

# Market Transparency Report

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

**June 2018**

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

### Page Reference

3. Market Commentary
4. Yield Matrix
5. Treasury, Agency, CD Transaction Trend Summary
6. Corporate Bonds: Odd-Lot Customer Transaction Trend Summary
7. Municipal Bonds: Odd-Lot Customer Transaction Trend Summary
8. Corporate Bonds: Top 20 Most Active Issuers
9. Corporate Bonds: Top 20 Issuers with Highest Buy/Sell Ratio
10. Corporate Bonds: Top 20 Issuers with Lowest Buy/Sell Ratio
11. Corporate Bonds: Top 20 Most Bought Issues
12. Corporate Bonds: Top 20 Most Sold Issues
13. Appendix
14. Disclosures

## Market Commentary

Monthly Change Table for June 2018

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-2	-5.5%	0.0
CD	10	6.5%	0.0
Corp	3	-2.5%	0.0
Municipal	2	-0.6%	0.0
Treasury	2	-4.9%	-0.5

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

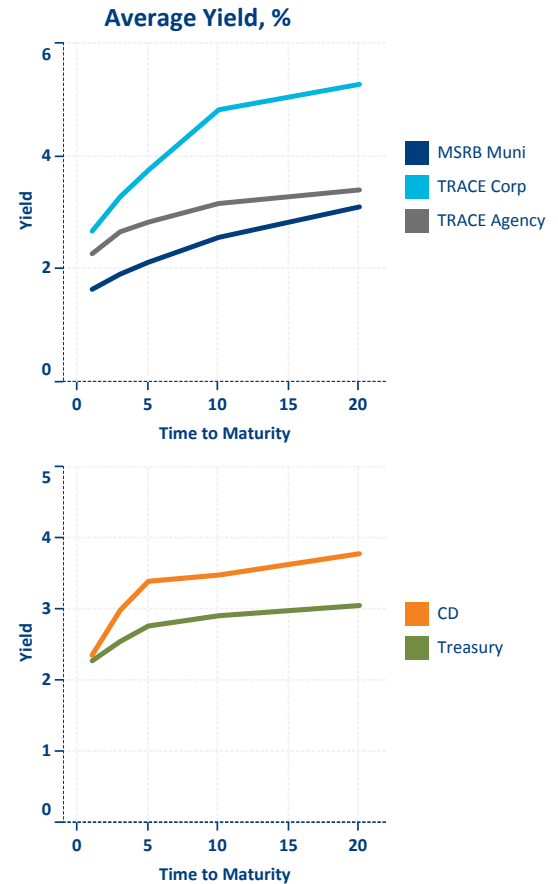
# Yield Matrix

## Average Yield, % for June 2018

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.7	1.9	2.1	2.6	3.1	11
TRACE Corp	2.7	3.3	3.8	4.8	5.3	3
TRACE Agency	2.3	2.7	2.8	3.2	3.4	2
CD	2.4	3.0	3.4	3.6	3.8	1
Treasury	2.3	2.6	2.8	2.9	3.1	0

## Asset Class

Market	Category (Filtered)	Rating Key	1	3	5	10	20	Median Maturity (Years)
TRACE Corp	Financial	AA	2.6	3.0	3.3	3.9	4.6	3
		A	2.6	3.2	3.5	4.0	4.6	3
		BBB	3.3	3.9	4.0	4.4	5.2	5
		HY	3.2	4.0	4.7	9.1	6.6	4
	Non-Financial	AAA	2.3	2.6	2.8	3.5	4.0	2
		AA	2.4	2.8	3.3	3.8	4.0	2
		A	2.7	3.2	3.7	4.0	4.8	5
		BBB	2.8	3.4	4.1	5.0	5.6	6
		HY	3.5	6.1	7.4	8.6	12.1	9
MSRB Muni	GO	AAA	1.5	1.8	2.0	2.4	3.1	9
		AA	1.6	1.9	2.1	2.6	3.2	11
		A	1.7	2.1	2.3	2.8	3.3	9
		BBB	2.6	3.0	3.1	3.5	4.0	9
	Revenue	HY	5.7	3.6	10.8	4.5	4.9	7
		AAA	1.6	1.8	2.0	2.5	2.9	9
		AA	1.6	1.9	2.1	2.5	3.0	11
		A	1.7	2.0	2.2	2.7	3.1	14
		BBB	2.1	2.6	3.0	3.3	3.6	13
		HY	5.6	6.9	5.7	5.6	6.4	11



