

Market Transparency Report

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

October 2020

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 October 2020

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	37	21.3%	0.4
CD	0	-10.8%	-0.1
Corp	2	-0.4%	-0.1
Municipal	13	7.4%	0.1
Treasury	-1	-0.6%	-0.1

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

Yield Matrix

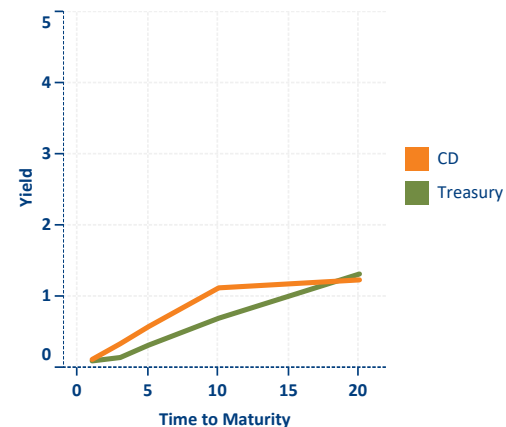
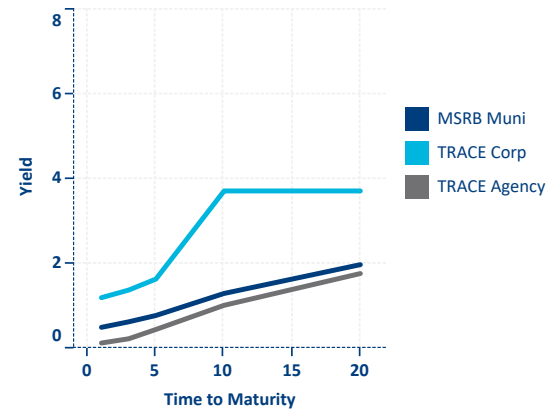
Average Yield, % for October 2020

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	0.5	0.6	0.8	1.3	2.0	10
TRACE Corp	1.2	1.4	1.6	3.7	3.7	4
TRACE Agency	0.1	0.2	0.5	1.0	1.8	7
CD	0.1	0.3	0.6	1.1	1.2	1
Treasury	0.1	0.1	0.3	0.7	1.3	1

Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	0.2	0.3	0.7			1
		A	0.3	0.5	0.8	1.8	2.9	3
		BBB	0.9	1.0	1.5	2.8	3.9	4
		HY	2.5	3.2	8.5	9.2	5.1	7
		AAA	0.2			1.3	2.1	9
	Non-Financial	AA	0.1	0.5		1.4	2.3	9
		A	0.3	0.4	1.0	2.0	3.0	2
		BBB	0.6	1.5	2.1	3.4	4.4	8
		HY	3.0	10.3	5.6	6.1	5.6	6
MSRB Muni	GO	AAA	0.3	0.3	0.5	0.9	1.4	6
		AA	0.4	0.4	0.6	1.1	1.9	9
		A	0.5	0.6	0.9	1.2	1.7	8
		BBB	2.0	2.1	2.4	3.3	3.7	10
		HY	1.9	5.3	2.8	4.2	4.9	6
	Revenue	AAA	0.4	0.4	0.5	1.0	1.6	8
		AA	0.4	0.5	0.6	1.1	1.7	10
		A	0.6	0.8	0.9	1.4	1.9	17
		BBB	1.4	1.6	1.8	2.4	2.8	15
		HY	4.4	5.2	4.8	4.7	4.7	11

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.

