

Market Transparency Report

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

April 2023

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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 April 2023

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-40	2.1%	0.7
CD	-20	-23.2%	-6.8
Corp	-31	-10.5%	0.1
Municipal	-6	-2.7%	-0.1
Treasury	15	-10.2%	-1.0

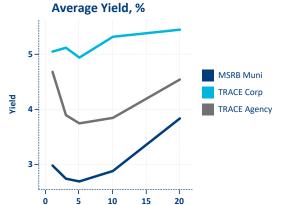
For monthly security trend data, see slides 5, 6 and 7



Yield Matrix

Average Yield, % for April 2023

			TTM			Median Maturity
Market	1	3	5	10	20	(Years)
MSRB Muni	3.0	2.7	2.7	2.9	3.8	9
TRACE Corp	5.1	5.1	5.0	5.3	5.5	3
TRACE Agency	4.7	3.9	3.8	3.9	4.6	8
CD	5.0	4.8	4.7	4.7	4.1	1
Treasury	4.7	4.0	3.6	3.5	3.9	0

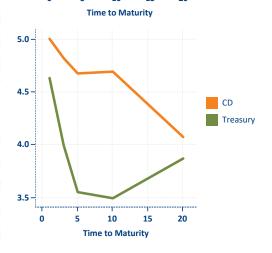


Median

15 22

Asset Class

								IVICUIUII
Market	Category (Filtered)	Rating Key	1	3	5	10	20	Maturity
								(Years)
		AA		4.5	4.5	4.8		3
		Α	4.9	4.4	4.3	4.6	5.1	2
TRACE —	Financial	BBB	5.5	5.2	5.4	5.4	6.2	3
		HY	6.0	7.9	9.5	9.5		4
		AAA	3.4				4.3	16
Corp		AA	4.0	3.8	4.1	4.5	4.5	9
	Non-Financial	Α	3.9	4.2	4.1	4.4	5.5	4
		BBB	5.1	4.9	4.9	5.1	6.5	5
		HY		16.5	7.3	8.0	7.1	6
								Median
			1	3	5	10	20	Maturity (Years)
		AAA	2.9	2.6	2.5	2.7	3.6	6
		AA	2.9	2.7	2.6	2.8	3.7	8
	GO	A	3.1	3.0	2.8	3.2	4.0	7
MSRB Muni		BBB	3.5	3.7	3.6	4.0	4.3	7
		HY			6.2	5.1	5.2	12
		AAA	2.9	2.6	2.5	2.7	3.7	9
		AA	3.0	2.7	2.6	2.8	3.8	10
	Revenue	A	3.2	3.0	2.9	3.1	3.9	14



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.

3.8

4.7

- -The weights are based on transaction size.
- -Yield summaries for Corporate and Agency exclude transactions in callable or floating-rate coupon bonds.

BBB

HY

- -Yield summaries for Municipal exclude transactions in taxable bonds.
- -See appendix for the definition of maturity and rating buckets.

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3.9

11.2

3.7

5.3



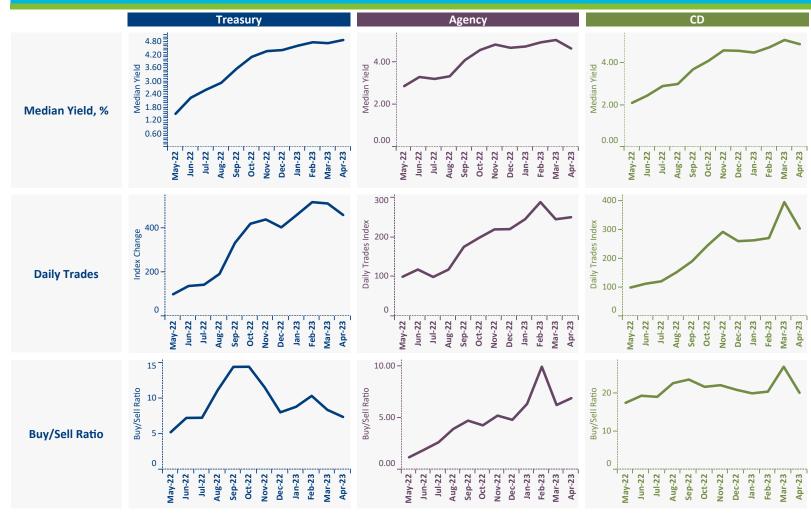
4.0

6.1

4.6

6.2

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.

