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Strengthening Trade Practice Oversight

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The Honorable Patrick J. Leahy, Chairman
The Honorable Richard G. Lugar, Ranking
Minority Member
Committee on Agriculture,
Nutrition, and Forestry
United States Senate

On February 23, 1989, we testified before the Committee on the effectiveness of the Commodity Futures Trading Commission (CFTC) and the exchanges it regulates in controlling trade practice abuses.[1] As a follow-up to that testimony, on March 27, 1989, you requested answers to a number of questions on the adequacy of oversight controls, the number and nature of disciplinary actions taken, the effects of high technology trading systems, and the use of management information. You also asked that, where possible, we compare controls in the futures markets with those in the securities markets.

This report provides our responses to your questions in appendixes I through XII, as well as our overall conclusions and recommendations. Some of your questions were on the potential impact of advances in information technology. Our answers to these questions are summarized in this report and provided in detail in a separate report.[2]

Background

Futures exchanges are centralized auction markets where standardized contracts specifying quantity and quality, are bought and sold for future delivery. These markets provide protection against adverse changes in the cash price of an underlying product or financial instrument, such as wheat or Treasury bonds. They provide protection by transferring the risk of price fluctuations to those willing to speculate on those fluctuations in return for a potential profit.

Futures contracts are traded through a competitive system called "open-outcry," in which floor participants verbally make bids and offers to each other at centralized exchange locations, called "trading pits." Two types of floor participants execute trades in these pits—floor brokers

[1] Commodity Futures Trading Commission and the Chicago Futures Exchanges' Detection of Trade Practice Abuses (GAO/T-GGD-89-8, Feb. 23, 1989). Also, see our report entitled Chicago Futures Market: Initial Observations on Trade Practice Abuses (GAO/GGD-89-58, Mar. 13, 1989).

[2] Futures Markets: Automation Can Enhance Detection of Trade Abuses But Introduces New Risks (GAO/IMTEC-89-68, Sept. 7, 1989).

and floor traders. Floor brokers trade for customers and may also trade for themselves. In contrast, floor traders deal only for their personal accounts. The futures markets are primarily self-regulated by the exchanges, with CFTC providing federal oversight.

January 1989 news accounts revealed the existence of joint Department of Justice and CFTC undercover operations at the Chicago Board of Trade (CBT) and at the Chicago Mercantile Exchange (CME). In August 1989, the Department of Justice indicted 46 floor participants—several of whom have pleaded guilty—for allegedly engaging in multiple floor trade practice abuses. The indictments raised questions about market regulators' effectiveness in deterring, detecting, and punishing floor trade practice abusers.

The August 1989 indictments indicate that the Federal Bureau of Investigation (FBI) found the same types of alleged abuses occurring in the CBT soybean and U.S. Treasury bond trading pits and in the CME Japanese yen and Swiss franc trading pits. The alleged abuses involved schemes to enrich floor participants in violation of the Commodity Exchange Act, CFTC regulations, and exchange rules. The glossary describes various abuses that can occur in the futures markets and that the Justice Department indictments allege occurred at CBT and CME.

Before the FBI investigations, CFTC and exchange officials had been working to improve the framework of controls over floor trade practice abuses. CFTC and exchange officials intensified these efforts after news of the investigations became public and have proposed or taken a series of actions that will provide incremental improvements to existing exchange internal controls.

Results in Brief

Weaknesses in controls over futures trading provide dishonest floor participants with the opportunity to cheat customers by noncompetitively executing orders and to conceal this cheating by manipulating the recorded price and time of trades. The actions CFTC and the exchanges have proposed or taken are important interim measures for reducing the opportunity for dishonest floor participants to commit trading violations. While detecting every abuse may never be possible, most of the types of abuses alleged in the Justice Department indictments could also have been detected and documented with independent, precise, and complete timing of trades. CFTC needs to require that the exchanges achieve this result. To the extent that trade timing and, therefore,

sequencing remain imprecise, surveillance systems that use this information will have limited ability to detect trading rule violators.

In addition to requiring improved timing information, CFTC needs to expand its review of exchange automated surveillance systems and to improve its use of management information. We were unable to reach conclusions about the adequacy or effectiveness of CFTC or exchange disciplinary action programs, primarily because the universe of abuses is unknown. However, the increased number and severity of penalties for floor trade practice abuses since the FBI investigation became public appears to indicate an increased commitment by the exchanges to deterring, detecting, and punishing trade practice abusers.

Objectives, Scope, and Methodology

The objectives of our work were to answer the questions the Committee raised, primarily by assessing the effectiveness of CFTC and the futures exchanges in deterring, detecting, and punishing trade practice abusers. Our discussion is limited to trade practice abuses that occur when orders are not openly offered to all market participants on the exchange floor.

To meet our objectives, we interviewed officials and reviewed policies and procedures at the CFTC headquarters in Washington, D.C.; at the eastern regional office in New York City; and at the central regional office in Chicago. We also interviewed officials and collected data at the two largest Chicago futures exchanges, CME and CBT, and at the two largest New York futures exchanges, the New York Mercantile Exchange (NYMEX) and the Commodity Exchange, Inc. (COMEX). These four exchanges accounted for about 93 percent of the futures contracts traded in the United States during 1988.

To compare futures markets with securities markets, as the Committee requested, we interviewed officials; reviewed policies and procedures; and collected data at the Securities and Exchange Commission (SEC) headquarters in Washington, D.C. We also visited the New York Stock Exchange (NYSE) and the American Stock Exchange (Amex) in New York City; the Chicago Board Options Exchange (CBOE) in Chicago; and the National Association of Securities Dealers (NASD) in Washington, D.C.

The disciplinary action data cover the period from January 1, 1984, through June 30, 1989. Our review of detailed investigative and disciplinary case files covered calendar years 1987 and 1988. We did our review from March 1989 through August 1989 in accordance with generally accepted government auditing standards.

Independently, Precisely, and Completely Timing Trades

Futures exchanges generally do not independently, precisely, and completely time all trades. Independent timing of trades could prevent floor participants from using their knowledge of the market price in the immediate past to alter trading records and to conceal execution of trades at noncompetitive prices. Precise timing could be used to determine the exact sequencing of each floor participant's trades, thereby making it easier to detect abusers. Complete timing of trades, including the times the floor participant receives and executes the trade, could help reconstruct the history of each trade, not only to detect potential abuses, but also to prove that they occurred.

