

Market Transparency Report

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

October 2017

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 October 2017

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	19	2.6%	0.0
CD	-2	-6.2%	-0.5
Corp	-2	3.7%	-0.1
Municipal	3	7.8%	0.0
Treasury	9	8.4%	-0.4

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

Yield Matrix

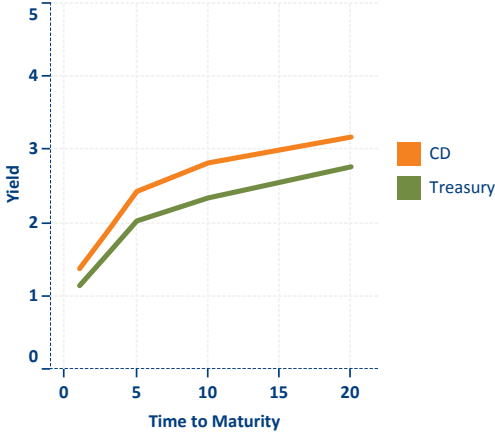
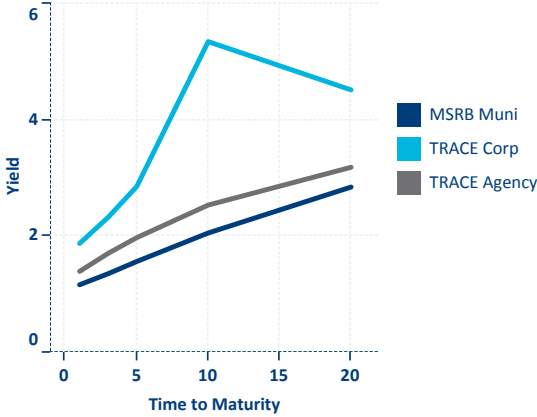
Average Yield, % for October 2017

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.2	1.4	1.6	2.1	2.9	13
TRACE Corp	1.9	2.3	2.9	5.4	4.5	4
TRACE Agency	1.4	1.7	2.0	2.5	3.2	3
CD	1.4	1.9	2.4	2.8	3.2	1
Treasury	1.1	1.6	2.0	2.3	2.8	1

Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	1.6	1.9	2.2	3.1		4
		A	1.6	2.1	2.6	3.2	4.0	4
		BBB	1.8	2.4	2.8	3.5	3.9	5
		HY	2.2	2.5	3.6	8.8	6.7	4
	Non-Financial	AAA	1.8	2.1	2.1	3.0	3.6	3
		AA	1.4	1.9	2.6	3.0	3.6	2
		A	1.4	2.1	2.6	3.2	4.1	3
		BBB	1.7	2.5	3.2	4.3	5.6	8
		HY	31.6	7.0	4.4	10.3	11.8	9
MSRB Muni	GO	AAA	1.0	1.2	1.4	1.8	2.6	9
		AA	1.1	1.2	1.4	2.0	2.9	12
		A	1.3	1.6	1.7	2.4	3.1	9
		BBB	1.7	2.3	2.9	3.3	3.6	10
	Revenue	HY	7.6	8.7	7.2	6.5	4.3	7
		AAA	1.1	1.2	1.4	1.9	2.6	10
		AA	1.1	1.2	1.4	1.9	2.7	13
		A	1.3	1.5	1.8	2.2	2.9	15
		BBB	1.4	2.0	2.4	2.8	3.4	17
		HY	10.7	12.6	11.3	7.4	7.4	14

