

Market Transparency Report

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

May 2018

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 2018

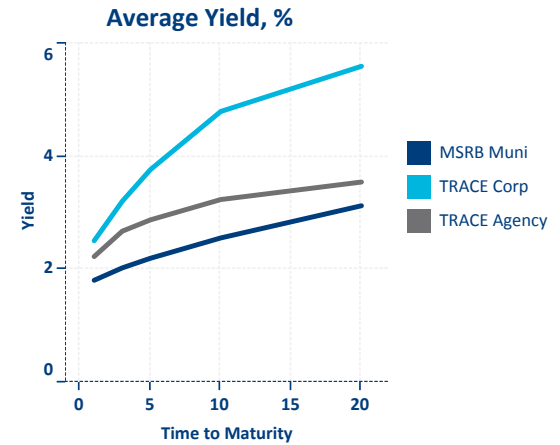
	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	10	-4.0%	0.1
CD	10	2.0%	3.1
Corp	13	1.2%	0.1
Municipal	3	-6.5%	0.0
Treasury	12	7.0%	0.8

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

Yield Matrix

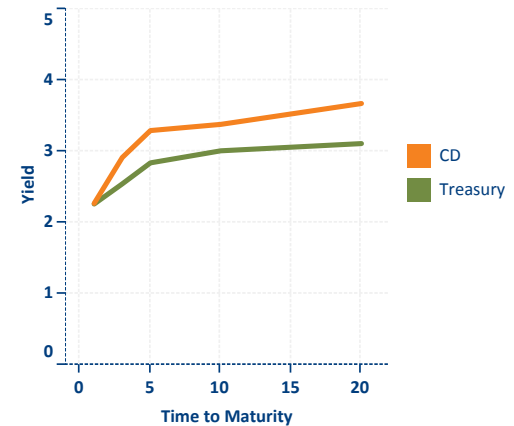
Average Yield, % for May 2018

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.8	2.0	2.2	2.6	3.1	11
TRACE Corp	2.5	3.2	3.8	4.8	5.6	3
TRACE Agency	2.2	2.7	2.9	3.2	3.6	3
CD	2.3	2.9	3.3	3.5	3.7	1
Treasury	2.3	2.6	2.8	3.0	3.1	0



Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	2.5	3.0	3.4	3.9	4.5	3
		A	2.5	3.2	3.5	4.0	4.5	3
		BBB	2.8	3.5	3.9	4.3	5.0	6
		HY	3.1	3.8	4.6	9.1	6.9	2
	Non-Financial	AAA	2.1	2.6	3.1	3.2	4.0	2
		AA	2.3	2.8	3.3	3.8	4.0	2
		A	2.6	3.1	3.6	4.1	4.6	5
		BBB	2.8	3.5	4.0	4.9	5.5	6
		HY	3.5	6.7	7.8	9.5	12.3	9
MSRB Muni	GO	AAA	1.7	1.9	2.1	2.4	3.1	8
		AA	1.8	2.0	2.1	2.6	3.2	10
		A	1.9	2.2	2.4	2.8	3.4	9
		BBB	2.8	3.2	3.7	3.7	4.2	9
	Revenue	HY	4.3	3.6	4.0	4.9	5.0	9
		AAA	1.8	1.9	2.1	2.5	3.0	8
		AA	1.8	2.0	2.1	2.5	3.0	11
		A	1.8	2.1	2.3	2.6	3.1	14
		BBB	2.3	2.6	3.1	3.4	3.6	13
		HY	15.9	9.4	7.2	5.3	5.6	13



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.