Currently, dishonest floor participants, working alone or with a third party, can eliminate the risk of unfavorable market movements. They can manipulate the information on their trading records to give noncompetitive trades the false appearance of having been competitively executed at an earlier time when prices were more favorable to them. These practices could be deterred or more easily detected through improved timing of trades.

Exchanges attempt to reconstruct the sequence of trades using times that may be based on inaccurate or incomplete information. The reconstructed sequence of trades and the timing information used to determine the sequence are then used along with an exchange record of the times of price changes to detect and investigate floor trade practice abuses. The timing information used to reconstruct the sequence of trades is part of the "audit trail," which is the documentation for all trades.

Audit trail information is obtained somewhat differently at each exchange, and different weaknesses exist in the audit trails of each exchange. (See app. I.) However, the audit trail systems of three of the four exchange we visited include some timing information provided by floor participants, such as trade time and sequence information. These systems, therefore, depend on the participants to submit accurate and complete timing information. The fourth exchange's system records times independently. But like the other systems, it does not record times precisely or completely. Therefore, it has difficulty sequencing trades, especially in active markets. In each system, opportunities exist to manipulate the timing and, therefore, the subsequent sequencing of trades.

CFTC requires each exchange to prepare a trade register that shows, for each cleared or matched trade, the execution time to the nearest minute.

CFTC allowed the exchanges to develop individual audit trail systems to meet this 1-minute timing standard and required that the exchanges be able to report on the accuracy of the information. Three of the four exchanges report that between 84 and 90 percent of trade times can be verified as meeting the 1-minute timing standard. CFTC officials told us that CBT does not have a system for reporting on the accuracy of its trade times. However, reported verification rates at the other three exchanges may not be reliable because floor participants can manipulate timing information to make illegal trades appear to have been executed competitively—that is, at prices that existed at an earlier time.

The ability of the exchanges to deter, detect, and investigate abuses is reduced by using audit trail systems that include information that is subject to manipulation, not precise enough to accurately sequence trades, or not complete enough to prove an abuse occurred. When floor participants record trade time and sequence information, opportunities exist to execute trades noncompetitively without detection. Because trading cards are currently required to be collected every 30 minutes, or even less often, sufficient time exists for participants to alter trading records to conceal abuses.

Further, while CFTC requires exchanges to report trading times to the nearest minute, a single minute during certain trading periods in an active market may include hundreds of trades. Because a single floor participant could have executed a number of these trades at different prices, even if the time is recorded independently, the floor participant has an opportunity to use information that may be only seconds old to cheat customers without detection. As a result, even independent timing to the nearest minute will not always allow for accurate sequencing of each floor participant's trades.

Finally, none of the exchanges time when floor participants receive customer orders. This time is crucial because it establishes when the participant assumes responsibility for promptly and competitively executing the orders. Without timing information on the complete history of each order, floor trade practice abuses could occur without detection and customers could be defrauded. Also, this information may provide the evidence needed to prove that certain abuses actually occurred.

CFTC proposed rule amendments in August 1989, tightening controls over the preparation and submission of trading cards and the submission of customer order tickets, that will improve timing information and

trade sequencing. The rules could go into effect in early 1990, if approved. The exchanges have already begun implementing some of these changes as well as others. However, even if these rules are implemented, floor participants will still be relied on to provide accurate trading records, trade times will not be exact, and complete information on trades will not be available.

All four exchanges are exploring applications of new technology and automated systems that could provide more independent, precise, and complete trade timing. CBT and CME are studying automated order routing systems to increase the efficiency of the futures trading process. All four exchanges are planning to develop electronic audit trail systems to record transactions using hand-held terminals. CME and CBT are also developing trading systems that will replace the current trading process and expand operations outside normal trading hours. NYMEX officials told us that they are planning a similar system. Under current plans, all these systems will not be fully implemented for more than 1 year, and the extent to which the exchanges will use these systems to control trading abuses is uncertain.

A lot of attention has been directed to the effect of dual trading on market integrity. Dual trading allows floor participants to trade for their personal accounts and those of customers on the same day. Market professionals generally agree that dual trading has several benefits, including increasing market liquidity. However, dual traders have the opportunity to trade ahead of customer orders and profit by making more trades than needed to fill their customer orders and then allocating the most favorable trades to their personal accounts and the least favorable trades to customers' accounts. This opportunity raises concerns about the extent to which dual traders are cheating customers and has led to proposals to restrict dual trading.

Restricting dual trading would not prevent floor brokers from using a third party to indirectly trade ahead of customers. In fact, the Justice Department indictments allege that some brokers were using third parties in an attempt to mask illegal trades. Trading ahead abuses could more easily be detected if trade times were independent, precise, and complete because the exact sequence and price of each floor participant's trades could be readily determined, as could the time when the floor broker received the order. Therefore, restricting dual trading is not a substitute for improved timing information in reducing opportunities to commit trading violations. (See app. VII.)

Independent, precise, and complete trade timing, however achieved, should reduce the opportunity for certain trading abuses and should increase the probability that those committing certain trade practice abuses will be apprehended. (See app. I.) The time frame for achieving independent, precise, and complete timing is likely to be more than a year. Thus, CFTC's proposals should be implemented quickly to provide needed interim improvements in controls over trade practice abuses.

Recommendation

We recommend that CFTC direct the exchanges to independently, precisely, and completely time each trade and specify a time frame for meeting this requirement. Timing should be independent of the other trading data supplied by floor participants. Time recording should include the precise time the broker receives and records as executed each order as well as the precise execution times of noncustomer trades. CFTC should give the exchanges flexibility in deciding how to meet the requirement but should also establish firm implementation dates.

Improving Automated Surveillance

Trade practice abuses can be detected by various means, such as manual review of the trade register, surveillance of the trading floor, and complaints from members. In addition, at different times between 1986 and 1989, the exchanges began using automated trade surveillance systems to more efficiently review all trading activity and to provide investigators with exception reports that highlight suspicious trading activity.

These systems can screen large volumes of trading data for potential abuses more efficiently than can manual methods. However, as we have discussed, the audit trail data upon which these systems rely are too imprecise for screening programs to accurately identify all potential abuses, and some of the systems are still in the early stages of development.