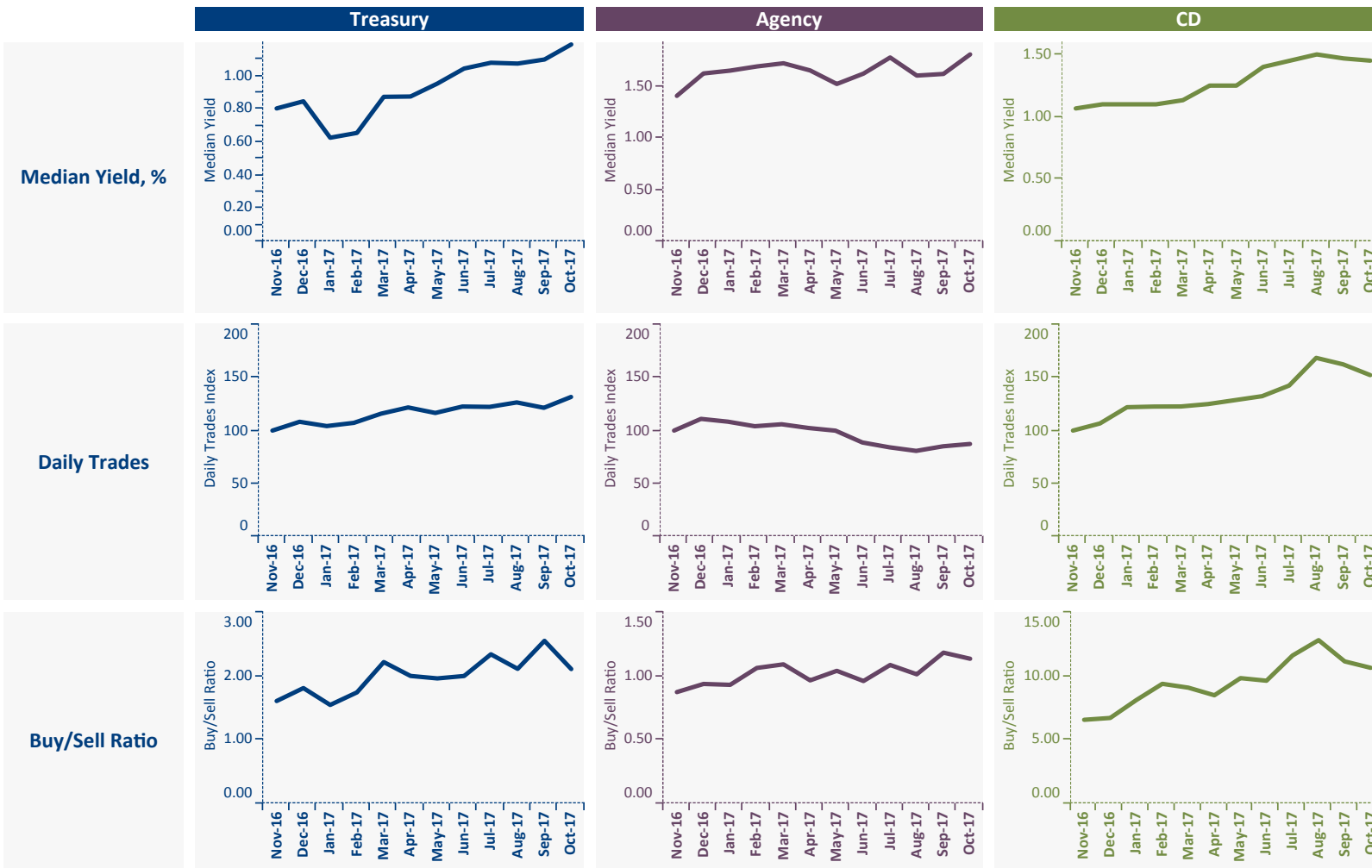
Average Yield, %



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



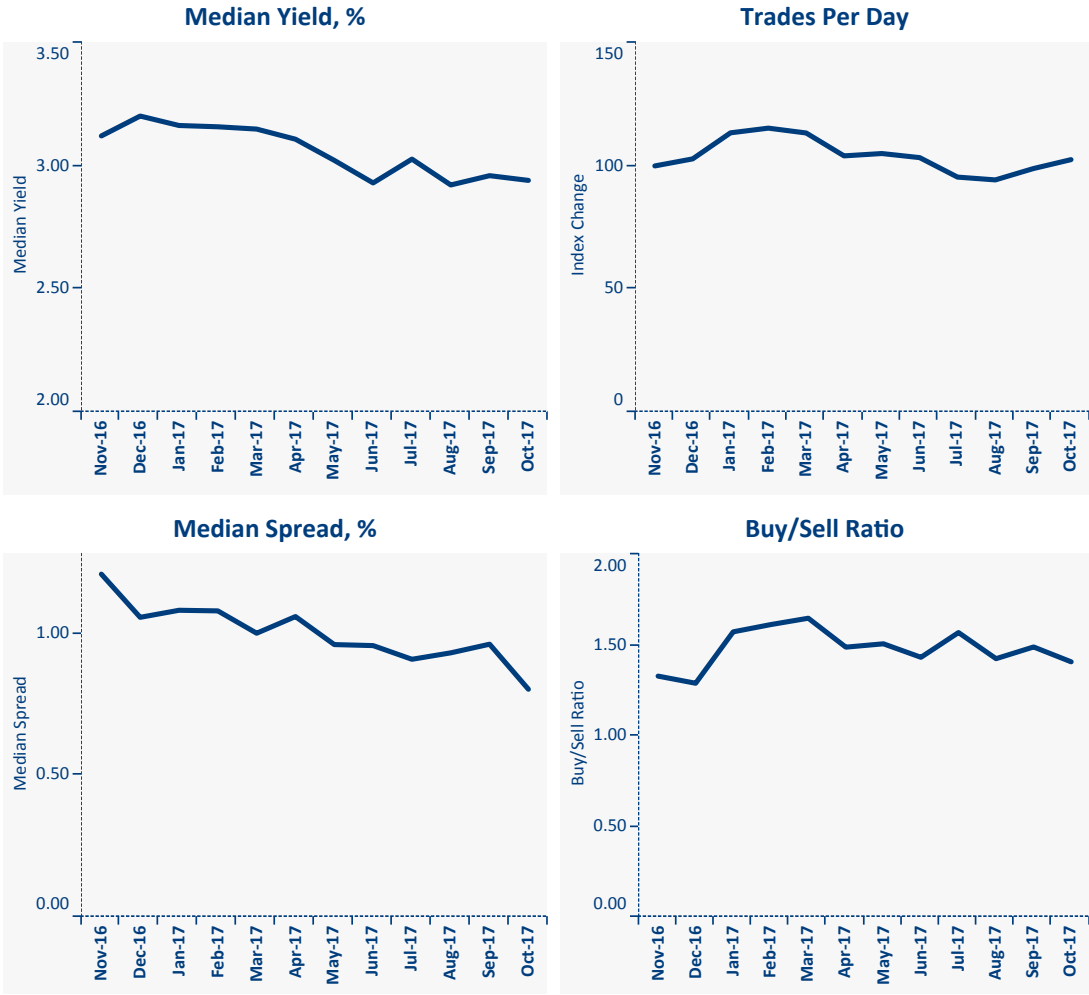
Daily Trades: First month = 100

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

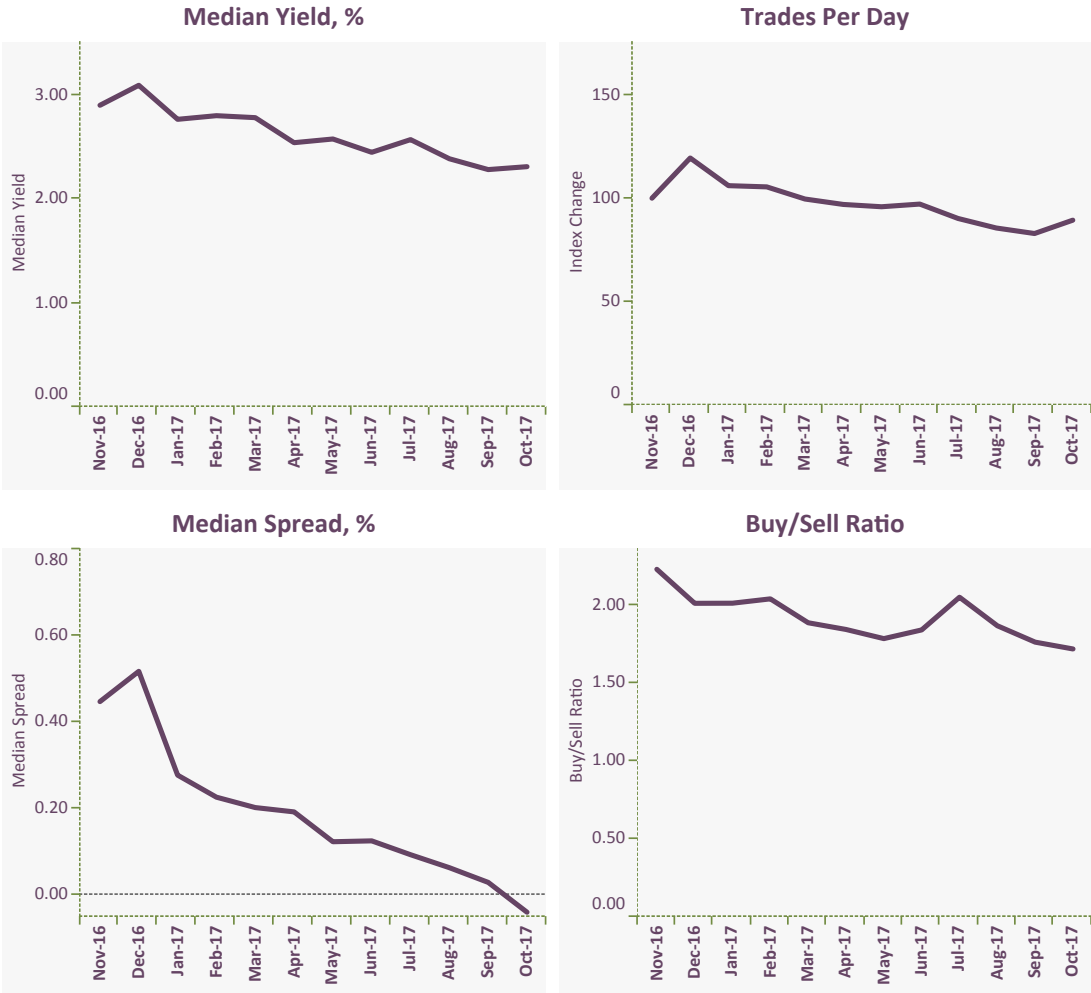


Daily Trades: First month = 100
 Source: TRACE and Tradeweb Direct
 -Based on odd-lot customer transactions (<100M) reported in TRACE.
 -Median yields and spreads are based on all odd-lot customer buy transactions...

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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

October 2017

