

Market Transparency Report

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

August 2016

www.tradeweb.com

1177 Avenue of the Americas
New York, NY 10036
212.852.1234

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 August 2016

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-1	3.7%	0.1
CD	5	0.4%	0.3
Corp	-20	0.8%	0.1
Municipal	5	5.0%	-0.1
Treasury	5	-5.3%	0.3

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

Yield Matrix

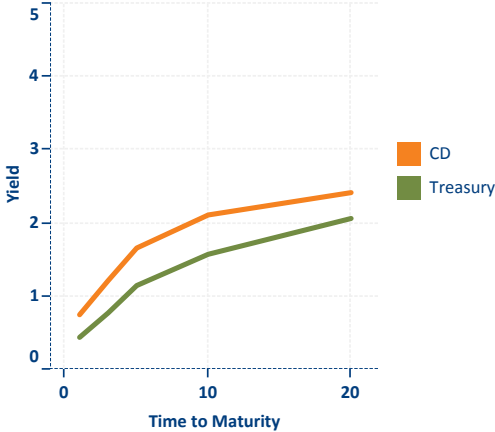
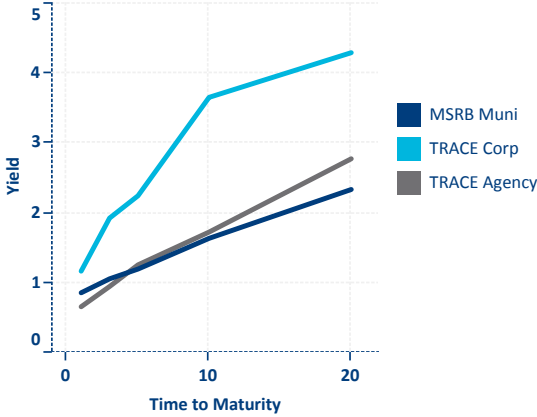
Average Yield, % for August 2016

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	0.9	1.1	1.2	1.6	2.3	14
TRACE Corp	1.2	1.9	2.3	3.7	4.3	5
TRACE Agency	0.7	1.0	1.3	1.7	2.8	3
CD	0.8	1.2	1.7	2.1	2.4	1
Treasury	0.4	0.8	1.2	1.6	2.1	1

Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	1.0	1.4	1.6	2.6		2
		A	1.1	1.5	1.9	2.7	3.9	5
		BBB	1.3	2.2	2.7	3.4	4.1	5
		HY	1.8	3.1	4.0	4.2	6.5	6
		AAA	1.1	1.1	1.3		3.0	4
	Non-Financial	AA	0.7	1.2	1.4	2.4	3.3	3
		A	0.8	1.6	2.4	3.0	3.6	5
		BBB	1.6	1.9	2.8	4.2	6.1	8
		HY	2.8	5.6	7.2	7.3	9.3	7
MSRB Muni	GO	AAA	0.6	0.7	0.9	1.4	2.1	11
		AA	0.7	0.8	1.0	1.5	2.4	12
		A	0.7	0.9	1.2	1.6	2.4	9
		BBB	1.4	1.7	2.3	2.4	3.5	14
		HY	5.4	4.3	4.8	5.9	5.8	11
	Revenue	AAA	0.7	0.7	1.0	1.4	1.9	10
		AA	0.7	0.8	1.0	1.5	2.2	14
		A	0.8	1.0	1.3	1.8	2.4	17
		BBB	1.3	1.4	1.7	2.1	2.7	18
		HY	31.5	7.4	14.4	9.4	7.2	14

