

Market Transparency Report

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

March 2021

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 March 2021

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	38	-2.7%	0.0
CD	4	6.0%	1.2
Corp	38	-0.3%	0.1
Municipal	22	-1.3%	-0.1
Treasury	2	-7.9%	-0.3

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

Yield Matrix

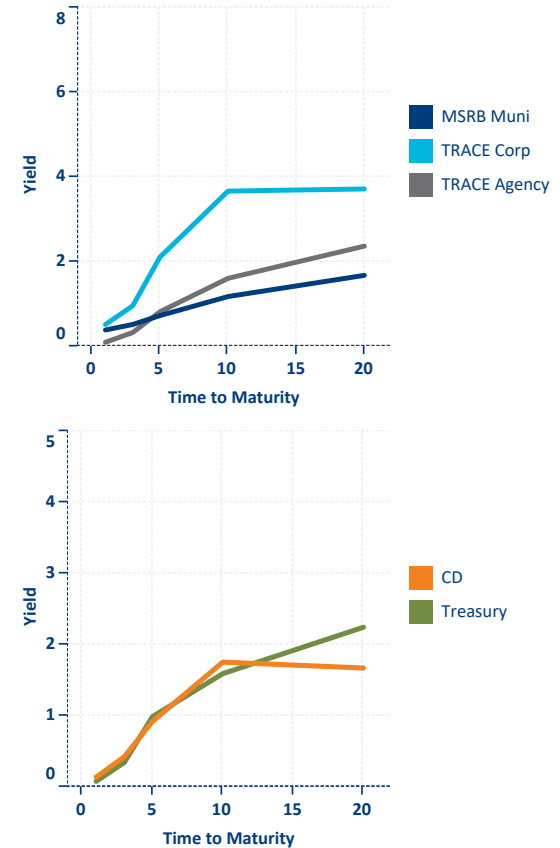
Average Yield, % for March 2021

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	0.4	0.5	0.7	1.2	1.7	9
TRACE Corp	0.5	1.0	2.1	3.7	3.7	4
TRACE Agency	0.1	0.3	0.8	1.6	2.4	5
CD	0.1	0.4	0.9	1.8	1.7	1
Treasury	0.1	0.3	1.0	1.6	2.2	1

Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	0.2	0.3	1.4	2.4		1
		A	0.3	0.6	1.2	2.2	3.3	3
		BBB	0.6	1.0	1.6	2.7	3.8	4
		HY	1.4	2.3	5.9	6.7		6
		AAA		0.0		1.5	2.7	18
	Non-Financial	AA	0.3	0.5	1.2	2.1	2.9	9
		A	0.2	0.5	1.3	2.4	3.5	2
		BBB	0.5	1.2	1.9	3.2	3.8	7
		HY	1.0	4.1	5.7	5.7	4.9	6
MSRB Muni	GO	AAA	0.3	0.4	0.6	1.0	1.4	7
		AA	0.4	0.5	0.7	1.1	1.7	8
		A	0.4	0.6	0.9	1.2	1.8	7
		BBB	0.8	1.3	1.5	2.1	2.4	6
		HY	2.0	5.3	4.1	2.9	1.9	21
	Revenue	AAA	0.3	0.4	0.6	1.1	1.5	7
		AA	0.4	0.5	0.7	1.1	1.5	9
		A	0.5	0.6	0.8	1.2	1.5	11
		BBB	1.0	1.1	1.5	2.0	2.0	13
		HY	7.3	4.2	4.1	4.0	3.5	10

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.

