

Market Transparency Report

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

October 2016

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 October 2016

	Median Yield (bps)	Daily Trade Volume	Buy/Sell Ratio
Agency	7	-5.9%	-0.3
CD	10	6.7%	0.2
Corp	3	-2.0%	-0.2
Municipal	38	7.4%	0.2
Treasury	6	9.1%	0.0

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

Yield Matrix

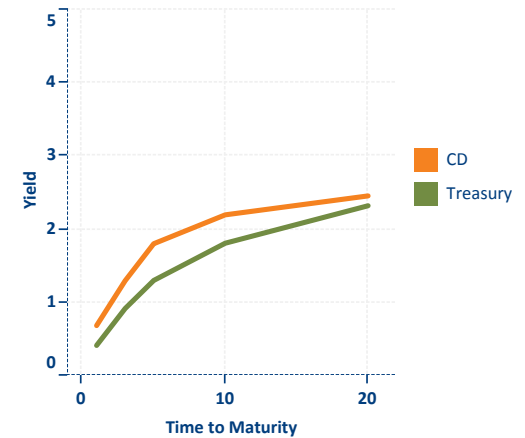
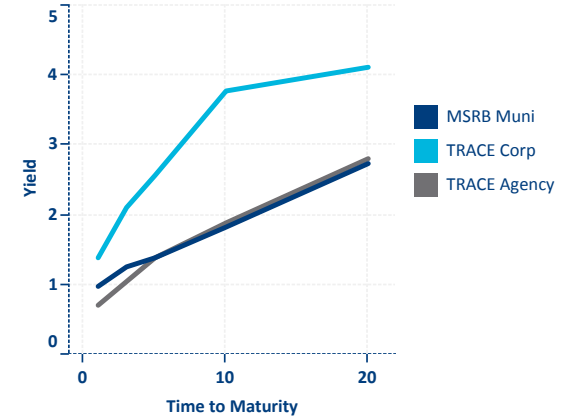
Average Yield, % for October 2016

Market	TTM					Median Maturity (Years)
	1	3	5	10	20	
MSRB Muni	1.0	1.3	1.4	1.8	2.7	15
TRACE Corp	1.4	2.1	2.6	3.8	4.1	4
TRACE Agency	0.7	1.1	1.4	1.9	2.8	3
CD	0.7	1.3	1.8	2.2	2.5	2
Treasury	0.4	0.9	1.3	1.8	2.3	1

Asset Class

Market	Category (Filtered)	Rating Key	TTM					Median Maturity (Years)
			1	3	5	10	20	
TRACE Corp	Financial	AA	1.1	1.5	1.8			2
		A	1.2	1.7	2.2	3.0	4.1	4
		BBB	1.6	2.5	3.0	3.6	4.2	4
		HY	2.0	3.3	4.2	4.3	7.5	3
		AAA	1.3	1.5	1.5		3.6	4
	Non-Financial	AA	0.8	1.4	1.8	3.0	3.5	4
		A	1.2	1.7	2.1	3.2	4.0	4
		BBB	1.7	2.3	2.8	4.3	5.9	8
		HY	2.2	4.8	7.8	7.7	8.6	9
MSRB Muni	GO	AAA	0.9	1.0	1.1	1.5	2.5	10
		AA	0.9	1.1	1.3	1.8	2.7	12
		A	1.0	1.2	1.7	2.0	2.7	10
		BBB	2.2	2.4	2.8	2.8	3.8	12
		HY	4.6	5.4	4.3	4.7	5.8	7
	Revenue	AAA	0.9	1.1	1.2	1.6	2.6	11
		AA	0.9	1.1	1.3	1.7	2.6	15
		A	1.0	1.3	1.5	2.0	2.8	18
		BBB	1.3	1.7	1.9	2.3	3.1	20
		HY	27.6	10.3	13.9	8.1	8.8	18

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.