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

Corporate Bonds: Top 20 Most Active Issuers

April 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	Α	1,111	2.8%	20,064	1.8	337	5.3	4.9	5.1	5.0	5.3
2	JPM	JP MORGAN CHASE	Α	938	2.7%	19,253	1.5	340	4.9	4.5	4.6	5.2	5.1
3	С	CITIGROUP	BBB	748	2.5%	17,927	1.5	314	5.1	5.1	5.0	5.5	5.4
4	BAC	BANK OF AMERICA	Α	414	2.3%	16,306	1.9	339	5.1	5.0	4.8	5.1	5.2
5	HD	HOME DEPOT	Α	35	2.1%	14,878	12.0	101	4.4	4.0	4.0	4.3	4.9
6	MS	MORGAN STANLEY	Α	947	1.7%	12,551	1.3	221	5.1	4.8	5.3	5.2	5.2
7	EDP	ENTERPRISE PRODS OPER LLC	BBB	34	1.7%	12,140	0.1	69	5.3	4.4	4.5	5.0	5.3
8	WFC	WELLS FARGO	Α	150	1.6%	11,842	1.5	176	4.9	4.9	4.9	5.4	5.5
9	BXMT	Null	N/R	2	1.6%	11,390	0.0	21		11.7			
10	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	91	1.5%	10,974	2.7	224	5.4	5.3	5.4	5.9	6.4
11	Т	AT&T	BBB	99	1.3%	9,294	1.5	132	5.2	5.3	4.6	4.9	5.4
12	VZ	VERIZON	BBB	131	1.2%	8,934	1.5	128	5.1	4.4	4.5	4.8	5.2
13	AAPL	APPLE INC	AA	50	1.2%	8,420	1.7	138	4.3	4.0	3.9	4.0	4.5
14	ORCL	ORACLE CORP	BBB	40	1.1%	8,106	1.5	134	5.0	4.7	4.7	5.1	5.7
15	SCHW	SCHWAB CHARLES CORP NEW	Α	34	1.1%	7,843	2.9	149	5.6	5.2	5.0	5.1	
16	CVS	CVS CAREMARK CORP	BBB	44	1.0%	7,224	1.7	96	4.9	4.5	4.6	4.9	5.4
17	CMCS	COMCAST	Α	62	1.0%	6,951	1.2	105	4.8	4.3	4.3	4.5	5.1
18	UNH	UNITEDHEALTH	Α	58	1.0%	6,923	3.5	108	4.6	4.2	4.2	4.4	4.8
19	AMZN	AMAZON COM INC	AA	36	0.9%	6,292	1.2	116	4.5	4.1	4.0	4.2	4.7
20	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	Α	26	0.8%	5,973	2.7	85	5.3	4.8	4.6		