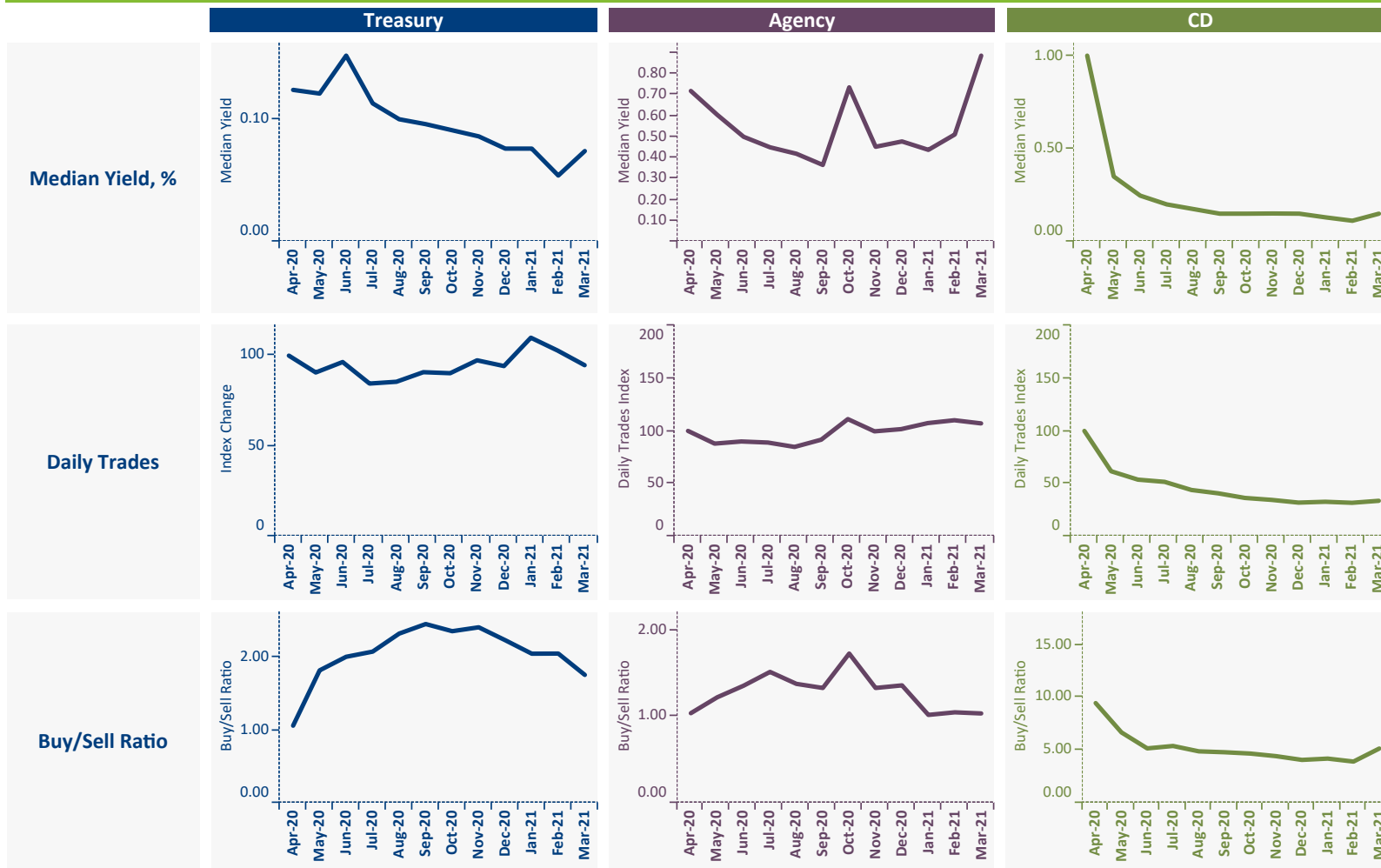
-The weights are based on transaction size.

-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.

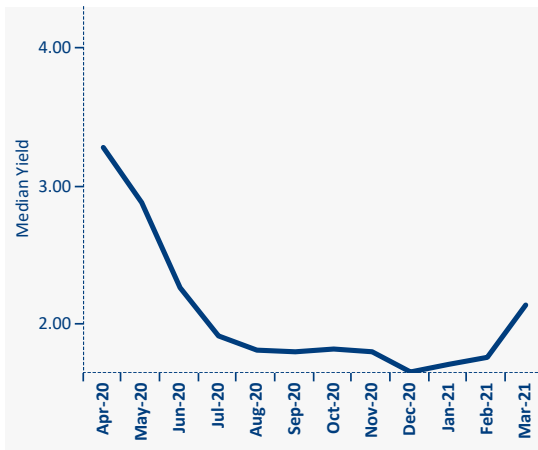
-Agency is based on odd-lot customer transactions (<100M) reported in TRACE. Median yields are based on all odd-lot customer buy transactions.

