

# Market Transparency Report

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

July 2016

[www.tradeweb.com](http://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 2016

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-11	-6.8%	0.0
CD	-5	2.3%	1.2
Corp	-9	-1.5%	-0.2
Municipal	-8	-9.2%	0.1
Treasury	-6	-2.9%	-0.1

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

# Yield Matrix

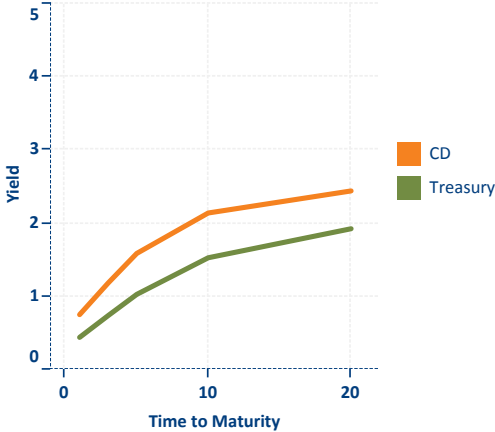
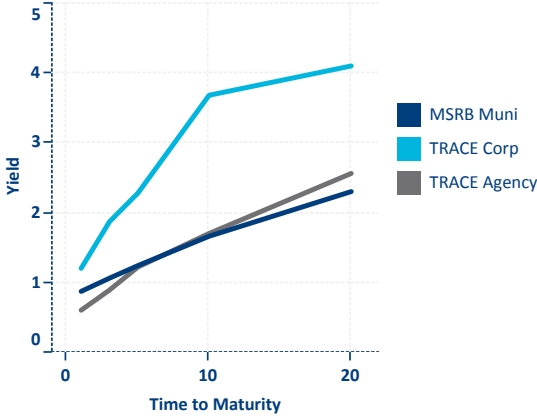
## Average Yield, % for July 2016

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	0.9	1.1	1.3	1.7	2.3	13
TRACE Corp	1.2	1.9	2.3	3.7	4.1	5
TRACE Agency	0.6	0.9	1.2	1.7	2.6	3
CD	0.7	1.2	1.6	2.1	2.4	1
Treasury	0.4	0.7	1.0	1.5	1.9	1

## Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	0.9	1.3	1.6	2.6		2
		A	1.1	1.5	1.9	2.8	3.8	5
		BBB	1.3	2.1	2.8	3.5	3.5	5
		HY	2.1	3.1	3.6	5.2	7.7	4
		AAA	1.0	1.3	1.3	3.2		4
	Non-Financial	AA	0.6	1.1	1.3	2.7	3.3	5
		A	2.0	1.3	2.2	3.3	3.7	5
		BBB	1.5	2.0	3.2	4.3	6.3	9
		HY	2.5	5.3	7.9	7.4	10.0	9
MSRB Muni	GO	AAA	0.7	0.8	0.9	1.4	2.1	11
		AA	0.7	0.9	1.1	1.5	2.2	11
		A	0.9	1.0	1.3	1.7	2.3	10
		BBB	1.5	1.9	2.2	3.2	3.6	14
		HY	10.0	8.2	7.9	6.1	5.1	8
	Revenue	AAA	0.7	0.8	1.0	1.4	1.9	10
		AA	0.7	0.9	1.1	1.6	2.2	14
		A	0.8	1.1	1.3	1.8	2.4	17
		BBB	1.1	1.5	1.8	2.4	2.6	16
		HY	19.1	17.0	13.5	8.6	8.1	16