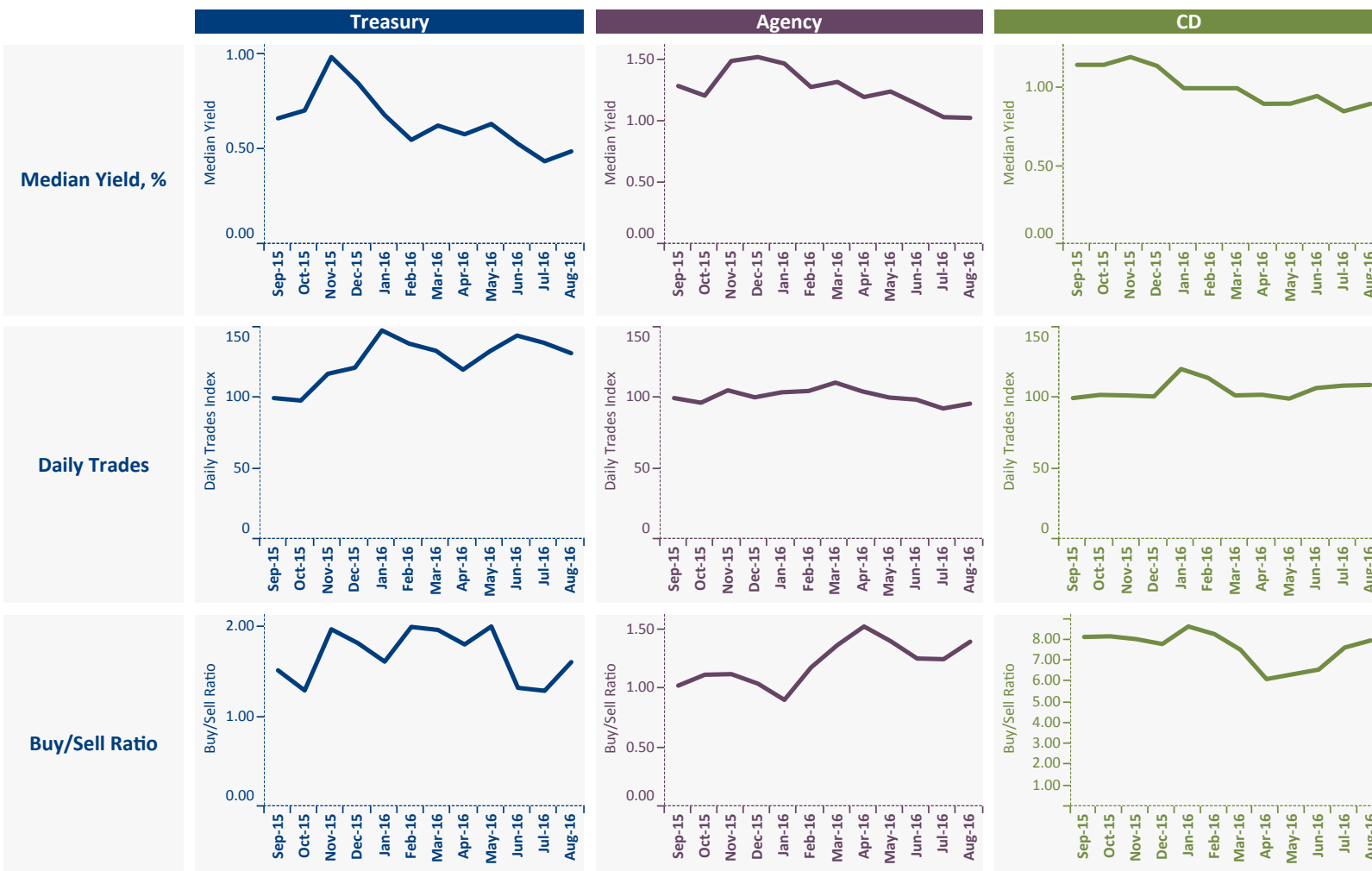
Average Yield, %



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



