

**RULE ENFORCEMENT REVIEW
OF THE
CHICAGO BOARD OF TRADE
AND THE
CHICAGO MERCANTILE EXCHANGE**



**Division of Market Oversight
September 13, 2010**

TABLE OF CONTENTS

I. INTRODUCTION	1
II. SUMMARY OF FINDINGS AND RECOMMENDATIONS	3
A. Compliance Department Staff.....	3
Findings.....	3
Recommendations.....	3
B. Audit Trail	4
Findings.....	4
Recommendations.....	5
C. Trade Practice Surveillance.....	5
Findings.....	5
Recommendations.....	6
D. Disciplinary Program	6
Findings.....	6
Recommendations.....	7
III. CHANGES AT CBOT AND CME SINCE THEIR LAST REVIEWS	8
IV. COMPLIANCE STAFF AND MARKET REGULATION OVERSIGHT COMMITTEE..	10
A. Market Regulation Department.....	10
B. Market Regulation Oversight Committee	15
C. Conclusions And Recommendations	18
V. AUDIT TRAIL PROGRAM.....	20
A. CME Globex Audit Trail	21
1. Audit Trail Creation And Contents.....	21
2. Identification Of Order Sources.....	23

3. Identification Of Account Owners.....	26
4. Pre-Host Audit Trail Data.....	27
B. Review Of Compliance With CME Globex Audit Trail Requirements.....	28
C. Open Outcry Audit Trail.....	33
1. Introduction.....	33
2. Electronic Audit Trail For Open Outcry Orders.....	34
3. Paper Audit Trail For Open Outcry Orders.....	37
D. Trade Timing For Open Outcry Trades.....	39
E. Enforcement Of Trade Recordation Requirements For Open Outcry Trades.....	40
1. Review Of Recordkeeping Exception Reports.....	40
a. Summary Recordkeeping Fines For Individual Open Outcry Traders.....	40
b. Summary Recordkeeping Fines For Member Firms.....	46
2. Back Office Audits.....	47
F. Safe Storage Capability.....	50
G. Conclusions And Recommendations.....	51
VI. TRADE PRACTICE SURVEILLANCE PROGRAM.....	54
A. Staffing And Division Of Trade Practice Surveillance Duties.....	55
B. Automated Surveillance.....	58
1. Sophisticated Market Analysis Research Technology.....	58
2. RAPID.....	60
3. Reportable Position System.....	61
4. Legacy Systems.....	62
C. Video And Floor Surveillance Of Open Outcry Trading.....	62
D. Timeliness And Adequacy Of Investigations.....	65
E. Conclusion And Recommendations.....	68

VII. DISCIPLINARY PROGRAM	69
A. Disciplinary Committees And Procedures	69
B. Adequacy Of Sanctions	76
C. Timeliness Of The Disciplinary Process	80
D. Adequacy Of Disciplinary Committee Written Decisions	80
E. Conclusions And Recommendations	83

I. INTRODUCTION

The Division of Market Oversight (“Division”) has completed a rule enforcement review of the audit trail, trade practice surveillance, and disciplinary programs of the Chicago Board of Trade (“CBOT”) and the Chicago Mercantile Exchange (“CME”) (collectively, “the Exchanges”) for compliance with related core principles under Section 5(d) of the Commodity Exchange Act (“Act”), as amended by the Commodity Futures Modernization Act of 2000 (“CFMA”), and Part 38 of the Commission’s regulations.¹ The review covers the period of January 1, 2008 to January 1, 2009 (“target period”).

The review focused on Core Principles 10, *Trade Information*, and 17, *Recordkeeping*, which relate to an exchange’s audit trail program for the recording and safe storage of trade information in a manner which enables prevention of customer and market abuses and enforcement of exchange rules; and Core Principles 2, *Compliance With Rules*, and 12, *Protection of Market Participants*, which relate to an exchange’s program for enforcing its rules, conducting disciplinary proceedings, and protecting market participants from abusive practices. Appendix B to Part 38 provides acceptable practices for demonstrating compliance with these core principles.²

¹ Rule enforcement reviews prepared by the Division are intended to present an analysis of an exchange’s overall compliance capabilities during the period under review. Such reviews deal only with programs directly addressed in the review and do not assess all programs or core principles. The Division’s analyses, conclusions, and recommendations are based, in large part, upon the Division’s evaluation of a sample of investigation and disciplinary case files, and other exchange documents. This evaluation process, in some instances, identifies specific deficiencies in particular exchange investigations or methods but is not designed to uncover all instances in which an exchange does not address effectively all exchange rule violations or other deficiencies. Neither is such a review intended to go beyond the quality of the exchange’s self-regulatory systems to include direct surveillance of the market, although some direct testing is performed as a measure of quality control.

² Appendix B to Part 38 of the Commission’s regulations provides guidance concerning the core principles with which a designated contract market must comply to maintain its designation. In addition, Appendix B provides acceptable practices for several of the core principles. Although the acceptable practices establish non-exclusive safe harbors, they do not establish a mandatory means of compliance with the core principles. Appendix B provides acceptable practices for Core Principles 2 and 10. However, acceptable practices are not set forth for Core Principle 12. In promulgating Part 38, the Commission reserved the authority to adopt acceptable practices for Core Principle 12 at a later date.

For purposes of this review, Division staff interviewed compliance officials and staff from the CME Market Regulation Department (“Market Regulation”), which, in addition to providing compliance services to CME, also provides compliance services to CBOT pursuant to a Regulatory Services Agreement between CBOT and CME. The Division also reviewed numerous documents used by Market Regulation in carrying out the self-regulatory responsibilities of the Exchanges. These documents included, among other things, the following:

- computer reports and other documentation used routinely for audit trail enforcement and trade practice surveillance;
- audit trail review and trade practice investigation files;
- trade practice investigation, floor surveillance, disciplinary, and arbitration logs;
- disciplinary case files;
- minutes of disciplinary committee, Board of Directors (“Board”), and Market Regulation Oversight Committee meetings held during the target period; and
- compliance procedures manuals and guidelines.

The Division provided the Exchanges an opportunity to review and comment on a draft of this report on July 12, 2010. On July 22, 2010, Division staff conducted an exit conference with Market Regulation staff to discuss the report’s findings and recommendations.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

A. Compliance Department Staff

Findings

- During the target period, the Exchanges' Market Regulation Department consisted of 93 staff members, including the Chief Regulatory Officer; a 41-member Investigations Group, responsible for trade practice surveillance and investigations; a 5-person Enforcement Group, responsible for prosecuting disciplinary cases; an 11-member Data Quality Assurance Group, responsible for ensuring audit trail data integrity and compliance with audit trail requirements; a 10-person Regulatory Systems Group, responsible for development and maintenance of CME Group's automated systems; a 20-member Market Surveillance Group (whose work is not covered in this review); and five administrative support staff.
- Market Regulation has a knowledgeable and experienced management team. Its senior staff have extensive exchange experience and other industry-related experience.
- Market Regulation's target period staffing level represented a compliance staff reduction of approximately 18 percent below the budgeted 114-person total of the Exchanges' combined, pre-merger compliance staffs. At the time of these staff cuts, the Exchanges' average monthly trading volume had increased from approximately 234 million contracts per month just prior to the merger to approximately 238 million contracts per month during the target period.
- The Division is concerned that compliance staff cuts of these proportions, accompanying significant increases in volume and number of products traded, could impair compliance program effectiveness and impede enforcement of exchange rules and Commission regulations. Prudence suggests that when exchanges merge, they should avoid substantial reductions in their combined compliance staff until major changes resulting from the merger are complete, and until experience following this transition demonstrates that merger-created efficiencies would allow the merged exchanges to maintain adequate and effective trading oversight while making some staff reductions. The Division discussed these concerns with Market Regulation during the interview phase of this review.
- During 2009, Market Regulation increased its staff size, adding eight additional compliance staff in June 2009, and nine additional positions in November 2009.

Recommendations

- The Exchanges should undertake a comprehensive review of the compliance staff size needed to ensure that the compliance services provided to all CME Group exchanges by Market Regulation remain effective in enforcing compliance with all exchange rules and Commission regulations. At the conclusion of the review, the Exchanges should report to the Division concerning the review process, the factors considered, the conclusions

reached, the reasons why the Exchanges believe that Market Regulation's present staff levels are adequate or need improvement, and any actions taken or planned in response to the review.

- The Exchanges should take such ongoing steps as are necessary to ensure that Market Regulation staff is increased appropriately whenever necessary in light of trading volume, products traded, futures and options industry changes, new responsibilities assigned to Market Regulation, or other relevant developments.

B. Audit Trail

Findings

- The Exchanges maintain an adequate audit trail program, which records trade data in a manner that enables CME to identify customer and market abuses and provide evidence of rule violations.
- CME Globex[®], the electronic trading platform of both Exchanges, maintains a complete electronic record of all orders entered and transactions executed, including all messages entered into the system, the terms and time of entry for each order, all order modifications and cancellations, and all matched trades. This record enables the Exchanges to reconstruct electronic trading efficiently and effectively.
- For open outcry trading, the Exchanges maintain a traditional audit trail for all orders transmitted to the pit by flashed hand signals, physical delivery of order tickets, or electronic order routing. This record enables the Exchanges to reconstruct open outcry trading efficiently and effectively.
- Each order entered into Globex must carry a unique workstation operator identifier that enables Market Regulation to identify the person or automated trading system entering the order.
- Market Regulation monitors compliance with electronic trading recordkeeping requirements through annual "Globex audits" at each clearing member, as well as weekly reviews focused on proper user ID submission. These audits use automated surveillance tools to review electronic audit trail data for trades guaranteed by the clearing member to detect instances of potential audit trail violations.
- Market Regulation monitors individual member compliance with open outcry recordkeeping rules through daily electronic review of recordkeeping exception reports, and reviews clearing member compliance with open outcry recordkeeping requirements through annual back office audits of all clearing members.
- During the target period, Market Regulation instituted a summary fine schedule for recordkeeping violations by individual open outcry traders that provided for a slower escalation of fine amounts for repeat offenses as compared with the practice at the

Exchanges prior to their merger. Market Regulation adopted the new fine schedule because major post-merger changes in the open outcry trading environment, the price reporting system, recordkeeping and reporting requirements, and the recordkeeping enforcement process had resulted in a need for a significant “acclimation and education period” for all open outcry traders with respect to new open outcry recordkeeping processes and requirements. While Market Regulation observed a substantial increase in open outcry recordkeeping violations immediately following floor consolidation in April 2008, its education efforts regarding the new environment proved effective, and 2009 saw substantial reduction in the violation levels seen shortly after the transition to the new open outcry environment. In February 2010 the Exchanges restored the summary fine schedule in place at CME prior to the merger, which provides for fines of \$500 for a second offense, \$1,000 for a third offense, and \$5,000 for any subsequent offenses within a rolling twelve-month period.

- The Division is concerned that the Exchanges’ present recordkeeping summary fine amounts may be low enough that traders could view them as merely a cost of doing business, and that they therefore could fail to provide a sufficient deterrence of recordkeeping violations on an ongoing basis. The Division believes that higher summary fine amounts, including an initial summary fine amount of at least \$1,000, would provide better deterrence of future open outcry recordkeeping offenses, and thus would serve to maintain high rates of recordkeeping compliance. The Division believes the goals of enforcement and deterrence also would be better served by a fine schedule under which each subsequent offense sanctioned by a summary fine receives a fine higher than the one preceding it.
- The Exchanges have adequate procedures for safe storage of audit trail data. Data is backed up daily and stored at an offsite backup storage location. CME Globex audit trail data and clearing data for both CME Globex and open outcry trades is also replicated in real time at CME Group’s Remote Data Centers.

Recommendations

- The Exchanges should review their summary fine schedule for open outcry recordkeeping offenses by individual traders, and adopt a revised summary fine schedule providing for fine amounts that are clearly sufficient to deter open outcry recordkeeping offenses, beginning with an initial summary fine amount of at least \$1,000, and providing for higher, escalating fine amounts for each subsequent offense not referred to a disciplinary committee.

C. Trade Practice Surveillance

Findings

- The Exchanges maintain an adequate trade practice surveillance program. Market Regulation monitors all CBOT and CME electronic and open outcry trading activity through automated computer surveillance. It also monitors all open outcry trading at the

Exchanges through floor surveillance and a new, advanced video surveillance system. Market Regulation conducts various types of investigations across all markets at the Exchanges in a manner capable of detecting trading activity prohibited by Exchange rules.

- The Exchanges' sophisticated computer surveillance systems enable Market Regulation investigators to conduct focused reviews of exception reports and create customized, ad hoc queries of all Exchange trade data in order to identify instances of possible trade practice violations. Market Regulation also uses these systems in structured surveillance programs which employ specific computerized pattern detection algorithms and other methods of data analysis that have proven effective in identifying trading patterns associated with several major types of trade practice violations.
- During the target period, Market Regulation closed 484 trade practice investigations, including 194 investigations involving electronic trading, 114 investigations that involved side-by-side trading in both electronic and open outcry venues, and 176 investigations involving open outcry trading.
- The fact that approximately 64 percent of the investigations closed during the target period involved either purely electronic trading or side-by-side trading represents a significant shift from the proportions seen in past reviews, when open outcry investigations predominated.
- The Division reviewed 211 of the 484 investigations closed during the target period, selected at random across all of the Exchanges' markets, and found that the investigations were thorough and well-documented, and included appropriate, well-founded analyses. A number of complex investigations involved analysis of substantial amounts of data and extended periods of trading activity. Market Regulation also completed investigations in a generally timely manner.

Recommendations

- The Division has no recommendations in this area.

D. Disciplinary Program

Findings

- The Exchanges maintain an adequate disciplinary program, which enables the Exchanges to take effective disciplinary action when rule violations are suspected. Exchange rules ensure due process for disciplinary proceedings, and give the Exchange the authority to discipline, suspend, or terminate members or market participants found to have committed rule violations.
- CBOT and CME now share consistent disciplinary procedures and a common disciplinary committee structure, put in place following the merger. At each Exchange, a

Probable Cause Committee (“PCC”) reviews investigation reports submitted by Market Regulation and determines whether charges should be brought, while a Business Conduct Committee (“BCC”) holds hearings on contested charges and determines whether proposed settlements should be accepted. Each PCC or BCC panel at either Exchange consists of a chairman; three Exchange members, including one local, one floor broker, and one member firm representative; and three public committee members not associated with either Exchange or their members.

- During the target period, the Exchanges closed 81 disciplinary cases, including four cases involving contested hearings and 77 cases concluded by settlement. In the 81 closed cases, the Exchanges assessed a total of \$2,053,250 in fines, including fines against 63 individuals and 14 member firms. Eight individuals and one firm were ordered to pay a total of \$508,104 in customer restitution. The Exchanges suspended 46 individuals for a total of 667 days, and imposed permanent bars on membership or association with any member or member firm against three individuals.
- The Division reviewed all 81 closed disciplinary cases, and found that the sanctions imposed in them appear reasonable relative to the violations alleged and the evidence presented, and that the Exchanges completed disciplinary proceedings in a generally timely manner.
- While most BCC decisions in matters involving contested hearings or consideration of settlement offers opposed by Market Regulation were adequately explained in the BCC’s written decisions, in one case in which the BCC acquitted a respondent charged with multiple instances of indirect bucketing of customer orders and non-competitive trading, the BCC failed to explain its decision in a way sufficient to enable thorough Division review of the Exchanges’ disciplinary program. Both Exchange rules relating to the disciplinary process and the Exchanges’ BCC Handbook require that written disciplinary committee decisions should include a statement of findings and conclusions with respect to each charge. The findings should include a summary of the evidence on which the committee’s decision was based, and a statement of why that evidence led to the conclusion reached with respect to each charge.

Recommendations

- The Exchanges should ensure that all written decisions issued by the BCC, and all decisions by the PCC not to issue charges, include findings and conclusions with respect to each charge, and ensure that the findings with respect to each charge state and explain the reason or reasons for the committee’s conclusion with respect to that charge, and note the evidence which led the committee to that conclusion.

III. CHANGES AT CBOT AND CME SINCE THEIR LAST REVIEWS

Since the Division's last Rule Enforcement Reviews examining the audit trail, trade practice surveillance, and disciplinary programs of CBOT and CME, dated August 25, 2005 ("the 2005 Review") and October 27, 2006 ("the 2006 Review"), respectively, the Exchanges have experienced a number of significant developments with respect to both the Exchanges themselves and the nature of the overall commodity futures marketplace. These changes have had a material impact on the Exchanges and their business. The most noteworthy of these changes include the following:

- **Merger.** On July 12, 2007, CBOT Holdings, Inc., the parent company of CBOT, merged with Chicago Mercantile Exchange Holdings Inc., the parent company of CME. The new combined company is known as CME Group Inc. As a result of this merger, CBOT and CME became wholly-owned subsidiaries of CME Group Inc.³ CBOT and CME continue to maintain independent registration status as designated contract markets, and they remain separate self-regulatory organizations. Each Exchange has its own Board of Directors and its own officers, although the same individuals, without exception, serve in these roles at both Exchanges. With respect to their compliance and self-regulatory programs, however, CBOT and CME share both substantially harmonized rules and a common Market Regulation Department: CME's Market Regulation Department provides regulatory services to CBOT, pursuant to a Regulatory Services Agreement between the two Exchanges dated July 13, 2007.⁴
- **Volume Growth.** Both Exchanges approximately doubled their total trading volume over the period since their previous rule enforcement reviews. CBOT's total trading volume during the target period for the 2005 Review (October 1, 2003 to October 1, 2004), was 542,188,568 contracts, an average of approximately 45 million contracts per month. During the target period for this review (January 1, 2008 to January 1, 2009), CBOT traded 960,446,329 contracts, an average of approximately 80 million contracts per month, nearly two times its earlier average monthly volume. CME's total trading volume during the target period for the 2006 Review (October 1, 2004 to October 1,

³ The New York Mercantile Exchange ("NYMEX") also became a wholly-owned subsidiary of CME Group Inc when it was purchased by CME Group Inc. on August 22, 2008. As part of the same transaction, CME Group Inc. also acquired the Commodity Exchange, Inc. ("COMEX"), which has operated as a subsidiary of NYMEX since 1994. As a matter of form, both NYMEX and COMEX also continue to operate as separately designated contract markets owned by CME Group Inc. CME Market Regulation provides compliance and self-regulatory services to NYMEX and COMEX pursuant to a Regulatory Services Agreement.

