

June 30, 2009

Executive Summary

As part of our participation in the Penny Pilot Program (“Pilot”), NYSE Amex, LLC, (“NYSE Amex” or “Exchange”)(formerly the American Stock Exchange LLC), has committed to the Securities and Exchange Commission (“Commission” or “SEC”) that it would produce several reports analyzing the impact of the Pilot. Specifically the reports should assess spreads, quoted size, volumes, quote traffic and any other factors the Exchange feels are relevant. The reports are designed to better understand the impact of reducing the minimum price variations (“MPVs”) for quoting and trading options and should serve as the basis for determining how to proceed in expanding the Pilot. This will be the fourth report on the Pilot to date and will cover the period August 1, 2008 to January 31, 2009¹.

Throughout this report reference will be made to different time periods defined as follows:

- Pre-Pilot: November 1, 2006 to January 31, 2007 – data captured during this time period forms the baseline statistics for the 13 Tranche 1 securities
- Pre-Pilot: July 1, 2007 to September 27, 2008 – data captured during this time period forms the baseline statistics for the 22 Tranche 2 securities
- Phase I: February 9, 2007 to April, 30, 2007
- Phase II: May 1, 2007 to September 27, 2007
- Phase III: September 28, 2007 to January 31, 2008
- Phase IV: February 1, 2008 to July 31, 2008 – except for the 28 Tranche 3 securities which began trading on March 28, 2008. Due to data capture problems there are no Pre-Pilot observations for the 28 Tranche 3 securities. Also, during the pilot reporting period, 2 of the 28 Tranche 3 securities stopped trading².
- Phase V: August 1, 2008 to November 30, 2008³.

The Pilot has now been in effect for well over a year. In that time observed spreads have declined, size at the NBBO has been reduced, and quote traffic has increased substantially. Observations about volume are harder to quantify given the market

¹ Problems occurred with data collection efforts that resulted in incomplete and/or incorrect data for December 2008 and January 2009. As such the results discussed in this report will omit that data and will be based on data from August 1, 2008 to November 30, 2008.

² Data for both BSC and CFC is only through the dates they were traded prior to delisting by the NYSE.

³ LEH options continued to trade on a customer closing only basis after the security was delisted by the NYSE and those quotes and trades are retained in the analysis.



conditions that have led to substantially increased volatility in the market place during Phase V of the Pilot.

One of the ongoing issues facing the marketplace is the price improvement mechanism employed by the Nasdaq Options Market. The process that price improvement is offered involves taking in penny priced quotes and orders and rounding them to the nearest MPV for display through OPRA while retaining the penny priced quotes and orders in the system to match with incoming quotes and orders. This process (“dark pennies”) can arguably have the effect of reducing transparency in the options markets particularly since a select group of participants may be able to see the dark penny quote⁴. It is the Exchange’s belief that greater transparency, not less, is more beneficial to investors and the options markets as a whole. As such, NYSE Amex recommends expanding the Pilot to include the next 300 most active names by industry volume so that all investors may benefit from the greater transparency offered by explicit penny quoting vs. dark pennies. By expanding the Pilot to the next 300 most active names by industry volume, approximately 85% of the daily volume transacted would be included in the Pilot. The expansion should retain the \$3 breakpoint for penny quoting below and nickel quoting above since the industry has utilized this breakpoint for many years and investors are accustomed to it. The \$3 breakpoint would also offer the greatest benefit to investors in terms of the potential to reduce spreads when viewed against the premium paid or received.

Summary Statistics Described

⁴ NASDAQ OMX Option Rule VII, Section 10 (b) “*Information Barrier*”. For the purposes of this Section, an Information Barrier is an organizational structure in which:

i. The market making functions are conducted in a physical location separate from the locations in which the Other Business Activities are conducted, in a manner that effectively impedes the free flow of communications between designated representatives of an Options Participant performing the function of a Market Maker and persons conducting the Other Business Activities. However, upon request and not on his own initiative, a designated representative of an Options Participant performing the function of a Market Maker may furnish to a person performing the function of an OEF or other persons at the same firm or an affiliated firm (“affiliated persons”), the same market or trading information, so long as the Market Maker also may make available such information to non-affiliated persons with whom the Market Maker may have the same type of business relationship. The designated representative of a Market Maker must provide such information to affiliated persons in the same manner that he would make such information available to a non-affiliated person.



