

# Market Transparency Report

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

**September 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 September 2016

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	6	-2.3%	-0.1
CD	0	-3.0%	-0.7
Corp	-14	-1.0%	0.0
Municipal	1	1.3%	0.0
Treasury	-3	8.0%	0.2

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

# Yield Matrix

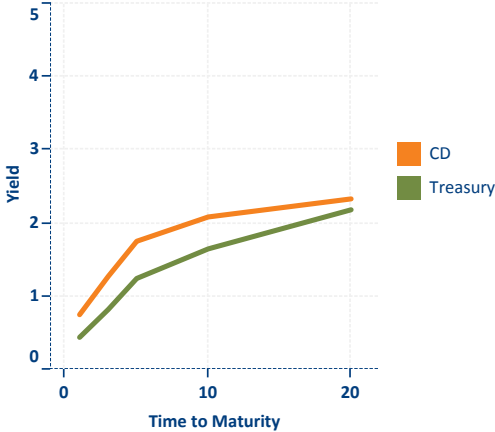
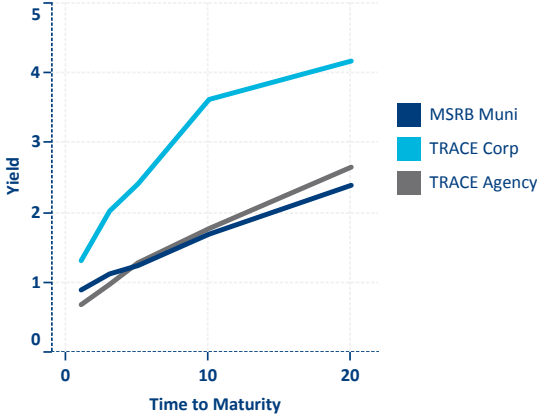
## Average Yield, % for September 2016

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	0.9	1.1	1.3	1.7	2.4	14
TRACE Corp	1.3	2.0	2.4	3.6	4.2	4
TRACE Agency	0.7	1.0	1.3	1.8	2.7	3
CD	0.8	1.3	1.8	2.1	2.3	1
Treasury	0.4	0.8	1.2	1.7	2.2	1

## Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	1.0	1.5	1.7			3
		A	1.1	1.6	2.0	2.9	4.0	4
		BBB	1.6	2.1	2.8	3.5	4.1	4
		HY	2.0	3.1	4.2	4.7	7.3	3
	Non-Financial	AAA	1.3	1.3			3.5	4
		AA	0.8	1.2	1.5	2.7	3.4	5
		A	0.8	1.5	2.4	3.2	3.6	5
		BBB	1.6	1.9	3.0	4.1	5.8	7
		HY	2.2	4.8	8.1	6.7	8.6	9
MSRB Muni	GO	AAA	0.8	0.9	1.0	1.4	2.1	9
		AA	0.8	1.0	1.1	1.6	2.4	12
		A	0.9	1.0	1.3	1.6	2.4	9
		BBB	2.1	2.2	2.3	2.5	3.5	12
		HY	4.5	4.0	7.6	5.9	5.6	12
	Revenue	AAA	0.8	0.9	1.1	1.4	2.0	9
		AA	0.8	1.0	1.1	1.6	2.2	14
		A	0.9	1.2	1.3	1.8	2.5	18
		BBB	1.2	1.7	1.8	2.4	2.7	19
		HY	16.9	8.6	16.1	9.1	8.4	15

