

Market Transparency Report

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

November 2015

As of November 30, 2015

www.tradeweb.com

1177 Avenue of the Americas
New York, NY 10036
866.645.7524

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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Monthly Change in Market Data: November vs. October

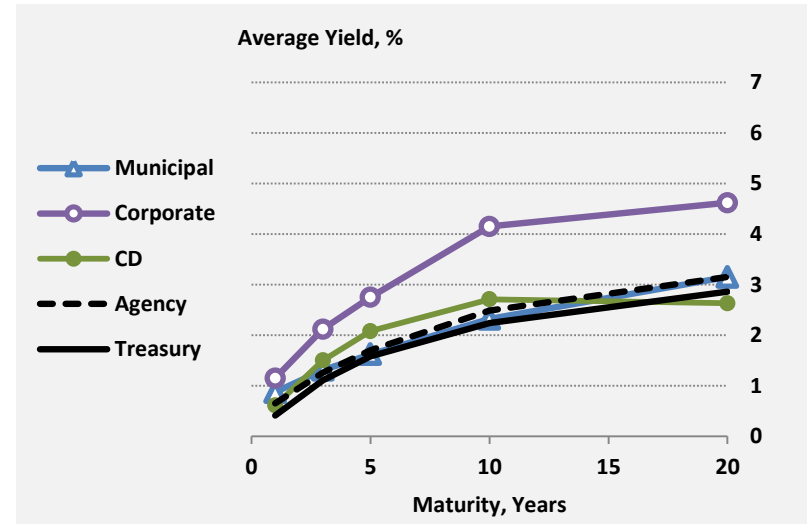
Security	Median Yield	Daily Trade Volume	Buy-to-Sell Ratio
Agency	+28 bps	+9.1%	0.0
CD	+3 bps	-2.3%	-0.1
Corporate	+7 bps	+0.1%	0.0
Municipal	+8 bps	+1.1%	+0.1
Treasury	+32 bps	+23.0%	+0.7

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

Yield Matrix

Average Yield, % Nov-15	Asset Class	Maturity, Years					Median Maturity, Years
		1	3	5	10	20	
	Treasury	0.4	1.1	1.6	2.2	2.9	2.0
	Agency	0.7	1.3	1.7	2.5	3.2	3
	CD	0.6	1.5	2.1	2.7	2.6	1.9
	Corporate	1.2	2.1	2.8	4.2	4.6	5
	Municipal	0.9	1.3	1.6	2.3	3.2	15

Asset Class	Rating	Maturity, Years					Median Maturity, Years
		1	3	5	10	20	
Financial	AAA	-	-	-	-	-	-
	AA	0.9	1.8	2.0	3.1	-	3
	A	1.0	1.8	2.4	3.5	4.5	5
	BBB	1.3	2.4	3.1	4.0	5.2	8
	High Yield	2.0	3.3	4.4	4.9	8.8	4
Corporate	AAA	-	1.5	1.9	2.6	4.2	5
	AA	0.6	1.3	2.0	3.9	4.3	5
	A	1.2	1.6	2.9	3.8	4.5	6
	BBB	1.2	2.2	3.7	5.2	6.5	7
	High Yield	1.0	6.3	6.2	7.4	10.3	8
General Obligation	AAA	0.6	1.0	1.3	1.8	2.7	10
	AA	0.7	1.0	1.3	2.1	3.0	12
	A	0.8	1.2	1.5	2.2	3.2	11
	BBB	1.2	1.7	2.0	2.7	3.8	13
	High Yield	61.5	13.7	9.4	11.0	9.3	16
Municipal	AAA	0.6	1.0	1.4	1.9	2.9	13
	AA	0.7	1.1	1.4	2.0	2.9	16
	A	0.9	1.4	1.8	2.8	3.3	18
	BBB	1.6	1.8	2.2	2.9	3.4	20
	High Yield	11.9	19.7	16.9	10.6	9.3	15

