

Market Transparency Report

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

July 2018

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 July 2018

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	6	-0.8%	0.1
CD	0	-2.2%	1.5
Corp	2	-4.8%	0.0
Municipal	-3	-6.4%	0.1
Treasury	3	9.7%	1.3

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

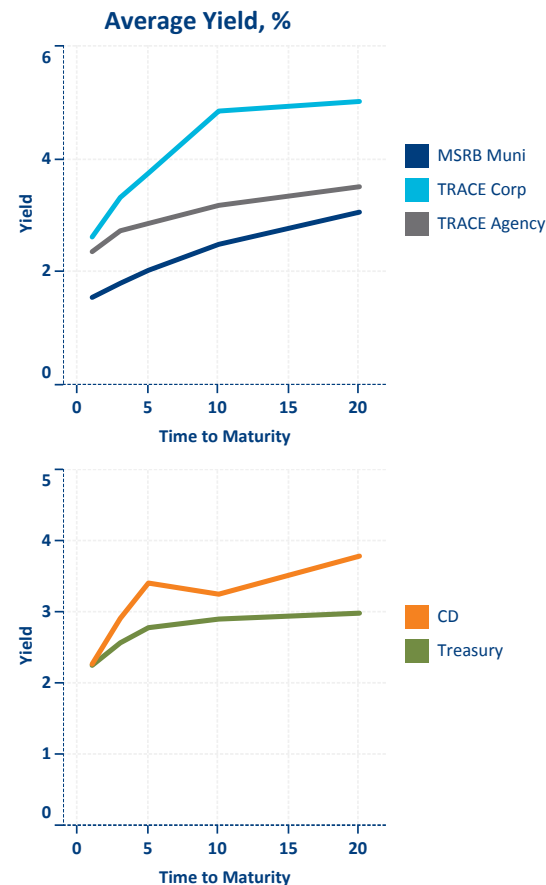
Yield Matrix

Average Yield, % for July 2018

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.6	1.8	2.0	2.5	3.1	11
TRACE Corp	2.6	3.3	3.8	4.9	5.0	3
TRACE Agency	2.4	2.7	2.9	3.2	3.5	2
CD	2.3	2.9	3.4	3.6	3.8	1
Treasury	2.3	2.6	2.8	2.9	3.0	1

Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	2.6	3.1	3.6	3.9	4.6	2
		A	2.6	3.2	3.5	4.1	4.6	3
		BBB	2.8	3.8	3.9	4.3	5.0	5
		HY	3.1	4.4	4.2	8.6	6.7	4
		AAA	2.3	2.6	2.8	3.5	3.8	2
	Non-Financial	AA	2.4	3.0	3.4	3.8	4.0	2
		A	2.7	3.2	3.6	4.2	4.7	5
		BBB	2.8	3.5	4.1	4.9	5.7	7
		HY	3.6	6.3	7.6	8.6	12.9	11
MSRB Muni	GO	AAA	1.5	1.7	1.9	2.4	3.1	9
		AA	1.5	1.8	2.0	2.5	3.1	11
		A	1.6	1.9	2.2	2.7	3.3	9
		BBB	2.2	2.7	2.9	3.5	4.0	8
		HY	3.2	3.8	5.6	4.0	4.8	8
		AAA	1.5	1.7	2.0	2.4	2.9	9
	Revenue	AA	1.5	1.8	2.0	2.4	3.0	12
		A	1.6	1.9	2.1	2.6	3.0	14
		BBB	1.9	2.4	2.7	3.2	3.5	15
		HY	9.6	5.1	7.5	4.6	6.1	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.

