CBOE
CHICAGO BOARD OPTIONS EXCHANGE

Edward J. Joyce
President and
Chief Operating Officer

Phone: 312 786-7310
Fax: 312 786-7407
joyce@cboe.com

March 4, 2008

Ms. Elizabeth King
Associate Director
Division of Trading and Markets
Securities and Exchange Commission
100 F Street, N.E.
Washington D.C. 20549

Re: Penny Pilot Report –September 28, 2007 through January 31, 2008

Dear Ms. King:

The Chicago Board Options Exchange, Incorporated ("CBOE" or "Exchange") is submitting this letter and the attached report which describes the impact of the changes to the minimum increments in the 35 Penny Pilot classes during the period September 28, 2007 through January 31, 2008. Previously, CBOE submitted reports analyzing the first nine months of the Penny Pilot Program.[1] The attached report provides data pertaining to such areas as average spread, average size, NBBO spread at time of trade, total quotes per day (inbound to CBOE and outbound to OPRA), peak quote rates, and industry average daily volume.

As the SEC staff is aware, the Penny Pilot Program commenced on January 26, 2007. Through September 27, 2007, thirteen option classes were included in Phase I of the Pilot Program. On September 28, 2007, twenty-two additional option classes were added to the Pilot Program ("Phase II"). For purposes of this report, CBOE refers to the initial 13 option classes as Phase I classes, and the twenty-two option classes that were added to the Pilot Program on September 28, 2007 as Phase II classes. On September 28, 2007, CBOE also began to quote and trade XSP options and DJX options in $.01 increments for all option series below $3, and $.05 increments for all option series $3 and above.

In its prior reports, CBOE expressed its concern that much of the data from the first nine months of the Pilot Program reflect negative consequences for the options industry, as to which CBOE, its members and member firms and their customers were justifiably worried. Liquidity at the best bid or offer had decreased substantially (*e.g.*, 86% reduction in penny series), volume in many Pilot classes had decreased significantly (*e.g.*, seven out of ten classes performed worse compared to their sectors), and quote traffic had increased dramatically. CBOE concluded that further analysis must be conducted over a longer period of time before drawing any firm conclusions as to the impact of quoting and trading in these reduced increments, and in order to determine which classes benefit from trading in penny increments versus those that should be removed from the Penny Pilot.

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[1] See letters from CBOE's President Edward Joyce to Elizabeth King, dated June 1, 2007 and November 1, 2007.

After further data analysis and receiving feedback from its members (including liquidity providers and firms representing customers – retail and institutional) and other market participants, CBOE believes that the Penny Pilot, while narrowing spreads, is causing other unintended and potentially harmful consequences for the options industry. We are particularly concerned with the effects of the current structure of the Penny Pilot, which was built upon certain industry foundations (*i.e.*, the $3 breakpoint) that existed previously and for different reasons. Notwithstanding our concerns, CBOE has developed what it and many others in our industry believe to be a responsible and suitable long term proposal for the Penny Pilot, which addresses the goals of the SEC while ensuring the long-term viability of the options industry. We will present that concept at the end of this letter.

Before proceeding with our report on Phase II, however, CBOE would like to request that the SEC reconsider the start date of the next phase of the Penny Pilot (currently March 28th). In view of the prevailing market volatility and uncertain economic conditions that have strained the U.S. financial system, as well as the significant increase in quote traffic in the past few months, CBOE believes that the further introduction of additional penny classes at this time would not contribute to market stability and operational integrity. Instead, CBOE recommends that the next phase of the Penny Pilot be delayed until July 2008, at which time it is anticipated that the markets will have begun to stabilize and OPRA's capacity will have increased from its current level of 701,000 to 907,000 messages per second. We believe this to be in the interest of all market participants, and would appreciate the flexibility that such an extension would provide.

After one year of the Penny Pilot, the impact of quoting in penny increments on transparency, liquidity, market structure, and quote traffic shows mixed results.

- Transparency. CBOE is concerned that the effects of the Penny Pilot in its current structure, specifically the reduction of size at market price points, may be driving business that was previously transacted on the exchanges to off-floor mechanisms, damaging price discovery and setting the stage for a flight of institutional liquidity. Furthermore, we are beginning to see the introduction of off-floor pricing and trade match mechanisms for options, which, while still requiring an exchange for execution, will seek out those marketplaces offering the least amount of exposure and price discovery.

