

Total PIM Volume Data (Jan 2016 – June 2016)

Total	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Totals/%
PIM	45,374	57,713	42,173	39,941	35,871	76,167	297,239
GEM	9,369,031	8,402,053	8,280,557	8,362,872	7,588,001	6,173,650	48,176,164
Industry	364,671,833	331,918,260	347,068,227	331,842,870	311,177,955	367,558,193	2,054,237,338
% PIM-to-GEM	0.48%	0.69%	0.51%	0.48%	0.47%	1.23%	0.62%
% PIM-to-Ind.	0.01%	0.02%	0.01%	0.01%	0.01%	0.02%	0.01%

ADV	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Totals
PIM	2,388	2,886	2,008	1,902	1,708	3,462	2,397
GEM	493,107	420,103	394,312	398,232	361,333	280,620	388,517
Industry	19,193,254	16,595,913	16,527,058	15,802,041	14,817,998	16,707,191	16,566,430
Trading Days	19	20	21	21	21	22	124

PIM Price Improvement Data (Jan 2016 – June 2016)

Appendix: Detailed price improvement statistics for the volume transacted through PIM for January 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	250	62	4	0	0	0	0	0	0	0	0	0	0	316	4	31.91%	20.86%
0.02	456	979	60	0	0	0	0	0	0	0	0	0	0	1495	4	40.53%	18.84%
0.03	339	804	133	0	0	0	0	0	0	0	0	0	0	1276	4	37.66%	17.32%
0.04	135	283	268	40	0	0	0	0	0	0	0	0	0	726	4	35.36%	21.50%
0.05	110	289	282	168	148	23	5	4	2	0	0	0	0	1031	4	24.60%	22.23%
>.05<=.10	69	268	251	291	229	156	137	28	0	0	0	0	0	1429	5	37.87%	23.48%
>.10<=.20	15	57	47	51	81	158	670	187	0	0	0	0	0	1266	5	45.21%	31.26%
>.20<=.30	0	5	10	3	3	20	142	345	11	0	0	0	0	539	5	50.03%	32.27%
>.30<=.40	2	0	40	10	4	5	14	197	117	0	0	0	0	389	4	47.89%	51.51%
>.40<=.50	0	0	0	0	0	0	31	62	330	39	0	1	0	463	5	35.72%	16.16%
>.50	0	0	0	0	11	38	38	73	180	119	80	176	0	715	5	40.34%	35.62%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	1467	137	5	1	0	0	0	0	0	0	0	0	0	1610	3	51.49%	42.47%
0.02	2087	787	9	1	1	0	2	1	0	0	0	0	0	2888	3	30.43%	20.08%
0.03	1531	1592	168	36	0	0	0	0	0	0	0	0	0	3327	4	20.91%	15.07%
0.04	737	1118	388	13	0	0	1	0	0	0	0	0	0	2257	4	16.24%	6.66%
0.05	893	882	698	115	49	14	31	23	0	0	0	0	0	2705	4	21.58%	18.87%
>.05<=.10	1008	1234	1208	828	189	193	157	13	2	14	0	0	0	4846	4	16.18%	13.77%
>.10<=.20	280	236	312	297	213	327	386	112	0	13	19	0	0	2195	4	22.98%	20.24%
>.20<=.30	73	59	34	50	50	107	152	237	24	0	0	0	0	786	4	27.84%	25.18%
>.30<=.40	38	0	78	11	15	3	70	72	37	0	0	0	0	324	4	33.35%	29.43%
>.40<=.50	0	0	7	0	4	0	26	64	21	3	1	0	0	126	4	35.96%	36.81%
>.50	36	0	0	0	8	0	26	169	140	113	38	153	0	683	4	37.27%	41.82%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	349	150	0	0	0	0	0	0	0	0	0	0	499	4	33.50%	29.83%