⁴ As reported to the Commission in an Informational Memorandum from the Division dated January 29, 2008, the Division reviewed the changes made to the Exchanges' rules in the rulebook harmonization process, and found that none of the changes were inconsistent with the Act or the Commission's regulations.

2005) was 962,705,004 contracts, an average of approximately 80 million contracts per month. During the target period for this review, CME's total volume was 1,890,492,555 contracts, a monthly average of approximately 158 million contracts, also almost two times its earlier average monthly volume.⁵

- **Consolidation And Continued Expansion Of Electronic Trading.** Following the merger, the Exchanges consolidated all of their electronic trading on the CME Globex platform, migrating CBOT's electronic trading, which formerly used CBOT's LIFFE Connect platform, to Globex in January 2008. During 2008, approximately 80 percent of the combined total volume at the Exchanges was traded on CME Globex. This included approximately 80 percent of CBOT's total volume, and approximately 84 percent of CME's total volume. In comparison, the electronic trading share of CBOT's total volume during the target period for the 2005 Review was approximately 58 percent, while the electronic trading share of CME's total volume during the target period for the 2006 Review was approximately 70 percent. As of the end of April, 2010, approximately 88 percent of the total combined volume of CBOT and CME was being traded on Globex.
- **Consolidation And Continued Contraction Of Open Outcry Trading.** As discussed in greater detail below, during the spring of 2008 the Exchanges consolidated all of their open outcry trading on newly refurbished trading floors at CBOT. The integration process was complete by May 19, 2008. The overall share of the combined total volume at the Exchanges which is traded by open outcry declined over the period since the last reviews, dropping at CBOT from approximately 42 percent during the target period for the 2005 Review to approximately 20 percent in 2008, and at CME from approximately 30 percent during the target period for the 2006 Review to approximately 16 percent in 2008. As of the end of April, 2010, approximately 12 percent of the total combined volume of CBOT and CME was being traded on the floor. Open outcry trading remains the preferred method of trading most options at both Exchanges.

⁵ In part due to the economic crisis of 2009, both CBOT and CME have experienced volume declines since 2008. CBOT traded 680,825,901 contracts in 2009, a 29.2 percent decline compared with 2008. CME traded 1,476,083,383 contracts in 2009, a 22 percent decline from its 2008 level.

IV. COMPLIANCE STAFF AND MARKET REGULATION OVERSIGHT COMMITTEE

A. Market Regulation Department

Following the merger, the Exchanges also merged the compliance staff of CBOT's Office of Information and Audits into CME's Market Regulation Department ("Market Regulation"), which as noted above now provides compliance services to CBOT as well as to CME.

At the time of the 2005 Review, CBOT had a 39-person compliance staff, which conducted compliance oversight of trading with an average monthly volume of approximately 45 million contracts. At the time of the 2006 Review, CME had a 57-person compliance staff, which was responsible for compliance oversight of trading with an average monthly volume of approximately 80 million contracts. In total, the Exchanges together had compliance staff of 96 persons conducting oversight of an average monthly volume of approximately 125 million contracts.

Just prior to the July 2007 merger of the Exchanges, CBOT's compliance staff had grown to a total of 51 persons, responsible for oversight of trading with an average monthly volume of approximately 86 million contracts. At the same point, CME's compliance staff had grown to a total of 63 persons, responsible for oversight of trading in an average monthly volume of approximately 148 million contracts. The Exchanges together then had compliance staff totaling 114 persons, conducting oversight of an average monthly volume of approximately 234 million contracts.

After consolidation of the CBOT and CME compliance staffs in the spring of 2008, and at the conclusion of the target period, Market Regulation included a total of 93 persons, 21 fewer than the 114-person total of the Exchanges' combined, pre-merger compliance staffs. This

represented a compliance staff reduction of approximately 18 percent.⁶ The Investigations Group, which is responsible for trade practice surveillance and investigations, suffered the most significant cut of all groups within Market Regulation, going from a pre-merger combined total of 59 persons for this function to a post-merger total of 46 staff, a reduction of 13 persons or approximately 22 percent.⁷ This reduced compliance staff was responsible for oversight of average monthly target period volume of approximately 238 million contracts, approximately four million contracts more than the average monthly volume overseen by the larger pre-merger combined staff.

The Division is concerned that compliance staff cuts of these proportions, accompanying significant increases in volume and number of products traded, could impair the effectiveness of an exchange's compliance program and impede enforcement of exchange rules and Commission regulations. The Division recognizes, as it did in the 2005 Review and 2006 Review, that the sophisticated automated surveillance systems essential for adequate trade practice surveillance in today's electronic futures and options trading environment can make the process of monitoring trading and finding patterns that could indicate trading abuses more efficient. The Division also

⁶ All of the groups within Market Regulation lost staff in the overall reduction of compliance staff. In addition to the cuts in the Investigations Group, the Data Quality Assurance Group, responsible for ensuring audit trail data integrity and compliance with audit trail requirements, was reduced from a pre-merger total of 12 persons to a post-merger total of 11 persons, an approximately eight percent reduction. The Regulatory Systems Group, responsible for development and maintenance of CME Group's automated systems, including the surveillance systems used by Market Regulation, was reduced from a pre-merger total of 11 persons to a post-merger total of 10 persons, a reduction of approximately 9 percent. The Market Surveillance Group (not covered in this review) was reduced from a pre-merger total of 23 persons to a post-merger total of 20 persons, a reduction of approximately 13 percent. The administrative support staff was also reduced from 7 persons to 5 persons, and a single Chief Regulatory Officer replaced the two Chief Regulatory Officer positions existing prior to the merger.

⁷ The post-merger Investigations Group headcount of 46 persons used in this comparison includes Market Regulation's 5-person Enforcement Group, which is responsible for prosecuting disciplinary cases, negotiating settlements, interacting with disciplinary committees, and representing Market Regulation in arbitrations. The Enforcement Group is counted here as part of Investigations, for purposes of comparing the pre-merger and post-merger situations, because this function was performed by Investigations staff at both Exchanges prior to the merger, being done at CME by the Investigations Group and at CBOT by the Vice President heading the Office of Investigations and Audits, with the support of the Investigations and Market Surveillance Groups. Assignment of this function to a new, separate Enforcement Group was part of the restructuring of Market Regulation following the merger.

recognizes, as it did in the last reviews of the Exchanges, that the comprehensive electronic audit trail present in electronic trading helps deter potential violations and eases the task of detecting them, and that the continuing shift of trading volume into screen-based trading thus can also add efficiency to the surveillance process. However, the Exchanges had sophisticated computer surveillance systems in place prior to the 2005 Review and 2006 Review, as discussed in those review reports, and the additional efficiency gains from further improvement and refinement of those systems occurring during the target period, while positive and important, have been incremental rather than ground-breaking at the level seen when such systems were first made operational. Moreover, even cutting-edge automated surveillance systems, such as those at CBOT and CME today, do not set their own parameters or drive themselves. Experienced, knowledgeable compliance staff who can use such surveillance tools to mine audit trail data for patterns indicating potential violations, and then follow up on those patterns with further inquiry that is refined and broadened as appropriate, are essential to effective trade practice and market surveillance and adequate compliance programs.

Furthermore, when the Division raised a concern about possible merger-related compliance staff reductions with the Exchanges in discussions about the merger prior to its completion, the Division understood the Exchanges to have represented to the Division that, while overall staff reductions at the Exchanges might result from efficiency gains due to the merger, only minor cuts would be made with respect to compliance staff. The Division does not believe that elimination of more than a fifth of the Exchanges' combined pre-merger number of investigators, and nearly a fifth of the Exchanges' entire combined compliance staffs, can be regarded as minor.

Adequate staffing of compliance responsibilities at CBOT and CME is of particular concern because of the substantial share of the entire U.S. futures and options marketplace accounted for by the Exchanges. During the target period, CBOT and CME together accounted for approximately 85 percent of all futures and options trading volume regulated by the Commission. CME alone accounted for approximately 56 percent of all U.S. futures and options volume, while CBOT accounted for approximately 29 percent.⁸ Since Market Regulation is responsible for compliance oversight with respect to such a large share of industry volume, the adequacy of its staffing—on which the adequacy of the compliance programs of all CME Group exchanges depends—takes on critical importance.

In the Division's view, prudence suggests that when exchanges merge, they should avoid substantial reductions of their combined compliance staff until major changes resulting from the merger are complete. Post-merger compliance staff reductions should be made only when experience following this transition demonstrates that merger-created efficiencies will allow the merged exchanges to maintain adequate and effective trading oversight with a somewhat smaller compliance staff.⁹ The Division expressed concerns about the Market Regulation staff reductions discussed above during the March 2009 interview phase of this rule enforcement review.

⁸ When combined with NYMEX's approximately 11 percent and COMEX's approximately 2 percent share of the industry's target period volume, the CME Group exchanges collectively accounted for more than 97 percent of all U.S. futures and options trading volume during the target period.

⁹ The Division notes that CME Group followed this more prudent course with respect to integration of NYMEX compliance staff into Market Regulation following CME Group's acquisition of NYMEX on August 22, 2009, leaving the NYMEX compliance department in place until after systems had been integrated and rules had been harmonized. Market Regulation informed the Division that this approach was taken regarding NYMEX as the result of lessons learned from the CBOT-CME merger.

In June 2009, Market Regulation added eight compliance staff, including five investigators assigned to CBOT and CME.¹⁰

During the target period, Market Regulation was focused on compliance services for CBOT and CME.¹¹ Today, Market Regulation provides increasingly integrated compliance services for all four CME Group exchanges. Market Regulation now includes a total of 133 persons, plus eight positions currently vacant, for a total of 141 positions. Market Regulation is led by a Chief Regulatory Officer and Deputy Chief Regulatory Officer, assisted by two administrative assistants. The department's Investigations Group, responsible for trade practice surveillance and investigations, consists of 58 individuals, including a nine-person management team, 47 investigators at various levels, and two administrative assistants. Three additional investigator positions are currently vacant. The Enforcement Group, responsible for prosecuting disciplinary cases, negotiating settlements, and representing Market Regulation in arbitrations, consists of 12 individuals, including a three-person management team, four additional attorneys, a rules specialist and senior rules analyst, and three administrative assistants. An additional attorney position remains open. The Strategic and Technology Initiatives Group, which is responsible for continued development of CME Group's automated surveillance and coordination of regulatory requirements for new strategic initiatives, and which also includes the Data Quality Assurance Group responsible for trader compliance with both electronic and open outcry audit trail and recordkeeping requirements, numbers 20 individuals, including a three-person management team, 10 staff assigned to Data Quality Assurance, six technology specialists

¹⁰ The other added staff included a market surveillance analyst in Chicago, an Enforcement Group attorney in Chicago, and a market surveillance specialist in New York, assigned to NYMEX. Nine additional compliance positions, including senior level positions, were added in November 2009, when Market Regulation was reorganized in the wake of CME Group's acquisition of NYMEX.

¹¹ As noted above, CME Group did not acquire NYMEX until August 2008, and integration of NYMEX compliance functions into Market Regulation did not occur until after the end of the target period.

at various levels, and an administrative assistant. Three Market Regulation staff conduct Market Regulation's employee development and training program. The Market Surveillance Group, responsible for market surveillance (and thus not addressed in this review), consists of 36 individuals, including an eight-person management team, 23 analysts, four database integrity staff, and one market surveillance clerk. One management position and three analyst positions are currently vacant.¹²

Market Regulation has a knowledgeable and experienced management team. The Chief Regulatory Officer has 24 years of exchange experience, and the Deputy Chief Regulatory Officer has 22 years of exchange experience. The senior management team also includes the Director of Global Market Investigations (a new hire with 25 years of industry related experience); the Global Enforcement Counsel (approximately three years of exchange experience and eight additional years of industry related experience); the Director of Global Market Surveillance (25 years of exchange experience); and the Director of Global Market Regulatory Strategy and Technology (32 years of exchange experience). Fifteen additional Directors and Associate Directors have exchange experience ranging from one to 26 years and additional industry related experience ranging from four to 23 years.

B. Market Regulation Oversight Committee

At the time of the merger of CBOT and CME, the charter of the Market Regulation Oversight Committee ("MROC" or "Committee") of the Exchanges was amended to make the MROC a committee of the CME Group Inc Board of Directors, charged with "independent oversight of the policies and programs" of the Market Regulation Department, in order to

¹² The market surveillance programs of larger exchanges, including CBOT and CME, are reviewed by the Division in separate Market Surveillance Rule Enforcement Reviews, and the CBOT and CME market surveillance program is therefore not addressed in this report. The most recent such review at the Exchanges was the CBOT Market Surveillance Rule Enforcement Review, issued on October 26, 2007.

“enable [Market Regulation] to administer effectively the self-regulatory responsibilities of the Chicago Mercantile Exchange Inc. (“CME”) and the Board of Trade of the City of Chicago Inc. (“CBOT”).”¹³

The MROC’s charter requires that all MROC members be directors of CME Holdings Inc. In addition, MROC members may not have membership privileges at CBOT or CME, and may not be officers, principals, or employees of CBOT or CME member firms. During the target period, MROC members had to qualify as “independent” directors under applicable listing standards. In May 2010, the MROC charter was amended to require that MROC members qualify as public directors as that term is defined in the Commission’s regulations. The charter further requires that the MROC consist of at least three directors, all of whom, including the MROC’s Chairman, are appointed to the Committee by the Board of CME Group Inc. The MROC must meet at least quarterly, must keep minutes of its meetings, and may ask members of the Exchange’s management to attend meetings and provide information.

The MROC’s specific responsibilities include reviewing and making recommendations with respect to Market Regulation’s “responsibilities, budget and staffing,” and conducting oversight of Market Regulation’s performance of its responsibilities. In addition, the MROC reviews the annual performance evaluations of, compensation determinations for, and any termination decisions regarding the Chief Regulatory Officer. Finally, the MROC is responsible for reviewing any rule changes or proposed rule changes at the Exchanges “to the extent that such rules are likely to impact significantly self-regulatory functions.”

In addition to its regulatory review responsibilities, the MROC also is charged with certain periodic and annual reporting obligations. These include regular reports to the Board of

¹³ CME Group Inc. Market Regulation Oversight Committee Charter (July 12, 2007). After CME Group’s acquisition of NYMEX and COMEX, the MROC Charter was further amended to reflect that acquisition as well.

Directors concerning Committee activities, and an annual report to the Board summarizing the Committee's "activities, conclusions, and recommendations." On an annual basis, the MROC must also present the Board with its working agenda for the coming year. In addition, on a yearly basis, the MROC must reassess the adequacy of its charter and make recommendations where appropriate.

The Division reviewed the MROC's minutes for the four quarterly meetings held during the target period, as well as the MROC's 2008 Annual Report. In addition to committee members, the MROC's meetings also were attended by senior Market Regulation, Audit, and Legal staff. As noted in the minutes and the 2008 Annual Report, the MROC regularly reviewed the status and timeliness of investigations and disciplinary matters at the Exchanges. It also considered issues including, among other things, changes in regulatory practices and the methodology for detecting trading violations in the electronic trading environment; regulatory risk management; futures industry issues being raised in legislative bodies and their relation to the Exchanges' self-regulatory responsibilities; the role of speculators in markets, and allegations that excessive speculation was a factor in the rise of commodity prices; Exchange policies and oversight procedures regarding hedge exemptions, risk mitigation in the context of customer concentration issues; the key differences remaining between CBOT and CME rules and the planned rule harmonization process with respect to NYMEX rules; and plans for the pending merger with NYMEX and their effect on Market Regulation. The minutes also indicated that the committee conducted a self-evaluation of its activities for the year. The MROC's annual report listed its objectives, responsibilities, and accomplishments.

The MROC met in executive session with the Chief Regulatory Officer and other senior Market Regulation staff to discuss the independence of the market regulation function, Market

Regulation's staffing needs, and the adequacy of Market Regulation's budget. It also met in executive session with the Exchanges' General Counsel—to whom the Chief Regulatory Officer reports—and the Exchanges' Chief Regulatory Counsel to discuss Market Regulation staffing and independence issues. The MROC also reviewed the Market Regulation staffing plan providing for the compliance staff cuts that followed the CBOT-CME merger. During 2009, the MROC also began conducting regular executive sessions with the chairmen of the Exchanges' disciplinary committees to obtain insight regarding the effectiveness of the Exchanges' disciplinary processes.

C. Conclusions And Recommendations

The Market Regulation Department consists of highly experienced professionals with many years of employment at the Exchanges and elsewhere in the futures industry. During the target period, Market Regulation consisted of 93 individuals, 21 fewer than the 114-person total of the Exchanges' combined, pre-merger compliance staffs. This represents an overall compliance staff reduction of approximately 18 percent, and includes a reduction in investigators of approximately 22 percent. During the time of these cuts, the Exchanges' combined average monthly trading volume of approximately 234 million contracts just prior to the merger in July 2007 increased to an average monthly target period volume of approximately 238 million contracts. Adequate Market Regulation staffing is critically important because the CBOT and CME accounted collectively for approximately 85 percent of all trading volume regulated by the Commission during the target period. The Division raised concerns about these compliance staff cuts during the March 2009 interview portion of this rule enforcement review.