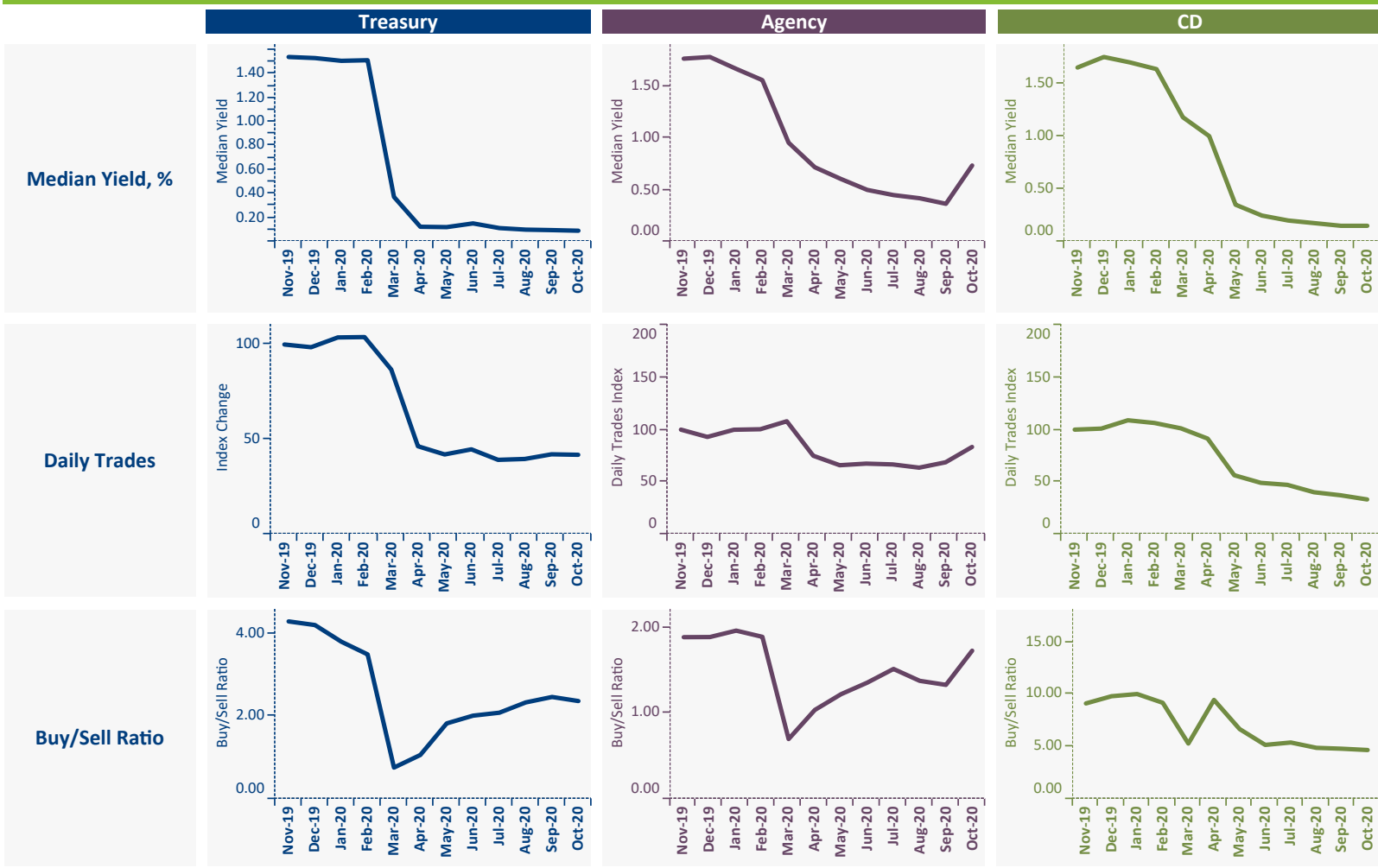
-The weights are based on transaction size.