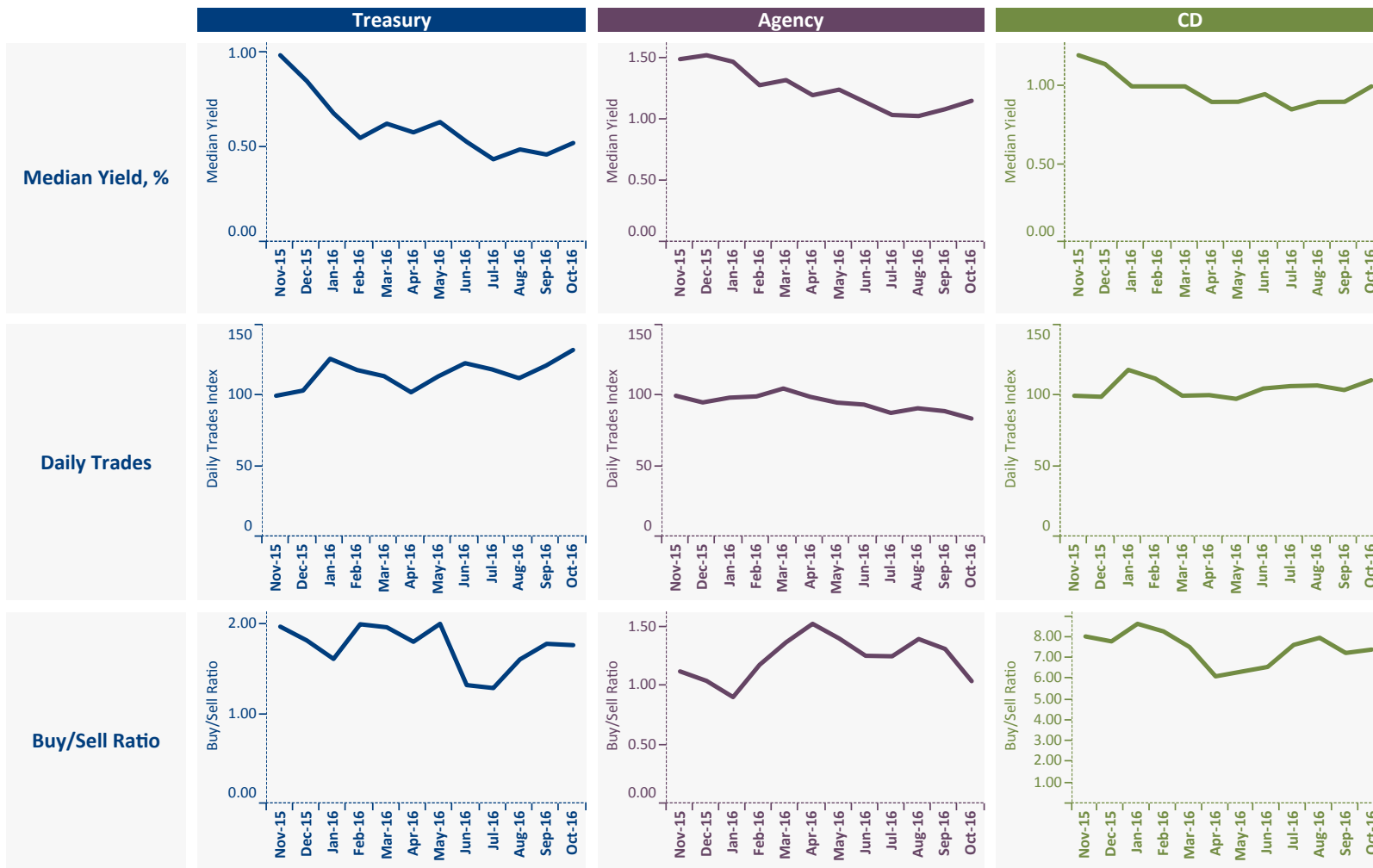
-The weights are based on transaction size.

