

Market Transparency Report

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

September 2023

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.

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Market Commentary

Monthly Change Table for September 2023

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	6	7.8%	-0.3
CD	15	9.2%	0.1
Corp	21	8.7%	0.0
Municipal	30	6.9%	-0.1
Treasury	2	-11.1%	-1.5

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

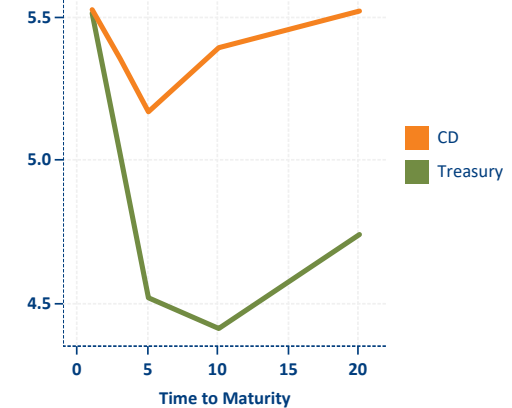
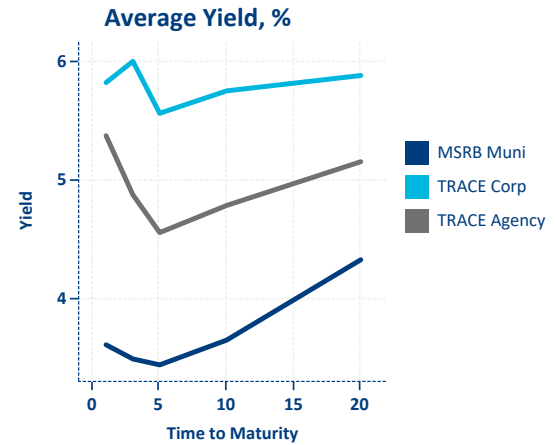
Yield Matrix

Average Yield, % for September 2023

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	3.6	3.5	3.4	3.7	4.3	9
TRACE Corp	5.8	6.0	5.6	5.8	5.9	3
TRACE Agency	5.4	4.9	4.6	4.8	5.2	2
CD	5.5	5.4	5.2	5.4	5.5	1
Treasury	5.5	5.0	4.5	4.4	4.7	1

Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	5.4	5.4	5.3			5
		A	5.6	5.3	5.1	5.3	5.7	3
		BBB	6.4	6.0	6.6	6.0	7.1	3
		HY	6.1	10.0	11.0	9.6		4
	Non-Financial	AAA			4.4	5.0		17
		AA	3.9	5.0	5.2	5.1	5.2	6
		A	4.9	5.3	5.1	5.5	6.0	5
		BBB	5.9	5.7	5.5	5.7	6.9	4
		HY		25.8	7.5	6.9	7.3	5
MSRB Muni	GO	AAA	3.5	3.4	3.3	3.5	4.1	7
		AA	3.6	3.4	3.4	3.6	4.2	8
		A	3.7	3.7	3.6	3.9	4.4	8
		BBB	4.6	4.2	4.1	4.3	5.2	13
	Revenue	HY		4.8	5.7	5.5	5.3	10
		AAA	3.6	3.4	3.3	3.5	4.2	9
		AA	3.6	3.5	3.4	3.6	4.2	10
		A	3.8	3.7	3.7	3.9	4.6	12
		BBB	4.4	4.4	4.3	4.7	5.1	14
		HY	5.1	8.9	6.3	6.7	6.5	12



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.

