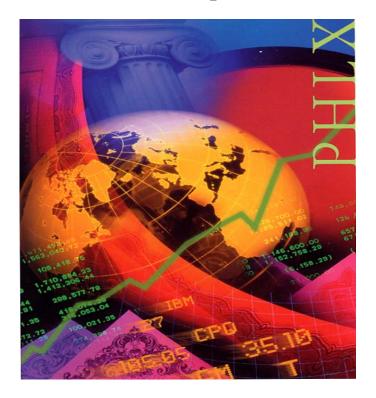


Philadelphia Stock Exchange Options Penny Pricing Pilot Report



October 31, 2007 Prepared by: PHLX Financial Automation Group

<u>Background</u>

On June 7, 2006, the Philadelphia Stock Exchange ("Phlx") received a letter from Chairman Cox of the Securities and Exchange Commission ("Commission") urging the Phlx to begin quoting a limited number of options classes with a minimum price variation ("MPV") of a penny by January 29, 2007. The options exchanges, in conjunction with the Commission, began a six-month pilot ("Penny Pilot") in which 13 options would be quoted and traded in penny increments. Under the Penny Pilot, all option series overlying QQQQ are quoted and traded with an MPV of \$0.01, and all other options included in the Penny Pilot are quoted and traded with an MPV of \$0.01 if priced below \$3.00 or with an MPV of \$0.05 if priced at \$3.00 and above. As part of Commission approval of the Penny Pilot, the options exchanges were ordered to prepare and submit an analytical report to the Commission that addresses the impact of the latter portion of the Penny Pilot on the quality of the Exchange's markets and option quote traffic and capacity.

The Phlx began a phased implementation of the pilot options on January 26, 2007 and completed the implementation of the remaining options by February 9, 2007 as follows:

- January 26, 2007
 - Whole Foods Market, Inc. (WFMI)
- February 2, 2007
 - General Electric Company (GE)
 - Microsoft Corporation (MSFT)
- February 9, 2007
 - Agilent Technologies, Inc. (A)

- o Advanced Micro Devices, Inc. (AMD)
- o Caterpiller Inc. (CAT)
- o Flextronics International Ltd. (FLEX)
- Intel Corporation (INTC)
- o Ishares Russell 2000 Index (IWM)
- NASDAQ-100 Trust Shares (QQQQ)
- o Semiconductor HDLRs (SMH)
- o Sun Microsystems, Inc. (SUNW)
- o Texas Instruments Incorporated (TXN)

Summary of Report Findings

The following is a summary of the data on the impact of the Penny Pilot covering the initial period of Phase One of the Penny Pilot from implementation through April 30, 2007, and the latter period of the Penny Pilot from May 1, 2007 through September 30, 2007.

Data provides the following comparisons:

- Initial period of the Penny Pilot early from implementation through April 30, 2007 compared with the baseline data from the period of November 1, 2006 through January 30, 2007
- Late period of the Penny Pilot from May 1, 2007 through September 30, 2007 compared with the baseline data from the period of November 1, 2006 through January 30, 2007

- Average quote spreads at the Phlx Best/Bid Offer ("PBBO") in Penny Pilot options decreased by 36% during the first three months of the Penny Pilot when compared to the baseline. During the latter portion of the Penny Pilot, average quote spreads at the PBBO decreased by only 32% when compared to the baseline. (See Page 6);
- 2. The Exchange's average disseminated size at the PBBO in Penny Pilot options decreased by 71% during the first three months of the Penny Pilot when compared to the baseline. During the latter portion of the Penny Pilot, the Exchange's average disseminated size at the PBBO decreased by an additional 2% to 73% when compared to the baseline. (See Page 9);
- 3. The average disseminated size at the National Best Bid/Offer ("NBBO") in Penny Pilot options decreased by 78% during the first three months of the Penny Pilot when compared to the baseline. During the latter portion of the Penny Pilot, the average disseminated size at the NBBO decreased 78% when compared to the baseline. (See Page 9);
- Penny Pilot series trading at a price under \$1.00 during the first three months of the Penny Pilot represented (see Page 18):
 - a. 15.5% of all Penny Pilot quotes submitted to the Exchange, and

b. 65.9% of all Penny Pilot contracts traded on the Exchange.

Penny Pilot series trading at a price of under \$1.00 during the latter portion of the Penny Pilot represented (see Page 18):

- a. 18.1% of all Penny Pilot quotes submitted to the Exchange, and
- b. 57.5% of all Penny Pilot contracts traded on the Exchange.
- 5. Penny Pilot series trading at a price of \$1.00 and higher during the first three months of the Penny Pilot represented (see Page 18):
 - a. 84.5% of all Penny Pilot quotes submitted to the Exchange, and
 - b. 34.1% of all Penny Pilot contracts traded on the Exchange.

Penny Pilot series trading at a price of \$1.00 and higher during the latter portion of the Penny Pilot represented (see Page 18):

- a. 81.9% of all Penny Pilot quotes submitted to the Exchange, and
- b. 42.5% of all Penny Pilot contracts traded on the Exchange.
- 6. Outbound quotes reported to the Options Price Reporting Authority ("OPRA") in all Penny Pilot options during the first three months of the Penny Pilot increased overall by 62% while outbound quotes reported in QQQQ options increased by 206%, when compared to the baseline. Outbound quotes reported to OPRA in all Penny Pilot options during the latter portion of the Penny Pilot increased overall by 45% while outbound quotes reported in QQQQ options increased by 161%, when compared to the baseline (see Page 11):

Findings

Reduced spreads

The average quote spread of the NBBO in the pilot issues during the first three months of the Penny Pilot was reduced overall by an average of 40%. In QQQQ options, the average NBBO quote spread was reduced by 54% and for all other options, excluding QQQQ in the Penny Pilot, the NBBO quote spread was reduced by 32% when compared to the baseline. During the latter portion of the Penny Pilot, the average NBBO quote spread in the pilot issues was reduced overall by an average of 34% when compared to the baseline. In QQQQ options, the average NBBO quote spread was reduced overall by an average of 34% when compared to the baseline. In QQQQ options, the average NBBO quote spread was reduced overall by 56% and for all other Penny Pilot options, excluding QQQQ, the NBBO quote spread was reduced by 14% when compared to the baseline.

NBBO Spread

Three months of Penny Pilot

					ALL										
Option		1 mon.			2 mon.			3-9 mon.			mon. to			All	
premium		to expir.			to expir			to expir			expir.			months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0637	0.0263	-58.71%	0.0619	0.0218	-64.78%	0.0680	0.0285	-58.09%	0.0781	0.0361	-53.78%	0.0675	0.0279	-58.67%
1-<3	0.0861	0.0470	-45.41%	0.0795	0.0331	-58.36%	0.0836	0.0421	-49.64%	0.1026	0.0543	-47.08%	0.0861	0.0433	-49.71%
3-<5	0.1384	0.0829	-40.10%	0.1308	0.0709	-45.80%	0.1321	0.0743	-43.75%	0.1539	0.0944	-38.66%	0.1369	0.0791	-42.22%
5-<10	0.1543	0.0945	-38.76%	0.1466	0.0833	-43.18%	0.1505	0.0913	-39.34%	0.1788	0.1259	-29.59%	0.1563	0.0992	-36.53%
10-<20	0.1685	0.1141	-32.28%	0.1654	0.1058	-36.03%	0.1723	0.1089	-36.80%	0.2208	0.1629	-26.22%	0.1816	0.1239	-31.77%
20+	0.1935	0.1265	-34.63%	0.2041	0.1286	-36.99%	0.2175	0.1455	-33.10%	0.2875	0.2269	-21.08%	0.2256	0.1770	-21.54%
All	0.1341	0.0819	-41.65%	0.1314	0.0739	-47.52%	0.1373	0.0818	-43.45%	0.1703	0.1168	-36.07%	0.1423	0.0917	-40.07%