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

April 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	NRG	NRG ENERGY	N/R	7	0.7%	4,733	4,473	260	17.2	19		6.1	6.3		
2	SWK	STANLEY BLACK & DECKER INC	Α	11	0.2%	1,729	1,629	100	16.3	40		4.7	5.2	5.0	5.7
3	HD	HOME DEPOT	Α	35	2.1%	14,878	13,730	1,148	12.0	101	4.4	4.0	4.0	4.3	4.9
4	NFLX	NETFLIX INC	BBB	9	0.5%	3,854	3,488	366	9.5	28	5.0	4.5	4.6		
5	CMA	COMERICA BK DALLAS TEX	BBB	7	0.4%	3,008	2,661	347	7.7	44		6.8	7.2		
6	LNC	LINCOLN NATL CORP IND	BBB	17	0.3%	2,510	2,117	393	5.4	44		5.9	6.3	6.6	6.8
7	MAR	MARRIOTT INTL INC NEW	BBB	20	0.3%	2,091	1,741	350	5.0	35	5.1	4.9	4.8	5.1	
8	AVGO	Null	BBB	19	0.3%	2,222	1,803	419	4.3	32	5.1	4.9	4.9	5.3	
9	NOC	NORTHROP GRUMMAN CORP	BBB	19	0.5%	3,890	3,104	786	4.0	34		4.3	4.4	4.5	5.0
10	HPQ	HEWLETT PACKARD	BBB	19	0.7%	5,318	4,203	1,115	3.8	77	5.0	5.0	4.8	5.5	5.9
11	DWDP	Null	BBB	8	0.2%	1,721	1,353	368	3.7	16		4.4	4.4		5.2
12	UNH	UNITEDHEALTH	Α	58	1.0%	6,923	5,373	1,550	3.5	108	4.6	4.2	4.2	4.4	4.8
13	MCD	MCDONALDS	BBB	27	0.7%	4,694	3,608	1,086	3.3	51	4.5	4.2	3.9	4.4	5.0
14	MTB	MFRS & TRADERS TR CO BK NT PROGRAM	BBB	15	0.4%	2,788	2,108	680	3.1	41		6.3	6.5		
15	INTC	INTEL CORP	Α	37	0.6%	4,513	3,399	1,114	3.1	97	4.4	4.3	4.3	4.7	5.2
16	FITB	FIFTH THIRD BANCORP	BBB	19	0.5%	3,749	2,809	940	3.0	63	6.5	5.7	5.7		
17	PRU	PRUDENTIAL	BBB	46	0.2%	1,723	1,288	435	3.0	35		4.5	4.5	4.8	5.5
18	LOW	LOWES COS INC	BBB	42	0.7%	5,120	3,823	1,297	3.0	72	4.5	4.4	4.4	4.8	5.4
19	SCHW	SCHWAB CHARLES CORP NEW	Α	34	1.1%	7,843	5,852	1,991	2.9	149	5.6	5.2	5.0	5.1	
20	TRP	TRANSCANADA PIPELINES LTD	BBB	32	0.3%	2,027	1,504	523	2.9	34	5.2	5.1	4.7	5.1	5.6

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

April 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	BXMT	Null	N/R	2	1.6%	11,390	87	11,303	0.01	21		12.4			
2	FLEX	FLEXTRONICS INTL LTD	BBB	5	0.3%	1,967	135	1,832	0.07	8		5.1	5.5		
3	EDP	ENTERPRISE PRODS OPER LLC	BBB	34	1.7%	12,140	1,357	10,783	0.13	69	5.4	4.5	4.6	5.0	5.5
4	RDS	SHELL	AA	24	0.3%	2,450	1,212	1,238	0.98	39	4.9	4.2	4.1	4.6	4.9
5	AMZN	AMAZON COM INC	AA	36	0.9%	6,292	3,401	2,891	1.18	116	4.5	4.3	4.1	4.3	4.7
6	CMCS	COMCAST	Α	62	1.0%	6,951	3,820	3,131	1.22	105	4.9	4.3	4.3	4.5	5.1
7	WMT	WAL-MART	AA	40	0.6%	4,271	2,360	1,911	1.23	71	4.6	4.0	3.9	4.1	4.5
8	EIX	EDISON MISSION	BBB	55	0.4%	2,754	1,549	1,205	1.29	56	5.5	4.8	4.9	4.8	5.4
9	MS	MORGAN STANLEY	Α	947	1.7%	12,551	7,137	5,414	1.32	221	5.2	4.8	5.7	5.0	5.2
10	ALLY	ALLY FINANCIAL	BBB	47	0.5%	3,303	1,885	1,418	1.33	60	7.5	6.8	6.5	7.0	
11	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Α	40	0.6%	4,223	2,423	1,800	1.35	53		4.4	4.4	4.4	5.0
12	ABT	ABBOTT LABS	AA	13	0.2%	1,654	970	684	1.42	20	5.1	3.9	3.8		4.7
13	SO	GEORGIA POWER CO	BBB	74	0.4%	2,552	1,497	1,055	1.42	43	5.4	4.7	4.9	4.8	5.4
14	VIA	VIACOM INC NEW	BBB	27	0.3%	2,168	1,286	882	1.46	42	6.8	5.2	5.5	6.2	7.1
15	Т	AT&T	BBB	99	1.3%	9,294	5,524	3,770	1.47	132	5.4	4.5	4.8	4.9	5.5
16	JPM	JP MORGAN CHASE	Α	938	2.7%	19,253	11,514	7,739	1.49	340	5.2	4.5	4.7	5.6	5.2
17	ANTM	Null	Α	28	0.3%	2,262	1,358	904	1.50	27	5.0	4.7	4.5	4.7	5.2
18	ORCL	ORACLE CORP	BBB	40	1.1%	8,106	4,871	3,235	1.51	134	5.0	4.8	4.8	5.2	5.8
19	AEP	AMERICAN ELEC PWR CO INC	BBB	71	0.3%	2,043	1,231	812	1.52	40	5.9	5.1	4.7	5.1	5.4
20	DIS	DISNEY WALT CO NEW MEDIUM TERM NTS BOOK	Α	61	0.5%	3,828	2,311	1,517	1.52	66	4.7	4.2	4.1	4.4	4.9