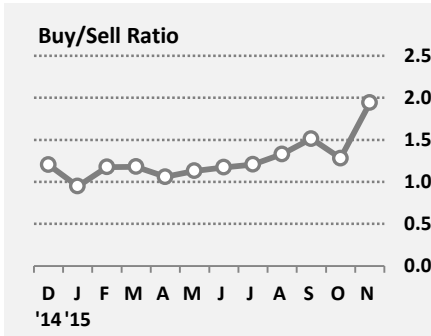
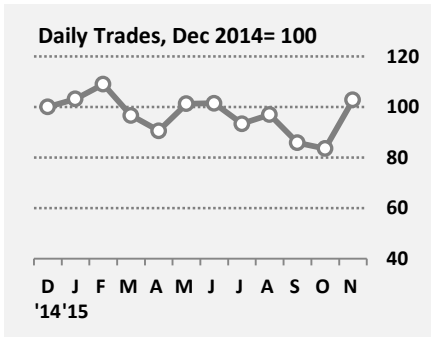
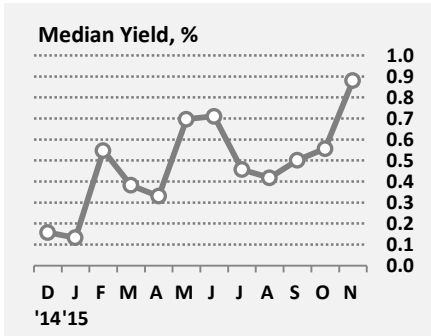


Source: TRACE, RTRS (MSRB's Real-time Transaction Reporting System) and Tradeweb Direct as of 11/30/2015.

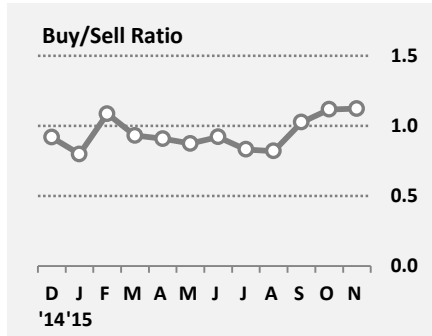
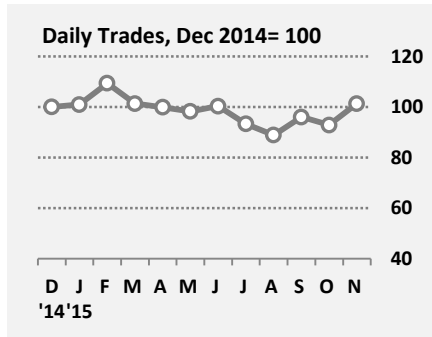
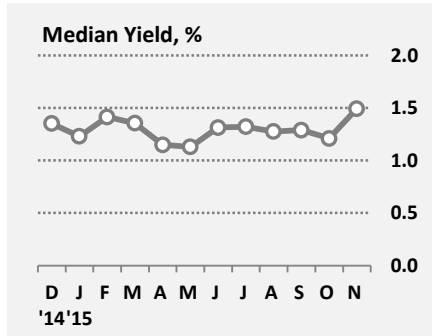
- The yields in each cell for Corporate/Agency/Municipal are the weighted average yield based on odd-lot customer buy transactions reported in TRACE/MSRB.
- The yields in each cell for Treasury/CD are the weighted average yield based on buy transactions on the Tradeweb Direct Platform.
- The weights 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

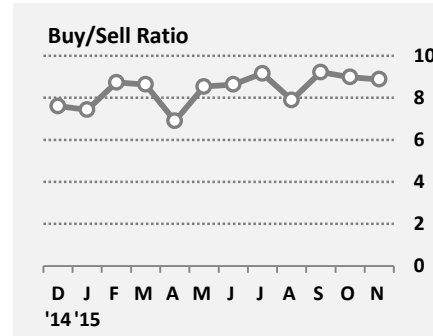
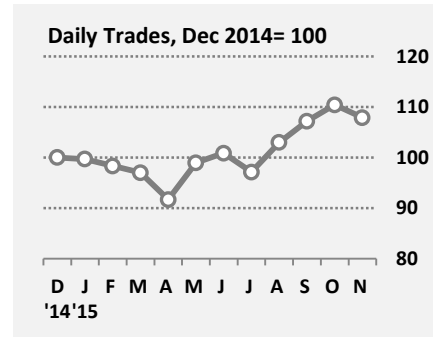
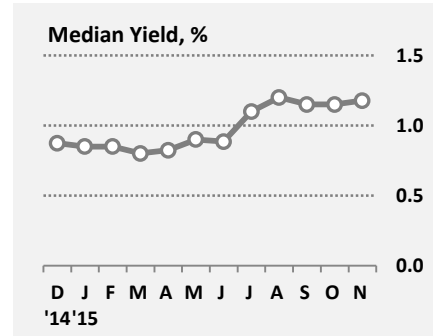
Treasury