0.02	891	285	0	0	0	0	0	0	0	0	0	0	1176	3	45.35%	52.68%
0.03	539	630	1158	0	0	0	0	0	0	0	0	0	2327	2	67.29%	75.59%
0.04	160	489	500	60	0	0	0	0	0	0	0	0	1209	3	49.35%	71.01%
0.05	60	290	80	40	0	0	0	0	0	0	0	0	470	4	32.00%	32.00%
>.05<=.10	6	660	790	1400	915	44	377	0	0	0	0	0	4192	3	53.76%	67.30%
>.10<=.20	210	120	385	143	432	454	896	120	0	0	0	0	2760	3	51.26%	54.51%
>.20<=.30	0	0	0	0	0	56	95	120	0	0	0	0	271	3	56.58%	56.83%
>.30<=.40	200	0	0	0	0	0	85	159	190	0	0	0	634	3	69.38%	72.08%
>.40<=.50	0	0	0	0	0	0	0	90	60	0	0	0	150	7	40.00%	40.00%
>.50	25	0	0	0	100	0	20	54	30	0	20	45	294	4	31.97%	28.91%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	80	0	0	0	0	0	0	0	0	0	0	0	80	4	40.00%	40.00%
0.02	847	285	0	0	0	0	0	0	0	0	0	0	1132	3	45.98%	53.27%
0.03	539	430	0	0	0	0	0	0	0	0	0	0	969	3	60.03%	54.81%
0.04	160	439	500	60	0	0	0	0	0	0	0	0	1159	3	54.83%	73.77%
0.05	60	260	40	40	0	0	0	0	0	0	0	0	400	4	30.00%	30.00%
>.05<=.10	6	570	160	483	140	44	0	0	0	0	0	0	1403	3	53.92%	55.97%
>.10<=.20	210	120	265	62	0	49	414	70	0	0	0	0	1190	3	56.00%	54.24%
>.20<=.30	0	0	0	0	0	56	95	0	0	0	0	0	151	3	63.17%	68.87%
>.30<=.40	200	0	0	0	0	0	85	159	40	0	0	0	484	3	61.73%	63.43%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	25	0	0	0	100	0	20	5	0	0	0	0	150	4	20.00%	13.33%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for February 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	238	34	0	0	0	0	0	0	0	0	0	0	272	3	28.84%	27.17%
0.02	364	1170	24	0	0	0	0	0	0	0	0	0	1558	3	33.27%	29.19%
0.03	193	1048	251	6	0	0	0	0	0	0	0	0	1498	4	23.74%	19.80%
0.04	262	535	166	73	48	0	0	0	0	0	0	0	1084	3	27.40%	25.87%
0.05	166	279	316	351	190	24	36	0	0	0	0	0	1362	3	44.51%	39.89%
>.05<=.10	21	332	373	293	198	274	214	42	0	0	0	0	1747	4	35.45%	31.86%
>.10<=.20	64	96	69	102	183	127	613	221	5	0	0	0	1480	3	42.60%	40.42%
>.20<=.30	0	0	1	42	1	100	176	201	40	0	0	0	561	3	46.90%	42.26%
>.30<=.40	38	34	40	6	0	10	64	91	58	0	0	0	341	3	51.63%	42.54%
>.40<=.50	4	0	9	21	10	6	41	52	121	51	20	0	335	3	37.67%	27.98%
>.50	0	0	0	0	0	0	8	62	149	112	72	411	814	3	55.66%	48.23%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	2697	186	20	2	0	0	0	0	0	0	0	0	2905	3	54.94%	50.08%
0.02	2254	886	75	4	0	0	0	0	0	0	0	0	3219	3	32.38%	26.80%
0.03	1734	1788	304	12	0	0	0	0	0	0	0	0	3838	3	21.57%	20.34%
0.04	931	915	386	94	3	1	0	0	0	0	0	0	2330	4	14.09%	14.00%
0.05	1271	1068	710	165	104	7	10	0	0	0	0	0	3336	3	26.16%	24.02%