-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



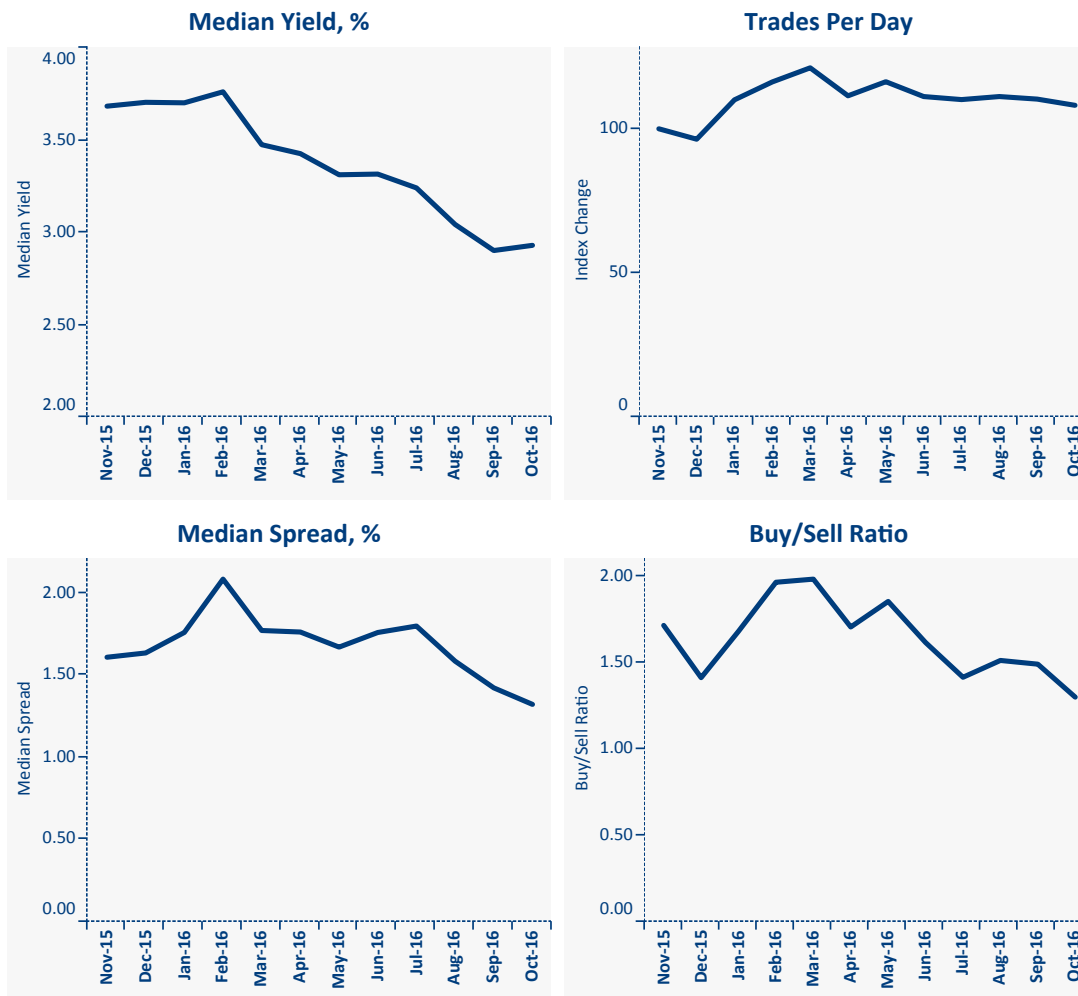
Daily Trades: First month = 100

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

October 2016

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	JPM	JP MORGAN CHASE	BBB	449	3.2%	12,062	1.9	274	1.3	1.9	2.2	3.0	3.0
2	GS	GOLDMAN SACHS	BBB	750	3.1%	11,359	1.2	251	1.5	1.9	2.4	3.1	4.1
3	BAC	BANK OF AMERICA	BBB	483	3.0%	11,152	1.3	226	1.5	1.8	2.3	3.4	3.9
4	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	390	2.3%	8,671	0.8	183	1.1	1.5	2.0	2.9	3.6
5	C	CITIGROUP	BBB	302	2.3%	8,490	2.0	210	1.4	1.8	2.3	3.6	3.0
6	WFC	WELLS FARGO	A	193	2.3%	8,385	1.8	201	1.2	1.8	2.2	3.0	4.3
7	T	AT&T	BBB	73	1.8%	6,842	1.6	141	1.4	1.8	2.3	3.1	4.3
8	MS	MORGAN STANLEY	BBB	677	1.7%	6,153	1.0	144	1.5	1.9	2.3	3.1	4.0
9	VZ	VERIZON	BBB	67	1.2%	4,557	1.3	93	1.1	1.8	2.1	2.9	4.2
10	DB	DEUTSCHE BANK	BBB	219	1.0%	3,891	1.5	88	2.7	3.2	3.6	4.1	
11	CTL	CENTURYLINK	BB	30	0.9%	3,472	1.4	78	1.4	3.3	4.9	6.2	7.6
12	AAPL	APPLE INC	AA	34	0.9%	3,436	1.3	79	0.8	1.3	1.7	2.4	3.5
13	BRK	BERKSHIRE HATHAWAY	AA	157	0.8%	3,120	1.1	78	1.1	1.4	1.9	2.6	3.9
14	STX	SEAGATE HDD CAYMAN	BBB	6	0.8%	2,984	2.2	72		2.1		5.8	6.9
15	BUD	ANHEUSER BUSCH INBEV WORLDWIDE INC	A	42	0.8%	2,843	1.2	59	1.0	1.5	1.9	2.8	3.9
16	FTR	FRONTIER COMMUNICATIONS CORP	BB	24	0.8%	2,839	2.8	61		6.0	7.2	9.2	9.3
17	PDVA	PETROLEOS DE VENEZUELA SA	N/R	10	0.7%	2,721	0.9	64					
18	F	FORD	BBB	183	0.7%	2,649	1.8	59	1.3	1.8	2.5	3.2	6.5
19	PBR	PETROBRAS	B	13	0.7%	2,610	1.0	93		3.7	5.5	6.8	
20	GNW	GENWORTH	B	9	0.7%	2,481	0.6	54		7.7	8.2		8.3

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