Number Of Quotes Per Day All Series								
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It is important to note that while utilizing a simple average across all series associated with an underlying security yields important information, it does not take into account the fact that some series are more actively traded than others. For that reason we decided to utilize open interest as a measure of investor activity and to weight important metrics such as size at the NBBO and the quoted spread width by open interest as well as calculating a simple average. One of the ancillary benefits of weighting by open interest rather than volume is that open interest is generally somewhat insulated from the effects of “strategy trades” whereas volume is not. For example, it is common to see hundreds of thousands and sometimes millions of contracts trade as part of a “strategy trade” against open interest of 50,000 contracts. The seemingly outsized volume as compared to the available open interest is a result of the random nature of exercises and assignments and an attempt by people entering into these “strategy trades” to capture as much of the open interest as possible. This is done by trading what is typically a spread involving deep in-the-money options and immediately exercising the long side of the spread so that the volume of 1,000,000 contracts will almost never show up in the open interest figures the next day despite seeing only 50,000 contracts of open interest the day the “strategy trade” took place. Additionally, any analysis which considers trades as part of the analysis is subject to distortion as a result of these strategy trades. The Exchange would argue that the riskless nature of “strategy trades” and the very low capped costs has increased the prevalence of these types of trades rendering any trade weighted measure such as effective spread of little or no use. The Exchange continues to believe that it is important to better understand how trades of this nature are influencing the results of the Pilot and would ask the SEC to request from each exchange details of any such “strategy trades” so that their impact can be discounted accordingly.

Once the daily summary statistics were compiled they were then aggregated for the pertinent time periods for each underlying security and averaged accordingly. Each day in the evaluation period was given equal weight in the averaging process.

Observations About The NBBO Quoted Spread Width

Classifying option series on the basis of where the bid price was observed to be allows for a better understanding of which series benefit the most from the reduction in the MPV’s. The Tranche 1 Pilot securities when weighted by open interest, reveals that the quoted spread for all series regardless of price, increased from \$.09 to \$.10 in Phase V as compared to the Pre-Pilot period. A closer look at the Tranche 1 securities grouped by premium range tells an important story. For all premiums



below \$3 where the MPV is \$.01, spreads in Phase V decreased as compared to the Pre-Pilot period. Premiums between \$3.00 and \$5.00 saw a decrease in quoted spreads as well from \$.15 to \$.11. The over \$5 premiums were the only premium range to increase from \$.17 to \$.26. So despite the greater volatility in the market place, those options quoted in \$.01 MPV's still had narrower spreads as compared to the Pre-Pilot period.

Symbol	Quoted NBBO Spread Weighted By Open Interest	Pre-Pilot Spread	Phase I Spread	Phase II Spread	Phase III Spread	Phase IV Spread	Phase V Spread
Tranche 1 13 Securities	Open Interest Weighted Spread For All Series Priced \$.00	\$ 0.06	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.03
Tranche 1 13 Securities	Open Interest Weighted Spread For All Series Priced Above \$.00	\$ 0.09	\$ 0.04	\$ 0.05	\$ 0.06	\$ 0.06	\$ 0.11
Tranche 1 13 Securities	Open Interest Weighted Spread For Series Priced \$.01 to \$1.00	\$ 0.07	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.02	\$ 0.04
Tranche 1 13 Securities	Open Interest Weighted Spread For Series Priced \$1.00 to \$2.00	\$ 0.08	\$ 0.03	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.06
Tranche 1 13 Securities	Open Interest Weighted Spread For Series Priced \$2.00 to \$3.00	\$ 0.09	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.07
Tranche 1 13 Securities	Open Interest Weighted Spread For Series Priced \$3.00 to \$5.00	\$ 0.15	\$ 0.09	\$ 0.10	\$ 0.10	\$ 0.10	\$ 0.11
Tranche 1 13 Securities	Open Interest Weighted Spread For Series Priced Above \$5.00	\$ 0.17	\$ 0.11	\$ 0.14	\$ 0.15	\$ 0.17	\$ 0.26
Tranche 1 13 Securities	Open Interest Weighted Spread For All Series	\$ 0.09	\$ 0.04	\$ 0.05	\$ 0.06	\$ 0.06	\$ 0.10



The Tranche 2 Pilot securities when weighted by open interest, reveals that the quoted spread for all series regardless of price, declined from \$.15 to \$.12 in Phase V as compared to the Pre-Pilot period. So once again, despite unprecedented volatility in the marketplace, quoted spreads, particularly for premiums under \$3, were narrower than they were during the Pre-Pilot period.