>.05<=.10	972	1289	1436	976	365	279	254	1	0	0	0	0	5572	4	19.89%	18.48%
>.10<=.20	516	367	321	456	263	156	666	158	2	0	1	0	2906	3	33.79%	31.58%
>.20<=.30	169	33	77	125	87	113	308	125	4	4	0	0	1045	3	35.69%	27.20%
>.30<=.40	28	126	53	20	16	36	95	158	40	3	0	0	575	3	48.04%	50.42%
>.40<=.50	28	50	25	12	14	3	78	100	16	9	1	0	336	3	49.11%	34.40%
>.50	19	4	6	0	1	13	36	75	123	106	101	158	642	3	53.05%	58.42%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	1	0	0	0	0	0	0	0	0	0	0	0	1	5	100.00%	100.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	52	1384	0	0	0	0	0	0	0	0	0	0	0	1436	2	70.23%	62.78%
0.03	0	1579	0	0	0	0	0	0	0	0	0	0	0	1579	3	55.43%	54.34%
0.04	0	100	100	0	0	0	0	0	0	0	0	0	0	200	3	40.00%	40.00%
0.05	0	200	173	100	80	0	0	0	0	0	0	0	0	553	3	53.43%	48.82%
>.05<=.10	170	620	250	550	207	163	0	0	0	0	0	0	0	1960	4	48.38%	51.58%
>.10<=.20	49	60	246	293	123	98	98	200	0	0	0	0	0	1167	4	39.37%	45.29%
>.20<=.30	1	0	55	0	0	0	185	553	0	0	0	0	0	794	3	62.15%	73.85%
>.30<=.40	0	0	0	0	65	35	0	0	0	0	0	0	0	100	4	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	100	0	45	130	275	3	40.00%	40.00%	

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	585	50	0	0	0	0	0	0	0	0	0	0	0	635	3	55.00%	63.62%
0.02	288	210	0	0	0	0	0	0	0	0	0	0	0	498	2	57.34%	53.41%
0.03	385	914	50	0	0	0	0	0	0	0	0	0	0	1349	2	58.26%	71.77%
0.04	0	171	223	48	0	0	0	0	0	0	0	0	0	442	3	78.10%	67.12%
0.05	506	649	825	85	0	100	0	0	0	0	0	0	0	2165	3	67.08%	70.25%
>.05<=.10	486	581	445	458	270	278	304	0	0	0	0	0	0	2822	3	56.22%	56.60%
>.10<=.20	395	82	378	239	337	92	191	50	0	0	0	0	0	1764	3	52.91%	51.71%
>.20<=.30	154	0	30	56	260	0	310	60	0	0	0	0	0	870	3	46.64%	54.14%
>.30<=.40	150	0	100	0	196	100	60	40	0	0	0	0	0	646	2	56.00%	52.17%
>.40<=.50	0	0	0	0	100	0	100	0	0	12	88	0	0	300	2	96.00%	96.00%
>.50	0	0	0	0	55	0	0	44	0	100	0	112	311	3	51.25%	51.45%	

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	90	0	0	0	0	0	0	0	0	0	0	90	3	44.44%	44.44%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for March 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	282	71	0	0	0	0	0	0	0	0	0	0	353	4	24.86%	22.24%
0.02	369	424	4	0	0	0	0	0	0	0	0	0	797	4	19.42%	15.63%
0.03	106	459	95	0	0	0	0	0	0	0	0	0	660	4	10.75%	10.42%
0.04	43	439	87	35	0	0	0	0	0	0	0	0	604	4	9.60%	5.82%
0.05	134	360	205	101	56	22	20	0	0	0	0	0	898	4	18.68%	11.54%
>.05<=.10	79	301	311	253	153	49	99	0	0	0	0	0	1245	4	24.43%	23.11%
>.10<=.20	107	111	98	61	88	64	185	33	1	0	0	0	748	4	22.74%	19.64%