Agency



CD



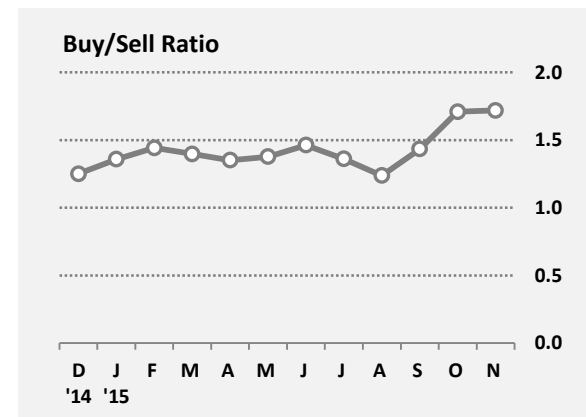
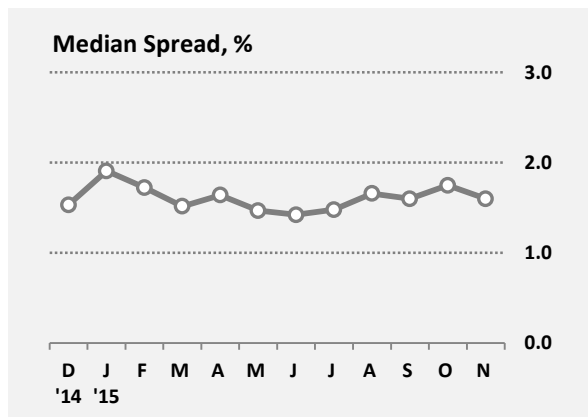
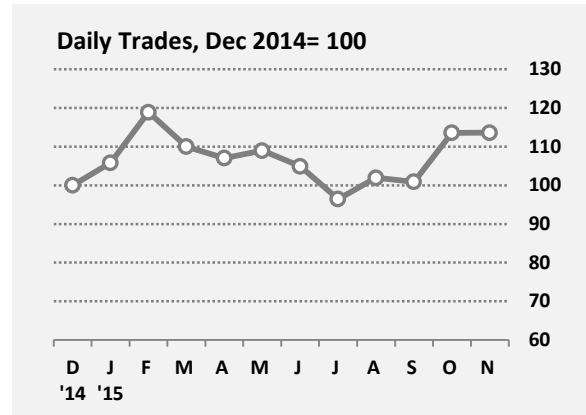
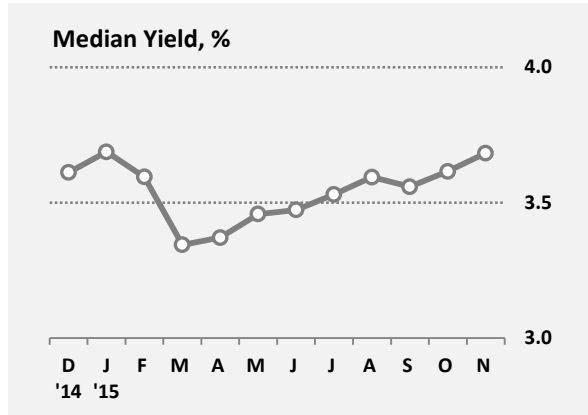
Source: TRACE and Tradeweb Direct as of 11/30/2015.

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.