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.

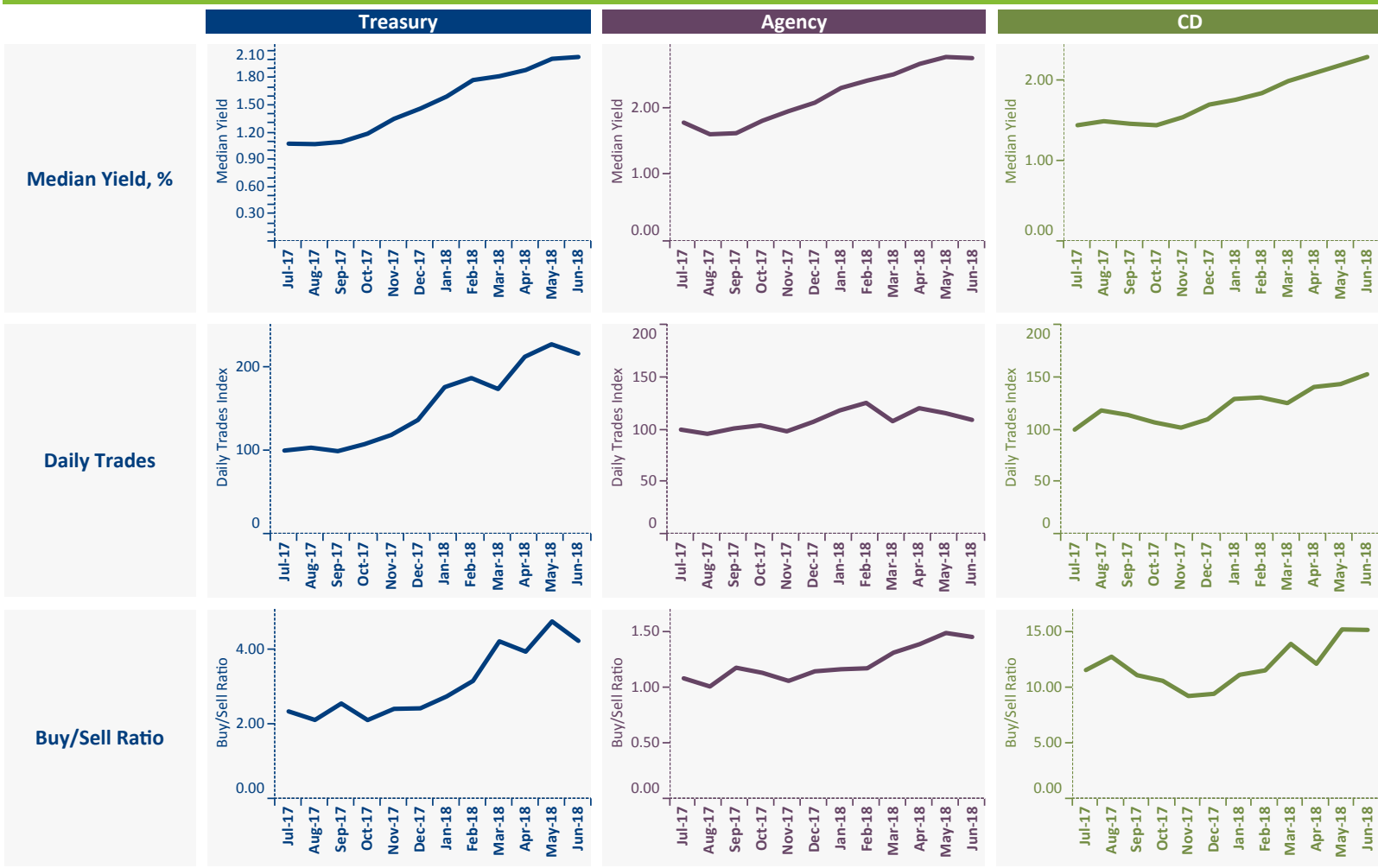
-The weights are based on transaction size.