>.20<=.30	18	23	10	28	6	0	100	80	4	0	0	0	269	4	34.23%	33.57%
>.30<=.40	1	0	0	276	80	2	2	87	1	0	0	0	449	4	18.18%	18.89%
>.40<=.50	0	7	5	0	0	0	4	78	28	9	0	0	131	4	19.30%	22.73%
>.50	10	0	0	0	0	10	5	64	14	67	16	28	214	4	43.68%	37.02%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	1067	114	0	0	0	0	0	0	0	0	0	0	0	1181	3	42.81%	35.19%
0.02	2049	786	34	0	0	0	0	0	0	0	0	0	0	2869	3	18.33%	13.94%
0.03	1422	1034	124	5	0	0	0	0	0	0	0	0	0	2585	4	13.45%	12.21%
0.04	751	994	151	4	0	0	0	0	0	0	0	0	0	1900	4	11.17%	8.42%
0.05	1502	1486	409	213	45	36	0	0	0	0	0	0	0	3691	4	20.36%	21.98%
>.05<=.10	1604	1894	985	530	279	181	82	1	0	0	0	0	0	5556	4	15.21%	18.92%
>.10<=.20	523	384	465	339	188	107	222	46	0	0	0	0	0	2274	4	17.49%	20.78%
>.20<=.30	234	68	96	207	104	219	233	43	5	0	0	0	0	1209	4	20.15%	23.79%
>.30<=.40	56	0	83	40	40	12	79	63	31	0	0	0	0	404	4	25.08%	41.89%
>.40<=.50	29	17	15	27	9	25	31	58	12	0	0	0	0	223	3	36.90%	42.60%
>.50	101	23	5	0	1	0	39	133	35	62	25	15	0	439	3	36.56%	37.13%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	3	0	0	0	0	0	0	0	0	0	0	0	0	3	4	70.00%	50.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	132	80	0	0	0	0	0	0	0	0	0	0	0	212	4	33.33%	35.56%
0.03	48	140	500	0	0	0	0	0	0	0	0	0	0	688	3	47.50%	73.65%
0.04	50	0	144	0	0	0	0	0	0	0	0	0	0	194	3	20.00%	17.39%
0.05	0	240	660	28	0	0	0	0	0	0	0	0	0	928	3	40.00%	40.00%
>.05<=.10	0	90	216	81	112	672	0	0	0	0	0	0	0	1171	4	33.84%	44.97%
>.10<=.20	107	156	172	213	340	0	90	10	0	0	0	0	0	1088	4	40.22%	46.75%
>.20<=.30	50	381	0	300	0	0	340	50	0	0	0	0	0	1121	4	34.55%	30.06%
>.30<=.40	0	0	0	0	120	80	55	145	0	0	0	0	0	400	4	52.75%	52.75%
>.40<=.50	0	2	0	0	0	0	190	8	0	0	0	0	0	200	5	67.50%	67.50%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for April 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	112	35	0	0	0	0	0	0	0	0	0	0	147	4	62.21%	49.77%
0.02	538	554	19	0	0	0	0	0	0	0	0	0	1111	4	24.18%	14.71%
0.03	117	351	72	2	0	0	0	0	0	0	0	0	542	4	16.84%	17.95%
0.04	46	194	130	0	0	0	0	0	0	0	0	0	370	4	21.93%	14.73%
0.05	104	292	253	87	63	14	0	0	0	0	0	0	813	4	23.76%	15.64%
>.05<=.10	104	178	197	276	216	127	160	6	0	0	0	0	1264	4	32.72%	27.87%
>.10<=.20	68	42	41	112	78	31	258	80	0	0	0	0	710	4	30.78%	28.74%
>.20<=.30	0	0	0	4	15	0	86	90	1	1	0	0	197	4	36.69%	26.40%
>.30<=.40	0	48	0	15	2	0	55	116	29	1	0	0	266	4	44.93%	38.32%
>.40<=.50	3	4	0	0	0	0	22	55	49	0	2	0	135	4	45.08%	42.14%