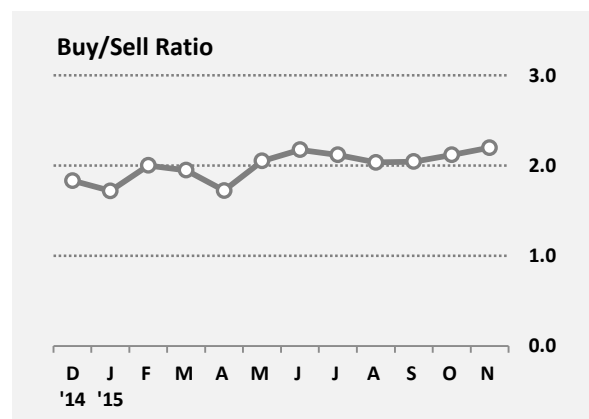
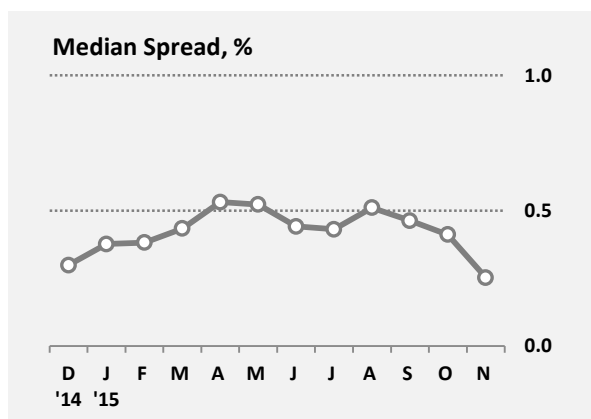
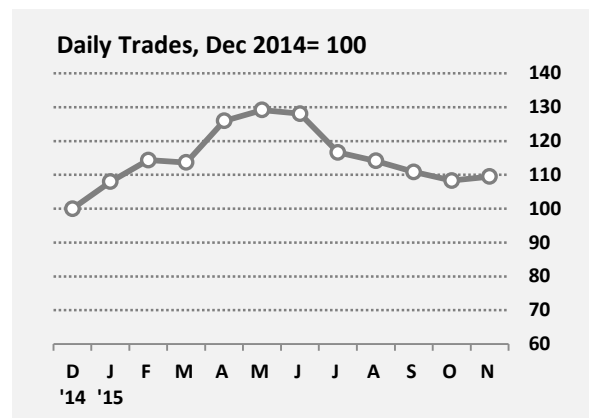
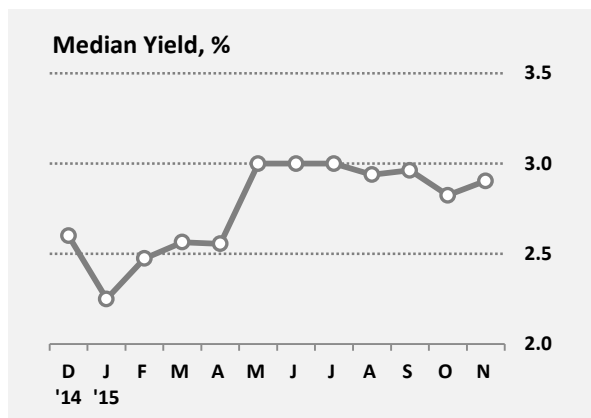
Corporate Bonds: Odd-Lot Customer Transaction Trend Summary



Source: TRACE and Tradeweb Direct as of 11/30/2015.

- Based on odd-lot customer transactions (<100M) reported in TRACE.
- 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.

Municipal Bonds: Odd-Lot Customer Transaction Trend Summary



Source: RTRS (MSRB's Real-time Transaction Reporting System) and Tradeweb Direct as of 11/30/2015.

- 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.