In June 2009, Market Regulation added eight compliance staff, including five investigators assigned to CBOT and CME. Nine additional compliance positions were added in

November 2009, following the merger with NYMEX. At present, Market Regulation includes a total of 133 individuals, plus eight positions currently vacant, for a total of 141 positions.

In light of (a) the significant cuts in Market Regulation staff that followed the merger of the Exchanges, despite an accompanying increase in the Exchanges' average monthly trading volume, (b) the subsequent, post-target-period increases in Market Regulation staff, (c) the subsequent acquisition of NYMEX and COMEX by CME Group, resulting in substantial additional compliance oversight responsibility for Market Regulation, and (d) the critical importance of Market Regulation's ability to conduct adequate and effective compliance oversight with respect to more than 97 percent of all U.S. futures and options trading volume, the Division believes that a review by CME Group of the compliance staff size needed to ensure the continued adequacy and efficacy of the compliance services Market Regulation provides to all CME Group exchanges, including CBOT and CME, would be both timely and prudent.

Based on the foregoing, the Division recommends that the Exchanges:

- Undertake a comprehensive review of the compliance staff size needed to ensure that the compliance services provided to all CME Group exchanges by Market Regulation remain effective in enforcing compliance with all exchange rules and Commission regulations. At the conclusion of the review, the Exchanges should report to the Division concerning the review process, the factors considered, the conclusions reached, the reasons why the Exchanges believe that Market Regulation's present staff levels are adequate or need improvement, and any actions taken or planned in response to the review.
- Ensure that Market Regulation staff is increased appropriately when necessary in light of trading volume, products traded, futures and options industry changes, new responsibilities assigned to Market Regulation, or other relevant developments.

V. AUDIT TRAIL PROGRAM

Core Principle 10 – Trade Information:

The board of trade shall maintain rules and procedures to provide for the recording and safe storage of all identifying trade information in a manner that enables the contract market to use the information for purposes of assisting in the prevention of customer and market abuses and providing evidence of any violations of the rules of the contract market.

Core Principle 17 – Recordkeeping:

The board of trade shall maintain records of all activities related to the business of the contract market in a form and manner acceptable to the Commission for a period of five years.

Pursuant to the acceptable practices set forth in Appendix B to Part 38 of the Commission's regulations, an effective contract market audit trail program should capture and retain sufficient trade-related information to permit contract market staff to detect trading abuses and to reconstruct transactions within a reasonable period of time. In addition, the contract market must create and maintain an electronic transaction history database that contains information with respect to transactions executed on the designated contract market. An acceptable audit trail also must be able to track a customer order from time of receipt through fill allocation or other disposition. Further, an acceptable audit trail should include original source documents, transaction history, electronic analysis capability, and safe storage capability.

Original source documents include unalterable, sequentially identified records on which trade execution information is originally recorded, whether manually or electronically. A transaction history consists of an electronic history of each transaction, including all data that are input into the trade entry or matching system for the transaction to match and clear. These data should include the categories of participants for whom such trades are executed; timing and sequencing data adequate to reconstruct trading; and the identification of each account to which fills are allocated. An electronic analysis capability permits sorting and presenting data included

in the transaction history so as to reconstruct trading and to identify possible trading violations, while safe storage capability provides for a method of storing the data included in the transaction history in a manner that protects the data from unauthorized alteration, accidental erasure, or other loss.

Commission Regulation 1.31 governs the manner in which an exchange is required to maintain trade-related records. The regulation mandates that all records required to be kept under the Act or Commission regulations be maintained for five years and be readily accessible during the first two years.

A. CME Globex Audit Trail

1. Audit Trail Creation And Contents

The audit trail for electronic trading at CME and CBOT is created by CME Globex, the electronic trading system used by both Exchanges, which now accounts for approximately 88 percent of all trades executed at CME and CBOT. Since the 2006 rule enforcement review of CME, CME Group has added significant capacity to the CME Globex system in order to keep pace with significant growth in both the number of messages submitted to the system by market participants and the volume of trades executed on it. From October 1, 2004 to October 1, 2005, the target period for the previous review, CME Globex received an average of approximately 160 million order messages per month, and executed an average volume of approximately 57 million contracts per month. During 2008, the target period for this review, the system received an average of approximately 1 billion order and order modification messages per month, and executed an average volume of approximately 197 million contracts per month.¹⁴ One factor in this growth, resulting from the 2007 merger of CME and CBOT, was the migration of electronic

¹⁴ The 2008 figures reflect trading activity at CBOT, CME, NYMEX, and COMEX following the mergers in 2007 and 2008.

trading in all CBOT products from CBOT's former electronic trading system, LIFFE-Connect, to CME Globex during the first quarter of 2008.

CME Globex creates a comprehensive audit trail for electronic trades by automatically recording all messages entered into the system, and retaining them in a database for at least five years. The retained information includes all orders, all order modifications, cancellations or replacements, all responses by the system to such messages, and all trades matched by the system. It also includes all quotes submitted by market makers through CME Globex's mass quote functionality, new to the system since the 2006 CME rule enforcement review, which allows submission of quotes across an entire product group in one message. The audit trail also includes the date and time of each message and each matched trade, recorded to the nearest millisecond. The system does not allow traders or exchange staff to erase or alter any message from the audit trail, whether it consists of an order, mass quote, order modification or cancellation, or trade match.

The CME Globex audit trail includes both historical and live data. Data from September 2007 to the present is immediately accessible online, through a new archive system installed since the last review, which provides faster data access. Data enters the database on a real time basis, and can be reviewed by Market Regulation staff up to the minute if desired. Historical data going back at least five years, and any data not immediately accessible online, can be accessed and viewed online within one or two days (depending on the volume of older data requested).

The audit trail data for each order includes the order's price, quantity, product (including the contract month and year), customer type indicator ("CTI") code, buy/sell indicator code, exchange indicator code, clearing member code, order type (and order qualifier, stop price or

trigger price, if applicable), account number, and, for options, a put or call indicator and strike price. All of this information must be entered into the system before CME Globex will accept an order. Each order carries a trade order number, assigned by the front end system used by the trader entering the order, and a host order number, assigned by CME Globex upon receipt of the order. These numbers facilitate tracking the order's history within the trader's computer system and within CME Globex, respectively. For modified or cancelled orders, audit trail data includes a record of the nature of the modification or cancellation. For spread orders, audit trail data includes a spread ID, the spread type, and the number of legs in the spread. For executed orders, the data also includes complete fill information.

2. Identification Of Order Sources

Orders may be entered into CME Globex by CME floor members; by clearing members or the futures commission merchants ("FCMs"), introducing brokers ("IBs"), or other clients they guarantee; or by customers of such guaranteed FCMs, IBs, or other clearing member clients using a CME-certified front-end system to transmit their own orders.¹⁵

Each person who enters an order into CME Globex must first logon to the system with a unique workstation operator identifier, known as a Tag 50 ID, that identifies the individual operator and is included in the data retained by the system with respect to every order. The rules of the Exchanges bar all market participants from entering any message into the system under any Tag 50 ID other than their own, and from permitting any other individual to use another's Tag 50 ID. Tag 50 IDs were used at CME prior to the merger of the Exchanges, and were adopted for use in connection with CBOT product trading on CME Globex after the merger.

¹⁵ A variety of front-end applications are available from CME, FCMs, IBs, and independent software vendors ("ISVs"). Customers using a front-end system may connect to CME Globex over the Internet or through the network or data center of an FCM, IB or ISV. Customers who qualify for and execute a direct access agreement with CME may submit their orders directly into CME Globex through their own direct connection.

Tag 50 IDs are assigned to CME Globex users either (a) by the Exchanges, or (b) by a clearing member or a clearing member's client or Independent Software Vendor ("ISV") acting under the clearing member's supervision in this regard.

Exchange-assigned Tag 50 IDs are issued by the Globex Control Center ("GCC") to each CME or CBOT member or member employee who enters orders into CME Globex using an Exchange-provided Galax-C handheld terminal on the CME-CBOT trading floor, and to each market participant who enters orders into CME Globex using the Exchange-provided front-end system known as Enhanced Option System Trader. Orders entered via these technologies account for less than one percent of all CME Globex orders. The GCC retains registration information in a database for each individual to whom it assigns a Tag 50 ID, including the person's name, date of birth, country of primary address, email address, and last four characters of the person's tax ID or equivalent governmental identification number.

The remaining 99 percent of CME Globex orders are entered by clearing members, FCMs, IBs, or customers using electronic order routing systems connected to CME Globex through iLink, CME Globex's Application Program Interface.¹⁶ The Exchanges require the clearing member that guarantees each iLink connection point to assign (or cause the FCMs, IBs, or other customers it clears to assign) a Tag 50 ID to each person who enters orders into CME Globex through that connection point that is unique among the Tag 50 IDs issued by or under supervision of the clearing member.

¹⁶ The audit trail for each message sent to CME Globex via iLink includes codes identifying both the server that hosts the iLink connection, and the particular instance or session of iLink (if any) within it, from which the message originated. Firms often set up a separate instance or session of iLink for the use of a particular customer or of a particular trading desk within the firm. The session ID attached to messages originating in a particular session enables rapid tracking of the messages transmitted by that customer or trading desk.

Each Automated Trading System (“ATS”) that generates and routes orders to CME Globex must also be given a unique Tag 50 ID that identifies the person who operates or administers the ATS (the “ATS Operator”) by initiating or disabling algorithms or strategies, adjusting the parameters of automated programs, or monitoring live trading by the ATS. If multiple individuals work together simultaneously to operate the ATS, Market Regulation may approve their designation as an “ATS Team” that is assigned a single Tag 50 ID.¹⁷ This exceptional situation is the only instance in which the Exchanges permit more than one individual to be identified by the same Tag 50 ID. Where a single ATS Operator or an ATS Team is responsible for multiple trading models, algorithms, programs, or systems that trade the same product and potentially could trade opposite one another, each such model, algorithm, program, or system must be assigned a separate Tag 50 ID.

Tag 50 IDs must be registered in the Exchange Fee System (“EFS”) if they are assigned to individual Exchange members, employees of individual members, employees or contractors of a clearing or corporate member, or any other party whose trades receive preferential trading fees under CME’s or CBOT’s fee programs.¹⁸ In addition, either the GCC or Market Regulation can require registration of the Tag 50 ID of any other market participant, something typically required when a participant generates significant messaging traffic. If registration of an ATS or ATS Team Tag 50 ID is involved, the ID will be identified as such in the registration process. Clearing members are required to ensure that all Tag 50 IDs requiring registration in the fee

¹⁷ For example, an ATS Team Tag 50 ID could be assigned where one firm employee may adjust pricing parameters, while another continuously monitors positions or risk or adjusts trade size parameters. ATS Team Tag 50 IDs are permitted only in true team situations where multiple operators operate the same ATS at the same time. Team Tag 50 IDs are not allowed for operators that are primarily responsible for different ATSs, or operators who control the same ATS on different shifts.

¹⁸ Market Regulation reviews these identifiers during periodic fee program audits to ensure accurate use of the identifiers and to ensure that traders receiving reduced trading fees continue to qualify for fee reductions.

system for any of these reasons are registered, with accurate information that is current at all times.

By correlating the Tag 50 IDs included in the audit trail of each order submitted to CME Globex with the Tag 50 IDs registered in the fee system and those issued by the GCC, Market Regulation is able to identify the individuals responsible for approximately 75 percent of the combined volume of CBOT and CME and for approximately 75 percent of trades occurring on CME Globex. The identity of all other Tag 50 holders is available to Market Regulation upon request through the Exchanges' clearing members. CME and CBOT rules require each clearing member that guarantees an iLink connection point to maintain records of all Tag 50 IDs issued in connection with use of that connection point for at least five years, and to be able to provide to Market Regulation, upon request, the identity of the person to whom any particular Tag 50 ID was assigned. Because Market Regulation can obtain the identity of a market participant with an identifier not registered directly with the GCC by querying the clearing member involved, the Exchanges believe it is unnecessary to require that every retail client have an identifier directly registered with the GCC.

3. Identification Of Account Owners

Market Regulation can identify the owner of the account whose number is attached to a given Globex order in one of three ways. First, the Exchanges' fee system maintains a record of the identity of the owner or owners of each account registered in the Exchanges' fee system in order to obtain discounted trading fees. This includes all accounts of individual members, member firms, and other entities receiving preferential fees, and represents approximately 16 percent of the accounts, and approximately 80 percent of the volume, traded on Globex. Second, in 2010, Market Regulation will complete its project that ties CFTC Form 102 account owner information submitted for each account included in the Exchanges' new large trader reporting

system, known as the Large Trader System (“LTS”), to corresponding identified trading accounts with a Market Participant Identifier.¹⁹ This will make account owner information visible to staff investigators who are using either LTS or the Sophisticated Market Analysis Research Technology (“SMART”) system to conduct trade practice surveillance.²⁰ Third, Market Regulation can obtain the identity of the owner or owners of an account not identified through the fee system or large trader system by calling the clearing member that guarantees the account.²¹

4. Pre-Host Audit Trail Data

In addition to the audit trail data recorded and maintained in the CME Globex database, the Exchanges also require each clearing member to maintain or cause its customers to maintain for five years a complete order-routing, front-end audit trail for all electronic orders entered into CME Globex through iLink by that clearing member or its customers.²² The clearing member must be able to produce this audit trail data in a standard format to Market Regulation upon request. In addition to a complete record of all messages transmitted to CME Globex, the audit trail so maintained must include a record of all orders that were placed but rejected for any reason either by the order routing system or by CME Globex.

¹⁹ CFTC Form 102 is used by clearing members, FCMs, and foreign brokers to report to the Commission on a daily basis, as required by Commission regulations, the futures and options positions of each trader holding positions at or above reporting levels set by the Commission for each commodity under its jurisdiction. The aggregate of all large trader positions reported to the Commission usually represents 70 to 90 percent of the total open interest in any given market.

²⁰ LTS and SMART are discussed below at pages 58-61.

²¹ In July 2010, the Commission published a Notice of Proposed Rulemaking addressing the collection of ownership and control information with respect to all trading accounts active on U.S. futures exchanges and other reporting entities. The Division plans to hold a public meeting during the comment period and will also review and consider comments prior to issuing a final rule.

²² CME Rule and CBOT Rule 536(B)(2). The Exchanges impose this requirement pursuant to the Commission’s Advisory, *Alternative Method of Compliance With the Written Record Requirements*, 62 Fed. Reg. 7675 (Feb. 20, 1997).

B. Review Of Compliance With CME Globex Audit Trail Requirements

Review of trader compliance with both electronic and open outcry audit trail and recordkeeping requirements is carried out by Market Regulation's eleven-person Data Quality Assurance Group ("DQA Group").

During the target period, Market Regulation refocused and reorganized its program for review of compliance with electronic audit trail requirements. At the time of the previous rule enforcement reviews at the Exchanges, when electronic trading was newer and accounted for a smaller share of overall trading volume, CBOT reviewed electronic audit trail compliance by mining CBOT's electronic audit trail data for indications of possible audit trail problems, while CME reviewed such compliance during annual back office audits of clearing members, focusing primarily on firm maintenance of front-end audit trail data captured and retained by order routing systems connected directly to Globex.²³ As time passed and electronic trading growth continued, CME found that its trade practice investigations rarely needed to rely on the pre-host audit trail data captured by a trader's front-end system, due to the comprehensive scope of the electronic audit trail maintained by the CME Globex system itself.²⁴ When it created a new electronic audit trail compliance program for both Exchanges following the merger, Market Regulation combined CBOT's emphasis on review of trading system audit trail data with CME's emphasis on review of electronic audit trail compliance in annual audits of each clearing member.

Market Regulation now conducts annual "Globex audits" of recordkeeping in the electronic trading done under the auspices of each of the Exchanges' clearing members. These Globex audits have grown sufficiently in size and significance that they are now conducted

²³ Back office audits of clearing members are discussed below at pages 47-49.

²⁴ During the present target period, Market Regulation found it necessary to obtain pre-host audit trail data in only one out of 420 trade practice investigations.

separately from Market Regulation's annual back office audits of clearing members. The principal component of the audit consists of DQA Group staff review of CME Globex electronic audit trail data for trading guaranteed by the clearing member, using new automated surveillance tools developed by Market Regulation during the target period, to detect instances of potential violations of electronic audit trail requirements relating to Tag 50 IDs, CTI codes, and account numbers.

To enforce Tag 50 ID requirements, analysts select a period of time for examination, typically two to three months of trading, and aggregate orders entered during that period under selected Tag 50 IDs or for selected account numbers.²⁵ They then review the orders associated with individual IDs or account numbers for trading patterns that may indicate either audit trail errors or possible violations of electronic audit trail rules concerning the use of Tag 50 IDs, account numbers, and CTI codes. Patterns suggesting possible ID rule violations may include involvement of a single ID in trading on behalf of multiple accounts, trading for most or all of a 24-hour day, or simultaneous or near-simultaneous trading originating from geographically separated locations. An unusually high volume of messages sent to the trading host under a single ID could suggest possible violation of requirements for registration and identification of an ATS.²⁶ Trading for a single account by multiple or unusually large numbers of Tag 50 IDs may also indicate potential ID violations. Patterns indicating possible account number or CTI code violations may include trading on behalf of a single account or single Tag 50 ID that

²⁵ Prior to the target-period development of the new automated surveillance tools discussed here, such aggregation was only possible through exporting audit trail data into an Excel spreadsheet, a slower and more labor-intensive process.