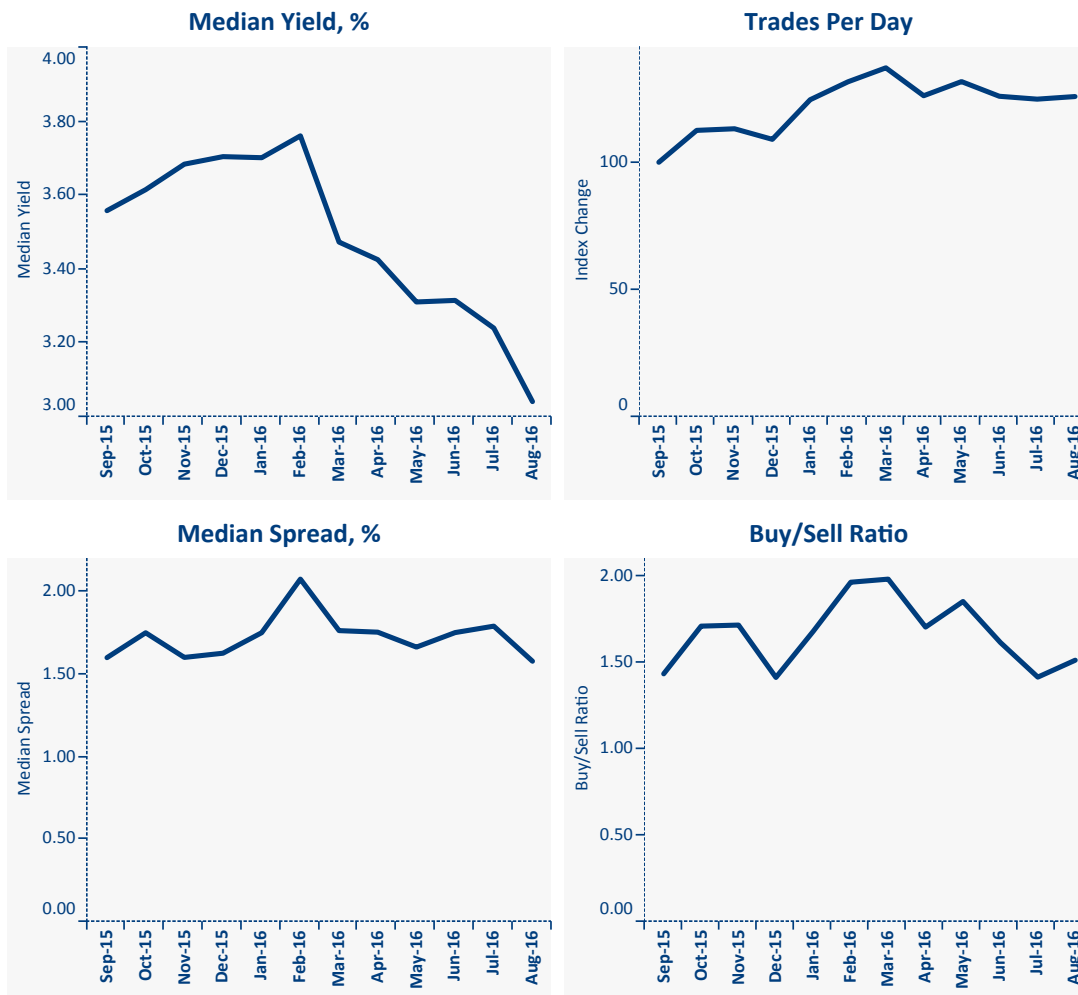
Daily Trades: First month = 100

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.