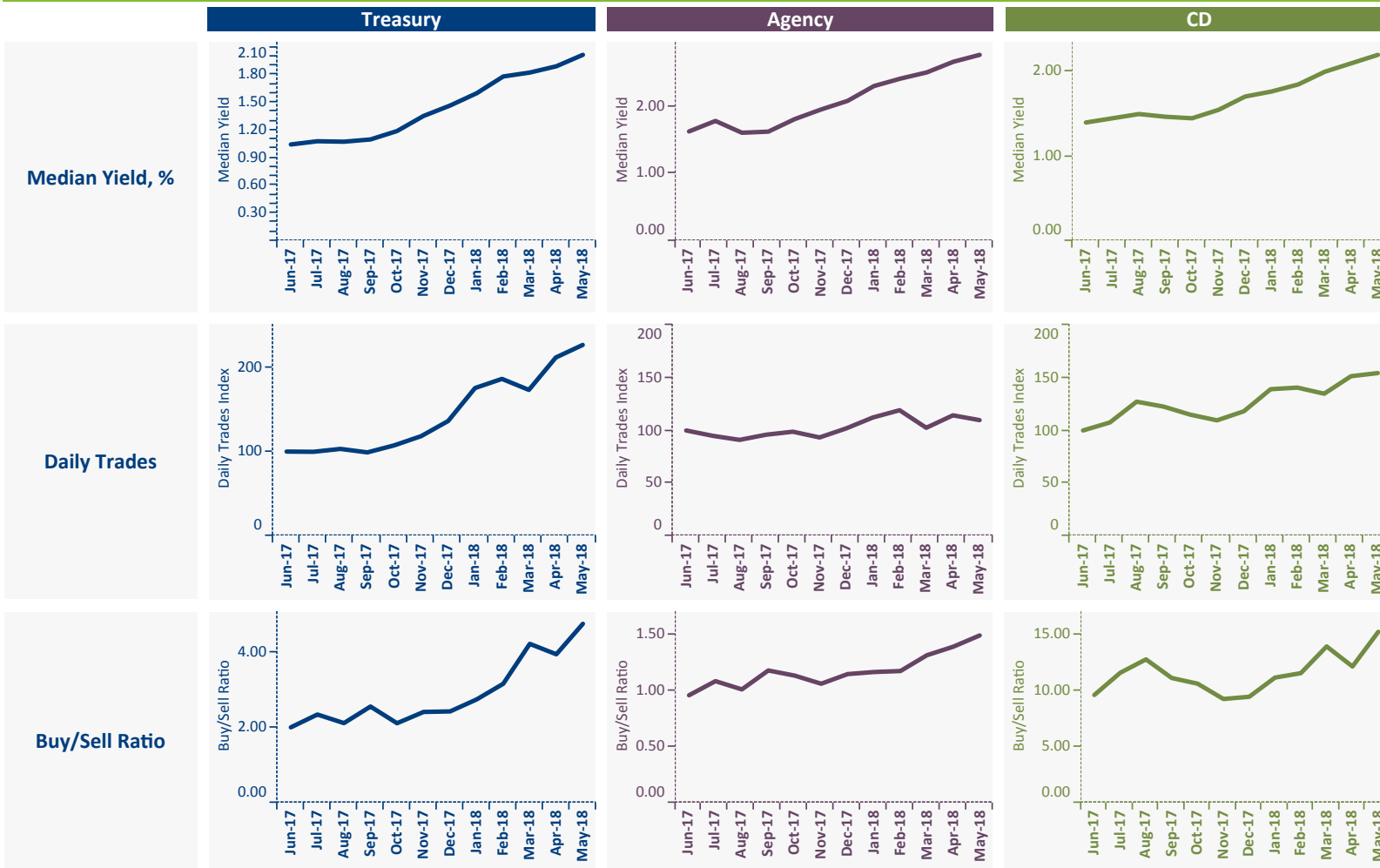
-The weights are based on transaction size.