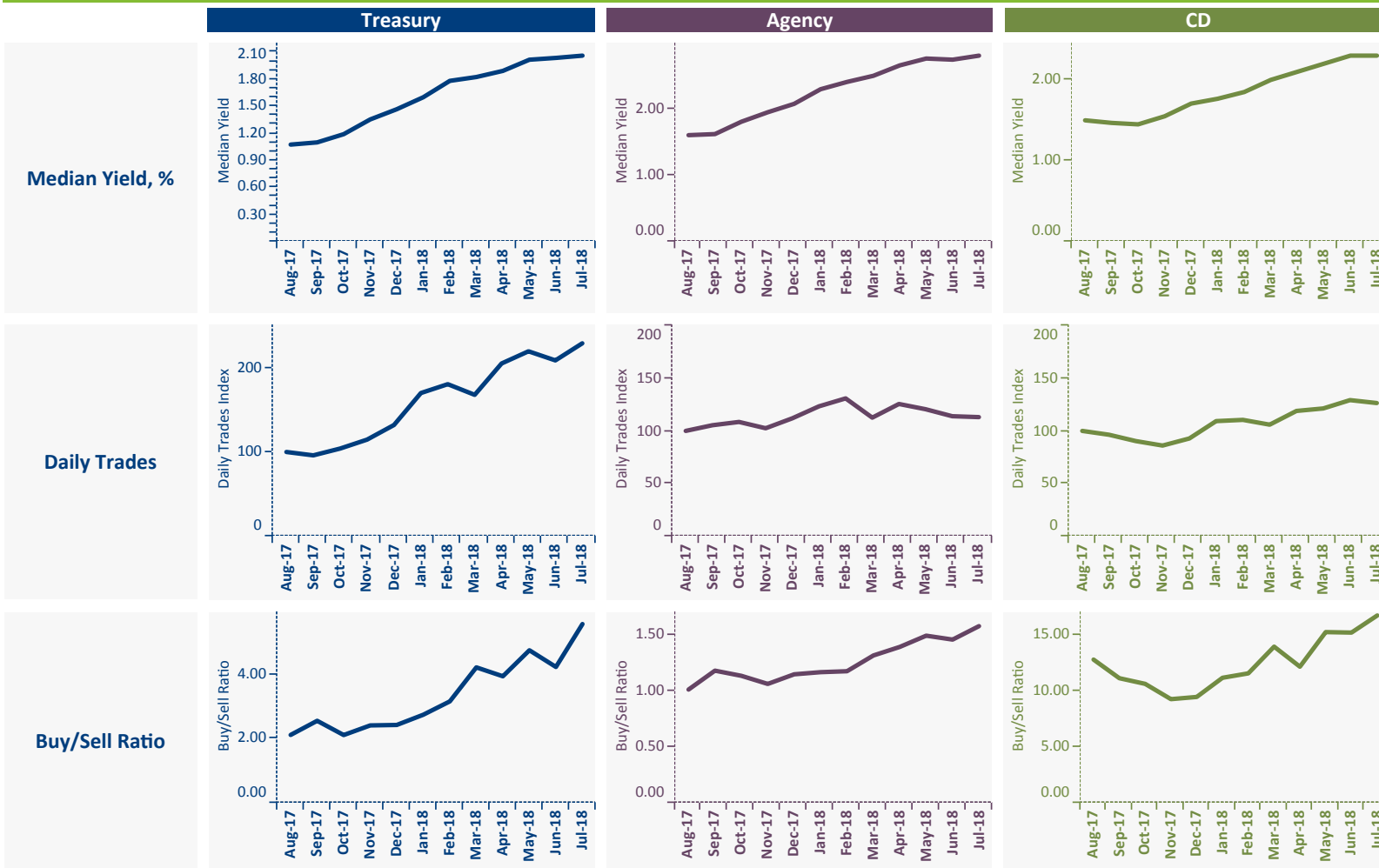
-The weights are based on transaction size.