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	GS	GOLDMAN SACHS	BBB	818	3.3%	14,410	1.4	290	1.7	2.2	2.7	3.4	4.2
2	T	AT&T	BBB	90	3.2%	13,989	2.3	249	1.8	2.2	2.7	3.7	4.7
3	JPM	JP MORGAN CHASE	BBB	502	3.1%	13,706	1.5	275	1.7	2.1	2.6	3.2	3.7
4	BAC	BANK OF AMERICA	BBB	424	3.0%	12,981	1.1	255	1.8	2.2	2.7	3.4	3.9
5	C	CITIGROUP	BBB	365	2.4%	10,668	1.6	243	1.7	2.2	2.8	3.5	3.5
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	361	2.1%	9,028	0.8	167	1.5	2.0	2.4	3.3	3.8
7	WFC	WELLS FARGO	A	202	1.8%	7,854	1.4	171	1.8	2.2	2.6	3.3	2.8
8	MS	MORGAN STANLEY	BBB	665	1.8%	7,744	1.1	167	1.6	2.2	2.7	3.3	4.0
9	VZ	VERIZON	BBB	93	1.6%	6,851	1.9	143		2.1	2.6	3.4	4.3
10	AAPL	APPLE INC	AA	51	1.2%	5,102	1.4	106	1.4	2.0	2.3	2.9	3.5
11	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	56	1.1%	4,845	3.3	122	1.8	2.3	3.1	3.7	4.7
12	BRK	BERKSHIRE HATHAWAY	A	159	1.0%	4,523	1.1	104	1.5	2.0	2.4	3.2	3.9
13	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	44	0.9%	4,130	1.3	76	1.7	2.0	2.5	3.1	3.9
14	PTRB	PETROBRAS	BB	28	0.9%	3,752	1.1	145			4.4	5.6	6.6
15	PBI	PITNEY BOWES	BBB	9	0.7%	3,196	1.4	65	2.3	3.8	4.9		5.3
16	F	FORD	BBB	207	0.7%	3,142	1.7	70	1.6	2.4	2.9	3.7	
17	VIA	VIACOM INC NEW	BBB	33	0.7%	3,058	4.3	68		2.6	2.9	3.5	5.7
18	CTL	CENTURYLINK	BB	29	0.7%	3,023	1.4	66		4.5	4.9	6.9	7.8
19	MSFT	MICROSOFT CORP	AAA	42	0.7%	2,996	1.6	67	1.4	1.7	2.2	2.8	3.3
20	GNW	GENWORTH	B	9	0.7%	2,979	1.7	47	7.4	8.9	8.1		8.3