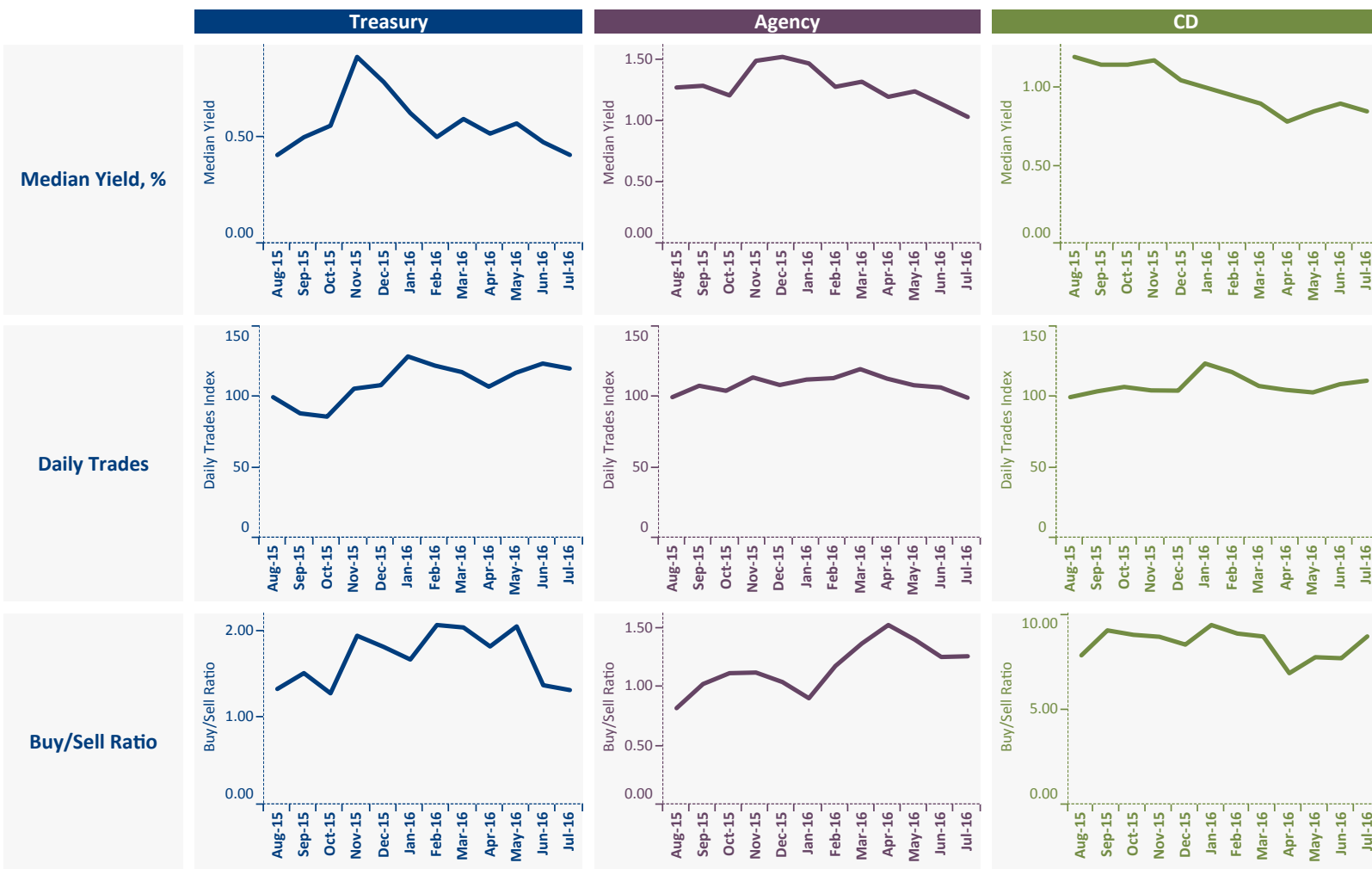
## Average Yield, %



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



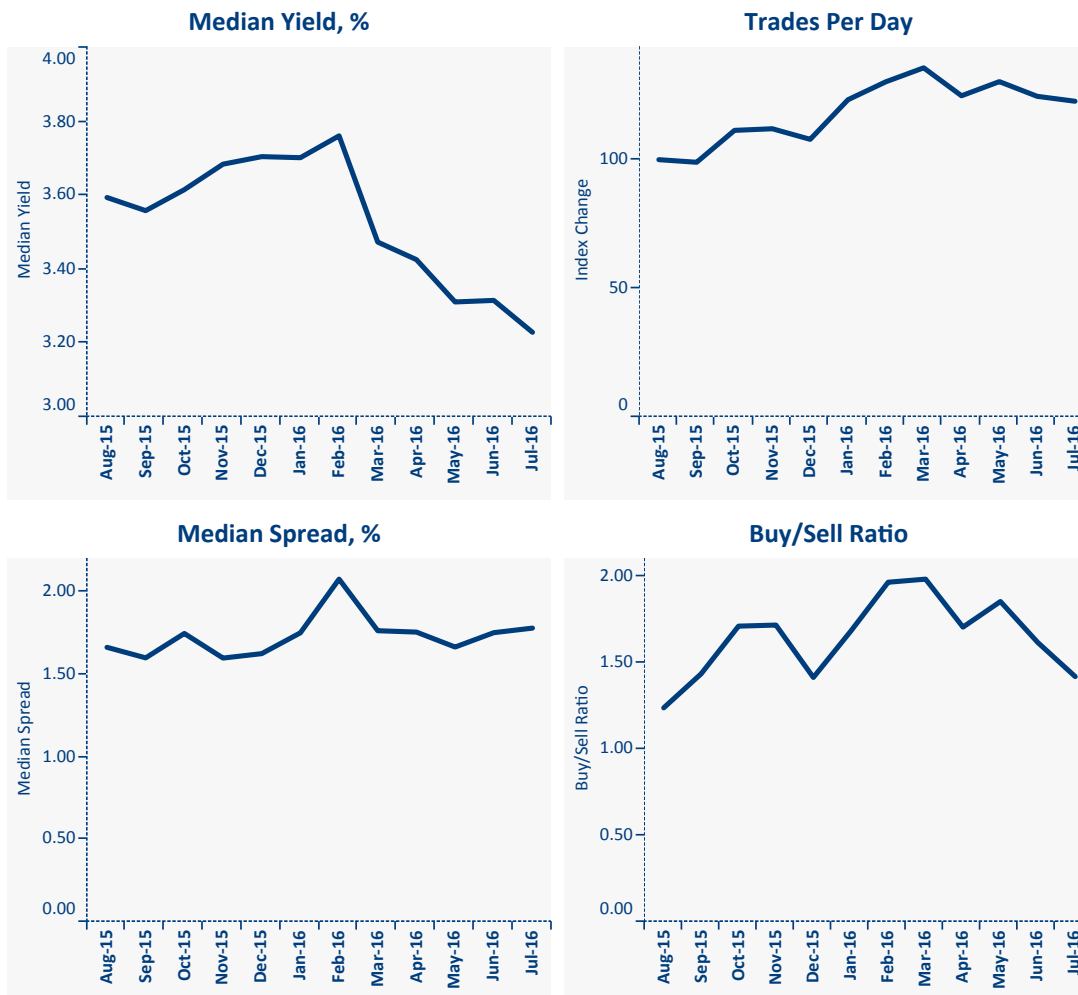
Daily Trades: First month = 100

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



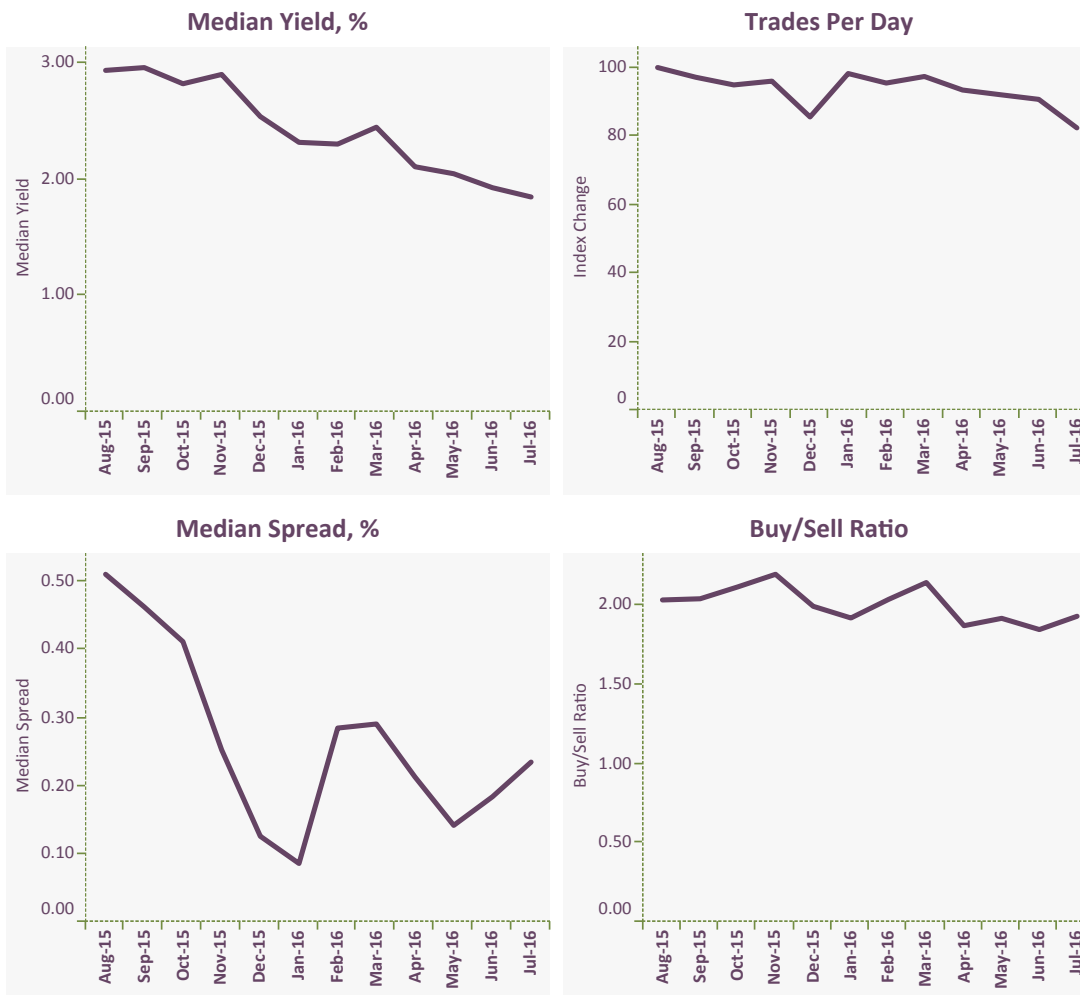
Daily Trades: First month = 100

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

July 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	768	3.3%	12,367	1.4	284	1.2	1.8	2.2	3.1	4.1
2	BAC	BANK OF AMERICA	BBB	507	3.3%	12,337	1.5	248	1.2	1.8	2.2	3.4	3.9