October 2016

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	AOI	ALLIANCE ONE INTL INC	C	1	0.5%	1,679	1,651	28	59.0	15			14.4		
2	CHRC	BAYSIDE CMNTY CHURCH SARASOTA INC BRADEN	N/R	100	0.5%	1,750	1,688	62	27.2	14					7.0
3	PBI	PITNEY BOWES	BBB	7	0.3%	1,296	1,102	194	5.7	28	1.5	2.2	3.3		5.0
4	M	MACYS RETAIL HLDGS INC	BBB	21	0.4%	1,364	1,093	271	4.0	30			2.7	3.5	5.0
5	FITB	FIFTH THIRD BANCORP	BBB	19	0.3%	1,044	812	232	3.5	23	1.0	1.8	2.3		4.7
6	RCII	RENT A CTR INC NEW	B	2	0.3%	1,051	809	242	3.3	17			9.1		
7	ECOH	ECOPETROL S A	BBB	7	0.3%	1,126	847	279	3.0	29		2.2		4.6	
8	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	35	0.6%	2,167	1,614	553	2.9	54	1.6	2.1	2.9	3.8	4.7
9	ESV	ENSCO PLC	BB	8	0.5%	1,852	1,375	477	2.9	37		6.7	6.6	8.7	9.8
10	IEP	ICAHN ENTERPRISES	BB	5	0.4%	1,630	1,210	420	2.9	37		5.8	6.3		
11	TEVA	TEVA PHARMACEUTICAL FIN CO B V	BBB	13	0.3%	1,107	822	285	2.9	28		1.8	2.3	3.4	4.1
12	NAVI	NAVIENT CORP	BB	24	0.3%	1,038	769	269	2.9	21	2.3	4.6	5.8	6.9	7.3
13	FTR	FRONTIER COMMUNICATIONS CORP	BB	24	0.8%	2,839	2,095	744	2.8	61		6.0	7.2	9.2	9.3
14	ETP	ENERGY TRANSFER PARTNERS L P	BBB	26	0.4%	1,328	972	356	2.7	28		2.5	2.8	4.0	5.1
15	MON	MONSANTO CO NEW	BBB	17	0.2%	850	620	230	2.7	20	1.2	1.6	2.2	2.8	4.0
16	ABBV	ABBVIE INC	BBB	15	0.4%	1,391	1,009	382	2.6	30	1.4	1.9	2.1	3.0	4.0
17	COF	CAPITAL ONE FINL CORP	BBB	27	0.3%	1,157	808	349	2.3	27	1.4	1.7	2.3	3.5	
18	MET	METLIFE	BBB	22	0.6%	2,079	1,439	640	2.3	41	1.3	1.5	1.9	2.7	4.0
19	STX	SEAGATE HDD CAYMAN	BBB	6	0.8%	2,984	2,045	939	2.2	72		2.1		5.8	6.9
20	BK	BANK NEW YORK INC MEDIUM TERM SR NTS BOO	A	37	0.4%	1,601	1,083	518	2.1	35	1.1	1.6	1.9	2.5	