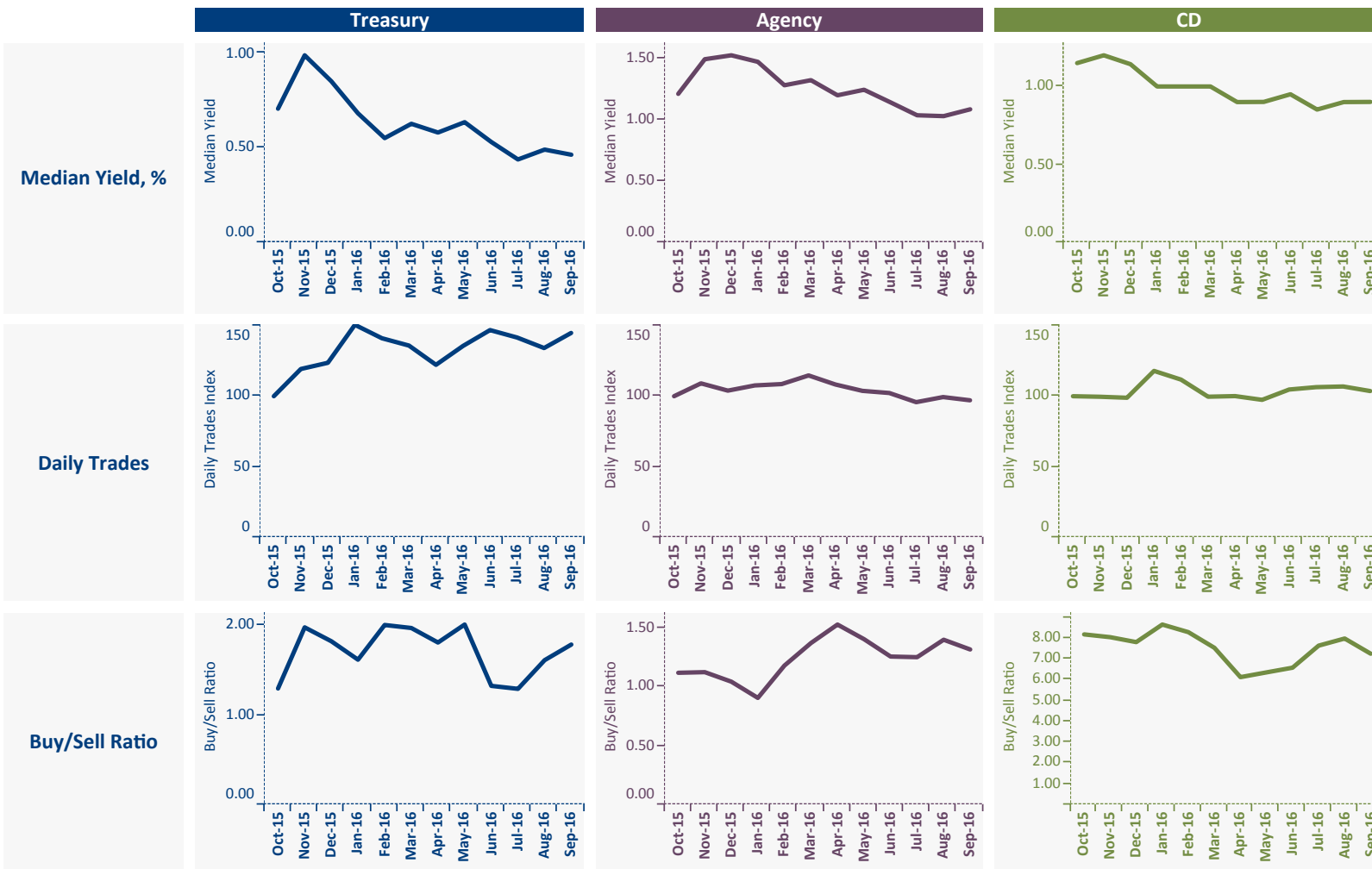
Average Yield, %



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



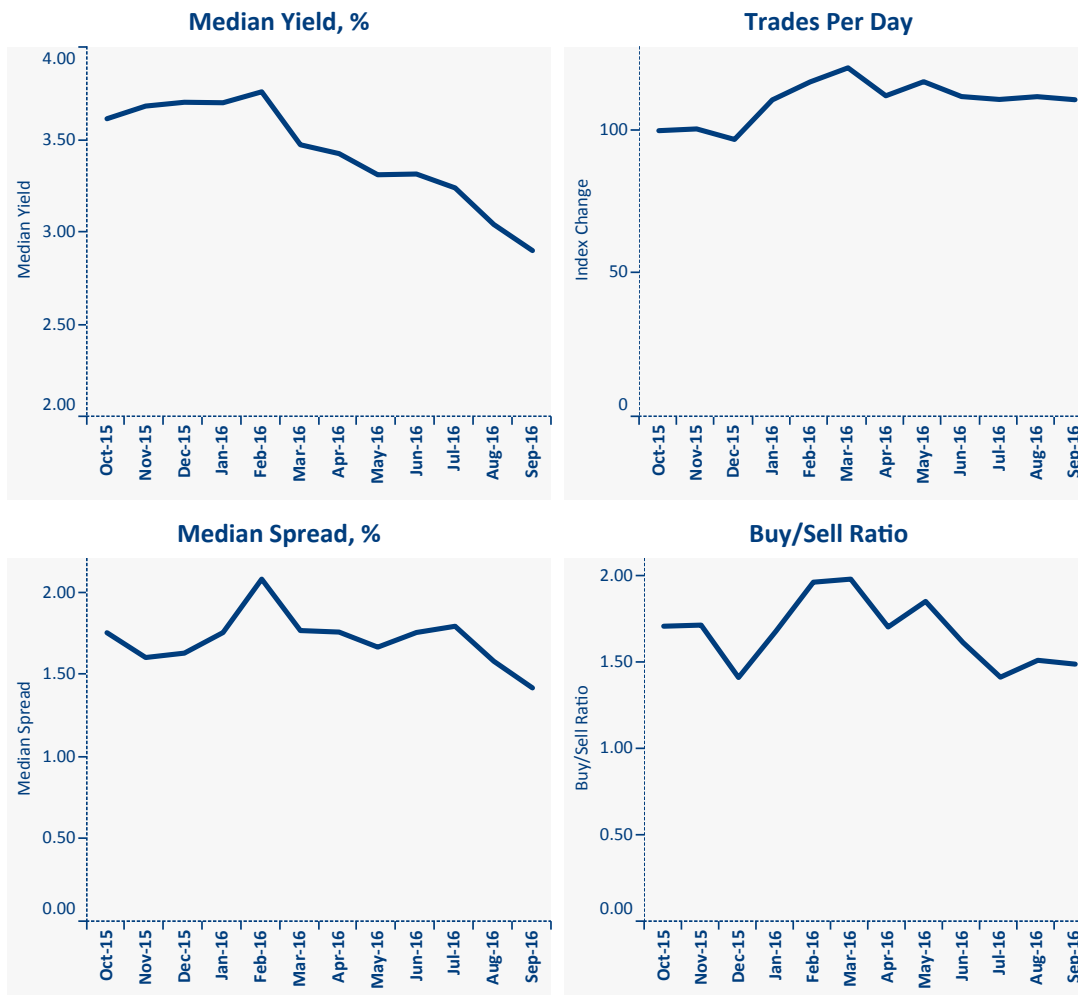
Daily Trades: First month = 100

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



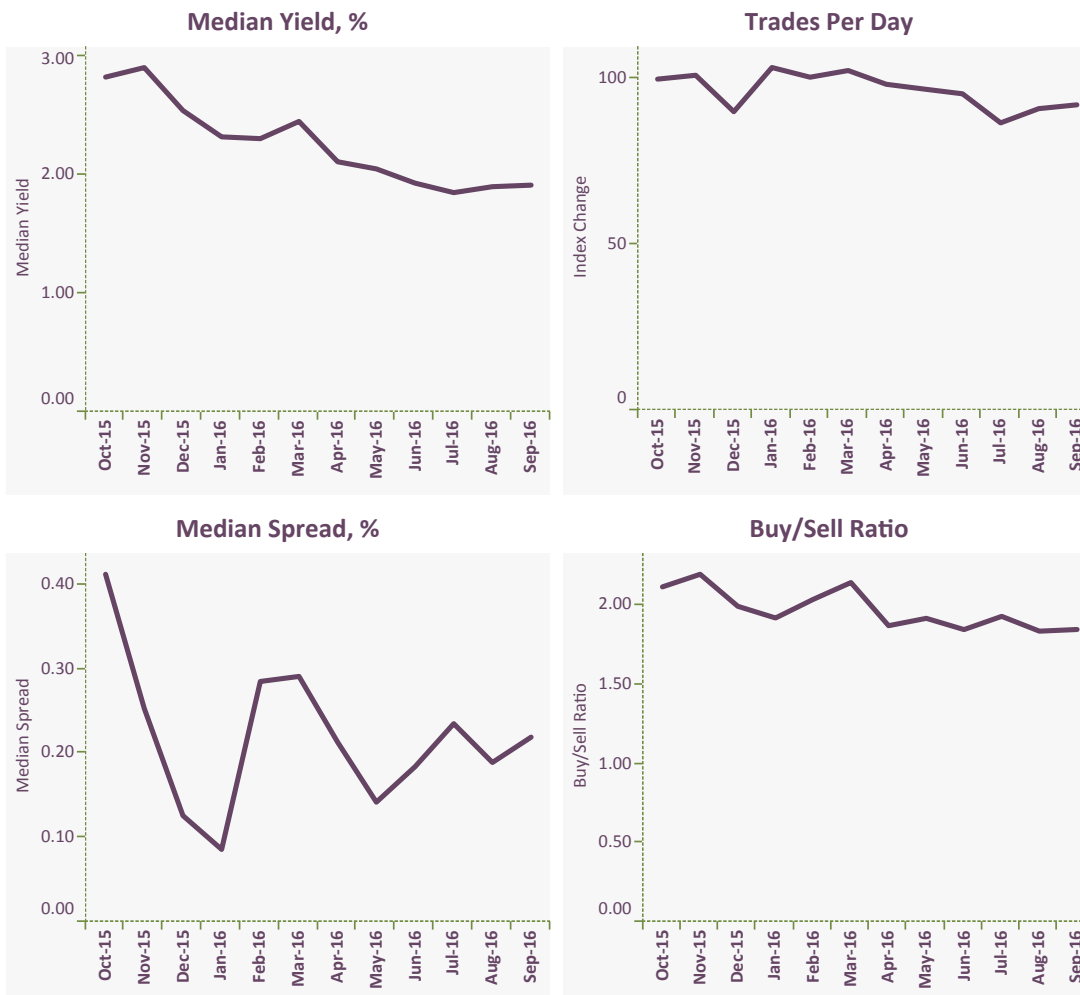
Daily Trades: First month = 100

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

September 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	JPM	JP MORGAN CHASE	BBB	452	3.2%	12,822	2.0	289	1.3	1.7	2.1	3.0	2.9
2	BAC	BANK OF AMERICA	BBB	467	3.2%	12,603	1.5	256	1.3	1.7	2.1	3.4	3.8