-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

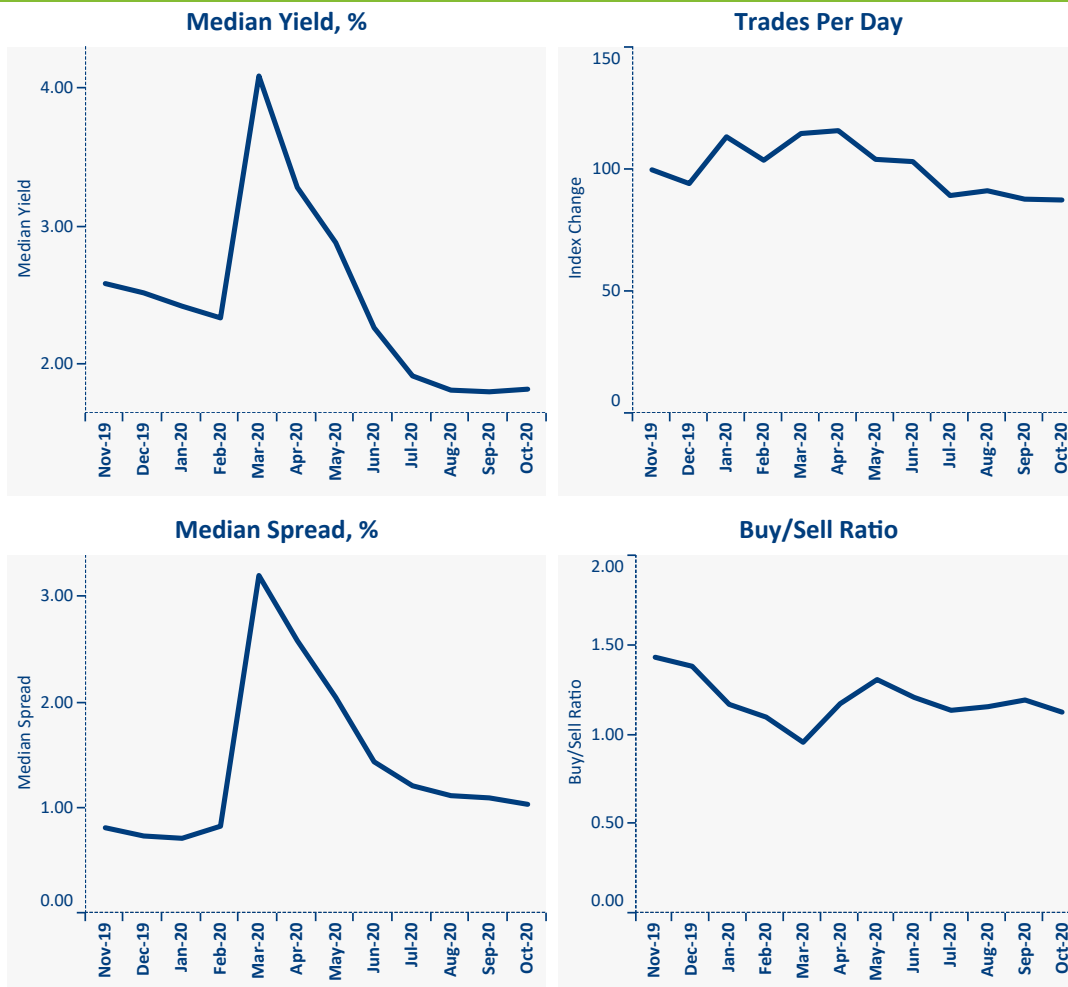
-Treasury and CD are based on transactions on the Tradeweb Direct Platform. Median yields are based on all customer buy transactions.

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

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Corporate Bonds: Odd-Lot Customer Transaction Trend Summary