					QQQQ										
Option premium		1 mon. to expir.			2 mon. to expir			3-9 mon. to expir			10+ mon. to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0549	0.0194	-64.66%	0.0549	0.0162	-70.49%	0.0610	0.0255	-58.20%	0.0827	0.0394	-52.36%	0.0615	0.0252	-59.02%
1-<3	0.0737	0.0357	-51.56%	0.0674	0.0238	-64.69%	0.0712	0.0340	-52.25%	0.0974	0.0523	-46.30%	0.0748	0.0366	-51.07%
3-<5	0.1191	0.0505	-57.60%	0.1157	0.0380	-67.16%	0.1168	0.0474	-59.42%	0.1385	0.0668	-51.77%	0.1213	0.0510	-57.96%
5-<10	0.1270	0.0541	-57.40%	0.1188	0.0465	-60.86%	0.1231	0.0586	-52.40%	0.1579	0.0870	-44.90%	0.1305	0.0629	-51.80%
10-<20	0.1283	0.0530	-58.69%	0.1210	0.0484	-60.00%	0.1267	0.0601	-52.57%	0.1805	0.0988	-45.26%	0.1418	0.0702	-50.49%
20+	0.0000	0.0000		0.1199	0.0407	-66.06%	0.1309	0.0566	-56.76%	0.2108	0.1197	-43.22%	0.1663	0.0810	-51.29%
All	0.1006	0.0425	-57.98%	0.0996	0.0356	-64.88%	0.1050	0.0470	-55.26%	0.1446	0.0773	-47.30%	0.1160	0.0545	-53.61%

					All less	QQQQ									
Option		1 mon.			2 mon.			3-9 mon.			10+ mon. to			All	
premium		to expir.			to expir			to expir			expir.			months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0664	0.0284	-57.23%	0.0641	0.0234	-63.49%	0.0700	0.0301	-57.00%	0.0769	0.0350	-54.49%	0.0693	0.0291	-58.01%
1-<3	0.0900	0.0505	-43.89%	0.0835	0.0356	-57.37%	0.0879	0.0456	-48.12%	0.1044	0.0551	-47.22%	0.0898	0.0460	-48.78%
3-<5	0.1429	0.1045	-26.87%	0.1343	0.0886	-34.03%	0.1364	0.0961	-29.55%	0.1582	0.1142	-27.81%	0.1410	0.0998	-29.22%
5-<10	0.1617	0.1224	-24.30%	0.1534	0.1086	-29.20%	0.1576	0.1178	-25.25%	0.1846	0.1491	-19.23%	0.1630	0.1254	-23.07%
10-<20	0.1794	0.1351	-24.69%	0.1749	0.1263	-27.79%	0.1855	0.1458	-21.40%	0.2375	0.2093	-11.87%	0.1936	0.1581	-18.34%
20+	0.1948	0.1265	-35.06%	0.2051	0.1354	-33.98%	0.2218	0.1770	-20.20%	0.2953	0.2479	-16.05%	0.2283	0.1975	-13.49%
All	0.1392	0.0946	-35.34%	0.1359	0.0863	-40.98%	0.1432	0.1021	-33.59%	0.1762	0.1351	-29.45%	0.1475	0.1093	-31.82%

May 1, 2007 to Sept. 28, 2007

					ALL										
Option premium		1 mon. to expir.			2 mon. to expir			3-9 mon. to expir			10+ mon. to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0637	0.0226	-64.52%	0.0619	0.0229	-63.00%	0.0680	0.0277	-59.26%	0.0781	0.0450	-42.38%	0.0675	0.0267	-60.44%
1-<3	0.0861	0.0421	-51.10%	0.0795	0.0335	-57.86%	0.0836	0.0442	-47.13%	0.1026	0.0625	-39.08%	0.0861	0.0441	-48.78%
3-<5	0.1384	0.0845	-38.95%	0.1308	0.0797	-39.07%	0.1321	0.0807	-38.91%	0.1539	0.0998	-35.15%	0.1369	0.0837	-38.86%
5-<10	0.1543	0.1016	-34.15%	0.1466	0.0987	-32.67%	0.1505	0.1025	-31.89%	0.1788	0.1465	-18.06%	0.1563	0.1094	-30.01%
10-<20	0.1685	0.1171	-30.50%	0.1654	0.1120	-32.29%	0.1723	0.1243	-27.86%	0.2208	0.2253	2.04%	0.1816	0.1363	-24.94%
20+	0.1935	0.1306	-32.51%	0.2041	0.1085	-46.84%	0.2175	0.1585	-27.13%	0.2875	0.3021	5.08%	0.2256	0.1664	-26.24%
All	0.1341	0.0831	-38.04%	0.1314	0.0759	-42.24%	0.1373	0.0897	-34.72%	0.1703	0.1469	-13.75%	0.1423	0.0944	-33.65%

					QQQQ										
Option premium		1 mon. to expir.			2 mon. to expir			3-9 mon. to expir			10+ mon. to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0549	0.0174	-68.31%	0.0549	0.0170	-69.03%	0.0610	0.0233	-61.80%	0.0827	0.0298	-63.97%	0.0615	0.0223	-63.74%
1-<3	0.0737	0.0355	-51.83%	0.0674	0.0251	-62.76%	0.0712	0.0326	-54.21%	0.0974	0.0398	-59.14%	0.0748	0.0333	-55.48%
3-<5	0.1191	0.0497	-58.27%	0.1157	0.0427	-63.09%	0.1168	0.0447	-61.73%	0.1385	0.0559	-59.64%	0.1213	0.0473	-61.01%
5-<10	0.1270	0.0590	-53.54%	0.1188	0.0554	-53.37%	0.1231	0.0588	-52.23%	0.1579	0.0764	-51.61%	0.1305	0.0620	-52.49%
10-<20	0.1283	0.0626	-51.21%	0.1210	0.0579	-52.15%	0.1267	0.0655	-48.30%	0.1805	0.0970	-46.26%	0.1418	0.0684	-51.76%
20+	0.1269	0.0564	-55.56%	0.1199	0.0539	-55.05%	0.1309	0.0685	-47.67%	0.2108	0.1150	-45.45%	0.1663	0.0702	-57.79%
All	0.1050	0.0468	-55.45%	0.0996	0.0420	-57.84%	0.1050	0.0489	-53.41%	0.1446	0.0690	-52.30%	0.1160	0.0506	-56.41%

					All less	QQQQ									
Option premium		1 mon. to expir.			2 mon. to expir			3-9 mon. to expir			10+ mon. to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0664	0.0242	-63.55%	0.0641	0.0247	-61.47%	0.0700	0.0301	-57.00%	0.0769	0.0668	-13.13%	0.0693	0.0289	-58.30%
1-<3	0.0900	0.0441	-51.00%	0.0835	0.0357	-57.25%	0.0879	0.0490	-44.25%	0.1044	0.0995	-4.69%	0.0898	0.0488	-45.66%
3-<5	0.1429	0.1071	-25.05%	0.1343	0.0975	-27.40%	0.1364	0.1037	-23.97%	0.1582	0.1700	7.46%	0.1410	0.1094	-22.41%
5-<10	0.1617	0.1174	-27.40%	0.1534	0.1251	-18.45%	0.1576	0.1280	-18.78%	0.1846	0.2100	13.76%	0.1630	0.1399	-14.17%
10-<20	0.1794	0.1326	-26.09%	0.1749	0.1500	-14.24%	0.1855	0.1725	-7.01%	0.2375	0.3155	32.84%	0.1936	0.1885	-2.63%
20+	0.1948	0.1532	-21.36%	0.2051	0.1652	-19.45%	0.2218	0.2317	4.46%	0.2953	0.4146	40.40%	0.2283	0.2414	5.74%
All	0.1392	0.1691	21.48%	0.1359	0.0997	-26.63%	0.1432	0.1192	-16.78%	0.1762	0.2127	20.77%	0.1475	0.1262	-14.47%

The average PBBO quote spread in the Penny Pilot options during the first three months was reduced overall by an average of 36%, with QQQQ reduced by 48% and all other

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issues excluding QQQQ by 28%. During the latter portion of the Penny Pilot, the average

PBBO quote spread in the Penny Pilot issues has been reduced by an average of 32%,

with QQQQ reduced by an average of 54% and all other issues excluding QQQQ by

13%.

