

Market Transparency Report

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

May 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 May 2017

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-13	-2.5%	0.1
CD	0	3.0%	1.3
Corp	-9	0.9%	0.0
Municipal	4	-1.1%	-0.1
Treasury	8	-4.3%	0.0

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

Yield Matrix

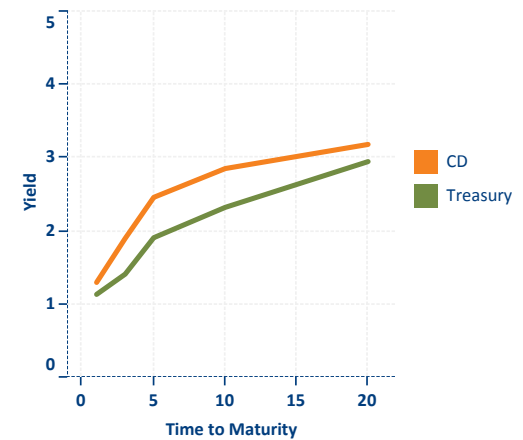
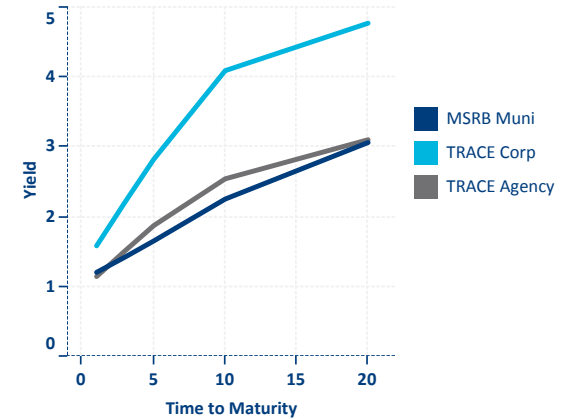
Average Yield, % for May 2017

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.2	1.4	1.7	2.3	3.1	13
TRACE Corp	1.6	2.2	2.8	4.1	4.8	4
TRACE Agency	1.2	1.5	1.9	2.6	3.1	3
CD	1.3	1.9	2.5	2.9	3.2	1
Treasury	1.1	1.4	1.9	2.3	3.0	0

Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	1.3	1.9	2.2	3.2		4
		A	1.4	2.1	2.6	3.3	4.2	4
		BBB	1.6	2.4	3.0	3.8	4.1	4
		HY	2.0	3.0	4.1		7.5	5
		AAA		1.6	2.0	3.2	3.8	3
	Non-Financial	AA	1.4	1.8	3.0	3.4	3.9	3
		A	1.3	2.1	2.5	3.4	4.1	3
		BBB	1.6	2.4	3.3	4.4	5.8	8
		HY	13.4	5.1	4.3	8.9	11.7	9
MSRB Muni	GO	AAA	1.0	1.1	1.3	2.0	2.9	10
		AA	1.0	1.2	1.5	2.2	3.0	12
		A	1.1	1.3	1.6	2.2	3.3	13
		BBB	2.0	2.7	3.2	3.8	4.3	10
		HY	30.8	4.8	1.9	4.2	4.5	6
	Revenue	AAA	1.0	1.1	1.4	2.0	2.8	10
		AA	1.0	1.2	1.5	2.1	2.9	14
		A	1.1	1.4	1.6	2.3	3.0	17
		BBB	1.7	2.3	2.6	3.3	3.6	17
		HY	20.5	30.1	21.9	12.0	11.4	13

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.