Daily Trades: First month = 100

Source: TRACE and Tradeweb Direct

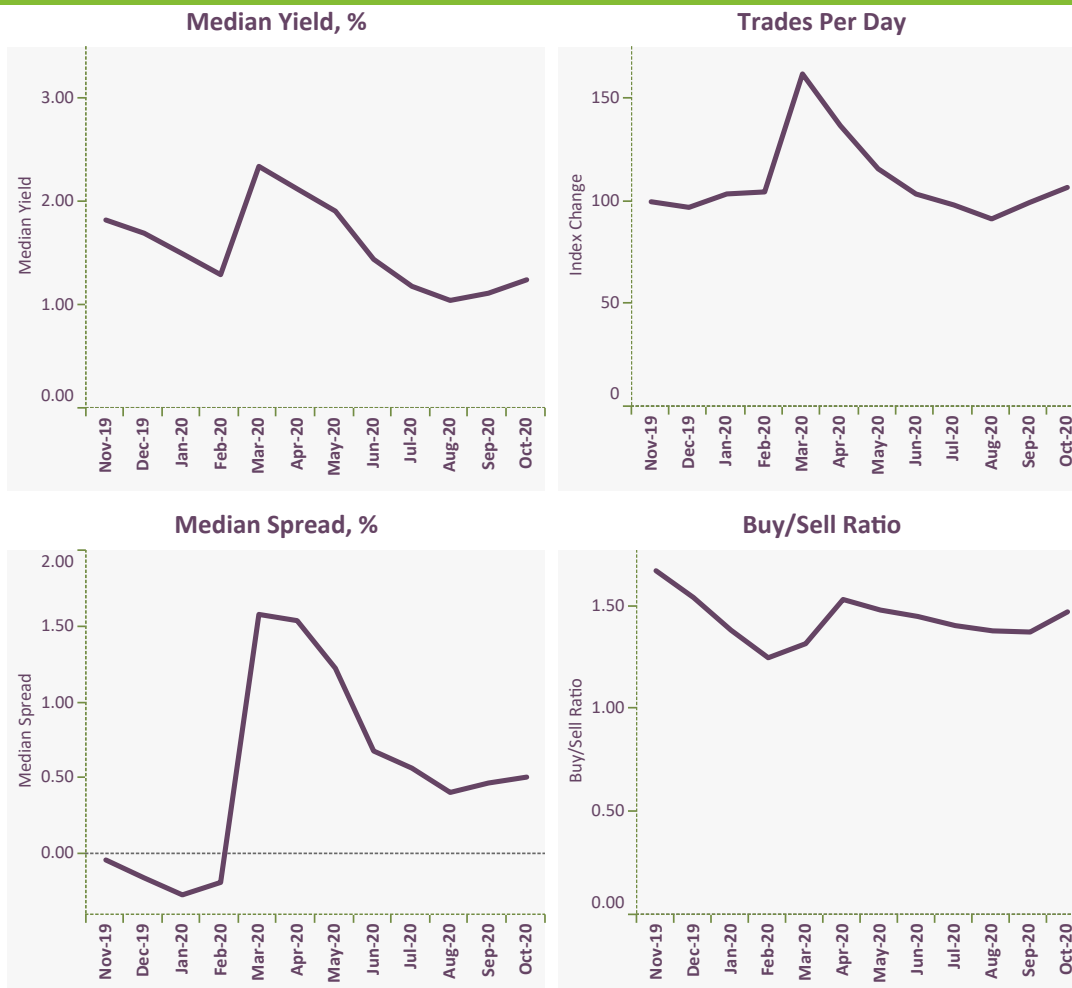
-Based on odd-lot customer transactions (<100M) reported in TRACE.

-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

October 2020

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	BBB	761	3.0%	13,057	1.2	301	0.2	0.5	1.0	1.1	2.6
2	GS	GOLDMAN SACHS	BBB	944	2.7%	11,708	1.1	248	0.4	0.8	1.1	1.9	3.6
3	C	CITIGROUP	BBB	491	2.6%	11,447	1.0	234	0.4	0.7	1.3	2.0	2.7
4	BAC	BANK OF AMERICA	A	340	2.3%	9,940	1.1	221	0.3	0.6	1.2	2.3	3.1
5	WFC	WELLS FARGO	A	220	1.9%	8,102	1.3	169	0.3	0.8	1.0	1.8	3.2
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	BBB	283	1.7%	7,360	1.2	145	0.7	1.1	2.1	3.6	4.1
7	MS	MORGAN STANLEY	A	844	1.7%	7,216	0.8	175	0.3	0.7	1.1	1.9	2.8
8	T	AT&T	BBB	109	1.4%	6,021	0.9	134	0.9	0.7	1.0	2.1	3.3
9	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	115	1.2%	5,408	1.3	133	0.9	1.5	2.0	2.9	4.3
10	AAPL	APPLE INC	AA	51	1.2%	5,184	1.1	110	0.2	0.3	0.6	1.3	2.4
11	CVS	CVS CAREMARK CORP	BBB	48	1.2%	5,070	1.6	100	0.4	0.5	1.0	1.9	3.1
12	CI	CIGNA CORP	A	41	1.1%	4,610	0.2	48	0.4	0.6	1.1	1.9	2.9
13	F	FORD	BB	241	1.0%	4,246	1.3	96	2.4	3.8	4.5	5.3	5.3
14	CMCS	COMCAST	A	62	0.9%	3,981	1.2	90	0.2	0.5	0.8	1.6	2.6
15	VZ	VERIZON	BBB	123	0.9%	3,969	1.0	81	0.4	0.5	0.7	1.6	2.4
16	ORCL	ORACLE CORP	A	31	0.9%	3,740	1.0	75	0.2	0.4	0.8	1.6	2.7
17	TFC	Null	BBB	48	0.8%	3,639	2.4	78	0.3	0.6	0.7	1.5	
18	BA	BOEING CO	BBB	56	0.8%	3,564	3.4	87	0.8	1.7	2.6	3.2	4.4
19	BRK	BERKSHIRE HATHAWAY	A	148	0.8%	3,511	1.0	92	0.2	0.4	0.9	1.5	2.8
20	MET	METLIFE	BBB	25	0.7%	3,209	1.3	63		0.5	0.6	3.0	2.8