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

October 2016

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	BTU	PEABODY ENERGY	N/R	6	0.5%	1,717	99	1,618	0.06	16					
2	CHK	CHESAPEAKE ENERGY	C	12	0.2%	868	277	591	0.47	17		6.2	8.6		
3	BCS	BARCLAYS	N/R	431	0.4%	1,605	533	1,072	0.50	24	2.9	2.8	3.5	3.9	4.2
4	FE	FIRSTENERGY CORP	BB	25	0.4%	1,385	498	887	0.56	26	1.9	2.5		3.1	4.8
5	ACT	ALLERGAN	BBB	17	0.3%	1,118	436	682	0.64	23	1.6	2.1	2.6	3.1	4.1
6	GNW	GENWORTH	B	9	0.7%	2,481	970	1,511	0.64	54	5.2	8.5	8.9		8.7
7	WAG	WALGREEN CO	BBB	14	0.3%	1,281	504	777	0.65	21	1.5	1.8	2.4	2.9	4.1
8	WMB	WILLIAMS COS INC	BBB	29	0.2%	922	382	540	0.71	24	2.5	2.8	3.3	4.0	5.6
9	SFTBF	SPRINT	B	17	0.4%	1,525	643	882	0.73	37	3.1	5.7	7.2	7.7	8.5
10	RIG	TRANSOCEAN INC	B	14	0.6%	2,259	979	1,280	0.76	51	6.1		8.2	11.8	10.8
11	AA	ALCOA	BBB	13	0.4%	1,506	656	850	0.77	36		3.3	3.7	4.6	6.0
12	PTRB	PETROBRAS	B	10	0.4%	1,643	713	930	0.77	56	3.5	4.2	5.5		7.9
13	CHTR	CCO HOLDINGS LLC	BBB	21	0.2%	930	407	523	0.78	21	1.7	2.4	2.7		5.1
14	WMT	WAL-MART	AA	25	0.3%	1,241	545	696	0.78	27	1.1	1.5	1.6	2.5	3.4
15	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	AA	390	2.3%	8,671	3,872	4,799	0.81	183	1.2	1.7	2.0	3.0	3.7
16	VIA	VIACOM INC NEW	BBB	37	0.5%	1,881	839	1,042	0.81	43	1.6	1.8	2.7	3.3	5.3
17	FCX	FREEMPORT-MCMORAN COPPER & GOLD INC	B	18	0.4%	1,675	767	908	0.84	35	3.3	4.6	5.5	6.0	7.1
18	PDVA	PETROLEOS DE VENEZUELA SA	N/R	10	0.7%	2,721	1,248	1,473	0.85	64					
19	TWX	TIME WARNER	BBB	30	0.2%	899	419	480	0.87	19	1.4	1.9	2.2	2.9	4.4
20	CS	CREDIT SUISSE	N/R	358	0.6%	2,083	976	1,107	0.88	40	2.3	2.7	2.8	3.4	