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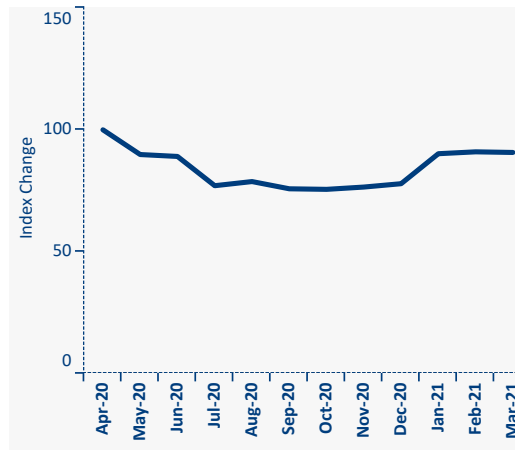


Corporate Bonds: Odd-Lot Customer Transaction Trend Summary

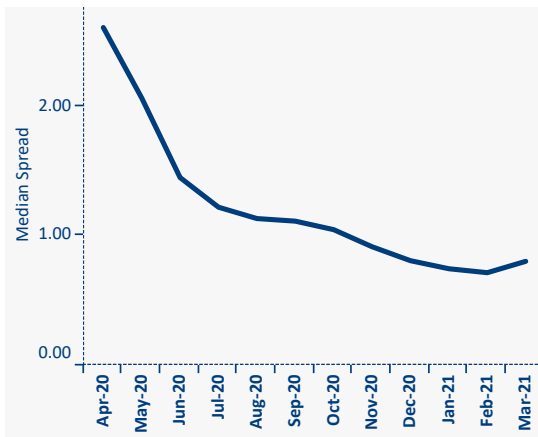
Median Yield, %



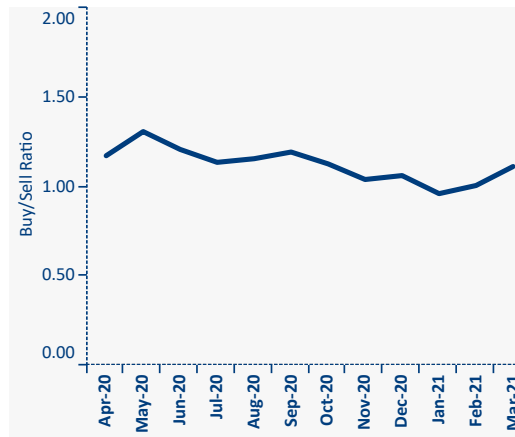
Trades Per Day



Median Spread, %



Buy/Sell Ratio



Daily Trades: First month = 100

Source: TRACE and Tradeweb Direct

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

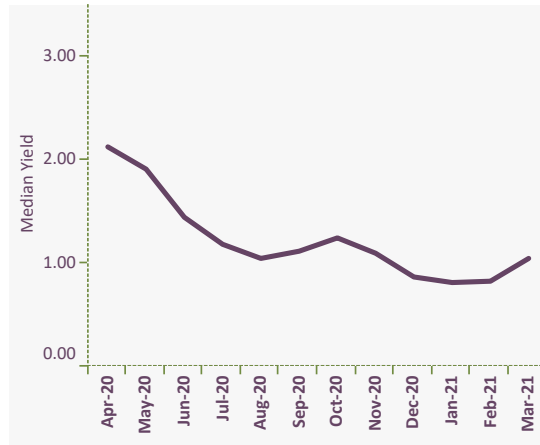
-Median yields and spreads are based on all odd-lot customer buy transactions...