Symbol	Quoted Spread Weighted By Open Interest	Pre-Pilot Spread	Phase III Spread	Phase IV Spread	Phase V Spread
2nd Tranche Of 22	Open Interest Weighted Spread For All Series Priced \$.00	\$ 0.06	\$ 0.03	\$ 0.03	\$ 0.04
2nd Tranche Of 22	Open Interest Weighted Spread For All Series Priced Above \$.00	\$ 0.15	\$ 0.11	\$ 0.09	\$ 0.13
2nd Tranche Of 22	Open Interest Weighted Spread For Series Priced \$.01 to \$1.00	\$ 0.08	\$ 0.03	\$ 0.03	\$ 0.05
2nd Tranche Of 22	Open Interest Weighted Spread For Series Priced \$1.00 to \$2.00	\$ 0.10	\$ 0.05	\$ 0.05	\$ 0.07
2nd Tranche Of 22	Open Interest Weighted Spread For Series Priced \$2.00 to \$3.00	\$ 0.12	\$ 0.07	\$ 0.06	\$ 0.09
2nd Tranche Of 22	Open Interest Weighted Spread For Series Priced \$3.00 to \$5.00	\$ 0.19	\$ 0.13	\$ 0.12	\$ 0.13
2nd Tranche Of 22	Open Interest Weighted Spread For Series Priced Above \$5.00	\$ 0.29	\$ 0.23	\$ 0.20	\$ 0.26
2nd Tranche Of 22	Open Interest Weighted Spread For All Series	\$ 0.15	\$ 0.10	\$ 0.09	\$ 0.12

As noted earlier, due to a problem with data capture, the Exchange does not have baseline statistics for the “Pre-Pilot” period covering January 2008 to March 2008 for the 28 Tranche 3 securities. Despite this there is still value in observing what



spreads were for that group of securities. In Phase V the Exchange observed that for all 28 securities, across all associated series, when weighted by open interest, the NBBO spread was \$.15 as compared to \$.10 during Phase IV.

Symbol	Quoted Spread Weighted By Open Interest	Phase IV Spread*	Phase V Spread*
Tranche 3 28 Securities	Open Interest Weighted Spread For All Series Priced \$.00	\$ 0.06	\$ 0.06
Tranche 3 28 Securities	Open Interest Weighted Spread For All Series Priced Above \$.00	\$ 0.11	\$ 0.16
Tranche 3 28 Securities	Open Interest Weighted Spread For Series Priced \$.01 to \$1.00	\$ 0.04	\$ 0.06
Tranche 3 28 Securities	Open Interest Weighted Spread For Series Priced \$1.00 to \$2.00	\$ 0.06	\$ 0.09
Tranche 3 28 Securities	Open Interest Weighted Spread For Series Priced \$2.00 to \$3.00	\$ 0.07	\$ 0.11
Tranche 3 28 Securities	Open Interest Weighted Spread For Series Priced \$3.00 to \$5.00	\$ 0.13	\$ 0.16
Tranche 3 28 Securities	Open Interest Weighted Spread For Series Priced Above \$5.00	\$ 0.26	\$ 0.36
Tranche 3 28 Securities	Open Interest Weighted Spread For All Series	\$ 0.10	\$ 0.15

As seen in earlier phases of the Pilot, the majority of the economic benefit accrues to buyers and seller of lower priced options when the spread is viewed as a percentage of the premium paid. These observations form the basis for the Exchanges recommendation to retain the nickel MPV for quoting above \$3 when the Pilot is



expanded. Exhibits A-1,A-2, and A-3 contain detailed information on each of the Pilot securities with respect to the quoted spread width.

Observations About Total Size At The NBBO

The total size at the NBBO (bid size plus ask size) was observed to be 91% less during Phase V as compared to the Pre-Pilot period for the Tranche 1 securities.

Symbol	Quoted NBBO Size Weighted By Open Interest	Pre-Pilot NBBO Size	Phase I NBBO Size	Phase II NBBO Size	Phase III NBBO Size	Phase IV NBBO Size	Phase V NBBO Size
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For All Series Priced \$.00	24,267	7,328	4,808	2,168	2,745	5,043
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For All Series Priced Above \$.00	59,976	10,408	8,661	5,441	6,739	4,631
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For Series Priced \$.01 to \$1.00	83,704	12,382	11,585	6,059	7,134	5,681
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For Series Priced \$1.00 to \$2.00	59,197	9,982	6,513	4,610	5,672	3,729
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For Series Priced \$2.00 to \$3.00	33,728	6,334	4,791	3,949	5,951	3,483
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For Series Priced \$3.00 to \$5.00	29,622	9,083	7,990	6,639	9,386	5,993
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For Series Priced Above	20,569	5,871	5,180	4,745	5,335	3,194



	\$5.00						
Tranche 1 13 Securities	Open Interest Weighted NBBO Size For All Series	53,805	10,280	8,548	5,234	6,513	4,741

For the Tranche 2 Pilot securities the decline in size quoted at the NBBO for all series was 78%.