PBBO Spre	ead				Three mon ALL	ths of Penn	y Pilot								
Option		1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
premium		expir.			expir			to expir			to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0718	0.0376	-47.63%	0.0685	0.0311	-54.60%	0.0738	0.0357	-51.63%	0.0865	0.0453	-47.63%	0.0742	0.0364	-50.94%
1-<3	0.0976	0.0607	-37.81%	0.0887	0.0454	-48.82%	0.0906	0.0503	-44.48%	0.1120	0.0652	-41.79%	0.0944	0.0532	-43.64%
3-<5	0.1502	0.0978	-34.89%	0.1425	0.0852	-40.21%	0.1413	0.0847	-40.06%	0.1651	0.1080	-34.59%	0.1472	0.0912	-38.04%
5-<10	0.1647	0.1074	-34.79%	0.1590	0.0952	-40.13%	0.1624	0.1033	-36.39%	0.1915	0.1428	-25.43%	0.1682	0.1124	-33.17%
10-<20	0.1777	0.1265	-28.81%	0.1780	0.1179	-33.76%	0.1848	0.1213	-34.36%	0.2343	0.1814	-22.58%	0.1940	0.1379	-28.92%
20+	0.2060	0.1378	-33.11%	0.2171	0.1405	-35.28%	0.2287	0.1580	-30.91%	0.3000	0.2444	-18.53%	0.2377	0.1915	-19.44%
All	0.1447	0.0946	-36.17%	0.1423	0.0859	-42.13%	0.1469	0.0922	-39.64%	0.1816	0.1312	-31.76%	0.1526	0.1038	-35.69%

					QQQQ										
Option		1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
premium		expir.			expir			to expir			to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0617	0.0314	-49.11%	0.0607	0.0261	-57.00%	0.0665	0.0314	-52.78%	0.0889	0.0478	-46.23%	0.0673	0.0327	-51.41%
1-<3	0.0840	0.0496	-40.95%	0.0761	0.0371	-51.25%	0.0779	0.0412	-47.11%	0.1030	0.0615	-40.29%	0.0821	0.0454	-44.70%
3-<5	0.1260	0.0601	-52.30%	0.1229	0.0483	-60.70%	0.1243	0.0560	-54.95%	0.1445	0.0785	-45.67%	0.1284	0.0605	-52.88%
5-<10	0.1334	0.0626	-53.07%	0.1253	0.0544	-56.58%	0.1326	0.0665	-49.85%	0.1669	0.1027	-38.47%	0.1390	0.0726	-47.77%
10-<20	0.1353	0.0613	-54.69%	0.1278	0.0561	-56.10%	0.1377	0.0687	-50.11%	0.1942	0.1152	-40.68%	0.1525	0.0810	-46.89%
20+	0.0000	0.0000		0.1249	0.0495	-60.37%	0.1411	0.0657	-53.44%	0.2237	0.1379	-38.35%	0.1772	0.0938	-47.07%
All	0.1081	0.0530	-50.03%	0.1063	0.0453	-57.00%	0.1134	0.0549	-51.37%	0.1535	0.0906	-41.62%	0.1244	0.0643	-48.45%

					All less QQ	QQ									
Option		1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
premium		expir.			expir			to expir			to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0749	0.0395	-47.26%	0.0710	0.0326	-54.08%	0.0759	0.0381	-49.80%	0.0859	0.0444	-48.31%	0.0762	0.0379	-50.26%
1-<3	0.1019	0.0642	-37.00%	0.0928	0.0476	-48.71%	0.0950	0.0543	-42.84%	0.1150	0.0667	-42.00%	0.0985	0.0563	-42.84%
3-<5	0.1559	0.1229	-21.17%	0.1471	0.1051	-28.55%	0.1460	0.1081	-25.96%	0.1708	0.1292	-24.36%	0.1522	0.1138	-25.23%
5-<10	0.1731	0.1384	-20.05%	0.1673	0.1232	-26.36%	0.1701	0.1331	-21.75%	0.1982	0.1667	-15.89%	0.1758	0.1413	-19.62%
10-<20	0.1892	0.1489	-21.30%	0.1888	0.1400	-25.85%	0.1984	0.1610	-18.85%	0.2509	0.2294	-8.57%	0.2064	0.1742	-15.60%
20+	0.2074	0.1378	-33.56%	0.2181	0.1475	-32.37%	0.2331	0.1906	-18.23%	0.3078	0.2653	-13.81%	0.2405	0.2124	-11.68%
All	0.1504	0.1086	-30.06%	0.1475	0.0993	-35.99%	0.1531	0.1142	-29.57%	0.1881	0.1503	-25.49%	0.1583	0.1227	-27.54%

PBBO Spr	ead 9/28				May 1, 200 ALL	7 to Sept. 2	8, 2007								
Option		1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
premium		expir.			expir			to expir			to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0718	0.0320	-55.43%	0.0685	0.0306	-55.33%	0.0738	0.0338	-54.20%	0.0865	0.0537	-37.92%	0.0742	0.0338	-54.45%
1-<3	0.0976	0.0566	-42.01%	0.0887	0.0454	-48.82%	0.0906	0.0513	-43.38%	0.1120	0.0729	-34.91%	0.0944	0.0528	-44.07%
3-<5	0.1502	0.0983	-34.55%	0.1425	0.0920	-35.44%	0.1413	0.0893	-36.80%	0.1651	0.1107	-32.95%	0.1472	0.0935	-36.48%
5-<10	0.1647	0.1116	-32.24%	0.1590	0.1089	-31.51%	0.1624	0.1122	-30.91%	0.1915	0.1602	-16.34%	0.1682	0.1198	-28.78%
10-<20	0.1777	0.1259	-29.15%	0.1780	0.1202	-32.47%	0.1848	0.1339	-27.54%	0.2343	0.2406	2.69%	0.1940	0.1464	-24.54%
20+	0.2060	0.1390	-32.52%	0.2171	0.1157	-46.71%	0.2287	0.1671	-26.93%	0.3000	0.3175	5.83%	0.2377	0.1756	-26.13%
All	0.1447	0.0939	-35.09%	0.1423	0.0855	-39.94%	0.1469	0.0979	-33.35%	0.1816	0.1593	-12.28%	0.1526	0.1037	-32.08%
					QQQQ										
Option		1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
premium		expir.			expir			to expir			to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0617	0.0257	-58.35%	0.0607	0.0238	-60.79%	0.0665	0.0278	-58.20%	0.0889	0.0362	-59.28%	0.0673	0.0276	-58.99%
1-<3	0.0840	0.0486	-42.14%	0.0761	0.0369	-51.51%	0.0779	0.0380	-51.22%	0.1030	0.0483	-53.11%	0.0821	0.0405	-50.67%
3-<5	0.1260	0.0599	-52.46%	0.1229	0.0525	-57.28%	0.1243	0.0509	-59.05%	0.1445	0.0639	-55.78%	0.1284	0.0545	-57.55%
5-<10	0.1334	0.0649	-51.35%	0.1253	0.0609	-51.40%	0.1326	0.0646	-51.28%	0.1669	0.0844	-49.43%	0.1390	0.0682	-50.94%
10-<20	0.1353	0.0680	-49.74%	0.1278	0.0627	-50.94%	0.1377	0.0713	-48.22%	0.1942	0.1043	-46.29%	0.1525	0.0743	-51.28%
20+	0.1323	0.0614	-53.59%	0.1249	0.0590	-52.76%	0.1411	0.0746	-47.13%	0.2237	0.1198	-46.45%	0.1772	0.0760	-57.11%
All	0.1121	0.0548	-51.17%	0.1063	0.0493	-53.61%	0.1134	0.0545	-51.89%	0.1535	0.0762	-50.40%	0.1244	0.0569	-54.31%

