

Market Transparency Report

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

September 2022

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 September 2022

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	75	47.3%	0.8
CD	70	24.7%	1.0
Corp	69	12.2%	-0.1
Municipal	60	18.0%	-0.1
Treasury	64	73.3%	3.3

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



Yield Matrix

Average Yield, % for September 2022 Average Yield, % TTM Median Market Maturity.. 3 10 20 2.7 4.1 4.0 3.4 5.6 3.9 4.2 5.9 4.4 **MSRB Muni** TRACE Corp TRACE Agency MSRB Muni TRACE Corp Yield CD 3.7 4.0 4.2 4.1 4.2 1 3.7 4.1 3.9 3.7 3.9 **TRACE Agency** Treasury **Asset Class** 2-Category (Filtered) 1 3 5 10 20 Market Rating Key 0 Median 4.8 3.1 4.3 AA Maturity.. 0 5 10 15 20 4.0 4.3 4.4 4.8 5.6 Α **Financial** BBB 4.0 4.8 5.0 5.4 5.9 **Time to Maturity** HY 6.5 8.2 10.1 6.6 TRACE AAA 2.3 4.5 5 Corp AA 3.7 3.7 4.3 4.9 4.9 Non-Financial 3.8 4.5 4.3 4.5 6.0 4.4 4.8 5.2 5.5 6.8 4-BBB 5.4 6.5 11.6 6.7 7.5 HY CD 1 3 5 10 20 Yield Median Treasury Maturity... AAA 2.6 2.7 2.8 3.2 3.9 2.7 2.8 2.9 3.2 AA 3.3 4.1 9 3.4 4.0 GO 3.4 3.7 4.0 4.1 4.8 BBB 12 1-HY 3.7 3.5 5.2 **MSRB** Non-Financial 4.8 AA 11 Muni 2.6 2.8 2.8 3.2 3.9 AAA 0 2.7 2.8 2.9 3.3 4.1 AA 11 2.8 3.0 3.1 3.5 4.4 Revenue 0 10 15 20 5 4.8 BBB 3.5 3.5 3.8 4.2 18 **Time to Maturity** HY 7.3 4.1 2.9 5.5 5.7 19

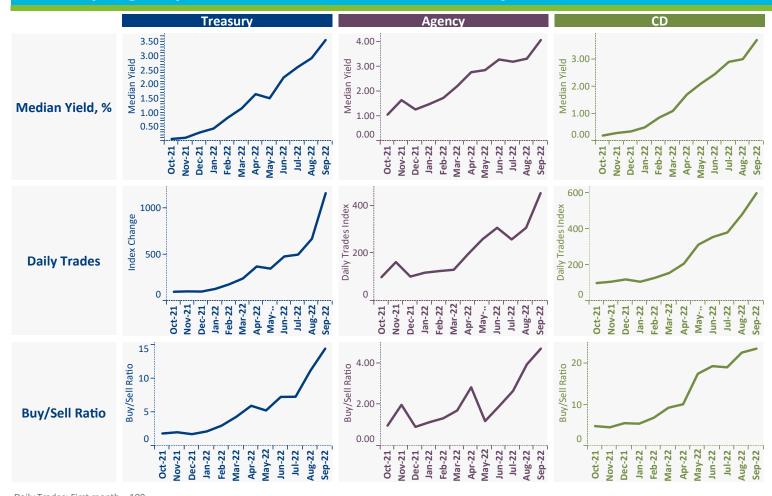
WA Yield = "Weighted Average Yield"

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 transcations 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...



Treasury, Agency, CD Transaction Trend Summary



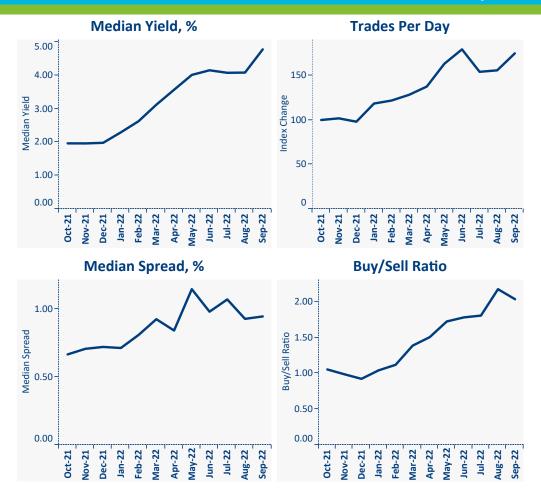
Daily Trades: First month = 100 Source: TRACE and Tradeweb Direct



⁻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.