-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



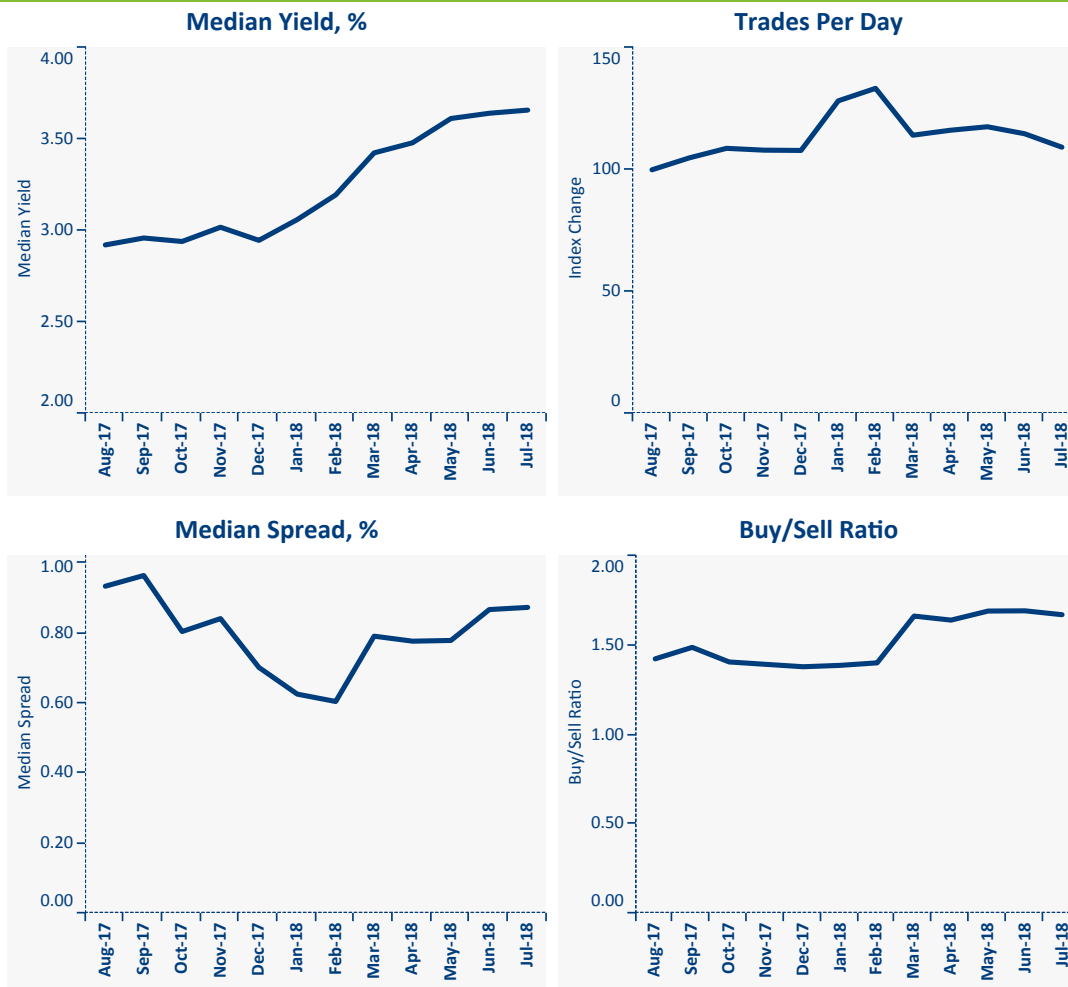
Daily Trades: First month = 100

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.

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.

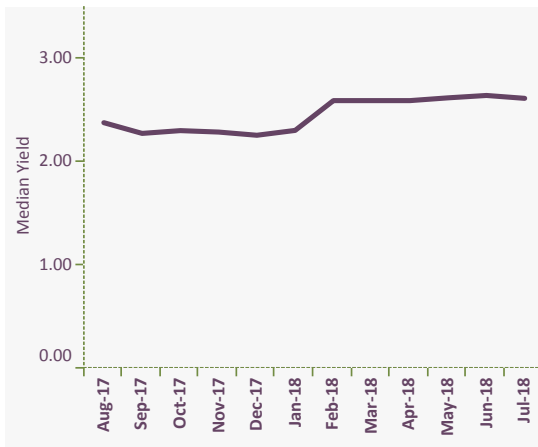
-Median yields and spreads are based on all odd-lot customer buy transactions...