CFTC reviews the parameters and output of screening programs to determine the appropriateness of the exception reports the programs generate. However, CFTC does not review system documentation or test screening programs to determine whether the surveillance systems are operating as intended. In addition, CFTC does not require that program documentation be independently assessed. Exchange officials told us that complete documentation is not always available that describes surveillance systems' initial design, any subsequent modifications, and test results of those modifications. Such documentation is needed to determine whether the systems are operating as intended. A CFTC or other

independent test of screening programs could include running data containing known violations through the exchanges' systems. (See app. I.)

Recommendations

We recommend that CFTC

- require exchanges to maintain complete documentation of automated surveillance systems and
- expand its reviewing and testing of exchange automated surveillance systems, or require that they be independently reviewed and tested, to determine whether they are operating as intended.

Assessing Disciplinary Action Programs

The number and severity of disciplinary actions that the exchanges have taken varies by exchange but has generally increased. From January 1, 1984, through June 30, 1989, the total number of floor participants penalized at each exchange ranged from a low of 17 at NYMEX to a high of 177 at CME; total fines ranged from $323,000 at NYMEX to $4,472,000 at CME; and total suspensions ranged from 304 business days at NYMEX to 13,562 business days at CME.

We were unable to evaluate the significance of these differences in exchange disciplinary actions because the universe of abuses is unknown, and the uniqueness and complexity of each case preclude any generalizations about the adequacy and consistency of penalties. Moreover, the results of comparisons of futures to securities market disciplinary actions are not useful in judging the futures market disciplinary actions because of differences in the types of abuses that occur in the two markets.

CFTC and exchange officials said that they are concerned about perceptions of potential conflicts of interest and about the fairness and consistency of the disciplinary action process. As a result, CFTC has issued proposed rules governing the eligibility of members with prior disciplinary histories to serve on disciplinary action committees. Also, most exchanges are considering actions, and in some cases have taken actions, that they believe will improve perceptions about the fairness and consistency of disciplinary action programs, including changing the composition of disciplinary committees or establishing minimum penalty guidelines. (See app. II.)

Using Management Information

CFTC uses investigatory and disciplinary action information to judge specific exchange decisions and to monitor exchange progress from one rule enforcement review to another. However, it does not formally analyze trends or compare results across exchanges.

Currently, CFTC uses exchange investigative logs to target problems and to gauge investigatory activity during a specific time period at a particular exchange. It uses disciplinary action notices, maintained in an automated database, to target particular disciplinary actions for further review and to measure disciplinary activity at a particular exchange.

CFTC cannot use this information to analyze trends and compare results among exchanges because no uniform definitions exist that would enable exchange officials and CFTC to classify investigations and disciplinary actions involving floor trade practice abuses. Such analyses and comparisons could help CFTC identify patterns in exchange oversight results that might highlight issues for review; show the relative effectiveness of different exchange approaches to detecting, investigating, and punishing abusers; and identify aspects of successful programs that all exchanges could adopt. For example, by tracking and comparing the exchanges' performance, CFTC could determine those detection methods that generate the most leads and could direct other exchanges to incorporate those methods, as appropriate. CFTC and the exchanges are beginning to develop uniform definitions. (See app. VIII.)

Recommendations

We recommend that CFTC

- establish milestones for completing definitions of trade practice violations and trade practice investigations so that they can be consistently differentiated from other types of rule violations and so that the definitions are uniform across exchanges and
- begin making formal trend and comparative analyses of exchange investigations and disciplinary actions.

We discussed this report with CFTC, SEC, and exchange officials and have incorporated their comments where appropriate. Most of the officials agreed that implementing our recommendations would improve trade timing and therefore enhance the ability of CFTC and the exchanges to deter, detect, and punish trade practice abusers. COMEX officials were concerned that our recommendation for improved timing of trades is not technologically feasible in the near term. We believe that the technology

the exchanges are researching and testing has the potential to provide cost-effective means of implementing our recommendations.

As arranged with the Committee, we are sending copies of this report to CFTC and to other interested parties. This report was prepared under the direction of Craig A. Simmons, Director, Financial Institutions and Markets Issues. Major contributors are listed in appendix XIII.

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Abbreviations

Amex	American Stock Exchange
CBT	Chicago Board of Trade
CBOE	Chicago Board Options Exchange
CME	Chicago Mercantile Exchange
COMEX	Commodity Exchange, Inc.
CFTC	Commodity Futures Trading Commission
CTR	Computerized Trade Reconstruction
FBI	Federal Bureau of Investigation
ITS	Intermarket Trading System
NASD	National Association of Securities Dealers
NASDAQ	National Association of Securities Dealers Automated Quotation
NYMEX	New York Mercantile Exchange
NYSE	New York Stock Exchange
OMB	Office of Management and Budget
OTC	Over-the-Counter
SEC	Securities and Exchange Commission

Effectiveness of Futures Exchange Trade Practice Oversight

How effective are the trade practice oversight systems, including computerized audit trail systems, at futures exchanges and, for comparison, in securities markets?

We could not directly determine the effectiveness of trade practice oversight programs because we do not know the relationship between the number of abuses that CFTC and the exchanges find and punish to the total number of abuses that occur. The full extent of abuses that occur is unknown, although the FBI investigations may provide more insight than has been available. The Department of Justice indictments indicate that the FBI found the same types of alleged abuses occurring in the CBT soybean and U.S. Treasury bond trading pits as in the CME Japanese yen and Swiss franc trading pits. The alleged abuses involved schemes to enrich floor participants in violation of the Commodity Exchange Act, CFTC regulations, and exchange rules. The glossary describes various abuses that can occur in the futures market and that the Justice Department indictments allege occurred at CBT and CME.

We focused on three indicators of the intensity or quality of efforts to deter, detect, and punish trade practice abusers—the adequacy of oversight controls, the number and nature of disciplinary actions taken, and the use of management information. In the following sections, we discuss opportunities for CFTC and the exchanges to improve their framework of controls by making audit trail data more reliable through independent, precise, and complete timing of trades and testing of automated surveillance systems. We also compared futures and securities audit trail and oversight systems but reached no conclusions. The number and nature of disciplinary actions and the use of management information are discussed in appendixes II and VIII, respectively.

Independently, Precisely, and Completely Timing Trades

Futures exchanges generally do not independently, precisely, and completely time all trades. Most of the types of abuses alleged in the Justice Department indictments could have been detected and documented with independent, precise, and complete timing of trades. CFTC and the exchanges have proposed, and in some cases have taken, actions that will improve timing information and the sequencing of trades. However, even if implemented, these actions will not result in independent, precise, or complete timing of trades. The exchanges are also exploring the potential of new technology and automated systems to provide more accurate timing data.