-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



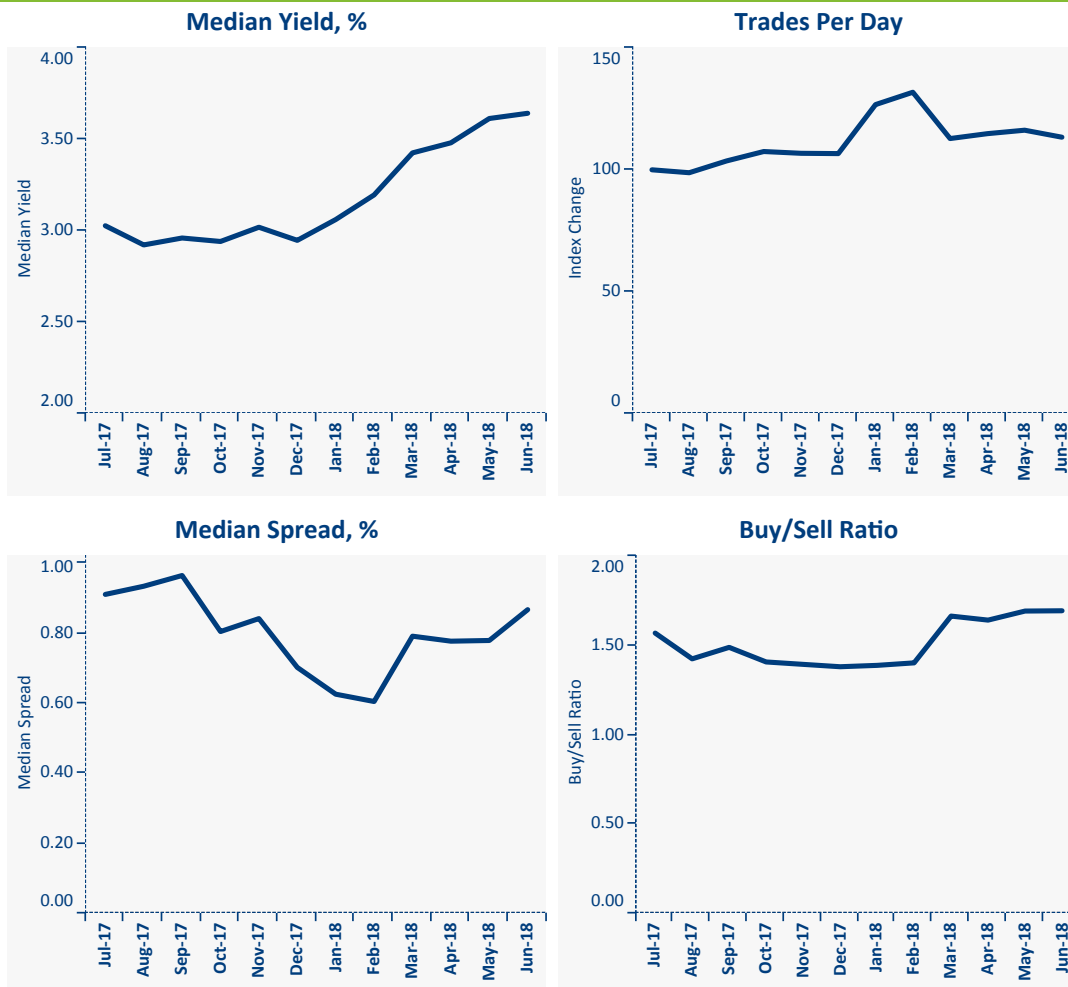
Daily Trades: First month = 100

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.

