

Market Transparency Report

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

February 2017

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 February 2017

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	4	-4.1%	0.1
CD	0	0.5%	1.3
Corp	-1	1.6%	0.0
Municipal	3	-0.6%	0.0
Treasury	3	2.9%	0.2

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

Yield Matrix

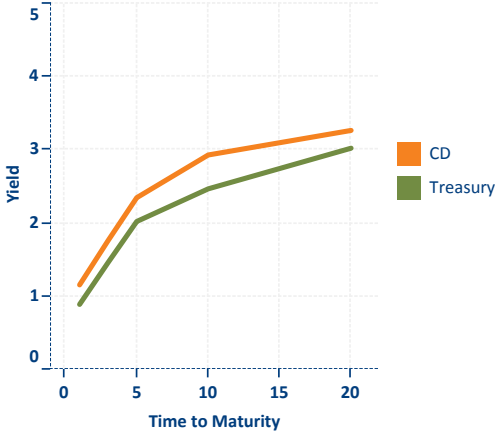
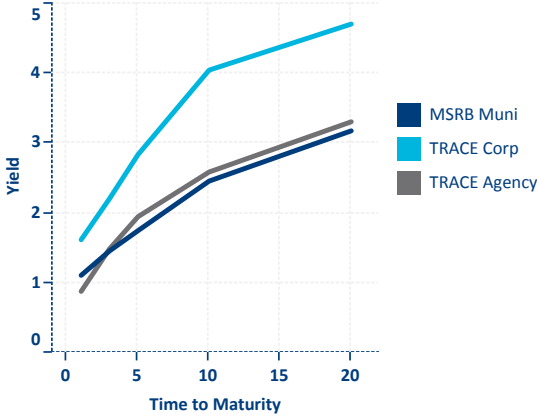
Average Yield, % for February 2017

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.1	1.5	1.8	2.5	3.2	13
TRACE Corp	1.6	2.2	2.8	4.1	4.7	4
TRACE Agency	0.9	1.5	2.0	2.6	3.3	3
CD	1.2	1.8	2.4	2.9	3.3	1
Treasury	0.9	1.5	2.0	2.5	3.0	0

Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	1.3	2.0	2.4			3
		A	1.3	2.1	2.7	3.5	4.4	4
		BBB	1.5	2.4	3.1	3.9	4.4	4
		HY	1.9	2.9	4.0	4.2	7.4	4
	Non-Financial	AAA	1.8	1.9	3.3	4.0		4
		AA	1.2	1.7	2.2	3.9	4.0	3
		A	1.4	2.1	2.6	3.4	4.4	3
		BBB	1.6	2.2	3.5	4.4	6.0	6
		HY	6.3	5.3	4.9	8.0	10.0	9
MSRB Muni	GO	AAA	0.9	1.2	1.5	2.2	3.1	13
		AA	1.0	1.3	1.7	2.4	3.2	11
		A	1.1	1.5	1.9	2.6	3.4	11
		BBB	2.0	3.0	3.8	4.2	5.0	13
	Revenue	HY	17.9	5.2	3.1	6.4	6.8	7
		AAA	0.9	1.3	1.6	2.2	3.1	11
		AA	1.0	1.3	1.6	2.3	3.0	14
		A	1.1	1.5	1.9	2.5	3.3	17
		BBB	1.5	2.2	2.5	3.2	3.8	19
		HY	24.5	24.5	14.7	8.8	8.5	17