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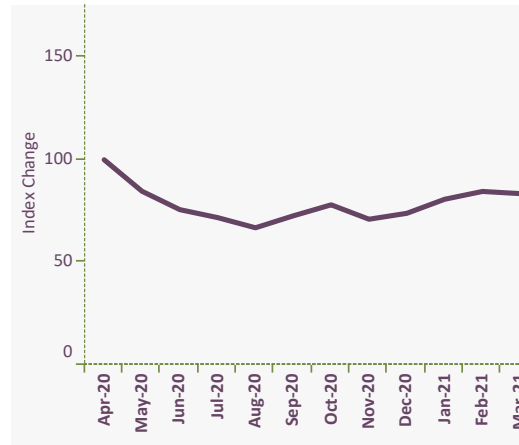


Municipal Bonds: Odd-Lot Customer Transaction Trend Summary

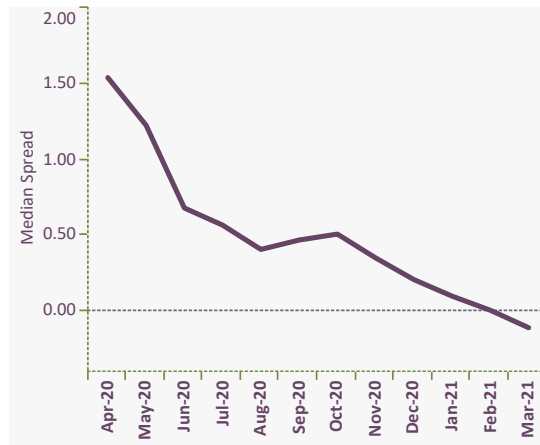
Median Yield, %



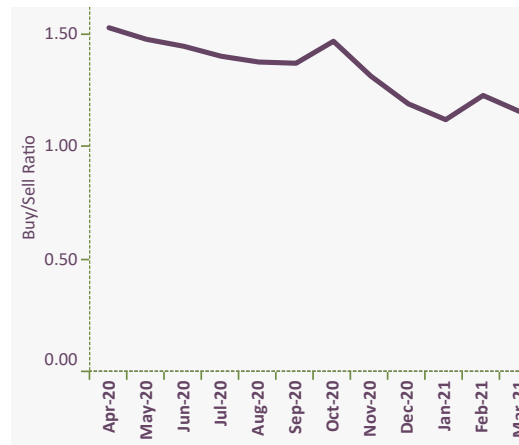
Trades Per Day



Median Spread, %



Buy/Sell Ratio



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

March 2021

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	790	2.9%	16,355	1.1	344	0.3	0.7	1.5	2.0	3.2
2	GS	GOLDMAN SACHS	A	992	2.7%	15,332	1.0	327	0.4	1.0	1.5	2.5	3.7
3	C	CITIGROUP	BBB	518	2.3%	13,391	1.0	289	0.3	0.8	1.6	2.8	3.2
4	BAC	BANK OF AMERICA	A	309	2.2%	12,626	1.0	277	0.2	0.9	1.4	2.6	3.5
5	WFC	WELLS FARGO	A	196	1.7%	9,875	1.0	214	0.3	0.8	1.6	2.2	3.7
6	MS	MORGAN STANLEY	A	1,121	1.7%	9,700	0.9	234	0.3	0.9	1.5	2.7	3.3
7	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	BBB	285	1.5%	8,738	1.2	176	0.6	0.9	1.7	3.1	3.7
8	T	AT&T	BBB	117	1.5%	8,466	1.2	179	0.5	0.6	1.6	2.6	3.7
9	VZ	VERIZON	BBB	135	1.4%	8,246	1.4	169	0.3	0.9	1.5	2.4	3.3
10	AAPL	APPLE INC	AA	54	1.4%	7,860	1.1	174	0.2	0.5	1.1	2.1	3.0
11	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	101	1.2%	6,686	1.3	145	0.5	1.0	1.9	2.7	3.9
12	CMCS	COMCAST	A	62	1.1%	6,546	1.1	136	0.2	0.6	1.2	2.3	3.1
13	F	FORD	BB	240	1.1%	6,246	1.6	131	1.2	2.7	3.2	4.2	4.8
14	SCHW	SCHWAB CHARLES CORP NEW	BBB	31	1.1%	6,117	4.6	142	0.3	0.6	1.1	2.2	
15	ORCL	ORACLE CORP	A	37	1.1%	6,105	1.2	125	0.2	0.7	1.3	2.4	3.5
16	CVS	CVS CAREMARK CORP	BBB	49	0.9%	5,428	1.0	111	0.4	0.7	1.3	2.5	3.4
17	BA	BOEING CO	BBB	60	0.9%	5,378	3.6	137	0.6	1.0	2.1	3.0	4.1
18	BRK	BERKSHIRE HATHAWAY	A	155	0.9%	4,870	0.8	128	0.2	0.3	1.2	2.7	3.3
19	TFC	Null	BBB	45	0.7%	4,126	1.7	84	0.3	0.7	1.1	2.2	
20	MSFT	MICROSOFT CORP	AAA	35	0.6%	3,672	0.8	75	0.1	0.3	1.2		2.7

