

BOX Penny Pilot Report: Report Period April through September 2011

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#### Chapter 1 – Purpose, Scope, Summary and Recommendation

#### 1.1 Purpose and Scope

Beginning on January 26, 2007, all six options exchanges in operation at the time, including BOX, began participating in the Penny Pilot Program to quote and trade certain option classes in penny increments. Originally, the Pilot included thirteen (13) options classes. On September 28, 2007, the Pilot was expanded to include an additional twenty-two (22) classes, and it was expanded again on March 28, 2008 to include another twenty-eight (28) classes. In 2009, the Securities and Exchange Commission (the "Commission") approved an extension of the Pilot, and it was expanded to include the 300 most active classes. The minimum price variation for all classes included in the Penny Pilot Program, except for QQQQ, IWM, and SPY, is \$0.01 for all quotations in options series that are quoted at less than \$3 per contract and \$0.05 for all quotations in options series that are quoted at \$3 per contract or greater. The QQQQs, IWM, and SPY are quoted in \$0.01 increments for all options series.

The Commission has requested that each exchange continue to provide reports regarding the Pilot, including information about market quality as reflected by bid/ask spreads and size available, and market activity as reflected by quotes and trade volume in Pilot classes. BOX has previously produced reports related to other time periods since the beginning of the Pilot and they can be found on the BOX website at <a href="http://bostonoptions.com/boxrPenny\_en">http://bostonoptions.com/boxrPenny\_en</a>.

This report provides information regarding the period from April 1, 2011 through September 30, 2011 for three data sets. This report considers activity in the (1) ten least active classes among those 63 included in the Pilot in March 2008 or before, (2) ten most active classes of those in the Pilot during the period of the report, April through September 2011, and (3) twenty least active classes of those in the Pilot during the report period.

The ten least active classes of those 63 that were in the Pilot in March 2008 or before, as measured by industry-wide average daily volume traded during the report period were: A, AMGN, DNDN, FLEX, MNX, NYX, RIO, TXN, WFMI, and WM. These comprise the data set "Least Active Classes (Original)" in the charts throughout this report.

The ten most active classes in the Pilot as measured by industry-wide average daily volume during the report period were: AAPL, BAC, C, CSCO, EEM, GLD, IWM, SLV, SPY, and XLF. These comprise the data set identified as "Most Active Classes (Period)" in the charts throughout this report.

The twenty least active classes in the Pilot as measured by industry-wide average daily volume during the report period were: ACL, AMED, APWR, ARNA, BCRX, BUCY, CTIC, FIS, FXP, GENZ, GGP, HSY, PARD, PCL, SEED, SQNM, SRS, URE, WFMI, and WIN. Note that BOX does not list or trade PARD. As such, the remaining 19 classes of this group comprise the data set identified as "Least Active Classes (Period)" in the charts throughout this report.

#### Summary and Recommendation

BOX believes that quoting and trading in penny increments has improved the overall market quality and that the Pilot has benefitted retail customers. This report generally confirms the expected data results; the most active Pilot classes have narrower spreads and greater liquidity than the least active classes. Note that the percentage of the total BOX volume for Pilot classes that traded through the PIP was more than 40% for the Most Active Classes. Further, 25 – 32% of the BOX volume of the Least Active Classes trades through the PIP, also providing these less liquid classes an opportunity for price improvement.

Based on the information provided in this and prior Pilot reports BOX has provided to the Commission, BOX recommends:

- The Commission terminate the Pilot and permit all classes to trade in penny increments at prices up to \$3.00; and
- The Pilot reports requested by the Commission be discontinued.

Ending the Pilot would allow the exchanges to avoid the complexity of trading certain classes in penny increments at all prices, some in penny increments only up to \$3.00, and other classes in \$.05 or \$.10 increments. Additionally, BOX does not believe that the Pilot reports provide significant statistical value. The most active options classes trade in penny increments and there are no longer actively-traded classes trading in larger increments that serve as a useful data set for comparison. Overall market volume and volatility have a more significant impact on Pilot class activity than the migration of the lesser-active classes to trading in penny increments.

### **Chapter 2 - Quality of Markets**

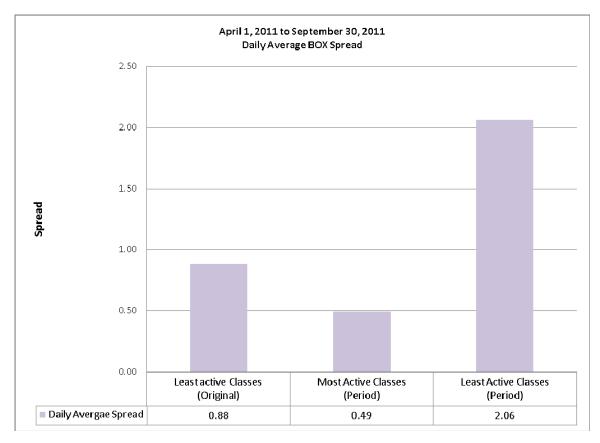
As the format of this report is different from that of the previous eight reporting periods where analysis was by "buckets" of option premium level rather than by groups of classes based on the level of trading activity, it is not possible to provide direct trend analysis for this period vis-à-vis earlier periods. BOX did, however, analyze this most recent period using the methodology of the previous eight reports and found that the resulting data were consistent with prior periods, with no significant change regarding spreads or top of the book size.