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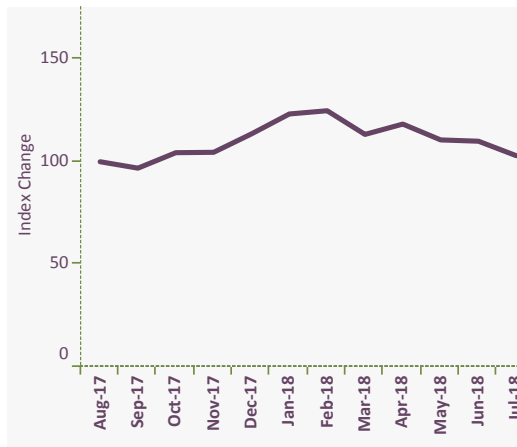


Municipal Bonds: Odd-Lot Customer Transaction Trend Summary

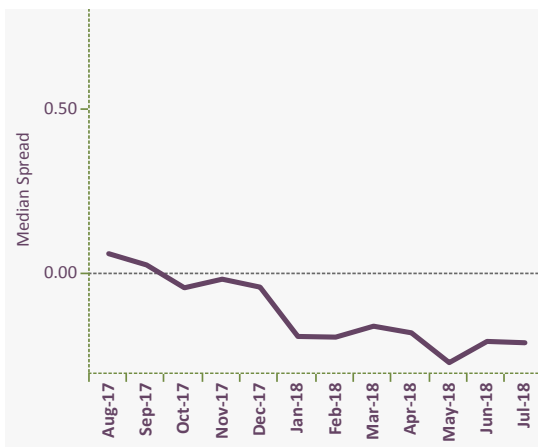
Median Yield, %



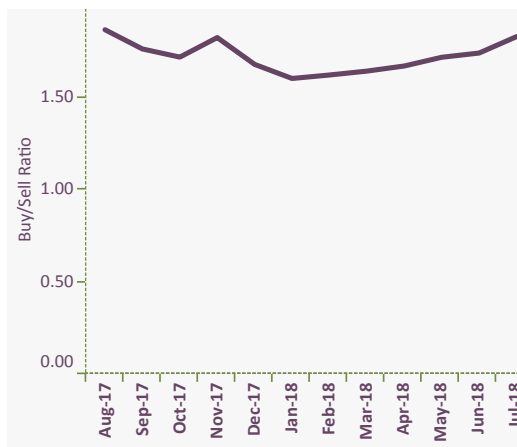
Trades Per Day



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

July 2018

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	A	540	3.6%	15,745	2.1	342	2.8	3.2	3.6	4.1	4.4
2	GS	GOLDMAN SACHS	BBB	877	3.4%	14,820	1.7	310	2.7	3.4	3.7	4.2	4.7
3	C	CITIGROUP	BBB	363	2.8%	12,556	2.0	267	2.8	3.4	3.7	4.5	4.3
4	BAC	BANK OF AMERICA	A	418	2.6%	11,567	1.9	240	2.5	3.2	3.6	4.2	4.4
5	T	AT&T	BBB	93	2.5%	10,899	2.2	192	2.7	3.5	3.9	4.3	5.2
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	A	340	2.1%	9,393	1.2	178	2.9	3.4	3.7	4.4	4.7
7	WFC	WELLS FARGO	A	197	2.1%	9,048	1.9	192	2.6	3.3	3.8	4.2	4.3
8	MS	MORGAN STANLEY	BBB	641	1.9%	8,264	1.6	177	2.7	3.4	3.9	4.2	4.5
9	AAPL	APPLE INC	AA	55	1.3%	5,869	1.2	122	2.3	2.9	3.2	3.5	4.0
10	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	73	1.2%	5,379	3.0	123	2.8	3.5	4.1	4.6	5.4
11	BRK	BERKSHIRE HATHAWAY	A	150	1.1%	4,865	1.7	114	2.5	3.1	3.3	4.2	5.0
12	VZ	VERIZON	BBB	109	1.1%	4,664	1.8	93	2.6	3.5	3.7	4.1	4.6
13	AXP	AMERICAN EXPRESS	BBB	37	0.9%	3,760	2.2	82	2.6	3.2	3.5	3.7	4.1
14	MSFT	MICROSOFT CORP	AAA	40	0.8%	3,638	1.5	82	2.3	2.9	3.2	3.4	3.7
15	CVS	CVS CAREMARK CORP	BBB	31	0.8%	3,578	2.0	74	2.7	3.3	3.8	4.4	4.7
16	ORCL	ORACLE CORP	AA	31	0.8%	3,402	1.2	65	2.5	3.0	3.4	3.6	4.0
17	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	35	0.8%	3,339	1.7	71	2.7	3.2	3.5	3.9	4.4
18	F	FORD	BBB	220	0.7%	2,964	1.7	60	2.8	3.6	4.1	4.6	5.6
19	CMCS	COMCAST	A	49	0.6%	2,838	1.3	51	2.6	3.4	3.7	3.9	4.5
20	PTRB	PETROBRAS	BB	23	0.6%	2,807	1.5	92	4.7	5.6	6.9	7.2	