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

April 2023

	ID					ridaes (bay)	Trades (Sell)	Trades	Traded (MM)	Yield (Buy)	Yield (Sell)	Price (Buy)	Price (Sell)
1 HD		HOME DEPOT	Sep-32	Α	4.500	11,804	79	11,883	47	4.3	4.3	101.4	101.2
2 NR	IRG	NRG ENERGY	Jun-48	N/R	2.750	4,385	97	4,482	14	0.8	1.3	104.0	103.0
3 NF	IFLX	NETFLIX INC	Apr-28	BBB	4.875	3,041	85	3,126	12	4.6	4.8	101.0	100.4
4 CN	MA	COMERICA BK DALLAS TEX	Jul-23	BBB	3.700	2,147	207	2,354	32	7.7	8.7	98.9	98.6
5 UN	JNH	UNITEDHEALTH	Apr-33	Α	4.500	2,125	51	2,176	18	4.4	4.5	100.7	99.9
6 NC	IOC	NORTHROP GRUMMAN CORP	Mar-33	BBB	4.700	1,891	22	1,913	7	4.5	4.7	101.2	100.1
7 HP	IPQ	HEWLETT PACKARD	Oct-25	BBB	4.900	1,815	463	2,278	12	5.0	5.0	99.8	99.8
8 CV	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	1,452	907	2,359	19	4.6	4.6	98.8	98.7
9 M	/ICD	MCDONALDS	Apr-28	BBB	3.800	1,390	42	1,432	12	3.9	4.2	99.6	98.4
10 T		AT&T	Feb-26	BBB	5.539	1,299	39	1,338	19	5.3	5.1	100.2	100.4
11 UT	JTX	UNITED TECHNOLOGIES CORP	Aug-25	BBB	3.950	1,231	440	1,671	9	4.4	4.5	99.0	98.9
12 US	JSB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	Sep-24	A	3.600	1,221	338	1,559	14	5.4	5.6	97.7	97.3
13 DV	WDP	Null	Nov-28	BBB	4.725	1,213	236	1,449	10	4.4	4.5	101.3	101.1
14 GS	is	GOLDMAN SACHS	Mar-24	Α	4.000	1,192	353	1,545	23	5.3	5.5	98.9	98.7
15 AA	APL	APPLE INC	Nov-27	AA	3.000	1,119	450	1,569	9	3.9	3.9	96.4	96.3
16 WI	VFC	WELLS FARGO	Jul-27	BBB	4.300	1,103	332	1,435	13	5.0	5.0	97.5	97.4
17 JPI	PM	JP MORGAN CHASE	Jan-33	A	2.963	1,080	54	1,134	5			85.5	85.5
18 LO	ow	LOWES COS INC	Apr-26	BBB	2.500	1,080	315	1,395	8	4.4	4.4	94.6	94.6
19 CO	OF	CAPITAL ONE FINL CORP	Mar-27	BBB	3.750	1,056	245	1,301	8	5.7	5.8	93.2	93.1
20 GS	iS	GOLDMAN SACHS	Feb-26	Α	3.750	1,025	386	1,411	10	4.7	4.7	97.5	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