Corporate Bonds: Odd-Lot Customer Transaction Trend Summary



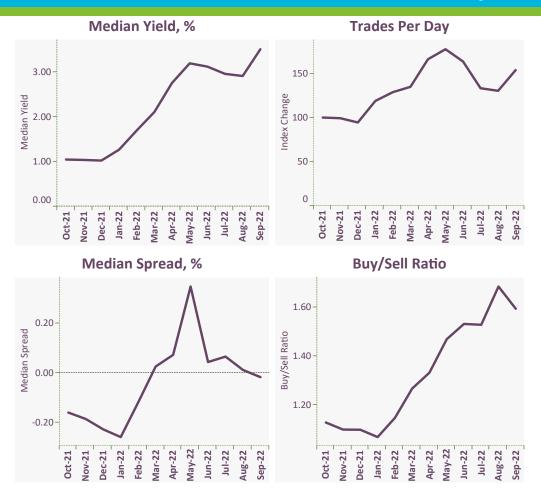
Daily Trades: First month = 100 Source: TRACE and Tradeweb Direct



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

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

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...



Corporate Bonds: Top 20 Most Active Issuers

September 2022

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Buy/Sell Ratio	Dollar Vol. Trad	1Y Yield (Buy)	3Y Yield (Buy)	5Y Yield (Buy)	10Y Yield (Buy)	20Y Yield (Buy)
1	JPM	JP MORGAN CHASE	Α	725	3.3%	25,306	1.7	472	4.1	4.6	5.0	5.1	5.7
2	GS	GOLDMAN SACHS	Α	939	3.1%	23,462	2.0	403	4.4	4.9	5.1	5.3	5.7
3	С	CITIGROUP	BBB	697	2.6%	20,143	1.8	339	4.4	4.8	5.2	5.9	5.8
4	BAC	BANK OF AMERICA	A	333	2.5%	19,479	2.2	411	4.2	4.8	5.0	5.1	5.4
5	MS	MORGAN STANLEY	Α	1,055	2.2%	16,723	2.2	298	4.1	4.8	5.3	5.3	5.3
6	WFC	WELLS FARGO	Α	146	1.9%	14,337	1.8	228	4.3	4.8	5.2	5.4	5.7
7	GM	GENERAL MOTORS FINANCIAL COMPANY	BBB	80	1.7%	13,048	3.0	258	4.5	5.1	6.1	6.3	6.8
8	AAPL	APPLE INC	AA	54	1.5%	11,763	1.9	190	4.0	4.1	4.4	4.2	4.7
9	WMT	WAL-MART	AA	36	1.4%	10,424	8.6	97	3.8	4.0	4.1	4.2	4.6
10	VZ	VERIZON	BBB	137	1.3%	9,624	1.5	129	4.4	4.6	4.9	5.1	5.3
11	ORCL	ORACLE CORP	BBB	34	1.1%	8,637	2.1	131	4.2	4.9	5.2	5.6	6.3
12	AMZN	AMAZON COM INC	AA	33	1.0%	8,004	2.2	109	3.7	4.1	4.6	4.3	4.8
13	ВА	BOEING CO	BBB	53	1.0%	7,968	3.9	156	4.5	5.0	5.3	5.9	6.3
14	CMCS	COMCAST	Α	59	1.0%	7,665	1.1	106		4.4	4.6	4.8	5.3
15	CVS	CVS CAREMARK CORP	BBB	39	0.9%	7,189	0.9	101	4.2	4.4	4.8	4.9	5.6
16	Т	AT&T	BBB	98	0.9%	7,047	1.3	101	4.5	4.7	4.8	5.2	5.6
17	LOW	LOWES COS INC	BBB	35	0.9%	6,950	4.8	99	4.2	4.7	4.6	5.2	5.7
18	BRK	BERKSHIRE HATHAWAY	AA	152	0.8%	6,449	1.8	134	3.7	4.4	4.6	4.8	5.2
19	DUK	DUKE ENERGY	BBB	117	0.8%	6,434	2.4	99	4.2	4.9	5.0	5.3	5.3
20	COF	CAPITAL ONE FINL CORP	BBB	30	0.8%	6,223	2.6	96	4.1	4.8	5.6		