3	JPM	JP MORGAN CHASE	BBB	454	3.0%	11,457	1.8	271	1.2	1.7	2.0	2.9	3.2
4	C	CITIGROUP	BBB	271	2.8%	10,639	2.3	251	1.1	1.6	2.3	3.6	2.2
5	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	396	2.1%	7,872	0.8	171	0.8	1.3	1.8	2.8	3.5
6	WFC	WELLS FARGO	A	205	2.0%	7,408	2.0	181	1.1	1.4	2.0	2.8	3.4
7	MS	MORGAN STANLEY	BBB	621	1.6%	6,138	1.2	146	1.2	1.9	2.2	3.1	3.7
8	T	AT&T	BBB	70	1.5%	5,663	1.2	126	1.1	1.5	2.1	2.8	4.1
9	VZ	VERIZON	BBB	67	1.3%	5,016	0.9	97	1.0	1.2	1.7	4.3	4.0
10	STX	SEAGATE HDD CAYMAN	BBB	6	1.1%	4,219	6.2	96		2.9		6.6	7.5
11	EMC	EMC CORP	A	3	0.9%	3,577	1.4	79		2.9			
12	DB	DEUTSCHE BANK	BBB	159	0.9%	3,422	2.8	76	1.6	2.7	3.2	4.0	
13	HPQ	HEWLETT PACKARD	BBB	17	0.9%	3,387	1.9	87		1.9	2.6		
14	AAPL	APPLE INC	AA	34	0.8%	3,114	1.6	73	0.6	1.1	1.5	2.2	3.4
15	RIG	TRANSOCEAN INC	B	14	0.8%	3,090	0.7	64	4.4		10.3	12.1	11.3
16	CTL	CENTURYLINK	BB	30	0.8%	3,031	1.0	58	1.5	3.7	5.2	6.5	7.0
17	HBC	HSBC	BBB	411	0.8%	3,009	1.6	71	1.4	1.9	2.9	3.6	4.7
18	PBR	PETROBRAS	B	13	0.8%	2,952	1.6	102	2.3	5.4	7.2	8.0	
19	BRK	BERKSHIRE HATHAWAY	AA	146	0.8%	2,883	1.2	73	1.2	1.2	1.6	2.4	3.7
20	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	71	0.7%	2,811	1.2	65	1.6	2.3	3.2	3.7	5.9