²⁶ ATS trading now accounts for approximately one third of the Exchanges' total volume. As discussed above, almost all ATSs are required to be registered directly with the Exchange, either because they are operated by members or market participants who receive preferential trading fees under the Exchanges' fee programs, or because Market Regulation requires their registration due to the high volume of message traffic they generate. Each Tag 50 ID assigned to an ATS or ATS team is identified as such.

involves multiple CTI codes, or unusual or frequent account number corrections or changes. When examination of aggregated trading data reveals patterns that could indicate possible violations of market participant identification rules, DQA Group staff investigate further, contact involved market participants with questions, obtain documents where needed, and verify the identity of the holder of each Tag 50 involved.

To monitor the use of CTI codes and detect patterns suggesting possible CTI code errors or related rule violations, analysts use the CTI Code Report to isolate instances where trading on behalf of a single account includes orders bearing different CTI codes, and review them for anomalous CTI code combinations.²⁷ For example, while it can be normal for trading on behalf of a single account to include orders coded CTI 1 (individual member for himself) and CTI 3 (individual member on behalf of another individual member), trading for one account that involved both orders coded CTI 2 (orders for a proprietary account of a member firm) and orders coded CTI 4 (orders entered on behalf of a non-member market participant) would indicate possible audit trail errors or trading violations.²⁸ When a CTI code review discloses such anomalies, analysts call the firm involved to ask the reason for the presence of inconsistent CTI codes. If the problem was caused by incorrect programming of the firm's front-end trading systems, corrections are requested. Where further investigation discloses improper trading practices, Market Regulation can issue warning letters or institute disciplinary proceedings.

²⁷ For electronic trading at the Exchanges, CTI codes have the following meanings. CTI 1 indicates a transaction by an individual member for her own account, an account she controls, or an account in which she has an ownership or financial interest. CTI 2 denotes a transaction for a proprietary account of a member firm. CTI 3 designates an order entered by a member or non-member terminal operator for an account owned or controlled by another individual member. CTI 4 applies to transactions not covered by the other codes, and typically denotes an order entered by or on behalf of a non-member. *See* CME and CBOT Rule 536D.

²⁸ Other anomalous CTI code combinations that would require additional review include trading for a single account that included orders coded both CTI 1 and CTI 2, or orders coded both CTI 1 and CTI 4.

To enforce electronic audit trail requirements concerning usage of account numbers, analysts use the Account Change Report to review account number corrections made by firms after execution but before the final clearing cycle. This report enables analysts to see, over any desired period of time, all instances where a given account number was changed to another account number, and to detect patterns in such changes. Analysts investigate further where an account number is involved in a significant number of changes, or in changes that appear unusual or lack an obvious explanation. In the course of their review of account number changes, analysts also monitor compliance with the Exchange's rules relating to give-ups and use of suspense accounts, requesting relevant records to verify that required information and timestamps are present for all stages of such transactions.

Although review of front-end audit trail data is no longer the principal focus of electronic audit trail compliance program, the DQA Group continues to review front-end audit trail data from each new front-end system used to submit orders to CME Globex when the system first goes into use, in order to ensure that the system is saving all required audit trail data as required by the Exchanges.

The DQA Group also continues to review each clearing firm's procedures for assignment of unique Tag 50 IDs, and for maintaining current information regarding the registered user of each ID, during Market Regulation's annual back office audits of clearing members. As part of such review, analysts verify the registered user information for a random sample of the Tag 50 IDs issued by the firm or by clients of the firm.

One additional component of the audit trail for a very small number of CME Globex orders is comprised of paper order tickets. The Exchanges' rules require that customer orders for CME Globex trading that are telephoned to an FCM or IB must be immediately entered into

CME Globex upon receipt if they are executable when received. If a customer order is not immediately executable, the date and time the order was received, the customer's account number and the terms of the order must be recorded on a written order ticket. The order must then be entered into CME Globex as soon as it becomes executable. During back office audits of clearing members, Market Regulation reviews samples of any paper order tickets for CME Globex orders prepared by the firm. No deficiencies with respect to such order tickets were found during the back office audits conducted during the target period.

Market Regulation reports that its new program of regular review of CME Globex audit trail data to detect patterns that can indicate potential violations of electronic audit trail requirements has resulted in better market participant understanding of, and improved compliance with, the Exchanges' electronic audit trail requirements.²⁹ The program also enables Market Regulation to identify firms and individuals that have not maintained generally high levels of compliance with electronic recordkeeping and audit trail requirements, and to develop the evidence needed for appropriate disciplinary proceedings.

During the target period, the DQA Group conducted a total of 59 Globex audits covering each of the Exchanges' 35 clearing members.³⁰ In 42 of the audits, staff identified audit trail issues ranging from incorrect CTI codes, problems with correct Tag 50 ID transmission, incorrect configuration or use of Tag 50 IDs, and failure to register Tag 50 IDs as ATS IDs to sharing of Tag 50 IDs. In 12 audits, no issues were identified. Four audits disclosed that the clearing member did not have any electronic trading activity during the target period, and testing

²⁹ Thus far, Market Regulation has found that the nature of the audit trail requirements for electronic trading makes it difficult to quantify degrees of compliance or instances of non-compliance with electronic audit trail requirements, or to reduce such compliance to metrics, in ways similar to what is possible with respect to the audit trail for open outcry trading.

³⁰ The number of Globex audits exceeds the number of clearing members because Market Regulation conducts separate Globex audits with respect to trading in CBOT products and trading in CME products at each of the 24 clearing members that clear trading on both Exchanges.

was not conducted at one firm that ceased clearing in March 2008. In 34 instances, issues disclosed by the audit were resolved by corrective action taken by the clearing member that satisfied Market Regulation's concerns. Market Regulation issued a pair of warning letters (one regarding CBOT trading and one regarding CME trading) to each of two clearing firms, for sharing and other improper use of Tag 50 IDs and failure to properly register ATS Tag 50 IDs. One clearing firm was referred for disciplinary action as the result of the Globex audits of both its CBOT-related and CME-related trading that disclosed a substantial degree of improper use of Tag 50 IDs. Finally, dual audits of one clearing member in which improper Tag 50 ID use was found have not yet been closed, but are likely to result in either a pair of warning letters to the firm or in referral for disciplinary action.

C. Open Outcry Audit Trail

1. Introduction

As noted above, one of the major changes resulting from the merger of CME and CBOT was the migration of open outcry trading in CME products to CBOT's trading floors in the spring of 2008. Today, all open outcry trading at both CME and CBOT takes place on the same open outcry trading facility, which is spread over two floors of the CBOT building (hereinafter, the "trading floor"). The other significant change in open outcry trading at the Exchanges since the last review is the continuing diminution in the overall number of traders on the floor, as trading volume continues to migrate from open outcry to Globex. Market Regulation estimates that the overall population of the trading floor decreased by approximately 23% during the target period, and today is approximately 55 to 60 percent of what it was in 2005.

Open outcry orders can be transmitted to floor brokers in the pit by flashed hand signals, verbal transmission over floor broker headsets, physical delivery of paper order tickets, or electronic order routing. The relative proportions of orders sent to floor brokers in these

different ways varies with the product involved. Flashing, headset transmission, or hand delivery of order tickets are used in connection with approximately 77 percent of all open outcry trades and 91 percent of all open outcry volume, while electronic order routing is involved in approximately 23 percent of open outcry trades and approximately nine percent of open outcry volume.³¹ The preponderance of electronic order routing takes place in the Exchanges' agricultural markets.³²

2. Electronic Audit Trail For Open Outcry Orders

Floor brokers receive electronically-routed open outcry orders on laptop computer devices called Electronic Clerks ("ECs"), which were used at CBOT prior to the merger and are now available for trading in CME products as well. ECs enable floor brokers to organize their order decks automatically by price and order type; group orders at the same price and order type for faster and easier execution; endorse filled orders; and return trade confirmations to the originating order entry device. Orders can be transmitted directly to ECs by the order management systems of FCMs that are connected to the Exchanges' OrderDirect Application Programming Interface ("OrderDirect").³³ They can also be transmitted to an EC by a floor desk

³¹ For example, in open outcry trading in agricultural products, Electronic Clerk ("EC") and Handheld Terminal ("HHT") devices for electronic order routing of open outcry orders, discussed below, are involved in approximately 35% of total trades in corn (CBOT), 32% in soybeans (CBOT), and 17% in wheat (CME). By contrast, in pit trading in financial products, ECs and HHTs are involved in less than 6% of total trades in Treasury Bonds (CBOT), less than 4% in the S&P 500 (CME), and less than 1% in 10 Year Notes (CBOT), and they are not used at all in the trading of the E-Mini S&P 500.

³² 160 ECs (approximately 77 percent of the 208 ECs in use at the Exchanges) and 266 HHTs (approximately 72% of the 368 HHTs in use at the Exchanges) are used in pits trading agricultural products, while 48 ECs (23%) and 102 HHTs (28%) are employed in pits trading financial products. The relatively greater presence of electronic order routing in agricultural markets reflects the fact that the electronic order routing system involved, named Denali, was developed at CBOT prior to the merger of the Exchanges, and its use was promoted to CBOT floor traders in agricultural markets through an incentive program.

³³ The CME Universal Broker Station ("CUBS") terminals formerly used at CME to fulfill functions similar to those of ECs have been retired. In addition, member firms no longer use proprietary order routing systems to transmit open outcry orders to the trading floor, due to the availability of transmission via OrderDirect.

clerk using a Comet laptop device provided by the Exchanges, after being received at a member firm's floor desk by telephone, email, instant message, or other similar means.³⁴

Locals can record their personal open outcry trades on Handheld Trading Devices ("HHTs"), which are lightweight, wireless, handheld computers provided to locals by the Exchanges and sometimes referred to as "electronic trading cards."³⁵ Some locals record their trades on traditional paper trading cards, and then have their clerks enter data from the trading cards into an HHT. Trades recorded on an HHT must be recorded in the exact sequence in which they were executed, and the 15-minute time bracket for each trade must also be entered.

Audit trail data concerning all open outcry trades transmitted electronically through an EC or HHT is maintained in a database called ECHELON that is part of the Exchanges' Sophisticated Market Analysis Research Technology ("SMART") system. This audit trail includes a record, not alterable by either market participants or Exchange staff, of each order routed electronically to an EC on the floor, and a record of the terms of each entry made in an EC by a floor broker or in an HHT by a local, including all changes made and all fills recorded. SMART also automatically creates a record of various times associated with each order, recorded to the nearest one thousandth of a second, including the time an order is transmitted to an EC; the time an order is accepted by a floor broker; the time that any change to an order is entered; and the time that a trade or order fill is recorded on an EC or HHT by a floor broker or

³⁴ Comet enables floor staff to send futures and options orders to pre-designated floor brokers; transmit order tickets to the executing floor broker for endorsement; timestamp order tickets automatically; receive trade fill data from the floor broker's EC and forward fills to the firm's bookkeeping system for trade processing; and handle customer inquiries. Comet also allows members to pre-program quick-pick lists of customer account numbers to speed account number input and reduce possible errors, and it can also process single-firm give-up information. Market Regulation estimates that 136 Comet workstations were in use at the end of the target period to route orders from member firm booths to broker ECs, principally in the Exchanges' agricultural markets.

³⁵ Market Regulation estimates that at the end of the target period approximately 370 HHTs were being used by locals. Market Regulation reports that HHT use is most prevalent in the corn and Dow Jones index pits.

local.³⁶ The electronic audit trail for open outcry orders and trades processed through these electronic devices is substantially similar to the audit trail retained by CME Globex with respect to electronic orders and trades, with the significant exception that, because pit trades are (by definition) executed by open outcry rather than by a computer algorithm, open outcry execution times themselves are not recorded electronically.³⁷ Audit trail data for orders processed by ECs and HHTs is accessible to Market Regulation analysts from their desktop computers, without the need to first obtain paper order tickets and trading cards from clearing firms.

All Exchange members, member firms, and their employees must keep full, complete and systematic records, including records created or transmitted electronically, of all transactions relating to the business of dealing in commodity futures, options, and cash transactions, retain such records for a minimum of five years, and make them available to Market Regulation or the Commission on request, in accordance with Commission Regulation § 1.35. This includes retention of order ticket and trading card originals by clearing members and of duplicate copies by floor traders.

All headset communications and all telephones in or on the perimeter of a trading pit must be voice recorded by the member or member firm authorized to use the headset, unless specifically exempted by Market Regulation, and all such recordings must be maintained for a minimum of 10 business days following the day on which the recordings were made. Recording of telephone communications over Exchange floor telephone lines is not required, but members and member firms that choose to record conversations on such lines, whether for customer

³⁶ As discussed below, these times are used by the Exchanges' new Trade Timing Algorithm ("TTA") system in its calculation of imputed execution times for open outcry trades, and the greater precision of these electronically recorded times has resulted in more accurate imputation of execution times for the trades involved.

³⁷ Prices for all of the Exchanges' open outcry trades continue to be included in the Exchanges' Time and Sales Report by the traditional method, with the floor broker or local calling out the price to Exchange floor staff.

dispute resolution or other purposes, must maintain the resulting recordings for at least 10 business days following the day on which the recordings were made.

3. Paper Audit Trail For Open Outcry Orders

The Exchanges maintain a traditional paper audit trail for orders transmitted to the pit via headset, flashing, or physical delivery of paper order tickets, as a majority of open outcry orders continue to be. When an open outcry order arrives at the initiating firm's floor order desk, whether by telephone, email, instant message, or other similar means, or is received directly by a floor broker over a headset, the terms of the order, the account identifier, and the order number must be recorded on a paper order ticket at the desk in non-erasable ink, unless this information is recorded electronically as the result of prompt transmission of the order by floor desk staff to a floor broker's EC via Comet as discussed earlier. The order can then be transmitted to a floor broker over his headset, by flashed hand signals, or by hand delivery of the paper order ticket. If a floor broker receives an order over a headset directly from a customer, a paper order ticket must also be created, by the floor broker, his floor clerk, or the floor order desk in the case of a three-way audio connection.

When a customer order is executed, the floor brokers involved are required to record fill information on an order ticket or brokerage card, unless the order was routed or recorded through an EC.³⁸ The order terms required to be recorded includes the order's date, product, expiration month, quantity, price, 15-minute time bracket symbol, opposite trader, opposite clearing member, and for options a put or call indicator and strike price. Order tickets must also record

³⁸ In the case of a trade made for another member on the floor, recording of the fill on a non-sequenced trading card known as an endorsement card maybe be substituted for the order ticket.

the order number and account identifier for the account for which the order was placed.³⁹ Order tickets must be timestamped immediately when the order is received on the floor (“entry time”), and timestamped again when the fill is reported to the customer (“exit time”) or when the order is modified or cancelled.⁴⁰

Trades executed for a member’s personal account must be recorded in non-erasable ink on a single-sided trading card which contains a pre-printed sequence number and the floor member’s trading symbol.⁴¹ All transactions on the card must be recorded in the order in which they were executed. The floor member may not skip any lines, and must cross out any unused lines before starting a new card. Erroneous information may be crossed out, but may not be obliterated. No more than six transactions may be recorded on a single card, and a new trading card must be used at the start of each 15-minute time bracket.

The trade data required to be recorded on both order tickets and trading cards includes the date, price, quantity, commodity, and contract month of the trade, the symbol of the 15-minute time bracket during which the trade was executed, the executing member’s name or symbol, the name of the member firm clearing the trade, and the identity of the opposite member and clearing firm. Options trades must also include the strike price, put or call indicator, and expiration month.

Order tickets and any related endorsement cards for filled orders and sequenced trading cards used during any 15-minute bracket period must be turned in for collection within 15

³⁹ A customer account number is not required at the time of execution for bunched orders entered by eligible account managers for accounts eligible for post-trade allocation, provided that such orders are allocated and recorded in accordance with Commission Regulation 1.35(a-1)(5).

⁴⁰ At the beginning of each trading day, clearing members must ensure that each time clock used on the floor by the floor traders cleared by the firm is synchronized with the Exchange’s master clock.

⁴¹ Trades made for other members on the floor are recorded on non-sequenced trading cards known as endorsement cards.

minutes of the end of the half-hour pickup period during which the tickets and cards were used, for timestamping by clearing firm staff who keypunch the data into the Exchanges' clearing system.⁴²

D. Trade Timing For Open Outcry Trades

The merger of the Exchanges also resulted in updating of the system Market Regulation uses to impute execution times for open outcry trades in accordance with the Exchanges' one-minute trade timing requirement. The systems used by the Exchanges for this purpose prior to the merger were largely similar in their approach to imputing execution times, although they differed slightly in the weights they assigned to different trade time indicators.⁴³ During the target period, Market Regulation used both systems in parallel to impute times for each open outcry trade made on the combined CBOT-CME trading floor, while developing a new system for the merged Exchanges. In August 2009, Market Regulation began using the new system, the Trade Timing Algorithm ("TTA"), for all open outcry trades at both Exchanges.

The new TTA system, which runs on state-of-the-art computer technology, uses the various timing indicia from order tickets, trading cards, and electronic order routing data for open outcry trades, along with time and sales information, to impute execution times for all open outcry trades. From all the available timing indicia, TTA constructs a series of timing windows using relevant "start" and "end" times, and compares these windows to narrow the timeframe during which a trade could have occurred. Based on the narrowest timing window that can be constructed, the system then assigns an imputed execution time to the trade. The system imputes a trade time even for trades without a corresponding price quote, based on all the other available

⁴² For example, trading cards used to record trades during time brackets "C" (7:30:00 to 7:44:59 a.m.) and "D" (7:45:00 to 7:59:59 a.m.) must be turned in no later than 8:15 a.m.