Corporate Bonds: Top 20 Most Active Issuers

November 2015

	Issuer		Rating	Issues Traded	% of Trades	Num of Trades	Buy/Sell Ratio	Dollar Vol. Traded (in Millions)	Median Yield (%), Investor Buys				
	Reference*	Issuer Name							1Y	3Y	5Y	10Y	20Y
1	JPM	JP MORGAN CHASE	A	455	3.2	10,488	1.9	232	1.1	1.7	2.6	3.8	4.3
2	GS	GOLDMAN SACHS	A	695	3.0	9,894	1.2	214	1.4	1.9	2.6	3.6	4.5
3	BAC	BANK OF AMERICA	BBB	504	3.0	9,786	1.3	202	1.1	2.0	2.7	4.0	4.0
4	C	CITIGROUP	BBB	250	2.8	8,992	3.3	229	1.0	1.9	2.6	4.0	4.7
5	GE	GENERAL ELECTRIC	AA	411	2.1	6,914	0.8	149	1.0	1.6	2.4	3.4	4.0
6	WFC	WELLS FARGO	A	165	2.1	6,751	2.2	156	0.8	1.6	2.4	3.5	4.4
7	MS	MORGAN STANLEY	A	613	1.7	5,568	1.1	137	1.4	1.8	2.6	3.9	4.4
8	T	AT&T	BBB	57	1.4	4,544	2.1	97	1.0	1.7	2.7	3.7	5.1
9	VZ	VERIZON	BBB	66	1.4	4,497	1.6	97	0.9	1.7	2.8	3.5	5.0
10	PTRB		BB	24	1.0	3,266	1.6	94	6.0	9.2	9.8	9.4	9.9
11	CTL	CENTURYLINK	BB	32	0.9	3,025	1.6	60	2.4	5.2	5.6	7.4	7.0
12	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	72	0.9	2,900	3.8	59	2.5	4.1	4.8	6.0	7.3
13	X	US STEEL	B	7	0.9	2,893	0.7	38	23.5	16.6	18.7	-	15.9
14	BRK	BERKSHIRE HATHAWAY	A	146	0.9	2,823	1.5	68	0.9	1.5	2.2	3.3	4.7
15	CHK	CHESAPEAKE ENERGY	BB	16	0.8	2,770	1.0	34	-	23.6	21.3	-	-
16	F	FORD	BBB	136	0.8	2,731	2.5	66	1.4	2.4	3.3	4.0	3.2
17	FCX	FREEMPORT-MCMORAN COPPER & GOLD INC	BBB	18	0.8	2,721	2.7	49	4.3	6.7	8.4	8.7	8.9
18	MSFT	MICROSOFT CORP	AAA	29	0.8	2,502	3.2	55	-	1.3	2.0	3.0	4.1
19	FTR	FRONTIER COMMUNICATIONS CORP	BB	21	0.8	2,492	2.5	50	-	5.9	9.1	9.8	10.6
20	HPQ	HEWLETT PACKARD	BBB	21	0.7	2,370	4.5	53	-	2.3	3.9	-	-

Source: TRACE and Tradeweb Direct as of 11/30/2015.

- 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.

* Actual issue symbol will vary.