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

October 2020

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	FLR	FLUOR CORP NEW	BBB	2	0.3%	1,269	1,040	229	4.5	17			6.1	5.9	
2	BA	BOEING CO	BBB	56	0.8%	3,564	2,758	806	3.4	87	0.8	1.7	2.6	3.2	4.4
3	HAL	HALLIBURTON CO	BBB	12	0.2%	1,016	781	235	3.3	31	0.4	1.0	2.0	3.1	4.8
4	KSS	KOHL'S CORP	BBB	8	0.4%	1,531	1,149	382	3.0	32		3.0	4.3	5.5	6.0
5	OKE	ONEOK INC NEW	BBB	28	0.2%	1,021	759	262	2.9	24	1.0	1.6	2.3	3.5	5.5
6	MAR	MARRIOTT INTL INC NEW	BBB	25	0.3%	1,417	1,035	382	2.7	32	0.9	1.8	2.8	3.4	
7	JWN	NORDSTROM INC	BBB	7	0.3%	1,477	1,054	423	2.5	28	3.7			7.0	8.1
8	EIX	EDISON MISSION	BBB	40	0.3%	1,123	795	328	2.4	29	0.3	1.1	1.2	2.1	3.6
9	TFC	Null	BBB	48	0.8%	3,639	2,571	1,068	2.4	78	0.3	0.6	0.7	1.5	
10	APC	ANADARKO PETE CORP	BB	77	0.7%	3,149	2,212	937	2.4	54	4.6	6.2	7.2	7.7	7.9
11	GT	GOODYEAR TIRE & RUBBER	B	5	0.3%	1,183	819	364	2.3	24		2.8	4.9		
12	LUV	SOUTHWEST AIRL'S CO	BBB	10	0.3%	1,337	922	415	2.2	30		1.6	2.6	3.1	
13	LUK	JEFFERIES GROUP INC NEW	BBB	68	0.4%	1,894	1,291	603	2.1	32	0.5	0.9	3.0	2.5	4.0
14	MRO	MARATHON OIL CORP	BBB	23	0.2%	1,055	705	350	2.0	26		1.5	2.7	5.7	5.5
15	FITB	FIFTH THIRD BANCORP	BBB	19	0.3%	1,353	899	454	2.0	29	0.2	0.7	0.9		3.4
16	TD	TORONTO DOMINION BK SR MEDIUM TERM BK NT	AA	68	0.3%	1,218	791	427	1.9	30	0.2	0.6	0.8		
17	DFS	DISCOVER BK NEW CASTLE DEL	BB	61	0.2%	1,020	658	362	1.8	22	0.7	0.5	1.5	2.9	
18	CAT	CATERPILLAR	A	83	0.4%	1,615	1,010	605	1.7	36	0.3	0.4	0.7	1.4	2.5
19	TEVA	TEVA PHARMACEUTICAL FIN CO B V	BB	11	0.3%	1,363	853	510	1.7	31	2.9	4.0	4.9		5.8
20	CVS	CVS CAREMARK CORP	BBB	48	1.2%	5,070	3,079	1,991	1.6	100	0.4	0.5	1.0	1.9	3.1