Independent timing of trades could prevent floor participants from using their knowledge of the market price in the immediate past to alter trading records and to conceal execution of trades at noncompetitive prices. Precise timing could be used to determine the exact sequencing of each floor participant's trades, thereby making it easier to detect abusers, particularly under active market conditions. Complete timing of trades, including the time the floor participant receives and executes trades, could help reconstruct the history of each trade, not only to detect potential abuses, but also to prove that they occurred.

Currently, dishonest floor participants, working alone or with a third party, can eliminate the risk of unfavorable market movements. They can manipulate the information on the trading records to give noncompetitive trades the false appearance of having been competitively executed at an earlier time when prices were more favorable to them. These practices could be deterred or more easily detected through improved timing of trades.

Exchanges attempt to reconstruct the sequence of trades using times that may be based on inaccurate or incomplete information. The reconstructed sequence of trades and the timing information used to determine the sequence are then used along with an exchange record of the times of price changes[1] to detect and investigate floor trade practice abuses.

The timing information used to reconstruct the sequence of trades is part of the "audit trail," which is the documentation for all trades. The on-floor audit trail for a customer order begins when an order ticket is prepared and time-stamped at a trading booth on the exchange floor. Except at NYMEX, the audit trail for trades not involving customers begins when the floor participant[2] completes an entry on a trading card. At NYMEX, it begins when the seller completes a special card, called a pit card.

When any trade is executed, floor participants are required to record trading information on a trading card or customer order ticket. The information may include quantity, price, opposite broker, transaction

[1]CFTC requires exchange employees to record all changes in prices to at least the nearest 10 seconds as trades are executed.

[2]Two basic types of floor participants are found in the futures pits—floor traders and floor brokers. Floor traders deal exclusively for their personal accounts and do not handle customer orders. In contrast, floor brokers may trade for themselves and others.

date, and timing information. The trading card may also include trade sequence. After a customer order is executed, the corresponding order ticket is returned to the floor trading booth, where it is again time-stamped. At NYMEX, the selling floor participant is required to complete a pit card that includes some of the same information that is on the trading card; however, the exchange provides the transaction date and time.

CFTC requires each exchange to prepare a trade register that shows, for each cleared or matched trade, the execution time to the nearest minute. CFTC allowed the exchanges to develop individual audit trail systems to meet this 1-minute timing standard and required that the exchanges be able to report on the accuracy of the information. Each exchange has its own requirements for reporting timing information in audit trail source records and procedures for incorporating data from these records into its audit trail database. Although all audit trail data are available to prove a case once a potential abuse is identified, only the data entered into the audit trail system are used for routine surveillance.

To the extent that the audit trail is dependent on floor participants to accurately record trade time and sequence information at CBT, CME, and COMEX, opportunities exist to manipulate reported trade times and, therefore, the subsequent sequencing of trades. Because trading cards are currently required to be collected every 30 minutes or even less often, sufficient time exists for floor participants to alter trading records. Also, because many price changes may occur within this time, the floor participant has the opportunity to use historical prices in an attempt to conceal abuses. At NYMEX, sellers cannot manipulate reported trade times because the exchange assigns the time upon receipt of the pit cards sellers submit—sellers are required to submit these cards within a minute of execution.

For surveillance systems to be effectively used in detecting abuses, trade timing must not only be free from participant manipulation, but it also must be precise enough to allow complete and accurate trade sequencing. While CFTC requires exchanges to report trading times to the nearest minute, a single minute during certain trading periods in an active market may include hundreds of trades. Because a single floor participant could have executed a number of these trades at different prices, even if the time is recorded independently, as at NYMEX, the floor participant has an opportunity, even within a 1-minute period, to use information that is only seconds old to cheat customers without detection. As a result, even independent timing to the nearest minute will not always allow for accurate sequencing of each floor participant's trades.

COMEX does not sequence trades within a single minute because, in its case, floor participants are only required to report trades to the nearest minute. CBT and CME attempt more precise trade sequencing, but this sequencing may not always be reliable.

Finally, the audit trail system must incorporate complete timing information on key events in the handling of each customer order for the entire period it is on the exchange floor. To the extent that the audit trail does not independently or precisely identify when orders are received, executed, and moved off the floor, an opportunity exists for dishonest floor participants to violate trading rules without detection by manipulating trade records. Although order ticket entry and exit times must be stamped on each order, only CBT and CME enter entry time stamps into their audit trail databases and none of the exchanges enter the exit time stamps for use in routine surveillance.

Additionally, none of the exchanges time when floor participants receive customer orders. This time is crucial because it establishes when the floor broker assumes responsibility for promptly and competitively executing the orders. By knowing when the floor broker received an order and the type of order, such as market[3] or limit[4] order, the quality of the order fill can be assessed in relationship to prices prevailing when the order should have been filled. Without timing information on the complete history of each order, floor trade practice abuses could occur without detection and customers could be defrauded. Also, this information may provide the evidence needed to prove that certain abuses actually occurred.

COMEX floor participants on both sides of the trade manually record the trade time to the nearest minute. Therefore, the accuracy of these times in the COMEX system is dependent on floor participants correctly recording trade execution times. To verify the participant-reported times, COMEX compares the times reported by each side of the trade and matches each of these times against its price change report. It may impose fines on members submitting times inconsistent with the other side of the trade or with the price change report. However, participants deliberately manipulating trade times may be able to make their times consistent to avoid detection.

[3]A market order is one to buy or sell a futures contract at whatever price is attainable at the time it enters the pit.

[4]A limit order is one in which the customer specifies a price limit or other conditions for order execution.

At NYMEX, sellers are required to submit the pit card to a NYMEX official within a minute of trade execution. Sellers submit the card by throwing it into a net in the middle of the exchange pit from which the exchange official then retrieves and time stamps it. Although NYMEX times are independent of floor participants, this system has some limitations in achieving precise 1-minute timing and sequencing of all trades. First, sellers may not always complete and submit their pit cards to the exchange officials fast enough to have them time-stamped in the same minute in which the trade was executed. Second, even if sellers promptly complete and submit pit cards, the NYMEX official timing them may not time-stamp them in the exact order in which they were received or in the same minute during which the trade was executed.

