3
14	C	CITIGROUP	Oct-24	BBB	0.776	564	733	1,297	8			98.2	97.9
15	CMCS	COMCAST	Oct-28	A	4.150	1,650	693	2,343	18	4.8	4.8	97.0	96.8
16	VZ	VERIZON	Mar-27	BBB	4.125	718	556	1,274	12	4.9	4.9	97.5	97.4
17	C	CITIGROUP	Oct-23	BBB	3.875	397	501	898	7	5.2	5.7	99.5	99.3
18	HPQ	HEWLETT PACKARD	Oct-25	BBB	4.900	1,368	494	1,862	14	5.4	5.5	98.9	98.8
19	GS	GOLDMAN SACHS	Mar-30	A	3.800	849	483	1,332	12	5.1	5.1	92.7	92.4
20	UTX	UNITED TECHNOLOGIES CORP	Aug-25	BBB	3.950	1,306	459	1,765	10	4.9	4.9	98.1	98.0

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).

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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.

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