- Market Structure. CBOE is also becoming increasingly concerned that the Penny Pilot, in its current structure, will adversely affect the marketplace by causing the elimination of small to medium size liquidity providers in favor of a select number of large participants. The data, thus far, shows that the average number of liquidity providers at CBOE in the Penny Pilot classes is down significantly – 41% in the Phase I classes, and 26% in the Phase II classes. Individual classes have experienced greater reductions (QQQQ: -47%; SMH: -57%; AMD: -59%; DIA: -56%; AMGN: -48%). The options marketplace is quote driven, not an order driven market like the equity markets, and benefits from the presence of a broad and diverse pool of liquidity providers. The Penny Pilot, in its current form, is causing a transfer of opportunity or wealth from small and mid-sized liquidity providers to price takers which, once done, will leave only a handful of large firms remaining.

- Liquidity at the BBO. For Phase I classes, the industry's average sizes are down 85% in penny series, and 56% in nickel series during this reporting period. For Phase II classes, the average sizes are down 74% in penny series, and 36% in nickel series during this reporting period. CBOE's members and institutional customers continue to advise that executing large size orders is difficult in the Penny Pilot classes, and as a result, CBOE believes firms and customers are executing orders OTC. CBOE understands that changes to the Linkage Plan to facilitate the execution of large-sized orders are under way, but will not be available until early 2009. In the meantime, the institutional customer base, which accounted for a meaningful portion of the growth in the options market, is dissatisfied and looking elsewhere to execute their transactions.

- Quote Traffic. Quote traffic, both into CBOE and to OPRA, has exploded in the past several months. During this reporting period, the Phase I classes experienced quote traffic increases of 291% in penny series and 171% in nickel series, compared to the pre-period (4th quarter of 2006). Phase II classes experienced quote traffic increases of 91% in penny series and 88% in nickel series, compared to the pre-period (3rd quarter of 2007). The peak message rate to OPRA from the exchanges currently is 387,413 messages per second, which is 62% greater than it was six months ago when the peak message rate was 239,124. Since the addition of the 22 Phase II classes in late September 2007, OPRA has reached 15 new peak message rates (most recently, February 26, 2008). CBOE is worried that adding 28 additional high-volume option classes to the Penny Pilot at the end of March 2008 will lessen operational integrity, particularly with market volatility returning to more historic norms.

  As the SEC staff is aware, CBOE has implemented a number of quote mitigation strategies in connection with the Penny Pilot, including modifying Market-Maker and RMM quoting obligations, implementing a Holdback Timer, adopting a delisting policy, and assessing a Hybrid quoting fee. It is obviously difficult to quantify the impact of these quote mitigation measures and assess their effectiveness. However, CBOE believes that its efforts have been effective in mitigating quotations and does not believe the strategies have had a negative impact on CBOE's marketplace.

- Average Daily Volume. In this reporting period, industry average daily volume increased 92% for Phase I classes, with two classes – IWM and QQQQ, continuing to skew the statistics (153% increase for IWM; and 134% increase for QQQQ). If QQQQ and IWM volume is excluded, industry volume increased a modest 14%, and customer volume increased only 10%. Seven of ten Phase I classes showed volume growth; however, some classes (*e.g.*, MSFT and FLEX) experienced significant volume growth, whereas in earlier periods volume had decreased in these option classes. For Phase II classes, industry average daily volume increased 33%, with nearly half of the option classes experiencing volume decreases. It is clear from the data that the volume increases are attributable, in large part, to market-maker transactions, which showed the largest increase among the market participants (141% increase for Phase I classes, and 46% increase for Phase II classes).

- Average Spread Width. One positive to report thus far is the reduction in average spread width. In this reporting period, average spread width decreased 41% in penny series and 17% in nickel series for the Phase I classes, which is consistent with prior months. For Phase II classes, average spread width decreased by 28% in penny series and 15% in nickel series. However, two Phase II classes increased their average spread width – DNDN (31% in penny series) and XLE (52% in penny series).

In light of the above statistics and analysis, CBOE would like to propose what we believe is an appropriate long-term solution to the issue of penny pricing in options. To the extent that a significant amount of the benefit of the Penny Pilot has both nominally and proportionally been enjoyed by those trades occurring at premiums under $1, and with the common understanding that the retail options user is far more likely to concentrate activity in these low premium options as opposed to those with much larger premium levels, CBOE would propose that:

a. The industry adopt a structure for all option classes (except those of such high underlying levels as to make the effect of penny pricing moot) whereby all option series of less than $1 premium value are quoted in penny increments, with all series at $1 or above quoted in nickel increments;

b. That the SEC postpone the next phase of the Penny Pilot until July 2008, at which time all current Penny Pilot classes as well as the 28 additional classes would be transitioned to the new pricing structure;

c. That an additional 100 classes be added in September 2008, January 2009 and March 2009, with all remaining classes transitioning to the new pricing structure by July 2009.