					All less QQ	QQ									
Option		1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
premium		expir.			expir			to expir			to expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	0.0749	0.0341	-54.47%	0.0710	0.0326	-54.08%	0.0759	0.0372	-50.99%	0.0859	0.0790	-8.03%	0.0762	0.0367	-51.84%
1-<3	0.1019	0.0591	-42.00%	0.0928	0.0476	-48.71%	0.0950	0.0568	-40.21%	0.1150	0.1128	-1.91%	0.0985	0.0582	-40.91%
3-<5	0.1559	0.1234	-20.85%	0.1471	0.1110	-24.54%	0.1460	0.1138	-22.05%	0.1708	0.1857	8.72%	0.1522	0.1211	-20.43%
5-<10	0.1731	0.1455	-15.94%	0.1673	0.1381	-17.45%	0.1701	0.1400	-17.70%	0.1982	0.2288	15.44%	0.1758	0.1531	-12.91%
10-<20	0.1892	0.1643	-13.16%	0.1888	0.1607	-14.88%	0.1984	0.1852	-6.65%	0.2509	0.3365	34.12%	0.2064	0.2020	-2.13%
20+	0.2074	0.1794	-13.50%	0.2181	0.1747	-19.90%	0.2331	0.2424	3.99%	0.3078	0.4367	41.88%	0.2405	0.2533	5.32%
All	0.1504	0.1176	-21.79%	0.1475	0.1108	-24.90%	0.1531	0.1292	-15.58%	0.1881	0.2299	22.23%	0.1583	0.1374	-13.18%

Reduced Quote Size

During the first three months of the Penny Pilot, the average size associated with the NBBO quote decreased by 78% for all Penny Pilot options, while the reduction in average NBBO quote size for options series overlying QQQQ decreased by 87%. During the latter portion of the Penny Pilot, the average size associated with the NBBO quote decreased by 78% for all Penny Pilot options, while the reduction in average NBBO quote size for options series overlying QQQQ decreased by 88%.

NBBO quote size

Three months of Penny Pilot

	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir			to expir			to expir.			All months	
Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
7006	1226	-82.50%	8537	1415	-83.43%	8137	1860	-77.14%	3783	1200	-68.28%	7270	1581	-78.25
				QQQQ										
	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir			to expir			to expir.			All months	
Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
23157	2285	-90.13%	26864	2848	-89.40%	23546	3007	-87.23%	9992	2060	-79.38%	21337	2719	-87.2
				All less QC	QQ									
	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir			to expir			to expir.			All months	
Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
3558	789	-77.82%	4390	874	-80.09%	4012	1137	-71.66%	1938	741	-61.76%	3658	965	-73.6

quote size 9/28				May 1, 200 ALL)7 to Sept. 2	8, 2007								
	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir			to expir			to expir.			All months	
Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
7006	1270	-81.87%	8537	1481	-82.65%	8137	1795	-77.94%	3783	1272	-66.38%	7270	1636	-77.50%
	4 4-						0.0			10				
	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir	-		to expir	-		to expir.			All months	
Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
23157	2149	-90.72%	26864	2431	-90.95%	23546	2753	-88.31%	9992	1801	-81.98%	21337	2506	-88.26%
				All less QC				-						
	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir			to expir			to expir.			All months	
Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
3558	828	-76.73%	4390	1048	-76.13%	4012	1228	-69.39%	1938	718	-62.95%	3658	1111	-69.63%

During the first three months of the Penny Pilot, the average size associated with the PBBO quote decreased by 71% for all Penny Pilot options and by 82% for options overlying QQQQ. During the latter portion of the Penny Pilot, the average size associated with the PBBO quote decreased by 73% for all Penny Pilot options and by 85% for options overlying QQQQ.

				ALL								-		
	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir			to expir			to expir.			All mont	
Before	After	% chg	Before	After	% chg	Before	After	% chg			% chg	Before	After	% chg
3068	664	-78.36%	3610	824	-77.17%	3940	1198	-69.59%	2124	742	-65.07%	3426	9	85 - 71.25
				QQQQ										
	1 mon. to			2 mon. to			3-9 mon.			10+ mon.				
	expir.			expir			to expir			to expir.			All mont	hs
Before	After	% chg	Before	After	% chg	Before	After	% chq			% chq	Before	After	% chq
1113				1866						1519			19	
·	1 mon. to		1	All less Qo 2 mon. to	QQQ	1	3-9 mon.		1	10+ mon.		1		
	expir.			expir			to expir			to expir.			All mont	ho
Before	After	% chq	Before	After	% chg	Before	After	% chq			% chq	Before	After	% chq
134										327	-64.72%			54 -68.99
								00.117		521	-04.7276	1404	4	<u> -00.35</u>
quote size 9/2	в			May 1, 20	07 to Sept. 2			00.1176		321	-04.72 /6	1404	- 4	
quote size 9/2	8 1 mon. to						3-9 mon.			10+ mon.	-04.72 //	1404		
quote size 9/2	1 mon. to			May 1, 20 ALL 2 mon. to			3-9 mon.		327	10+ mon.	-04.72 //	1404	All mon	
quote size 9/24		·	Before	May 1, 20 ALL	07 to Sept. 2		3-9 mon. to expir		Before	10+ mon. to expir.		Before	All mon	ths
	1 mon. to expir. After	% chg	Before	May 1, 20 ALL 2 mon. to expir After	07 to Sept. 2	28, 2007 Before	3-9 mon. to expir After	% chg	Before	10+ mon. to expir. After	% chg	Before	All mon After	ths % chg
Before	1 mon. to expir. After	% chg	Before	May 1, 20 ALL 2 mon. to expir After	07 to Sept. 2	28, 2007 Before	3-9 mon. to expir After	% chg	Before	10+ mon. to expir. After	% chg	Before	All mon After	ths % chg
Before	1 mon. to expir. After	% chg	Before	May 1, 20 ALL 2 mon. to expir After 769	07 to Sept. 2	28, 2007 Before	3-9 mon. to expir After	% chg	Before	10+ mon. to expir. After	% chg	Before	All mon After	ths % chg
Before	1 mon. to expir. After 3 637	% chg	Before	May 1, 20 ALL 2 mon. to expir After 769 QQQQ	07 to Sept. 2	28, 2007 Before	3-9 mon. to expir After 1018	% chg	Before	10+ mon. to expir. After 818	% chg	Before	All mon After	ths % chg 921 -73.1
Before	1 mon. to expir. After 3 637 1 mon. to	% chg	Before	May 1, 20 ALL 2 mon. to expir After 769 QQQQ 2 mon. to	07 to Sept. 2	28, 2007 Before	3-9 mon. to expir After 1018 3-9 mon.	% chg	Before	10+ mon. to expir. After 818 10+ mon.	% chg	Before	All mon After	ths % chg 921 -73.1
Before 306	1 mon. to expir. After 3 637 1 mon. to expir. After	% chg -79.24%	Before 3610 Before	May 1, 20 ALL 2 mon. to expir After 769 QQQQ 2 mon. to expir	07 to Sept. : % chg 9 -78.70%	28, 2007 Before 3940 Before	3-9 mon. to expir After 1018 3-9 mon. to expir After	% chg -74.16% % chg	Before 2124 Before	10+ mon. to expir. After 818 10+ mon. to expir.	% chg -61.49% % chg	Before 3426 Before	All mon After All mon After	ths % chg 921 -73.1 ths
Before 3060 Before	1 mon. to expir. After 3 637 1 mon. to expir. After	% chg -79.24%	Before 3610 Before	May 1, 20 ALL 2 mon. to expir After QQQQ 2 mon. to expir After	07 to Sept. : % chg 9 -78.70%	28, 2007 Before 3940 Before	3-9 mon. to expir After 1018 3-9 mon. to expir After	% chg -74.16% % chg	Before 2124 Before	10+ mon. After 818 10+ mon. to expir. After	% chg -61.49% % chg	Before 3426 Before	All mon After All mon After	ths % chg 921 -73.1 ths % chg
Before 3060 Before	1 mon. to expir. After B 637 1 mon. to expir. After 7 1158	% chg -79.24%	Before 3610 Before	May 1, 20 ALL 2 mon. to expir After 2 mon. to expir After 144: All less Q	07 to Sept. 2 % chg 3 -78.70% % chg 7 -88.70%	28, 2007 Before 3940 Before	3-9 mon. to expir After 1018 3-9 mon. to expir After 1830	% chg -74.16% % chg	Before 2124 Before	10+ mon. to expir. After 818 10+ mon. to expir. After 1239	% chg -61.49% % chg	Before 3426 Before	All mon After All mon After	ths % chg 921 -73.1 ths % chg
Before 3060 Before	1 mon. to expir. After 3 637 1 mon. to expir. After 7 1158 1 mon. to	% chg -79.24%	Before 3610 Before	May 1, 20 ALL 2 mon. to expir After 769 2 mon. to expir After 1443 All less Q 2 mon. to 2 mon. to	07 to Sept. 2 % chg 3 -78.70% % chg 7 -88.70%	28, 2007 Before 3940 Before	3-9 mon. to expir After 1018 3-9 mon. to expir After 1830 3-9 mon.	% chg -74.16% % chg	Before 2124 Before	10+ mon. to expir. After 818 10+ mon. to expir. After 1239 10+ mon.	% chg -61.49% % chg	Before 3426 Before	All mon After All mon After 16	ths % chg 321 -73.1 ths % chg 330 -85.2
Before 3064 Before 1113	1 mon. to expir. After 3 637 1 mon. to expir. After 7 1158 1 mon. to expir.	% chg -79.24% % chg -89.60%	Before 3 3610 Before 12802	May 1, 20 ALL 2 mon. to expir After 2 mon. to expir After 144: All less Q 2 mon. to expir	07 to Sept. 2 % chg -78.70% % chg -88.70% QQQ	28, 2007 Before 3940 Before 12424	3-9 mon. to expir After 1018 3-9 mon. to expir 1830 3-9 mon. to expir	% chg -74.16% % chg -85.27%	Before 2124 Before 6153	10+ mon. to expir. After 10+ mon. to expir. After 1239 10+ mon. to expir.	% chg -61.49% % chg -79.86%	Before 3426 Before 11067	All mon After All mon After 16 All mon	ths % chg 321 -73.1 ************************************
Before 3060 Before	1 mon. to expir. After B 637 1 mon. to expir. After 7 1158 1 mon. to expir. After	% chg -79.24% % chg -89.60% % chg	Before Before 12802 Before	May 1, 20 ALL 2 mon. to expir After 2 mon. to expir After 144: All less Q 2 mon. to expir After After After After	07 to Sept. 2 % chg -78.70% % chg 200 200 % chg	28, 2007 Before 3940 Before 12424 Before	3-9 mon. to expir After 3-9 mon. to expir After 1830 3-9 mon. to expir After After	% chg -74.16% % chg -85.27% % chg	Before 2124 Before 6153 Before	10+ mon. to expir. After 818 10+ mon. to expir. After 1239 10+ mon.	% chg -61.49% % chg -79.86% % chg	Before 3426 Before 11067 Before	All mon After All mon After All mon After	ths % chg 321 -73. ths % chg 330 -85.2