3	GS	GOLDMAN SACHS	BBB	762	3.1%	12,221	1.3	280	1.3	2.0	2.3	3.1	4.1
4	C	CITIGROUP	BBB	285	2.4%	9,758	2.4	230	1.3	1.6	2.2	3.6	4.1
5	WFC	WELLS FARGO	A	197	2.1%	8,533	1.7	204	1.2	1.5	2.0	3.0	3.9
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	389	2.1%	8,449	1.0	187	1.0	1.4	1.8	2.9	3.5
7	T	AT&T	BBB	73	1.8%	7,087	1.8	140	1.3	1.6	2.2	3.0	4.3
8	MS	MORGAN STANLEY	BBB	690	1.7%	6,889	1.2	174	1.1	1.8	2.2	3.0	3.9
9	DB	DEUTSCHE BANK	BBB	262	1.6%	6,594	0.8	158	2.2	2.7	3.2	4.0	5.5
10	VZ	VERIZON	BBB	67	1.3%	5,019	1.3	99	1.1	1.7	1.9	2.7	4.0
11	AAPL	APPLE INC	AA	33	1.0%	3,816	1.6	85	0.7	1.2	1.6	2.4	3.4
12	BRK	BERKSHIRE HATHAWAY	A	156	0.9%	3,797	1.4	89	1.1	1.3	2.2	2.4	3.7
13	FTR	FRONTIER COMMUNICATIONS CORP	BB	22	0.8%	3,388	2.3	76		5.8	7.0	8.8	9.1
14	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	40	0.8%	3,377	1.1	67	1.1	1.4	2.0	2.8	3.8
15	AXP	AMERICAN EXPRESS	BBB	35	0.8%	3,014	1.7	64	1.1	1.4	1.9	3.0	4.6
16	STX	SEAGATE HDD CAYMAN	BBB	6	0.7%	2,955	4.2	67		2.3		6.1	7.2
17	HPQ	HEWLETT PACKARD	BBB	17	0.7%	2,789	2.0	70		1.7	2.6		5.8
18	F	FORD	BBB	194	0.7%	2,781	1.8	63	1.3	1.9	2.4	3.2	2.0
19	ORCL	ORACLE CORP	AA	30	0.7%	2,716	2.3	64	1.0	1.3	1.9	2.5	3.6
20	CTL	CENTURYLINK	BB	31	0.7%	2,643	1.6	57	1.3	3.3	5.0	6.5	8.2