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

October 2017

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	RAD	RITE AID CORP	C	4	0.5%	2,126	1,881	245	7.7	30		5.2		10.2	
2	TSLA	TESLA MTRS INC	N/R	6	0.2%	981	868	113	7.7	29	2.7	4.2			
3	CBL	CBL & ASSOCS LTD PARTNERSHIP	BBB	3	0.2%	1,020	884	136	6.5	23				5.6	
4	CHRC	BAYSIDE CMNTY CHURCH SARASOTA INC BRADEN	N/R	182	0.3%	1,367	1,170	197	5.9	10				6.1	7.0
5	XRX	XEROX CORP	BBB	12	0.4%	1,905	1,556	349	4.5	42	1.7	3.0	3.6		5.4
6	VIA	VIACOM INC NEW	BBB	33	0.7%	3,058	2,475	583	4.3	68		2.6	2.9	3.5	5.7
7	M	MACYS RETAIL HLDGS INC	BBB	19	0.4%	1,711	1,380	331	4.2	38		3.1	4.0	5.8	6.1
8	STI	SUNTRUST BKS INC	BBB	20	0.4%	1,718	1,375	343	4.0	25	1.7	2.0	2.5	3.6	
9	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	56	1.1%	4,845	3,729	1,116	3.3	122	1.8	2.3	3.1	3.7	4.7
10	NBR	NABORS INDS INC	BB	6	0.2%	978	737	241	3.1	21		4.7	5.6		
11	ABT	ABBOTT LABS	BBB	24	0.3%	1,300	954	346	2.8	28	1.7	2.1	2.5	3.3	3.9
12	TEVA	TEVA PHARMACEUTICAL FIN CO B V	BBB	12	0.6%	2,464	1,778	686	2.6	54	1.8	3.3	3.7	4.3	5.6
13	BBBY	BED BATH & BEYOND INC	BBB	3	0.2%	997	702	295	2.4	23					5.5
14	PEMX	PETROLEOS MEXICANOS	BBB	37	0.6%	2,476	1,737	739	2.4	89	2.2	2.9	3.9	4.6	6.1
15	T	AT&T	BBB	90	3.2%	13,989	9,783	4,206	2.3	249	1.8	2.2	2.7	3.7	4.7
16	COF	CAPITAL ONE FINL CORP	BBB	30	0.3%	1,422	984	438	2.3	34	1.9	2.3	2.6	3.6	
17	AMGN	AMGEN INC	A	32	0.4%	1,714	1,176	538	2.2	41	1.7	2.1	2.5	3.0	4.1
18	BNS	BANK NOVA SCOTIA B C	A	77	0.3%	1,161	790	371	2.1	28	1.6	2.2	2.5	3.6	
19	UTX	UNITED TECHNOLOGIES CORP	A	25	0.2%	977	654	323	2.0	25	1.6	1.9	2.4	3.1	4.0
20	HTZ	HERTZ CORP	B	7	0.3%	1,242	818	424	1.9	29	6.5	6.0	6.8	7.6	