The mechanical timing process NYMEX uses makes any further increases in timing precision difficult. In addition, sellers may fail to promptly submit a pit card, or may not submit a card at all, as part of a scheme to conceal a trade practice abuse. Because buyers do not record or submit trade timing data, sellers can delay the reported time of trade execution without collusion from the buyer.

Like COMEX, NYMEX uses its time and sales record as a means of verifying 1-minute execution times. If the time-stamp is inconsistent with its price change reports, indicating late submission of pit cards, the seller may be subject to a fine.

CME and CBT have computerized trade reconstruction (CTR) systems that use a series of logical steps to impute 1-minute trade times from audit trail data. The accuracy of the trade times that these systems generate partially depends on audit trail timing data that floor participants submit. For example, when a trade is executed, CME and CBT require floor participants to record a letter that corresponds to an exchange-designated, half-hour trading period, which the CTR system uses with other information to impute 1-minute trade times.[5]

CFTC identified some problems in the logic CTR systems use that were leading to incorrect trade times. For example, at both CBT and CME, CFTC found that CTR imputed times for some trades before the trade reached the floor order booth or after it was reported to the floor order booth as executed. CFTC also found that the CBT CTR system may also impute incorrect times because it does not use all key timing data.

[5]The CTR system will sometimes ignore participant-provided timing information that is inconsistent with other audit trail records.

CME, NYMEX, and COMEX report that 84, 85, and 87 percent of trade times, respectively, can be verified as meeting the 1-minute timing standard. CFTC officials told us that CBT does not have a method for reporting on the accuracy of its trade times. The other three exchanges use methods that rely heavily on the record of price changes to either derive or test the accuracy of reported execution times. To the extent that floor participants can manipulate timing information to make illegal trades appear to have been executed in conformity with the record of price changes, either by recording incorrect information on trading cards and order tickets or by withholding the submission of pit cards, these reported verification rates may not be reliable.

CFTC and Exchange Initiatives

CFTC proposed rule amendments in August 1989, tightening controls over the preparation and submission of trading cards and the submission of order tickets that will improve timing information and trade sequencing. Some of these rules are already in effect at one or more of the exchanges. The rules include a variety of requirements designed to make it more difficult to manipulate audit trail records.

The proposed rules include requiring that trading cards (1) contain preprinted identifying information that would permit sequencing, distinguish each member's records from those of other members, and distinguish each such record from others prepared by a member over a 1-week period; (2) be time-stamped promptly upon completion; (3) be accounted for in exact numerical sequence, regardless of whether the card was voided or unused; and (4) be submitted to the exchange or clearing member at intervals, initially not to exceed 30 minutes, subsequently to be reduced to 15 minutes. The latter would also apply to order tickets.

The rules would also require that floor participants submit trading cards within 5 minutes or less of the market close and identify trades made at the opening and closing of trading—periods ranging from 30 seconds to several minutes in length. According to a CFTC official, these are the most active and volatile trading times, and the additional information required by the proposal is needed to help CFTC and the exchanges to better sequence trades during these periods.

If approved, the rules could go into effect in early 1990. The exchanges have already begun implementing some of these changes, as well as others. However, even if these rules are implemented, floor participants will still be relied on to provide accurate trading records, trade times

will not be exact, and complete information on trades will not be available. Additionally, CFTC has issued an interpretation, effective immediately, which reaffirms the need for exchanges to maintain complete records for several kinds of trading errors.

The President of the Futures Industry Association, a national trade association composed of more than 100 of the largest futures brokerage firms, said that more precise timing than the current 1-minute standard will probably not be feasible for systems that manually record trade times and will likely require increased automation. In fact, the exchanges are exploring applications of new technology and automated systems that could provide more independent, precise, and complete timing during normal hours under open-outcry trading. CBT, CME, and NYMEX are also exploring after-hours electronic trading systems. Although some of these systems are not being designed primarily to perfect timing information, this may be one result of their implementation. These systems will also facilitate the detection of abuses if the information is incorporated into the audit trail.

CBT and CME are pilot testing automated order-routing systems that will independently record order-entry times to the nearest one-hundredth of a second and report them to the nearest second. The systems will also record the time orders are entered into the systems after they are executed. If integrated into the audit trail, these data will better define the period within which the order must have been executed, thereby improving trade timing capabilities. The systems will not, by themselves, provide the times that brokers receive or execute customer orders.

All four exchanges are investigating hand-held trading terminals for use under open-outcry trading. COMEX and NYMEX officials told us that their exchanges are jointly developing a hand-held trading terminal. In August 1989, CME and CBT announced that they had committed a total of $5,000,000 to developing an automated data input terminal system. The terminals are expected to have controls that will provide independent times for order receipt and execution and that will prevent brokers from changing entered execution times. Adding this system to automated order-routing systems would allow exchanges to determine exactly when brokers received and executed customer orders. If configured as planned, this technology would make it more difficult for brokers to manipulate audit trail records and avoid detection.

The proposed system will use hand-held electronic trading terminals in place of trading cards and order tickets. The terminals will record the times that trades enter and are executed in each trading pit. The system is also intended to include stationary broker work stations that can be used to receive incoming orders from exchanges' planned order routing systems. CME and CBT officials are optimistic that a workable hand-held terminal can be deployed within 1 year for floor traders. Integration of the floor trader terminals with proposed order entry systems is expected to take longer than a year.

CBT and CME are currently developing automated trading systems for after-hours trading. NYMEX officials told us that they are planning a similar system. Our review was limited to the CBT and CME systems. Both systems include controls that would make certain types of trade practice abuses more difficult. For example, prearranging trades to execute customer orders outside of the current market prices would be very difficult. These trading systems would also generate an audit trail that includes precise timing of all trading activity to the nearest one-hundredth of a second. Exchange officials expect some type of automated after-hours trading system to be in place in less than 1 year. To reduce costs to exchange members, CBT and CME are discussing working together on a joint after-hours trading system.

While these automated improvements to open-outcry trading and after-hours trading systems would provide more precise trade times, some are only now being tested and others are still under development. Under current plans, exchange officials expect enhancements to the open-outcry system to be phased in over the next several years, although parts of the system are expected to be in place before the end of 1990. After-hours automated trading systems may be operational somewhat sooner.

Conclusions

Independent, precise, and complete trade timing, however achieved, should reduce the opportunity for certain trading abuses and should increase the probability that those committing certain trade practice abuses will be apprehended. The time frame for achieving precise, independent, and complete timing is likely to be more than a year. Thus, CFTC's proposals should be implemented quickly to provide needed interim improvement in controls over trade practice abuses.