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

September 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	KEY	KEYCORP MEDIUM TERM SR NTS BOOK ENTRY	BBB	13	0.6%	2,559	2,472	87	28.4	57		1.8	2.1	3.2	
2	CHRC	BAYSIDE CMNTY CHURCH SARASOTA INC BRADEN	N/R	72	0.3%	1,383	1,316	67	19.6	10	3.0			5.7	6.9
3	ESV	ENSCO PLC	BB	8	0.5%	1,941	1,707	234	7.3	33		7.0	7.3	10.1	10.7
4	IEP	ICAHN ENTERPRISES	BB	4	0.7%	2,627	2,241	386	5.8	54	2.1	6.0	7.0		
5	ETFC	E TRADE FINL CORP	BB	3	0.2%	916	766	150	5.1	22					
6	MRO	MARATHON OIL CORP	BBB	20	0.4%	1,785	1,455	330	4.4	40		3.1	2.4	4.5	6.2
7	STX	SEAGATE HDD CAYMAN	BBB	6	0.7%	2,955	2,382	573	4.2	67		2.3		6.1	7.2
8	ETP	ENERGY TRANSFER PARTNERS L P	BBB	25	0.4%	1,418	1,121	297	3.8	30			3.0	4.1	5.8
9	XRX	XEROX CORP	BBB	12	0.4%	1,681	1,325	356	3.7	39	2.0	2.7	3.2	3.9	6.2
10	FITB	FIFTH THIRD BANCORP	BBB	20	0.3%	1,013	793	220	3.6	25	1.2	1.8	2.2		4.7
11	M	MACYS RETAIL HLDGS INC	BBB	22	0.4%	1,590	1,239	351	3.5	38			2.5	3.4	4.8
12	COF	CAPITAL ONE FINL CORP	BBB	25	0.4%	1,516	1,169	347	3.4	34	1.4	1.5	2.2	3.5	
13	MET	METLIFE	A	22	0.7%	2,622	1,958	664	3.0	59	1.3	1.4	1.8	2.7	4.0
14	SO	GEORGIA POWER CO	BBB	60	0.5%	2,030	1,516	514	3.0	28	1.1	1.4	1.9	2.8	3.8
15	FE	FIRSTENERGY CORP	BB	22	0.3%	1,121	830	291	2.9	17	1.5	1.6	9.9		4.4
16	PSEC	PROSPECT CAP CORP INTERNOTES BOOK ENTRY	BBB	173	0.4%	1,597	1,182	415	2.9	28	3.0	4.2	4.6	4.8	6.3
17	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	32	0.4%	1,771	1,299	472	2.8	46	1.5	2.0	2.9	3.6	4.7
18	ECOH	ECOPETROL S A	BBB	7	0.2%	941	687	254	2.7	31		2.3		4.6	
19	ESRX	EXPRESS SCRIPTS HLDG CO	BBB	14	0.3%	1,005	731	274	2.7	21	1.1	1.6	2.1	3.2	
20	MSFT	MICROSOFT CORP	AAA	35	0.6%	2,546	1,843	703	2.6	62	0.7	1.1	1.5	2.3	3.3