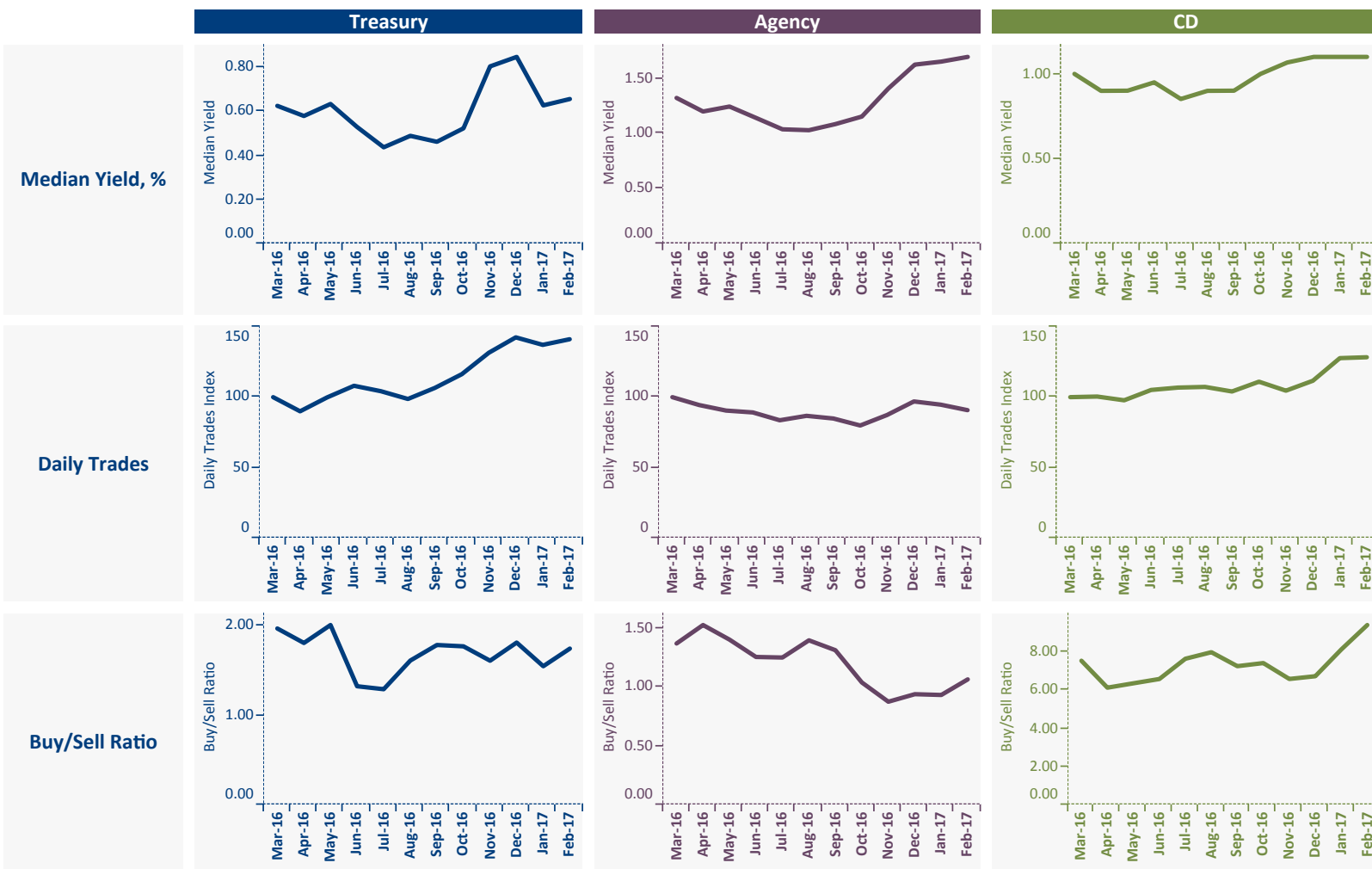
Average Yield, %



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



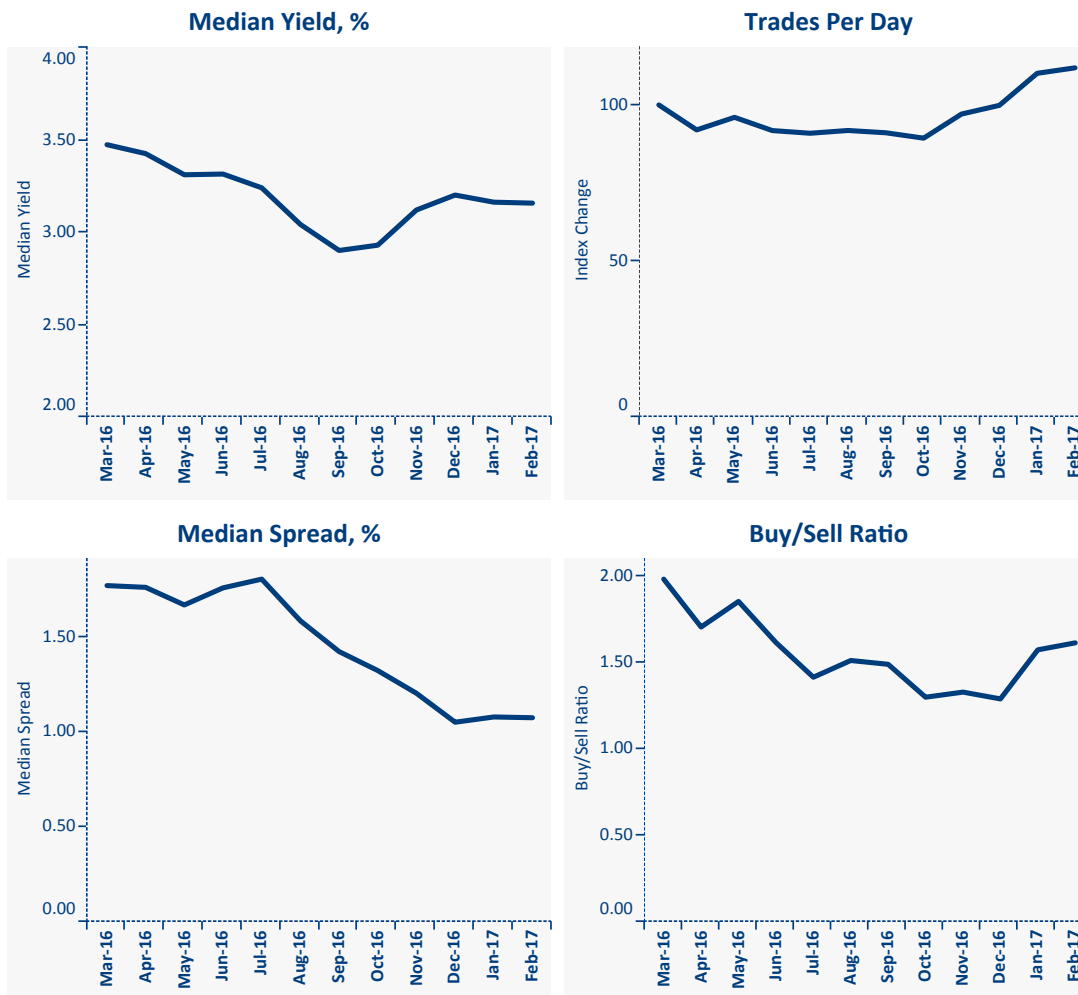
Daily Trades: First month = 100

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



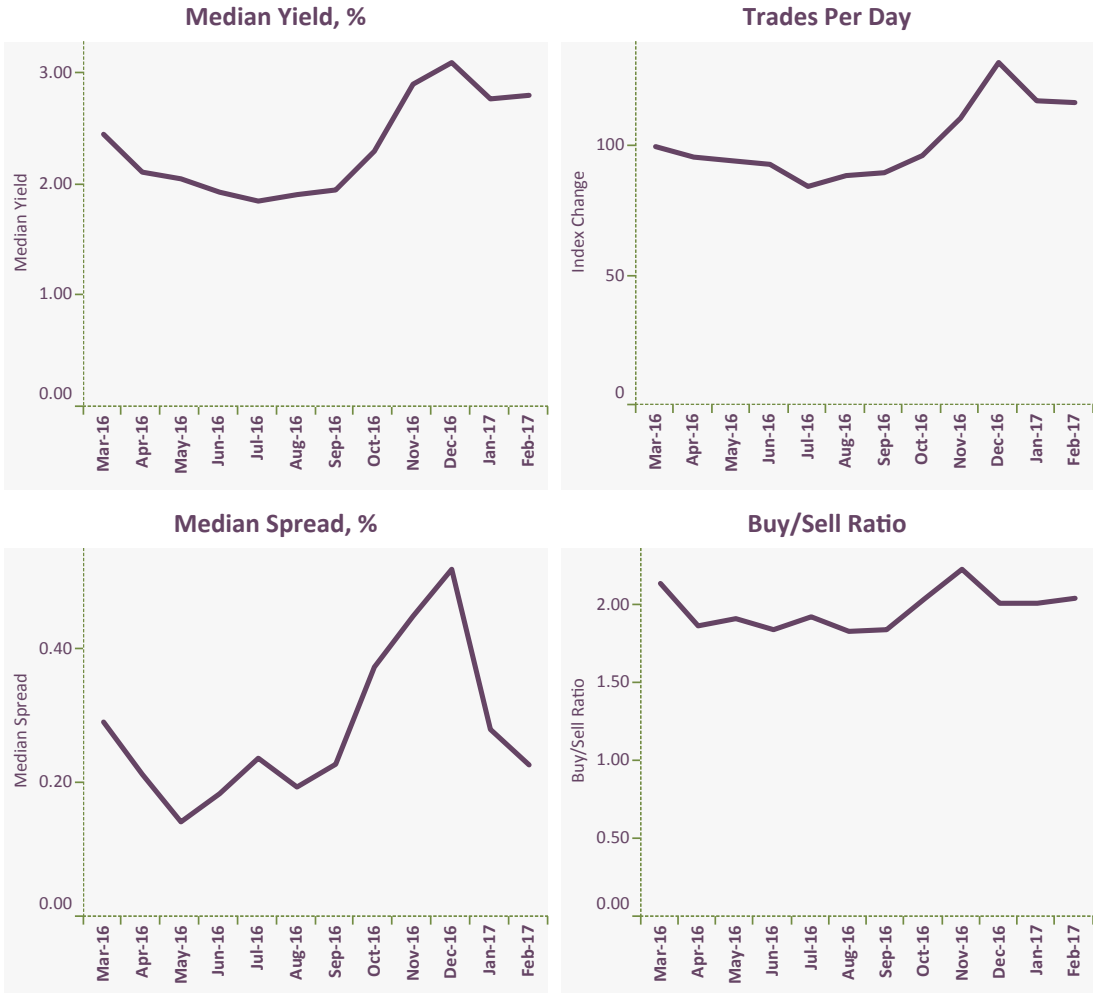
Daily Trades: First month = 100

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

February 2017

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	785	3.2%	14,347	1.6	298	1.5	2.2	2.9	3.6	4.6
2	BAC	BANK OF AMERICA	BBB	462	2.9%	13,105	1.5	256	1.5	2.3	3.0	3.9	4.0
3	JPM	JP MORGAN CHASE	A	478	2.9%	12,908	1.9	294	1.4	2.1	2.7	3.6	3.6