Recommendation

We recommend that CFTC direct the exchanges to independently, precisely, and completely time each trade and specify a time frame for

meeting this requirement. Timing should be independent of the other trading data supplied by floor participants. Time recording should include the precise time the broker receives and records as executed each order, as well as the precise execution times of noncustomer trades. CFTC should give the exchanges flexibility in deciding how to meet the requirement but should also establish firm implementation dates.

Improving Automated Surveillance

CFTC regulations require that exchanges maintain a program for deterring, detecting, and punishing trade practice abusers. Originally, exchanges complied with this requirement, in part, by manually reviewing their trade registers. At different times between 1986 and 1989, the exchanges began using automated trade surveillance systems to more efficiently review all trading activity and to provide investigators with exception reports that highlight suspicious trading activity. CME and CBT implemented their systems in 1986. However, although CME immediately began 100-percent coverage of trading activity, until 1989, CBT used its system to review a sample of trades. NYMEX and COMEX started using their screening programs in 1988 and 1989, respectively.

Trade practice abuses can be detected by various means, such as manual review of the trade register, surveillance of the trading floor, and complaints from members. In addition, automated surveillance systems can screen large volumes of trading data for potential abuses more efficiently than can manual methods. We have already discussed how improved timing data would enhance the ability of these systems to detect abuses that involve floor participants taking advantage of past trading times and prices to cheat customers. Identifying abuses that do not involve floor participants taking advantage of knowledge of past information requires analysis of trading patterns that may not be facilitated by exact sequencing. Some of these involve floor participants trading at competitive market prices, such as with a favored colleague, but not by open-outcry. These abuses could be identified by reviewing the frequency with which a floor participant trades with the same person or by reviewing other trading patterns.

While the exchanges are continuing to upgrade their systems, CFTC officials said that the exchanges could make better use of existing systems in detecting trade practice abusers. CFTC officials also said that they have been concerned about the few disciplinary actions resulting from automated surveillance.

The exchanges are planning further enhancements to their present systems' capabilities that they expect to increase the number of productive leads. For example, CME, CBT, and NYMEX plan to incorporate trading profiles for exchange members in their programs that will highlight abnormal broker trading and/or profits. COMEX recently implemented an automated trading-ahead surveillance program that incorporates individual trading profiles, and CME and CBT are developing advanced data retrieval programs. In addition, CBT has announced that CME and CBT have agreed to unify their existing computerized surveillance programs. Timeframes for implementing these enhancements, however, are uncertain.

CFTC needs to upgrade its oversight of exchange automated surveillance systems. CFTC reviews the parameters and the output of the screening programs to determine the appropriateness of the exception reports the programs generate. In certain cases, CFTC has asked exchanges to modify their systems to better identify leads. However, CFTC does not review system documentation or test screening programs to determine whether the surveillance systems are operating as intended. In addition, CFTC does not require that program documentation be independently assessed.

Exchange officials said that complete documentation is not always available that describes surveillance system initial design, any subsequent modifications, and test results of those modifications. Such documentation is important in determining whether systems are operating as intended. While CME and CBT initially prepared system specifications and plans, the documentation has not been updated to reflect extensive system modifications. Exchange officials said that they tested both the initial system and all subsequent enhancements, but CFTC did not review these. Likewise, CFTC does not independently test the screening programs to determine whether surveillance systems are operating as the exchanges intend, or otherwise require that they be independently assessed. CFTC or other independent tests of screening programs could include running data containing known abuses, called a test deck, through the exchanges' systems.

Conclusions

Improved trading information should improve exchanges' ability to detect and document trade practice abuses. However, audit trail enhancements will have little impact unless the exchanges can effectively analyze the enhanced data. CFTC needs to upgrade its oversight of the exchanges' automated surveillance systems.

Two techniques can help CFTC strengthen its oversight. First, CFTC needs to require exchanges to prepare and maintain system documentation, including test results. By reviewing such documentation or requiring that it be independently reviewed, CFTC can be more confident of the appropriateness of system design and changes to that design. Second, CFTC should test exchanges' automated surveillance systems, or require that an independent party do so, to judge the ability of these systems to detect abuses.

Recommendations

We recommend that CFTC

- require exchanges to maintain complete documentation of automated surveillance systems and
- expand its reviewing and testing of exchange automated surveillance systems, or require that they be independently reviewed and tested, to determine whether they are operating as intended.

Futures and Securities Trade Practice Oversight Programs

Comparisons between the oversight of the futures and securities markets for trade practice abuses are complicated because the trading systems in the two markets are different. These differences, as well as the differences in the instruments traded, result in different kinds of abuses occurring in each market. As a result, although the audit trail and surveillance systems used to detect and document floor trade practice abuses in securities markets use some of the same general approaches as used in the futures markets, the details of the systems are very different, making comparisons difficult. However, CFTC and SEC are organized similarly to oversee trade practice abuses, and they have similar surveillance activities.

Differences in Trading Systems

While futures are traded in an open-outcry system in which floor brokers and floor traders compete for bids and offers, NYSE and Amex use a specialist[6] system that provides for more structured markets. NASD and

[6]Specialists are exchange members who function as both brokers and dealers in fulfilling their primary obligation to maintain fair and orderly markets in the stocks the exchange assigns to them by buying or selling assigned stocks when a temporary disparity exists between the supply and demand for the stocks. As brokers, specialists act on behalf of others who entrust to them orders that cannot be executed until specified execution prices have been reached. As dealers, specialists facilitate orderly price movements by buying stock for their own accounts when sellers outnumber buyers and by selling stock from their accounts when buyers outnumber sellers.

CBOE have a multiple market-maker [7] system with some similar features. Specialists have responsibility for buying and selling assigned stocks when a temporary disparity exists between the supply and demand for the stocks. According to NYSE and Amex officials, the structure of securities markets plays a role in the types of abuses that can occur on the exchange floor. As a result, more abuses are likely to occur off the exchange floor—among them insider trading.

Comparison of Audit Trail and Oversight Systems

Each of the securities exchanges has its own audit trail system that is used to record information on each transaction, including the time of execution. At NYSE and Amex, approximately 80 percent of all orders entering the exchanges are routed to specialists via automated order routing systems, and the time that specialists execute these trades is independently, precisely, and completely recorded. Trades involving brokers are recorded by exchange employees.