#### 2.1 Best Bid/Ask Spread

The difference between the Best Bid and Best Ask is the "spread." Generally, the less the average spread, the better the market quality. The chart below shows the daily average Bid/Ask Spread on BOX for each data set during the report period. Fluctuations in the Bid/Ask spread are generally in direct correlation to volatility in the overall markets. BOX believes that quoting and trading in penny increments has improved the overall quality of the markets and that the Pilot has benefitted retail customers.

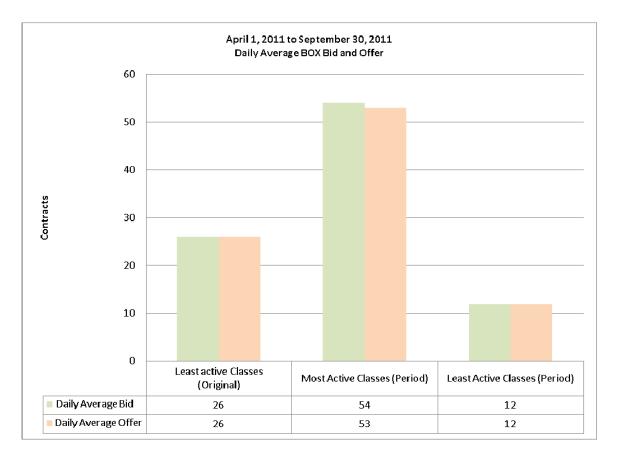
Each options class may contain numerous series within the class. Generally, trading activity in any particular class is concentrated in those series with expiration dates closer in time and strike prices closer to the price of the underlying stock or index value. The wider spread shown for the Least Active Classes (Period) in the chart below (\$2.06) generally arises because those classes will have many inactive instruments that are quoted in very wide spreads, and only a few active instruments within the class that have more narrow spreads.

By comparison, the average spread for the Most Active Classes (Period) (\$0.49) is significantly narrower. Such a spread is indicative of the greater volume in the class generally, and in a greater number of series within the class, in particular.



### 2.2 Bid/Ask Size

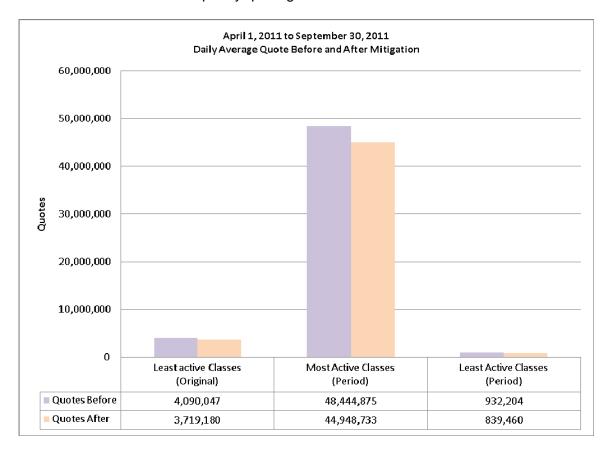
The number of contracts available at the BOX Best Bid/Ask is often referred to as the "size" and is another item that may reflect market quality. The chart below shows the average daily size available at the BOX Best Bid and Ask during the report period for each of the data sets. As one would expect, the average Bid/Ask size is only 12 for the least active classes while it is more than 50 for the most active classes.



## Chapter 3 – Capacity and Trading Activity

### 3.1 BOX Quotes to OPRA: Before and After Mitigation

BOX sends its Best Bid and Best Ask prices for each options series to the Options Price Reporting Authority ("OPRA"), which then disseminates those prices to the market along with quotes from the other options exchanges. BOX notes that on average, over 4 million quotes per day are sent to OPRA for each of the Most Active Classes, whereas BOX sends less than 1 million per day for the total set of Least Active Classes. The industry continues to increase systems capacity to handle increasing quoting and trading activity in all options classes. The "quote traffic catastrophe" that was forecast by opponents of the Pilot several years ago has simply not occurred as the options industry has been able to adapt, with the help of improvements in technology, to the increase in traffic due to penny quoting.



### 3.2 Trading Activity

In addition to providing the BOX volume for the selected data sets of Pilot classes, the Commission has inquired about the percentage of transactions in Pilot classes that occur through the BOX PIP. Provided in the table below for each of the three respective data sets, is the: (i) daily average PIP volume; (ii) daily average total volume on BOX; and (iii) percentage of total volume traded in the PIP. While the Most Active Classes trade a daily average of more than 57,000 contracts per class, the Least Active Classes (Original) and (Period) each traded a daily average of less than 1,000 contracts per class.

Note that the percentage of the total BOX volume for Pilot classes that traded through the PIP was more than 40% for the Most Active Classes. Further, 25 – 32% of the BOX volume of the Least Active Classes trades through the PIP, also providing these less liquid classes an opportunity for price improvement.

	Daily Avg Contracts Traded in PIP	Daily Avg Total Contracts Traded	PIP Percentage
Least Active Classes (Original)	2,467	9,666	25.52
Most Active Classes (Period)	230,648	572,245	40.31
Least Active Classes (Period)	1,028	3,206	32.06

#### **Chapter 4 – Number of BOX Market Makers**

The Commission has asked BOX to provide the number of BOX Market Makers at various points during the Pilot. In January 2007, there were 24 firms acting as BOX Market Makers. As of January 2008, there were 19 firms acting as BOX Market Makers. As of January 2010, while there had been some turnover as to the particular firms, there were still 19 BOX Market Makers. As of September 2011, there were 14 firms registered as BOX Market Makers.