-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



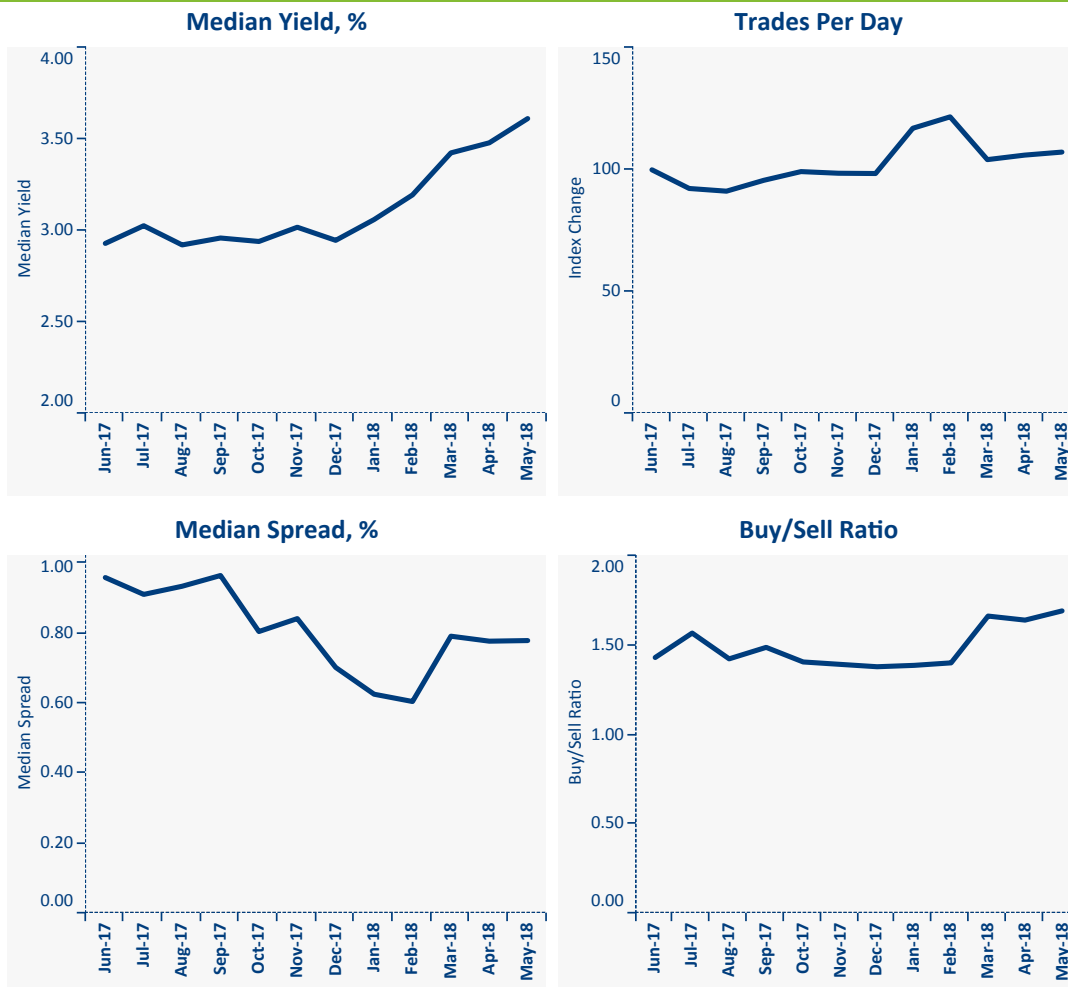
Daily Trades: First month = 100

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 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	GS	GOLDMAN SACHS	BBB	850	3.4%	16,909	1.8	348	2.6	3.2	3.7	4.2	4.6
2	JPM	JP MORGAN CHASE	A	512	3.2%	15,805	2.0	339	2.5	3.1	3.6	4.1	4.4
3	BAC	BANK OF AMERICA	A	431	3.0%	14,668	1.9	303	2.5	3.1	3.6	4.2	4.3
4	C	CITIGROUP	BBB	362	2.7%	13,191	2.1	290	2.5	3.2	3.7	4.4	4.3
5	WFC	WELLS FARGO	A	215	2.0%	10,130	1.9	215	2.5	3.3	3.8	4.3	4.3
6	T	AT&T	BBB	98	2.0%	9,747	1.5	191	2.5	3.3	3.7	4.3	5.1
7	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	A	340	2.0%	9,735	1.5	186	2.7	3.3	3.6	4.2	4.7
8	MS	MORGAN STANLEY	BBB	695	1.8%	8,927	1.5	200	2.5	3.3	3.8	4.3	4.7
9	AAPL	APPLE INC	AA	57	1.5%	7,538	1.7	157	2.4	2.9	3.3	3.6	4.0
10	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	84	1.4%	6,882	3.6	153	2.7	3.5	4.1	4.7	5.3
11	VZ	VERIZON	BBB	120	1.4%	6,742	1.8	135	2.5	3.2	3.6	4.1	4.7
12	BRK	BERKSHIRE HATHAWAY	A	142	1.1%	5,614	2.1	132	2.4	3.0	3.4	4.2	5.0
13	MSFT	MICROSOFT CORP	AAA	41	1.0%	4,961	2.1	98	2.1	2.8	3.2	3.5	3.8
14	CVS	CVS CAREMARK CORP	BBB	30	1.0%	4,955	2.0	96	2.4	3.3	3.7	4.4	4.8
15	AXP	AMERICAN EXPRESS	A	41	0.9%	4,564	2.4	109	2.5	3.1	3.5	3.9	4.3
16	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	37	0.8%	4,137	2.0	85	2.8	3.1	3.5	4.0	4.5
17	CMCS	COMCAST	A	52	0.7%	3,701	1.2	66	2.7	3.2	3.6	4.1	4.5
18	PTRB	PETROBRAS	BB	23	0.7%	3,688	1.6	127	3.3	4.2	5.2	6.5	7.2
19	F	FORD	BBB	246	0.7%	3,664	1.8	77	2.9	3.5	4.0	4.6	5.5
20	ORCL	ORACLE CORP	AA	31	0.7%	3,556	1.1	70	2.3	3.0	3.3	3.7	4.0

