

To: File

From: Division of Risk, Strategy, and Financial Innovation

Date: March 1, 2010

RE: ISE Qualified Contingent Cross Order Proposal (SR-ISE-2009-35)

At the request of the Division of Trading and Markets (“TM”), the Division of Risk, Strategy, and Financial Innovation (“RiskFin”) has conducted a review of data collected from the Consolidated Order Audit Trail (“COATS”) to analyze executions of large stock-option orders on floor-based exchanges (PHLX and CBOE) and an electronic exchange (ISE). The purpose of the review is to determine if large-sized orders are broken up more frequently on an electronic exchange as compared to certain floor-based exchanges.

TM has requested this analysis in connection with the Commission’s decision to grant a petition for review of an order granting approval by delegated authority for the use of a Qualified Contingent Cross (“QCC”) Order by ISE.¹ The QCC Order type permits a member to cross the options leg of a Qualified Contingent Trade (“QCT”)² on ISE immediately upon entry without exposure, if the order meets certain specified criteria, including that the order be for at least 500 contracts. ISE has asserted, among other things, that it needs this order type to remain competitive with other exchanges, particularly floor-based exchanges, because although these orders are exposed on the floor-based exchanges, they are rarely broken up.

Our analysis did not confirm ISE’s contention that large orders are broken-up less frequently on floor-based exchanges, though certain data did provide support for ISE’s position. Most notably, the analysis shows that, for large orders a significantly lower percentage of orders on ISE were 90% filled against a single contra party, while the comparable figures for CBOE and Phlx were significantly higher (more than double the percentage). Further, the analysis indicates that large orders are split into multiple executions more often on ISE (88%) than on PHLX (71%) or CBOE (74%). It is possible that the lack of strong evidence is related to the inability to focus the analysis directly on the specific order type impacted by the ISE proposal. While these results are not conclusive, as noted below, the data we used contained additional orders unrelated to ISE’s proposed order type.

¹ See Securities Exchange Act Release No. 60584 (August 28, 2009), 74 FR 45663 (September 3, 2009) (SR-ISE-2009-35)

² In 2006, the Commission provided an exemption for Rule 611(a) of Regulation NMS for each NMN stock component of contingent trades that satisfied six requirements for “qualified contingent trades.” Pursuant to the Commission’s exemption, trade-throughs caused by the execution of orders involving one or more NMS stocks that are components of a QCT are permitted. See Securities Exchange Act Release No. 57620 (April 4, 2008), 73 FR 19271 (April 9, 2008).

Analysis

To examine the execution of orders on different trading platforms, RiskFin collected COATS data from the ISE, CBOE and PHLX for each Tuesday in August and September 2009. To conduct the analysis, we separated orders into buckets based on order size as follows: below 500 contracts; 500 to 1999 contracts; and 2,000 or more contracts. We focused on whether orders tended to be split into multiple executions on each exchange, and into how many executions. In addition, we looked at the relative ability of the exchange to execute orders in full.

We considered narrowing the sample to examine only facilitation orders, but such orders were not easily identifiable using the COATS data. Also, ISE's proposed QCC order type requires the order to be completely filled, so partial orders were excluded from this analysis. In addition, the data analyzed includes all trades at the particular trade size and not only contingency orders. Finally, we note that the COATS data received included index options orders as well as equity options orders (which would be most relevant to the QCC Order proposal).

Table 1 shows the percentage of orders executed in a single execution versus in multiple executions, broken out by order size. The data for this table represents only those orders that were completely filled. In the 2,000 or greater contract level, ISE has a statistically significant (at 1% confidence level) lower percentage of single execution trades (12%) than PHLX (29%) or CBOE (26%). This means that large orders are broken into several executions more often on ISE than on CBOE and PHLX. Not surprisingly, Table 1 also shows that smaller orders are executed in single executions more often than are large orders, regardless of the exchange.

Table 2 shows the percentage of orders that were broken up and given multiple executions and how many executions it took to fill an order. As with Table 1, the data for this table represents only those orders that were completely filled. We note that, for executions in the 500-1999 order size, the exchanges have similar execution statistics. However, for the 2000 or greater order level, PHLX executed a greater percentage of large orders in four or fewer executions than ISE. ISE had a greater total percentage of multiple executions than CBOE; but there is no pattern consistent with an ability by CBOE to avoid splitting large orders into a high number of executions.

Table 3 shows the percentage of orders that were filled 70%, 80%, 90% and 100% in a single execution (e.g., the 80% row gives the percentage of orders in which the largest execution was at least 80% of the total size of the order). Like the two tables above, the data for this table represents only those orders that were completely filled. In addition, this table only looks at orders that are 500 contracts or greater. The minimum size of a QCC Order is 500 contracts; therefore smaller orders were left out.