Quote Message Traffic and Efficiency

During the first three months of the Penny Pilot, the Exchange experienced an increase in quote message traffic in the Penny Pilot options when compared with quote message traffic during the baseline. Total Penny Pilot outbound quotes reported to OPRA increased by 62% and series overlying QQQQ increased by 206%. During the latter portion of the Penny Pilot, total Penny Pilot outbound quotes reported to OPRA increased by 45% and series overlying QQQQ increased by 161%.

PBBO O/B (outbound) quotes to OPRA

Three months of Penny Pilot

					ALL										
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	124156.36	209620.84	68.84%	189948.16	341516.72	79.79%	492127.52	825932.91	67.83%	124507.53	229689.86	84.48%	930739.57	1586814.70	70.49%
1-<3	154584.45	260050.95	68.23%	261451.66	455932.49	74.39%	707602.27	1502314.19	112.31%	209168.10	517207.69	147.27%	1332806.48	2710705.47	103.38%
3-<5	86977.08	129023.86	48.34%	129928.83	192613.91	48.25%	381889.66	765599.41	100.48%	146803.29	317135.75	116.03%	745598.86	1392058.83	86.70%
5-<10	159463.59	242328.68	51.96%	228053.14	350838.31	53.84%	659039.02	1240680.61	88.26%	279406.80	610680.52	118.56%	1325962.56	2421427.74	82.62%
10-<20	164501.51	170330.44	3.54%	214612.22	254727.90	18.69%	555983.11	902957.25	62.41%	276923.39	505857.54	82.67%	1212020.24	1817775.83	49.98%
20+	69807.61	26085.02	-62.63%	92588.47	39128.54	-57.74%	160587.41	119419.82	-25.64%	89524.90	140628.69	57.08%	412508.40	322873.04	-21.73%
All	759490.60	1037439.79	29.71%	1116582.48	1634757.87	36.20%	2957228.99	5356904.19	67.61%	1126334.01	2321200.05	101.02%	5959636.11	10251655.61	61.91%

					0000										
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				1
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	28786.81	49192.60	70.89%	44758.22	76286.73	70.44%	105707.45	295488.73	179.53%	25167.67	61872.38	145.84%	204420.15	478110.38	133.89%
1-<3	36165.37	62793.19	73.63%	63163.64	94538.33	49.67%	178027.63	467276.65	162.47%	51302.07	155506.10	203.12%	328658.72	774076.46	135.53%
3-<5	16335.48	52079.94	218.81%	24158.13	68164.52	182.16%	81212.61	345842.13	325.85%	31433.31	134551.81	328.05%	153139.54	595630.71	288.95%
5-<10	33377.85	100200.06	200.20%	44094.88	144807.04	228.40%	133226.09	560261.29	320.53%	59028.63	231087.27	291.48%	269727.45	1026721.04	280.65%
10-<20	34401.36	44511.23	29.39%	37177.27	68568.88	84.44%	122336.01	394684.37	222.62%	79845.46	215258.52	169.59%	273760.10	718743.08	162.54%
20+	0.00	0.00		995.81	2947.88	196.03%	7312.60	32311.06	341.85%	7988.46	23540.98	194.69%	17535.97	58799.92	235.31%
All	149066.87	308777.02	118.58%	214347.95	455313.38	135.19%	627822.39	2095864.23	258.81%	254765.60	821817.06	222.13%	1247241.93	3652081.59	206.14%

					All less QQQ	Q									
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	95369.55	160428.25	68.22%	145189.94	265229.98	82.68%	386420.08	530444.18	37.27%	99339.85	167817.47	68.93%	726319.42	1108704.31	52.65%
1-<3	118419.07	197257.76	66.58%	198288.02	361394.16	82.26%	529574.64	1035037.53	95.45%	157866.03	361701.60	129.12%	1004147.76	1936629.01	92.86%
3-<5	70641.60	76943.92	8.92%	105770.70	124449.39	17.66%	300677.05	419757.27	39.60%	115369.98	182583.94	58.26%	592459.32	796428.11	34.43%
5-<10	126085.74	142128.62	12.72%	183958.26	206031.27	12.00%	525812.93	680419.32	29.40%	22037818.00	379593.26	-98.28%	1056235.11	1394706.70	32.05%
10-<20	130100.15	125819.20	-3.29%	177434.95	186159.01	4.92%	433647.10	508272.89	17.21%	197077.93	290599.02	47.45%	938260.14	1099032.15	17.14%
20+	68568.50	26085.02	-61.96%	91592.67	36180.66	-60.50%	153274.82	87108.76	-43.17%	81536.44	117087.71	43.60%	394972.43	264073.11	-33.14%
All	101530.77	121443.80	15.20%	902234.54	1179444.47	23.17%	2329406.62	3261039.95	29.29%	22689008.23	1499383.00	41.51%	4712394.18	6599573.39	32.66%