⁴³ For example, CBOT's Denali electronic audit trail system for some open outcry trades had no counterpart at CME.

timing indicia. It also has enhanced functionality for imputing trade times for spread transactions.⁴⁴

E. Enforcement Of Trade Recordation Requirements For Open Outcry Trades

Market Regulation uses TTA execution times and the trade data collected from floor trading documents and electronic order routing to reconstruct open outcry trading activity and conduct trade practice surveillance with respect to open outcry trading. Because the accuracy and efficacy of this process depends on proper recordation of trade data by floor members and accurate entry of such data into the clearing system by clearing members, Market Regulation conducts two types of routine audit trail reviews to monitor compliance with Exchange open outcry recordkeeping rules. Market Regulation monitors floor member compliance with trade recordation requirements through daily electronic review of recordkeeping exception reports concerning all open outcry trades, and reviews clearing member compliance with data entry standards through annual back office audits of all clearing members.

1. Review Of Recordkeeping Exception Reports

a. Summary Recordkeeping Fines For Individual Open Outcry Traders

Market Regulation monitors recordkeeping compliance by all open outcry traders through regular review of computerized recordkeeping exception reports generated by the Computerized Trade Reconstruction (“CTR”) Edit system. In April 2008, Market Regulation implemented a revised CTR Edit program that harmonized the separate programs in place at CBOT and CME pre-merger. CTR Edit system exception reports, which cover all open outcry trades, identify instances of audit trail recordation and data entry errors, including: (a) bracket errors, where a floor member does not indicate a time bracket or reports an erroneous time bracket; (b) time of

⁴⁴ A separate Spread Grouping Algorithm (“SGA”) system, associated with TTA, creates imputed trade times for open outcry spread transactions.

execution errors, where a required execution time is not recorded or submitted; and (c) sequence errors, where the imputed time for a trade entered into the clearing system is out of chronological order with other trades recorded on the trading card, or where trading cards are used out of sequence.

Market Regulation reviews CTR Edit system exception reports on a monthly basis to determine whether any floor members have bracket, time of execution, or sequence errors for eight percent or more of their trades. Each floor member's compliance is tracked over a rolling 12-month period. Floor members receive a warning letter the first time they reach the eight percent monthly threshold for recordkeeping errors in one of these categories during any 12-month period, while subsequent offenses within a rolling 12-month period incur summary fines, as discussed below.⁴⁵ In addition, Market Regulation can refer any recordkeeping offense (even a first offense) that it deems egregious to the Probable Cause Committee.⁴⁶ Summary fines are final and unappealable, and can be rescinded only if the floor member presents evidence to Market Regulation within 15 days demonstrating that an administrative, clerical or other error caused the apparent recordkeeping violation.

The Exchanges' post-merger summary fine schedule in effect from September 2008 through December 2009 provided for a slower escalation of summary fine amounts for repeat offenses than the previously existing summary fine schedule, which provided for fines of \$500 for a second offense, \$1,000 for a third offense, and \$5,000 for any subsequent offenses within

⁴⁵ The CTR system also produces daily exception reports, which are used to provide members with continuous feedback concerning their compliance with recordkeeping requirements and encourage prompt correction of recordkeeping errors. At the beginning of each trading day, each trader has access to an electronic copy of the trader's exception report from the previous two trading days. Traders are encouraged to review their reports and correct the noted recordkeeping errors immediately, contacting their clearing firms as necessary for this purpose.

⁴⁶ The Exchanges' disciplinary committees are discussed at pages 69-70.

the rolling twelve-month period.⁴⁷ Under the post-merger summary fine schedule, repeat offenses in the same offense category within any 12-month period were sanctioned by summary fines of \$250 for a second offense, \$500 for a third offense, \$1,000 for a fourth offense, \$2,500 for a fifth offense, and \$5,000 for a sixth offense. A seventh offense within the rolling twelve-month period resulted in automatic referral to the Probable Cause Committee for disciplinary action.

Market Regulation informed the Division that it added fine levels of \$250 for a second offense and \$2,500 for a fifth offense to the schedule following consolidation of the trading floors because major post-merger changes in the open outcry trading environment, the price reporting system, recordkeeping and reporting requirements, and the recordkeeping enforcement process resulted in a need for a significant “acclimation and education period” for all open outcry traders with respect to open outcry recordkeeping processes and requirements. Following the merger, CME pit traders migrated in stages to the Exchanges’ rebuilt trading floors at CBOT, and thus needed to adjust to a wholly new trading environment. They also had to adjust to a new requirement for reporting every options trade, instead of reporting only price changes as they had been accustomed to do prior to the merger. All traders, and also Exchange price reporting staff on the floor, had to adjust to a new Price Reporting System (“PRS”) that required entry of trade data in a new fashion. Since the new PRS data format differed substantially from the format previously used at CBOT, this change had particular impact on CBOT traders. Data entry errors by Exchange price reporting staff inevitably increased at first, and since the CTR Edit system assumes that data entered into the PRS is correct, this caused an increase in the rate of automatic citations to traders for recordkeeping errors in both the bracket and time of execution categories.

⁴⁷ Prior to the merger, summary recordkeeping fines were not automatically imposed at CBOT, although CBOT did have a structure of escalating recordkeeping fines that was generally followed by the disciplinary committees that imposed all recordkeeping fines.

Recordkeeping difficulties also flowed at first from the new floor's new wallboards, the electronic screens surrounding the floor that make market information visible to all traders. The new wallboards displayed market information differently in some respects than the old ones had done, and the amount of market information displayed had to be reduced in some cases due to the need to display information on both CME and CBOT products in essentially the same space previously used to display data concerning only CBOT products. This hampered traders' ability to check the data entered by price reporting staff and catch errors immediately. In addition, while all pre-merger recordkeeping sanctions at CBOT had been issued by disciplinary committees following verification of the recordkeeping violation based on a review of the underlying documentation by compliance staff, under the new CTR Monthly Enforcement Program for the merged Exchanges, summary fines were now issued automatically based on violations disclosed by the CTR Edit reports, and the burden of proof (and thus the burden of reviewing trade data) shifted to the trader to demonstrate to Market Regulation that a violation had not in fact occurred.

One consequence of these changes was that immediately following the April 2008 move to the new, combined trading floor, Market Regulation observed a substantial increase in open outcry recordkeeping violations in comparison to levels seen at either Exchange before the merger. In response, Market Regulation undertook a major effort to work with pit traders concerning recordkeeping and educate them concerning the Exchanges' post-merger recordkeeping requirements. It added two new fine levels to the recordkeeping summary fine schedule in September 2008 as part of this effort.

From April through December 2008, Market Regulation issued 711 warning letters to traders who reached an eight percent recordkeeping error threshold in one of the three

recordkeeping error categories noted above for the first time in a rolling twelve-month period, with 470 letters going to traders in CBOT products and 241 going to traders in CME products. The warning letters included 566 letters (383 to CBOT traders and 183 to CME traders) for bracket errors, 138 letters (83 to CBOT traders and 55 to CME traders) for time of execution errors, and seven letters (four to CBOT traders and three to CME traders) for sequence errors.

During the same nine-month period, Market Regulation assessed the following summary fines:

- 88 summary fines of \$250 each for second recordkeeping offenses within 12 months, totaling \$22,000. These including 55 fines (41 to CBOT traders and 14 to CME traders) for second bracket offenses, and 33 fines (24 to CBOT traders and nine to CME traders) for second time of execution offenses.
- 134 summary fines of \$500 each for second or third recordkeeping offenses within 12 months, totaling \$67,000.⁴⁸ These included 104 fines (81 to CBOT traders and 23 to CME traders) for bracket offenses, 29 fines (15 to CBOT traders and 14 to CME traders) for time of execution offenses, and one fine (to a CBOT trader) for a sequence offense.
- 34 summary fines of \$1,000 each for third or fourth recordkeeping offenses within 12 months, totaling \$34,000.⁴⁹ These included 23 fines (16 to CBOT traders and seven to CME traders) for bracket offenses, and 11 fines (four to CBOT traders and seven to CME traders) for time of execution offenses.
- Seven summary fines of \$2,500 each for fifth recordkeeping offenses within 12 months, totaling \$17,500. These included four fines (one to a CBOT trader and three to CME traders) for bracket offenses, and three fines (one to a CBOT trader and two to CME traders) for time of execution offenses.
- One summary fine of \$5,000 (to a CME trader) for a sixth recordkeeping bracket offense within 12 months.⁵⁰

⁴⁸ From April through August 2008, \$500 fines were issued for second offenses; \$500 became the fine amount for third offenses beginning in September 2008.

⁴⁹ From April through August 2008, \$1,000 fines were issued for third offenses; \$1,000 became the fine amount for fourth offenses beginning in September 2008.

⁵⁰ From April through August 2008, \$5,000 fines were issued for fourth or subsequent offenses; \$5,000 became the fine amount for sixth offenses beginning in September 2008. The referenced fine for a sixth offense was issued under the post-September 2008 schedule following a \$2,500 fine for a fifth offense.

Overall, from April through December 2008, the CTR Edit program reviewed the recordkeeping compliance of a total of 2,044 active open outcry traders, defined as traders executing at least 100 transactions per month on average. Market Regulation assessed 264 summary recordkeeping fines against 164 individual traders, 118 from CBOT and 46 from CME, in a total amount of \$145,500, and issued recordkeeping warning letters to 666 active individual traders.⁵¹ Thus, approximately 92 percent of the Exchanges' active open outcry traders had no recordkeeping infractions meriting summary fines during this period, while eight percent received at least one summary fine. Approximately 33 percent of active traders received a recordkeeping warning letter during this period. No traders were referred to the Probable Cause Committee for disciplinary action concerning recordkeeping offenses as a result of the CTR Edit program.

Market Regulation informed the Division that the post-floor consolidation education efforts it undertook with open outcry traders concerning the new recordkeeping requirements were effective, and resulted in post-target period reductions in the levels of recordkeeping violations seen shortly after the transition to the new open outcry trading environment. From January through September 2009, the Exchanges had 1,925 active individual traders. During that period, Market Regulation assessed a total of 168 summary recordkeeping fines against 124 individual traders, 96 fewer fines than it assessed between April and December 2008. From January through September 2009, Market Regulation issued 292 warning letters, as compared to the 711 letters issued from April through December 2008.

⁵¹ Given that summary recordkeeping fines are assessed based on a rolling 12-month period, some traders who received fines for a third or later offense during the target period received fines for preceding offenses prior to the beginning of the target period. All fines assessed have been paid, except for two fines totaling \$1,500. Each of these two fines was assessed against a member who has relinquished membership privileges, and who cannot return to the floor as a member or the employee of a member until the fine is paid.

In January 2010 the Exchanges restored the summary fine schedule in place at CME prior to the merger. The current schedule provides for fines of \$500 for a second offense, \$1,000 for a third offense, and \$5,000 for any subsequent offenses within the rolling twelve-month period.

b. Summary Recordkeeping Fines For Member Firms

Market Regulation also reviews monthly CTR exception reports regarding member firm compliance with order ticket and trading card timestamping requirements.⁵² Firms are sanctioned when eight percent or more of the trades cleared by the firm involve timestamping errors. Firms receive a warning letter the first time they exceed this threshold during any 12-month period, while further offenses within any 12-month period are sanctioned by summary fines of \$1,500 for a second offense, \$5,000 for a third offense, and \$10,000 for a fourth offense. These fines are rescindable only if within 15 days the firm presents evidence sufficient to reduce the firm's timestamping error percentage below the threshold level. Fifth offenses are referred to the Probable Cause Committee for disciplinary action. Again, Market Regulation also may refer any offense (even a first offense) that it deems egregious to the Probable Cause Committee. Between April and December 2009, Market Regulation assessed a total of 34 summary fines totaling \$106,000 against 18 firms for timestamping errors, including six fines totaling \$30,000 for second offenses, and four fines totaling \$40,000 for third offenses.⁵³ No firms were referred to the Probable Cause Committee for recordkeeping-related disciplinary action.

⁵² At CME, the timestamping of these documents is performed predominantly by firm staff. The CTR exception reports concerning timestamping note three types of exceptions: (1) instances where required timestamps are missing; (2) instances where a timestamp does not match the time bracket recorded on the document; and (3) instances of a mismatch between a timestamp and a trade execution time.

⁵³ In addition to these fines, eight fines were rescinded based on evidence that the timestamping error percentage of the firm involved did not exceed the target level.

2. Back Office Audits

Market Regulation monitors the accuracy of the order ticket and trading card data submitted to the clearing system by clearing members through back office audits. As noted earlier, the accuracy of this data is important because the TTA system uses it to impute one-minute execution times for open outcry trades. Each clearing firm is audited once each year, together with its subsidiaries, if any.

For each back office audit, DQA Group staff use CTR Exam, a module in the SMART system, to select for review a sample of the trades for which the firm has keypunched data into the clearing system since its last back office audit. The CTR Exam system will include in the sample the trades it identifies as most likely to involve errors; that is, the trades for which the TTA system imputed trade times with low confidence. It will also include in the sample at least one trade made by each trader cleared by the firm who had any trading activity since the last back office audit of the firm. The sample will include at least 150 trades, and in the case of larger clearing members may increase in size to include as much as 10% of the trades cleared by the firm. The time period from which the sample is taken, which is adjusted to ensure inclusion of appropriate numbers and types of trades, can range from two days in the case of a larger clearing member to a week or more in the case of a smaller firm. Once the trades to be included in the review sample are identified, DQA Group staff initiate the audit by means of a letter to the clearing member requesting all of the documents associated with each trade in the sample.

When the documents are received, staff compare the documents for each trade involved with the data entered into the clearing system by the clearing firm for that trade, to determine whether the trade involved any keypunch errors. Firms are sanctioned when 10 percent or more of the trades cleared by the firm involve data entry errors of any sort. No warning letters are issued. Offenses within a rolling 24-month period are sanctioned by summary fines of \$2,500

for a first offense, \$5,000 for a second offense, and \$10,000 for a third or subsequent offense. These summary fine amounts are an increase over previous practice, which called for fines of \$1,000, \$2,500, and \$5,000. Fines can be rescinded only if the firm presents evidence within 15 days demonstrating that the relevant error percentage should be reduced below the threshold level; otherwise, the fines are final and unappealable. In addition, Market Regulation can refer any offense, even a first offense, to the Probable Cause Committee for disciplinary action and possible sanctions of greater severity if it deems this appropriate.

Staff also check each document received to determine whether it was turned in for collection on a timely basis as required by Exchange rules. Trade documents must be timestamped and turned in for collection no later than 15 minutes after the end of each half hour interval during the trading day.⁵⁴ Staff determine whether this was done by comparing the bracket in which the trade was executed with the exit timestamp on the document. Firms are sanctioned when 20 percent or more of the trades they clear are not submitted in a timely fashion at any point during a rolling 24-month period. Warning letters are not issued, and summary fines apply on the same summary fine schedule used for keypunch offenses.

If a back office audit reveals sufficiently serious recordkeeping problems, Market Regulation may conduct a follow-up audit of the firm within two or three months of the regularly-scheduled annual audit.

During the target period Market Regulation conducted 100 back office audits at the Exchanges' 97 clearing firms (including their affiliates). The audits indicated generally high rates of firm compliance with Exchange recordkeeping requirements. The audits of 73 (approximately 76 percent) of the 97 firms had no deficiencies resulting in summary fines. In 26

⁵⁴ For example a floor order ticket for a trade executed between 10:00 a.m. and 10:30 a.m. must be turned in no later than 10:45 a.m.

audits (which involved 24 firms), Market Regulation assessed summary fines totaling \$59,500. Of the fines assessed, 22 were for a first offense within 24 months, while two fines were for second offenses and two were for third offenses.

Division staff reviewed 48 of the 100 back office audits and found that they were thorough and well-documented. Each audit file included an audit summary, copies of original source documents examined during the audit, spreadsheets and work papers prepared by Market Regulation staff detailing findings concerning each transaction reviewed, an audit report, and records of fines assessed and paid, where applicable.

When reviewing trade documents during back office audits of clearing members, DQA Group staff also examine the documents of each trader involved to determine whether they are in compliance with recordkeeping requirements that can be monitored only through document examination and thus cannot be monitored by means of the CTR Edit program. These include the crossing out of unused lines on trading cards, the use of non-erasable ink, and the timely submission of trade documents for orders not completely filled until more than one half-hour period has passed. Offenses by individual traders revealed by this examination are subject to the same standards as those applied to individual traders under the CTR Edit program, discussed above. If trading documents examined during a back office audit suggest potential trade practice violations by an individual trader, copies of the documents are forwarded to trade practice investigators for further inquiry. During the target period, Market Regulation issued warning letters to 152 members for recordkeeping violations identified through document examination during back office audits.

F. Safe Storage Capability

The Exchanges archive complete audit trail data for both electronic and open outcry trading on their legacy mainframe computer system. Archive files for electronic and open outcry data are stored separately. In addition, the SMART and RAPID system databases contain all trade and audit trail data, which can be instantly accessed, and backup hardware for both SMART and RAPID exists at CME Group's primary and backup data centers. The Exchanges also create daily and monthly backups of all audit trail data for both electronic and open outcry trading on computer tape cartridges, which are sent offsite each day or month, respectively, for storage at data backup sites maintained by the data backup provider contracted by the Exchanges. These sites are located a significant distance from CME's headquarters. The data is retained in storage for at least five years.