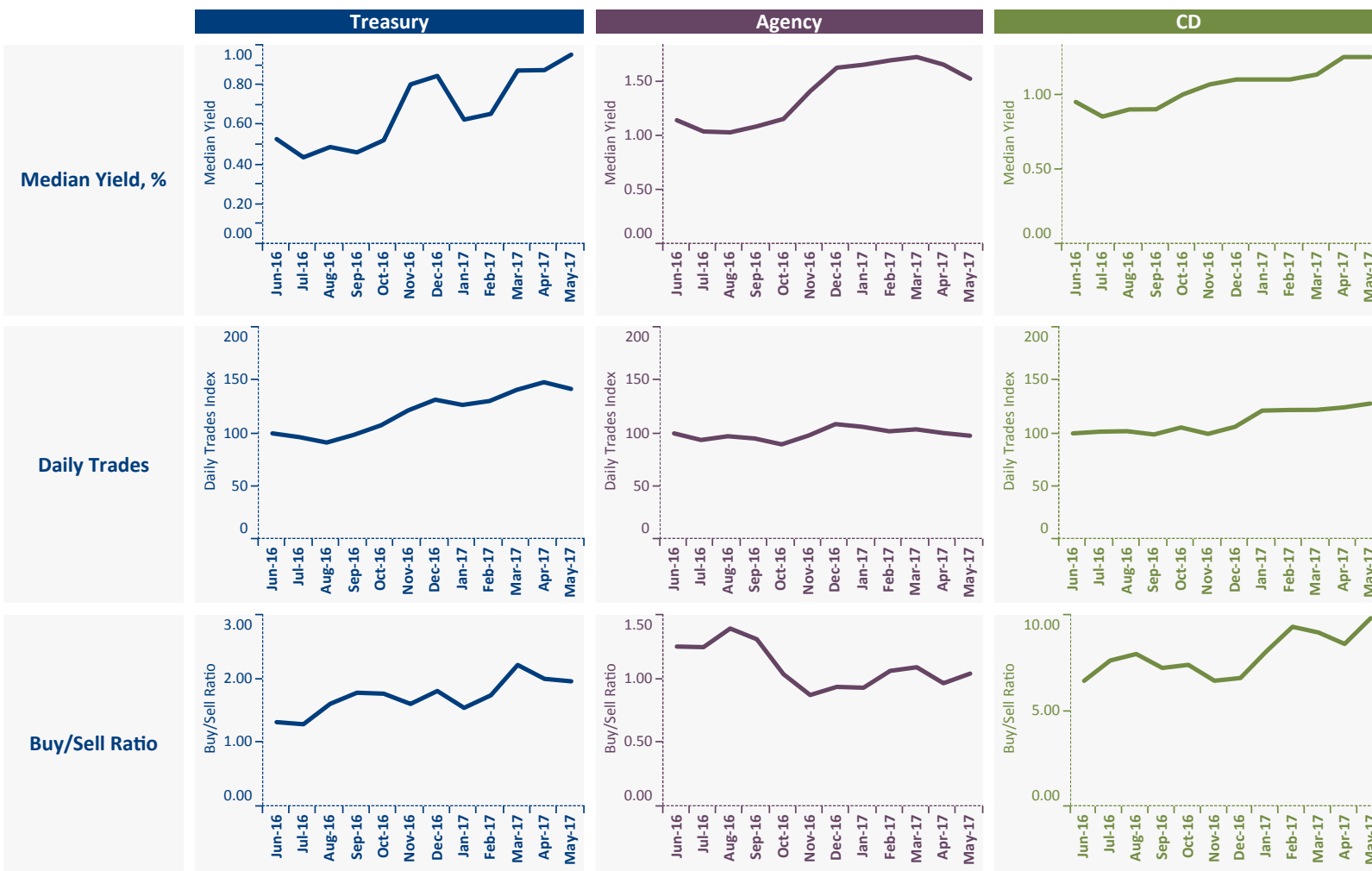
-The weights are based on transaction size.