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

September 2022

Index	Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Trades (Buy)	Trades (Sell)	Buy/Sell Ratio	Dollar Vol. Traded	1Y Yield (Buy)	3Y Yield (Buy)	5Y Yield (Buy)	10Y Yield (Buy)	20Y Yield (Buy)
1	CE	CELANESE US HLDGS LLC	BBB	8	0.5%	3,862	3,601	261	13.8	74		6.1	6.2	6.8	
2	WMT	WAL-MART	AA	36	1.4%	10,424	9,334	1,090	8.6	97	3.8	4.0	4.1	4.2	4.6
3	CI	CIGNA CORP	BBB	39	0.8%	5,756	4,986	770	6.5	76	4.2	4.5	4.9	4.9	5.4
4	MMM	3M CO	Α	21	0.3%	2,325	1,997	328	6.1	52	4.3	4.5	4.8	4.9	5.2
5	MAR	MARRIOTT INTL INC NEW	BBB	23	0.2%	1,779	1,501	278	5.4	36	4.0	4.7	5.4	5.5	
6	LOW	LOWES COS INC	BBB	35	0.9%	6,950	5,751	1,199	4.8	99	4.2	4.7	4.6	5.2	5.7
7	EIX	EDISON MISSION	Α	53	0.5%	3,541	2,907	634	4.6	68	4.2	5.0	5.6	5.4	5.8
8	SAN	ABBEY NATL TREAS SVCS PLC	BBB	42	0.3%	2,394	1,942	452	4.3	62	4.5	5.3	5.4	7.3	
9	PM	PHILIP MORRIS INTL INC	Α	23	0.3%	1,979	1,594	385	4.1	35	4.0	4.5	4.9	5.5	6.2
10	ВХ	APRIA HEALTHCARE GROUP INC	BBB	30	0.3%	2,270	1,812	458	4.0	48	4.7	5.9	7.0	6.0	4.9
11	BA	BOEING CO	BBB	53	1.0%	7,968	6,343	1,625	3.9	156	4.5	5.0	5.3	5.9	6.3
12	BMO	BANK MONTREAL MEDIUM TERM SR NTS B	Α	141	0.5%	4,160	3,284	876	3.8	66	4.2	4.8	5.0		
13	MO	ALTRIA GROUP INC	BBB	23	0.4%	2,880	2,272	608	3.7	59	4.4	4.8	4.8	6.0	6.6
14	DWDP	Null	BBB	8	0.3%	2,263	1,745	518	3.4	40	4.1	4.6		4.6	5.5
15	TM	ТОУОТА	Α	69	0.6%	4,273	3,295	978	3.4	90	4.1	4.4	4.7	4.8	
16	CS	CREDIT SUISSE	Α	287	0.3%	2,334	1,796	538	3.3	41	4.5	5.2	5.2	5.9	7.0
17	NEE	FPL GROUP CAP INC	BBB	59	0.6%	4,808	3,697	1,111	3.3	77	4.1	4.5	4.8	4.9	5.0
18	CVX	CHEVRON CORP NEW	AA	29	0.2%	1,801	1,383	418	3.3	39	4.0	4.2	4.2	4.4	5.2
19	UTX	UNITED TECHNOLOGIES CORP	BBB	50	0.5%	3,606	2,744	862	3.2	50	4.1	4.7	4.6	4.9	5.3
20	HCA	HCA INC	BBB	26	0.4%	2,789	2,103	686	3.1	56	4.9	5.3	5.7	5.9	6.3