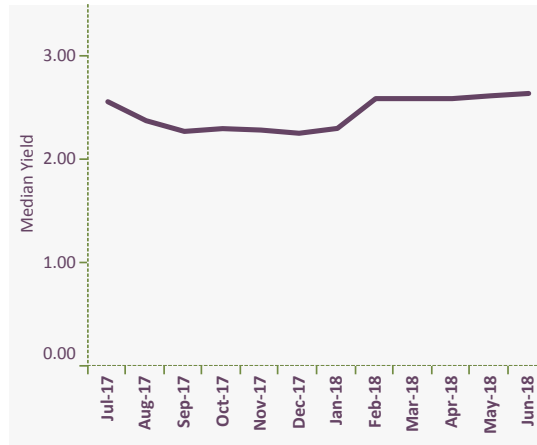
-Median yields and spreads are based on all odd-lot customer buy transactions...

©2017 Tradeweb Markets LLC. All rights reserved. The information contained herein: (1) is confidential and proprietary; (2) may not be copied or redistributed; (3) and is not offered as investment, tax or legal advice or an offer to buy or sell securities.

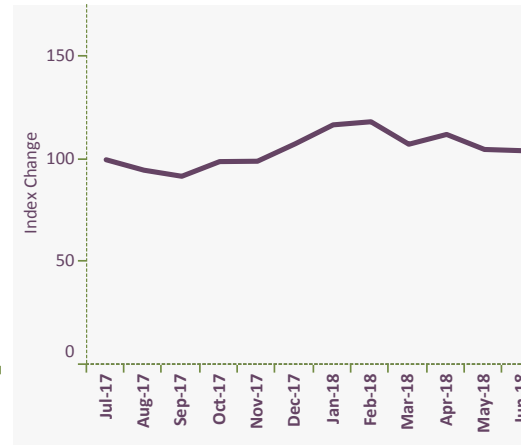


# Municipal Bonds: Odd-Lot Customer Transaction Trend Summary

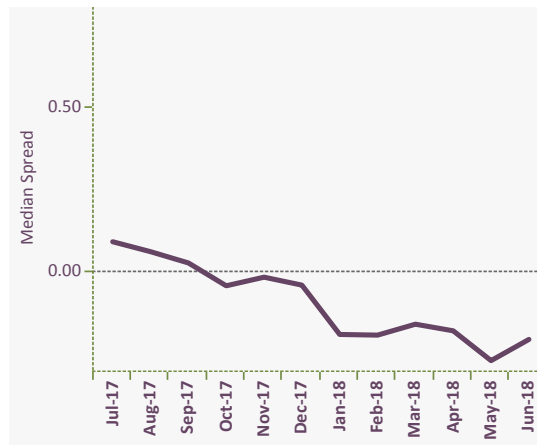
Median Yield, %



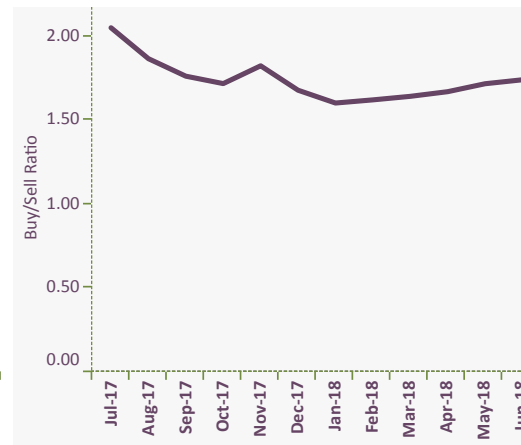
Trades Per Day



Median Spread, %



Buy/Sell Ratio



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.