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 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	BBBY	BED BATH & BEYOND INC	BBB	3	0.4%	1,442	1,360	82	16.6	31				3.1	5.1
2	CHRC	BAYSIDE CMNTY CHURCH SARASOTA INC BRADEN	N/R	137	0.4%	1,546	1,421	125	11.4	11		4.7	4.2	4.9	
3	STX	SEAGATE HDD CAYMAN	BBB	6	1.1%	4,219	3,629	590	6.2	96		2.9		6.6	7.5
4	M	MACYS RETAIL HLDGS INC	BBB	24	0.4%	1,541	1,302	239	5.5	38			2.9	3.4	5.0
5	MU	MICRON TECHNOLOGY INC	BB	9	0.3%	1,277	1,070	207	5.2	26			6.5	7.0	
6	VLO	VALERO ENERGY	BBB	11	0.3%	1,241	1,023	218	4.7	26	1.3	2.0		3.3	5.3
7	XRX	XEROX CORP	BBB	12	0.6%	2,322	1,905	417	4.6	52	1.3	3.0	3.5	4.4	6.6
8	FE	FIRSTENERGY CORP	BBB	24	0.3%	1,145	925	220	4.2	24	1.4	2.6			4.8
9	MRO	MARATHON OIL CORP	BBB	20	0.6%	2,202	1,735	467	3.7	38		3.4	2.3	3.6	6.0
10	COF	CAPITAL ONE FINL CORP	BB	26	0.4%	1,671	1,305	366	3.6	31	1.3	1.6	2.3	3.1	
11	IEP	ICAHN ENTERPRISES	BB	4	0.4%	1,618	1,240	378	3.3	37	1.8	4.3	6.1		
12	KSS	KOHL'S CORP	BBB	7	0.3%	1,133	862	271	3.2	25			2.6	3.9	5.2
13	ESV	ENSCO PLC	BB	8	0.3%	1,203	911	292	3.1	24		6.0	7.1	9.8	10.7
14	MET	METLIFE	A	22	0.5%	1,852	1,368	484	2.8	43	1.1	1.3	1.9	2.7	3.8
15	DB	DEUTSCHE BANK	BBB	159	0.9%	3,422	2,526	896	2.8	76	1.6	2.7	3.2	4.0	
16	D	DOMINION RES INC VA NEW	BBB	46	0.7%	2,593	1,903	690	2.8	26	1.1	1.7	1.9	2.5	4.1
17	SAN	ABBEY NATL TREAS SVCS PLC	BBB	25	0.2%	848	612	236	2.6	21	1.5	2.2	2.6	4.5	
18	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	32	0.5%	1,921	1,376	545	2.5	52	1.3	2.2	3.0	3.6	4.6
19	ORCL	ORACLE CORP	AA	28	0.6%	2,157	1,526	631	2.4	55	0.8	1.2	1.8	2.4	3.6
20	MON	MONSANTO CO NEW	BBB	18	0.3%	1,123	793	330	2.4	25	1.1	1.5	2.2	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.