Within the 500-1999 trade size of Table 3, there is little difference between the exchanges in the relative size of the largest executions. But, with regard to the largest execution in orders greater than 2000 contracts, the ISE executions are a much smaller

percentage of the total order size than the executions of similar sized orders executed on CBOE and PHLX. In fact, all comparisons in this trade size are significantly different at the 1% confidence level. For instance, in the over 2000 trade size category ISE only has single executions in 19% of all completed fills where the largest execution of an order represented 70% or more of such order while PHLX (43%) and CBOE (41%) are much larger.

Table 4 compares the percentage of partially filled orders against the percentage of completely filled orders across exchanges. PHLX executes in full 98% of large orders, which is significantly more than the ISE (79%) or CBOE (77%). There is no statistically significant difference for the propensity for ISE to completely fill large orders as compared to CBOE. PHLX completely fills a higher percentage of large orders than small orders. This result would not be expected unless there is segmentation in how the order flow is handled.

The Options Order Protection and Locked/Crossed Market Plan (“Plan”), which does not contain an exemption from the Trade-Through Rule for block-size trades, was implemented on August 31, 2009.³ ISE submitted some statistics showing that their market share of large trades declined following this implementation while the market share of PHLX increased and CBOE stayed constant.⁴ We also compared data from August 2009, before implementation of the Plan, to September 2009, after implementation of the Plan, to determine if there was a difference in executions. Tables 5 and 6 are similar to tables 1 and 4 but separate the statistics by month (August and September). We replicated Tables 2 and 3 as well, but we do not report them in the interest of space because they did not add any new information.

Table 5 shows the percentage of orders that were single executions as opposed to multiple executions in August 2009 versus September 2009. The monthly differences show statistically significant changes for both CBOE and PHLX, but not ISE. For CBOE, in the 500-1999 trade size, the three percentage point increase is statistically significant at the 5% level of confidence, while, in the 2000 & over group the increase of 16% in single executions from August to September is significant at the one percent confidence level. PHLX’s 2000 and over order level was statistically significant at the 5% level of confidence, with a six percentage point decrease in single executions.

In Table 6, the percentage of orders that are partially executed by month, show almost no changes from August to September. Based on these two tables, the executions of large orders do not appear to have changed on ISE even if the relative markets share did change. Further, the percentage of orders in single executions decreased on PHLX, which cannot explain the increase in market share.

³ See Securities Exchange Act Release No. 60405 (July 30, 2009), 74 FR 39362 (August 6, 2009).

⁴ See E-mail from Michael J. Simon, General Counsel, Secretary and Chief Regulatory Officer, ISE, to Elizabeth K. King, Associate Director, Division of Trading and Markets, Commission, dated September 30, 2009. Market share refers to volume of trading on one market relative to all markets.

Table 1: Percentage of Orders Executed in Single vs. Multiple Executions

This table shows multiple and single executions by order size (in percentages, rounded to nearest unit). Statistics are estimated from COATS Data from ISE, CBOE and PHLX, for each Tuesday in August/September 2009. The statistics only include orders that received a full execution.

| Order Size | CBOE | | PHLX | | ISE | |
|------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| | Single | Multiple | Single | Multiple | Single | Multiple |
| 1-499 | 70% | 30% | 39% | 61% | 79% | 21% |
| 500-1999 | 25% | 75% | 29% | 71% | 25% | 75% |
| 2000 & OVER | 26% | 74% | 29% | 71% | 12% | 88% |

Table 2: Percentage of Orders by Number of Executions and Order Size

This table shows the number of executions per filled order by order size (in percentages, rounded to nearest unit). Statistics are estimated from COATS data from ISE, CBOE and PHLX, for each Tuesday in August/September 2009. The statistics only include orders that received a full execution. The *, ** denote that the percentage is statistically different from the ISE percentage at the 5% and 1% level of confidence.

| Order Size | Executions | CBOE | PHLX | ISE |
|------------------------|-------------------|-------------|-------------|------------|
| 1 to 499 | 1 | 70% | 39% | 79% |
| | 2 | 15% | 23% | 11% |
| | 3 | 6% | 13% | 4% |
| | 4 | 4% | 8% | 3% |
| | 5 | 2% | 5% | 2% |
| | 6 | 1% | 3% | 1% |
| | 7 | 1% | 3% | 0% |
| | 8 | 0% | 2% | 0% |
| | 9 | 0% | 1% | 0% |
| | 10 & Over | 1% | 3% | 0% |
| 500 to 1999 | 1 | 25% | 29% | 25% |
| | 2 | 12% | 17% | 7% |
| | 3 | 8% | 8% | 6% |
| | 4 | 7% | 8% | 7% |
| | 5 | 7% | 5% | 7% |
| | 6 | 5% | 5% | 6% |
| | 7 | 5% | 4% | 7% |
| | 8 | 5% | 5% | 6% |
| | 9 | 4% | 4% | 6% |
| | 10 & Over | 22% | 15% | 23% |
| 2000 & Over | 1 | 26%** | 29%** | 12% |
| | 2 | 8%* | 26%** | 3% |
| | 3 | 4% | 11%** | 2% |
| | 4 | 3% | 12%** | 4% |
| | 5 | 4% | 3% | 5% |
| | 6 | 3% | 5% | 5% |
| | 7 | 5% | 2%* | 5% |
| | 8 | 4% | 3%* | 5% |
| | 9 | 5% | 1%** | 5% |
| | 10 & Over | 38%** | 8%** | 54% |