Corporate Bonds: Top 20 Issuers with Highest Buy/Sell Ratio

November 2015

	Issuer Reference*	Issuer Name	Rating	Issues Traded	% of Trades	Num of Trades			Buy/Sell Ratio	Dollar Vol. Traded (in Millions)	Median Yield (%), Investor Buys				
						All	Buys	Sells			1Y	3Y	5Y	10Y	20Y
1	NRP	Natural Resources Partners	B	1	0.5	1,707	1,689	18	94	11	-	24.5	-	-	-
2	ICON	ICONIX BRAND GROUP INC	N/R	1	0.3	1,058	1,044	14	75	10	22.0	-	-	-	-
3	YUM	YUM BRANDS INC	BBB	8	0.5	1,641	1,573	68	23	32	-	3.8	4.3	5.0	7.4
4	QCOM		A	6	0.6	1,998	1,886	112	17	43	-	1.6	2.5	4.1	5.5
5	CHRC	REVIVAL PENTE TABERNACLE	N/R	111	0.4	1,182	1,097	85	13	9	-	-	-	-	6.5
6	HAL	HALLIBURTON CO	A	18	0.3	1,006	922	84	11	21	1.2	2.0	2.6	3.6	5.0
7	EMC	EMC CORP	A	3	0.5	1,744	1,571	173	9	37	-	3.1	4.3	5.7	-
8	AFG	AMERICAN FINANCIAL	BBB	2	0.4	1,183	1,064	119	9	9	-	3.0	-	-	-
9	XRX	XEROX CORP	BBB	14	0.6	1,933	1,712	221	8	44	1.8	3.3	4.0	4.7	6.4
10	ESV	ENSCO PLC	BBB	8	0.2	781	686	95	7	15	-	7.1	7.0	8.7	8.2
11	VIA	VIACOM INC NEW	BBB	34	0.6	1,837	1,551	286	5	38	1.4	2.4	3.5	4.1	6.6
12	HPQ	HEWLETT PACKARD	BBB	21	0.7	2,370	1,941	429	5	53	-	2.3	3.9	-	-
13	MCD	MCDONALDS	BBB	19	0.5	1,556	1,271	285	4	32	1.3	2.0	2.4	3.4	4.7
14	WAG	WALGREEN CO	BBB	10	0.3	1,004	814	190	4	22	-	2.5	3.3	4.0	5.0
15	GM	GENERAL MOTORS FINANCIAL COMPANY INC	BBB	25	0.4	1,270	1,005	265	4	34	1.2	2.8	3.4	4.2	5.2
16	KMI	KINDER MORGAN ENERGY PARTNERS L P	BBB	72	0.9	2,900	2,292	608	4	59	2.5	4.1	4.8	6.0	7.3
17	CVX	CHEVRON CORP NEW	AA	23	0.3	1,127	878	249	4	25	0.4	1.4	2.3	2.9	4.2
18	EBAY	EBAY INC	BBB	9	0.3	1,058	824	234	4	23	-	2.4	3.0	4.0	-
19	PFE	PFIZER	AA	35	0.4	1,205	933	272	3	36	0.9	1.9	3.3	3.2	4.6
20	NE	NOBLE HLDG INTL LTD	BBB	12	0.2	782	605	177	3	15	4.1	6.3	8.1	8.8	9.3

Source: TRACE and Tradeweb Direct as of 11/30/2015.

- 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 issuer. Bond ratings are from Moody's and S&P.

* Actual issue symbol will vary.

Corporate Bonds: Top 20 Issuers with Lowest Buy/Sell Ratio

November 2015

Issuer Reference*	Issuer Name	Rating	Issues Traded	% of Trades	Num of Trades			Buy/Sell Ratio	Dollar Vol. Traded (in Millions)	Median Yield (%), Investor Sells					
					All	Buys	Sells			1Y	3Y	5Y	10Y	20Y	
1	AVP	AVON PRODUCTS	B	6	0.3	942	184	758	0.2	15.2	-	14.4	15.3	-	-
2	BTU	PEABODY ENERGY	C	6	0.5	1,717	396	1,321	0.3	4.0	-	73.8	62.1	49.7	-
3	CS	CREDIT SUISSE	A	271	0.5	1,489	421	1,068	0.4	15.7	1.5	2.3	2.8	7.0	-
4	BCS	BARCLAYS	A	434	0.6	1,966	611	1,355	0.5	31.7	1.3	2.8	3.3	3.9	4.4
5	SFTBF	SPRINT	B	14	0.3	873	366	507	0.7	17.1	6.0	11.1	10.8	10.8	11.3
6	X	US STEEL	B	7	0.9	2,893	1,233	1,660	0.7	38.4	25.9	26.3	24.4	-	15.3
7	DB	DEUTSCHE BANK	BBB	184	0.4	1,317	601	716	0.8	21.4	1.7	2.2	2.9	3.8	-
8	GE	GENERAL ELECTRIC	AA	411	2.1	6,914	3,164	3,750	0.8	149.2	1.2	1.8	2.5	3.6	4.3
9	RY	ROYAL BANK OF CANADA	AA	235	0.4	1,259	604	655	0.9	22.8	0.9	1.8	2.3	3.3	3.8
10	CMCS	COMCAST	A	40	0.5	1,496	729	767	1.0	38.0	1.1	1.6	2.2	3.1	4.6
11	CSCO	CISCO	AA	17	0.3	986	484	502	1.0	20.2	1.0	1.8	2.1	3.0	4.4
12	HBC	HSBC	A	359	0.7	2,370	1,189	1,181	1.0	81.6	-	2.4	3.3	4.2	5.0
13	AIG	AIG	BBB	37	0.3	892	453	439	1.0	23.3	1.7	2.4	4.0	3.8	4.6
14	BP	BP	A	31	0.3	1,059	539	520	1.0	25.0	1.2	1.8	2.5	3.4	5.4
15	TM	TOYOTA	AA	41	0.3	820	418	402	1.0	19.8	1.0	1.6	2.5	2.9	3.7
16	CHK	CHESAPEAKE ENERGY	BB	16	0.8	2,770	1,415	1,355	1.0	34.0	-	34.7	26.8	-	-
17	PDVA	PETROLEOS DE VENEZUELA SA	N/R	10	0.5	1,694	883	811	1.1	29.7	-	-	-	-	-
18	MS	MORGAN STANLEY	A	613	1.7	5,568	2,913	2,655	1.1	137.3	1.5	2.2	3.0	4.0	4.5
19	BNPQF		BBB	125	0.3	989	527	462	1.1	25.9	2.2	2.6	3.0	4.8	4.4
20	RIG	TRANSOCEAN INC	BB	12	0.5	1,562	840	722	1.2	28.1	5.7	8.4	12.4	14.8	11.8