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

October 2017

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	VALEF	Null	BBB	9	0.2%	962	282	680	0.41	36		3.0	3.3	4.3	5.5
2	AA	ALCOA	BB	10	0.3%	1,220	416	804	0.52	27		3.0	3.6	4.4	5.4
3	BMO	BANK MONTREAL MEDIUM TERM SR NTS BOOK EN	A	49	0.2%	1,044	361	683	0.53	26	1.7	2.3	2.5		3.5
4	FCX	FREEPORT-MCMORAN COPPER & GOLD INC	B	17	0.2%	1,027	361	666	0.54	27		3.1	4.0	5.5	5.8
5	RIG	TRANSOCEAN INC	B	15	0.4%	1,552	564	988	0.57	33	3.1		6.5	7.0	8.8
6	RY	ROYAL BANK OF CANADA	A	265	0.5%	2,063	856	1,207	0.71	42	1.8	2.1	2.3	3.6	3.8
7	WIN	WINDSTREAM CORP	B	8	0.3%	1,159	498	661	0.75	19		15.4	14.0		
8	CS	CREDIT SUISSE	N/R	352	0.4%	1,734	753	981	0.77	32	12.7	2.4	2.9	3.6	
9	EDP	ENTERPRISE PRODS OPER LLC	BBB	30	0.2%	1,084	475	609	0.78	24	2.0	2.2	2.7	3.3	4.4
10	FTR	FRONTIER COMMUNICATIONS CORP	B	21	0.6%	2,539	1,146	1,393	0.82	43	6.8		14.0	14.5	13.3
11	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	361	2.1%	9,028	4,076	4,952	0.82	167	2.0	2.1	2.6	3.5	3.9
12	HBC	HSBC	N/R	496	0.7%	2,973	1,367	1,606	0.85	89	2.3	2.5	2.6	3.7	4.0
13	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	68	0.4%	1,680	801	879	0.91	37	2.1	2.5	3.0	3.5	5.2
14	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	A	22	0.4%	1,603	769	834	0.92	28	1.7	2.0	2.4	3.1	
15	MET	METLIFE	A	23	0.3%	1,500	757	743	1.02	31	1.8	2.3	2.7	3.0	3.9
16	RDS	SHELL	AA	32	0.3%	1,435	732	703	1.04	34	1.7	2.0	2.4	2.9	3.9
17	PTRB	PETROBRAS	BB	28	0.9%	3,752	1,926	1,826	1.05	145	2.9	3.9	4.5	5.7	6.7
18	ALLY	ALLY FINANCIAL	BB	51	0.3%	1,095	563	532	1.06	23	2.6	3.0	3.3	4.3	
19	MS	MORGAN STANLEY	BBB	665	1.8%	7,744	3,991	3,753	1.06	167	1.9	2.5	2.9	3.4	4.1
20	BRK	BERKSHIRE HATHAWAY	A	159	1.0%	4,523	2,342	2,181	1.07	104	1.6	2.1	2.5	3.0	3.9