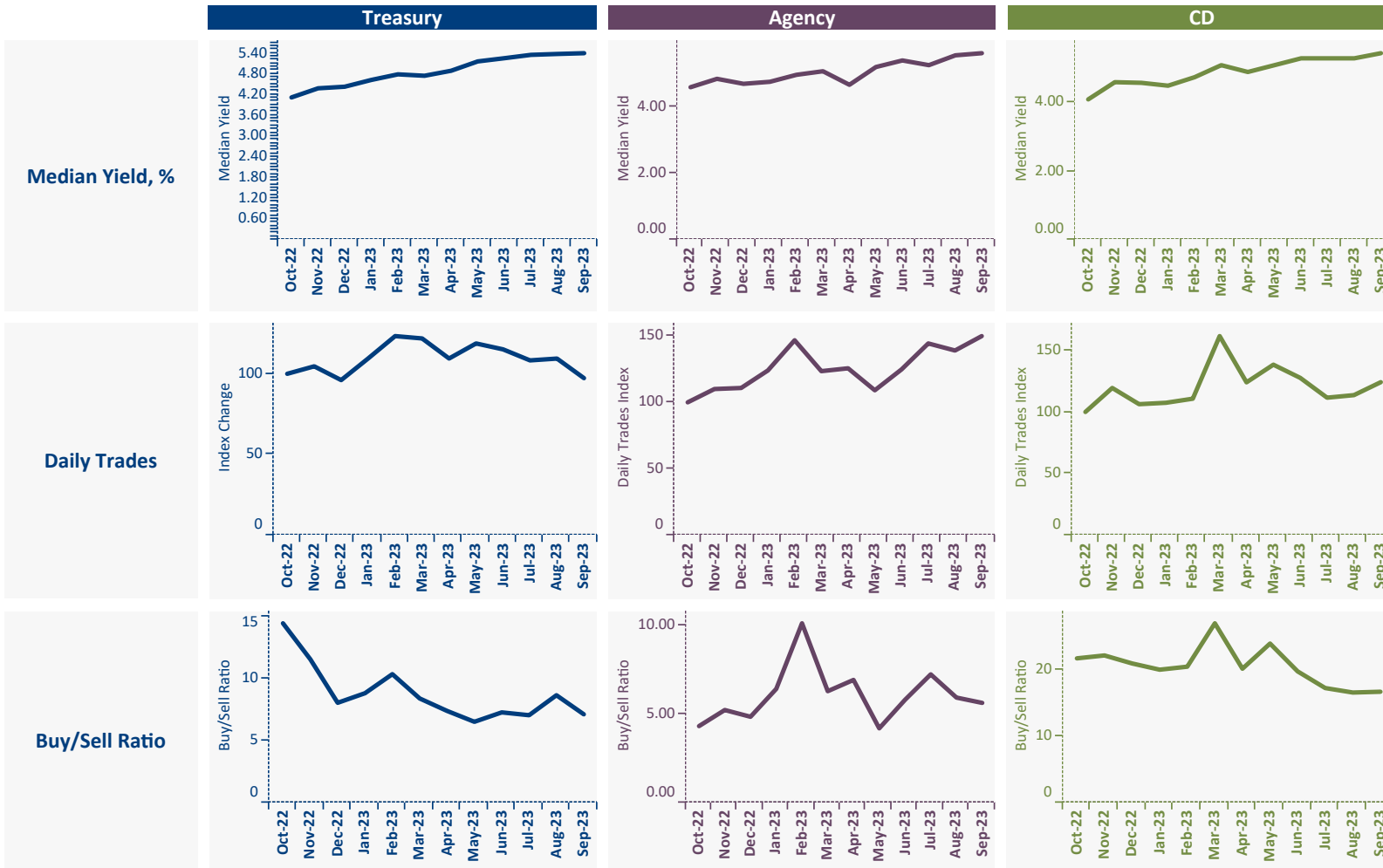
-The weights are based on transaction size.