April 2023

1 BXMT Null Mar-27 N/R 5.500 81 11,300 11,381 21 11,7 12.4 81.0 2 EDP ENTERPRISE PRODS OPER LLC Feb-42 BBB 5.700 189 9,787 9,976 37 5.3 5.5 104.7 3 FLEX FLEXTRONICS INTL LTD Feb-26 BBB 3.750 28 1,787 1,815 5 5.4 5.1 95.8 4 RF REGIONS FINL CORP NEW May-25 BBB 2.250 181 1,103 1,284 9 5.8 6.2 93.2 5 T AT&T Mar-29 BBB 4.350 291 1,080 1,371 14 4.7 4.8 98.4 6 HAS HASBRO INC Nov-29 BBB 3.900 123 919 1,042 7 5.5 5.4 91.5 7 CVS CVS CAREMARK CORP Mar-28 BBB 4.300 1,452	dex Ticker	Company	Maturity	Rating Key (Med)	Coupon	Trades (Buy)	Trades (Sell)	Trades	Dollar Vol. Traded (MM)	Yield (Buy)	Yield (Sell)	Price (Buy)	Price (Sell)
3 FLEX FLEXTRONICS INTL LITD Feb-26 BBB 3.750 28 1,787 1,815 5 5.4 5.1 95.8 4 RF REGIONS FINL CORP NEW May-25 BBB 2.250 181 1,103 1,284 9 5.8 6.2 93.2 5 T AT&T Mar-29 BBB 4.350 291 1,080 1,371 14 4.7 4.8 98.4 6 HAS HASBRO INC Nov-29 BBB 3.900 123 919 1,042 7 5.5 5.4 91.5 7 CVS CVS CAREMARK CORP Mar-28 BBB 4.300 1,452 907 2,359 19 4.6 4.6 98.8 8 AMZN AMAZON COM INC May-26 AA 1.000 250 864 1,114 22 4.1 4.3 91.2 9 WMT WAL-MART SCHWAS A 4.150 927 828	BXMT	Null	Mar-27	N/R	5.500	81	11,300	11,381	21	11.7	12.4	81.0	79.1
4 RF REGIONS FINL CORP NEW May-25 BBB 2.250 181 1,103 1,284 9 5.8 6.2 93.2 5 T AT&T Mar-29 BBB 4.350 291 1,080 1,371 14 4.7 4.8 98.4 6 HAS HASBRO INC Nov-29 BBB 3.900 123 919 1,042 7 5.5 5.4 91.5 7 CVS CVS CAREMARK CORP Mar-28 BBB 4.300 1,452 907 2,359 19 4.6 4.6 98.8 8 AMZN AMAZON COM INC May-26 AA 1.000 250 864 1,114 22 4.1 4.3 91.2 9 WMT WAL-MART Sep-26 AA 1.050 84 863 947 19 4.0 4.0 90.6 10 CMCS COMCAST Oct-28 A 4.150 927 828 1,755	EDP	ENTERPRISE PRODS OPER LLC	Feb-42	BBB	5.700	189	9,787	9,976	37	5.3	5.5	104.7	101.8
5 T AT&T Mar-29 BBB 4.350 291 1,080 1,371 14 4.7 4.8 98.4 6 HAS HASBRO INC Nov-29 BBB 3.900 123 919 1,042 7 5.5 5.4 91.5 7 CVS CVS CAREMARK CORP Mar-28 BBB 4.300 1,452 907 2,359 19 4.6 4.6 98.8 8 AMZN AMAZON COM INC May-26 AA 1.000 250 864 1,114 22 4.1 4.3 91.2 9 WMT WAL-MART Sep-26 AA 1.050 84 863 947 19 4.0 4.0 90.6 10 CMCS COMCAST Oct-28 A 4.150 927 828 1,755 14 4.3 4.3 99.1 11 SYK STRYKER CORP Jun-25 BBB 4.125 438 541 979	FLEX	FLEXTRONICS INTL LTD	Feb-26	BBB	3.750	28	1,787	1,815	5	5.4	5.1	95.8	96.4