©2017 Tradeweb Markets LLC. All rights reserved. The information contained herein: (1) is confidential and proprietary; (2) may not be copied or redistributed; (3) and is not offered as investment, tax or legal advice or an offer to buy or sell securities.



## Corporate Bonds: Top 20 Most Active Issuers

June 2018

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	JPM	JP MORGAN CHASE	A	567	3.5%	15,971	2.1	330	2.6	3.2	3.6	4.0	4.5
2	GS	GOLDMAN SACHS	BBB	832	3.3%	15,234	1.7	308	2.7	3.3	3.7	4.2	4.6
3	BAC	BANK OF AMERICA	A	433	2.7%	12,386	1.7	254	2.6	3.1	3.6	4.2	4.4
4	C	CITIGROUP	BBB	334	2.7%	12,262	2.0	277	2.6	3.3	3.8	4.5	4.3
5	T	AT&T	BBB	93	2.2%	10,032	1.8	197	2.7	3.5	3.9	4.4	5.2
6	WFC	WELLS FARGO	A	204	2.2%	10,025	2.0	212	2.6	3.3	3.9	4.2	4.2
7	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	A	342	2.1%	9,768	1.2	190	2.7	3.3	3.6	4.3	4.8
8	MS	MORGAN STANLEY	BBB	845	1.9%	8,596	1.4	194	2.6	3.3	3.8	4.3	4.7
9	AAPL	APPLE INC	AA	56	1.3%	6,202	1.5	133	2.4	2.9	3.3	3.6	3.9
10	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	86	1.3%	5,846	2.9	132	2.8	3.5	4.1	4.6	5.2
11	VZ	VERIZON	BBB	116	1.3%	5,834	2.0	115	2.9	3.3	3.7	4.2	4.8
12	BRK	BERKSHIRE HATHAWAY	A	154	1.2%	5,683	1.9	135	2.5	3.0	3.5	4.0	5.0
13	PTRB	PETROBRAS	BB	24	1.0%	4,611	2.2	147	3.9	5.1	6.2	7.4	7.7
14	CVS	CVS CAREMARK CORP	BBB	32	0.9%	4,139	2.3	89	2.6	3.3	3.7	4.4	4.8
15	MSFT	MICROSOFT CORP	AAA	40	0.9%	3,999	1.6	88	2.3	2.9	3.1	3.5	3.8
16	AXP	AMERICAN EXPRESS	A	38	0.9%	3,947	2.2	90	2.6	3.2	3.6	3.8	4.2
17	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	37	0.8%	3,713	1.9	81	2.9	3.1	3.5	4.0	4.5
18	ORCL	ORACLE CORP	AA	31	0.8%	3,507	1.4	71	2.5	3.0	3.3	3.7	4.1
19	CMCS	COMCAST	A	51	0.7%	3,358	1.7	61	2.7	3.4	3.7	4.1	4.7
20	PEMX	PETROLEOS MEXICANOS	BBB	42	0.7%	3,265	2.5	100	3.4	4.5	5.2	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