CBOE believes that modifying the increment "breakpoint" from $3 to $1 is reasonable and appropriate, and would have several important benefits for the industry and investors. First, it would provide the benefits of penny quoting and trading in those option contracts that customers actually trade (approximately 35% of the national contract volume is in series priced up to $1). Second, it would introduce penny increments in nearly all listed option classes, and reduce the current dime increment to nickels in those same classes for series priced $1 and above. Third, because the proposal is simple to understand and explain, it would eliminate investor confusion as to which options are quoted in penny increments. Investor confusion is likely to increase as more option classes are added to the Pilot program, and/or if it is determined to replace existing Pilot classes with others more suitable for the Pilot.[2] CBOE believes that having a subset of option classes (representing a majority of the national volume) quoted and traded in penny and nickel increments, and the vast majority of classes quoted in nickel and dime increments, would be confusing and could threaten the growth of this expanding industry. Fourth, CBOE's proposal should limit the dramatic growth in quote traffic, and hopefully increase the displayed size in those options priced $1 or more.

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[2] In light of CBOE's long-term solution to the Penny Pilot, CBOE is not, at this time, recommending that specific option classes be removed from the Pilot.

CBOE recognizes that in making this change to the Penny Pilot, the average quote width in those series priced between $1 and $3 may not decrease as much; but CBOE strongly believes that the overall benefit to the options market in making this change far outweighs this cost. CBOE further believes that this proposal would attract broad support from liquidity providers, and retail and institutional investors, and fulfill the spirit and goals of the Pilot program without undermining the growth of the industry CBOE helped create and build over the past 35 years.

We would be pleased to meet with you to discuss our proposal and if you have any questions concerning CBOE's report, please call me.

Sincerely,

Edward J. Joyce

Attachment

CBOE Penny Pilot Report

Time Period

All comparisons are done between a 3-month pre-period and an approximately 4-month post period that starts on September 28, 2007 and ends on January 31, 2008. For Whole Foods (WFMI), the pre-period is from October through December 2006. For the remaining classes in the initial pilot, the pre-period is from November 2006 through January 2007.[1] For the classes in the second phase, the pre-period is from July 1, 2007 through September 27, 2007. SUNW changed its symbol to JAVA and it is included.

Quote Quality – Average Spreads and Average Size

The section focuses on quotes disseminated to OPRA for each of the 35 pilot classes. The summary covers all quotes sent in all of the series and differentiates between quotes in series that are subject to quoting in penny differentials (penny series) and series that are quoted in nickel differentials (nickel series). Average spread is calculated as a straight average of the spreads (disseminated offer less disseminated bid) of all quotes disseminated to OPRA. Average quoted size is calculated by averaging both bid sizes and ask sizes disseminated to OPRA.

Phase 1 Classes

Spread Width: Overall, the Industry's average spreads in penny series decreased by an average of 41% from $0.10 in the pre-period to $0.06 in the post-period. This is in line with decreases seen in the previous reports. Average spreads in the post period ranged from $0.04 to $0.11. In nickel series, spreads decreased an average of 17%. Average spreads in the post period ranged from $0.13 to $0.21. The table below shows Industry average spreads in the pre and post periods for each pilot stock for penny series and nickel series.

Average Spread Width

	Penny Series			Nickel Series			All Series		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
A	0.13	0.07	-47%	0.25	0.20	-21%	0.19	0.13	-31%
AMD	0.09	0.05	-51%	0.21	0.16	-23%	0.16	0.08	-52%
CAT	0.09	0.05	-45%	0.21	0.20	-3%	0.17	0.15	-11%
FLEX	0.10	0.05	-50%	0.18	0.16	-11%	0.14	0.08	-39%
GE	0.08	0.04	-49%	0.18	0.14	-18%	0.13	0.09	-30%
INTC	0.07	0.04	-52%	0.16	0.13	-19%	0.12	0.08	-33%
IWM	0.10	0.07	-31%	0.24	0.20	-15%	0.19	0.15	-23%
MSFT	0.07	0.04	-44%	0.15	0.15	-3%	0.11	0.09	-17%
QQQQ	0.13	0.11	-15%				0.13	0.11	-15%
SMH	0.09	0.08	-11%	0.18	0.16	-10%	0.13	0.12	-11%
SUNW	0.08	0.05	-44%	0.15	0.16	5%	0.09	0.07	-25%
TXN	0.09	0.04	-51%	0.20	0.14	-30%	0.14	0.09	-39%
WFMI	0.11	0.05	-53%	0.30	0.21	-31%	0.26	0.15	-40%
Total	0.10	0.06	-41%	0.20	0.17	-17%	0.15	0.11	-29%

