

Market Transparency Report

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

June 2019

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 June 2019

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	-29	-1.6%	-0.2
CD	-6	2.7%	-0.3
Corp	-18	1.4%	-0.2
Municipal	-6	1.2%	0.1
Treasury	-24	-6.7%	-1.0

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

Yield Matrix

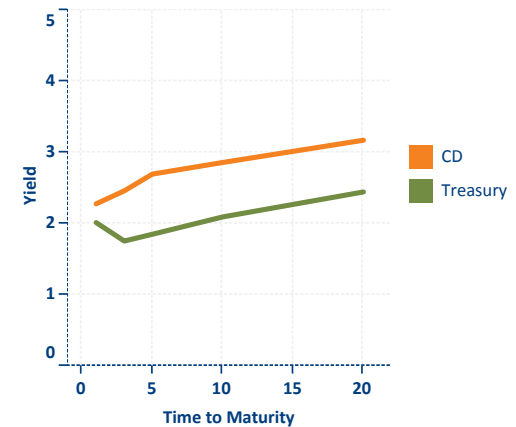
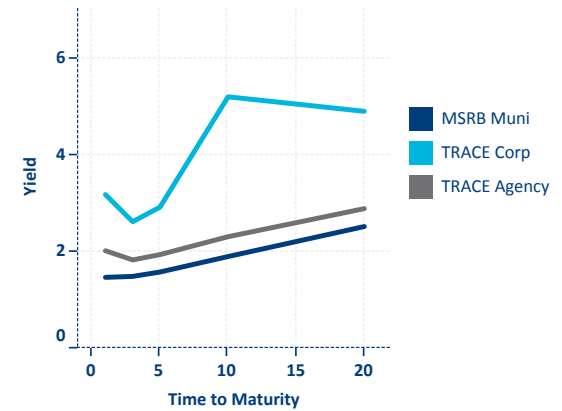
Average Yield, % for June 2019

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.5	1.5	1.6	1.9	2.5	10
TRACE Corp	3.2	2.6	2.9	5.2	4.9	4
TRACE Agency	2.0	1.8	1.9	2.3	2.9	3
CD	2.3	2.5	2.7	2.9	3.2	1
Treasury	2.0	1.8	1.9	2.1	2.4	0

Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	2.2	2.1	2.4			2
		A	2.3	2.4	2.6	3.0	3.9	3
		BBB	2.9	3.0	3.3	4.1	4.7	4
		HY	2.9	3.6	3.5	7.5	6.3	3
		AAA	1.9		1.8	2.4	3.3	10
	Non-Financial	AA	2.0	2.1	2.2	3.0	3.4	1
		A	2.1	2.1	2.6	3.1	4.0	4
		BBB	2.5	2.9	3.5	4.7	5.5	9
		HY	22.3	4.5	8.6	9.8	21.5	8
MSRB Muni	GO	AAA	1.4	1.4	1.4	1.7	2.4	8
		AA	1.4	1.4	1.5	1.9	2.6	10
		A	1.5	1.6	1.6	2.0	2.6	8
		BBB	1.9	2.2	2.3	2.9	3.3	9
		HY	3.3	3.3	6.0	3.8	3.6	9
	Revenue	AAA	1.4	1.4	1.5	1.7	2.2	8
		AA	1.5	1.5	1.5	1.8	2.4	11
		A	1.6	1.6	1.6	2.0	2.5	13
		BBB	1.9	2.1	2.3	2.5	3.0	14
		HY	5.6	4.3	5.0	5.0	4.6	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.