Corporate Bonds: Odd-Lot Customer Transaction Trend Summary



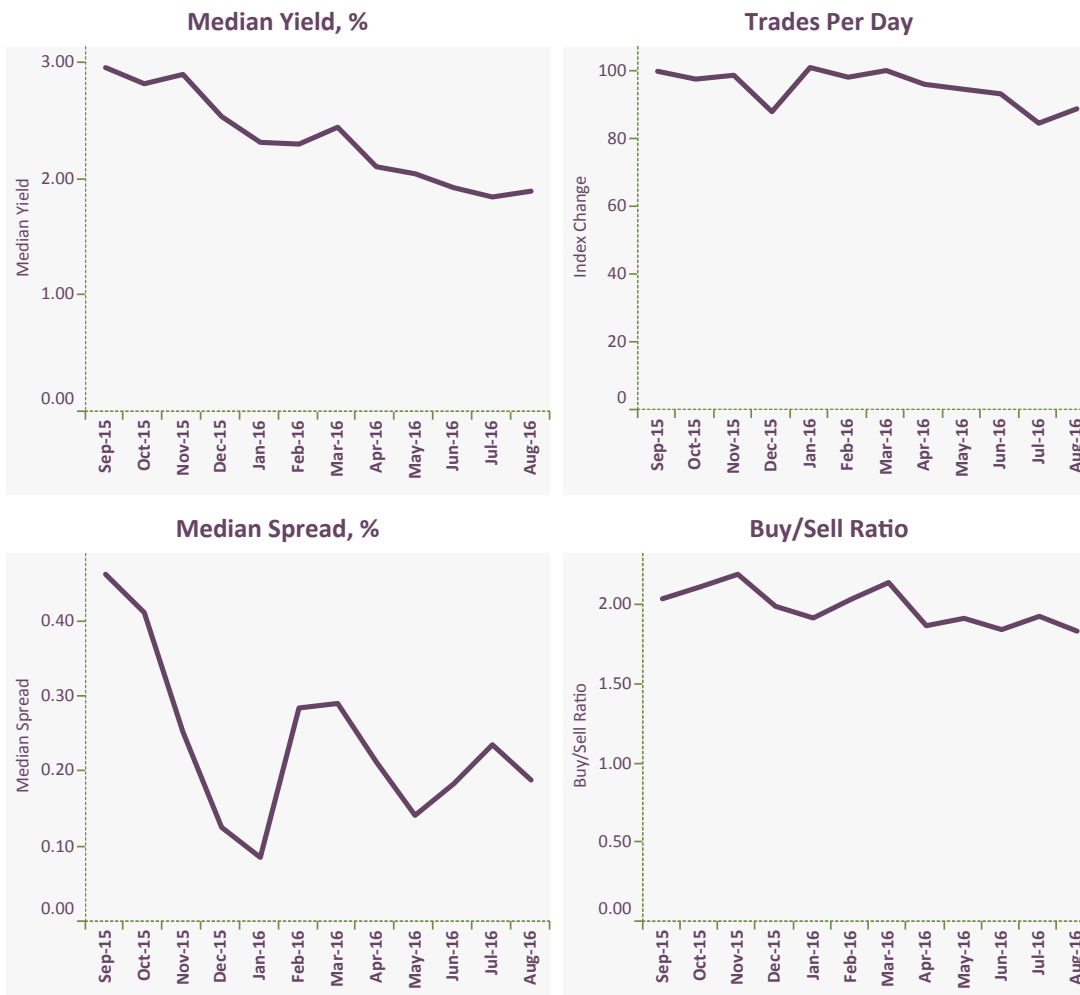
Daily Trades: First month = 100

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.

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Corporate Bonds: Top 20 Most Active Issuers

August 2016

Index	Ticker	Comany	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	BBB	844	3.2%	13,969	1.3	312	1.3	1.7	2.2	3.0	4.1
2	BAC	BANK OF AMERICA	BBB	501	3.1%	13,688	1.4	283	1.2	1.8	2.1	3.3	3.9
3	JPM	JP MORGAN CHASE	BBB	475	3.1%	13,640	2.0	310	1.2	1.6	2.1	2.8	3.1
4	C	CITIGROUP	BBB	312	2.6%	11,698	2.8	282	1.1	1.5	2.2	3.5	2.9
5	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	392	2.1%	9,197	1.1	190	0.9	1.3	1.7	2.8	3.4
6	WFC	WELLS FARGO	A	203	1.8%	8,106	1.9	193	1.1	1.5	1.9	2.7	3.8
7	MS	MORGAN STANLEY	BBB	689	1.7%	7,546	1.2	180	1.1	1.7	2.2	3.0	4.0
8	T	AT&T	BBB	72	1.5%	6,708	1.4	143	1.2	1.5	2.1	2.9	4.0
9	CTL	CENTURYLINK	BB	32	1.3%	5,561	1.5	95	1.3	3.4	4.8	6.0	8.1
10	VZ	VERIZON	BBB	66	1.1%	4,963	1.1	102	1.1	1.3	1.8	2.7	4.0
11	FTR	FRONTIER COMMUNICATIONS CORP	BB	23	1.1%	4,706	2.4	99		5.6	6.7	8.5	9.2
12	AAPL	APPLE INC	AA	35	1.0%	4,257	2.3	96	0.7	1.1	1.6	2.3	3.3
13	MSFT	MICROSOFT CORP	AAA	35	0.9%	4,155	2.4	93	0.7	1.1	1.4	2.2	3.2
14	STX	SEAGATE HDD CAYMAN	BBB	6	0.9%	4,100	3.1	94		2.3		6.2	7.2
15	DB	DEUTSCHE BANK	BBB	161	0.8%	3,653	3.8	86	1.6	2.7	3.1	3.8	
16	HPQ	HEWLETT PACKARD	BBB	17	0.8%	3,508	2.2	90		1.7	2.4		
17	EMC	EMC CORP	A	3	0.8%	3,399	3.6	78		2.8			
18	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	40	0.7%	3,222	1.1	67	1.0	1.3	1.9	2.8	3.7
19	AXP	AMERICAN EXPRESS	BBB	36	0.7%	3,180	1.9	78	1.0	1.3	1.8	2.9	4.4
20	BRK	BERKSHIRE HATHAWAY	AA	159	0.7%	3,161	1.2	81	0.9	1.2	1.6	2.3	3.7