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 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	GD	GENERAL DYNAMICS CORP	A	13	0.3%	1,476	1,345	131	10.3	38		3.1	3.4	3.7	
2	GIS	GENERAL MLS INC	BBB	17	0.3%	1,300	1,120	180	6.2	27	2.8	3.3	3.7	4.3	4.7
3	TSLA	TESLA MTRS INC	B	6	0.3%	1,308	1,114	194	5.7	23	4.8	0.2			
4	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	84	1.4%	6,882	5,387	1,495	3.6	153	2.7	3.5	4.1	4.7	5.3
5	TM	TOYOTA	AA	58	0.5%	2,665	2,071	594	3.5	59	2.3	3.1	3.4	3.6	
6	AIG	AIG	BBB	28	0.3%	1,705	1,296	409	3.2	31	2.9	3.3	4.0	4.3	4.7
7	HTZ	HERTZ CORP	B	6	0.3%	1,256	950	306	3.1	28		7.4	8.3	8.2	
8	ESV	ENSCO PLC	BB	10	0.2%	1,168	875	293	3.0	18		5.5	4.3	8.3	9.0
9	COF	CAPITAL ONE FINL CORP	BBB	34	0.6%	3,214	2,398	816	2.9	71	2.6	3.3	3.9	4.5	
10	SAN	ABBEY NATL TREAS SVCS PLC	BBB	35	0.2%	1,105	816	289	2.8	32	2.7	3.5	4.1	4.6	
11	QCOM	QUALCOMM	A	16	0.3%	1,583	1,128	455	2.5	35	1.4	3.0	3.8	4.2	4.7
12	WAG	WALGREEN CO	BBB	10	0.3%	1,390	990	400	2.5	24	2.8	3.5	3.6	4.3	4.7
13	LUK	JEFFERIES GROUP INC NEW	BBB	30	0.2%	1,219	865	354	2.4	25	3.0	3.5	4.6	5.0	5.9
14	AMGN	AMGEN INC	A	33	0.5%	2,378	1,685	693	2.4	52	2.5	3.2	3.6	4.1	4.7
15	WBK	WESTPAC BKG CORP	AA	37	0.3%	1,340	947	393	2.4	32	2.6	3.1	3.5	3.9	
16	AXP	AMERICAN EXPRESS	A	41	0.9%	4,564	3,223	1,341	2.4	109	2.5	3.1	3.5	3.9	4.3
17	GT	GOODYEAR TIRE & RUBBER	BB	5	0.2%	1,233	870	363	2.4	28		3.5	5.1	5.8	
18	BNS	BANK NOVA SCOTIA B C	A	91	0.4%	1,744	1,229	515	2.4	41	2.5	3.2	3.4	4.3	4.1
19	ABBV	ABBVIE INC	BBB	14	0.3%	1,474	1,038	436	2.4	32	2.0	3.1	3.6	4.2	4.6
20	TD	TORONTO DOMINION BK SR MEDIUM TERM BK NT	AA	63	0.3%	1,616	1,138	478	2.4	43	2.6	3.1	3.3	3.8	

