Surveillance of Electronic Trading

Presentation to the

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Dramatic electronic trading growth

- Electronic trading in CFTC-regulated markets has grown significantly since 1999
- Electronic trading as % of total volume at U.S. futures exchanges:
  - 5% in 1999
  - 42% in 2003

Most dramatic increases at largest exchanges

- CME
  - 8% in 1999
  - 44% in 2003
- CBT
  - 5% in 1999
  - 52% in 2003
- Currently, approx. 60% at both exchanges

New, all-electronic exchanges designated in last two years

- CBOE Futures Exchange
- HedgeStreet
- NQLX
- OneChicago
- U.S. Futures Exchange

Purpose of DMO review

- Determine implications of growth in electronic trading for DMO's trade practice surveillance program
  - What can be learned from experience of exchanges and other regulators?
  - Where should our trade practice surveillance of electronic trading be focused?

Review methodology

- Interviewed compliance staff at SROs
  - In U.S. – CME, CBT, NYMEX, NFA
  - In Europe – Eurex, LIFFE
- Met with several foreign regulators who oversee electronic markets
  - BAFIN in Germany
  - CONSOB in Italy
  - FSA in United Kingdom

Insights gained from exchanges and regulators

- Recommended focus points for surveillance of electronic trading
- Useful observations regarding other aspects of electronic trading surveillance

Four recommended focus points for surveillance

1. Order entry
2. Illiquid markets
3. Side-by-side trading
4. Intermarket transactions

1. Order entry

- Surveillance focus necessarily shifts from order execution by floor broker to order entry by terminal operator
  - Algorithm controls order execution
  - Order entry is point at which human intervention occurs, and thus where abuses can occur
- Terminal operator controls time of entry for orders not submitted directly by customers to trading host
  - Presents opportunity to trade ahead of customer orders
  - No evidence of time of receipt for telephoned orders

2. Illiquid Markets

- Increased likelihood of successful violations
  - Prearranged trading
  - Trading against customer orders
  - Wash trading
- Reason: decreased probability that other orders will interfere with illegal activity

3. Side-by-side trading

- Traders now have simultaneous access to open outcry and electronic trading in same markets
- Offers opportunities for abuses, such as:
  - Frontrunning an open outcry order on an electronic market, or *vice versa*
  - Manipulating price in one market to take advantage in the other

4. Intermarket transactions

- Traders can now access multiple exchanges on a single screen simultaneously
- Intermarket trading is increasing
  - Intermarket spreads
  - Basis trades
  - OTC vs. futures
  - Parallel products
- Offers opportunities for trading abuses

Example of importance of four focus points

- Firm received large customer spread order to buy CME Eurodollars and sell CBT Fed Funds
- Firm traded ahead of sell leg in pit, going short Fed Funds
- Firm entered legs of customer's spread order:
  - Bought Eurodollars on CME's Globex system
  - Sold Fed Funds on CBT's then-existing a/c/e system
- Firm traded against customer's a/c/e order, effectively offsetting its short pit position

Result of transactions

- Firm profits by trading ahead of customer
- Customer injured because a/c/e trade made at price worse than price obtainable for customer in pit
- In sum, violation involved:
  - Intermarket transaction
  - Side-by-side trading
  - Illiquid market
  - Trading ahead of order entry

Useful observations regarding other aspects of electronic trading surveillance

1. Effects of trader anonymity
2. Need for vigilance regarding novel electronic trading violations
3. Impact on customer abuses

1. Effects of trader anonymity

- May affect trader complaints of possible wrongdoing by other traders
  - Fewer complaints received by exchanges, possibly due to traders not being visible to each other
- More difficult to identify relationships between traders, thus harder to direct data mining to detect correlations among traders

2. Vigilance regarding novel electronic trading violations

- Traders and exchanges still face steep learning curve
- As more traders become more familiar, new types of violations likely to be attempted
- Potential new violation examples already seen:
  - "Flipping" or "spoofing"
  - Taking improper advantage of allocation algorithm

“Flipping” or “spoofing”

- Occurred on Eurex in early 2004
- Trader entered large-size offer below current best offer
- That offer attracted smaller offers from others
- Trader then canceled large offer, reversed to bid side, hit offers he attracted, and profited as market moved higher
- Some traders argued practice caused a disorderly market

Taking improper advantage of allocation algorithm

- Firm knows spread algorithm uses price and quantity priority but not time priority
  - Result: large orders at best price get larger share of fills
- Firm received several customer spread orders
- Firm entered unusually large proprietary spread orders on opposite side of market before entering customer's orders
- Effect: lock out other sellers at same price, so that firm could trade against its customer's orders
- Firm then cancelled remainder of its orders

3. Impact of electronic trading on customer abuses

- All interviewed U.S. SROs stated that electronic trading has reduced customer abuses
- Reasons:
  - Anonymous, automated nature of order execution process
  - Comprehensive, unalterable electronic audit trail

Steps to be taken or considered as a result of DMO's review

- Focus surveillance on four points identified where electronic trading is most vulnerable to trading abuses
- Ensure new CFTC trade practice surveillance system, currently under development, has robust capabilities for detecting electronic trading violations
- Address order entry vulnerability by capturing time of receipt for telephoned orders

One possible approach to order entry vulnerability

- Recording, time-indexing and retention of telephone calls in which customers place orders
  - Recommended by all interviewed U.S. SROs
  - Offers substantial benefits
  - Technology has reduced burden

Benefits of recording

- Close gap in otherwise comprehensive electronic audit trail
  - Without automated record of when telephoned order is received, order is vulnerable to abuse before it is entered into trading system and captured by audit trail
  - Time-indexing would capture exact time telephoned order is received
- Provide useful support for effective investigation and prosecution of customer abuses
  - SRO and CFTC experience shows recording evidence highly valuable

Reduced burden of recording

- Today's digital recording/time-indexing process less costly and onerous than analog recording
- Computer storage of recordings easier, cheaper than analog tape storage
- Most FCMs already record for dispute resolution purposes

Conclusion

- Review is necessarily preliminary in nature
  - Electronic trading environment still evolving
  - Exchanges, traders still face steep learning curve
  - As trader knowledge increases, some will seek new ways to “game” the system
- DMO will continue dialogue with SROs regarding new developments in electronic trading