					All .01 MPV's										
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	244436.42	469205.27	91.95%	359537.89	720543.36	100.41%	1014242.47	2626308.41	158.94%	354105.45	989634.53	179.47%	1973561.35	4760785.90	141.23%
1-<3	267485.94	506034.78	89.18%	412635.97	816707.54	97.92%	1157397.03	3130901.76	170.51%	412631.63	1183518.66	186.82%	2251389.69	5588710.60	148.23%
All	511922.36	975240.05	90.57%	772173.86	1537250.90	99.17%	2171639.50	5757210.17	164.73%	766737.08	2173153.19	183.15%	4224951.04	10349496.50	144.73%

PBBO O/B (outbound) quotes to OPRA 9/28

May 1, 2007 to Sept. 28, 2007 ALL

					ALL										
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	124156.36	159902.88	28.79%	189948.16	306607.58	61.42%	492127.53	779185.59	58.33%	124507.53	61852.42	-50.32%	930739.56	1305471.61	40.26%
1-<3	154584.45	158956.19	2.83%	261451.66	341922.92	30.78%	707602.27	1389142.32	96.32%	209168.10	203158.33	-2.87%	1332806.47	2090991.25	56.89%
3-<5	86977.08	79482.32	-8.62%	129928.83	157591.40	21.29%	381889.66	728644.41	90.80%	146803.29	169665.54	15.57%	745598.84	1134560.62	52.17%
5-<10	159463.59	141741.67	-11.11%	228053.14	266125.30	16.69%	659039.02	1193335.03	81.07%	279406.80	326462.59	16.84%	1325962.57	1926235.66	45.27%
10-<20	164501.51	147209.08	-10.51%	214612.22	279183.71	30.09%	555983.11	1120027.51	101.45%	276923.39	258087.62	-6.80%	1212020.23	1803283.87	48.78%
20+	69807.61	36576.97	-47.60%	92588.47	44511.00	-51.93%	160587.41	277519.46	72.82%	89524.90	45758.84	-48.89%	412508.40	406453.42	-1.47%
All	759490.60	723869 11	-4 69%	1116582.48	1395941 91	25.02%	2957229.00	5487854 32	85 57%	1126334.01	1064985 34	-5 45%	5959636.07	8666996 43	45 43%

					QQQQ										
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	28786.81	38872.90	35.04%	44758.22	71889.18	60.62%	105707.45	276604.07	161.67%	25167.67	36572.13	45.31%	204420.15	423938.28	107.39%
1-<3	36165.37	26624.18	-26.38%	63163.64	70531.65	11.66%	178027.63	406389.83	128.27%	51302.07	125817.93	145.25%	328658.72	639363.59	94.54%
3-<5	16335.48	31089.83	90.32%	24158.13	51194.98	111.92%	81212.61	283580.26	249.18%	31433.31	104403.56	232.14%	153139.54	470268.63	207.09%
5-<10	33377.85	59069.21	76.97%	44094.88	100729.27	128.44%	133226.09	439719.76	230.06%	59028.63	155065.28	162.70%	269727.45	754583.51	179.76%
10-<20	34401.36	58152.58	69.04%	37177.27	115319.20	210.19%	122336.01	504903.70	312.72%	79845.46	106536.42	33.43%	273760.10	784911.90	186.72%
20+	1239.10	12415.89	902.01%	995.81	23892.82	2299.34%	7312.60	124503.28	1602.59%	7988.46	17202.57	115.34%	17535.97	178014.55	915.14%
All	150305.97	226224.59	50.51%	214347.95	433557.10	102.27%	627822.39	2035700.90	224.25%	254765.60	545597.89	114.16%	1247241.93	3251080.46	160.66%

					All less QQQ	Q									
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	95369.55	121029.98	26.91%	145189.94	234718.40	61.66%	386420.08	502581.52	30.06%	99339.85	25280.29	-74.55%	726319.41	881533.33	21.37%
1-<3	118419.07	122332.01	3.30%	198288.02	271391.28	36.87%	529574.64	982752.50	85.57%	157866.01	77340.40	-51.01%	1004147.75	1451627.66	44.56%
3-<5	70641.60	48392.49	-31.50%	105770.70	106396.42	0.59%	300677.05	445064.15	48.02%	115369.97	65261.98	-43.43%	592459.30	664291.99	12.12%
5-<10	126085.74	82672.46	-34.43%	183958.26	165396.04	-10.09%	525812.93	753615.27	43.32%	220378.18	171397.31	-22.23%	1056235.12	1171652.14	10.93%
10-<20	130100.15	89056.50	-31.55%	177434.95	163864.51	-7.65%	433647.10	615123.82	41.85%	197077.93	151551.20	-23.10%	938260.13	1018371.97	8.54%
20+	68568.50	24161.09	-64.76%	91592.67	22981.02	-74.91%	153274.82	153016.18	-0.17%	81536.43	28556.27	-64.98%	394972.43	228438.87	-42.16%
All	101530.77	81274.09	-19.95%	902234.54	964747.67	6.93%	2329406.62	3452153.44	48.20%	871568.37	519387.45	-40.41%	4712394.14	5415915.96	14.93%

					All .01 MPV's										
Option		1 mon. to			2 mon. to			3-9 mon. to			10+ mon. to				
premium		expir.			expir			expir			expir.			All months	
	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg	Before	After	% chg
<1	245675.52	347254.57	41.35%	359537.89	668275.50	85.87%	1014242.47	2538282.42	150.26%	354105.45	570878.18	61.22%	1973561.34	4132613.79	109.40%
1-<3	268725.04	348556.60	29.71%	412635.97	704948.38	70.84%	1157397.03	3018453.40	160.80%	412631.61	622938.29	50.97%	2251389.68	4702708.12	108.88%
All	514400.56	695811.17	35.53%	772173.86	1373223.88	78.36%	2171639.50	5556735.82	155.53%	766737.06	1193816.47	56.09%	4224951.02	8835321.91	109.14%

For the baseline period, the Exchange found that series trading at a premium price of less than \$1.00 accounted for 15.6% of all Penny Pilot quotes during that same time period. The Exchange found that during the initial three months, series trading at a premium price of less than \$1.00 accounted for 15.5% of all Penny Pilot quotes. In the QQQQ, series trading at a premium price of less than \$1.00 accounted for 13.1% of all QQQQ quotes.

During the latter portion of the Penny Pilot, series trading at a premium price of less than \$1.00 accounted for 15.1% of all Penny Pilot. In the QQQQ, options under \$1.00 accounted for 13.4% of all QQQQ quotes.