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 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	EDP	ENTERPRISE PRODS OPER LLC	BBB	32	0.2%	1,124	472	652	0.72	21	3.0	3.2	3.7	4.1	4.8
2	FTR	FRONTIER COMMUNICATIONS CORP	C	26	0.4%	2,140	900	1,240	0.73	35	5.8	11.3	14.6	8.5	14.2
3	BCS	BARCLAYS	BB	448	0.3%	1,664	795	869	0.91	33	3.2	3.4	3.9	4.5	4.6
4	SFTBF	SPRINT	B	18	0.2%	1,129	567	562	1.01	27	4.2	5.5	6.3	7.0	
5	XOM	XTO ENERGY INC	AA	18	0.2%	1,219	630	589	1.07	27	2.5	3.0	3.2	3.6	4.3
6	CTL	CENTURYLINK	B	37	0.5%	2,626	1,382	1,244	1.11	58	4.2	5.8	6.6	8.1	7.7
7	DELL	DELL	BB	11	0.3%	1,378	728	650	1.12	28	3.5	4.1	4.9	6.0	6.8
8	ORCL	ORACLE CORP	AA	31	0.7%	3,556	1,876	1,680	1.12	70	2.6	3.0	3.3	3.8	4.1
9	PNC	PNC FDG CORP	A	38	0.2%	1,131	617	514	1.20	24	2.9	3.3	3.8	3.9	
10	BP	BP	A	41	0.6%	2,817	1,546	1,271	1.22	56	2.7	3.2	3.5	3.8	
11	CMCS	COMCAST	A	52	0.7%	3,701	2,046	1,655	1.24	66	2.9	3.3	3.8	4.1	4.6
12	MET	METLIFE	A	23	0.4%	1,949	1,079	870	1.24	40	2.7	3.3	3.7	3.9	4.4
13	CS	CREDIT SUISSE	N/R	415	0.4%	2,042	1,136	906	1.25	38	6.5	3.6	4.1	4.4	4.8
14	HBC	HSBC	N/R	497	0.6%	3,066	1,712	1,354	1.26	66	3.0	3.5	4.2	4.2	4.5
15	CSCO	CISCO	AA	22	0.5%	2,262	1,264	998	1.27	43	2.6	2.9	3.3	3.6	4.1
16	RDS	SHELL	AA	29	0.4%	1,988	1,130	858	1.32	43	2.7	2.9	3.3	3.7	4.2
17	USB	U S BANCORP MEDIUM TERM NTS- BOOK ENTRY	A	32	0.5%	2,250	1,279	971	1.32	45	2.7	3.2	3.5	4.0	
18	HD	HOME DEPOT	A	23	0.4%	1,835	1,046	789	1.33	36	2.5	3.0	3.2	3.7	4.1
19	GNW	GENWORTH	B	8	0.3%	1,287	737	550	1.34	24		8.4	9.3		9.4
20	MCD	MCDONALDS	BBB	25	0.3%	1,699	974	725	1.34	33	2.7	3.0	3.4	3.8	4.5