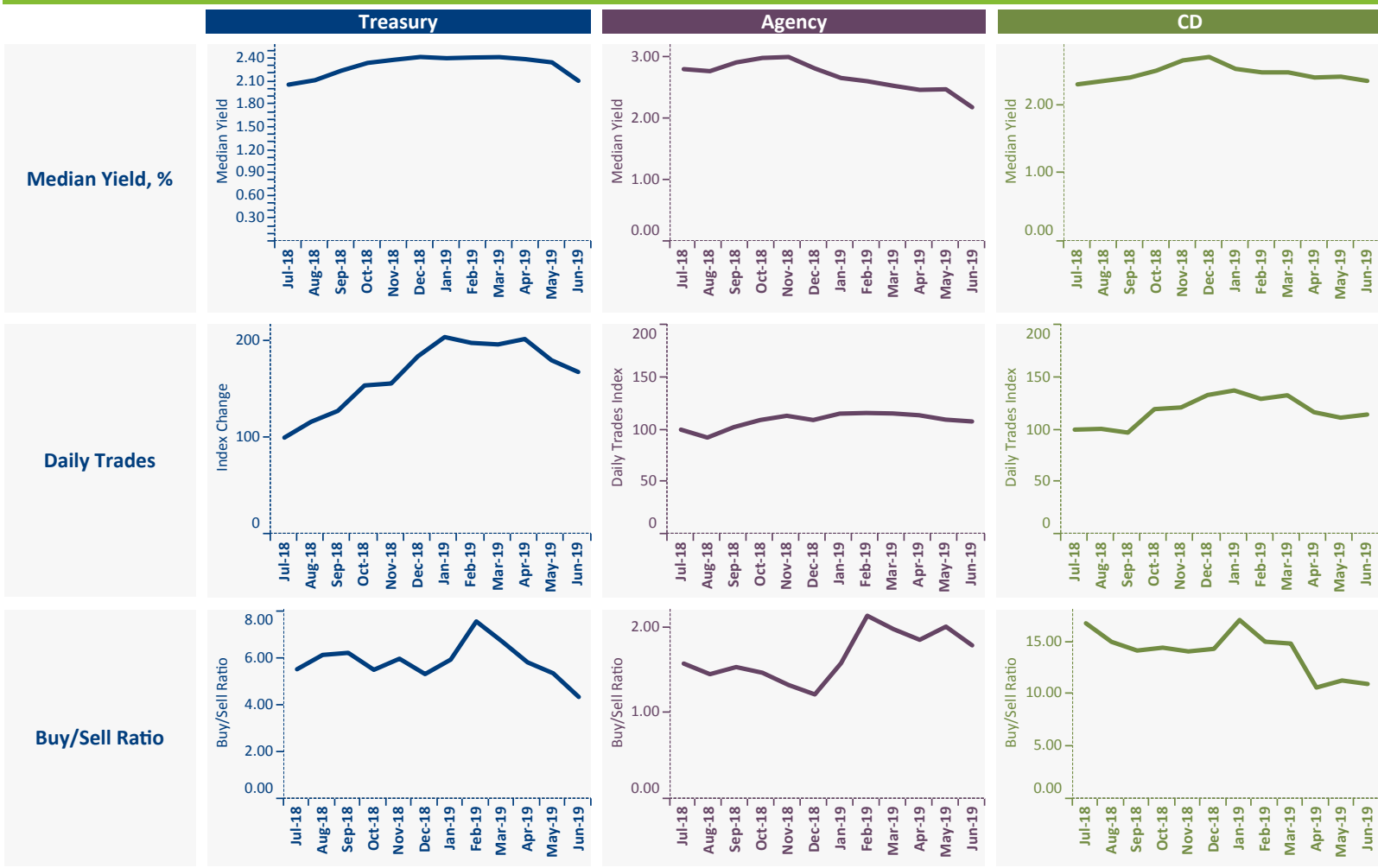
-The weights are based on transaction size.

-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.

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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