-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

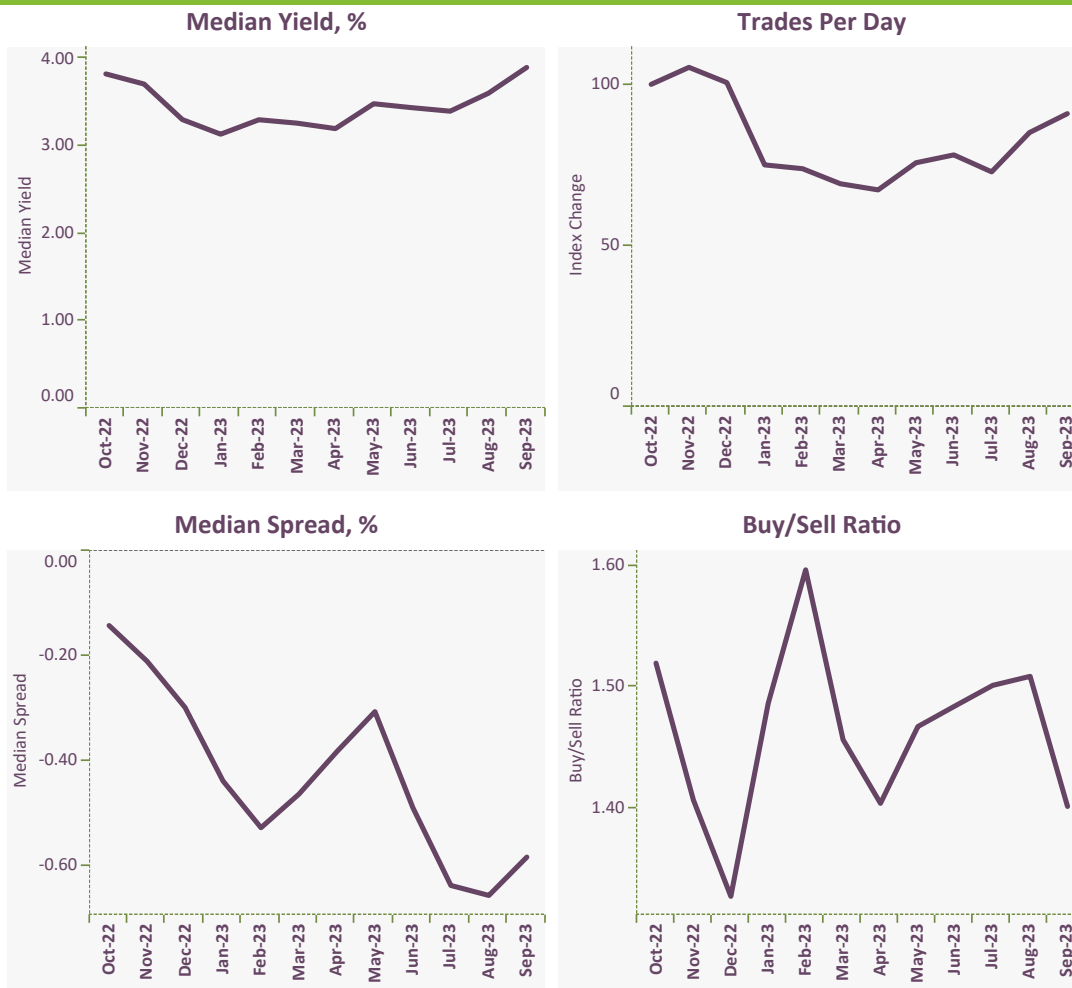
-Based on odd-lot customer transactions (<100M) reported in TRACE.

-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

September 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	T	AT&T	BBB	103	3.2%	28,384	6.7	164	5.9	5.6	5.8	5.8	6.2
2	GS	GOLDMAN SACHS	A	1,139	3.1%	27,747	2.1	479	5.9	5.8	6.0	5.6	5.9
3	C	CITIGROUP	BBB	847	2.9%	25,645	1.8	436	5.8	5.9	5.9	6.1	6.1
4	JPM	JP MORGAN CHASE	A	933	2.9%	25,434	1.4	433	5.8	5.6	5.4	6.1	5.7
5	BAC	BANK OF AMERICA	A	461	2.4%	21,150	2.0	427	6.0	5.8	5.8	6.0	5.7
6	ABBV	ABBVIE INC	BBB	21	2.0%	18,005	8.3	115	5.7	5.3	5.1	5.3	5.6
7	WFC	WELLS FARGO	A	177	1.9%	17,004	1.8	268	5.8	5.8	5.8	6.1	6.3
8	MS	MORGAN STANLEY	A	1,401	1.8%	16,126	1.3	285	5.7	5.8	5.7	5.5	5.7
9	LOW	LOWES COS INC	BBB	45	1.7%	15,356	0.4	103	5.6	5.4	5.3	5.5	5.9
10	CVS	CVS CAREMARK CORP	BBB	46	1.4%	12,783	3.0	141	5.8	5.5	5.6	5.8	6.1
11	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	84	1.2%	10,830	1.8	218	6.2	6.1	6.1	6.4	7.0
12	VZ	VERIZON	BBB	147	1.2%	10,765	1.4	144	5.7	5.5	5.5	5.7	5.9
13	AAPL	APPLE INC	AA	53	1.2%	10,677	2.2	175	5.3	5.0	4.8	4.8	5.1
14	BRK	BERKSHIRE HATHAWAY	A	145	1.0%	9,096	3.1	181	5.6	5.2	5.3	5.7	6.1
15	CMCS	COMCAST	A	65	1.0%	8,963	1.7	130	5.5	5.3	5.1	5.5	5.7
16	COF	CAPITAL ONE FINL CORP	BBB	28	0.9%	8,341	1.8	105	6.1	6.2	6.1		
17	TFC	Null	A	38	0.9%	7,948	1.9	125	6.1	5.9	6.4		
18	ORCL	ORACLE CORP	BBB	39	0.9%	7,927	1.4	142	5.8	5.6	5.4	5.8	6.2
19	TMUS	T-MOBILE USA INC	BBB	38	0.8%	7,538	0.9	100	5.9	5.7	5.8	5.8	5.9
20	DUK	DUKE ENERGY	BBB	124	0.8%	7,233	2.0	114	5.8	5.6	5.4	5.7	6.0