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

September 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	BTU	PEABODY ENERGY	D	6	0.2%	990	48	942	0.05	3					
2	AMD	ADVANCED MICRO DEVICES	C	5	0.2%	910	260	650	0.40	20		6.4	7.0	7.1	
3	BMO	BANK MONTREAL MEDIUM TERM SR NTS BOOK EN	N/R	37	0.2%	969	307	662	0.46	24	1.2	1.6	2.0		
4	CHK	CHESAPEAKE ENERGY	C	14	0.3%	1,335	437	898	0.49	24	5.4		10.3		
5	CHTR	CCO HOLDINGS LLC	BBB	25	0.2%	903	348	555	0.63	22	1.6	2.3	2.7		5.2
6	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	A	24	0.4%	1,609	644	965	0.67	27	1.2	1.4	2.1	2.6	
7	EMC	EMC CORP	BB	3	0.6%	2,519	1,017	1,502	0.68	55		4.2			
8	BCS	BARCLAYS	N/R	429	0.5%	1,812	738	1,074	0.69	34	2.8	2.7	3.6	4.2	4.1
9	CS	CREDIT SUISSE	N/R	381	0.6%	2,211	925	1,286	0.72	43	2.3	2.6	3.4	3.3	
10	D	DOMINION RES INC VA NEW	BBB	49	0.4%	1,573	656	917	0.72	24	1.4	1.9	2.1	2.8	4.2
11	DB	DEUTSCHE BANK	BBB	262	1.6%	6,594	2,852	3,742	0.76	158	3.4	3.5	3.3	4.5	5.7
12	PTRB	PETROBRAS	B	10	0.4%	1,472	645	827	0.78	51	3.7	5.0	6.0		8.0
13	RY	ROYAL BANK OF CANADA	AA	244	0.4%	1,623	733	890	0.82	46	1.3	1.6	1.8	3.4	3.8
14	RIG	TRANSOCEAN INC	B	14	0.5%	2,080	944	1,136	0.83	46	6.0		9.6	12.0	11.4
15	WMB	WILLIAMS COS INC	BBB	30	0.3%	1,232	573	659	0.87	28		3.0	3.7	4.3	5.7
16	INTC	INTEL CORP	A	19	0.3%	1,005	471	534	0.88	26	1.1	1.5	1.7	2.3	1.2
17	DELL	DELL	BB	6	0.3%	1,010	480	530	0.91	26		3.3	4.1	6.5	7.0
18	ACT	ALLERGAN	BBB	17	0.3%	1,018	504	514	0.98	19	1.6	2.0	2.5	3.1	4.0
19	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	389	2.1%	8,449	4,189	4,260	0.98	187	1.2	1.6	1.9	2.9	3.6
20	WMT	WAL-MART	AA	25	0.3%	1,088	539	549	0.98	25	1.1	1.3	1.4	2.2	3.4