June 2019

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	BBB	569	3.2%	14,976	0.9	310	2.3	2.5	2.7	3.2	3.8
2	GS	GOLDMAN SACHS	BBB	972	3.0%	14,012	1.3	308	2.4	2.6	2.9	3.5	4.3
3	BAC	BANK OF AMERICA	A	415	2.4%	11,297	1.4	262	2.4	2.6	2.9	3.2	4.0
4	C	CITIGROUP	BBB	429	2.2%	10,456	1.0	234	2.3	2.6	3.1	3.5	3.8
5	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	BBB	324	2.0%	9,513	1.4	190	2.6	2.9	3.2	4.2	4.8
6	WFC	WELLS FARGO	A	228	1.9%	8,780	1.1	194	2.3	2.5	2.8	3.2	4.0
7	T	AT&T	BBB	114	1.8%	8,531	1.1	185	2.5	2.5	2.8	3.5	4.4
8	MS	MORGAN STANLEY	BBB	965	1.8%	8,293	1.0	198	2.4	2.6	2.7	3.2	3.9
9	F	FORD	BBB	252	1.7%	7,848	2.8	161	2.7	3.2	4.1	4.8	5.8
10	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	111	1.5%	6,991	2.3	171	2.6	3.1	3.7	4.3	5.3
11	AAPL	APPLE INC	AA	50	1.2%	5,417	1.1	121	2.1	2.2	2.4	2.8	3.5
12	PEMX	PETROLEOS MEXICANOS	BBB	43	1.1%	5,045	1.7	152	3.4	5.0	5.3	6.8	7.4
13	BRK	BERKSHIRE HATHAWAY	A	148	1.0%	4,842	1.0	121	2.4	2.3	2.4	3.9	4.8
14	VZ	VERIZON	BBB	136	1.0%	4,549	0.8	102		2.4	2.4	3.2	3.7
15	AXP	AMERICAN EXPRESS	BBB	39	1.0%	4,445	0.9	85	2.3	2.5	2.5	2.6	3.6
16	CVS	CVS CAREMARK CORP	BBB	41	0.9%	4,422	1.5	103	2.5	2.7	3.0	3.6	4.6
17	CMCS	COMCAST	A	61	0.8%	3,810	1.1	87	2.3	2.3	2.5	3.0	3.7
18	MSFT	MICROSOFT CORP	AAA	37	0.8%	3,625	1.0	86	2.0	2.1	2.2	2.5	3.2
19	ORCL	ORACLE CORP	AA	29	0.7%	3,390	1.1	68	2.0	2.3	2.5	2.8	3.5
20	MET	METLIFE	BBB	22	0.7%	3,247	2.3	68		2.5	2.5	4.4	3.6

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 2019

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	MYL	MYLAN INC	BBB	10	0.3%	1,495	1,343	152	8.8	31	2.7	3.3	4.0	4.8	5.8
2	X	UNITED STS STL CORP NEW	B	3	0.4%	1,941	1,629	312	5.2	37					8.3
3	EIX	EDISON MISSION	BBB	33	0.4%	1,705	1,406	299	4.7	41	2.6	4.2	2.9	4.6	4.3
4	SRE	SEMPRA ENERGY	BBB	54	0.5%	2,400	1,919	481	4.0	34	2.6	2.5	2.7	3.4	4.1
5	BPL	BUCKEYE PARTNERS	BBB	9	0.4%	1,836	1,436	400	3.6	39			5.1	5.8	7.1
6	FDX	FEDEX CORP	BBB	23	0.3%	1,435	1,120	315	3.6	29	2.3	2.4	2.6	2.9	4.4
7	PSEC	PROSPECT CAP CORP INTERNOTES BOOK ENTRY	BBB	150	0.3%	1,473	1,106	367	3.0	26	2.8	4.3	5.6	5.4	6.3
8	GT	GOODYEAR TIRE & RUBBER	BB	5	0.3%	1,438	1,078	360	3.0	37	3.3		4.2	5.7	
9	F	FORD	BBB	252	1.7%	7,848	5,756	2,092	2.8	161	2.7	3.2	4.1	4.8	5.8
10	NEE	FPL GROUP CAP INC	BBB	42	0.3%	1,262	908	354	2.6	23	2.2	2.3	2.6	2.9	3.4
11	MET	METLIFE	BBB	22	0.7%	3,247	2,264	983	2.3	68		2.5	2.5	4.4	3.6
12	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	111	1.5%	6,991	4,839	2,152	2.3	171	2.6	3.1	3.7	4.3	5.3
13	MO	ALTRIA GROUP INC	BBB	22	0.5%	2,102	1,455	647	2.3	53	2.4	2.5	3.0	3.9	5.0
14	WAG	WALGREEN CO	BBB	9	0.3%	1,434	980	454	2.2	30		2.5	3.1		4.6
15	APC	ANADARKO PETE CORP	A	41	0.3%	1,281	862	419	2.1	28		2.6	3.1	3.4	5.8
16	LUK	JEFFERIES GROUP INC NEW	BBB	36	0.3%	1,526	1,022	504	2.0	34		3.0	3.2	4.4	5.6
17	DB	DEUTSCHE BANK	BBB	110	0.4%	1,678	1,121	557	2.0	38	3.2	3.6	3.8		
18	TEVA	TEVA PHARMACEUTICAL FIN CO B V	BB	13	0.5%	2,201	1,446	755	1.9	51	3.7	5.2	6.6	8.0	7.3
19	DE	DEERE JOHN CAP CORP MEDIUM TERM NTS-BOOK	A	60	0.5%	2,165	1,399	766	1.8	48	2.2	2.2	2.4	2.8	3.5
20	AMGN	AMGEN INC	A	28	0.4%	1,798	1,159	639	1.8	41	2.3	2.4	2.7	3.0	4.2