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.

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

September 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	WGO	Null	N/R	1	0.2%	2,225	2,211	14	157.9	8					
2	LTHM	Null	N/R	1	0.3%	2,271	2,234	37	60.4	15					
3	ONNN	ON SEMICONDUCTOR CORP	N/R	3	0.3%	2,265	2,226	39	57.1	14					
4	ETSY	Null	N/R	3	0.3%	2,332	2,261	71	31.9	8		5.8	6.2		
5	ABBV	ABBVIE INC	BBB	21	2.0%	18,005	16,073	1,932	8.3	115	5.7	5.3	5.1	5.3	5.6
6	T	AT&T	BBB	103	3.2%	28,384	24,699	3,685	6.7	164	5.9	5.6	5.8	5.8	6.2
7	MU	MICRON TECHNOLOGY INC	BBB	11	0.2%	2,161	1,724	437	4.0	40		5.8	5.9	6.2	6.3
8	MET	METLIFE	A	23	0.5%	4,409	3,443	966	3.6	58	5.7	5.4		5.6	5.7
9	PM	PHILIP MORRIS INTL INC	A	31	0.5%	4,675	3,642	1,033	3.5	103	5.6	5.5	5.5	5.8	6.1
10	STZ	CONSTELLATION BRANDS INC	BBB	18	0.2%	1,992	1,545	447	3.5	32	5.7	5.7	5.5	5.7	6.1
11	APC	ANADARKO PETE CORP	BBB	65	0.4%	3,346	2,584	762	3.4	71	5.9	6.0	6.2	6.3	6.7
12	FB	Null	AA	10	0.3%	2,562	1,952	610	3.2	50		5.0	5.0	5.2	
13	BRK	BERKSHIRE HATHAWAY	A	145	1.0%	9,096	6,875	2,221	3.1	181	5.6	5.2	5.3	5.7	6.1
14	CVS	CVS CAREMARK CORP	BBB	46	1.4%	12,783	9,583	3,200	3.0	141	5.8	5.5	5.6	5.8	6.1
15	DE	DEERE JOHN CAP CORP MEDIUM TERM NTS-BOOK	A	66	0.6%	5,407	4,016	1,391	2.9	106	5.4	5.2	5.1	5.1	5.0
16	BX	APRIA HEALTHCARE GROUP INC	BBB	34	0.4%	3,357	2,491	866	2.9	69	6.5	6.8	6.4	6.2	5.1
17	F	FORD	BB	151	0.7%	6,032	4,441	1,591	2.8	83	7.0	6.6	6.4	6.8	7.3
18	EIX	EDISON MISSION	BBB	57	0.6%	4,926	3,617	1,309	2.8	78	5.8	5.8	5.5	5.8	6.1
19	AEP	AMERICAN ELEC PWR CO INC	BBB	75	0.2%	2,198	1,612	586	2.8	44	6.0	5.5	5.5	5.8	6.0
20	CI	CIGNA CORP	BBB	33	0.5%	4,359	3,197	1,162	2.8	59	5.7	5.6	5.5	5.5	5.9