Source: TRACE and Tradeweb Direct as of 11/30/2015.

- 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 issuer. Bond ratings are from Moody's and S&P.

* Actual issue symbol will vary.

Corporate Bonds: Top 20 Most Bought Issues

November 2015

Issue	Issuer Reference*	Coupon	Maturity	Rating	Number of Trades			Dollar Vol. Traded (in Million)	Median Yield, %		Median Price		
					Buys	Sells	Total		Buyers	Sellers	Buyers	Sellers	
1	CITIGROUP INC	C	6.125	Dec-49	N/R	2,060	11	2,071	63.1	-	-	102.3	101.1
2	NATURAL RESOURCE PARTNERS LP	NRP	9.125	Oct-18	B	1,689	18	1,707	11.1	24.5	22.8	69.8	72.2
3	AMERICAN FINANCIAL GROUP	AFG	6.000	Nov-55	BBB	1,051	111	1,162	8.8	-	-	25.0	25.0
4	ICONIX BRAND GROUP INC	ICON	2.500	Jun-16	N/R	1,044	14	1,058	10.1	22.0	25.9	91.1	89.6
5	PNC FINANCIAL SERVICES	PNC	6.750	Aug-49	BBB	762	71	833	8.0	-	-	109.0	108.3
6	WACHOVIA CAP TR III	WFC	5.570	-	BBB	671	135	806	21.4	-	-	99.8	97.1
7	HARSCO CORP	HSC	5.750	May-18	BB	651	19	670	5.2	6.6	8.4	98.0	94.3
8	QUALCOMM INC	QCOM	3.450	May-25	A	610	33	643	12.9	4.1	4.2	94.7	94.0
9	JPMORGAN CHASE & CO	JPM	5.300	Apr-49	BBB	601	27	628	10.2	-	-	100.8	99.5
10	E M C CORP MASS	EMC	3.375	Jun-23	A	591	39	630	12.2	5.7	5.9	85.9	85.0
11	JPMORGAN CHASE & CO	JPM	7.900	Apr-49	BBB	562	245	807	17.1	-	-	104.0	103.0
12	E M C CORP MASS	EMC	2.650	Jun-20	A	533	71	604	13.1	4.3	4.4	93.4	92.8
13	QUALCOMM INC	QCOM	3.000	May-22	A	507	26	533	12.1	3.4	3.6	97.9	96.7
14	YUM BRANDS INC	YUM	3.875	Nov-20	BBB	506	16	522	9.8	4.2	4.4	98.8	97.5
15	GAP INC	GPS	5.950	Apr-21	BBB	484	205	689	19.0	4.6	4.6	106.4	106.2
16	YUM BRANDS INC	YUM	6.875	Nov-37	BBB	467	12	479	8.2	7.4	-	93.5	91.0
17	UNITED STATES CELLULAR CORP	TDS	7.250	Dec-64	BB	464	160	624	4.6	-	-	25.2	24.9
18	CITIGROUP INC	C	6.300	May-49	BB	460	49	509	12.7	-	-	100.0	97.5
19	CITIGROUP INC	C	5.950	Dec-49	BB	457	29	486	11.4	-	-	98.1	95.3
20	E M C CORP MASS	EMC	1.875	Jun-18	A	447	63	510	11.3	3.1	3.5	97.0	96.2

Source: TRACE and Tradeweb Direct as of 11/30/2015.