Quoted Size: Quoted size has decreased significantly in the post period. The Industry's average sizes are down 85% from 13,685 to 1,999 in penny series and 56% from 4,212 to 1,868 in nickel series. The decrease in sizes was very similar in all classes in penny series. QQQQ, for example decreased from an average size of 60,549 to an average size of 7,586. The table below shows average size in penny series and nickel series for the pilot classes in the pre and post periods.

[1] Pre-period information for IWM quote information is from 12/19/06 when it was moved to the Hybrid Trading System.

Average Size

	Penny Series			Nickel Series			All Series		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
A	1,153	294	-74%	550	399	-27%	1,703	693	-59%
AMD	5,306	896	-83%	2,450	1,009	-59%	7,756	1,905	-75%
CAT	3,008	580	-81%	1,603	916	-43%	4,611	1,497	-68%
FLEX	1,670	434	-74%	1,135	763	-33%	2,805	1,197	-57%
GE	11,974	1,798	-85%	5,354	2,257	-58%	17,327	4,055	-77%
INTC	20,547	2,389	-88%	7,781	3,408	-56%	28,329	5,797	-80%
IWM	19,584	6,430	-67%	8,786	6,208	-29%	28,369	12,638	-55%
MSFT	18,093	2,234	-88%	6,759	3,405	-50%	24,852	5,639	-77%
QQQQ	60,549	7,586	-87%				60,549	7,586	-87%
SMH	17,473	1,269	-93%	5,905	1,541	-74%	23,378	2,810	-88%
SUNW	7,762	810	-90%	5,266	766	-85%	13,027	1,576	-88%
TXN	8,731	928	-89%	3,904	1,307	-67%	12,635	2,235	-82%
WFMI	2,061	333	-84%	1,053	443	-58%	3,114	776	-75%
Total	13,685	1,999	-85%	4,212	1,868	-56%	17,574	3,723	-79%

Phase 2 Classes

Spread Width: Overall, the Industry's average spreads in penny series decreased by an average of 28% from $0.13 in the pre-period to $0.09 in the post-period. This is significantly less than the decrease seen in Phase 1 classes. Average spreads in the post period ranged from $0.04 to $0.22. In nickel series, spreads decreased an average of 15%. Average spreads in the post period ranged from $0.14 to $0.53. The table below shows Industry average spreads in the pre and post periods for each pilot stock for penny series and nickel series.

Average Spread Width

	Penny Series			Nickel Series			All Series		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
AAPL	0.10	0.07	-26%	0.33	0.35	4%	0.30	0.32	6%
AMGN	0.12	0.07	-44%	0.29	0.22	-25%	0.23	0.15	-33%
AMZN	0.10	0.07	-35%	0.32	0.27	-16%	0.28	0.24	-15%
BMY	0.11	0.05	-58%	0.25	0.16	-36%	0.19	0.09	-50%
C	0.11	0.06	-43%	0.28	0.21	-27%	0.22	0.15	-32%
COP	0.11	0.07	-40%	0.30	0.26	-11%	0.26	0.21	-19%
CSCO	0.10	0.04	-56%	0.23	0.15	-34%	0.17	0.10	-43%
DIA	0.15	0.10	-33%	0.34	0.26	-24%	0.29	0.22	-24%
DNDN	0.17	0.22	31%	0.40	0.41	4%	0.28	0.36	26%
FCX	0.20	0.14	-33%	0.58	0.50	-14%	0.53	0.45	-14%
GM	0.11	0.05	-49%	0.27	0.21	-24%	0.21	0.14	-32%
MO	0.12	0.07	-42%	0.29	0.26	-11%	0.24	0.19	-20%
MOT	0.09	0.04	-58%	0.23	0.14	-38%	0.12	0.06	-49%
NYX	0.16	0.11	-32%	0.43	0.37	-14%	0.37	0.31	-16%
OIH	0.13	0.13	6%	0.40	0.53	33%	0.36	0.48	33%
QCOM	0.10	0.08	-23%	0.24	0.21	-13%	0.18	0.14	-24%
RIMM	0.13	0.09	-26%	0.55	0.38	-30%	0.50	0.36	-29%
T	0.12	0.06	-55%	0.28	0.18	-36%	0.21	0.12	-42%
XLE	0.14	0.21	52%	0.27	0.36	32%	0.23	0.31	34%
XLF	0.14	0.09	-37%	0.26	0.25	-5%	0.19	0.15	-20%
YHOO	0.10	0.05	-51%	0.25	0.17	-33%	0.18	0.11	-38%
Total	0.13	0.09	-28%	0.34	0.29	-15%	0.28	0.23	-16%