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

September 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	LOW	LOWES COS INC	BBB	45	1.7%	15,356	4,273	11,083	0.39	103	6.0	5.5	5.5	5.5	6.0
2	TMUS	T-MOBILE USA INC	BBB	38	0.8%	7,538	3,661	3,877	0.94	100	6.2	5.8	5.5	5.8	5.9
3	MSFT	MICROSOFT CORP	AAA	28	0.6%	5,214	2,544	2,670	0.95	77	5.3	5.0		4.7	5.0
4	RDS	SHELL	AA	24	0.3%	2,919	1,519	1,400	1.09	41	5.5	5.2	5.0	5.3	5.6
5	SPG	SIMON PPTY GROUP L P	A	23	0.2%	1,998	1,053	945	1.11	40	6.0	5.6	5.7	5.9	6.3
6	FISV	FISERV INC	BBB	13	0.3%	2,704	1,430	1,274	1.12	35	6.0	5.6	5.5	5.9	
7	BMY	BRISTOL MYERS SQUIBB CO	A	39	0.3%	2,293	1,229	1,064	1.16	36	5.8	5.3	5.1	5.1	5.7
8	EDP	ENTERPRISE PRODS OPER LLC	BBB	34	0.4%	3,365	1,829	1,536	1.19	41	5.8	5.5	5.4	5.5	6.0
9	AMT	AMERICAN TOWER CORP NEW	BBB	34	0.5%	4,443	2,424	2,019	1.20	66	6.1	5.9	5.9	5.9	
10	ETP	ENERGY TRANSFER PARTNERS L P	BBB	30	0.3%	2,629	1,442	1,187	1.21	47	6.1	5.9	6.0	6.2	6.8
11	ANTM	Null	A	27	0.3%	2,774	1,542	1,232	1.25	38	6.0	5.7	5.4	5.5	5.9
12	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	BBB	221	0.5%	4,361	2,463	1,898	1.30	73	7.1	6.0	5.9	5.9	5.8
13	PEP	PEPSICO	A	42	0.2%	2,226	1,260	966	1.30	40	5.7	5.0	4.9	4.9	5.3
14	MS	MORGAN STANLEY	A	1,401	1.8%	16,126	9,171	6,955	1.32	285	6.0	5.9	6.3	5.5	5.9
15	BNS	BANK NOVA SCOTIA B C	A	150	0.4%	3,221	1,851	1,370	1.35	57	6.0	5.8	5.7	5.6	
16	VZ	VERIZON	BBB	147	1.2%	10,765	6,195	4,570	1.36	144	5.9	5.5	5.6	5.7	6.1
17	CAT	CATERPILLAR	A	58	0.3%	2,543	1,481	1,062	1.39	51	5.7	5.2	4.9	4.7	5.2
18	BK	BANK NEW YORK INC MEDIUM TERM SR NTS BOO	A	49	0.5%	4,172	2,433	1,739	1.40	63	5.9	5.5	5.5	5.4	
19	JPM	JP MORGAN CHASE	A	933	2.9%	25,434	14,939	10,495	1.42	433	6.0	5.7	5.5	6.1	5.8
20	ORCL	ORACLE CORP	BBB	39	0.9%	7,927	4,648	3,279	1.42	142	5.9	5.6	5.5	5.8	6.2

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.

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Corporate Bonds: Top 20 Most Bought Issues