Table 3: Cumulative Percentage of Orders Filled 70%-100% Against One Contra-Party

This table shows the cumulative percentage of the largest execution within a completely filled order by trade size and decile (in percentages, rounded to nearest unit). For example, 100% represents an order that was filled with one execution; 90% represents an order filled 90% or greater with one execution, etc. Statistics are estimated from COATS data from ISE, CBOE and PHLX, for each Tuesday in August/September 2009. The *, ** denote that the percentage is statistically different from the ISE percentage at the 5% and 1% level of confidence correspondingly.

| Trade Size | Deciles | CBOE | PHLX | ISE |
|----------------------------|---------|-------|-------|-----|
| 500 to 1999 | 100% | 25% | 29% | 25% |
| | 90% | 32%** | 32%* | 29% |
| | 80% | 37%** | 37%** | 32% |
| | 70% | 42%** | 41%** | 36% |
| 2000 & Over | 100% | 26%** | 29%** | 12% |
| | 90% | 35%** | 37%** | 16% |
| | 80% | 39%** | 40%** | 18% |
| | 70% | 41%** | 43%** | 19% |

Table 4: Percentage of Orders that are Partially Filled vs. Completely Filled

This table shows how often orders are partially filled or completely filled by order size (in percentages, rounded to nearest unit). Statistics are estimated from COATS data from ISE, CBOE and PHLX, for each Tuesday in August/September 2009.

| Order Size | CBOE | | PHLX | | ISE | |
|------------------------|---------|----------|---------|----------|---------|----------|
| | Partial | Complete | Partial | Complete | Partial | Complete |
| 1-499 | 35% | 65% | 47% | 53% | 3% | 97% |
| 500-1999 | 11% | 89% | 6% | 94% | 11% | 89% |
| 2000 & OVER | 23% | 77% | 2% | 98% | 21% | 79% |

Table 5: Percentage of Orders Executed in Single vs. Multiple Executions in August 2009 and September 2009

This table shows multiple and single executions by order size (in percentages, rounded to nearest unit) by month. Statistics are estimated from COATS Data from ISE, CBOE and PHLX, for each Tuesday in August and September 2009 separately. The statistics only include orders that received a full execution. The *, ** denote that the percentage between months is statistically significant at the 5% and 1% level of confidence correspondingly.

| | Trade Size | CBOE | | PHLX | | ISE | |
|------------------|------------------------|--------|----------|--------|----------|--------|----------|
| | | Single | Multiple | Single | Multiple | Single | Multiple |
| August | 1-499 | 69% | 31% | 40% | 60% | 78% | 22% |
| | 500-1999 | 23%* | 77%* | 31% | 69% | 25% | 75% |
| | 2000 & OVER | 19%** | 81%** | 33%* | 67%* | 14% | 86% |
| September | 1-499 | 70% | 30% | 38% | 62% | 79% | 21% |
| | 500-1999 | 26%* | 74%* | 29% | 71% | 25% | 75% |
| | 2000 & OVER | 35%** | 65%** | 27%* | 73%* | 11% | 89% |

Table 6: Percentage of Orders that are Partially Filled vs. Completely Filled in August 2009 and September 2009

This table shows how often orders are partially filled or completely filled by order size (in percentages, rounded to nearest unit) and month. Statistics are estimated from COATS data from ISE, CBOE and PHLX, for each Tuesday in August and September 2009 separately.

| | Trade Size | CBOE | | PHLX | | ISE | |
|------------------|------------------------|---------|----------|---------|----------|---------|----------|
| | | Partial | Complete | Partial | Complete | Partial | Complete |
| August | 1-499 | 35% | 65% | 47% | 53% | 3% | 97% |
| | 500-1999 | 11% | 89% | 7% | 93% | 11% | 89% |
| | 2000 & OVER | 23% | 77% | 1% | 99% | 22% | 78% |
| September | 1-499 | 36% | 64% | 47% | 53% | 3% | 97% |
| | 500-1999 | 11% | 89% | 5% | 95% | 10% | 90% |
| | 2000 & OVER | 23% | 77% | 3% | 97% | 20% | 80% |