Quoted Size: Quoted size has decreased significantly in the post period. The Industry's average sizes are down 74% from 996 to 255 in penny series and 36% from 497 to 321 in nickel series. The decrease in sizes was very similar in all classes in penny series. CSCO, for example decreased 83% from an average size of 2,199 to an average size of 369. The table below shows average size in penny series and nickel series for the pilot classes in the pre and post periods.

Average Size

	Penny Series			Nickel Series			All Series		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
AAPL	530	80	-85%	226	79	-65%	262	79	-70%
AMGN	410	103	-75%	181	138	-24%	258	123	-52%
AMZN	490	105	-79%	200	105	-47%	256	105	-59%
BMY	541	228	-58%	280	276	-2%	406	247	-39%
C	1,146	277	-76%	688	304	-56%	864	293	-66%
COP	484	120	-75%	214	146	-32%	273	139	-49%
CSCO	2,199	369	-83%	1,033	660	-36%	1,569	513	-67%
DIA	2,460	845	-66%	1,715	1,117	-35%	1,888	1,055	-44%
DNDN	212	42	-80%	158	62	-60%	184	57	-69%
FCX	134	84	-37%	84	76	-10%	92	77	-16%
GM	519	158	-70%	309	268	-13%	386	222	-42%
MO	323	111	-66%	155	131	-15%	205	124	-39%
MOT	1,420	262	-82%	458	337	-26%	1,223	279	-77%
NYX	208	82	-60%	154	100	-35%	165	96	-42%
OIH	382	116	-70%	149	86	-43%	181	90	-51%
QCOM	950	166	-83%	432	243	-44%	647	209	-68%
RIMM	233	76	-67%	94	66	-29%	108	67	-38%
SPY	4,713	1,246	-74%	1,938	1,157	-40%	2,513	1,177	-53%
T	649	172	-74%	376	258	-31%	497	218	-56%
XLE	1,320	274	-79%	758	360	-52%	921	333	-64%
XLF	1,521	499	-67%	916	789	-14%	1,266	616	-51%
YHOO	1,069	199	-81%	417	294	-30%	726	248	-66%
Total	996	255	-74%	497	321	-36%	677	289	-57%

Quote Quantity

This section focuses on the number of quotes disseminated to OPRA and the number of quotes that individual quoters sent to CBOE. As described above, the numbers are compared for the pre and post periods.

Phase 1 Classes

Outbound Quotes to OPRA: The Industry's total number of quotes per day in the penny series increased 291% from an average of 1.33 million to 5.22 million. In the nickel series the Industry's total number of quotes per day increased 171% from an average of 1.2 million to 3.3 million. In penny series, changes ranged from an increase of 15% in AMD to an increase of 455% in QQQQ. These percentage increases are significantly higher than they were in the previous studies, most likely due to the increased volatility in January. The table below compares pre- and post-period quote traffic for each of the penny pilot classes in penny and nickel series.