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

July 2018

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	GG	GOLDCORP INC NEW	BBB	3	0.3%	1,299	1,240	59	21.0	10		3.6	3.8		
2	ASCMA	Null	C	1	0.3%	1,244	1,113	131	8.5	10					
3	CCCX	COMMUNITY CHOICE FINL INC	C	1	0.2%	1,080	966	114	8.5	10	39.6				
4	CHRC	BAYSIDE CMNTY CHURCH SARASOTA INC BRADEN	N/R	105	0.2%	1,032	874	158	5.5	8		4.0	4.4	6.0	6.3
5	PCG	PACIFIC GAS & ELEC CO	BBB	27	0.3%	1,256	1,063	193	5.5	28		3.5	4.0	4.4	5.1
6	GIS	GENERAL MLS INC	BBB	17	0.2%	1,045	867	178	4.9	26	3.0	3.4	3.7	4.2	4.7
7	GT	GOODYEAR TIRE & RUBBER	BB	5	0.3%	1,442	1,173	269	4.4	30		3.8	5.3	6.1	
8	ANTM	Null	A	22	0.3%	1,254	1,016	238	4.3	23	2.7	3.3	3.6	4.2	4.7
9	XRX	XEROX CORP	BBB	11	0.3%	1,194	950	244	3.9	25	3.0	3.9	4.4		6.3
10	TWX	TIME WARNER	BBB	28	0.4%	1,906	1,513	393	3.9	37	2.7	3.5	4.0	4.2	5.1
11	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	73	1.2%	5,379	4,026	1,353	3.0	123	2.8	3.5	4.1	4.6	5.4
12	SAN	ABBEY NATL TREAS SVCS PLC	BBB	33	0.2%	1,035	774	261	3.0	29	2.6	3.6	4.0	4.8	
13	HCA	HCA INC	BBB	23	0.4%	1,801	1,345	456	3.0	32	3.1	4.3	4.6	5.1	6.6
14	STI	SUNTRUST BKS INC	BBB	23	0.3%	1,317	967	350	2.8	28	2.7	3.3	3.5	4.0	
15	LTD	LIMITED BRANDS INC	BB	11	0.3%	1,283	940	343	2.7	25		4.9	5.1	6.8	8.3
16	COF	CAPITAL ONE FINL CORP	BBB	33	0.5%	2,251	1,616	635	2.5	48	2.6	3.5	3.9	4.5	
17	TD	TORONTO DOMINION BK SR MEDIUM TERM BK NT	AA	76	0.4%	1,702	1,221	481	2.5	42	2.7	3.2	3.5	3.9	
18	CELG	CELGENE CORP	BBB	19	0.2%	1,001	701	300	2.3	22	2.7	3.1	3.7	4.3	
19	LMT	LOCKHEED MARTIN CORP	BBB	17	0.3%	1,206	831	375	2.2	25	2.7	3.0	3.4	3.7	4.1
20	AXP	AMERICAN EXPRESS	BBB	37	0.9%	3,760	2,584	1,176	2.2	82	2.6	3.2	3.5	3.7	4.1