4	T	AT&T	BBB	83	2.9%	12,860	3.5	259	1.4	2.4	3.1	3.9	5.0
5	C	CITIGROUP	BBB	316	2.4%	10,763	1.9	237	1.5	2.2	2.8	4.0	3.8
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	375	2.3%	10,343	1.4	201	1.2	1.9	2.5	3.4	3.9
7	WFC	WELLS FARGO	A	211	2.1%	9,255	1.7	210	1.3	2.2	2.7	3.5	3.7
8	MS	MORGAN STANLEY	BBB	660	1.7%	7,562	1.2	170	1.5	2.2	2.8	3.7	4.1
9	VZ	VERIZON	BBB	66	1.5%	6,526	1.5	127	1.2	2.3	2.8	3.6	4.7
10	AAPL	APPLE INC	AA	44	1.3%	5,850	2.1	122	1.2	1.8	2.3	3.1	3.9
11	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	39	1.0%	4,496	5.1	108	1.8	2.3	2.8	4.0	4.9
12	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	44	1.0%	4,346	1.8	75	1.3	1.7	2.8	3.5	4.2
13	BRK	BERKSHIRE HATHAWAY	AA	157	1.0%	4,333	1.5	99	1.3	1.9	2.4	3.5	4.2
14	AXP	AMERICAN EXPRESS	BBB	35	0.9%	4,060	2.3	74	1.5	2.0	2.6	3.3	4.9
15	MSFT	MICROSOFT CORP	AAA	42	0.9%	3,933	2.8	89	0.9	1.7	2.3	3.1	3.8
16	CMCS	COMCAST	A	43	0.8%	3,459	1.8	68	1.2	2.0	2.7	3.3	4.1
17	FTR	FRONTIER COMMUNICATIONS CORP	B	23	0.8%	3,440	1.2	68		5.8	7.9	10.2	9.9
18	HBC	HSBC	N/R	488	0.7%	3,314	1.5	70	1.4	3.1	2.9	3.5	4.6
19	F	FORD	BBB	177	0.7%	3,191	2.3	72	1.6	2.1	3.0	4.0	
20	CTL	CENTURYLINK	BB	29	0.7%	3,159	1.4	68		3.3	4.6	6.2	7.1