Quotes per Day

	Penny Series			Nickel Series			All Series		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
A	319,150	1,013,765	218%	291,943	970,812	233%	611,093	1,984,577	225%
AMD	1,111,099	1,274,520	15%	1,105,372	438,308	-60%	2,216,471	1,712,828	-23%
CAT	1,020,435	2,190,582	115%	1,856,912	4,442,585	139%	2,877,347	6,633,166	131%
FLEX	129,693	354,635	173%	119,617	159,394	33%	249,310	514,030	106%
GE	616,097	2,058,794	234%	544,236	1,794,090	230%	1,160,333	3,852,884	232%
INTC	705,679	1,734,499	146%	598,575	1,310,183	119%	1,304,254	3,044,682	133%
IWM	2,648,860	13,129,625	396%	5,849,903	23,729,354	306%	8,498,763	36,858,979	334%
MSFT	1,115,342	2,216,683	99%	922,322	2,059,640	123%	2,037,664	4,276,323	110%
QQQQ	7,046,005	39,087,377	455%				7,046,005	39,087,377	455%
SMH	740,611	1,336,128	80%	728,012	999,574	37%	1,468,623	2,335,702	59%
SUNW	301,383	632,889	110%	40,160	160,967	301%	341,544	793,856	132%
TXN	845,332	1,702,243	101%	785,255	1,496,221	91%	1,630,587	3,198,464	96%
WFMI	756,813	1,064,001	41%	1,727,648	1,911,657	11%	2,484,461	2,975,658	20%
Average	1,335,115	5,215,057	291%	1,214,163	3,289,399	171%	2,455,881	8,251,425	236%

Peak Quotes per Second: Peak quotes are based on sustained rates over a 1-minute period. All of the quotes in a minute are counted and the total is divided by 60 to determine the quotes per second. For this portion of the analysis, the pre period is from December 1, 2007 through the penny pilot start date for each stock. Peak rates for quotes inbound to CBOE increased substantially, with peaks in SUNW increasing 514%, IWM increasing 271%, and TXN increasing 214%. Ten of the 13 classes had increases in peak quote rates outbound to OPRA. SUNW had the biggest increase at 229%. The table below shows the inbound and outbound peak rates in the pre and post periods for each of the pilot classes.

CBOE Peak Quote Rates

	Inbound			*Outbound*		
Class	Pre	Post	% Chg	Pre	Post	% Chg
A	218	608	179%	154	485	215%
AMD	445	557	25%	323	527	63%
CAT	728	1,107	52%	499	611	22%
FLEX	211	211	0%	169	95	-44%
GE	344	688	100%	238	297	25%
INTC	341	595	74%	271	363	34%
IWM	857	3,181	271%	700	2,242	220%
MSFT	545	696	28%	434	415	-4%
QQQQ	825	2,554	210%	743	2,122	186%
SMH	171	403	136%	151	197	30%
SUNW	57	350	514%	48	158	229%
TXN	285	896	214%	225	397	76%
WFMI	600	958	60%	468	397	-15%

Phase 2 Classes

Outbound Quotes to OPRA: The Industry's total number of quotes per day in the penny series increased 91% from an average of 1.73 million to 3.3 million. In the nickel series the Industry's total number of quotes per day increased 88% from an average of 6.5 million to 12.2 million. In penny series, changes ranged from an increase of 35% in DNDN to an increase of 226% in YHOO. The table below compares pre- and post-period quote traffic for each of the penny pilot classes in penny and nickel series.

Quotes per Day

	Penny Series			Nickel Series			All Series		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
AAPL	3,046,909	4,480,347	47%	22,808,987	46,744,595	105%	25,855,895	51,224,942	98%
AMGN	682,920	1,451,300	113%	1,341,235	2,076,640	55%	2,024,154	3,527,940	74%
AMZN	1,364,044	2,309,398	69%	5,713,813	12,157,779	113%	7,077,857	14,467,177	104%
BMY	533,512	969,087	82%	569,448	636,081	12%	1,102,959	1,605,168	46%
C	1,099,964	2,202,049	100%	1,756,308	3,107,333	77%	2,856,272	5,309,382	86%
COP	1,268,397	1,822,984	44%	4,572,051	4,656,302	2%	5,840,448	6,479,286	11%
CSCO	552,746	1,748,447	216%	649,046	1,727,863	166%	1,201,793	3,476,310	189%
DIA	6,642,862	11,041,486	66%	21,868,260	37,818,876	73%	28,511,122	48,860,362	71%
DNDN	154,750	208,348	35%	162,318	540,883	233%	317,069	749,230	136%
FCX	1,397,283	2,311,337	65%	7,926,679	14,881,912	88%	9,323,962	17,193,249	84%
GM	970,295	1,940,512	100%	1,658,542	2,712,811	64%	2,628,837	4,653,323	77%
MO	885,475	1,191,759	35%	2,097,219	2,205,918	5%	2,982,693	3,397,676	14%
MOT	602,007	1,435,369	138%	155,345	410,820	164%	757,352	1,846,189	144%
NYX	943,804	1,632,882	73%	3,742,270	6,326,330	69%	4,686,074	7,959,212	70%
OIH	1,443,427	2,316,069	60%	9,077,926	16,225,982	79%	10,521,353	18,542,051	76%
QCOM	889,667	1,925,754	116%	1,250,832	2,495,625	100%	2,140,498	4,421,379	107%
RIMM	2,082,325	4,610,939	121%	18,329,980	43,385,716	137%	20,412,306	47,996,655	135%
SPY	9,290,510	19,326,586	108%	35,577,287	66,117,412	86%	44,867,797	85,443,998	90%
T	746,992	1,671,845	124%	945,272	1,897,142	101%	1,692,264	3,568,986	111%
XLE	3,721,355	7,968,658	114%	9,095,070	17,269,951	90%	12,816,424	25,238,609	97%
XLF	977,365	2,780,990	185%	714,874	1,873,085	162%	1,692,239	4,654,075	175%
YHOO	475,367	1,547,758	226%	527,007	1,666,485	216%	1,002,373	3,214,243	221%
Total	1,729,027	3,299,629	91%	6,503,321	12,249,490	88%	8,232,348	15,549,119	89%