>.50	0	0	0	3	0	0	11	24	58	54	60	60	270	4	55.86%	46.67%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	666	39	0	0	0	0	0	0	0	0	0	0	705	3	67.50%	59.59%
0.02	2587	992	2	0	0	0	0	0	0	0	0	0	3581	3	22.14%	20.59%
0.03	1632	1189	148	29	0	0	20	0	0	0	0	0	3018	4	16.16%	13.90%
0.04	1052	1209	236	22	42	0	0	0	0	0	0	0	2561	4	11.50%	11.61%
0.05	1524	1278	466	139	65	4	0	0	0	0	0	0	3476	4	18.79%	17.18%
>.05<=.10	1845	1469	1111	728	232	148	54	0	0	0	0	0	5587	4	16.53%	19.62%
>.10<=.20	462	318	373	272	258	121	357	47	0	0	0	0	2208	4	21.34%	24.85%
>.20<=.30	129	61	78	56	67	56	165	54	11	0	0	0	677	3	28.12%	34.55%
>.30<=.40	78	38	53	42	5	18	79	52	1	0	0	0	366	4	31.31%	30.54%
>.40<=.50	14	0	0	0	0	46	77	25	16	1	1	0	180	4	38.50%	43.78%
>.50	10	0	0	10	0	2	32	59	36	7	35	23	214	4	39.82%	44.19%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	1	0	0	0	0	0	0	0	0	0	0	0	0	1	5	100.00%	100.00%
0.02	9	1	0	0	0	0	0	0	0	0	0	0	0	10	5	35.56%	42.86%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5	100.00%	100.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	2	1	0	0	0	0	0	0	0	0	0	0	0	3	4	33.33%	50.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	540	0	0	0	0	0	0	0	0	0	0	0	0	540	2	100.00%	100.00%
0.02	325	200	0	0	0	0	0	0	0	0	0	0	0	525	3	57.50%	47.34%
0.03	0	70	0	0	0	0	0	0	0	0	0	0	0	70	6	40.00%	40.00%
0.04	0	0	0	111	0	0	0	0	0	0	0	0	0	111	2	100.00%	100.00%
0.05	95	100	500	112	0	0	0	0	0	0	0	0	0	807	2	40.04%	48.27%
>.05<=.10	120	440	53	0	174	20	221	0	0	0	0	0	0	1028	4	40.02%	35.63%
>.10<=.20	0	286	0	24	133	122	100	0	0	0	0	0	0	665	5	36.67%	36.99%
>.20<=.30	87	0	60	0	0	0	160	250	0	0	0	0	0	557	4	46.50%	29.64%
>.30<=.40	0	2	0	0	0	0	0	110	0	0	0	0	0	112	3	1.61%	1.79%
>.40<=.50	0	0	0	0	0	0	0	50	0	0	0	0	0	50	6	40.00%	40.00%
>.50	0	0	0	0	0	0	0	0	20	0	0	0	0	20	5	0.00%	0.00%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	340	0	0	0	0	0	0	0	0	0	0	0	0	340	2	79.00%	81.44%
0.02	319	76	5	0	0	0	0	0	0	0	0	0	0	400	4	54.40%	49.00%
0.03	30	190	0	0	0	0	0	0	0	0	0	0	0	220	3	46.67%	44.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	527	124	140	200	46	0	0	0	0	0	0	0	0	1037	3	64.86%	62.68%
>.05<=.10	556	729	74	130	22	30	68	0	0	0	0	0	0	1609	3	73.45%	76.83%
>.10<=.20	592	127	190	265	0	28	148	0	0	0	0	0	0	1350	3	45.02%	54.04%
>.20<=.30	649	294	40	0	0	77	100	187	62	0	0	0	0	1409	3	55.29%	57.77%
>.30<=.40	30	50	0	50	0	20	100	0	0	0	0	0	0	250	3	70.00%	64.00%