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

February 2017

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	MX	MAGNACHIP SEMICONDUCTOR CORP NEW	C	1	0.2%	996	984	12	82.0	11			9.5		
2	HTZ	HERTZ CORP	B	7	0.7%	2,969	2,802	167	16.8	54	2.8	7.4	7.3	6.8	
3	AOI	ALLIANCE ONE INTL INC	C	2	0.3%	1,248	1,164	84	13.9	13			14.0		
4	KSS	KOHL'S CORP	BBB	8	0.5%	2,188	1,903	285	6.7	49			3.8	4.8	6.8
5	UA	UNDER ARMOR	BBB	1	0.3%	1,304	1,106	198	5.6	16				4.4	
6	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	39	1.0%	4,496	3,759	737	5.1	108	1.8	2.3	2.8	4.0	4.9
7	FITB	FIFTH THIRD BANCORP	BBB	15	0.3%	1,484	1,239	245	5.1	21	1.6	2.3	2.6	3.6	
8	PBI	PITNEY BOWES	BBB	7	0.3%	1,446	1,194	252	4.7	31	1.8	2.4	3.6		5.3
9	M	MACYS RETAIL HLDGS INC	BBB	21	0.6%	2,555	2,068	487	4.3	60		3.1	3.9	5.9	5.6
10	VIA	VIACOM INC NEW	BBB	36	0.7%	3,031	2,423	608	4.0	73	1.6	2.3	3.2	3.7	5.7
11	ABT	ABBOTT LABS	BBB	19	0.3%	1,223	964	259	3.7	29		2.1	2.9	3.7	4.6
12	ABBV	ABBVIE INC	BBB	14	0.4%	1,646	1,294	352	3.7	35	1.6	2.3	3.0	3.7	4.5
13	T	AT&T	BBB	83	2.9%	12,860	9,976	2,884	3.5	259	1.4	2.4	3.1	3.9	5.0
14	ESRX	EXPRESS SCRIPTS HLDG CO	BBB	14	0.4%	1,787	1,352	435	3.1	30		2.4	3.0	4.1	
15	AMGN	AMGEN INC	A	30	0.5%	2,219	1,677	542	3.1	46	1.5	1.8	2.7	3.3	4.6
16	RCII	RENT A CTR INC NEW	B	2	0.3%	1,234	929	305	3.1	15		11.6	11.2		
17	DB	DEUTSCHE BANK	BBB	118	0.5%	2,362	1,753	609	2.9	50	1.8	2.6	3.3	4.1	
18	MSFT	MICROSOFT CORP	AAA	42	0.9%	3,933	2,896	1,037	2.8	89	0.9	1.7	2.3	3.1	3.8
19	XRX	XEROX CORP	BBB	13	0.3%	1,233	899	334	2.7	25	1.9	2.7	3.3		6.4
20	STX	SEAGATE HDD CAYMAN	BBB	8	0.5%	2,405	1,744	661	2.6	53				5.3	6.5