In addition, all Globex audit trail data is received and recorded in real time, on an essentially simultaneous basis, by the Globex electronic systems at both the Globex primary location at a suburban Chicago site and the Globex backup site in the Chicago Loop area. In a new process using the latest technology, unrewriteable copies of each message received or sent by Globex are retained at each site on a Storage Area Network ("SAN") system and periodically transmitted to a remote site for long-term storage.⁵⁵

⁵⁵ [TO BE REDACTED FROM PUBLIC VERSION] CME Group's safe storage of trade and clearing data and its business continuity and disaster recovery capabilities are covered in more detail in a non-public report submitted to the Commission in May 2009 by the Division of Market Oversight and the Division of Clearing and Intermediary Oversight concerning their joint, horizontal, core principle review of the business continuity and disaster recovery programs of significant designated contract markets and derivatives clearing organizations.

G. Conclusions And Recommendations

The Division found that the Exchanges maintain an adequate audit trail program. The audit trail maintained by the Exchanges records trade data in a manner that enables them to identify customer and market abuses and provide evidence of rule violations. With respect to electronic trading on CME Globex, which now accounts for approximately 88 percent of the Exchanges' total volume, the audit trail is captured and retained in an electronic record which includes all messages entered into or sent by CME Globex, the terms and time of entry for each order, all order modifications, and all matched trades. The system does not allow traders or exchange staff to alter or erase any message from the audit trail. The audit trail includes identification of the source of each order, and enables Market Regulation to readily identify the owner of the account for whom each order is submitted. This record allows Market Regulation staff to reconstruct CME Globex trading efficiently and effectively. Market Regulation conducts annual Globex audits of trader and firm compliance with electronic recordkeeping requirements. The Exchanges also maintain a traditional paper audit trail for open outcry orders transmitted to the pit by headset, flashed hand signals, physical delivery of order tickets, or electronic order routing, and monitors individual member and member firm compliance with recordkeeping rules through routine audit trail reviews which result in detection and sanctioning of recordkeeping violations. Finally, the Exchanges have adequate procedures for safe storage of audit trail data.

The only area of concern for the Division with respect to the Exchanges' audit trail program is the summary fine schedule which Market Regulation uses to enforce individual trader compliance with open outcry recordkeeping requirements. The Exchanges' post-floor consolidation summary fine schedule, as discussed above, provided for a slower escalation of summary fine amounts for repeat offenses as compared with the prior practice at the Exchanges. Market Regulation informed the Division that the reason for this change was that consolidation

of the Exchanges' trading floors in April 2008 and associated changes in the open outcry trading environment, price reporting system, recordkeeping and reporting requirements, and recordkeeping enforcement process, resulted in a significant increase in open outcry recordkeeping violations in comparison to pre-consolidation levels, and in a need for a significant "acclimation and education period" for open outcry traders with respect to new recordkeeping processes and requirements. Market Regulation also reported that its post-merger education efforts in this regard were effective, and that 2009 saw substantial post-target period reductions in the levels of recordkeeping violations seen shortly after the transition to the new open outcry environment.

The Division discussed its concerns about the post-merger relaxation of the summary fine schedule and the low fine amounts in it with Market Regulation during the interview portion of this rule enforcement review. Following this discussion, in February 2010, as noted above, the Exchanges restored the summary fine schedule in place at CME prior to the merger. The current schedule provides for fines of \$500 for a second offense, \$1,000 for a third offense, and \$5,000 for any subsequent offenses within a rolling twelve-month period.

The Division recognizes that the major open outcry changes resulting from the merger of the Exchanges may have required timely efforts to achieve improved recordkeeping compliance such as those employed by Market Regulation during the target period, and may have justified temporary alteration of the summary fine schedule as part of that process. However, the Division remains concerned that, as a matter of regular procedure, even the slightly higher summary fine amounts in the current schedule may be low enough that traders could view them as merely a cost of doing business, and that they therefore could fail to provide a sufficient deterrence of recordkeeping violations on an ongoing basis. Because recordkeeping compliance

is essential to the overall integrity of an exchange's open outcry audit trail, enforcement of recordkeeping requirements and deterrence of recordkeeping offenses is an important part of an exchange's audit trail program.

The Division believes that higher summary fine amounts, including an initial summary fine amount of at least \$1,000, would provide better deterrence of future open outcry recordkeeping offenses, and thus would serve to maintain high rates of recordkeeping compliance. The Division believes the goals of enforcement and deterrence also would be better served by a fine schedule under which each subsequent offense sanctioned by a summary fine rather than referral to the disciplinary committee process receives a fine higher than the one preceding it.⁵⁶

Based on the foregoing, the Division recommends that the Exchanges:

- Review their summary fine schedule for open outcry recordkeeping offenses by individual traders, and adopt a revised summary fine schedule providing for fine amounts that are clearly sufficient to deter open outcry recordkeeping offenses, beginning with an initial summary fine amount of at least \$1,000, and providing for higher, escalating fine amounts for each subsequent offense not referred to a disciplinary committee.

⁵⁶ For example, if a summary fine schedule calls for a \$5,000 fine for a third offense, the Division believes that the fine amount for a fourth offense not resulting in a disciplinary committee referral should be higher than \$5,000 and should maintain escalation of fine amounts across the schedule as a whole.

VI. TRADE PRACTICE SURVEILLANCE PROGRAM

Core Principle 2 – Compliance With Rules:

The board of trade shall monitor and enforce compliance with the rules of the contract market, including the terms and conditions of any contracts to be traded and any limitations on access to the contract market.

Core Principle 12 – Protection Of Market Participants:

The board of trade shall establish and enforce rules to protect market participants from abusive practices committed by any party acting as an agent for the participants.

Pursuant to Appendix B to Part 38 of the Commission's regulations, a contract market's trade practice surveillance program should have the arrangements, resources, and authority necessary to perform effective rule enforcement. The arrangements and resources attendant to the program should facilitate the direct supervision of the contract market, including analysis of relevant data. Trade practice surveillance programs can be carried out by the contract market itself or through delegation to a third party.

An acceptable program should have systems that maintain all data reflecting the details of each transaction executed on the contract market. In this regard, the program should include routine electronic analysis of these data to detect potential trading violations. The program also should provide for appropriate and thorough investigation of all potential trading violations brought to the contract market's attention, including member and Commission referrals and customer complaints. In addition, the program should have the authority to discipline, suspend, or terminate the activities of members or market participants pursuant to clear and fair standards.⁵⁷

⁵⁷ The aspect of Core Principle 2 that relates to the disciplining of members who violate Exchange rules is discussed below in Section VI. This section of the report addresses the Exchanges' program for monitoring their markets for possible trading abuses and the investigation of any identified abuses.

A. Staffing And Division Of Trade Practice Surveillance Duties

As discussed above, Market Regulation's Investigations Group is responsible for conducting trade practice surveillance and investigations for both CME and CBOT. The Investigations Group is headed by a Director of Global Market Investigations, who reports to the Deputy Chief Regulatory Officer. Two Associate Directors supervise the 43 current staff responsible for conducting trade practice surveillance and investigations at CME and CBOT, including three Managers, nine Lead Investigators, three Lead Trading Floor Investigators (all former floor members), four Senior Investigators, and 24 Investigators. The Investigations Group staff assigned to CME and CBOT also includes two Associate Directors and a Senior Trainer responsible for employee development and training, and an Administrative Assistant.

All investigators are involved in two of the three principal tasks of the trade practice surveillance program, namely trade practice research and trade practice investigations. Some are also included in trade practice programs designed to detect particular types of major trade practice violations, as discussed below.

Research (sometimes called trade practice surveillance) consists of regular review or data mining of trade data across both Exchanges, using Market Regulation's sophisticated automated surveillance tools, to detect patterns of trading activity that could indicate possible trading violations and merit further investigation. While research may still include review of pertinent, pre-determined exception reports, its major focus is on customized, ad hoc queries that focus on particular markets, time frames, firms, participants, trade sequences, or other aspects of trading activity. For example, an ad hoc query might involve review of all trading activity during a major market move, identification of the traders who were selling the high and buying the low during that move, and targeted review of their trades for possible violations. Another query might examine trading activity in a product traded both electronically and by open outcry, in

order to search for violations involving side-by-side trading. Still other queries might scrutinize the activity of an individual trader, or focus on trader relationships, characteristic trading practices, proximity of traders in the pit, or other factors chosen by the investigator.

With respect to research work, investigators are assigned to (and eventually rotated on an approximately annual basis through) five primary research groups or teams that review trading across one or more of the major categories or suites of products traded on the Exchanges. The five groups include: (1) CBOT interest rate futures and options; (2) CBOT agricultural futures and options; (3) CME interest rate futures and options, and foreign exchange futures and options; (4) equity futures and options (large, regular, and e-Mini) across both Exchanges; and (5) CME agricultural futures and options, plus all remaining products at either Exchange not covered by another group. Each team is led by a Lead Investigator or Supervisor, and includes staff with varying levels of investigative experience levels. Research teams are responsible for covering both electronic and open outcry trading in all of the products to which they are assigned, and they meet regularly (often weekly) to determine how to allocate resources to each product and what customized strategies to employ in the research process.

Each investigator also participates in investigations (sometimes referred to as casework). Investigations are initiated whenever research, a customer or trader complaint, or a Commission referral indicates the possibility of a violation of Exchange rules or of the Act or Commission regulations. Investigators are frequently assigned to investigations involving products belonging to the research group in which they are working, in order to leverage the expertise they have developed with respect to those products. However, they may also be assigned to investigations involving other products, to enable balancing of investigator workloads and to take into account the varying complexity and length of different cases, as well as staff experience levels.

Investigators are divided into three teams, each headed by a manager. The teams do not specialize in particular products; rather, the team structure exists to optimize the ratio between Managers and investigators.

When an investigator detects a possible violation from research, an exception program, or video or floor surveillance, the investigator meets with the appropriate manager or supervisor in order to develop a strategy for pursuing the matter. When it is determined that a matter merits continued review, an investigative file is opened and assigned a case number, and the investigation is recorded and tracked in Market Regulation's Case Tracking System. During the investigation, staff review and analyze relevant trade data, request needed documents, interview witnesses where appropriate, and may initiate additional video or floor surveillance. When appropriate, cases are expanded to include review of additional, related instances of possible violations. Both during the investigative process and at the conclusion of the investigation, investigators and managers discuss with Market Regulation's Enforcement Group whether the evidence developed would support charging a rule violation in a proceeding before an Exchange disciplinary committee. If a decision to seek charges is made, investigators prepare an investigative report that is submitted to Enforcement Counsel for final approval before transfer of the case into the disciplinary process. If staff determine that there is not a sufficient basis for charges, investigators prepare a closing memorandum that is included in the case file.

Some investigators are also assigned to one of five structured surveillance programs aimed at detection of specific types of trade practice violations where pattern matching is fairly clear-cut, including wash trading, improper cross trading, trading ahead of customer orders, improper assignment of trades, and money pass transactions. Based on its extensive experience in detecting and prosecuting these major violation types, Market Regulation has developed

specific computerized pattern detection tools and methods of data analysis that have proven effective in identifying trading patterns that can indicate that such violations are occurring.⁵⁸ Investigators initially run the computerized exception reports developed for the program with broadly set parameters, to help ensure that possible violations are not missed. They can then narrow the parameters if desired, in order to focus in on particular trades or market participants.

B. Automated Surveillance

Market Regulation uses a combination of three automated systems to detect and investigate trade practice violations for both electronic and open outcry trading, including the Sophisticated Market Analysis Research Technology (“SMART”) system, the RAPID system, and the Exchanges’ large trader reporting system, known as the Large Trader System (“LTS”). The current advanced versions of these systems resulted from the major, post-merger technical work required to consolidate the automated surveillance systems and various types of data used at CBOT, CME, and NYMEX prior to the CBOT-CME merger and the later NYMEX acquisition, while retaining the best features of the legacy systems of each exchange.

1. Sophisticated Market Analysis Research Technology

The SMART system brings together for investigators basically all of the cleared trade and market data for both electronic and open outcry trading at the Exchanges, regardless of the data’s source, including all Globex and open outcry trade data, open outcry electronic order

⁵⁸ The “wash trading program” identifies instances where both sides of a transaction are placed for the same account. It includes detection of ATS trading activity that could constitute wash trading, since market participants who use such systems to enter orders on opposite sides of a market that could cross with each other are responsible for employing algorithmic functionality designed to minimize or eliminate instances where their buy and sell orders match with each other. The “block trade review program” monitors block trades for compliance with Exchange minimum size and trade reporting requirements. Investigators in the “trading ahead program” use a variety of Market Regulation’s surveillance tools to monitor the relationships between a firm’s proprietary trading and its execution of customer orders in the same contract. The “assignment trade program” reviews assignment trades for possible violations of Exchange assignment trade rules. The “cross trading program” reviews electronic trading to identify cross trades that do not fit within the requirements of Exchange rules restricting cross trades to narrowly defined circumstances in which various requirements, such as use of a Request for Quote, are met.

routing and trade recordation data, cleared trade and allocation data from the clearing system, and Times and Sales data. It thus allows investigators to conduct research into trading activity from any desired perspective, using SMART's search, analysis, and summarization functions via an interface that is consistent across all three functions.

SMART's search functions allow investigators to set search parameters based on all available forms of data. For example, investigators can search, or limit searches, by exchange, venue type (electronic or open outcry), product, trader or Tag 50 ID, CTI code, account number, quantity, price, order entry or trade execution time, trade date, order type, open positions, opposite party, profit or loss, give-up activity, or clearing member, among many other possibilities. Once a particular search is created, it can be saved for later use if desired. Investigators can also use SMART search functions to review, for example, trading activity in any product over any desired time span, review Time and Sales data, reconstruct a trader's deck, or examine give-up activity.

SMART's analysis functions allow investigators to repeat research techniques and strategies that have proved fruitful in the past, and give access to resulting exception reports or pattern matches concerning major violation types such as wash trading, money pass, directly or indirectly taking the other side of a customer order, improper cross trading, and trading ahead of customer orders, among others.

SMART's summarization functionality allows investigators to easily create trading profiles for accounts, traders, or firms, or profiles of normal activity for particular markets. These are useful in identifying deviations from normal activity. Market profiles can be also used to identify periods when particular market conditions existed, such as uptrends or downtrends,

rallies, declines, fast markets, and so on, and to examine particular trader activity during such conditions.

SMART queries can be saved in the system for reuse, and can also be exported in hard copy PDF format that can be sent to other Market Regulation staff or included in case files. Search results can also be exported to an Excel spreadsheet for further analysis or creation of charts and graphs.

2. RAPID

The RAPID system takes data directly from the CME Globex trading engine, allowing Market Regulation to view all Globex order and trade messages on a real time or historical basis. The system can also reconstruct the order book for a given time, and can aggregate data at a rate of 1 billion rows per second, allowing investigators to summarize enormous quantities of data very rapidly. RAPID's Armada module allows staff to view the order book in any Globex product in real time or historically. In addition, RAPID's "live alert" functionality monitors electronic trading positions on Globex, compares them with position thresholds set by Market Regulation for each product based on 50-day moving averages of position size, and sends an email alert to Market Regulation staff if an individual trader's position exceeds a product threshold or is unusual for that trader. Market Regulation is developing additional RAPID alerts for situations where trading for an account involves unusually high volume or an unusual intraday position size.

RAPID's capabilities allow staff to take a proactive approach in monitoring electronic trading and addressing potential problems as they occur. For example, if staff knows that an economic report is due to be released that could affect the markets, they can use RAPID to monitor electronic trading activity immediately before and after the report is released. Staff can also use RAPID for quick review of CME Globex trading if floor staff report seeing increased

electronic trading activity by floor traders due to something that occurred in an open outcry market.⁵⁹ RAPID also facilitates prompt resolution of questions and complaints regarding CME Globex trading. For example, if a CME Globex user watching the CME Globex trading screen calls to complain about large orders being entered and then immediately disappearing from the screen, assuming that someone is entering and then immediately cancelling the orders involved, Globex Control Center staff can review the activity in question to determine whether the orders involved are being hit or cancelled.

3. Large Trader System

The Exchanges' former Reportable Position System ("RPS") that was in place during the target period combined the functionality of the previous large trader reporting systems of CBOT and CME. RPS was replaced in early 2010 by the Large Trader System ("LTS"), which was redesigned and built from the ground up, and includes substantially richer analytical capabilities than the predecessor system. LTS is used extensively for market surveillance (which is not covered in this review), it is also an important tool for investigators conducting trade practice surveillance. LTS gives investigators access to the daily reports submitted by clearing members concerning all market participants who own, control, or carry positions reportable under the Act and Commission regulations, including the account numbers of such participants. This facilitates timely and effective investigations by enabling investigators to see at a glance who owns the accounts holding approximately 70 to 90 percent of the total open interest in almost all markets at the Exchanges.

⁵⁹ One example of such an effect could involve electronic trading in the E-mini S&P futures contract and open outcry trading in the S&P futures pit.

4. Legacy Systems

During the target period, Market Regulation also had access, as it does today, to four other legacy trade practice surveillance systems used at CME prior to the CBOT-CME merger. These legacy systems include the Virtual Detection System (“VDS”), Regulatory Trade Browser (“RTB”), Regulatory Web (“RegWeb”), and the Interested Party & Accounts Database (“IP and Accounts”). Almost all of the trade-related functionality of these systems has already been integrated into SMART or other applications, and any remaining functionality of these systems that is deemed to have regulatory value will be similarly integrated before they are retired during the course of 2010.