Non-QQQQ Over \$1.00	Initial Period	Latter Period
Contracts	34.1 %	50.0%
Trades	30.0 %	53.9%
O/B Quotes	84.5 %	83.7 %

All non-QQQQ Penny Pilot series trading at over \$1.00:

All Penny Pilot options with a trade price of under \$3.00:

All Pilot options Under \$3.00	Initial Period	Latter Period
Contracts	94.8 %	92.9%
Trades	92.8 %	91.0%
O/B Quotes	42.0 %	39.2 %

QQQQ options Under \$3.00	Initial Period	Latter Period
Contracts	97.1 %	95.1%
Trades	98.0 %	96.7%
O/B Quotes	34.3 %	32.7 %

All Penny Pilot options with a trade price of over \$20.00:

All Pilot options Over \$20.00	Initial Period	Latter Period
Contracts	<0.01 %	<0.01 %
Trades	0.01 %	<0.01 %
O/B Quotes	1.6 %	4.7 %

All Penny Pilot options with 2 or fewer months to expiration:

All Pilot options 2 or fewer months	Initial Period	Latter Period
Contracts	67.7 %	74.8%
Trades	72.1 %	76.8%
O/B Quotes	25.8 %	24.5 %

QQQQ options 2 or fewer months	Initial Period	Latter Period
Contracts	80.7 %	79.8%
Trades	88.3 %	87.1%
O/B Quotes	20.8 %	20.3 %

QQQQ Penny Pilot options with 2 or fewer months to expiration:

All Penny Pilot options with 3 to 9 to expiration:

All Pilot options 3-9 months to exp	Initial Period	Latter Period
Contracts	24.7 %	23.9%
Trades	20.8 %	21.1
O/B Quotes	51.8 %	63.3 %

QQQQ Penny Pilot options with 3 to 9 months to expiration:

QQQQ options 3-9 months to exp	Initial Period	Latter Period
Contracts	16.9 %	18.8%
Trades	10.4 %	11.8%
O/B Quotes	56.9 %	62.6 %

All Penny Pilot options with 9 or fewer months to expiration:

All Pilot options 9 or fewer months	Initial Period	Latter Period
Contracts	92.4 %	98.8%
Trades	92.9 %	97.8%
O/B Quotes	77.6 %	87.8 %

All Penny Pilot options under \$1.00 and with 2 or fewer months to expiration:

All Pilot options Under \$1.00 & 2 or fewer months	Initial Period	Latter Period
Contracts	50.9 %	49.1%
Trades	59.1 %	59.3%
O/B Quotes	5.3 %	5.4 %

QQQQ options under \$3.00 and with 2 or fewer months to expiration:

QQQQ options Under \$3.00 & 2 or fewer months	Initial Period	Latter Period
Contracts	79.7 %	78.0%
Trades	87.7 %	85.9%
O/B Quotes	7.7 %	6.4 %

All Pilot options Under \$3.00 &	Initial Period	Latter Period
9 or fewer months		
Contracts	88.8 %	92.5%
Trades	88.0 %	89.5%
O/B Quotes	34.7 %	36.2 %

All Penny Pilot options under \$3.00 and with 9 or fewer months to expiration:

QQQQ options under \$3.00 and with 9 or fewer months to expiration:

QQQQ options Under \$3.00 & 9 or fewer months	Initial Period	Latter Period
Contracts	95.5 %	94.0%
Trades	97.3 %	95.9%
O/B Quotes	28.4 %	27.4 %

| | 8 2007 vs baseline

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| option trade |

 | 1 month to |
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 | Before | After
 | Chg | Before | After
 | Chg | Before | After | Chg
 | - | Before | After | Chg
 | Before | After | Chg
 |
| | quote width

 | 0.0718 | 0.0320
 | -55.43% | 0.0685 | 0.0306
 | -55.33% | 0.0738 | 0.0338 | -54.20%
 | | 0.0865 | 0.0537 | -37.92%
 | 0.0742 | 0.0338 | -54.45%
 |
| | # O/B quotes

 | 124156 | 159903
 | 28.79% | 189948 | 306608
 | 61.42% | 492128 | 779186 | 58.33%
 | | 124508 | 61852 | -50.32%
 | 930740 | 1305472 | 40.26%
 |
| | # elec trd contract
elec trades

 | 27257
1678 | 72784
 | 167.03%
184.27% | 26343
1736 | 58736
4255
 | 122.97%
145.10% | 11969
680 | 23160
1009 | 93.50%
48.38%
 | - | 2136
93 | 2073
93 | -2.95%
0.00%
 | 67392 | 154175
10056 | 128.77%
141.09%
 |
| | # orders

 | 1446 | 3983
 | 175.45% | 1499 | 3666
 | 144.56% | 617 | 757 | 22.69%
 | | 83 | 70 | -15.66%
 | 3637 | 8424 | 131.62%
 |
| >=\$1<\$3 | quote width

 | 0.0976 | 0.0566
 | -42.01% | 0.0887 | 0.0454
 | -48.82% | 0.0906 | 0.0513 | -43.38%
 | | 0.112 | 0.0729 | -34.91%
 | 0.0944 | 0.0528 | -44.07%
 |
| | # O/B quotes

 | 154584 | 158956
 | 2.83% | 261452 | 341923
 | 30.78% | 707602 | 1389142 | 96.32%
 | | 209168 | 203158 | -2.87%
 | 1332806 | 2090991 | 56.89%
 |
| | # elec trd contract
elec trades

 | 7201 | 21692
747
 | 201.24% | 12934
593 | 40640
1472
 | 214.21%
148.23% | 12268 | 30957
1487 | 152.34%
110.92%
 | _ | 2862
192 | 2766
144 | -3.35%
-25.00%
 | 35058 | 94742
3801 | 170.24%
108.96%
 |
| | # elec trades
orders

 | 253 | 612
 | 141.90% | 431 | 1472
 | 146.23% | 506 | 1467 | 127.08%
 | - | 192 | 144 | -25.00%
 | 1331 | 3050 | 129.15%
 |
| >=\$3<\$5 | quote width

 | 0.1502 | 0.0983
 | -34.55% | 0.1425 | 0.0920
 | -35.44% | 0.1413 | 0.0893 | -36.80%
 | | 0.1651 | 0.1107 | -32.95%
 | 0.1472 | 0.0935 | -36.48%
 |
| | # O/B quotes

 | 86977 | 79482
 | -8.62% | 129929 | 157591
 | 21.29% | 381890 | 728644 | 90.80%
 | | 146803 | 169666 | 15.57%
 | 745599 | 1134561 | 52.17%
 |
| | # elec trd contract

 | 533 | 1344
 | 152.16% | 606 | 3407
 | 462.21% | 1347 | 6236 | 362.95%
 | | 1059 | 1230 | 16.15%
 | 3521 | 12086 | 243.25%
 |
| | # elec trades
orders

 | 53 | 99
72
 | 86.79%
105.71% | 59 | 215
 | 264.41% | 109 | 425 | 289.91%
 | - | 93
66 | 100 | 7.53%
 | 313 | 831
599 | 165.50%
181.22%
 |
| | quote width

 | 0.1647 | 0.1116
 | -32.24% | 0.159 | 0.1089
 | -31.51% | 0.1624 | 0.1122 | -30.91%
 | | 0.1915 | 0.1602 | -16.34%
 | 0.1682 | | -28.78%
 |
| | # O/B quotes

 | 159464 | 141742
 | -11.11% | 228053 | 266125
 | 16.69% | 659039 | 1193335 | 81.07%
 | | 279407 | 326463 | 16.84%
 | 1325963 | 1926236 | 45.27%
 |
| | # elec trd contract

 | 225 | 617
 | 174.22% | 224 | 910
 | 306.25% | 518 | 2811 | 442.66%
 | | 869 | 1098 | 26.35%
 | 1825 | 5196 | 184.71%
 |
| | # elec trades
orders

 | 28 | 39
 | 39.29% | 25 | 69
52
 | 176.00% | 47 | 224 | 376.60%
 | _ | 75 | 93
76 | 24.00%
 | 175 | 415 | 137.14%
 |
| | # orders
quote width

 | 18
0.1777 | 30
0.1259
 | -29.15% | 18 | 0.1202
 | -32.47% | 0.1848 | 0.1339 | 405.88%
 | Н | 0.2343 | 0.2406 | 38.18%
 | 0.194 | 0.1464 | -24.54%
 |
| ψιοςψευ | # O/B quotes