-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



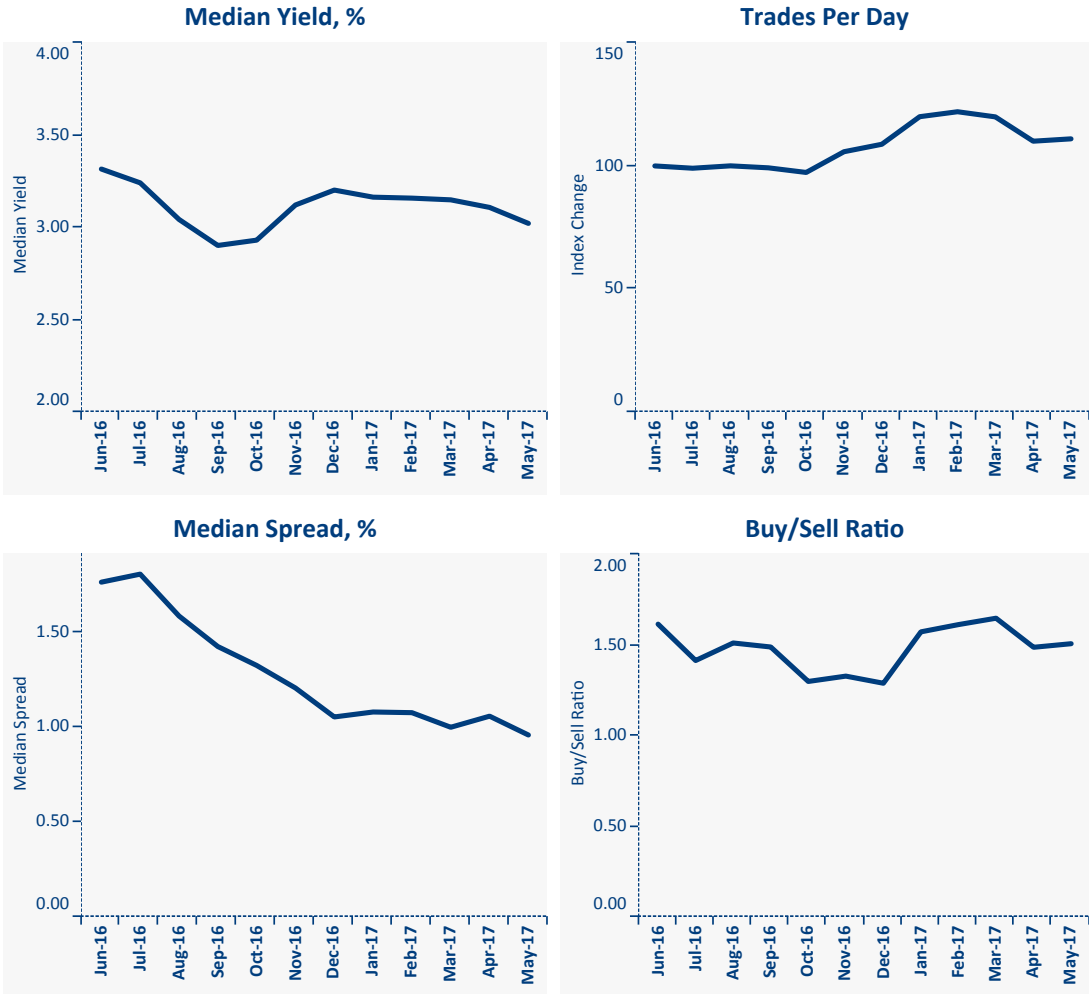
Daily Trades: First month = 100

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

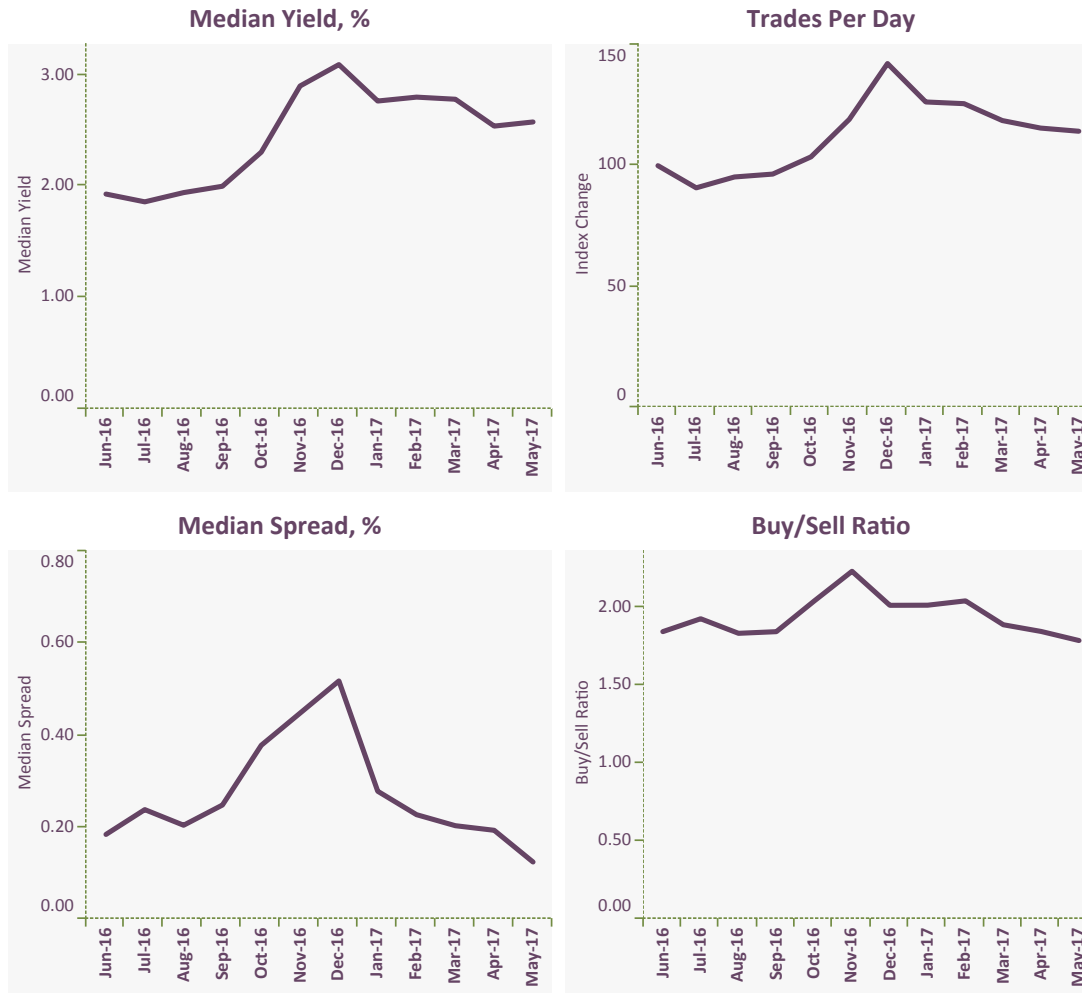


Daily Trades: First month = 100
 Source: TRACE and Tradeweb Direct
 -Based on odd-lot customer transactions (<100M) reported in TRACE.
 -Median yields and spreads are based on all odd-lot customer buy transactions...

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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

May 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	801	3.3%	15,559	1.3	307	1.6	2.2	2.7	3.5	4.5
2	JPM	JP MORGAN CHASE	A	512	3.0%	14,022	1.8	307	1.5	2.1	2.7	3.4	3.7
3	BAC	BANK OF AMERICA	BBB	476	2.9%	13,794	1.5	285	1.5	2.3	2.8	3.7	4.0
4	C	CITIGROUP	BBB	331	2.9%	13,790	2.0	302	1.6	2.3	2.7	3.8	4.3
5	T	AT&T	BBB	84	2.3%	10,688	2.3	211	1.5	2.3	2.9	3.8	4.9
6	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	367	2.1%	9,747	1.1	188	1.3	2.0	2.3	3.4	3.9