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 2022

Inde	x Ticker	Company	Rating Key (Med)	Issues Traded	% of Total Trades	Trades	Trades (Buy)	Trades (Sell)	Buy/Sell Ratio	Dollar Vol. Traded	1Y Yield (Sell)	3Y Yield (Sell)	5Y Yield (Sell)	10Y Yield (Sell)	20Y Yield (Sell)
1	RGA	REINSURANCE GROUP AMER INC	BBB	6	0.8%	5,754	1,318	4,436	0.30	17	5.0	5.1		5.3	
2	BBBY	BED BATH & BEYOND INC	С	3	0.3%	1,986	467	1,519	0.31	7				34.3	28.6
3	RDS	SHELL	AA	25	0.4%	2,860	1,250	1,610	0.78	40	4.3	4.3		4.7	5.2
4	CVS	CVS CAREMARK CORP	BBB	39	0.9%	7,189	3,395	3,794	0.89	101	4.6	4.5	4.8	5.0	5.7
5	V	VIVENDI	AA	13	0.3%	2,092	1,036	1,056	0.98	28		4.3	4.2	4.3	4.8
6	EDP	ENTERPRISE PRODS OPER LLC	BBB	34	0.4%	3,268	1,681	1,587	1.06	42	4.5	4.6	4.5	6.0	5.8
7	BK	BANK NEW YORK INC MEDIUM TERM SR	Α	48	0.4%	3,263	1,684	1,579	1.07	60	4.3	4.4	4.7	4.8	
8	CMCS	COMCAST	Α	59	1.0%	7,665	3,994	3,671	1.09	106		4.4	4.6	4.8	5.3
9	CTL	CENTURYLINK	В	23	0.3%	1,968	1,051	917	1.15	26	5.5	7.0	10.0	10.2	11.1
10	XOM	XTO ENERGY INC	AA	22	0.5%	3,646	1,973	1,673	1.18	51	4.5	4.3	4.1	4.5	5.0
11	PYPL	Null	Α	11	0.3%	1,919	1,063	856	1.24	26	4.0	4.6	4.5	4.9	
12	T	AT&T	BBB	98	0.9%	7,047	4,006	3,041	1.32	101	4.3	4.7	4.9	5.3	5.7
13	SBUX	STARBUCKS CORP	BBB	18	0.2%	1,777	1,047	730	1.43	26	4.3	4.4	4.5	5.0	5.1
14	VZ	VERIZON	BBB	137	1.3%	9,624	5,702	3,922	1.45	129	4.4	4.5	4.7	5.1	5.4
15	PEP	PEPSICO	Α	36	0.3%	2,138	1,274	864	1.47	38	4.1	4.2	4.1	4.4	4.7
16	HD	HOME DEPOT	Α	36	0.4%	3,417	2,063	1,354	1.52	60	4.2	4.3	4.3	4.7	5.2
17	D	DOMINION RES INC VA NEW	BBB	73	0.3%	2,079	1,256	823	1.53	42	4.6	4.6	4.7	5.1	5.5
18	FITB	FIFTH THIRD BANCORP	BBB	17	0.3%	2,049	1,240	809	1.53	33	4.6	4.7	4.9		5.7
19	USB	U S BANCORP MEDIUM TERM NTS- BOOK .	. A	25	0.6%	4,627	2,887	1,740	1.66	57	4.3	4.3	4.5	4.7	
20	JPM	JP MORGAN CHASE	Α	725	3.3%	25,306	15,826	9,480	1.67	472	4.2	4.6	5.0	5.5	5.8

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

September 2022

1 WMT WAL-MART Sep-32 AA 4.150 4,831 46 4,877 20 4.2 4.5 99.9 2 CI CIGNA CORP Oct-28 BBB 4.375 2,628 47 2,675 15 4.7 5.2 98.4 3 AMZN AMAZON COM INC Jun-27 AA 1.200 2,509 44 2,553 13 4.6 4.4 85.8 4 SCHW SCHWAB CHARLES CORP NEW Sep-49 BBB 5.375 1,688 295 1,983 37 99.4 5 WFC WELLS FARGO Jul-27 BBB 4.300 1,618 290 1,908 21 5.2 5.0 96.3	97.0 95.8 86.5 99.1 96.9 98.2 98.1
3 AMZN AMAZON COM INC Jun-27 AA 1.200 2,509 44 2,553 13 4.6 4.4 85.8 4 SCHW SCHWAB CHARLES CORP NEW Sep-49 BBB 5.375 1,688 295 1,983 37 99.4	86.5 99.1 96.9 98.2
4 SCHW SCHWAB CHARLES CORP NEW Sep-49 BBB 5.375 1,688 295 1,983 37 99.4	99.1 96.9 98.2
,	96.9 98.2
5 WFC WELLS FARGO Jul-27 BBB 4.300 1,618 290 1,908 21 5.2 5.0 96.3	98.2
6 WMT WAL-MART Sep-27 AA 3.950 1,555 27 1,582 13 4.1 4.4 99.5	98.1
7 MS MORGAN STANLEY Oct-24 A 3.700 1,429 255 1,684 21 4.8 4.7 97.8	
8 JPM JP MORGAN CHASE Jul-25 A 3.900 1,420 463 1,883 26 4.6 4.6 98.1	98.1
9 GS GOLDMAN SACHS Mar-24 A 4.000 1,418 361 1,779 32 4.5 4.6 99.3	99.2
10 AAPL APPLE INC Nov-27 AA 3.000 1,412 306 1,718 12 4.4 4.3 93.6	94.0
11 BA BOEING CO May-23 BBB 4.508 1,407 162 1,569 32 4.5 4.8 100.0	99.8
12 UTX UNITED TECHNOLOGIES CORP Aug-25 BBB 3.950 1,398 403 1,801 12 4.7 4.5 98.0	98.6
13 SO GEORGIA POWER CO Jul-23 BBB 2.950 1,381 635 2,016 15 4.1 4.4 99.1	98.9
14 PNC PNC FDG CORP Dec-49 BBB 6.200 1,358 176 1,534 37 98.5	97.5
15 NEE FPL GROUP CAP INC Mar-23 BBB 0.650 1,315 194 1,509 15 4.1 4.2 98.5	98.4
16 C CITIGROUP Oct-23 BBB 3.875 1,307 635 1,942 13 4.4 4.1 99.4	99.7
17 BAC BANK OF AMERICA Aug-24 BBB 4.200 1,285 166 1,451 32 4.5 4.8 99.4	98.9
18 GE GENERAL ELEC CAP CORP MEDIUM TERM Null BBB 6.623 1,281 565 1,846 44 6.7 6.9 97.1	95.3
19 HPQ HEWLETT PACKARD Oct-25 BBB 4.900 1,247 549 1,796 15 4.9 4.7 100.0	100.5
20 GM GENERAL MOTORS FINANCIAL COMPANY Apr-27 BBB 5.000 1,242 35 1,277 20 6.2 5.6 95.3	97.5