>.40<=.50	80	0	90	0	0	0	60	80	0	118	0	0	0	428	3	61.57%	57.94%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for May 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	218	11	1	0	0	0	0	0	0	0	0	0	230	3	50.49%	41.12%
0.02	177	920	26	5	0	0	0	0	0	0	0	0	1128	3	59.71%	52.39%
0.03	36	324	197	41	0	0	0	0	0	0	0	0	598	3	55.35%	51.56%
0.04	2	347	146	66	3	0	0	0	0	0	0	0	564	3	55.38%	47.18%
0.05	20	114	246	165	346	67	93	0	0	0	0	0	1051	3	61.56%	63.33%
>.05<=.10	64	106	205	173	343	277	302	0	0	0	0	0	1470	3	64.07%	61.21%
>.10<=.20	54	24	42	44	54	107	521	70	0	0	0	0	916	3	59.47%	56.88%
>.20<=.30	2	0	0	0	16	7	58	218	23	0	0	0	324	2	63.06%	55.08%
>.30<=.40	0	0	0	0	0	0	16	115	93	27	0	0	251	3	52.77%	47.81%
>.40<=.50	0	0	0	0	0	0	0	84	38	22	8	0	152	2	70.43%	65.58%
>.50	0	0	0	0	0	0	0	32	40	54	102	204	432	2	78.44%	84.72%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	2451	217	12	0	0	0	0	0	0	0	0	0	2680	3	63.00%	58.03%
0.02	2799	1104	40	0	0	0	0	0	0	0	0	0	3943	3	50.94%	43.47%
0.03	1649	912	127	14	3	0	0	0	0	0	0	0	2705	3	40.74%	42.26%
0.04	808	520	131	28	1	0	0	0	0	0	0	0	1488	3	32.14%	27.09%
0.05	2196	688	515	219	123	10	6	0	1	0	0	0	3758	3	45.36%	48.11%
>.05<=.10	1069	1085	731	354	228	158	154	3	0	0	0	0	3782	3	37.15%	35.80%
>.10<=.20	816	272	174	224	162	160	224	74	0	0	0	0	2106	3	41.29%	44.07%
>.20<=.30	117	42	51	17	82	50	106	119	18	0	0	0	602	3	50.72%	49.01%
>.30<=.40	87	1	2	24	14	60	37	78	2	2	0	0	307	3	58.78%	51.14%
>.40<=.50	1	5	4	2	2	10	5	26	2	3	0	0	60	3	25.65%	30.77%
>.50	47	0	0	2	1	0	20	74	18	16	16	73	267	2	71.58%	62.17%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	6	0	0	0	0	0	0	0	0	0	0	0	6	3	72.73%	50.00%
0.02	8	0	0	0	0	0	0	0	0	0	0	0	8	6	40.00%	40.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	52	0	0	0	0	0	0	0	0	0	0	0	52	3	48.61%	48.08%
0.02	44	0	0	0	0	0	0	0	0	0	0	0	44	2	70.00%	86.36%
0.03	14	10	0	0	0	0	0	0	0	0	0	0	24	4	41.67%	41.67%
0.04	5	0	0	0	0	0	0	0	0	0	0	0	5	4	40.00%	40.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	2	0	0	0	0	2	6	100.00%	100.00%
>.20<=.30	0	0	0	0	0	0	0	1	0	0	0	0	1	5	100.00%	100.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	285	0	0	0	0	0	0	0	0	0	0	285	2	76.00%	73.68%
0.03	0	200	0	0	0	0	0	0	0	0	0	0	200	2	74.50%	74.50%
0.04	0	64	100	0	0	0	0	0	0	0	0	0	164	2	100.00%	100.00%
0.05	0	100	0	110	90	0	0	0	0	0	0	0	300	4	55.00%	50.00%
>.05<=.10	0	0	200	120	154	236	81	0	0	0	0	0	791	3	42.22%	43.49%
>.10<=.20	0	0	0	0	115	0	0	0	0	0	0	0	115	2	100.00%	100.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	100	0	0	0	0	100	5	40.00%	40.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	1591	120	0	0	0	0	0	0	0	0	0	0	1711	3	66.91%	66.74%