7	WFC	WELLS FARGO	A	217	1.9%	8,959	1.9	204	1.4	2.2	2.5	3.4	4.0
8	VZ	VERIZON	BBB	73	1.7%	8,050	2.2	169	1.7	2.2	2.6	3.5	4.6
9	MS	MORGAN STANLEY	BBB	688	1.7%	7,889	1.2	186	1.5	2.2	2.9	3.5	4.3
10	AAPL	APPLE INC	AA	49	1.3%	6,242	2.2	133	1.2	1.7	2.3	3.0	3.7
11	FTR	FRONTIER COMMUNICATIONS CORP	B	21	1.1%	5,370	0.5	109	3.3	6.1	9.8	11.8	11.5
12	BRK	BERKSHIRE HATHAWAY	A	150	1.0%	4,783	1.7	105	1.4	1.9	2.8	3.5	4.1
13	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	42	1.0%	4,561	1.7	84	1.3	2.2	2.6	3.3	4.1
14	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	42	0.9%	4,421	4.0	107	1.8	2.3	3.1	4.0	5.0
15	MSFT	MICROSOFT CORP	AAA	42	0.8%	3,747	1.9	84	1.0	1.5	2.1	2.9	3.6
16	HBC	HSBC	N/R	488	0.8%	3,649	1.2	63	1.4	2.5	2.7	3.5	4.2
17	AXP	AMERICAN EXPRESS	BBB	39	0.8%	3,602	1.3	82	1.5	1.9	2.6	3.3	
18	F	FORD	BBB	194	0.7%	3,466	2.0	79	1.6	2.3	2.9	4.0	
19	PBR	PETROBRAS	B	13	0.7%	3,415	1.6	126		4.7	5.2	6.3	
20	CTL	CENTURYLINK	BB	29	0.7%	3,275	1.2	75		3.1	4.5	5.9	8.0