C. Video And Floor Surveillance Of Open Outcry Trading

Prior to the merger of the Exchanges, CBOT did not conduct video surveillance of its trading floors. CME did not conduct routine video surveillance, but did use a 19-camera Video Surveillance System for video surveillance in the context of individual investigations involving open outcry trading activity, when Market Regulation determined that such surveillance might enhance the investigation.⁶⁰

Following the merger, the Exchanges adopted and expanded CME’s practice of conducting video surveillance, and installed an enhanced video surveillance system covering all CBOT and CME open outcry markets present on the Exchanges’ consolidated trading floors. The new Market Regulation Video System (“MRVS”) employs 43 new, state-of-the-art cameras with high resolution and enhanced zoom capabilities. Camera angles are controlled exclusively by Market Regulation staff. MRVS is used for both routine surveillance of the market and targeted investigations. Each day, all of the cameras run automatically from 45 minutes prior to

⁶⁰ CME also maintained two other video surveillance systems, the Video Trade Resolution System and Video Logging System, that were developed primarily for use by CME members for the purpose of resolving trade disputes, but which were also used for investigative purposes.

the open until 30 minutes after the close. The timestamps captured on the images are automatically synchronized with official trading floor clocks. The cameras record from pre-set positions determined by Market Regulation to provide maximum coverage of the floor, unless otherwise adjusted by Market Regulation staff to obtain a specific view necessary for specific investigative purposes. The system is entirely digital, and all images are stored on computer servers for approximately 25 business days, depending on the amounts of data involved and the storage capacity limits of the system. This is many times longer than the one to three-day retention period available with CME's predecessor system. Specific recordings can be downloaded to a DVD or an archive server at Market Regulation's request for purposes of retention through the course of an investigation or disciplinary proceeding. Investigators wishing to use the system for a particular investigation obtain authorization from the appropriate manager, and receive unique user identifications and passwords. All use of the system is recorded in the MRVS log.

The Exchanges also maintain a Video Trade Resolution System ("VTRS") which uses 47 static cameras to cover the equities and Eurodollar options pits. VTRS is used primarily by Exchange members active in those markets to resolve trade disputes, but is also used extensively by Market Regulation for surveillance purposes. VTRS images are also stored digitally and maintained for approximately 25 business days. Members can request copies of specific recordings for arbitration or other regulatory purposes.

The Division found that video from MRVS is an important investigative tool, and frequently provides important evidence for prosecuting or settling disciplinary cases. For example, after routine research involving the Lean Hog futures contract suggested further investigation might be warranted, Market Regulation videotaped the Lean Hog pit for two weeks

in March 2007. The videotape, along with relevant trade documents and interviews, produced evidence that on nine occasions, a trader traded ahead of customer orders, traded directly against customer orders, crossed customer orders, and endorsed the acronym of another trader on a customer order that the other trader did not fill. As a result of the videotape evidence, the trader made a settlement offer accepted by Market Regulation during the target period. The resulting sanctions ordered the trader to pay \$10,740 in restitution to affected customers, imposed a fine of \$75,000, suspended the trader's membership and floor access privileges for 180 calendar days, and barred the trader from filling or otherwise handling customer orders for a period of one year following his suspension.⁶¹

The Investigations Group includes three Lead Trading Floor Investigators who conduct floor surveillance in the Exchanges' open outcry markets on a daily basis. Each floor investigator is a former floor trader with substantial open outcry trading experience. In addition to conducting floor surveillance, the floor investigators also consult with and contribute their expertise and experience with open outcry trading to the work of the five research groups engaged in review of trade information for patterns that could suggest potential violations. They are also consulted frequently concerning interpretation of floor activity recorded through video surveillance, and can serve as expert witnesses in that regard in disciplinary proceedings.

In addition to the three floor investigators, all investigators are required to spend at least a small amount of time on the trading floor each month, in order to enhance Market Regulation's presence on the floor and to add to the investigators' knowledge of trading. When staff present on the floor observe activity that could indicate possible violations, they pass their observations

⁶¹ CME 07-28233-BC.

on to investigators currently conducting research focused on the product involved, normally doing so via email.

D. Timeliness And Adequacy Of Investigations

During the target period, the Exchanges opened 499 investigations (225 involving CBT trading and 274 involving CME trading), including 407 resulting from investigator research and from Market Regulation's five structured surveillance programs focused on major types of trade practice violations, and 92 resulting from trader or customer complaints or outside referrals.

Market Regulation closed 484 investigations during the target period, including 194 investigations involving electronic trading, 114 investigations that involved side-by-side trading in both electronic and open outcry venues, and 176 investigations involving open outcry trading.⁶² The Division found that 401 of the 484 investigations (approximately 83 percent) were closed in less than one year. Of those 401 investigations, 44 were closed in less than one month, 209 investigations were closed within six months, and 148 investigations were closed within six months to one year. Eighty-three investigations remained open for more than one year, for periods ranging from one year to 28 months. The Division examined all of the 83 investigations that were open for longer than one year, and found that in almost all cases the reasons why these investigations were open for long periods of time were acceptable. Most of these investigations involved multiple individuals and firms, complex fact patterns involving numerous weeks of trade data, numerous interviews and document requests, and frequently required detailed review and analysis of trade data and videotape. Moreover, several of these investigations resulted in significant disciplinary action during the target period. While the Division and the Exchange

⁶² Thirty-two additional investigations recorded in the investigations log involved floor decorum matters rather than trade practice violations, and are therefore not considered here.

agreed that in six instances an investigation should perhaps have been resolved in a somewhat more timely manner, all six have now been concluded.

The Division thoroughly reviewed 211 of the 484 investigations closed during the target period. The cases reviewed were selected at random across all of the Exchanges' markets, and included potential violations relating to, among other things, prearranged and noncompetitive trading, trading ahead of customer orders and trading ahead of market-moving news events.

As noted in previous rule enforcement review reports concerning the Exchanges, one consequence of the past decade's rise of electronic trading—which includes a comprehensive audit trail that cannot be altered by traders, deters violations, and makes their detection and prosecution easier—was that, during much of the decade, a preponderance of investigations and disciplinary cases at the Exchanges involved open outcry rather than electronic trading, even as the majority of volume shifted to electronic venues. However, Market Regulation reported to the Division that during the target period for this review this balance shifted (as it has continued to do since). Approximately 64% of investigations at the Exchanges closed during the target period (308 of 484 investigations) involved either purely electronic trading on Globex or side-by-side trading on both Globex and the floor. Purely electronic trading accounted for approximately 40% of the closed investigations (194 of 484), while side-by-side trading accounted for approximately 24% (114 of 484). Market Regulation attributes this shift to several factors. One is that, during the target period, electronic trading accounted for approximately 83 percent of overall volume at the Exchanges, while open outcry trading was just 17 percent. Since this meant that in many markets price discovery depended on electronic trading, it led to side-by-side trading by increasing numbers of floor traders. Market Regulation also cites the continuing evolution and improvement of its automated surveillance tools and the increasing familiarity of

its investigative staff with those tools and with electronic trading as factors leading to more investigations of electronic trading. While the Division recognizes that the inherently lesser difficulty of attempting violations in floor trading, as opposed to electronic trading, may continue to result in a number of open outcry investigations and disciplinary cases that exceeds open outcry's proportional share of overall trading volume, the Division views the increased number of investigations and cases involving electronic trading as a positive and indeed necessary development in light of today's predominance of electronic trading in overall volume at the Exchanges.

The Division found that Market Regulation conducted thorough investigations that included appropriate analysis.⁶³ Investigation files were well-documented, typically containing pertinent underlying trading documents, correspondence, computer reports, summaries of witness interviews and videotape evidence reviewed, along with summaries of the trading activity examined. Investigations were also expanded in scope, when necessary, to look for patterns of violations. Files for investigations that were referred for formal disciplinary action included an Investigation Report and a memorandum containing recommendations with respect to charges. Investigation Reports described the details surrounding the investigations, including a description of how the investigation was initiated, the facts developed during the course of the investigations, summaries of interviews, and staff's analysis and conclusions. Relevant computer reports and, in some instances, the subject's written responses to questions, were typically attached to the reports. Investigations that were closed with no further action or with a recommendation for issuance of a staff warning letter included either a file closing form or a close-out memorandum, which are not as detailed as Investigation Reports, but typically contain

⁶³ Typical examples of effective investigations are discussed below in the Disciplinary section at pages 78-79.

a brief description of the investigation conducted and generally contain sufficient information for Division staff to make an informed decision regarding the investigation's adequacy.

E. Conclusion And Recommendations

The Division found that the Exchanges maintain an adequate trade practice surveillance program. Market Regulation is led by an experienced management team that has effectively structured its staff to efficiently identify, investigate, and prosecute trading violations with respect to both electronic and open outcry trading.

To detect potential trade practice violations, Market Regulation uses sophisticated computer surveillance tools, employed in research or data mining in all of their trade data across all products traded on either Exchange, as well as in structured surveillance programs designed to detect specific major violation types. With respect to open outcry trading, Market Regulation also employs video surveillance by means of a substantially enhanced, new video surveillance system, and floor surveillance by expert investigators. Market Regulation conducts various types of investigations in a manner capable of detecting trading violations and enforcing Exchange rules and Commission regulations. During the target period, Market Regulation closed 484 investigations, including 194 investigations involving electronic trading, 114 investigations that involved a combination of electronic and open outcry trading, and 176 investigations involving open outcry trading. The Division found that the investigations were thorough and well-documented, and included appropriate, well-founded analysis. A number of complex investigations involved analysis of substantial amounts of data and extended periods of trading activity. Market Regulation also completed investigations in a generally timely manner.

Based on the foregoing, the Division has no recommendations in this area.

VII. DISCIPLINARY PROGRAM

Core Principle 2 – Compliance With Rules:

The board of trade shall monitor and enforce compliance with the rules of the contract market, including the terms and conditions of any contracts to be traded and any limitations on access to the contract market.

Core Principle 2 requires that exchanges take effective disciplinary action whenever a rule violation is suspected. Disciplinary actions must be prompt and conducted pursuant to clear and fair standards. Exchanges must have the authority to discipline, suspend, or terminate the activities of members or market participants found to have committed rule violations.

A. Disciplinary Committees And Procedures

CME and CBOT now share consistent disciplinary procedures and a common disciplinary committee structure, put in place following the merger. In November 2007, prior to the beginning of the target period, both exchanges harmonized their disciplinary rules, and essentially adopted the disciplinary committee structure in place at CME pre-merger. Disciplinary cases in which charges were issued prior to the November 2007 implementation of common disciplinary procedures were completed under the rules and before the disciplinary committees existing at each Exchange prior to the merger.

The principal disciplinary committees at each Exchange are a Probable Cause Committee (“PCC”) and a Business Conduct Committee (“BCC”). The function of the PCC is similar to that of a grand jury: it receives and reviews investigation reports from Market Regulation, and determines whether there is a reasonable basis to bring charges for violations of Exchange rules. The BCC holds hearings on contested charges, and has overall responsibility for enforcing

Exchange rules relating to trading and sales practice, as well as rules relating to trader conduct and the ethical responsibilities of Exchange members and clearing members.⁶⁴

Each Exchange maintains its own PCC and BCC, although the membership of any PCC or BCC panel will be drawn in part from the membership of the parallel committee of the other Exchange. Every PCC or BCC panel at either Exchange consists of seven individuals: a chairman; three Exchange members, including one local, one floor broker, and one member firm representative; and three public committee members not associated with either Exchange or its members. Panel members are chosen on a rotating basis. The chairman of each PCC or BCC panel, chosen on a rotating basis from a separate pool of potential chairmen, may be either a member of the Exchange involved or a public individual not associated with CME Group, its exchanges, or any member of any CME Group exchange.

PCC and BCC members must agree in writing, prior to serving on any panel, that they will not make known to anyone in any manner any facts or information that come to their attention in their official capacities as members of the PCC or BCC, except when reporting to Market Regulation, to the Legal Department of the Exchanges, or to the Board of Directors or one of its committees, when requested to do so by the Commission or another government agency, or when compelled to testify in a judicial or administrative proceeding.

To help ensure application of consistent standards and sanctions across PCC and BCC panels, Market Regulation provides each PCC or BCC panel with a copy of the Exchanges' Probable Cause Committee and Business Conduct Committee Handbook ("Handbook"), which contains an overview of the Exchanges' disciplinary process and sets out Exchanges' disciplinary committee policies and the guidelines. Appendices to the Handbook give each panel

⁶⁴ The disciplinary process for both Exchanges is governed by and described in Chapter 4 of the Exchanges respective, harmonized rulebooks.

copies of Appendix B to Part 38 of the Commission's regulations; the Commission's 1994 Guidelines For SRO Sanctions; and copies of the Exchanges' rules relating to trade practice and to the PCC and BCC.⁶⁵ Market Regulation also reports Exchange precedents for the type of case involved to each panel as part of its sanction recommendation in each proceeding. In addition, Market Regulation meets regularly with each member of the committee chairman pools for the PCC and BCC to discuss consistency in standards and sanctions.

Throughout the disciplinary process, Market Regulation's Enforcement Group, which is responsible for prosecuting all disciplinary cases, will attempt to settle a case. Respondents may agree to settle a case without admitting or denying charged rule violations, but must consent to entry of findings by the BCC regarding the conduct and rule violations at issue and the penalty to be imposed. Proposed settlements are presented to the BCC for approval. Settlement offers not opposed by Market Regulation may be submitted at any time. For such offers, the BCC considers the respondent's written offer and Market Regulation's written supporting statement. If such an offer is made before a matter is heard by the PCC, the charging phase of the disciplinary process is suspended and the matter is referred directly to the BCC for consideration of the offer. Settlement offers opposed by Market Regulation may be submitted only after charges are issued by the PCC. In such cases, the BCC considers the respondent's written offer and Market Regulation's written statement opposing the offer. If the BCC approves a settlement, it must file a written decision specifying the Exchange rules alleged to have been violated, stating the panel's findings, and noting the penalty imposed. The BCC Handbook provides that:

Typically, the decision will consist of a short statement explaining why the BCC Panel accepted the settlement offer However, if Market Regulation's case includes allegations of customer harm and/or seeks restitution, and the BCC Panel

⁶⁵ The Commission's guidelines for SRO sanctions are found in its *CFTC Policy Statement Relating to the Commission's Authority to Impose Civil Money Penalties and Futures Self-regulatory Organizations' Authority to Impose Sanctions*, published by the Commission on November 18, 1994 ("Policy Statement On SRO Sanctions").

decides to either 1) grant an unsupported settlement, 2) find the respondent not guilty of any rule violation that includes an allegation of customer harm, or 3) not order restitution, the Panel's decision must provide a detailed explanation as to why it decided not to find the respondent(s) guilty of customer harm or order restitution.

Each PCC panel reviewing a Market Regulation investigation report must determine within 30 days of its receipt whether a reasonable basis exists for issuing a notice of charges. If the PCC determines that Market Regulation has failed to demonstrate a reasonable basis for issuing charges, it may direct that a warning letter be issued or that no further action be taken.⁶⁶ The PCC handbook provides that a decision not to issue charges in a case where Market Regulation has alleged customer harm must be "documented in the meeting minutes."

If the PCC directs that charges be issued, the Notice of Charges must indicate the rule or rules that the respondent is alleged to have violated; describe the conduct involved; advise the member of his or her rights, including the opportunity to submit a written answer to the charges within 21 days of receipt of the Notice; and advise the member of the time and place for the hearing. The respondent may waive the right to a hearing within 10 days of receipt of the Notice. Failure to file a timely written answer may be considered an admission of the charges.

When a Notice of Charges is issued, the case is referred to a BCC panel for a hearing. Once the panel is selected as described above, counsel to the BCC must notify respondents at least seven days prior to the hearing of the names of the assigned chairman and panelists, and respondents then have the opportunity to request that a panelist be stricken for cause.

Hearings must be conducted in accordance with Exchange rules that require a fair hearing. The Respondent has the right to appear personally and to testify; to be represented by counsel or an Exchange member; to examine and obtain copies of all evidence against him or

⁶⁶ Market Regulation also is authorized, based on appropriate findings, to issue a warning letter at the conclusion of an investigation rather than referring the matter to the PCC. A warning letter does not constitute either a finding of a rule violation or a penalty.

her, prior to the hearing; to submit evidence and call witnesses; and to cross-examine witnesses.⁶⁷

At the hearing, Market Regulation presents the evidence supporting the charges, and bears the burden of establishing the basis for a finding of guilt on any charge by a preponderance of the evidence. A majority vote of the panel is required for a finding of guilt.

When a respondent is found guilty, the panel requests information or argument as to the appropriate nature and amount of sanctions. Exchange rules give the BCC the authority, among other things, to order a member to cease and desist from violative conduct; impose a fine of up to \$1 million per major rule violation, plus the monetary value of any benefit resulting from the violation; order restitution to any customer or other person or entity damaged by the member's conduct; impose a period of probation; suspend a member from all access to CME Globex or the Exchange trading floor and all other privileges of membership; or expel the member.⁶⁸ In the case of non-member respondents found guilty of violating the Act or Exchange rules, or of trading in a manner threatening the integrity or liquidity of any contract, the BCC has authority to order clearing members to liquidate all or part of the non-member's position; order that no clearing member accept new positions on behalf of the non-member; and deny, limit, or terminate the non-member's access to Globex or any other trading or clearing platform owned or controlled by CME Group. If the BCC decides by majority vote that the conduct involved may warrant a penalty in excess of its authority, the panel chairman must refer the case to the Board of Directors for further hearing and decision.

⁶⁷ The Respondent must provide copies of all documentary evidence and a list of all witnesses to Market Regulation at least ten days prior to the hearing.

⁶⁸ Following the merger, the Exchanges eliminated the distinction formerly found in CME's rules between "major" and "minor" offenses. The severity of all sanctions imposed by each Exchange's BCC is now determined entirely according to the egregiousness of the offense involved.