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

March 2021

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	EIX	EDISON MISSION	BB	43	0.6%	3,416	2,960	456	6.5	86	0.7	0.6	1.3	2.5	3.6
2	DLTR	Null	BBB	3	0.2%	1,330	1,114	216	5.2	12		0.7	1.3		
3	SCHW	SCHWAB CHARLES CORP NEW	BBB	31	1.1%	6,117	5,026	1,091	4.6	142	0.3	0.6	1.1	2.2	
4	PSEC	PROSPECT CAP CORP INTERNOTES BOOK ENTRY	BBB	196	0.4%	2,324	1,839	485	3.8	42	2.2	3.6	3.8	4.6	5.8
5	BA	BOEING CO	BBB	60	0.9%	5,378	4,210	1,168	3.6	137	0.6	1.0	2.1	3.0	4.1
6	GEO	GEO GROUP INC	B	4	0.3%	1,689	1,288	401	3.2	19	5.7	10.8	13.8		
7	TEVA	TEVA PHARMACEUTICAL FIN CO B V	BB	11	0.4%	2,132	1,606	526	3.1	51	2.0	3.3	4.1		
8	SLM	SLM CORP	B	139	0.3%	1,828	1,333	495	2.7	34	2.5	4.1	5.0	6.8	7.0
9	TMUS	T-MOBILE USA INC	BB	35	0.5%	2,698	1,917	781	2.5	57	1.3	2.2	2.4	3.2	
10	MUR	MURPHY OIL CORP	BB	11	0.4%	2,247	1,583	664	2.4	46	0.6	4.4	5.3	6.4	6.9
11	MO	ALTRIA GROUP INC	BBB	25	0.4%	2,360	1,657	703	2.4	64	0.5	0.8	1.4	2.7	4.1
12	CCI	CROWN CASTLE INTL CORP	BBB	22	0.2%	1,341	939	402	2.3	24		1.0	1.6	2.7	3.5
13	PYPL	Null	BBB	8	0.2%	1,420	981	439	2.2	24	0.4	0.7	1.4	2.3	
14	MAR	MARRIOTT INTL INC NEW	BBB	23	0.2%	1,322	906	416	2.2	29	0.7	1.3	2.0	3.1	
15	KO	COCA COLA CO	A	35	0.5%	2,714	1,747	967	1.8	54	0.2	0.6	1.2	2.2	2.9
16	PSX	PHILLIPS 66	BBB	18	0.2%	1,356	862	494	1.7	24	0.4	0.7	1.3	2.7	3.8
17	GILD	GILEAD SCIENCES INC	BBB	21	0.4%	2,211	1,397	814	1.7	44	0.3	1.0	1.6	2.3	3.4
18	TFC	Null	BBB	45	0.7%	4,126	2,602	1,524	1.7	84	0.3	0.7	1.1	2.2	
19	CI	CIGNA CORP	BBB	40	0.3%	1,804	1,131	673	1.7	47	0.4	0.6	1.4	2.4	3.2
20	DAL	DELTA AIR LINES INC DEL	BB	19	0.4%	2,415	1,492	923	1.6	49	1.8	3.0	3.6	3.9	