CBOE relies on floor participants to record the execution times of most trades. However, about 14 percent of all customer orders are executed automatically through a small order execution system that independently, precisely, and completely records trade times. Similarly, NASD relies on market makers to report most execution times, while in 1988 about 10 percent of all customer orders were independently, precisely, and completely timed by an automated small order execution system.[8] Like the futures exchanges, the securities exchanges are moving towards more precise and independent trade times and have implemented or are considering some of the same types of technology that are now being considered in the futures markets.

As in the futures markets, once trading data are entered into audit trail systems, the securities exchanges review these records with varying levels of computer assistance in an attempt to identify unusual price and volume movements, as well as specific instances of potential trading abuses. The major difference between the securities and futures market

[7]Market makers are options traders and exchange members who trade for their own accounts. Like specialists, they are responsible for maintaining fair and orderly markets. Over-the-counter market makers have few obligations. A primary obligation is to maintain a continuous two-sided price quote for their own accounts.

[8]NASD data applies only to National Market System stocks. At NASD, the small order execution system handles customer orders of 1,000 or less shares of stock. At CBOE the retail automated execution system can electronically execute customer orders of 10 contracts or less of designated equity options.

oversight programs appears to be securities markets' emphasis on monitoring for unusual price and volume movements. Because futures trade practice abuses are not necessarily related to such unusual movements, this kind of analysis might not be as productive for detecting floor trade practice abuses in the futures markets. Additionally, NYSE and Amex maintain a specific oversight program designed to monitor the performance of specialists in meeting their obligations. Because futures participants do not have comparable obligations, similar programs do not exist in the futures markets. Like the futures markets, the securities markets have ongoing programs to apply more advanced automation techniques to trade practice oversight.

Federal Oversight Activities

Both CFTC and SEC rely on the self-regulatory organizations, which include the exchanges and NASD, to provide the primary defense against trade practice abuses. The self-regulatory organizations meet their responsibilities by setting and enforcing rules. CFTC and SEC oversight programs have similar features for ensuring that the exchanges carry out their regulatory responsibilities. Both do oversight reviews and a variety of other monitoring activities, including reviews of exchange disciplinary actions and investigative logs. (See app. VIII.) Unlike SEC, CFTC makes its oversight reports public. Both agencies use computerized database systems to assist in fulfilling their oversight responsibilities.

CFTC and SEC refer trade practice abuse cases identified by their direct oversight activities to the appropriate exchange or their own enforcement division for further investigation. However, SEC refers most of its very few floor trade practice abuse cases to the appropriate exchange because it does not typically take enforcement action against individual floor trade practice abusers. Although SEC has the authority to take such action, it relies primarily on the exchange to pursue these cases. SEC officials said that the agency uses its resources to pursue issues, such as insider trading, that generally fall outside of exchange jurisdiction.

CFTC and SEC have the authority not only to discipline individuals, but also to discipline exchanges that fail to meet their obligations to enforce federal regulations and their own rules. Both agencies have taken such actions; however, without knowing the universe of violations, we could not measure their effectiveness in doing so.

Effectiveness of Exchange Disciplinary Programs

How effective are futures exchange disciplinary programs? Include the consistency and severity of penalties assessed and the roles of compliance staffs and member committees at the futures exchanges and, for comparison, in securities markets.

The number and the severity of disciplinary actions that the exchanges have taken varies considerably. We were unable to evaluate the significance of the differences in exchange disciplinary actions because the universe of abuses is unknown, and the uniqueness and complexity of each case preclude generalizations about the adequacy and consistency of penalties. Moreover, the results of comparisons of futures to securities market disciplinary actions are not useful in judging the futures market disciplinary actions because of differences in the types of abuses that occur in the two markets. However, the increased number and severity of penalties for floor trade practice abuses since the FBI investigation became public appears to indicate an increased commitment by the exchanges to deterring, detecting, and punishing trade practice abusers.

CFTC and exchange officials are concerned about perceptions of potential conflicts of interest and about the fairness and consistency of the disciplinary action process. As a result, CFTC has issued proposed rules governing the eligibility of members with prior disciplinary histories to serve on disciplinary action committees. Also, most exchanges are considering actions, and in some cases have taken actions, that they believe will improve perceptions about the fairness and consistency of disciplinary action programs, including changing the composition of disciplinary committees or establishing minimum penalty guidelines.

Number and Severity of Actions

Table II.1 shows that the number and the severity of disciplinary actions the futures exchanges have taken over the past 5 1/2 years varies by exchange but have generally increased. From January 1, 1984, through June 30, 1989, the total number of floor participants penalized at each exchange ranged from a low of 17 at NYMEX to a high of 177 at CME; total fines ranged from $323,000 at NYMEX to $4,472,000 at CME; and total suspensions ranged from 304 business days at NYMEX to 13,562 business days at CME.

CME, CBT, and COMEX disciplinary activity during the period January 1, 1987, through June 30, 1989, was higher than their activity in the previous 3 years. At CME, this result applies to all of the disciplinary categories shown. At CBT and COMEX, the number of permanent bars were higher in the earlier period.

In contrast, NYMEX shows less disciplinary activity of all types in the 1987 through 1989 period compared to the 1984 through 1986 period. NYMEX officials said that the exchange's relatively small number of disciplinary actions and the apparent weakening of its program were caused by problems with staff turnover, particularly in key positions, and low staffing levels in the compliance department. From 1987 through early 1988, NYMEX had three different trade practice surveillance managers. In 1989, NYMEX had eight trade practice investigators, in contrast to the two it had during most of 1987. NYMEX officials said that the increase in disciplinary actions taken in the first half of 1989 reflects increased surveillance staffing.

The number of floor participants penalized does not correspond to exchange size, as measured by the volume of contracts traded. Table II.1 shows the volume of contracts that CFTC reported each exchange traded from fiscal years 1984 through 1988. The ranking of exchanges by volume for 1987 and 1988, from highest to lowest, was CBT, CME, NYMEX, and COMEX. As already noted, CME led in most disciplinary action areas despite lagging behind CBT in trading volume.

Also, in 1987 and 1988, the number of floor participants penalized per contract traded was higher at COMEX, which had the lowest trading volume, than at CBT, which had the highest trading volume. NYMEX volume has exceeded COMEX volume in recent years, but COMEX has consistently had more disciplinary actions.