June 2018

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	CPB	CAMPBELL SOUP CO	BBB	13	0.2%	1,107	958	149	6.4	25	2.7	3.4	4.0	4.7	5.3
2	ASCMA	Null	C	1	0.3%	1,160	974	186	5.2	9					
3	GT	GOODYEAR TIRE & RUBBER	BB	5	0.3%	1,576	1,323	253	5.2	27		3.7	4.9	5.7	
4	PCG	PACIFIC GAS & ELEC CO	BBB	26	0.2%	1,146	961	185	5.2	23		3.6	4.1	4.5	5.0
5	PEG	PUBLIC SVC ELEC GAS CO SECD MEDIUM TERM	BBB	30	0.2%	1,140	941	199	4.7	20	2.8	3.3	3.8	3.6	4.6
6	SAN	ABBAY NATL TREAS SVCS PLC	BBB	36	0.3%	1,430	1,168	262	4.5	42	2.8	3.5	4.1	4.8	
7	XRX	XEROX CORP	BBB	13	0.3%	1,218	919	299	3.1	26	3.0	3.9	4.3		6.4
8	COF	CAPITAL ONE FINL CORP	BBB	34	0.6%	2,643	1,968	675	2.9	58	2.7	3.5	3.9	4.5	
9	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	86	1.3%	5,846	4,327	1,519	2.9	132	2.8	3.5	4.1	4.6	5.2
10	ETP	ENERGY TRANSFER PARTNERS L P	BBB	35	0.3%	1,232	909	323	2.8	26	2.9	3.5	4.2	4.8	5.9
11	TWX	TIME WARNER	BBB	29	0.3%	1,598	1,171	427	2.7	29	2.8	3.4	4.0	4.3	5.1
12	WMT	WAL-MART	AA	34	0.4%	1,747	1,278	469	2.7	46	2.4	2.7	3.2	3.6	3.9
13	PEMX	PETROLEOS MEXICANOS	BBB	42	0.7%	3,265	2,325	940	2.5	100	3.4	4.5	5.2	6.2	7.1
14	HTZ	HERTZ CORP	B	7	0.3%	1,245	878	367	2.4	27		7.5	8.5	8.5	
15	ESRX	EXPRESS SCRIPTS HLDG CO	BBB	14	0.4%	1,738	1,222	516	2.4	29	2.8	3.6	4.1	4.5	5.1
16	CVS	CVS CAREMARK CORP	BBB	32	0.9%	4,139	2,897	1,242	2.3	89	2.6	3.3	3.7	4.4	4.8
17	TD	TORONTO DOMINION BK SR MEDIUM TERM BK NT	AA	75	0.4%	1,699	1,189	510	2.3	44	2.7	3.2	3.3	3.9	
18	AMGN	AMGEN INC	A	31	0.5%	2,229	1,556	673	2.3	51	2.6	3.3	3.6	4.0	4.7
19	JNJ	JOHNSON & JOHNSON	AAA	33	0.2%	1,134	790	344	2.3	29	2.2	2.7	3.1	3.4	3.8
20	TM	TOYOTA	AA	62	0.4%	1,868	1,291	577	2.2	46	2.4	3.0	3.3	3.6	

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

June 2018

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	RCII	RENT A CTR INC NEW	C	2	0.4%	1,676	171	1,505	0.11	27		6.6			
2	GNW	GENWORTH	B	7	0.4%	1,873	603	1,270	0.47	42		6.5	7.5		7.8
3	MON	MONSANTO CO NEW	BBB	15	0.2%	1,083	364	719	0.51	17	3.0	3.6	4.0		4.7
4	EDP	ENTERPRISE PRODS OPER LLC	BBB	30	0.2%	1,066	474	592	0.80	21	3.1	3.3	3.7	4.1	4.9
5	FTR	FRONTIER COMMUNICATIONS CORP	C	24	0.4%	1,775	866	909	0.95	29	5.4	11.7	14.7	8.5	14.6
6	CS	CREDIT SUISSE	N/R	346	0.4%	1,797	893	904	0.99	39	3.0	3.4	4.2	4.5	4.9
7	BCS	BARCLAYS	BBB	443	0.4%	1,887	976	911	1.07	43	3.4	3.4	3.7	4.6	4.5
8	ABT	ABBOTT LABS	BBB	23	0.3%	1,202	638	564	1.13	24	2.9	3.5	4.1	4.0	4.5
9	CSCO	CISCO	AA	22	0.4%	1,954	1,055	899	1.17	37	2.7	3.0	3.4	3.6	4.2
10	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	A	28	0.4%	1,874	1,017	857	1.19	36	2.8	3.2	3.6	3.9	
11	RDS	SHELL	AA	29	0.4%	1,724	944	780	1.21	39	2.8	3.0	3.3	3.7	4.3
12	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	A	342	2.1%	9,768	5,365	4,403	1.22	190	3.1	3.6	3.8	4.5	4.9
13	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	68	0.3%	1,545	858	687	1.25	34	3.2	3.6	4.2	5.5	5.6
14	RY	ROYAL BANK OF CANADA	AA	226	0.4%	2,044	1,134	910	1.25	45	2.8	3.2	3.7	4.4	4.3
15	DELL	DELL	BB	10	0.3%	1,245	696	549	1.27	26	3.4	4.0	4.7	5.9	6.7
16	DUK	DUKE ENERGY	BBB	95	0.3%	1,394	780	614	1.27	32	3.1	3.2	3.5	4.0	4.2
17	HBC	HSBC	N/R	451	0.6%	2,840	1,589	1,251	1.27	62	3.4	3.6	4.3	4.3	4.7
18	CHTR	CCO HOLDINGS LLC	BBB	37	0.3%	1,172	659	513	1.28	31	3.2	4.0	5.3		6.0
19	V	VIVENDI	A	8	0.2%	1,071	604	467	1.29	22		2.9	3.3	3.6	3.8
20	INTC	INTEL CORP	A	23	0.3%	1,439	814	625	1.30	34		3.0	3.2	3.6	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