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

May 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	SNCR	Null	B	1	0.2%	1,056	1,038	18	57.7	11		7.5			
2	CHRC	BAYSIDE CMNTY CHURCH SARASOTA INC BRADEN	N/R	149	0.4%	2,011	1,898	113	16.8	15				6.2	6.6
3	CBL	CBL & ASSOCS LTD PARTNERSHIP	BBB	3	0.3%	1,286	1,184	102	11.6	31				6.0	
4	WFM	WHOLE FOODS MARKET INC	BBB	2	0.3%	1,248	1,070	178	6.0	30				4.2	
5	NEE	FPL GROUP CAP INC	BBB	29	0.3%	1,257	1,048	209	5.0	22	1.6	2.0	2.5	3.4	3.9
6	LTD	LIMITED BRANDS INC	BB	9	0.2%	1,075	867	208	4.2	25		3.5	4.2		7.0
7	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	42	0.9%	4,421	3,536	885	4.0	107	1.8	2.3	3.1	4.0	5.0
8	SO	GEORGIA POWER CO	BBB	67	0.5%	2,220	1,738	482	3.6	47	1.6	2.0	2.5	3.3	4.3
9	COF	CAPITAL ONE FINL CORP	BBB	30	0.5%	2,177	1,694	483	3.5	52	1.8	2.3	2.8	3.9	
10	BDX	BECTION DICKINSON & CO	BBB	23	0.2%	1,159	897	262	3.4	25	1.7	2.2	2.8	4.0	5.1
11	STI	SUNTRUST BKS INC	BBB	25	0.3%	1,539	1,183	356	3.3	36	1.8	2.0	2.6	3.9	
12	PBI	PITNEY BOWES	BBB	8	0.3%	1,254	959	295	3.3	28	1.8		3.5		5.1
13	M	MACYS RETAIL HLDGS INC	BBB	21	0.4%	1,784	1,331	453	2.9	42		3.2	3.9	5.7	6.0
14	KSS	KOHL'S CORP	BBB	8	0.3%	1,451	1,065	386	2.8	32			3.3	4.3	6.1
15	PFE	PFIZER	AA	34	0.2%	1,115	806	309	2.6	31	1.3	1.6	2.0	3.0	3.9
16	PM	PHILIP MORRIS INTL INC	A	28	0.3%	1,226	877	349	2.5	24	1.4	2.0	2.5	3.0	4.1
17	AMGN	AMGEN INC	A	37	0.4%	1,923	1,357	566	2.4	43	1.5	2.0	2.4	3.1	4.4
18	ABBV	ABBVIE INC	BBB	14	0.3%	1,571	1,100	471	2.3	34	1.6	2.1	2.8	3.4	4.3
19	PSEC	PROSPECT CAP CORP INTERNOTES BOOK ENTRY	BBB	208	0.4%	1,679	1,171	508	2.3	31	2.2	4.1	4.8	2.2	6.1
20	T	AT&T	BBB	84	2.3%	10,688	7,430	3,258	2.3	211	1.5	2.3	2.9	3.8	4.9