-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 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	0.3%	1,054	278	776	0.36	20	8.7	13.9	13.1		11.0
2	BCS	BARCLAYS	N/R	434	0.5%	1,800	487	1,313	0.37	36	2.5	3.0	3.7	4.1	4.2
3	JOY	JOY GLOBAL INC	BB	2	0.2%	832	226	606	0.37	22			3.0		5.4
4	AU	ANGLOGOLD ASHANTI HLDGS PLC	BBB	4	0.3%	1,058	306	752	0.41	29		6.0			6.5
5	CS	CREDIT SUISSE	N/R	340	0.5%	1,824	554	1,270	0.44	30	4.8	2.9		4.2	4.2
6	CHK	CHESAPEAKE ENERGY	C	12	0.2%	912	297	615	0.48	16	11.3		16.1		
7	AA	ALCOA	BBB	12	0.6%	2,307	790	1,517	0.52	60	2.0	2.5	3.6	4.4	5.9
8	CHTR	CCO HOLDINGS LLC	BBB	25	0.3%	948	335	613	0.55	23	1.8	2.1	2.6	4.4	5.1
9	RIG	TRANSOCEAN INC	B	14	0.8%	3,090	1,213	1,877	0.65	64	4.6		8.8	12.8	11.6
10	WMT	WAL-MART	AA	24	0.3%	1,049	443	606	0.73	25	0.8	1.1	1.3	2.0	3.3
11	INTC	INTEL CORP	A	19	0.2%	900	386	514	0.75	24	1.0	1.4	1.6	2.3	1.2
12	PTRB	PETROBRAS	B	11	0.5%	1,914	829	1,085	0.76	67	2.3	5.8	7.1		8.5
13	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	396	2.1%	7,872	3,416	4,456	0.77	171	1.0	1.5	1.8	3.0	3.5
14	MT	ARCELORMITTAL SA LUXEMBOURG	BB	9	0.3%	952	422	530	0.80	26		4.3	5.4	5.5	7.7
15	FCX	FREEMPORT-MCMORAN COPPER & GOLD INC	BB	18	0.6%	2,222	1,017	1,205	0.84	45	3.9	5.0	6.0	6.6	7.6
16	RY	ROYAL BANK OF CANADA	N/R	228	0.4%	1,577	719	858	0.84	39	1.1	1.4	1.7	3.5	3.5
17	BNS	BANK NOVA SCOTIA B C	N/R	63	0.3%	1,170	550	620	0.89	27	1.2	1.5	1.9	3.8	
18	COP	CONOCOPHILLIPS	BBB	31	0.4%	1,615	771	844	0.91	36	1.5	1.9	2.3	2.9	4.4
19	ACT	ALLERGAN	BBB	16	0.2%	882	424	458	0.93	16	1.6	2.0	2.4	3.0	4.1
20	VZ	VERIZON	BBB	67	1.3%	5,016	2,411	2,605	0.93	97	1.2	1.3	1.9	4.3	4.1