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

October 2016

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	AOI	ALLIANCE ONE INTL INC	Jul-21	C	9.875	1,651	28	1,679	15	14.4	14.7	84.7	84.0
2	STX	SEAGATE HDD CAYMAN	Dec-34	BBB	5.750	902	314	1,216	29	6.9	7.2	87.7	85.3
3	MET	METLIFE	Dec-49	BBB	5.250	865	105	970	19			102.0	101.5
4	JPM	JP MORGAN CHASE	Jan-49	BBB	5.000	828	95	923	22			99.7	97.8
5	SIG	SUSQUEHANNA INTERNATIONAL GROUP	Jun-24	BBB	4.700	754	56	810	14	5.1	5.4	97.5	95.8
6	PBI	PITNEY BOWES	Oct-21	BBB	3.375	692	5	697	14	3.3	3.4	100.2	100.0
7	IEP	ICAHN ENTERPRISES	Feb-22	BB	5.875	676	187	863	19	6.3	6.7	98.3	96.5
8	C	CITIGROUP	May-49	BB	6.300	650	94	744	21			104.5	101.9
9	WFC	WELLS FARGO	Dec-49	BBB	5.900	588	104	692	21			105.3	103.5
10	KTOS	KRATOS DEFENSE & SEC SOLUTIONS	May-19	C	7.000	577	21	598	7	10.1		92.9	91.8
11	EAT	BRINKER INTL INC	May-23	BB	3.875	569	14	583	14	4.2	4.4	98.4	97.0
12	RCII	RENT A CTR INC NEW	Nov-20	B	6.625	556	152	708	12	8.7	9.5	93.0	90.6
13	KEY	KEYCORP MEDIUM TERM SR NTS BOOK ENTRY	Dec-49	BBB	5.000	554	16	570	14			100.8	98.3
14	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	548	339	887	21	5.7	5.8	104.4	102.0
15	ETP	ENERGY TRANSFER PARTNERS L P	Nov-66	BB	3.774	532	8	540	10			71.5	69.8
16	JPM	JP MORGAN CHASE	Dec-49	BBB	6.000	520	113	633	12			105.2	104.1
17	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	A	5.000	508	549	1,057	15			106.6	106.3
18	MTB	MFRS & TRADERS TR CO BK NT PROGRAM	Dec-49	BBB	5.125	446	2	448	12			100.8	100.5
19	JPM	JP MORGAN CHASE	Apr-49	BBB	5.300	441	85	526	13			102.6	101.0
20	STX	SEAGATE HDD CAYMAN	Jun-27	BBB	4.875	440	46	486	13	5.9	6.2	91.9	89.6

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

October 2016

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	FE	FIRSTENERGY CORP	Aug-39	BB	6.800	160	767	927	18			66.7	100.7
2	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Dec-49	A	5.000	508	549	1,057	15			106.6	106.3
3	BTU	PEABODY ENERGY	Sep-20	N/R	6.500	19	544	563	5			45.5	45.9
4	WAG	WALGREEN CO	Nov-24	BBB	3.800	111	507	618	6	2.8	2.9	106.8	106.4
5	VNR	Vanguard Natural Resources, LLC	Apr-20	C	7.875	27	486	513	5	29.2	29.0	55.7	56.0
6	BTU	PEABODY ENERGY	Nov-18	N/R	6.000	24	456	480	5			44.4	46.0
7	PDVA	PETROLEOS DE VENEZUELA SA	Apr-17	N/R	5.250	319	455	774	21			81.8	80.6
8	PDVA	PETROLEOS DE VENEZUELA SA	Nov-17	N/R	8.500	205	433	638	19			86.0	85.8
9	GNW	GENWORTH	Sep-21	B	7.625	366	431	797	18	8.2	8.9	97.6	95.1
10	GS	GOLDMAN SACHS	Dec-49	BB	4.000	253	395	648	11			84.3	82.5
11	STX	SEAGATE HDD CAYMAN	Jun-23	BBB	4.750	309	361	670	16	4.6	4.9	100.8	99.1
12	ACT	ALLERGAN	Mar-20	BBB	3.000	49	347	396	6	1.9	2.1	103.3	103.0
13	MUR	MURPHY OIL CORP	Jun-22	BB	4.000	128	347	475	6	4.6	5.0	97.0	95.0
14	RIG	TRANSOCEAN INC	Dec-21	B	8.125	190	346	536	13		9.2	98.7	95.6
15	HPQ	HEWLETT PACKARD	Sep-41	BBB	6.000	548	339	887	21	5.7	5.8	104.4	102.0
16	GE	GENERAL ELEC CAP CORP MEDIUM TERM NTS BO	Jan-38	AA	5.875	60	332	392	8	3.6	3.7	133.1	132.4
17	PBR	PETROBRAS	Mar-24	B	6.250	405	330	735	27	6.3	6.4	99.9	98.9
18	PBR	PETROBRAS	May-23	B	4.375	186	326	512	16	5.9	6.1	91.9	91.0
19	BTU	PEABODY ENERGY	Nov-21	N/R	6.250	12	324	336	3			47.7	44.3
20	PTRB	PETROBRAS	Jan-21	B	5.375	212	320	532	18	5.2	5.5	100.5	99.7

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).

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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