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

July 2018

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	DELL	DELL	BB	10	0.4%	1,830	691	1,139	0.61	27	3.8	4.2	5.0	6.1	6.7
2	BBBY	BED BATH & BEYOND INC	BBB	3	0.3%	1,148	505	643	0.79	19					6.8
3	HTZ	HERTZ CORP	B	6	0.5%	1,990	878	1,112	0.79	29		8.1	9.6	9.0	
4	FTR	FRONTIER COMMUNICATIONS CORP	C	24	0.4%	1,546	731	815	0.90	26	6.6	11.2	16.1	8.6	14.9
5	EDP	ENTERPRISE PRODS OPER LLC	BBB	31	0.2%	1,080	515	565	0.91	20	3.1	3.3	3.7	3.9	4.8
6	CS	CREDIT SUISSE	N/R	335	0.3%	1,207	578	629	0.92	26	3.5	3.8	3.9	4.7	
7	NOW	Null	N/R	2	0.2%	1,024	507	517	0.98	10					
8	BCS	BARCLAYS	BBB	442	0.4%	1,708	851	857	0.99	35	3.5	4.0	3.7	4.6	4.6
9	ABT	ABBOTT LABS	BBB	23	0.3%	1,256	633	623	1.02	24	2.9	3.4	4.4	3.9	4.3
10	HD	HOME DEPOT	A	23	0.4%	1,622	824	798	1.03	29	2.7	3.0	3.2	3.6	4.1
11	CSCO	CISCO	AA	20	0.4%	1,872	959	913	1.05	34	2.7	3.0	3.3	3.5	4.1
12	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	A	29	0.4%	1,811	949	862	1.10	34	2.9	3.3	3.5	3.8	
13	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	67	0.3%	1,416	760	656	1.16	34	3.2	3.6	4.1	5.7	5.6
14	TEVA	TEVA PHARMACEUTICAL FIN CO B V	BB	13	0.4%	1,545	830	715	1.16	35	3.8	4.8	5.2	5.8	6.1
15	ORCL	ORACLE CORP	AA	31	0.8%	3,402	1,850	1,552	1.19	65	2.7	3.1	3.4	3.6	4.0
16	RDS	SHELL	AA	28	0.4%	1,737	949	788	1.20	39	2.8	3.0	3.2	3.5	4.2
17	AAPL	APPLE INC	AA	55	1.3%	5,869	3,215	2,654	1.21	122	2.5	3.0	3.2	3.6	3.8
18	CHTR	CCO HOLDINGS LLC	BBB	35	0.2%	1,052	575	477	1.21	29	3.3	3.9	5.3		5.9
19	CVX	CHEVRON CORP NEW	AA	29	0.3%	1,360	747	613	1.22	31	2.7	3.0	3.3	3.6	
20	BP	BP	A	35	0.6%	2,506	1,381	1,125	1.23	49	2.8	3.3	3.5	3.8	