Exchange rules provide that promptly following the hearing the panel must issue a written report of its findings and conclusions. The written report must include the notice of charges and the answer, if any; a summary of the evidence produced at the hearing; a statement of the panel's findings and conclusions with respect to each charge, including the specific rules the respondent is found to have violated; and a declaration of any penalties imposed and their effective date. The report must also note the availability, if any, of an appeal. The BCC Handbook provides that the panel should provide at least a short statement "explaining why the BCC Panel . . . found the respondent guilty or not guilty of a rule violation."⁶⁹ As noted above, the Handbook also provides that where Market Regulation alleged customer harm or sought restitution, if the panel does not find customer harm or order restitution, its written decision must provide a detailed explanation of why customer harm was not found or restitution was not ordered.

A respondent who is found guilty of an offense or is otherwise aggrieved by a decision of or sanction imposed by the BCC may appeal to a hearing panel of the Board of Directors within 10 days of receiving notice of the decision or sanction, provided that the sanction imposed is greater than \$10,000 or a five-day suspension, and that Exchange rules do not specifically prohibit an appeal in the circumstances. In addition, Market Regulation may appeal a BCC decision or sanction, or a PCC decision not to issue requested charges, to a hearing panel of the Board within 10 days of receiving notice of it.⁷⁰ Board hearing panels consist of a director appointed by the Chairman of the Board to serve as chairman of the panel, and two additional

⁶⁹ CBOT and CME Rule 408.E.

⁷⁰ The CBOT modified its rules to provide for appeal by Market Regulation as part of CBOT's response to the Division's concerns over inappropriate sanctions in a disciplinary matter, raised in the Division's § 38.5 letter to CBOT on August 30, 2007, prior to the target period. Appeal by Market Regulation was already embodied in CME's legacy rules.

directors, one of whom must be a public director. Directors may not serve on the hearing panel if they participated in any proceeding below; have any personal, financial, or other direct interest in the matter; or are a member of the same broker association as the respondent.

The hearing panel determines whether sufficient grounds exist to grant the appeal, based solely on the written appeal request and the written response of the opposing party. If the appeal is granted, a hearing must be held within 60 days.⁷¹ The hearing is limited to the record in the proceeding before the BCC, together with written appeal briefs by both parties. The panel may not set aside, modify or amend the appealed decision unless it finds by majority vote that the decision was arbitrary, capricious, or an abuse of the BCC's discretion, was in excess of the BCC's authority or jurisdiction, or was based on a clearly erroneous interpretation of Exchange rules. The panel must issue a written decision, including a statement of the findings in the decision being appealed and of the panel's determination to affirm, set aside, modify or amend it. If the BCC decision is not affirmed in whole, the panel's written decision must also note the penalty to be imposed, if any, and its effective date. The decision of the panel is deemed a decision of the Board and the final decision of the Exchange.

In addition to the two principal disciplinary committees, the Exchanges also maintain a joint Floor Conduct Committee ("FCC"), which has jurisdiction over open outcry trading infractions on the Exchanges' joint trading floor.⁷² Summary proceedings concerning such infractions are conducted, as soon as practicable after the FCC issues charges, by an FCC panel

⁷¹ The panel chairman can grant an extension for good cause.

⁷² Rule 514 at each Exchange defines open outcry trading infractions as including, among other things, a bid or offer that is out of line with the market or that tends to confuse other traders; a trade through the existing bid or offer; dissemination of false, misleading, or inaccurate quotes; a failure to indicate a quantity on a bid or offer, to confirm a transaction, or to notify the pit reporter of transaction prices; use of profane, obscene, or unbusinesslike language or undue force; and conduct of an unbusinesslike nature. The FCC also has final jurisdiction over pit space disputes and resolution of quote change requests.

appointed from the membership of the FCC by the Exchanges' Chief Regulatory Officer.⁷³ The panel can impose fines of up to \$10,000 per offense.⁷⁴ If the panel determines that the infraction was of major importance or warrants a fine beyond the FCC's authority, it may refer the matter to the PCC for consideration of disciplinary charges. A respondent receiving a fine greater than \$1,000 may file a written appeal with Market Regulation within 10 days of the FCC's decision. Appeals are heard by the BCC, which can only set aside or modify the FCC's decision if it finds that the decision was arbitrary, capricious, or an abuse of discretion, in excess of the FCC's authority, or based on a clearly erroneous interpretation of Exchange rule. The BCC's decision on appeal is final.

B. Adequacy Of Sanctions

During the target period, the Exchanges closed 81 disciplinary cases, including 56 at CBOT and 25 at CME. One closed case at CBOT and three closed cases at CME involved contested hearings, while 55 cases at CBOT and 22 at CME were concluded by settlement. Fourteen disciplinary cases, including four at CME and 10 at CBOT, remained open with charges pending at the conclusion of the target period.

To determine whether the disciplinary process at the Exchanges is imposing adequate sanctions on violators of Exchange rules, the Division reviewed all of the 81 closed disciplinary cases from both CBOT and CME. The Division found that the sanctions imposed by the BCC during the target period appear reasonable relative to the violations alleged and the evidence presented.

⁷³ Hearing procedures are detailed in Rule 409 of each Exchange's rulebook. No FCC member may serve on the panel if he or any person, firm, or broker association with which he is affiliated has a personal, financial, or other direct interest in the matter.

⁷⁴ The summary fine schedule is set out in Rule 514B in the rulebook of each Exchange.

In the 81 closed cases, through four contested hearings and 77 settlement agreements, the Exchanges assessed a total of \$2,053,250 in fines, including fines against 42 individuals and 10 firms at CBOT totaling \$1,163,250, and fines against 21 individuals and four firms at CME totaling \$890,000. In addition, CBOT ordered five individuals to pay a total of \$254,663.75 in customer restitution; suspended 31 individuals for a total of 359 days; and imposed a permanent bar from association with any CME Group member or member firm against one individual found guilty of inequitable proceedings, acts detrimental to the exchange, reckless dealing, and misallocation of trades. CME ordered three individuals and one firm to pay a total of \$253,440 in customer restitution; suspended 15 individuals for a total of 308 days, and imposed permanent bars on membership against two members found guilty of fraud and dishonest conduct, among other violations.

Of the 81 closed cases, 48 involved floor trading, while 19 involved electronic trading and two involved trading in both venues. Four cases involved recordkeeping violations or exchange of futures for related positions (“EFRPs”) violations, and one involved decorum violations rising to a level that required disciplinary action.⁷⁵ Excluding the recordkeeping, EFRP, and decorum cases, approximately 30 percent of the closed cases involved electronic trading, while approximately 70 percent involved only floor trading.

The substantive trade practice violations charged most frequently in the 56 closed CBOT cases included noncompetitive trading, wash sales, withholding orders, and accommodation trades. The substantive violations charged most frequently in the 25 closed CME cases included

⁷⁵ EFRPs are not addressed in this review, since they are covered in the Division’s separate Market Surveillance Rule Enforcement Reviews. The decorum case involved a physical altercation in public, which the BCC found constituted conduct impairing the dignity of the exchange, between respondents with a significant disciplinary history. The BCC imposed fines totaling \$50,000 and suspensions totaling seven days.

noncompetitive trading, prearranged trading, fraud and dishonest conduct, and recordkeeping violations.

Notable sanctions for noncompetitive trading were assessed at CBOT against two traders who agreed to BCC findings that they prearranged trades in deep-in-the-money corn and wheat options.⁷⁶ As part of a settlement supported by Market Regulation, the BCC imposed a fine of \$35,000 and a suspension of 10 business days on the first trader, and a fine of \$40,000 and a suspension of 15 business days on the second trader. It also ordered restitution by both traders. CME assessed significant sanctions for noncompetitive trading against a trader who, on several occasions filled orders in the Eurodollar Options pit opposite other members in his broker association by means other than open outcry.⁷⁷ The trader had also allowed two Eurodollar Options orders he had filled to be reported with incorrect filling broker information; had failed to record trades properly on several occasions; and had regularly failed to retain originally endorsed trading documents. Pursuant to a settlement offer supported by Market Regulation, the BCC fined the trader \$70,000, suspended his trading and membership privileges for 15 days, and ordered him to cease and desist from further violations.

The BCC also issued significant sanctions in several other cases. For example, sanctions including a permanent bar on association by the respondent with any CME Group member or member firm and a restitution order in the amount of \$214,000 were imposed in a CBOT case involving a respondent who had defrauded his firm.⁷⁸ The respondent had been responsible for

⁷⁶ Case No. 06-TPR-89-BC. The equal and offsetting trades involved were part of an “interest rate play,” a strategy—not necessarily improper in itself—in which a trader taking the sell or short side of an options trade times the transaction in a way likely to increase the amount of time that passes before the clearing house assigns the delivery obligation under the option to the short. Increasing the time interval before assignment occurs increases the amount of interest the trader can earn on the premium paid by the buyer of the option.

⁷⁷ Case No. 05-26105-BC.

⁷⁸ Case No. 07-INV-20.

filling futures orders to hedge 10-Year Treasury options trades placed by other firm traders, and also for trading 10-Year Treasury futures in a proprietary account for which he was compensated based on the account's profits. He had placed unauthorized, speculative trades in the hedge accounts, moved profitable trades to the proprietary trading account to increase his compensation, and moved losses from his proprietary trading account into the hedging accounts. The result had been losses for the hedging accounts totaling \$786,266, and compensation to the trader totaling \$214,485 for profits in the proprietary account.

In a CME case, the BCC fined a floor member's clerk \$75,000, ordered the clerk to pay restitution in the amount of \$134,272, and permanently barred the clerk from membership, floor trading access, electronic trading access, and employment with any CME member, after the clerk placed E-mini S&P 500 futures orders in the floor member's account without authorization, causing losses totaling \$134,272, and then intentionally misled the floor member about the member's instructions for trades to be entered, and placed additional improper orders in an attempt to recoup the losses the original improper orders had incurred.⁷⁹

When employees engaged in electronic trading on behalf of a CBOT member firm were found to have engaged in multiple instances of impermissible pre-execution communications, withholding of customer orders, and failure to expose orders to the market for the required minimum time before taking the other side of those orders, the BCC fined the firm \$400,000 for inadequate supervision, ordered it to cease and desist from such practices, and ordered improved supervision and training, monitored by Market Regulation.

⁷⁹ Case No. 07-00951-BC.

C. Timeliness Of The Disciplinary Process

The Division is satisfied that the disciplinary cases closed during the target period were handled in a timely manner. In each of the 81 closed cases, a disciplinary committee decision was issued and the case was closed in less than one year following referral of the investigation involved into the disciplinary process by Market Regulation or its predecessor at CBOT, the Office of Investigations and Audits.⁸⁰ The average time that cases were in the disciplinary process was approximately six months. Cases in which the disciplinary process required comparatively longer periods of time involved complex settlement negotiations or other factors justifying the time involved.

D. Adequacy Of Disciplinary Committee Written Decisions

The Division found that, for the most part, BCC decisions in matters involving contested hearings or consideration of unsupported settlement offers were adequately explained in the BCC's written decisions. However, the Division found that in one case the BCC failed to explain its decision in a way sufficient to enable the Division to review it.⁸¹ In that case, the PCC had charged the respondent floor trader with multiple instances of indirect bucketing of customer orders and non-competitive execution of soybean oil contracts. After a contested hearing, the BCC acquitted the respondent of all charges. The only explanation the BCC provided for its decision was a brief statement that the BCC "finds that the weight of the evidence does not

⁸⁰ Following the merger, Market Regulation implemented new procedures under which investigations concluded by a Market Regulation decision that disciplinary proceedings are warranted are referred to Market Regulation's Enforcement Group. The Enforcement Group is responsible for the disciplinary phase of each such matter, including conducting settlement negotiations with the respondent or respondents in the case, presenting the case to the PCC for consideration of charges, and prosecuting the case before the BCC if a contested hearing results. Accordingly, Market Regulation now dates the beginning of each disciplinary case from the date that the investigation involved was referred to the Enforcement Group.

⁸¹ Case No. 06-INV-8A.

support a conclusion that [the trader] violated [the exchange rules charged to have been violated].”

As noted above, the Exchanges’ BCC Handbook provides that a BCC panel’s written decision after a contested hearing should include at least a short statement “explaining why the BCC Panel . . . found the respondent guilty or not guilty of a rule violation.” In addition, Rule 408.E at both Exchanges provides that the BCC’s written decisions must include “a statement of findings and conclusions with respect to each charge.”⁸²

Since the standard of proof which the BCC must apply in its decisions, as noted in the BCC Handbook, is “a preponderance of the evidence,” the written explanation of its decision provided by the BCC in this case is merely a circular restatement of the fact that the panel acquitted the respondent.⁸³ It does not comply with the requirement that the written decision must explain “why” a respondent is found guilty or not guilty. Nor does it comply with the requirement that the written decision must include “findings and conclusions with respect to each charge.”

Proper findings and conclusions with respect to each charge would include, as called for in Rule 408.E at both Exchanges, a summary of the evidence relevant to that charge on which the committee’s decision was based, and a statement explaining what evidence led the committee to its decision and why that evidence was decisive. For example, the findings might note that the committee did not find the testimony of a witness credible, or might explain the relative weight the committee gave to different items of contradictory evidence. The particular contents of adequate findings will necessarily differ from case to case, but in each case the findings with

⁸² This approach is also suggested in the Acceptable Practices for Core Principle 2, *Compliance With Rules*, which incorporate 17 CFR Part 8 as describing an acceptable disciplinary program. See 17 CFR Part 38, App. B, Core Prin. 2(b)(4), and 17 CFR § 8.18.

⁸³ BCC Handbook, *Deliberations*, at 28.

respect to each charge should state and explain the reason or reasons for the committee's conclusion with respect to that charge.

Explanation of the basis for a disciplinary committee decision is most important in contested matters involving either a contested hearing or disciplinary committee consideration of a settlement offer opposed by Market Regulation. In such instances, written decisions that do not explain the basis for disciplinary committee decisions can impede the ability of a respondent, or of Market Regulation, to determine whether and on what grounds to appeal the disciplinary decision in the manner allowed under the Exchange's rules. Such explanation still has a role to play, however, even in cases involving disciplinary committee consideration of a settlement offer supported by Market Regulation. Since the committee should consider the sanctions in each case in the context of all sanctioning by the Exchange in matters involving comparable misconduct, its role in approving uncontested sanctions provides a guard against the possibility that the sanctions in a particular case could be unduly lenient or punitive in comparison to the sanctions generally appropriate for the misconduct involved. While the degree of explanation needed from the BCC with respect to its conclusions may be greater in cases involving contested hearings or consideration of settlement offers opposed by Market Regulation, some explanation with respect to the reason for the committee's approval of the sanctions imposed is needed even when the BCC considers supported settlements.

Written explanations of the reasons for PCC decisions not to issue charges are similarly essential to an adequate disciplinary program. PCC decisions which do not follow relevant exchange rules or provisions of the Act and Commission regulations, or do not apply correct standards of proof, could deprive an exchange of effective ability to enforce compliance with its rules, sanction trading violations, and deter misconduct. Lack of appropriate explanation of

decisions not to issue charges could also impede effective compliance department appeal of such decisions as provided by exchange rules.

It is worth noting in this connection that the Exchanges' disciplinary committees are not independent, unreviewable, unsupervised judicial bodies against whose decision-making procedures the Exchanges have no recourse. Rather, disciplinary committees are creatures of the Board of Directors and subject to the Board's authority, and the Board remains ultimately responsible for disciplinary committee exercise of the Board's delegated responsibility to ensure that the Exchanges' disciplinary program includes adequate disciplinary and sanctioning processes. In addition, inadequate written decisions can also prevent the Division from conducting thorough review of the Exchanges' disciplinary program.

Accordingly, the Division believes the Exchanges should ensure that all written decisions issued by the BCC, and all decisions by the PCC not to issue charges, include findings and conclusions with respect to each charge, and ensure that the findings with respect to each charge state and explain the reason or reasons for the conclusion with respect to that charge, noting the evidence which led the committee to that conclusion.

E. Conclusions And Recommendations

The Division found that CME and CBOT maintain an adequate disciplinary program. During the target period, CME and CBOT took final disciplinary action in 81 cases, which involved 77 settlement agreements and four hearings before the BCC. In the 81 closed cases, through four contested hearings and 77 settlement agreements, the Exchanges assessed a total of \$2,053,250 in fines, ordered customer restitution totaling \$508,103.72, suspended 46 individuals for a total of 667 days, and imposed permanent bars on membership or association with members or member firms against three individuals. The Division reviewed all of the 81 closed cases, and found that the sanctions imposed by the BCC appeared reasonable and appropriate in relation to

the violations alleged and the evidence presented, and reasonably calculated to deter similar violations. The disciplinary process in these cases proceeded in a timely manner.

With respect to disciplinary committee written decisions, the Division found that, while most conclusions reached by the BCC were adequately explained in its written decisions, in one case the BCC failed to explain its decision in a way sufficient to enable thorough Division review of the Exchanges' disciplinary program, or sufficient to comply with the requirements of the Exchanges' BCC Handbook and the rules of both Exchanges. As required by those authorities, written decisions by disciplinary committees should include a statement of findings and conclusions with respect to each charge. The findings should include a summary of the evidence on which the committee's decision was based, and a statement of why that evidence led the committee to the conclusion reached with respect to each charge. Written explanation of the reason for PCC decisions not to issue charges should also be required, in order to ensure the Exchanges' ability to enforce compliance with Exchange rules, sanction trading violations, and deter misconduct, and to avoid impeding effective appeal of such decisions by Market Regulation where needed.

Based on the foregoing, the Division recommends that the Exchanges:

- Ensure that all written decisions issued by the BCC, and all decisions by the PCC not to issue charges, include findings and conclusions with respect to each charge, and ensure that the findings with respect to each charge state and explain the reason or reasons for the committee's conclusion with respect to that charge, and note the evidence which led the committee to that conclusion.