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 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	1,373	739	2,112	35			99.4	98.9
2	MSFT	MICROSOFT CORP	Aug-26	AAA	2.400	989	182	1,171	12	3.5	3.6	92.1	91.8
3	TSLA	TESLA MTRS INC	Mar-22	B	2.375	939	9	948	15	0.2	0.7	108.2	107.0
4	GM	GENERAL MOTORS FINANCIAL COMPANY INC	Null	BB	5.750	902	166	1,068	20			98.1	97.6
5	GD	GENERAL DYNAMICS CORP	May-21	A	3.000	829	17	846	18	3.1	3.3	99.6	99.3
6	BAC	BANK OF AMERICA	Apr-19	A	2.650	819	110	929	16	2.6	2.7	100.1	100.0
7	CCCX	COMMUNITY CHOICE FINL INC	May-19	C	10.750	809	153	962	8	65.7	69.9	64.4	63.0
8	PTRB	PETROBRAS	Jan-28	N/R	5.999	598	243	841	30			96.7	95.9
9	CVS	CVS CAREMARK CORP	Jul-22	BBB	3.500	589	78	667	9	3.7	3.7	99.1	99.3
10	CVS	CVS CAREMARK CORP	Mar-25	BBB	4.100	582	38	620	11	4.1	4.2	99.7	99.5
11	UNM	PROVIDENT COS INC	Jun-58	BBB	6.250	573	79	652	4			25.0	24.7
12	PBI	PITNEY BOWES	Mar-24	BB	4.625	560	200	760	11	7.7	7.9	85.8	85.0
13	WYN	WYNDHAM WORLDWIDE CORP	Mar-23	BBB	3.900	557	18	575	11	5.0	5.2	95.3	94.6
14	GS	GOLDMAN SACHS	Oct-25	BBB	4.250	551	94	645	12	4.4	4.5	99.0	98.5
15	GS	GOLDMAN SACHS	Dec-20	BBB	2.600	522	26	548	5	3.2	3.2	98.5	98.4
16	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Feb-21	A	2.650	517	153	670	15	3.1	3.1	98.8	98.7
17	BAC	BANK OF AMERICA	Null	BBB	5.875	509	15	524	14			101.0	99.3
18	BAC	BANK OF AMERICA	Aug-24	BBB	4.200	506	174	680	11	4.1	4.1	100.5	100.3
19	ESV	ENSCO PLC	Jan-24	BB	3.000	504	28	532	4	4.3	4.9	93.7	90.6
20	AAPL	APPLE INC	May-19	AA	2.100	503	174	677	12	2.4	2.5	99.8	99.6

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 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	NOG	NORTHERN OIL & GAS INC MN	Jun-20	C	8.000	90	754	844	8	9.9	10.4	96.6	95.7
2	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Null	BBB	5.000	1,373	739	2,112	35			99.4	98.9
3	MOH	MOLINA HEALTHCARE INC	Aug-44	N/R	1.625	3	491	494	3			146.0	143.4
4	T	AT&T	Feb-22	BBB	3.000	354	407	761	7	3.5	3.6	98.2	98.0
5	T	AT&T	Feb-26	BBB	4.125	416	400	816	10	4.3	4.4	99.0	98.5
6	CVS	CVS CAREMARK CORP	Jul-20	BBB	2.800	179	399	578	9	3.1	3.2	99.4	99.1
7	CMCS	COMCAST	Feb-24	A	3.000	87	382	469	7	3.7	3.8	96.4	95.7
8	AAPL	APPLE INC	May-23	AA	2.400	474	378	852	18	3.2	3.3	96.2	96.1
9	BBBY	BED BATH & BEYOND INC	Aug-24	BBB	3.749	348	368	716	10	5.7	6.4	89.9	86.7
10	VZ	VERIZON	Sep-23	BBB	5.150	325	351	676	13	3.7	3.7	107.2	107.1
11	FE	FIRSTENERGY CORP	Aug-39	D	6.800	9	335	344	3			47.5	46.1
12	GS	GOLDMAN SACHS	Mar-20	BBB	5.375	229	335	564	8	3.0	3.1	104.2	104.0
13	VZ	VERIZON	Nov-24	BBB	3.500	287	309	596	7	3.9	3.9	98.0	97.7
14	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	Feb-26	A	3.650	377	302	679	14	3.9	4.0	98.1	97.8
15	JPM	JP MORGAN CHASE	Oct-26	A	2.950	275	301	576	6	4.0	4.0	92.4	92.3
16	AAPL	APPLE INC	Feb-26	AA	3.250	293	298	591	7	3.6	3.6	97.6	97.4
17	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-38	A	5.875	97	294	391	6	4.8	4.8	114.1	113.6
18	GILD	GILEAD SCIENCES INC	Feb-25	A	3.500	219	292	511	4	3.8	3.8	98.4	98.2
19	ESRX	EXPRESS SCRIPTS HLDG CO	Mar-27	BBB	3.400	253	291	544	3	4.5	4.6	91.8	91.6
20	WFC	WELLS FARGO	Mar-22	A	3.500	372	285	657	10	3.5	3.6	100.1	99.8

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.

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