0.02	590	870	20	0	0	0	0	0	0	0	0	0	1480	2	70.59%	73.23%
0.03	104	150	0	0	0	0	0	0	0	0	0	0	254	3	55.19%	51.97%
0.04	100	200	100	0	0	0	0	0	0	0	0	0	400	3	70.00%	70.00%
0.05	0	200	0	0	0	0	0	0	0	0	0	0	200	4	40.00%	40.00%
>.05<=.10	0	60	245	0	0	0	100	0	0	0	0	0	405	2	88.00%	85.19%
>.10<=.20	60	0	0	0	40	100	100	0	0	0	0	0	300	2	80.00%	80.00%
>.20<=.30	0	60	0	40	0	0	0	50	60	0	0	0	210	2	60.00%	57.14%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not at NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for June 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	699	88	12	0	0	0	0	0	0	0	0	0	799	3	47.20%	43.44%
0.02	246	3606	27	19	1	2	0	0	0	0	0	0	3901	2	71.91%	72.21%
0.03	91	1176	661	73	2	4	0	0	0	0	0	0	2007	2	67.72%	63.41%
0.04	33	405	728	324	21	6	4	0	0	0	0	0	1521	2	68.60%	64.71%
0.05	60	173	516	772	638	80	77	3	0	0	0	0	2319	2	70.75%	66.79%
>.05<=.10	9	138	523	677	904	810	617	18	0	0	0	0	3696	2	69.24%	64.87%
>.10<=.20	24	87	33	164	296	277	1048	388	3	10	0	0	2330	2	63.36%	61.68%
>.20<=.30	0	1	1	36	2	32	184	544	80	2	3	0	885	2	65.21%	58.95%
>.30<=.40	0	0	0	0	1	6	48	216	274	19	0	0	564	2	68.22%	61.42%
>.40<=.50	0	0	0	0	0	0	2	128	198	104	3	0	435	2	62.85%	68.28%
>.50	0	5	0	0	30	0	29	72	419	335	268	642	1800	2	64.81%	67.74%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	7770	687	91	57	19	0	0	0	0	0	0	0	8624	3	68.12%	64.30%
0.02	3956	3675	321	69	13	11	0	0	0	0	0	0	8045	2	65.36%	58.73%
0.03	1941	1968	698	54	7	13	0	0	0	0	0	0	4681	2	61.55%	59.44%
0.04	955	1144	738	159	19	8	5	0	0	0	0	0	3028	2	54.73%	49.33%
0.05	1890	967	871	533	386	97	141	52	0	0	0	0	4937	2	58.19%	58.09%
>.05<=.10	1552	1072	988	997	628	355	474	18	0	0	0	0	6084	2	54.70%	55.52%
>.10<=.20	722	345	338	295	271	358	443	233	1	0	0	0	3006	2	53.59%	56.35%
>.20<=.30	206	30	66	15	95	86	256	185	84	0	0	0	1023	2	60.53%	58.52%
>.30<=.40	15	3	6	1	10	52	98	183	51	56	0	0	475	2	51.65%	47.90%
>.40<=.50	49	1	0	9	4	0	28	167	64	28	7	0	357	2	69.46%	73.67%
>.50	12	0	0	5	12	3	71	141	287	199	110	307	1147	2	66.21%	67.39%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	2	0	0	0	0	0	0	0	0	0	0	0	2	4	100.00%	100.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	10	0	0	0	0	0	0	0	0	0	0	0	10	3	40.00%	40.00%
0.02	20	0	0	0	0	0	0	0	0	0	0	0	20	3	40.00%	40.00%