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 2022

Ind	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	RGA	REINSURANCE GROUP AMER INC	Oct-52	BBB	7.125	725	4,394	5,119	4			25.8	25.7
2	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	1,044	1,339	2,383	19	4.8	4.8	97.8	97.4
3	CMCS	COMCAST	Oct-28	Α	4.150	955	1,069	2,024	19	4.7	4.7	97.3	97.2
4	VZ	VERIZON	Mar-27	BBB	4.125	621	911	1,532	18	4.6	4.7	98.0	97.8
5	CVS	CVS CAREMARK CORP	Apr-30	BBB	3.750	113	890	1,003	8	5.0	5.0	92.4	92.0
6	GM	GENERAL MOTORS FINANCIAL COMPANY I	Feb-25	BBB	2.900	96	871	967	14	4.9	5.8	95.3	93.5
7	XOM	XTO ENERGY INC	Mar-24	AA	3.176	115	800	915	7	4.0	4.5	98.9	98.1
8	GS	GOLDMAN SACHS	Mar-30	Α	3.800	637	767	1,404	14	5.4	5.3	90.4	90.7
9	WFC	WELLS FARGO	May-28	Α	3.584	199	735	934	5			92.8	92.3
10	BBBY	BED BATH & BEYOND INC	Aug-34	С	4.915	225	718	943	2	33.8	34.3	16.6	16.3
11	BBBY	BED BATH & BEYOND INC	Aug-24	С	3.749	138	710	848	4	59.2	65.1	41.5	38.8
12	AMZN	AMAZON COM INC	Jun-30	AA	1.500	310	636	946	4	4.3	4.4	81.7	81.4
13	С	CITIGROUP	Oct-23	BBB	3.875	1,307	635	1,942	13	4.4	4.1	99.4	99.7
14	SO	GEORGIA POWER CO	Jul-23	BBB	2.950	1,381	635	2,016	15	4.1	4.4	99.1	98.9
15	С	CITIGROUP	Jan-28	BBB	3.887	231	633	864	5			94.8	94.2
16	AAPL	APPLE INC	Jan-23	AA	2.400	162	620	782	17	2.7	3.9	99.9	99.5
17	JPM	JP MORGAN CHASE	Dec-29	Α	4.452	284	619	903	4			95.1	94.4
18	RDS	SHELL	Sep-26	AA	2.500	225	607	832	4	4.2	4.3	93.9	93.5
19	Т	AT&T	Dec-33	BBB	2.550	359	587	946	5	5.2	5.3	77.7	77.1
20	GE	GENERAL ELEC CAP CORP MEDIUM TERM N	Null	BBB	6.623	1,281	565	1,846	44	6.7	6.9	97.1	95.3

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 <= TTM <= 1.5 3Y: 2 <= TTM <= 4 5Y: 4 < TTM <= 6 10Y: 7.5 <= TTM <= 12.5 20Y: 15 <= TTM <=25

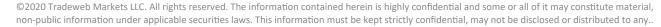
Rating buckets (AAA, AA, A, BBB, HY) in yield matrix are based on agggregate ratings from Moody's and S&P (when available).

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...





Disclosures

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