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

July 2018

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	Null	BBB	5.625	1,327	93	1,420	7			25.0	24.7
2	GG	GOLDCORP INC NEW	Mar-23	BBB	3.700	1,213	31	1,244	9	3.8	3.8	99.7	99.5
3	JPM	JP MORGAN CHASE	Null	BBB	4.625	1,183	44	1,227	31			94.8	92.4
4	ASCMA	Null	Apr-20	C	9.125	1,113	131	1,244	10	33.3	33.2	70.1	70.3
5	CCCX	COMMUNITY CHOICE FINL INC	May-19	C	10.750	966	114	1,080	10	39.6	38.1	82.5	83.0
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	5.000	839	949	1,788	28			99.1	98.5
7	VZ	VERIZON	Jul-48	BBB	5.050	748	4	752	17	5.0	5.2	100.0	97.9
8	BAC	BANK OF AMERICA	Null	BBB	5.875	728	13	741	20			100.0	98.4
9	MCFH	HARLAND CLARKE HLDGS CORP	Feb-21	C	5.750	653	158	811	8	17.1	17.5	77.1	76.5
10	UAL	UNITED AIRLINES	Feb-24	BB	5.000	633	10	643	9	5.5	5.6	97.7	97.0
11	GT	GOODYEAR TIRE & RUBBER	May-26	BB	5.000	566	91	657	11	6.0	6.1	93.7	93.0
12	GEL	Genesis Energy LP	May-26	B	6.250	540	8	548	4	7.1	7.2	95.1	94.4
13	WFC	WELLS FARGO	Null	BBB	5.900	532	101	633	18			102.2	100.5
14	JPM	JP MORGAN CHASE	Jul-20	A	4.400	524	196	720	16	3.2	3.2	102.4	102.3
15	DBD	Null	Apr-24	B	8.500	516	34	550	9	9.3	9.6	96.5	95.2
16	AJRD	Null	Dec-23	N/R	2.250	498	15	513	2			133.0	129.3
17	JPM	JP MORGAN CHASE	Null	BBB	5.809	498	184	682	10			101.1	100.9
18	RIG	TRANSOCEAN INC	Jan-23	N/R	0.500	498	16	514	2			138.9	138.4
19	NOW	Null	Jun-22	N/R	0.000	497	9	506	4			147.6	140.6
20	T	AT&T	Feb-26	BBB	4.125	495	182	677	9	4.3	4.4	98.8	98.5

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

July 2018

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	GTLS	Null	Aug-18	N/R	2.000	5	980	985	3		6.7	101.1	100.5
2	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	5.000	839	949	1,788	28			99.1	98.5
3	HTZ	HERTZ CORP	Jan-21	B	7.375	318	907	1,225	11	7.9	8.1	98.9	98.5
4	DELL	DELL	Apr-28	BB	7.100	46	716	762	4	6.0	6.1	108.1	107.3
5	NOW	Null	Nov-18	N/R	0.000	10	508	518	6			258.5	260.2
6	BBBY	BED BATH & BEYOND INC	Aug-24	BBB	3.749	237	494	731	10	5.2	5.4	92.5	91.4
7	UAL	UNITED AIRLINES	Dec-20	BB	6.000	64	493	557	6	3.8	4.0	104.9	104.5
8	AA	ALCOA	Jan-28	BB	6.750	396	478	874	13	6.7	6.9	100.4	99.3
9	T	AT&T	Feb-22	BBB	3.000	346	390	736	7	3.6	3.7	97.9	97.8
10	RCII	RENT A CTR INC NEW	Nov-20	C	6.625	55	385	440	6	6.2	6.7	100.1	99.8
11	AAPL	APPLE INC	May-23	AA	2.400	302	355	657	13	3.2	3.2	96.6	96.5
12	SYK	STRYKER CORP	Mar-19	A	2.000	68	342	410	4	2.6	2.7	99.6	99.5
13	HOS	HORNBECK OFFSHORE SVCS INC NEW	Apr-20	C	5.875	97	327	424	3	21.3	24.6	79.0	74.8
14	GS	GOLDMAN SACHS	Dec-49	BB	5.000	442	318	760	15			95.4	93.4
15	SVU	ALBERTSONS INC	Nov-22	B	7.750	76	314	390	8	6.3	6.4	102.9	102.8
16	JPM	JP MORGAN CHASE	Oct-26	A	2.950	221	313	534	4	3.9	3.9	93.4	93.2
17	ESRX	EXPRESS SCRIPTS HLDG CO	Mar-27	BBB	3.400	205	308	513	2	4.4	4.5	92.7	92.5
18	VZ	VERIZON	Sep-23	BBB	5.150	188	306	494	9	3.7	3.7	107.0	106.7
19	VZ	VERIZON	Nov-24	BBB	3.500	289	294	583	8	3.8	3.9	98.2	98.0
20	AAPL	APPLE INC	Feb-26	AA	3.250	239	280	519	5	3.5	3.5	98.3	98.1

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 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

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