0.03	24	0	0	0	0	0	0	0	0	0	0	0	24	3	41.67%	41.67%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	20	0	0	0	0	0	0	0	0	0	20	2	100.00%	100.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	161	125	0	0	0	0	0	0	0	0	0	0	0	286	3	77.03%	82.21%
0.02	44	1074	0	0	0	0	0	0	0	0	0	0	0	1118	2	80.00%	81.14%
0.03	0	250	0	0	0	0	0	0	0	0	0	0	0	250	2	80.00%	76.00%
0.04	0	213	210	74	0	0	0	0	0	0	0	0	0	497	2	65.00%	65.42%
0.05	0	0	200	150	101	50	0	0	0	0	0	0	0	501	2	80.00%	78.04%
>.05<=.10	0	0	100	390	200	300	100	0	0	0	0	0	0	1090	2	54.93%	51.19%
>.10<=.20	0	0	117	150	107	400	470	150	0	0	0	0	0	1394	2	76.02%	76.40%
>.20<=.30	0	0	0	0	0	0	0	100	0	0	0	0	0	100	2	50.00%	50.00%
>.30<=.40	0	0	0	0	0	0	0	100	0	0	0	0	0	100	4	53.00%	53.00%
>.40<=.50	0	0	0	0	0	0	0	100	200	0	0	0	0	300	3	73.33%	73.33%
>.50	0	0	0	0	0	0	50	100	50	0	0	0	0	200	3	66.67%	75.00%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	2704	129	20	0	0	0	0	0	0	0	0	0	0	2853	3	54.81%	57.38%
0.02	782	901	0	0	0	0	0	0	0	0	0	0	0	1683	3	54.53%	52.46%
0.03	0	370	0	0	0	0	0	0	0	0	0	0	0	370	2	88.86%	89.46%
0.04	145	265	100	50	0	0	0	0	0	0	0	0	0	560	2	76.00%	76.64%
0.05	441	100	337	200	205	50	35	47	0	0	0	0	0	1415	2	78.33%	63.78%
>.05<=.10	0	50	300	100	50	100	100	0	0	0	0	0	0	700	2	80.00%	82.86%
>.10<=.20	100	100	0	0	0	160	300	0	0	0	0	0	0	660	2	81.22%	81.97%
>.20<=.30	0	0	50	0	0	0	0	100	0	0	0	0	0	150	2	100.00%	100.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	50	0	0	0	0	0	50	2	100.00%	100.00%
>.50	0	0	0	0	0	0	0	50	0	0	0	0	0	50	3	26.00%	26.00%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	100	0	0	0	0	0	0	0	0	0	0	0	100	2	100.00%	100.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement											Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives		
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50					>.50	
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

PIM Early Termination Data (Jan 2016 - June 2016)

	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Totals/%
Early Terminated Auctions	10	16	4	8	11	16	65
% Early Terminated Auctions	0.05%	0.11%	0.03%	0.06%	0.13%	0.10%	0.08%
Traded Contracts in Early Terminated Auctions	38	123	33	23	44	64	325
% Traded Contracts in Early Terminated Auctions	0.08%	0.21%	0.08%	0.06%	0.12%	0.08%	0.11%
% Early Terminated Auctions Receiving PIM	50.00%	68.75%	75.00%	25.00%	36.36%	50.00%	50.77%
% Traded Contracts in Early Terminated Auctions Receiving PIM	39.47%	78.86%	78.79%	26.09%	15.91%	31.25%	52.00%
Amount of PI Received by Early Terminated Auctions	\$0.21	\$4.86	\$1.08	\$0.29	\$0.08	\$1.44	\$7.96