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

September 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	KEY	KEYCORP MEDIUM TERM SR NTS BOOK ENTRY	Dec-49	BBB	5.000	2,399	8	2,407	54			100.2	98.5
2	MET	METLIFE	Dec-49	BBB	5.250	1,031	67	1,098	30			102.2	100.1
3	SO	GEORGIA POWER CO	Oct-76	BBB	5.250	1,017	247	1,264	8			25.2	24.9
4	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	945	152	1,097	24	7.2	7.5	85.4	82.8
5	IEP	ICAHN ENTERPRISES	Feb-22	BB	5.875	922	138	1,060	23	7.0	7.3	95.0	93.9
6	IEP	ICAHN ENTERPRISES	Aug-20	BB	6.000	829	122	951	21	6.5	6.7	98.4	97.5
7	ESV	ENSCO PLC	Aug-20	BB	6.875	794	26	820	12	7.0	7.5	99.5	98.1
8	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	711	309	1,020	27	5.8	5.9	103.1	101.2
9	WFC	WELLS FARGO	Dec-49	BBB	5.900	675	97	772	24			106.1	104.3
10	BAC	BANK OF AMERICA	Dec-49	BB	5.200	645	33	678	15			99.7	96.9
11	C	CITIGROUP	May-49	BB	6.300	624	112	736	20			104.8	102.3
12	T	AT&T	Feb-26	BBB	4.125	622	70	692	9	3.0	3.1	108.7	107.8
13	BAC	BANK OF AMERICA	Dec-49	BB	6.100	618	169	787	15			105.8	104.1
14	JPM	JP MORGAN CHASE	Dec-49	BBB	6.100	597	27	624	18			107.8	105.5
15	ETFC	E TRADE FINL CORP	Dec-49	BB	5.875	589	47	636	15			104.7	103.4
16	LTD	LIMITED BRANDS INC	Feb-22	BB	5.625	583	35	618	5	3.2	3.4	112.0	110.9
17	STX	SEAGATE HDD CAYMAN	Jun-23	BBB	4.750	558	275	833	19	4.9	5.2	99.0	97.3
18	FTR	FRONTIER COMMUNICATIONS CORP	Sep-21	BB	6.250	554	137	691	13	6.8	7.2	97.7	96.3
19	JPM	JP MORGAN CHASE	Apr-49	BBB	5.300	535	80	615	15			103.6	101.5
20	KTOS	KRATOS DEFENSE & SEC SOLUTIONS	May-19	C	7.000	523	27	550	8			94.1	92.8

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).

## Corporate Bonds: Top 20 Most Sold Issues

September 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	BB	3.375	338	833	1,171	23	3.9	4.4	96.8	94.3
2	CDE	COEUR MNG INC	Feb-21	B	7.875	148	630	778	10	7.3	7.3	101.2	101.2
3	VNR	Vanguard Natural Resources, LLC	Apr-20	C	7.875	89	587	676	4	35.3	36.6	47.1	45.8
4	MAS	MASCO CORP	Mar-22	BBB	5.950	9	522	531	4	2.9	3.1	115.3	114.3
5	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	Dec-49	BBB	5.125	115	476	591	6			107.6	106.3
6	BTU	PEABODY ENERGY	Nov-21	D	6.250	5	409	414	1			24.1	23.9
7	D	DOMINION RES INC VA NEW	Mar-21	BBB	4.450	11	405	416	4	2.0	2.1	110.2	110.1
8	ABT	ABBOTT LABS	Mar-20	A	2.000	26	401	427	4	1.4	1.6	101.9	101.3
9	BTU	PEABODY ENERGY	Sep-20	D	6.500	11	400	411	1			24.2	23.8
10	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Jan-20	A	5.375	68	398	466	5	1.6	1.8	112.0	111.4
11	PDVA	PETROLEOS DE VENEZUELA SA	Nov-17	N/R	8.500	172	382	554	17			80.0	78.5
12	EMC	EMC CORP	Jun-20	BB	2.650	289	354	643	16	3.8	4.2	96.2	94.9
13	AU	ANGLOGOLD ASHANTI HLDGS PLC	Apr-20	BBB	5.375	115	349	464	7	3.7	4.0	105.6	104.5
14	GST	GASTAR EXPLORATION USA INC	May-18	C	8.625	32	327	359	3	21.5	21.7	83.0	82.7
15	PDVA	PETROLEOS DE VENEZUELA SA	Apr-17	N/R	5.250	400	324	724	19			74.9	77.4
16	EMC	EMC CORP	Jun-18	BB	1.875	390	315	705	16	2.8	3.5	98.5	97.4
17	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	711	309	1,020	27	5.8	5.9	103.1	101.2
18	AAPL	APPLE INC	May-23	AA	2.400	389	301	690	14	2.0	2.1	102.4	101.7
19	JPM	JP MORGAN CHASE	Aug-49	BBB	6.750	462	298	760	13			112.9	112.0
20	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-38	AA	5.875	84	281	365	7	3.5	3.6	134.7	134.1

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 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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