Peak Quotes per Second: Peak quotes are based on sustained rates over a 1-minute period. All of the quotes in a minute are counted and the total is divided by 60 to determine the quotes per second. Peak rates for quotes inbound to CBOE increased substantially, with peaks in AMGN increasing 199%, YHOO increasing 172%, and MOT increasing 166%. Nineteen of the 22 classes had increases in peak quote rates outbound to OPRA. AMGN had the biggest increase at 290%. The table below shows the inbound and outbound peak rates in the pre and post periods for each of the pilot classes.

CBOE Peak Quote Rates

	Inbound			*Outbound*		
Class	Pre	Post	% Chg	Pre	Post	% Chg
AAPL	2,741	4,023	47%	1,936	3,209	66%
AMGN	517	1,545	199%	375	1,462	290%
AMZN	1,501	2,550	70%	1,029	1,407	37%
BMY	344	573	67%	276	258	-6%
C	519	1,067	106%	359	461	28%
COP	1,460	1,501	3%	1,160	1,251	8%
CSCO	544	955	76%	444	673	51%
DIA	2,412	3,266	35%	1,921	1,947	1%
DNDN	642	903	41%	578	750	30%
FCX	1,943	3,029	56%	1,716	1,828	7%
GM	1,155	1,379	19%	973	1,212	25%
MO	934	702	-25%	737	522	-29%
MOT	206	547	166%	161	227	41%
NYX	1,640	2,245	37%	1,135	1,339	18%
OIH	1,437	2,628	83%	1,142	2,183	91%
QCOM	560	1,061	89%	457	519	13%
RIMM	3,172	4,618	46%	2,526	2,085	-17%
SPY	3,255	5,137	58%	2,931	3,211	10%
T	473	1,032	118%	418	428	2%
XLE	1,193	1,870	57%	1,005	1,588	58%
XLF	478	679	42%	377	412	9%
YHOO	348	947	172%	271	578	113%

Trading Volume

Phase 1 Classes

Average Daily Volume: Industry volume in the pilot classes has increased. Overall, Industry average daily volume has increased 92% from 1.2 million contracts to 2.3 million contracts. Much of this increase is due to volume increasing 153% in IWM and 134% in QQQQ – already the two most active classes. In fact, without IWM & QQQQ, Industry volume was up just 14%. Just seven of the thirteen classes showed volume increases. Of the six classes that showed decreases in volume, WFMI was down 33% and A was down 28%. Customer, Firm and Market Maker average daily volume all increased, however, Customer volume increased just 10% and Firm volume decreased 13% respectively when IWM and QQQQ are excluded. Customer, Firm and Market Maker are the trading origin ranges defined by The Options Clearing Corp.