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

March 2021

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	HBC	HSBC	N/R	457	0.3%	1,706	437	1,269	0.34	48	0.5	1.3	2.0	3.4	3.5
2	DWDP	Null	BBB	14	0.4%	2,161	564	1,597	0.35	31	0.6	0.8	1.4	2.3	3.3
3	CS	CREDIT SUISSE	N/R	257	0.2%	1,401	403	998	0.40	35	0.6	1.0	1.2	2.6	3.7
4	BCS	BARCLAYS	N/R	587	0.4%	2,118	741	1,377	0.54	46	0.9	1.7	1.8	2.4	3.7
5	HPQ	HEWLETT PACKARD	BBB	22	0.4%	2,261	881	1,380	0.64	58	0.6	0.8	1.5	2.8	4.2
6	STT	STATE STR CORP	A	21	0.2%	1,426	563	863	0.65	27		0.5	1.2	2.1	
7	X	UNITED STS STL CORP NEW	C	5	0.4%	2,145	858	1,287	0.67	40			6.2	7.0	7.3
8	M	MACYS RETAIL HLDGS INC	B	24	0.2%	1,359	554	805	0.69	28	2.5	3.7	6.0	7.0	6.6
9	PEP	PEPSICO	A	41	0.4%	2,220	904	1,316	0.69	48	0.3	0.4	1.2	2.1	3.0
10	RDS	SHELL	AA	28	0.4%	2,322	953	1,369	0.70	51	0.3	0.4	1.3	2.2	3.2
11	PNC	PNC FDG CORP	A	33	0.3%	1,686	703	983	0.72	37	0.3	0.6	1.4	2.2	
12	NEE	FPL GROUP CAP INC	BBB	49	0.3%	1,572	673	899	0.75	35	0.4	0.7	1.2	2.5	3.1
13	MSFT	MICROSOFT CORP	AAA	35	0.6%	3,672	1,606	2,066	0.78	75	0.3	0.4	1.2		2.8
14	COF	CAPITAL ONE FINL CORP	BBB	24	0.5%	3,090	1,370	1,720	0.80	65	0.4	1.0	1.8		
15	BNS	BANK NOVA SCOTIA B C	A	123	0.3%	1,538	687	851	0.81	34	0.3	0.7	1.4	1.3	
16	BRK	BERKSHIRE HATHAWAY	A	155	0.9%	4,870	2,179	2,691	0.81	128	0.4	0.4	1.2	2.3	3.3
17	EDP	ENTERPRISE PRODS OPER LLC	BBB	36	0.3%	1,901	853	1,048	0.81	43	0.4	1.1	1.5	2.4	3.8
18	INTC	INTEL CORP	A	28	0.4%	2,395	1,069	1,326	0.81	50	0.3	0.6	1.1	2.1	3.1
19	SO	GEORGIA POWER CO	BBB	64	0.3%	1,896	853	1,043	0.82	43	0.4	0.7	1.6	2.4	3.5
20	AXP	AMERICAN EXPRESS	BBB	27	0.6%	3,291	1,489	1,802	0.83	71	0.4	0.7	1.2		3.3