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

February 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	NRP	Natural Resources Partners	C	1	0.3%	1,495	217	1,278	0.17	16					
2	CLF	CLIFFS NAT RES INC	C	7	0.3%	1,136	175	961	0.18	28		5.0	5.6		7.5
3	VALE	VALE OVERSEAS LTD	BB	10	0.3%	1,326	456	870	0.52	50		3.0	3.9	5.1	6.5
4	SFTBF	SPRINT	B	16	0.2%	1,095	378	717	0.53	28	2.2	4.2	5.6	6.4	7.0
5	ACT	ALLERGAN	BBB	17	0.3%	1,419	519	900	0.58	19	1.8	2.4	3.2	3.8	4.5
6	DELL	DELL	BB	9	0.3%	1,293	533	760	0.70	33	2.3	3.5	3.8	6.4	6.9
7	EDP	ENTERPRISE PRODS OPER LLC	BBB	32	0.2%	1,022	440	582	0.76	21	1.8	2.4	2.8	3.6	4.8
8	PTRB	PETROBRAS	B	9	0.3%	1,214	540	674	0.80	42	2.8	5.1			7.6
9	BNPQF	BNP PARIBAS SA	BB	111	0.3%	1,369	611	758	0.81	32	1.8	3.0	5.1		
10	BCS	BARCLAYS	N/R	398	0.4%	1,674	759	915	0.83	33	2.7	3.2	4.0	4.2	
11	INTC	INTEL CORP	A	18	0.2%	1,021	480	541	0.89	24	1.3	2.0	2.4	3.1	3.8
12	AA	ALCOA	BB	12	0.3%	1,427	677	750	0.90	32	2.3	3.3	3.6	5.1	5.9
13	WMT	WAL-MART	AA	24	0.3%	1,266	611	655	0.93	30	1.3	1.9	2.1	3.2	4.1
14	CS	CREDIT SUISSE	N/R	371	0.4%	1,891	950	941	1.01	33	2.2	2.7	3.6	4.1	
15	IEP	ICAHN ENTERPRISES	BB	8	0.3%	1,488	749	739	1.01	38		4.4	5.5		
16	RIG	TRANSOCEAN INC	B	14	0.7%	2,911	1,483	1,428	1.04	55	4.7	6.3	7.5	8.1	9.0
17	PBR	PETROBRAS	B	14	0.5%	2,354	1,220	1,134	1.08	89			5.2	6.7	
18	RY	ROYAL BANK OF CANADA	BBB	254	0.5%	2,090	1,100	990	1.11	43	1.6	2.1	2.4	3.8	4.1
19	CSCO	CISCO	AA	27	0.4%	1,801	951	850	1.12	36	1.3	1.8	2.4	3.1	4.0
20	MCD	MCDONALDS	BBB	24	0.3%	1,306	694	612	1.13	28	1.6	2.2	2.6	3.5	4.4