September 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	T	AT&T	Mar-29	BBB	4.350	19,734	437	20,171	49	5.8	5.7	93.4	93.6
2	ABBV	ABBVIE INC	Nov-28	BBB	4.250	13,541	292	13,833	46	5.1	5.2	96.1	95.6
3	CVS	CVS CAREMARK CORP	Jan-29	BBB	5.000	4,671	74	4,745	23	5.6	5.7	97.4	96.9
4	GS	GOLDMAN SACHS	Null	BB	7.500	2,937	118	3,055	74			100.6	100.3
5	ETSY	Null	Jun-28	N/R	0.250	2,239	39	2,278	7	6.2	6.5	76.0	75.0
6	LTHM	Null	Jul-25	N/R	4.125	2,234	37	2,271	15			236.2	206.3
7	ONNN	ON SEMICONDUCTOR CORP	May-27	N/R	0.000	2,221	31	2,252	13			181.6	182.0
8	F	FORD	Mar-26	BB	0.000	2,216	154	2,370	8			98.9	98.0
9	WGO	Null	Apr-25	N/R	1.500	2,211	14	2,225	8			113.5	111.6
10	C	CITIGROUP	Null	BB	7.375	1,966	217	2,183	23			100.6	98.7
11	CI	CIGNA CORP	Oct-28	BBB	4.375	1,942	375	2,317	20	5.5	5.5	95.1	95.2
12	COF	CAPITAL ONE FINL CORP	Jun-29	BBB	6.312	1,777	28	1,805	15			98.2	98.4
13	C	CITIGROUP	Null	BB	7.625	1,603	138	1,741	48			100.2	100.0
14	MET	METLIFE	Jun-35	A	5.700	1,603	40	1,643	10	5.6	5.9	100.6	98.6
15	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	1,553	1,061	2,614	20	5.5	5.5	95.3	95.2
16	NEM	NEWMONT MINING	Jul-32	BBB	2.600	1,319	150	1,469	8	5.6	5.6	79.6	79.5
17	EIX	EDISON MISSION	Nov-24	BBB	3.550	1,310	175	1,485	11	5.8	6.2	97.5	97.1
18	WFC	WELLS FARGO	Null	BBB	7.625	1,279	284	1,563	39			102.5	102.3
19	UTX	UNITED TECHNOLOGIES CORP	Aug-25	BBB	3.950	1,238	462	1,700	9	5.6	5.7	97.0	96.9
20	CMCS	COMCAST	Oct-28	A	4.150	1,226	766	1,992	15	5.1	5.2	95.6	95.5

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

September 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	LOW	LOWES COS INC	Sep-28	BBB	1.700	136	9,358	9,494	26	5.3	5.5	84.5	83.7
2	TMUS	T-MOBILE USA INC	Jul-28	BBB	4.800	292	2,183	2,475	13	5.6	5.5	96.8	97.0
3	JPM	JP MORGAN CHASE	Null	BBB	6.750	396	1,737	2,133	19	6.7	6.8	100.1	99.9
4	MSFT	MICROSOFT CORP	Feb-25	AAA	2.700	207	1,334	1,541	12	5.1	5.3	96.7	96.6
5	COF	CAPITAL ONE FINL CORP	Oct-24	BBB	3.300	855	1,318	2,173	17	6.1	6.3	97.0	96.8
6	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	1,553	1,061	2,614	20	5.5	5.5	95.3	95.2
7	AMT	AMERICAN TOWER CORP NEW	Mar-33	BBB	5.650	45	900	945	12	5.9	5.9	98.2	98.1
8	WDC	WESTERN DIGITAL CORP	Feb-26	BB	4.750	142	849	991	10	6.9	7.2	95.4	94.6
9	CMCS	COMCAST	Oct-28	A	4.150	1,226	766	1,992	15	5.1	5.2	95.6	95.5
10	C	CITIGROUP	Oct-24	BBB	0.776	257	726	983	7			99.4	99.5
11	VZ	VERIZON	Mar-27	BBB	4.125	588	650	1,238	14	5.5	5.5	95.8	95.7
12	HPQ	HEWLETT PACKARD	Oct-25	BBB	4.900	1,146	556	1,702	13	5.7	5.8	98.4	98.3
13	VZ	VERIZON	Mar-24	BBB	0.750	32	540	572	5	5.6	6.1	97.5	97.6
14	WFC	WELLS FARGO	Jul-27	BBB	4.300	893	528	1,421	15	5.7	5.8	95.2	94.9
15	MS	MORGAN STANLEY	Apr-25	A	3.620	70	525	595	6			98.5	98.4
16	GS	GOLDMAN SACHS	Mar-30	A	3.800	661	517	1,178	12	5.7	5.7	90.0	89.9
17	ALLY	ALLY FINANCIAL	Oct-23	BBB	1.450	60	500	560	6	6.1	7.4	99.7	99.8
18	GM	GENERAL MOTORS FINANCIAL COMPANY INC	Oct-29	BBB	5.400	254	466	720	14	6.2	6.2	96.1	96.1
19	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Apr-28	A	4.000	581	464	1,045	10	5.1	5.2	95.5	95.3
20	UTX	UNITED TECHNOLOGIES CORP	Aug-25	BBB	3.950	1,238	462	1,700	9	5.6	5.7	97.0	96.9

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).

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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 rates 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 ones 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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