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

August 2016

Index	Ticker	Comany	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	ETFC	E TRADE FINL CORP	BB	3	0.6%	2,505	2,441	64	38.1	65					
2	CHRC	BAYSIDE CMNTY CHURCH SARASOTA INC BRADEN	N/R	100	0.3%	1,527	1,447	80	18.1	10		4.0		6.0	7.0
3	WDC	WESTERN DIGITAL CORP	BBB	3	0.2%	1,095	974	121	8.1	30			1.2		
4	TRP	TRANSCANADA PIPELINES LTD	BBB	24	0.2%	1,089	967	122	7.9	33	1.3	1.7	2.2	3.0	4.1
5	ETR	ENERGY CORP NEW	A	33	0.5%	2,229	1,950	279	7.0	21		1.6	1.9	2.5	
6	ESV	ENSCO PLC	BB	8	0.3%	1,383	1,175	208	5.7	26		7.1	7.9	9.9	10.5
7	COF	CAPITAL ONE FINL CORP	BBB	25	0.4%	1,944	1,543	401	3.9	40	1.2	1.5	2.2	3.5	
8	DB	DEUTSCHE BANK	BBB	161	0.8%	3,653	2,895	758	3.8	86	1.6	2.7	3.1	3.8	
9	EMC	EMC CORP	A	3	0.8%	3,399	2,666	733	3.6	78		2.8			
10	IEP	ICAHN ENTERPRISES	BB	4	0.5%	2,337	1,831	506	3.6	53	1.9	5.9	6.4		
11	MRO	MARATHON OIL CORP	BBB	20	0.5%	2,260	1,746	514	3.4	53	2.3	3.1	2.4	4.3	6.1
12	ETP	ENERGY TRANSFER PARTNERS L P	BBB	26	0.3%	1,540	1,171	369	3.2	31	1.1		3.1	4.0	5.6
13	STX	SEAGATE HDD CAYMAN	BBB	6	0.9%	4,100	3,107	993	3.1	94		2.3		6.2	7.2
14	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	33	0.4%	1,867	1,378	489	2.8	48	1.4	2.1	2.8	3.5	4.5
15	BBBY	BED BATH & BEYOND INC	BBB	3	0.3%	1,235	909	326	2.8	31				3.1	4.8
16	C	CITIGROUP	BBB	312	2.6%	11,698	8,579	3,119	2.8	282	1.1	1.5	2.2	3.5	2.9
17	XRX	XEROX CORP	BBB	12	0.5%	2,097	1,538	559	2.8	46	1.1	2.7	3.1	3.9	6.3
18	WAG	WALGREEN CO	BBB	14	0.3%	1,419	1,040	379	2.7	29	1.1	1.5	2.1	2.7	3.8
19	PSEC	PROSPECT CAP CORP INTERNOTES BOOK ENTRY	BBB	171	0.4%	1,549	1,132	417	2.7	28	2.7	4.3	4.8	3.6	5.9
20	MET	METLIFE	BBB	21	0.7%	2,881	2,093	788	2.7	65	1.1	1.3	1.7	2.7	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.