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

October 2017

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	N/R	5.350	2,348	224	2,572	17			25.0	24.9
2	RAD	RITE AID CORP	Feb-27	C	7.700	1,490	91	1,581	18	10.2	10.4	85.0	84.1
3	JPM	JP MORGAN CHASE	Null	BBB	6.750	1,280	234	1,514	12			114.6	114.6
4	GNW	GENWORTH	Sep-21	B	7.625	1,119	270	1,389	18	9.0	9.1	95.6	95.2
5	GM	GENERAL MOTORS FINANCIAL COMPANY INC	Null	BB	5.750	991	40	1,031	29			106.0	104.5
6	STI	SUNTRUST BKS INC	Null	BBB	5.625	976	54	1,030	8			104.8	104.4
7	TSLA	TESLA MTRS INC	Aug-25	N/R	5.300	844	40	884	27			98.7	97.3
8	PBI	PITNEY BOWES	Mar-24	BBB	4.625	839	858	1,697	34	5.2	5.8	96.8	93.7
9	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	A	5.000	690	860	1,550	20			105.8	105.1
10	MCFH	HARLAND CLARKE HLDGS CORP	Feb-21	C	5.750	672	61	733	9	9.9	10.2	88.5	87.6
11	T	AT&T	May-25	BBB	3.400	643	233	876	18	3.5	3.6	99.4	98.8
12	SVU	ALBERTSONS INC	Nov-22	B	7.750	629	27	656	11	8.8	9.1	95.9	94.5
13	JPM	JP MORGAN CHASE	Null	BBB	5.300	574	156	730	12			105.3	104.3
14	T	AT&T	Aug-27	BBB	3.900	550	107	657	14	3.8	3.9	100.5	100.0
15	T	AT&T	Aug-24	BBB	3.400	527	82	609	12	3.3	3.4	100.6	100.1
16	ONNN	ON SEMICONDUCTOR CORP	Dec-20	BB	1.000	515	23	538	3			121.5	123.0
17	VIA	VIACOM INC NEW	Feb-57	BB	5.875	509	49	558	11			99.0	98.8
18	NUVA	NUVASIVE INC	Mar-21	N/R	2.250	506	28	534	4			113.1	113.2
19	OAS	OASIS PETE INC NEW	Sep-23	BB	2.625	504	24	528	3	1.4	1.7	106.7	105.2
20	T	AT&T	Feb-22	BBB	3.000	497	350	847	8	2.7	2.8	101.3	101.0

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

October 2017

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	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	A	5.000	690	860	1,550	20			105.8	105.1
2	PBI	PITNEY BOWES	Mar-24	BBB	4.625	839	858	1,697	34	5.2	5.8	96.8	93.7
3	BAC	BANK OF AMERICA	Null	BB	6.100	189	506	695	10			111.8	110.5
4	DEPO	DEPOMED INC	Sep-21	N/R	2.500	9	504	513	1	11.0	12.1	73.9	71.1
5	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Feb-19	A	2.150	382	473	855	4	1.6	1.7	100.7	100.6
6	T	AT&T	Jun-20	BBB	2.450	164	447	611	9	2.1	2.3	100.8	100.5
7	JPM	JP MORGAN CHASE	Null	BBB	7.900	216	420	636	16			103.2	103.0
8	TLN	TALEN ENERGY CORP	Dec-21	B	4.600	81	404	485	8		9.5	88.6	86.9
9	BAC	BANK OF AMERICA	Null	BB	6.300	88	403	491	9			114.8	114.6
10	PTRB	PETROBRAS	May-23	BB	4.375	211	351	562	20	4.5	4.6	99.6	99.1
11	T	AT&T	Feb-22	BBB	3.000	497	350	847	8	2.7	2.8	101.3	101.0
12	RIG	TRANSOCEAN INC	Apr-31	B	7.500	167	316	483	9	8.5	8.7	92.3	90.3
13	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	415	314	729	18	6.1	6.2	96.8	95.0
14	PM	PHILIP MORRIS INTL INC	May-18	A	5.650	233	312	545	4	1.5	1.6	102.4	102.3
15	ETN	EATON CORP	Nov-17	BBB	1.500	5	307	312	3	1.4	1.6	100.0	100.0
16	AAPL	APPLE INC	May-23	AA	2.400	286	306	592	12	2.4	2.5	100.0	99.7
17	WFC	WELLS FARGO	Jun-26	A	4.100	294	299	593	9	3.5	3.5	104.4	104.3
18	VZ	VERIZON	Nov-24	BBB	3.500	427	297	724	10	3.1	3.2	102.3	102.0
19	HOTT	Null	Jan-23	B	6.375	85	287	372	11		3.0	101.6	116.5
20	HFC	FRONTIER OIL CORP	Apr-26	BBB	5.875	115	284	399	6	4.2	4.4	111.2	110.3

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.)

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