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 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	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	1,602	163	1,765	41	7.5	8.0	82.5	78.6
2	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	1,429	497	1,926	48	6.0	6.1	100.6	98.4
3	D	DOMINION RES INC VA NEW	Jul-76	BBB	5.250	1,425	433	1,858	11			25.3	25.1
4	GS	GOLDMAN SACHS	Dec-49	BB	5.300	1,205	2	1,207	25			101.8	101.6
5	EMC	EMC CORP	Jun-23	A	3.375	1,064	889	1,953	43	4.0	4.4	96.1	94.2
6	STX	SEAGATE HDD CAYMAN	Jun-23	BBB	4.750	979	252	1,231	28	5.9	6.3	93.6	91.5
7	BAC	BANK OF AMERICA	Dec-49	BB	6.100	906	140	1,046	19			104.3	103.7
8	COF	CAPITAL ONE FINL CORP	Dec-49	BB	5.550	783	59	842	14			100.9	100.0
9	C	CITIGROUP	Dec-49	BB	6.250	777	21	798	18			106.5	105.3
10	MET	METLIFE	Dec-49	BBB	5.250	755	61	816	22			101.8	99.7
11	MRO	MARATHON OIL CORP	Jun-45	BBB	5.200	733	34	767	5	5.9	6.0	90.1	89.5
12	HPT	HOSPITALITY PPTYS TR	Feb-26	BBB	5.250	712	4	716	5	4.3	4.5	106.8	105.2
13	IEP	ICAHN ENTERPRISES	Feb-22	BB	5.875	705	115	820	18	6.3	6.4	98.3	97.4
14	STX	SEAGATE HDD CAYMAN	Jan-25	BBB	4.750	688	143	831	19	6.5	6.9	88.7	86.3
15	FE	FIRSTENERGY CORP	Aug-39	BBB	6.800	676	155	831	18	6.7	6.9	103.0	98.5
16	BBBY	BED BATH & BEYOND INC	Aug-44	BBB	5.165	646	30	676	14	5.7	5.9	92.1	89.7
17	MU	MICRON TECHNOLOGY INC	Feb-22	BB	5.875	645	72	717	14	6.5	6.7	97.3	96.3
18	XRX	XEROX CORP	Dec-39	BBB	6.750	622	78	700	14	6.6	6.8	101.3	99.8
19	C	CITIGROUP	May-49	BB	6.300	597	116	713	19			103.3	101.3
20	WFC	WELLS FARGO	Jan-49	BBB	5.875	579	82	661	18			110.3	108.5

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 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	EMC	EMC CORP	Jun-23	A	3.375	1,064	889	1,953	43	4.0	4.4	96.1	94.2
2	HPT	HOSPITALITY PPTYS TR	Aug-22	BBB	5.000	76	888	964	5	3.3	3.6	108.5	107.1
3	RIG	TRANSOCEAN INC	Nov-20	B	6.500	205	757	962	21	8.1	8.5	94.1	93.0
4	CTL	CENTURYLINK	Jun-36	BB	7.995	30	576	606	6	7.6	7.6	104.2	104.0
5	JOY	JOY GLOBAL INC	Oct-21	BB	5.125	149	533	682	18	5.6	3.0	97.7	110.0
6	VZ	VERIZON	Sep-23	BBB	5.150	257	525	782	13	2.4	2.5	117.7	117.2
7	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	1,429	497	1,926	48	6.0	6.1	100.6	98.4
8	EMC	EMC CORP	Jun-20	A	2.650	535	454	989	22	2.9	3.1	99.0	98.4
9	OUTR	OUTERWALL INC	Mar-19	B	6.000	54	447	501	10	7.7	6.0	96.0	100.0
10	D	DOMINION RES INC VA NEW	Jul-76	BBB	5.250	1,425	433	1,858	11			25.3	25.1
11	AA	ALCOA	Oct-24	BBB	5.125	179	422	601	16	4.2	4.4	106.0	105.0
12	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-38	AA	5.875	59	416	475	8	3.4	3.5	137.1	135.5
13	VZ	VERIZON	Sep-18	BBB	2.406	23	412	435	7			102.6	102.9
14	JPM	JP MORGAN CHASE	Aug-49	BBB	6.750	353	411	764	11			112.7	111.3
15	RIG	TRANSOCEAN INC	Dec-21	B	8.125	249	351	600	15	10.9	11.3	88.8	87.3
16	GS	GOLDMAN SACHS	Dec-49	BB	4.000	266	346	612	15			79.7	80.8
17	JPM	JP MORGAN CHASE	Apr-49	BBB	7.900	429	338	767	16			104.0	103.3
18	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	A	5.000	341	336	677	14			108.0	107.1
19	FCX	FREEMPORT-MCMORAN COPPER & GOLD INC	Nov-21	BB	4.000	161	319	480	7	5.6	5.9	93.0	91.2
20	AA	ALCOA	Feb-37	BBB	5.950	153	298	451	12	6.0	5.9	99.4	100.6

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

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