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

May 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	RIG	TRANSOCEAN INC	B	15	0.6%	2,750	879	1,871	0.47	44	3.7		7.8	8.9	9.3
2	ATW	ATWOOD OCEANICS INC	C	1	0.4%	2,021	661	1,360	0.49	24		6.5			
3	FTR	FRONTIER COMMUNICATIONS CORP	B	21	1.1%	5,370	1,777	3,593	0.49	109	3.8	6.4	10.5	12.1	12.0
4	AA	ALCOA	BB	12	0.3%	1,256	483	773	0.62	30	2.1	3.2	4.0	4.9	5.8
5	CS	CREDIT SUISSE	N/R	420	0.4%	1,981	830	1,151	0.72	38	9.7	2.5	3.2	4.0	3.9
6	DELL	DELL	BB	9	0.3%	1,372	573	799	0.72	33	2.5	3.4		6.0	6.6
7	BCS	BARCLAYS	N/R	458	0.4%	2,006	859	1,147	0.75	36	2.9	3.1	2.6	3.5	4.0
8	COP	CONOCOPHILLIPS	BBB	32	0.3%	1,217	528	689	0.77	27	1.7	2.3	2.6	3.2	4.3
9	VALEF	Null	BB	10	0.3%	1,185	542	643	0.84	44		3.3	4.0	5.0	6.3
10	PDVA	PETROLEOS DE VENEZUELA SA	N/R	9	0.3%	1,625	753	872	0.86	29					
11	WMT	WAL-MART	AA	23	0.2%	1,171	552	619	0.89	28	1.4	1.9	2.3	3.1	4.0
12	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	66	0.4%	1,902	908	994	0.91	39	2.0	2.7	3.2	3.7	5.5
13	BNPQF	BNP PARIBAS SA	BB	118	0.3%	1,324	641	683	0.94	36	2.6	2.8	3.0		
14	MRO	MARATHON OIL CORP	BBB	20	0.3%	1,272	621	651	0.95	24		2.8	3.4	4.0	5.5
15	PTRB	PETROBRAS	B	8	0.3%	1,458	712	746	0.95	51	2.8	4.8			7.2
16	CSCO	CISCO	AA	24	0.4%	1,667	851	816	1.04	32	1.4	1.8	2.3	3.0	3.9
17	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	367	2.1%	9,747	5,087	4,660	1.09	188	1.5	2.1	2.4	3.5	4.0
18	MET	METLIFE	A	23	0.4%	1,773	932	841	1.11	35	1.8	2.3	2.7	3.1	4.0
19	DOW	DOW CHEM CO	BBB	135	0.2%	1,108	589	519	1.13	24	2.1	2.4	2.7	4.1	4.2
20	MCD	MCDONALDS	BBB	25	0.3%	1,503	797	706	1.13	31	1.7	2.2	2.5	3.2	4.3