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

October 2020

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	GPOR	GULFPORT ENERGY CORP	C	4	0.5%	2,157	116	2,041	0.06	19		32.5	19.4		
2	CI	CIGNA CORP	A	41	1.1%	4,610	799	3,811	0.21	48	0.7	0.8	1.5	1.9	2.9
3	BBBY	BED BATH & BEYOND INC	B	3	0.4%	1,791	514	1,277	0.40	34		4.8			6.7
4	RIG	TRANSOCEAN INC	C	15	0.3%	1,200	351	849	0.41	8	52.6	91.2		52.5	51.3
5	HBC	HSBC	N/R	436	0.4%	1,646	510	1,136	0.45	37	0.6	1.6	1.8	3.2	3.5
6	X	UNITED STS STL CORP NEW	C	4	0.3%	1,382	469	913	0.51	15			12.5		11.0
7	SLM	SLM CORP	B	155	0.3%	1,444	546	898	0.61	25	4.1	5.1	6.2	9.1	9.1
8	PTRB	PETROBRAS	BB	24	0.4%	1,601	672	929	0.72	62	1.7	2.2	3.0	4.4	5.6
9	BCS	BARCLAYS	N/R	639	0.5%	2,011	892	1,119	0.80	40	0.6	1.7	1.9	2.2	3.3
10	MS	MORGAN STANLEY	A	844	1.7%	7,216	3,221	3,995	0.81	175	0.4	0.8	1.2	2.2	2.8
11	DE	DEERE JOHN CAP CORP MEDIUM TERM NTS-BOOK	A	57	0.3%	1,249	562	687	0.82	27	0.3	0.4	0.6	1.5	2.3
12	DELL	DELL	BBB	10	0.3%	1,105	502	603	0.83	25	1.8	2.2	1.5	3.4	4.9
13	BNS	BANK NOVA SCOTIA B C	A	127	0.2%	1,051	480	571	0.84	24	0.4	0.7	0.9	1.9	
14	RY	ROYAL BANK OF CANADA	A	228	0.4%	1,563	718	845	0.85	38	0.3	0.6	1.0	2.6	3.2
15	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	BBB	47	0.5%	2,011	938	1,073	0.87	53		0.5	1.1	1.8	3.1
16	T	AT&T	BBB	109	1.4%	6,021	2,814	3,207	0.88	134	1.4	0.7	1.1	2.1	3.5
17	MSFT	MICROSOFT CORP	AAA	34	0.7%	2,969	1,407	1,562	0.90	63	0.3	0.3	0.7		2.2
18	CTL	CENTURYLINK	B	26	0.4%	1,732	825	907	0.91	37	2.5	3.5	3.8	6.3	6.4
19	MRK	MERCK & CO INC NEW	AA	22	0.2%	1,008	480	528	0.91	22	0.3	0.3	0.6	1.3	2.6
20	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	60	0.3%	1,393	668	725	0.92	31	0.8	1.1	1.3	3.6	4.4