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 2019

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	MCFH	HARLAND CLARKE HLDGS CORP	C	2	0.5%	2,111	297	1,814	0.16	26			16.0		
2	HPT	HOSPITALITY PPTYS TR	BBB	9	0.5%	2,506	498	2,008	0.25	21		3.5	4.0	4.9	
3	FITB	FIFTH THIRD BANCORP	BBB	14	0.4%	1,770	551	1,219	0.45	25	2.5	2.4	2.7	3.1	4.6
4	STI	SUNTRUST BKS INC	BBB	32	0.5%	2,129	660	1,469	0.45	33	2.8	2.5	2.8	4.0	
5	HCA	HCA INC	BBB	28	0.2%	1,125	406	719	0.56	25	2.9	3.1	3.4	3.9	5.0
6	FTR	FRONTIER COMMUNICATIONS CORP	C	24	0.5%	2,433	879	1,554	0.57	35	30.7	25.7	22.8	8.5	15.9
7	BCS	BARCLAYS	B	537	0.4%	1,897	773	1,124	0.69	40	3.1	3.4	3.6	3.6	4.1
8	PTRB	PETROBRAS	BB	20	0.6%	2,630	1,113	1,517	0.73	103		3.8	4.2	5.3	6.3
9	HTZ	HERTZ CORP	B	6	0.3%	1,450	620	830	0.75	35	5.8	6.3		9.2	
10	CTL	CENTURYLINK	B	34	0.5%	2,493	1,073	1,420	0.76	56	4.0	4.2	5.2	7.5	8.5
11	VZ	VERIZON	BBB	136	1.0%	4,549	1,976	2,573	0.77	102		3.1	2.5	3.8	3.8
12	BNS	BANK NOVA SCOTIA B C	A	118	0.3%	1,252	556	696	0.80	27	2.3	2.4	2.6	4.3	
13	CS	CREDIT SUISSE	N/R	345	0.4%	1,636	742	894	0.83	32	2.9	2.6	3.0	4.4	
14	AXP	AMERICAN EXPRESS	BBB	39	1.0%	4,445	2,036	2,409	0.85	85	2.5	2.5	2.6	2.7	3.6
15	HBC	HSBC	N/R	498	0.6%	2,695	1,235	1,460	0.85	59	2.8	2.6	3.4	4.3	4.1
16	DIS	DISNEY WALT CO NEW MEDIUM TERM NTS BOOK	A	56	0.3%	1,225	568	657	0.86	26	2.3	2.2	3.6	2.7	3.6
17	HPQ	HEWLETT PACKARD	BBB	18	0.5%	2,111	975	1,136	0.86	44	2.7	2.7		4.8	5.3
18	DISH	DISH DBS CORP	B	9	0.2%	1,098	520	578	0.90	23	4.0	5.8	7.4		
19	JPM	JP MORGAN CHASE	BBB	569	3.2%	14,976	7,147	7,829	0.91	310	2.5	2.6	2.7	3.4	3.8
20	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	63	0.4%	1,665	794	871	0.91	39	2.8	2.7	3.0	4.7	5.0