Industry Average Daily Volume

	Total ADV			*Customer ADV*			*Firm ADV*			*Market Maker ADV*		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
A	3,437	2,483	-28%	1,476	709	-52%	423	293	-31%	1,537	1,481	-4%
AMD	52,962	54,492	3%	22,454	21,917	-2%	8,654	8,130	-6%	21,854	24,445	12%
CAT	30,672	28,524	-7%	12,257	10,253	-16%	4,875	2,966	-39%	13,540	15,306	13%
FLEX	2,910	5,375	85%	1,207	1,821	51%	244	494	102%	1,459	3,060	110%
GE	70,181	92,748	32%	20,601	29,131	41%	11,382	17,828	57%	38,198	45,788	20%
INTC	97,807	109,314	12%	43,253	45,913	6%	17,478	13,432	-23%	37,076	49,970	35%
IWM	287,934	728,327	153%	108,773	263,312	142%	57,467	84,638	47%	121,695	380,377	213%
MSFT	100,409	150,319	50%	44,493	60,307	36%	19,250	21,061	9%	36,665	68,952	88%
QQQQ	433,088	1,012,690	134%	208,561	389,529	87%	57,336	94,246	64%	167,192	528,915	216%
SMH	35,318	27,490	-22%	11,942	10,641	-11%	8,698	4,083	-53%	14,677	12,766	-13%
SUNW	15,455	13,596	-12%	7,906	5,902	-25%	2,679	711	-73%	4,870	6,983	43%
TXN	31,791	25,395	-20%	10,886	8,600	-21%	7,663	3,996	-48%	13,242	12,799	-3%
WFMI	17,362	11,645	-33%	4,417	3,470	-21%	4,701	1,597	-66%	8,244	6,579	-20%
Total	1,179,326	2,262,398	92%	498,226	851,503	71%	200,850	253,475	26%	480,251	1,157,420	141%

Phase 2 Classes

Average Daily Volume: Industry volume in the Phase 2 classes has increased 33% from 2.4 million contracts to 3.2 million contracts. C had a volume increase of 287% and T had an increase of 103%. Eight of the classes showed volume decreases.

Industry Average Daily Volume

	Total ADV			*Customer ADV*			*Firm ADV*			*Market Maker ADV*		
Class	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg	Pre	Post	% Chg
AAPL	312,638	384,093	23%	158,304	169,954	7%	22,801	28,600	25%	131,534	185,539	41%
AMGN	37,835	30,736	-19%	13,767	10,885	-21%	8,760	6,639	-24%	15,308	13,212	-14%
AMZN	57,783	60,102	4%	25,606	24,663	-4%	4,826	4,757	-1%	27,350	30,682	12%
BMY	78,700	40,065	-49%	31,729	13,281	-58%	22,641	10,679	-53%	24,330	16,106	-34%
C	84,141	325,464	287%	33,443	101,517	204%	15,405	63,830	314%	35,293	160,118	354%
COP	40,199	31,626	-21%	15,260	11,432	-25%	6,235	4,713	-24%	18,704	15,481	-17%
CSCO	64,738	88,528	37%	30,574	39,012	28%	8,884	10,012	13%	25,280	39,505	56%
DIA	85,314	121,474	42%	32,924	43,349	32%	4,721	7,223	53%	47,669	70,902	49%
DNDN	53,208	31,977	-40%	31,119	20,755	-33%	4,610	4,143	-10%	17,479	7,079	-60%
FCX	65,240	72,206	11%	25,150	21,022	-16%	11,687	15,520	33%	28,403	35,664	26%
GM	94,426	82,323	-13%	40,000	31,605	-21%	18,982	15,025	-21%	35,444	35,692	1%
MO	60,669	86,783	43%	18,918	11,910	-37%	13,392	14,808	11%	28,359	60,065	112%
MOT	27,614	33,431	21%	13,102	12,561	-4%	4,071	4,699	15%	10,441	16,171	55%
NYX	29,974	21,107	-30%	14,562	8,724	-40%	3,759	2,315	-38%	11,653	10,068	-14%
OIH	64,731	49,459	-24%	29,034	21,239	-27%	6,647	4,154	-38%	29,051	24,067	-17%
QCOM	64,289	58,460	-9%	25,201	20,912	-17%	14,975	10,973	-27%	24,113	26,575	10%
RIMM	82,363	158,328	92%	39,969	67,751	70%	3,014	10,515	249%	39,379	80,062	103%
SPY	701,880	926,198	32%	244,979	301,388	23%	79,964	107,674	35%	376,937	517,136	37%
T	36,488	73,937	103%	10,744	12,814	19%	7,751	20,772	168%	17,993	40,351	124%
XLE	61,996	85,725	38%	22,810	33,060	45%	12,539	17,084	36%	26,647	35,581	34%
XLF	237,180	318,177	34%	97,343	142,485	46%	66,489	71,369	7%	73,348	104,322	42%
YHOO	69,895	121,203	73%	31,535	52,833	68%	13,182	18,358	39%	25,179	50,011	99%
Total	2,411,303	3,201,401	33%	986,073	1,173,152	19%	355,335	453,862	28%	1,069,895	1,574,388	47%