6 HAS HASBRO INC Nov-29 BBB 3.900 123 919 1,042 7 5.5 5.4 91.5 7 CVS CVS CAREMARK CORP Mar-28 BBB 4.300 1,452 907 2,359 19 4.6 4.6 98.8 8 AMZN AMAZON COM INC May-26 AA 1.000 250 864 1,114 22 4.1 4.3 91.2 9 WMT WAL-MART Sep-26 AA 1.050 84 863 947 19 4.0 4.0 90.6 10 CMCS COMCAST Oct-28 A 4.150 927 828 1,755 14 4.3 4.3 99.1 11 SYK STRYKER CORP Jun-25 BBB 1.150 25 763 788 12 4.7 4.9 92.9 12 VZ VERIZON Mar-27 BBB 4.125 438 541 979	RF	REGIONS FINL CORP NEW	May-25	BBB	2.250	181	1,103	1,284	9	5.8	6.2	93.2	92.3
7 CVS CVS CAREMARK CORP Mar-28 BBB 4.300 1,452 907 2,359 19 4.6 4.6 98.8 8 AMZN AMAZON COM INC May-26 AA 1.000 250 864 1,114 22 4.1 4.3 91.2 9 WMT WAL-MART Sep-26 AA 1.050 84 863 947 19 4.0 4.0 90.6 10 CMCS COMCAST Oct-28 A 4.150 927 828 1,755 14 4.3 4.3 99.1 11 SYK STRYKER CORP Jun-25 BBB 1.150 25 763 788 12 4.7 4.9 92.9 12 VZ VERIZON Mar-27 BBB 4.125 438 541 979 11 4.4 4.4 4.9 92.2 13 GS GOLDMAN SACHS Mar-30 A 3.800 489 534	Т	AT&T	Mar-29	BBB	4.350	291	1,080	1,371	14	4.7	4.8	98.4	97.8
8 AMZN AMAZON COM INC May-26 AA 1.000 250 864 1,114 22 4.1 4.3 91.2 9 WMT WAL-MART Sep-26 AA 1.050 84 863 947 19 4.0 4.0 90.6 10 CMCS COMCAST Oct-28 A 4.150 927 828 1,755 14 4.3 4.3 99.1 11 SYK STRYKER CORP Jun-25 BBB 1.150 25 763 788 12 4.7 4.9 92.9 12 VZ VERIZON Mar-27 BBB 4.125 438 541 979 11 4.4 4.4 99.2 13 GS GOLDMAN SACHS Mar-30 A 3.800 489 534 1,023 9 5.0 5.0 93.3 14 EIX EDISON MISSION Null BB 5.375 132 502 634 12 90.0 15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	HAS	HASBRO INC	Nov-29	BBB	3.900	123	919	1,042	7	5.5	5.4	91.5	91.7
9 WMT WAL-MART Sep-26 AA 1.050 84 863 947 19 4.0 4.0 90.6 10 CMCS COMCAST Oct-28 A 4.150 927 828 1,755 14 4.3 4.3 99.1 11 SYK STRYKER CORP Jun-25 BBB 1.150 25 763 788 12 4.7 4.9 92.9 12 VZ VERIZON Mar-27 BBB 4.125 438 541 979 11 4.4 4.4 99.2 13 GS GOLDMAN SACHS Mar-30 A 3.800 489 534 1,023 9 5.0 5.0 93.3 14 EIX EDISON MISSION Null BB 5.375 132 502 634 12 90.0 15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 - 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	1,452	907	2,359	19	4.6	4.6	98.8	98.7
10 CMCS COMCAST Oct-28 A 4.150 927 828 1,755 14 4.3 4.3 99.1 11 SYK STRYKER CORP Jun-25 BBB 1.150 25 763 788 12 4.7 4.9 92.9 12 VZ VERIZON Mar-27 BBB 4.125 438 541 979 11 4.4 4.4 99.2 13 GS GOLDMAN SACHS Mar-30 A 3.800 489 534 1,023 9 5.0 5.0 93.3 14 EIX EDISON MISSION Null BB 5.375 132 502 634 12 90.0 15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 - 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	AMZN	AMAZON COM INC	May-26	AA	1.000	250	864	1,114	22	4.1	4.3	91.2	90.7