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Corporate Bonds: Top 20 Issuers with Lowest Buy/Sell Ratio

August 2016

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	CLF	CLIFFS NAT RES INC	C	7	0.4%	1,589	300	1,289	0.23	34	3.5	10.5	10.8		10.0
2	AMGN	AMGEN INC	A	32	0.7%	3,060	791	2,269	0.35	34	1.2	1.3	1.9	2.5	4.2
3	CHK	CHESAPEAKE ENERGY	C	14	0.4%	1,666	540	1,126	0.48	30		10.7	12.2		
4	BCS	BARCLAYS	N/R	420	0.4%	1,736	574	1,162	0.49	41	3.2	2.6	3.0	3.9	4.1
5	AVP	AVON PRODS INC	B	7	0.3%	1,321	515	806	0.64	32		6.9			
6	AMT	AMERICAN TOWER CORP NEW	BBB	14	0.2%	1,012	397	615	0.65	19	1.4	1.7	2.2	2.9	
7	WMT	WAL-MART	AA	24	0.3%	1,184	531	653	0.81	30	1.0	1.2	1.3	2.5	3.3
8	CS	CREDIT SUISSE	N/R	361	0.4%	1,844	832	1,012	0.82	33	2.2	2.6		3.7	
9	X	UNITED STS STL CORP NEW	B	5	0.5%	2,001	911	1,090	0.84	43	4.5	7.6	8.1		8.6
10	PTRB	PETROBRAS	B	11	0.4%	1,894	885	1,009	0.88	65	2.8	5.4	6.4		7.9
11	AA	ALCOA	BBB	12	0.4%	1,947	922	1,025	0.90	47	2.1	3.5	3.8	4.9	5.9
12	INTC	INTEL CORP	A	19	0.2%	1,035	491	544	0.90	26	1.0	1.4	1.6	2.3	1.1
13	MCD	MCDONALDS	BBB	24	0.3%	1,154	564	590	0.96	24	1.2	1.4	1.7	2.6	3.9
14	PEP	PEPSICO	A	35	0.2%	1,075	537	538	1.00	28	1.0	1.3	1.6	2.2	3.5
15	BP	BP	A	34	0.3%	1,198	616	582	1.06	31	1.2	1.4	2.2	2.6	4.6
16	VZ	VERIZON	BBB	66	1.1%	4,963	2,563	2,400	1.07	102	1.2	1.3	1.9	4.4	4.0
17	BNS	BANK NOVA SCOTIA B C	N/R	68	0.2%	1,104	574	530	1.08	28	1.3	1.5	1.8	3.7	
18	PDVA	PETROLEOS DE VENEZUELA SA	N/R	10	0.4%	1,757	911	846	1.08	33					
19	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	392	2.1%	9,197	4,796	4,401	1.09	190	1.1	1.5	1.8	2.9	3.5
20	RIG	TRANSOCEAN INC	B	14	0.5%	2,405	1,260	1,145	1.10	47	5.0		9.7	12.0	11.2