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

May 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	1,122	576	1,698	22			106.6	106.3
2	WFM	WHOLE FOODS MARKET INC	Dec-25	BBB	5.200	1,069	177	1,246	30	4.2	4.3	106.7	106.2
3	SNCR	Null	Aug-19	B	0.750	1,038	18	1,056	11	7.5	7.7	86.4	85.9
4	VZ	VERIZON	May-47	BBB	4.900	962	3	965	24	4.8	4.9	100.0	99.3
5	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	Dec-49	BBB	5.300	941	15	956	8			104.7	104.5
6	HTZ	HERTZ CORP	Jan-21	B	7.375	822	531	1,353	21	9.2	10.8	94.4	90.0
7	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Feb-19	A	2.150	727	319	1,046	5	1.7	1.8	100.7	100.6
8	C	CITIGROUP	Feb-20	BBB	2.400	673	29	702	15	2.3	2.3	100.4	100.4
9	BRK	BERKSHIRE HATHAWAY	Jun-22	BBB	3.500	666	73	739	11	2.8	2.7	103.1	103.5
10	T	AT&T	May-25	BBB	3.400	664	204	868	17	3.6	3.8	98.5	97.5
11	ATW	ATWOOD OCEANICS INC	Feb-20	C	6.500	661	1,360	2,021	24		6.5	89.9	87.2
12	CBL	CBL & ASSOCS LTD PARTNERSHIP	Dec-26	BBB	5.950	645	54	699	19	6.0	6.2	99.7	98.4
13	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	564	431	995	24	6.1	6.3	96.7	94.1
14	JPM	JP MORGAN CHASE	Jan-49	BBB	5.000	558	155	713	12			102.3	101.0
15	STX	SEAGATE HDD CAYMAN	Jun-27	BBB	4.875	558	166	724	15	5.1	5.2	98.6	97.1
16	STI	SUNTRUST BKS INC	Dec-49	BBB	5.050	554	21	575	13			101.3	100.3
17	CAR	AVIS BUDGET CAR RENTAL LLC/FINANCE INC.	Apr-23	B	5.500	550	80	630	11	5.8	6.2	98.3	96.8
18	VZ	VERIZON	Nov-24	BBB	3.500	530	194	724	9	3.3	3.4	101.0	100.5
19	T	AT&T	Mar-27	BBB	4.250	529	65	594	13	3.9	4.0	103.0	101.9
20	T	AT&T	Feb-22	BBB	3.000	527	297	824	9	2.8	2.9	100.7	100.4

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

May 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	ATW	ATWOOD OCEANICS INC	Feb-20	C	6.500	661	1,360	2,021	24		6.5	89.9	87.2
2	RIG	TRANSOCEAN INC	Apr-31	B	7.500	371	1,106	1,477	16	9.1	9.5	87.9	84.7
3	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	A	5.000	1,122	576	1,698	22			106.6	106.3
4	FTR	FRONTIER COMMUNICATIONS CORP	Apr-22	B	8.750	237	534	771	16	10.4	11.0	93.6	91.4
5	HTZ	HERTZ CORP	Jan-21	B	7.375	822	531	1,353	21	9.2	10.8	94.4	90.0
6	WTI	W & T OFFSHORE INC	Jun-19	C	8.500	226	505	731	6	20.1	20.6	81.3	80.4
7	AMAG	AMAG Pharmaceuticals, Inc.	Feb-19	N/R	2.500	2	495	497	1		1.1	110.3	108.7
8	C	CITIGROUP	Sep-18	BBB	2.500	161	493	654	13	1.8	1.9	100.9	100.8
9	GS	GOLDMAN SACHS	Sep-20	BBB	2.750	154	487	641	10	2.3	2.4	101.4	100.9
10	FTR	FRONTIER COMMUNICATIONS CORP	Aug-31	B	9.000	75	454	529	10	11.2	11.5	84.4	82.8
11	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	564	431	995	24	6.1	6.3	96.7	94.1
12	FTR	FRONTIER COMMUNICATIONS CORP	Jan-23	B	7.125	117	420	537	10	10.3	10.8	86.5	84.8
13	FTR	FRONTIER COMMUNICATIONS CORP	Sep-21	B	6.250	242	372	614	12	8.1	8.6	93.3	91.6
14	NRG	NRG ENERGY	Jun-17	C	7.875	273	372	645	9	184.0	578.2	87.6	74.9
15	PBR	PETROBRAS	May-23	B	4.375	451	348	799	28	5.2	5.3	96.0	95.1
16	FTR	FRONTIER COMMUNICATIONS CORP	Sep-25	B	11.000	361	343	704	17	11.8	12.3	95.6	93.5
17	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Feb-19	A	2.150	727	319	1,046	5	1.7	1.8	100.7	100.6
18	AAPL	APPLE INC	May-23	AA	2.400	438	309	747	17	2.5	2.5	99.5	99.2
19	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	174	300	474	11	5.5	5.7	106.1	104.5
20	VZ	VERIZON	Sep-23	BBB	5.150	379	300	679	14	3.2	3.2	111.4	111.2

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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