June 2018

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	BBB	5.000	1,195	742	1,937	35			99.1	98.5
2	ASCMA	Null	Apr-20	C	9.125	974	186	1,160	9	36.9	36.9	66.0	66.1
3	GT	GOODYEAR TIRE & RUBBER	May-26	BB	5.000	957	101	1,058	15	5.7	5.7	95.5	95.3
4	DB	DEUTSCHE BANK	May-19	BBB	2.850	719	43	762	15	3.5	3.8	99.5	99.2
5	PEG	PUBLIC SVC ELEC GAS CO SECD MEDIUM TERM	Jun-23	BBB	3.850	705	8	713	10	3.9	3.9	100.1	99.6
6	JPM	JP MORGAN CHASE	Apr-19	A	6.300	700	94	794	9	2.6	2.9	103.1	102.8
7	JPM	JP MORGAN CHASE	Null	BBB	4.625	673	50	723	17			93.9	92.4
8	WFC	WELLS FARGO	Null	BBB	5.875	645	130	775	9			103.1	102.9
9	MET	METLIFE	Null	BBB	5.875	616	15	631	17			104.3	101.9
10	PTRB	PETROBRAS	Jan-28	N/R	5.999	596	241	837	27			91.1	90.3
11	GS	GOLDMAN SACHS	Null	BB	5.300	592	69	661	7			98.6	98.5
12	JPM	JP MORGAN CHASE	Jan-22	A	4.500	557	67	624	9	3.4	3.5	103.6	103.5
13	GS	GOLDMAN SACHS	Jan-19	BBB	2.625	530	124	654	13	2.6	2.8	100.0	99.9
14	BRK	BERKSHIRE HATHAWAY	Jun-23	BBB	4.000	529	18	547	15	4.0	4.1	99.9	99.7
15	GS	GOLDMAN SACHS	Oct-25	BBB	4.250	521	66	587	10	4.4	4.5	98.9	98.5
16	CVS	CVS CAREMARK CORP	Mar-25	BBB	4.100	519	39	558	11	4.2	4.2	99.7	99.6
17	PCRX	PACIRA PHARMACEUTICALS INC	Apr-22	N/R	2.375	492	12	504	2	3.4	4.3	96.5	93.3
18	TREE	Null	Jun-22	N/R	0.625	488	11	499	2			146.9	131.4
19	PTRB	PETROBRAS	Jan-27	BB	7.375	484	130	614	20	7.4	7.5	99.6	99.0
20	T	AT&T	Mar-27	BBB	4.250	475	222	697	12	4.4	4.4	99.2	98.7