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

March 2021

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	EIX	EDISON MISSION	Null	BB	5.375	2,215	25	2,240	56			101.8	100.5
2	SCHW	SCHWAB CHARLES CORP NEW	Null	BBB	4.000	1,821	116	1,937	53			100.0	99.2
3	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-70	BBB	3.514	1,543	907	2,450	46	3.7	3.8	95.4	94.4
4	SCHW	SCHWAB CHARLES CORP NEW	Null	BBB	4.000	1,288	47	1,335	27			101.7	100.6
5	SCHW	SCHWAB CHARLES CORP NEW	Null	BBB	5.375	1,241	142	1,383	27			110.1	109.8
6	DLTR	Null	May-28	BBB	4.200	1,065	85	1,150	8	2.2	2.2	112.5	112.4
7	TMUS	T-MOBILE USA INC	Sep-23	BB	7.875	964	34	998	7	2.2	2.2	113.7	113.7
8	PSEC	PROSPECT CAP CORP INTERNOTES BOOK ENTRY	Jan-26	BBB	3.706	914	22	936	18	3.8	4.0	99.7	98.9
9	BA	BOEING CO	Feb-26	BBB	2.196	811	66	877	22	2.2	2.3	99.8	99.7
10	GEO	GEO GROUP INC	Apr-23	B	5.125	720	159	879	10	10.4	11.2	90.5	89.2
11	F	FORD	Apr-23	BB	8.500	698	300	998	19	2.7	2.8	111.8	111.4
12	CMCS	COMCAST	Feb-28	A	3.150	679	81	760	14	1.8	1.9	108.7	107.9
13	DAL	DELTA AIR LINES INC DEL	Oct-24	BB	2.900	676	106	782	14	3.0	3.1	99.6	99.4
14	JPM	JP MORGAN CHASE	Null	BBB	5.150	671	134	805	9	5.0	5.0	103.2	102.4
15	JPM	JP MORGAN CHASE	Dec-49	BBB	4.000	665	80	745	7	4.0	4.0	99.5	99.1
16	GM	GENERAL MOTORS FINANCIAL COMPANY INC	Mar-70	BB	5.750	660	314	974	12	5.5	5.5	104.5	104.0
17	TFC	Null	Null	BBB	5.050	660	260	920	10	5.0	5.0	101.5	100.5
18	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	4.000	623	71	694	7	4.5	4.5	89.8	88.8
19	C	CITIGROUP	Null	BB	5.350	582	54	636	6	5.2	5.2	102.3	102.2
20	VZ	VERIZON	Mar-31	BBB	2.550	561	20	581	6	2.5	2.6	99.1	99.9

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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Corporate Bonds: Top 20 Most Sold Issues

March 2021

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	DWDP	Null	Nov-23	BBB	4.205	225	1,248	1,473	14	0.7	0.8	108.8	108.6
2	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-70	BBB	3.514	1,543	907	2,450	46	3.7	3.8	95.4	94.4
3	X	UNITED STS STL CORP NEW	Mar-26	C	6.250	354	878	1,232	19	6.3	6.1	99.8	100.2
4	WPG	Null	Aug-24	C	6.450	183	707	890	8	26.8	26.7	56.6	56.4
5	HTZGQ	Null	Oct-22	N/R	6.250	107	632	739	18			89.9	88.0
6	CVS	CVS CAREMARK CORP	Mar-28	BBB	4.300	359	603	962	17	2.2	2.2	113.4	113.2
7	OII	Null	Nov-24	B	4.650	132	519	651	9	5.0	5.2	98.7	98.3
8	AAPL	APPLE INC	May-23	AA	2.400	213	483	696	16	0.3	0.4	104.3	104.3
9	CMCS	COMCAST	Oct-28	A	4.150	232	435	667	14	2.0	2.0	114.8	114.6
10	RNG	Null	Mar-23	N/R	0.000	7	393	400	4			419.0	420.0
11	DAL	DELTA AIR LINES INC DEL	Mar-22	BB	3.625	299	374	673	11	1.8	2.2	101.7	101.3
12	VZ	VERIZON	Mar-27	BBB	4.125	156	362	518	12	1.8	1.8	113.4	113.2
13	BAC	BANK OF AMERICA	Jan-23	A	3.300	206	358	564	11	0.4	0.5	105.2	105.1
14	PBI	PITNEY BOWES	Mar-24	B	4.625	123	358	481	10	3.6	3.1	102.7	104.0
15	V	VIVENDI	Dec-25	AA	3.150	401	357	758	13	1.0	1.1	109.3	109.1
16	C	CITIGROUP	Jul-28	BBB	3.668	197	346	543	7			109.7	109.6
17	VZ	VERIZON	Nov-24	BBB	3.500	401	343	744	8	0.9	0.9	108.6	108.5
18	LEVI	LEVI STRAUSS & CO NEW	May-25	BB	5.000	25	327	352	3	0.9	1.8	102.4	102.0
19	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-38	BBB	5.875	51	326	377	8	3.6	3.6	127.9	127.8
20	GS	GOLDMAN SACHS	Jan-23	A	3.625	201	315	516	10	0.6	0.6	105.6	105.5

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).

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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