11 SYK STRYKER CORP Jun-25 BBB 1.150 25 763 788 12 4.7 4.9 92.9 12 VZ VERIZON Mar-27 BBB 4.125 438 541 979 11 4.4 4.4 99.2 13 GS GOLDMAN SACHS Mar-30 A 3.800 489 534 1,023 9 5.0 5.0 93.3 14 EIX EDISON MISSION Null BB 5.375 132 502 634 12 90.0 15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	WMT	WAL-MART	Sep-26	AA	1.050	84	863	947	19	4.0	4.0	90.6	90.6
12 VZ VERIZON Mar-27 BBB 4.125 438 541 979 11 4.4 4.4 99.2 13 GS GOLDMAN SACHS Mar-30 A 3.800 489 534 1,023 9 5.0 5.0 93.3 14 EIX EDISON MISSION Null BB 5.375 132 502 634 12 90.0 15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	CMCS	COMCAST	Oct-28	Α	4.150	927	828	1,755	14	4.3	4.3	99.1	99.1
13 GS GOLDMAN SACHS Mar-30 A 3.800 489 534 1,023 9 5.0 5.0 93.3 14 EIX EDISON MISSION Null BB 5.375 132 502 634 12 90.0 15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	SYK	STRYKER CORP	Jun-25	BBB	1.150	25	763	788	12	4.7	4.9	92.9	92.4
14 EIX EDISON MISSION Null BB 5.375 132 502 634 12 90.0 15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	VZ	VERIZON	Mar-27	BBB	4.125	438	541	979	11	4.4	4.4	99.2	99.1
15 SCHW SCHWAB CHARLES CORP NEW Null BBB 5.375 825 495 1,320 25 96.4 16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	GS	GOLDMAN SACHS	Mar-30	Α	3.800	489	534	1,023	9	5.0	5.0	93.3	93.0
16 GM GENERAL MOTORS FINANCIAL COMPANY INC Mar-62 BB 5.750 815 463 1,278 11 6.9 7.0 83.3	EIX	EDISON MISSION	Null	ВВ	5.375	132	502	634	12			90.0	89.3
	SCHW	SCHWAB CHARLES CORP NEW	Null	BBB	5.375	825	495	1,320	25			96.4	95.6
	GM	GENERAL MOTORS FINANCIAL COMPANY INC	Mar-62	ВВ	5.750	815	463	1,278	11	6.9	7.0	83.3	82.5
17 HPQ HEWLETT PACKARD Oct-25 BBB 4.900 1,815 463 2,278 12 5.0 5.0 99.8	HPQ	HEWLETT PACKARD	Oct-25	BBB	4.900	1,815	463	2,278	12	5.0	5.0	99.8	99.8
18 AMZN AMAZON COM INC Jun-30 AA 1.500 338 455 793 5 4.2 4.2 83.4	AMZN	AMAZON COM INC	Jun-30	AA	1.500	338	455	793	5	4.2	4.2	83.4	83.4
19 BUD ANHEUSER BUSCH INBEV WORLDWIDE INC Jan-29 A 4.750 261 454 715 11 4.4 4.5 101.9	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Jan-29	Α	4.750	261	454	715	11	4.4	4.5	101.9	101.0
20 AAPL APPLE INC Nov-27 AA 3.000 1,119 450 1,569 9 3.9 3.9 96.4	AAPL	APPLE INC	Nov-27	AA	3.000	1,119	450	1,569	9	3.9	3.9	96.4	96.3

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

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.
- -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.)



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