 | 164502 | 147209
 | -10.51% | 214612 | 279184
 | 30.09% | 555983 | 1120028 | 101.45%
 | ⊢ | 276923 | 258088 | -6.80%
 | 1212020 | | 48.78%
 |
| | # elec trd contract

 | 74 | 153
 | 106.76% | 93 | 214
 | 130.11% | 131 | 770 | 487.79%
 | | 300 | 415 | 38.33%
 | 596 | 1481 | 148.49%
 |
| | # elec trades

 | 7 | 7
 | 0.00% | 3 | 13
 | 333.33% | 7 | 53
42 | 657.14%
740.00%
 | П | 20 | 40 | 100.00%
94.12%
 | 37 | 106 | 186.49%
 |
| | # orders

 | 0.206 | 5
0.1390
 | -32.52% | 0.2171 | 10
0.1157
 | 233.33% | 0.2287 | 42
0.1671 | 740.00%
-26.93%
 | ⊢ | 17 | 33
0.3175 | 94.12%
5.83%
 | 0.2377 | 85
0.1756 | 183.33%
-26.13%
 |
| >=\$20 | quote width
O/B quotes

 | 69808 | 0.1390
 | -32.52% | 92588 | 46874
 | -46.71% | 160587 | 277519 | -26.93%
 | ⊢ | 89525 | 45759 | -48.89%
 | 412508 | 406453 | -26.13%
 |
| | # elec trd contract

 | 12 | 16
 | 33.33% | 8 | 32
 | 300.00% | 168 | 180 | 7.14%
 | | 34 | 38 | 11.76%
 | 222 | 252 | 13.51%
 |
| | # elec trades

 | 0 | 1
 | | 0 | 1
 | | 1 | 7 | 100.00%
 | | 1 | 5 | 100.00%
 | 3 | | 300.00%
 |
| A 11 | # orders

 | 0 | 0
 | | 0 | 1
 | | 1 | 6 | 100.00%
 | | 1 | 4 | 100.00%
 | 2 | 10 | 400.00%
 |
| All | quote width
quote size

 | 3068 | 637
 | -79.24% | 3610 | 769
 | -78,70% | 3940 | 1018 | -74.16%
 | - | 2124 | 818 | -61.49%
 | 3426 | 921 | -73.12%
 |
| | # O/B quotes

 | 759491 | 723869
 | -4.69% | 1116582 | 1398305
 | 25.23% | 2957229 | 5487854 | 85.57%
 | | 1126334 | 1064985 | -5.45%
 | 5959636 | | 45.43%
 |
| | # elec trd contract

 | 35302 | 96606
 | 173.66% | 40208 | 103939
 | 158.50% | 26401 | 64114 | 142.85%
 | | 7260 | 7620 | 4.96%
 | 108614 | 267932 | 146.68%
 |
| | # elec trades
orders

 | 2107
1757 | 5663
4702
 | 168.77%
167.62% | 2416
1989 | 6025
5105
 | 149.38%
156.66% | 1549
1237 | 3205
2424 | 106.91%
95.96%
 | | 474 376 | 475
375 | 0.21%
 | 6518
5337 | 15221
12488 | 133.52%
133.99%
 |
| | # orders

 | 1/5/ | 4702
 | 167.62% | 1969 | 5105
 | 100.00% | 1237 | 2424 | 95.90%
 | | 3/0 | 3/5 | -0.27%
 | 5337 | 12400 | 133.99%
 |
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| May 1-Sept 28 | 8 2007 vs baseline

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| option trade |

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 | | 2 months to | |
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| price |

 | expiration |
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 | | 3 to 9 months | |
 | | fter 9 months | |
 | All months | 5 |
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| <\$1 |

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 | | expiration | |
 | | to expiration | |
 | | ter 9 months
to expiration | |
 | All months
to expiration | 5 |
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 | Before | After
 | Chg | expiration
Before | After
 | | to expiration
Before | After | ong
 | | to expiration
Before | After | ong
 | to expiration
Before | e After |
 |
| | quote width

 | Before
0.0617 | 0.0257
 | -58.35% | expiration
Before
0.0607 | 0.0238
 | -60.79% | to expiration
Before
0.0665 | 0.0278 | -58.20%
 | | to expiration
Before
0.0889 | 0.0362 | -59.28%
 | to expiration
Before
0.0673 | After
3 0.0276 | -58.99%
 |
| | # O/B quotes

 | Before
0.0617
28787 | 0.0257 38873
 | -58.35%
35.04% | expiration
Before
0.0607
44758 | 0.0238
71889
 | -60.79%
60.62% | to expiration
Before
0.0665
105707 | 0.0278 | -58.20%
161.67%
 | | to expiration
Before
0.0889
25168 | 0.0362 | -59.28%
45.31%
 | to expiration
Before
0.0673
204420 | e After
3 0.0276
0 423938 | 58.99%
107.39%
 |
| |

 | Before
0.0617 | 0.0257
38873
48686
 | -58.35%
35.04%
241.39% | expiration
Before
0.0607
44758
12635 | 0.0238
71889
38674
 | -60.79% | to expiration
Before
0.0665
105707
2558 | 0.0278 | -58.20%
161.67%
253.36%
 | | to expiration
Before
0.0889 | 0.0362 | -59.28%
 | to expiration
Before
0.0673
204420
29643 | After
0.0276
423938
97268 | -58.99%
107.39%
228.13%
 |
| | # O/B quotes
elec trd contract

 | Before
0.0617
28787
14261 | 0.0257 38873
 | -58.35%
35.04% | expiration
Before
0.0607
44758 | 0.0238
71889
 | -60.79%
60.62%
206.09% | to expiration
Before
0.0665
105707 | 0.0278
276604
9039 | -58.20%
161.67%
 | | to expiration
Before
0.0889
25168 | 0.0362
36572
971 | -59.28%
45.31%
339.37%
 | to expiration
Before
0.0673
204420 | After
0.0276
0.423938
0.97268
0.7580 | -58.99%
107.39%
228.13%
334.14%
 |
| | # O/B quotes
elec trd contract
elec trades
orders
quote width

 | Before
0.0617
28787
14261
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quote width
O/B quotes

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| >=\$1<\$3 | # O/B quotes
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elec trades
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O/B quotes
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O/B quotes

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| >=\$1<\$3
>=\$3<\$5 | # O/B quotes
elec trd contract
elec trades
orders
quote width
O/B quotes
elec trd contract
elec trades
orders
quote width
O/B quotes

 | Before
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Conclusions

As indicated in the Summary of Findings, the Exchange found a number of significant results from the Penny Pilot, particularly an increase in quote traffic, a decrease in quote sizes and a narrowing of quote spreads. In comparing the first three months to the latter

portion of the Penny Pilot, the Exchange found that the PBBO and NBBO spreads widened.

The Exchange also observed that these results were particularly pronounced in the series with 9 months or less until expiration priced under \$1.00, which are the most actively traded series in the options marketplace. Thus, the Penny Pilot's impact on the quality of markets overall was most pronounced in the most active series.

In addition to the charts and other summaries of data that appear in this Report, attached in the Appendix is the methodology associated with collecting such data.

APPENDIX A

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1. Data and Methodology

The methodology used to measure and compare the different data statistics for the Penny Pilot was to capture electronic data on the Penny Pilot options for the three months prior to the start of the Penny Pilot (the "baseline data"). This electronic data was compared to electronic data gathered from the first three months and the latter portion of the Penny Pilot. In all our reports we provided average percentage changes of the baseline data as compared to the first three months and the latter portion of the Penny Pilot. This report is intended to measure the short-term impact of the Penny Pilot on quoting and trading.

Resources

The primary resource used to capture data came from our trading systems database logs (trade log, quote log and order log). The required data was extracted though customized programs on our Trade Data Access System ("TDAS") regulatory system and loaded into a PC spreadsheet application for analysis. The TDAS system is a comprehensive database that receives and archives detailed order, quote and trade information.