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 2019

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	1,438	593	2,031	36	5.2	5.3	95.8	94.0
2	SRE	SEMPRA ENERGY	Jul-79	BBB	5.750	1,154	228	1,382	9			25.2	24.8
3	F	FORD	Jun-59	BBB	6.200	1,012	117	1,129	6			25.5	25.2
4	X	UNITED STS STL CORP NEW	Mar-26	B	6.250	807	117	924	17	8.5	8.8	88.5	87.0
5	X	UNITED STS STL CORP NEW	Aug-25	B	6.875	720	135	855	17	8.3	8.6	93.1	92.1
6	T	AT&T	Jun-20	BBB	2.450	712	187	899	16	2.5	2.6	99.9	99.9
7	MET	METLIFE	Jun-27	BBB	3.700	656	71	727	14	4.4	4.5	95.6	94.7
8	GT	GOODYEAR TIRE & RUBBER	May-26	BB	5.000	567	165	732	19	5.5	5.7	97.0	96.3
9	GS	GOLDMAN SACHS	Dec-49	BB	5.500	554	16	570	20			102.8	102.5
10	MET	METLIFE	Null	BBB	5.250	540	216	756	17	5.2	5.2	101.0	100.4
11	WDC	WESTERN DIGITAL CORP	Feb-26	BBB	4.750	537	100	637	15	5.2	5.3	97.6	97.0
12	MET	METLIFE	Jun-47	BBB	4.700	516	94	610	12	5.9	6.0	84.1	82.7
13	JPM	JP MORGAN CHASE	Null	BBB	5.000	516	199	715	19	5.0	5.0	99.9	99.3
14	F	FORD	Dec-26	BBB	4.346	464	452	916	25	4.3	4.5	100.5	99.0
15	FET	Forum Energy Technologies, Inc.	Oct-21	B	6.250	464	46	510	5	10.4	10.5	91.8	91.5
16	BPL	BUCKEYE PARTNERS	Jul-23	BBB	4.150	439	73	512	10	5.1	4.9	96.5	97.4
17	C	CITIGROUP	Null	BB	6.125	434	190	624	10	5.9	6.0	103.0	102.6
18	WLL	WHITING PETE CORP	Jan-26	BB	6.625	421	87	508	9	7.7	7.6	94.6	95.2
19	TAP	MOLSON COORS BREWING CO	Mar-20	BBB	2.250	419	14	433	5	2.6	2.7	99.7	99.6
20	JPM	JP MORGAN CHASE	Null	BBB	5.300	413	202	615	10	5.2	5.2	101.5	101.2

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).

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Corporate Bonds: Top 20 Most Sold Issues

June 2019

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	HPT	HOSPITALITY PPTYS TR	Feb-26	BBB	5.250	139	1,901	2,040	9	4.8	4.8	102.5	102.1
2	MCFH	HARLAND CLARKE HLDGS CORP	Feb-21	C	5.750	250	1,767	2,017	25	13.0	13.3	89.6	89.2
3	JPM	JP MORGAN CHASE	Null	BBB	6.053	287	1,052	1,339	14	6.0	6.1	100.2	100.0
4	AXP	AMERICAN EXPRESS	Null	BBB	5.200	121	1,021	1,142	10	5.2	5.2	100.2	100.2
5	JPM	JP MORGAN CHASE	Null	BBB	6.750	183	996	1,179	11	6.1	6.1	110.5	110.0
6	FITB	FIFTH THIRD BANCORP	Null	BBB	4.900	90	951	1,041	7	5.0	5.0	98.9	98.6
7	STI	SUNTRUST BKS INC	Null	BBB	5.625	61	905	966	6	5.6	5.6	101.3	101.0
8	AER	AERCAP AVIATION SOLUTIONS B V	Aug-22	BBB	5.875	31	737	768	7	2.9	3.0	108.9	108.5
9	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	5.000	1,438	593	2,031	36	5.2	5.3	95.8	94.0
10	WFC	WELLS FARGO	Dec-48	BBB	6.180	187	560	747	9	6.3	6.3	101.0	100.7
11	HTZ	HERTZ CORP	Oct-22	B	6.250	226	497	723	17	6.2	6.3	100.1	99.8
12	C	CITIGROUP	Null	BB	6.250	92	464	556	9	5.7	5.7	109.5	109.0
13	F	FORD	Dec-26	BBB	4.346	464	452	916	25	4.3	4.5	100.5	99.0
14	HPQ	HEWLETT PACKARD	Oct-25	BBB	4.900	326	410	736	12	3.4	3.2	108.0	109.2
15	AAPL	APPLE INC	May-23	AA	2.400	317	370	687	15	2.3	2.3	100.5	100.3
16	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-27	BBB	3.950	84	359	443	5	4.1	4.1	99.1	98.8
17	T	AT&T	May-25	BBB	3.400	257	351	608	11	3.0	3.1	102.3	101.8
18	JPM	JP MORGAN CHASE	Null	BBB	4.625	377	345	722	17	4.8	4.9	96.8	94.2
19	WFC	WELLS FARGO	Null	BBB	5.570	154	334	488	9	5.5	5.6	100.5	99.8
20	JPM	JP MORGAN CHASE	Oct-26	A	2.950	252	317	569	5	2.9	2.9	100.3	100.3

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).

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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.

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