Symbol	NBBO Size Weighted By Open Interest	Pre-Pilot NBBO Size	Phase III NBBO Size	Phase IV NBBO Size	Phase V NBBO Size
2nd Tranche Of 22	Open Interest Weighted NBBO Size For All Series Priced \$.00	8,301	2,258	3,584	1,736
2nd Tranche Of 22	Open Interest Weighted NBBO Size For All Series Priced Above \$.00	13,792	3,945	5,100	3,087
2nd Tranche Of 22	Open Interest Weighted NBBO Size For Series Priced \$.01 to \$1.00	15,871	2,826	4,021	2,077
2nd Tranche Of 22	Open Interest Weighted NBBO Size For Series Priced \$1.00 to \$2.00	15,107	2,526	2,796	1,793
2nd Tranche Of 22	Open Interest Weighted NBBO Size For Series Priced \$2.00 to \$3.00	12,443	2,383	2,818	1,901
2nd Tranche Of 22	Open Interest Weighted NBBO Size For Series Priced \$3.00 to \$5.00	16,581	7,502	9,757	6,917



2nd Tranche Of 22	Open Interest Weighted NBBO Size For Series Priced Above \$5.00	8,000	5,040	6,672	4,041
2nd Tranche Of 22	Open Interest Weighted NBBO Size For All Series	13,393	3,838	5,006	2,977

For the Tranche 3 securities the total size at the NBBO, was observed to be 1,547 contracts.

Symbol	NBBO Size Weighted By Open Interest	Phase IV NBBO Size	Phase V NBBO Size
3rd Tranche Of 28	Open Interest Weighted NBBO Size For All Series Priced \$.00	1,151	921
3rd Tranche Of 28	Open Interest Weighted NBBO Size For All Series Priced Above \$.00	2,182	1,592
3rd Tranche Of 28	Open Interest Weighted NBBO Size For Series Priced \$.01 to \$1.00	2,031	1,492
3rd Tranche Of 28	Open Interest Weighted NBBO Size For Series Priced \$1.00 to \$2.00	1,532	1,004



3rd Tranche Of 28	Open Interest Weighted NBBO Size For Series Priced \$2.00 to \$3.00	1,519	987
3rd Tranche Of 28	Open Interest Weighted NBBO Size For Series Priced \$3.00 to \$5.00	4,008	2,628
3rd Tranche Of 28	Open Interest Weighted NBBO Size For Series Priced Above \$5.00	2,231	1,873
3rd Tranche Of 28	Open Interest Weighted NBBO Size For All Series	2,116	1,547

The observations for individual names are detailed in Exhibit B-1, B-2 and B-3 for the Tranche 1, 2, and 3 securities respectively.

Observations About Volume

As noted earlier, exceptional volatility has made making any observation on volume difficult at best. Volume in the ETF's that are part of the Pilot continues to grow at the fastest pace of any of the Pilot securities. In the table below, the growth in the ETF volumes can clearly be seen relative to the other Pilot securities and the overall industry as a whole.

Under	Phase I vs Pre Pilot % Change	Phase II Vs Pre Pilot % Change	Phase III vs Pre Pilot % Change	Phase IV vs Pre Pilot % Change	Phase V vs Pre Pilot % Change
Industry ADV	10%	26%	56%	53%	65%
SubTotal 13 Pilot Securities	31%	60%	92%	60%	79%
SubTotal 22 Pilot Securities	14%	41%	96%	97%	123%
SubTotal 28 Pilot Securities	-11%	13%	52%	52%	72%
SubTotal All Pilot Securities	12%	40%	83%	74%	96%
SubTotal ETF Pilot Securities	45%	109%	184%	188%	254%



SubTotal Pilot Securities Ex ETFs	-2%	9%	39%	24%	27%
Industry ADV Ex Pilot Securities	8%	17%	35%	37%	41%

Please see Exhibits C-1, C-2, C-3, and C-4 for observations on the trends in volume for individual Pilot securities in the various participant categories – Customer, Firm, and Market Maker, as well as overall Industry Volume.

Observations On Quote Traffic

Quote traffic continues to grow as more securities have been added to the Pilot, coupled with exceptionally high volatility. Tranche 1 securities saw an increase of 211% in quote traffic versus the Pre-Pilot when measured in terms of average daily quotes per series. 8 of the 13 Tranche 1 securities experienced increases of more than 100% in Phase V. Tranche 2 securities experienced a growth in quote traffic of 117% in Phase III as compared to the Pre-Pilot period. Tranche 3 securities saw an increase in quote traffic of 42% as compared to Phase IV. Please see Exhibits D-1, D-2, and D-3 for detailed observations on quote traffic.

Observations On Trade Throughs

During the Pilot, the Exchange did not see any meaningful change in the amount or magnitude of trade throughs for orders executed on our Exchange.