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

August 2016

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	ETFC	E TRADE FINL CORP	Dec-49	BB	5.875	2,249	21	2,270	58			103.3	102.6
2	ETR	ENTERGY CORP NEW	Sep-66	A	4.875	1,499	57	1,556	10			25.0	24.8
3	CTL	CENTURYLINK	Sep-56	BBB	6.500	1,353	398	1,751	12			25.2	25.3
4	EMC	EMC CORP	Jun-23	A	3.375	1,331	393	1,724	39	4.0	4.2	96.5	95.3
5	MET	METLIFE	Dec-49	BBB	5.250	1,315	259	1,574	39			102.1	100.3
6	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	1,305	533	1,838	48	5.8	5.9	102.5	100.8
7	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	1,189	173	1,362	31	7.2	7.6	85.3	82.0
8	GS	GOLDMAN SACHS	Dec-49	BB	5.300	1,142	11	1,153	24			102.8	101.9
9	FTR	FRONTIER COMMUNICATIONS CORP	Sep-21	BB	6.250	996	109	1,105	20	6.7	7.0	98.0	97.0
10	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	A	5.000	994	258	1,252	18			107.6	107.3
11	STX	SEAGATE HDD CAYMAN	Jun-23	BBB	4.750	955	636	1,591	36	5.3	5.4	97.0	96.6
12	IEP	ICAHN ENTERPRISES	Feb-22	BB	5.875	863	184	1,047	24	6.4	6.8	97.5	95.8
13	BAC	BANK OF AMERICA	Dec-49	BB	6.100	848	122	970	20			106.0	105.1
14	TRP	TRANSCANADA PIPELINES LTD	Aug-76	BBB	5.875	801	17	818	25			104.0	105.0
15	JPM	JP MORGAN CHASE	Aug-49	BBB	6.750	742	126	868	14			113.4	112.5
16	EMC	EMC CORP	Jun-18	A	1.875	733	132	865	19	2.2	2.4	99.4	99.0
17	JPM	JP MORGAN CHASE	Apr-49	BBB	7.900	688	491	1,179	25			104.7	104.1
18	MSFT	MICROSOFT CORP	Aug-21	AAA	1.550	681	16	697	13	1.5	1.6	100.0	99.9
19	IEP	ICAHN ENTERPRISES	Aug-20	BB	6.000	676	144	820	19	6.0	6.2	100.0	99.4
20	C	CITIGROUP	Apr-49	BB	5.350	650	48	698	16			100.0	98.4

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

August 2016

Index	Ticker	Comany	Maturity	Rating Key (Med)	Coupon	Trades (Buy)	Trades (Sell)	Trades	Dollar Vol. Traded (MM)	Yield (Buy)	Yield (Sell)	Price (Buy)	Price (Sell)
1	AMGN	AMGEN INC	Nov-21	A	3.875	95	1,811	1,906	6	1.8	1.9	109.9	109.1
2	STX	SEAGATE HDD CAYMAN	Jun-23	BBB	4.750	955	636	1,591	36	5.3	5.4	97.0	96.6
3	NSM	Nationstar Mortgage LLC	Aug-18	B	6.500	60	563	623	7	6.2	6.8	100.2	99.5
4	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	1,305	533	1,838	48	5.8	5.9	102.5	100.8
5	MSFT	MICROSOFT CORP	Feb-20	AAA	1.850	37	528	565	10	1.2	1.3	102.0	101.7
6	VZ	VERIZON	Sep-23	BBB	5.150	398	506	904	15	2.4	2.5	117.6	117.2
7	CDE	COEUR MNG INC	Feb-21	B	7.875	241	502	743	10	7.6	8.1	100.7	99.2
8	LM	LEGG MASON INC	Sep-56	BBB	5.450	643	499	1,142	10			25.3	25.0
9	JPM	JP MORGAN CHASE	Apr-49	BBB	7.900	688	491	1,179	25			104.7	104.1
10	X	UNITED STS STL CORP NEW	Apr-20	B	7.375	240	429	669	16	7.2	7.6	100.4	99.4
11	GS	GOLDMAN SACHS	Dec-49	BB	4.000	231	417	648	12			83.6	81.5
12	NEM	NEWMONT MINING	Oct-39	BBB	6.250	27	415	442	13		5.1	115.0	115.0
13	CTL	CENTURYLINK	Sep-56	BBB	6.500	1,353	398	1,751	12			25.2	25.3
14	EMC	EMC CORP	Jun-23	A	3.375	1,331	393	1,724	39	4.0	4.2	96.5	95.3
15	PBR	PETROBRAS	May-23	B	4.375	247	373	620	19	6.5	6.6	88.8	87.8
16	CLF	CLIFFS NAT RES INC	Jan-18	C	5.950	6	372	378	10	2.4	3.5	104.9	103.3
17	CTL	CENTURYLINK	Apr-20	BB	5.625	37	362	399	8	3.5	3.5	107.3	107.0
18	FLEX	FLEXTRONICS INTL LTD	Jun-25	BBB	4.750	29	351	380	2	3.9	4.0	106.0	105.1
19	PTRB	PETROBRAS	Jan-21	B	5.375	302	337	639	21	6.1	6.4	97.1	96.3
20	GS	GOLDMAN SACHS	Sep-49	BB	4.000	54	331	385	3			83.3	81.8

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).

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

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