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

February 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	Dec-49	A	5.000	2,440	705	3,145	50			104.8	104.6
2	AOI	ALLIANCE ONE INTL INC	Jul-21	C	9.875	1,162	84	1,246	13	14.0	14.3	86.7	85.9
3	HTZ	HERTZ CORP	Jan-21	B	7.375	1,141	24	1,165	16	7.6	7.6	99.3	99.3
4	UA	UNDER ARMOR	Jun-26	BBB	3.250	1,106	198	1,304	16	4.4	4.4	91.2	91.2
5	MX	MAGNACHIP SEMICONDUCTOR CORP NEW	Jul-21	C	6.625	984	12	996	11	9.5	9.5	89.8	89.9
6	AXP	AMERICAN EXPRESS	Dec-49	BBB	5.200	975	103	1,078	10			102.1	101.1
7	HTZ	HERTZ CORP	Oct-22	B	6.250	890	68	958	20	7.3	7.6	95.4	93.7
8	BAC	BANK OF AMERICA	May-49	BB	8.125	875	143	1,018	11			105.0	104.4
9	T	AT&T	Feb-22	BBB	3.000	866	275	1,141	15	3.1	3.2	99.6	99.2
10	RCII	RENT A CTR INC NEW	Nov-20	B	6.625	853	267	1,120	13	11.6	11.8	85.2	84.6
11	FITB	FIFTH THIRD BANCORP	Sep-49	BBB	4.900	815	90	905	7			98.0	97.5
12	RIG	TRANSOCEAN INC	Apr-31	B	7.500	815	180	995	15	8.7	8.9	90.7	89.2
13	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Feb-19	A	2.150	726	250	976	5	1.7	1.7	100.9	100.8
14	VZ	VERIZON	Nov-24	BBB	3.500	675	202	877	13	3.5	3.6	99.7	99.5
15	GSVC	GSV CAPITAL CORP	Sep-18	N/R	5.250	660		660	12	5.0		100.4	
16	T	AT&T	Mar-27	BBB	4.250	659	20	679	15	4.0	4.2	102.0	100.7
17	T	AT&T	Jun-22	BBB	3.000	641	82	723	16	3.1	3.2	99.7	98.8
18	GM	GENERAL MOTORS FINANCIAL COMPANY INC	Mar-21	BBB	4.200	640	10	650	11	2.8	3.0	105.1	104.5
19	T	AT&T	May-25	BBB	3.400	606	168	774	14	3.8	4.0	97.1	95.7
20	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	579	258	837	17	6.5	6.8	91.9	88.9

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

February 2017

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	NRP	Natural Resources Partners	Oct-18	C	9.125	217	1,278	1,495	16	8.1	6.8	100.6	101.3
2	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	A	5.000	2,440	705	3,145	50			104.8	104.6
3	VZ	VERIZON	Jun-19	BBB	2.550	6	577	583	8	1.6	1.7	102.2	102.0
4	IEP	ICAHN ENTERPRISES	Feb-22	BB	5.875	325	396	721	19	4.8	5.5	102.8	101.1
5	FTR	FRONTIER COMMUNICATIONS CORP	Apr-20	B	8.500	89	387	476	9	5.8	5.8	107.8	107.8
6	ACT	ALLERGAN	Mar-17	BBB	1.850	6	373	379	3	0.8	0.9	100.1	100.1
7	RIG	TRANSOCEAN INC	Jun-28	B	7.000	13	338	351	6	7.6	8.0	95.2	92.5
8	AAPL	APPLE INC	May-23	AA	2.400	383	329	712	16	2.7	2.8	98.4	98.0
9	WFC	WELLS FARGO	Feb-49	BBB	7.980	215	307	522	12			105.4	105.1
10	PBR	PETROBRAS	May-23	B	4.375	266	295	561	19	5.5	5.7	94.0	93.3
11	PTRB	PETROBRAS	Jan-21	B	5.375	206	276	482	17	4.9	5.1	101.7	101.1
12	T	AT&T	Feb-22	BBB	3.000	866	275	1,141	15	3.1	3.2	99.6	99.2
13	WFC	WELLS FARGO	Mar-22	A	3.500	249	272	521	9	2.7	2.8	103.7	103.4
14	BNPQF	BNP PARIBAS SA	Dec-22	BB	6.125	64	268	332	5	4.9	5.1	106.3	105.1
15	RCII	RENT A CTR INC NEW	Nov-20	B	6.625	853	267	1,120	13	11.6	11.8	85.2	84.6
16	VNR	Vanguard Natural Resources, LLC	Apr-20	D	7.875	28	265	293	5	16.9	17.9	77.5	75.3
17	VZ	VERIZON	Sep-23	BBB	5.150	346	263	609	12	3.4	3.5	110.4	109.9
18	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	579	258	837	17	6.5	6.8	91.9	88.9
19	C	CITIGROUP	May-49	BB	6.300	251	254	505	13			105.0	104.2
20	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-17	AA	5.250	147	253	400	8	1.1	1.3	103.3	103.1

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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