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

June 2018

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	RCII	RENT A CTR INC NEW	Nov-20	C	6.625	157	1,398	1,555	25	6.6	6.6	100.0	100.0
2	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	5.000	1,195	742	1,937	35			99.1	98.5
3	BAYZ	Null	Jul-24	BBB	3.375	23	28	51	1	4.1	4.3	96.4	94.9
4	MON	MONSANTO CO NEW	Jul-24	BBB	3.375	87	545	632	6	4.0	4.1	96.7	96.1
5	GNW	GENWORTH	Sep-21	B	7.625	133	477	610	14	7.0	6.6	101.7	103.0
6	VZ	VERIZON	Sep-23	BBB	5.150	203	405	608	11	3.7	3.8	107.0	106.5
7	T	AT&T	Feb-22	BBB	3.000	381	379	760	8	3.6	3.7	98.0	97.7
8	AAPL	APPLE INC	May-23	AA	2.400	330	364	694	14	3.2	3.3	96.3	96.1
9	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-38	A	5.875	142	308	450	7	4.9	4.9	112.8	112.4
10	JPM	JP MORGAN CHASE	Oct-26	A	2.950	328	285	613	5	4.0	4.0	92.9	92.7
11	GNW	GENWORTH	Feb-21	B	7.200	112	275	387	9	6.3	6.5	102.2	101.6
12	MDSO	MEDIDATA SOLUTIONS INC	Aug-18	N/R	1.000	17	272	289	1			139.8	137.5
13	GS	GOLDMAN SACHS	Jan-22	BBB	5.750	311	268	579	9	3.6	3.6	107.3	107.0
14	WFC	WELLS FARGO	Mar-22	A	3.500	372	259	631	10	3.6	3.6	99.8	99.6
15	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Feb-26	A	3.650	353	258	611	12	3.9	4.0	98.1	97.8
16	VZ	VERIZON	Nov-24	BBB	3.500	300	252	552	7	4.0	4.0	97.4	97.1
17	AAPL	APPLE INC	Feb-26	AA	3.250	237	248	485	5	3.6	3.6	97.7	97.4
18	PTRB	PETROBRAS	Jan-28	N/R	5.999	596	241	837	27			91.1	90.3
19	ESRX	EXPRESS SCRIPTS HLDG CO	Mar-27	BBB	3.400	257	238	495	3	4.5	4.5	92.1	91.9
20	PTRB	PETROBRAS	May-23	BB	4.375	297	238	535	17	5.9	6.1	93.5	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).

## 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

This report represents certain customer trades in securities that have been reported by dealers to FINRA's Trade Reporting and Compliance Engine ("TRACE"), and the Municipal Securities Rulemaking Board ("MSRB"). The report does not necessarily reflect all transactions that were effected on dates noted. There is the possibility of errors or delays in the trade submission process. Prices for transactions vary with market conditions and can be affected by trade size and other factors. The information provided has been obtained from sources deemed to be reliable, however Tradeweb Direct does not guarantee the accuracy of the information contained in this report.

Fixed income securities are subject to increased loss of principal during periods of rising interest rates. Fixed-income investments are subject to various risks including changes in credit quality, market valuations, liquidity, prepayments, early redemption, corporate events, tax ramifications and other factors. Defaults on interest payments and/or principal may also occur. Projections, results and assumptions contained herein reflect past performance of the referenced securities and asset classes. Past performance is no guarantee of future results. The investment return and principal value of an investment will fluctuate such that an investment, if and when redeemed, may be worth more or less than its original cost.

This information is intended for general informational purposes only, and should not be used as the sole basis for any investment decisions. None of the information in the report constitutes an offer or solicitation to buy or sell any security or financial product, a recommendation concerning any security, financial product or asset class, or an offer to provide investment advice or any other service. Where appropriate, please consult with a qualified financial and tax professional.