- 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).

* Actual issue symbol will vary.

Corporate Bonds: Top 20 Most Sold Issues

November 2015

Issue	Issuer Reference*	Coupon	Maturity	Rating	Number of Trades			Dollar Vol. Traded (in Million)	Median Yield, %		Median Price		
					Buys	Sells	Total		Buyers	Sellers	Buyers	Sellers	
1	PEABODY ENERGY CORP	BTU	6.000	Nov-18	C	130	1,089	1,219	2.3	72.3	73.8	23.0	22.3
2	UNITED STATES STL CORP	X	7.000	Feb-18	B	233	486	719	7.6	16.6	26.4	82.7	69.3
3	UNITED STATES STEEL CORP	X	7.375	Apr-20	B	412	357	769	10.4	18.6	25.0	67.3	54.8
4	US STEEL CORP	X	7.500	Mar-22	B	99	334	433	6.5	14.9	14.3	70.3	72.2
5	CHESAPEAKE ENERGY CORP	CHK	3.571	Apr-19	BB	28	313	341	2.8	-	-	55.2	52.7
6	PETROLEOS DE VENEZUELA S A	PDVA	9.000	Nov-21	N/R	81	313	394	3.6	-	-	45.7	46.2
7	APPLE INC	AAPL	2.400	May-23	AA	329	279	608	14.0	2.8	2.8	97.6	97.2
8	CHESAPEAKE ENERGY CORP	CHK	6.125	Feb-21	BB	144	264	408	2.5	21.7	27.5	52.6	42.5
9	TECK COMINCO LTD	TCK	4.500	Jan-21	BB	13	253	266	1.5	12.9	12.9	69.0	69.0
10	JPMORGAN CHASE & CO	JPM	7.900	Apr-49	BBB	562	245	807	17.1	-	-	104.0	103.0
11	GENERAL ELECTRIC CO	GE	5.250	Dec-17	AA	121	244	365	5.7	1.2	1.4	108.1	107.7
12	UNITED STATES STL CORP NEW	X	6.050	Jun-17	B	332	242	574	9.6	23.5	25.9	78.8	76.3
13	CENTURYLINK INC	CTL	5.800	Mar-22	BB	209	241	450	7.7	7.0	7.5	93.8	91.5
14	AVON PRODS INC	AVP	6.750	Mar-23	B	24	229	253	4.2	14.0	15.0	67.5	64.2
15	GOLDMAN SACHS GROUP INC	GS	5.750	Jan-22	A	158	209	367	5.8	3.1	3.2	114.5	114.1
16	CISCO SYS INC	CSCO	5.500	Feb-16	AA	69	209	278	3.5	0.4	0.7	101.3	101.2
17	GAP INC	GPS	5.950	Apr-21	BBB	484	205	689	19.0	4.6	4.6	106.4	106.2
18	VERIZON COMMUNICATIONS INC	VZ	5.150	Sep-23	BBB	279	205	484	11.0	3.5	3.5	111.4	111.1
19	TRANSOCEAN INC	RIG	6.500	Nov-20	BB	196	202	398	7.2	11.3	12.2	82.0	79.3
20	PETROBRAS INTL	PTRB	5.375	Jan-21	BB	231	199	430	11.3	9.7	10.1	82.5	81.3

Source: TRACE and Tradeweb Direct as of 11/30/2015.

- 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).

* Actual issue symbol will vary.

Appendix

Maturity

We consider the following maturity ranges for maturity buckets. TTM is Time to Maturity in years.

1Y:	0.5 <= TTM <= 1.5
3Y:	2 <= TTM <= 4
5Y:	4 < TTM <= 6
10Y:	7.5 <= TTM <= 12.5
20Y:	15 <= TTM <= 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.
 - Corp 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 BBB 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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