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

October 2020

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	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	BBB	5.000	1,145	697	1,842	31	6.1	6.3	81.7	79.5
2	APC	ANADARKO PETE CORP	Aug-24	BB	2.900	1,102	32	1,134	11	6.1	6.7	89.1	87.4
3	WFC	WELLS FARGO	Feb-25	A	3.000	1,027	182	1,209	14	1.0	1.1	108.4	108.2
4	CVS	CVS CAREMARK CORP	Mar-25	BBB	4.100	945	130	1,075	11	1.0	1.0	113.0	113.0
5	FLR	FLUOR CORP NEW	Dec-24	BBB	3.500	899	131	1,030	13	6.1	6.3	90.6	89.9
6	C	CITIGROUP	Jun-25	BBB	4.400	872	127	999	8	1.3	1.5	113.6	112.8
7	LUK	JEFFERIES GROUP INC NEW	Oct-23	BBB	5.500	760	98	858	6	0.9	1.0	110.2	110.0
8	PH	PARKER-HANNIFIN CORP MEDIUM TERM NTS BOO	Jun-29	BBB	3.250	731	21	752	8	1.6	1.6	112.8	112.5
9	JPM	JP MORGAN CHASE	Aug-70	BBB	5.000	672	152	824	19	4.9	5.0	101.6	100.9
10	TFC	Null	Jun-49	BBB	5.125	609	139	748	9	5.0	5.0	103.2	102.7
11	KSS	KOHL'S CORP	Jul-25	BBB	4.250	586	141	727	14	4.3	4.5	100.0	99.0
12	JPM	JP MORGAN CHASE	Null	BBB	4.600	549	148	697	19	4.6	4.7	100.0	98.9
13	BA	BOEING CO	May-25	BBB	4.875	523	33	556	11	2.7	2.5	109.1	110.0
14	TFC	Null	Dec-49	BBB	4.800	481	70	551	11			101.4	100.6
15	BAM	BROOKFIELD ASSET MGMT INC	Oct-80	BBB	4.625	455	90	545	2			25.5	25.1
16	GT	GOODYEAR TIRE & RUBBER	Nov-23	B	5.125	448	91	539	8	2.8	5.1	100.3	100.0
17	GS	GOLDMAN SACHS	Apr-22	BBB	3.000	443	116	559	11	0.4	0.4	101.4	101.3
18	AXL	Null	Mar-26	B	6.250	415	85	500	5	5.1	5.4	102.5	102.0
19	SCHW	SCHWAB CHARLES CORP NEW	Dec-49	BBB	5.375	407	126	533	12			110.0	109.1
20	JWN	NORDSTROM INC	Mar-28	BBB	6.950	405	129	534	9	7.5	7.5	97.1	96.8

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

October 2020

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	CI	CIGNA CORP	Mar-27	A	3.400	128	3,346	3,474	18	1.5	1.8	111.0	109.0
2	GPOR	GULFPORT ENERGY CORP	May-23	C	6.625	105	1,771	1,876	15	31.7	32.5	58.6	57.7
3	C	CITIGROUP	Aug-24	BBB	4.000	72	974	1,046	9	1.1	1.4	110.6	109.8
4	T	AT&T	Feb-26	BBB	4.125	147	760	907	9	1.1	1.1	114.8	114.8
5	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	BBB	5.000	1,145	697	1,842	31	6.1	6.3	81.7	79.5
6	BBBY	BED BATH & BEYOND INC	Aug-44	B	5.165	158	606	764	16	6.6	6.7	83.1	81.9
7	X	UNITED STS STL CORP NEW	Aug-25	C	6.875	142	586	728	7	13.1	12.5	78.3	80.0
8	QUAD	Null	May-22	C	7.000	119	565	684	7	13.8	18.1	90.8	85.9
9	BBBY	BED BATH & BEYOND INC	Aug-34	B	4.915	201	554	755	12	6.6	6.7	85.2	83.9
10	ICPT	Null	Jul-23	N/R	3.250	5	422	427	1	11.3	15.2	81.5	74.3
11	KEY	KEYCORP MEDIUM TERM SR NTS BOOK ENTRY	Mar-21	BBB	5.100	28	407	435	6	0.3	0.3	102.1	102.0
12	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	325	397	722	15	1.8	1.8	117.0	116.8
13	RIG	TRANSOCEAN INC	Jan-23	N/R	0.500		381	381	0		91.2		18.1
14	MET	METLIFE	Aug-70	BBB	3.825	308	363	671	9	3.8	3.9	99.9	99.2
15	PBI	PITNEY BOWES	Mar-24	BB	4.625	153	344	497	7	5.2	5.5	98.2	97.2
16	NFLX	NETFLIX INC	Feb-21	BB	5.375	132	327	459	8	0.8	1.6	101.2	101.0
17	BRCM	BROADCOM CORP	Jan-27	BBB	3.875	47	325	372	6	1.8	1.9	111.4	111.3
18	COF	CAPITAL ONE FINL CORP	Aug-70	BB	4.046	389	290	679	14	4.4	4.4	92.2	91.2
19	AAPL	APPLE INC	May-23	AA	2.400	329	288	617	12	0.3	0.3	105.3	105.2
20	DAL	DELTA AIR LINES INC DEL	Apr-23	BB	3.800	234	283	517	7	5.0	5.3	97.3	96.6

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: $0.5 \leq TTM \leq 1.5$
 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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