Table II.1: Futures Floor Trade Practice Disciplinary Actions and Exchange Volume (January 1, 1984, Through June 30, 1989)

	1984	1985	1986	1987	1988	1989	Total
CBT							
Floor participants penalized	2	7	14	16	13	12	**64**
Fines (thousands of dollars)	30	260	156	162	180	1,196	**1,984**
Suspensions (business days)	819	381	1,012	2,222	6,104	20	**10,558**
Permanent bar	0	4	2	0	0	2	**8**
Trading volume (millions of contracts)	74	78	103	116	140	a	**511**
CME							
Floor participants penalized	4	33	27	38	51	24	**177**
Fines (thousands of dollars)	10	291	190	1,684	558	1,739	**4,472**
Suspensions (business days)	132	160	58	8,553	3,797	862	**13,562**
Permanent bar	0	0	0	4	1	2	**7**
Trading volume (millions of contracts)	43	54	67	80	78	a	**322**
NYMEX							
Floor participants penalized	6	1	5	0	2	3	**17**
Fines (thousands of dollars)	134	0	128	0	13	48	**323**
Suspensions (business days)	0	0	199	0	0	105	**304**
Permanent bar	1	1	0	0	0	0	**2**
Trading volume (millions of contracts)	5	7	13	22	33	a	**80**
COMEX							
Floor participants penalized	5	9	22	27	27	13	**103**
Fines (thousands of dollars)	248	388	421	649	613	375	**2,694**
Suspensions (business days)	0	147	232	707	411	242	**1,739**
Permanent bar	0	1	0	0	0	0	**1**
Trading volume (millions of contracts)	20	18	16	20	20	a	**94**

[a]Not available.

Source: GAO prepared the table from exchange disciplinary action notices. Trading volume data are from CFTC's annual reports.

Universe of Abuses

Directly measuring the total numbers and types of floor trade practice abuses that occur in the futures markets is difficult, if not impossible, because rule violators need to keep abuses hidden to avoid detection and punishment. The cases that exchanges investigate and disciplinary actions that they take provide an indication of the potential for and types of abuses that can occur. Undercover operations, such as those of

the FBI, may also provide a gauge of abusive activity because agents can observe a range of activity that may escape current conventional surveillance programs.

Adequacy and Consistency of Penalties

We reviewed trade practice abuse disciplinary case files that had penalties imposed in 1987 and 1988 and were unable to identify cases in which abusers were, in our opinion, treated with extreme severity or leniency. Because of the dissimilarity among cases, we could not determine if similar cases received consistent penalties within an exchange or among exchanges. CFTC may provide some consistency for disciplinary actions through its rule enforcement reviews and through its continuing review of exchange disciplinary action notices.

We could not determine whether disciplinary action cases were similar and the actions taken comparable because each case typically involved several different abuses, occurring over varying periods of time, with different amounts of customer funds involved. In addition, according to exchange officials, when deciding what disciplinary action to take, exchanges considered many factors, including the dollar amount of customer funds and the number of trades involved, the disciplinary record of the offender, and the extent of cooperation the offender provided. The disciplinary committees determined penalties through a deliberative process that frequently included settlement negotiations similar to plea bargaining. The details of the disciplinary committee proceedings were not fully documented in exchange records.

In reviewing exchange disciplinary action programs, CFTC evaluates the timeliness and documentation of the disciplinary process and the adequacy of sanctions imposed. While CFTC did not identify timeliness problems at either CME or CBT in its most recent reviews, it did cite delays in the disciplinary process at both COMEX and NYMEX and made recommendations for improvement. COMEX also received a recommendation to improve its recordkeeping.

CFTC concluded that the sanctions imposed at all four exchanges were adequate and reasonably calculated to deter future violations. However, CFTC identified areas for improvement at both CME and COMEX. CFTC cited one CME case in which the sanction did not appear to consider the violator's recidivism and also noted that CME had no procedures to monitor compliance with exchange suspensions. At COMEX, CFTC found one instance in which the exchange had not referred a nonmember's possible

illegal trading activity to CFTC for further action. According to CFTC officials, the exchanges have corrected these deficiencies by improving their policies, procedures, and practices.

Securities and Futures Market Disciplinary Actions

Disciplinary procedures in the securities markets are generally similar to those followed in the futures markets. In both markets, once a potential abuse is detected, the exchanges open an investigation and, with the exception of CBT and NYSE, send cases appearing to merit further action through a screening committee that determines if the case should proceed. If it proceeds, another review committee decides what, if any, penalty to assess. CBT and NYSE do not have screening committees. Instead, cases move directly from the investigation to the committee with sanctioning authority.

As in the futures markets, most securities cases result in negotiated settlements. Direct comparisons between futures and securities markets' disciplinary actions on floor trade practice abuses are complicated by the differences in the types of abuses that can occur in the two markets.

Table II.2 provides statistics on the number of disciplinary actions taken at the securities exchanges we visited. It is limited to disciplinary actions taken against market participants for floor trade practice abuses. A list of the abuses covered and their definitions is found in the glossary.

In addition to their disciplinary action programs, NYSE and Amex have an action available to address poor market making performance by specialists that is not directly comparable to the futures markets or CBOE—reallocating their stocks to other specialists. According to exchange officials, the NYSE reallocated 11 stocks and Amex reallocated 3 stocks during the period from January 1, 1984, through June 30, 1989. Like a suspension or an expulsion in the futures markets, this action deprives the specialist of income.

Table II.2: Securities Floor Trade Practice Disciplinary Actions for NYSE, Amex, and CBOE (January 1, 1984, Through June 30, 1989)

	1984	1985	1986	1987	1988	1989	Total
NYSE							
Floor participants penalized	4	10	9	12	6	6	**47**
Fines (thousands of dollars)	80	181.5	102.5	492.5	62	82.5	**1,001**
Permanent bar	0	0	0	1	0	0	**1**
Barred in supervisory specialist capacity	1	0	1	0	0	0	**2**
Suspensions (calendar days)	231	570	1150	2,007.5	0	540	**4,498.5**
Censures	4	7	9	4	4	5	**33**
Amex							
Floor participants penalized	7	9	4	6	5	1	**32**
Fines (thousands of dollars)	65.5	53.5	40	140	53	15	**367**
Permanent bar	0	0	2	0	0	0	**2**
Suspensions (calendar days)	0	0	0	1,980	554	10	**2,544**
Censures	3	2	3	5	5	1	**19**
CBOE							
Floor participants penalized	19	72	63	28	22	5	**209**
Fines (thousands of dollars)	38	107	71	78	71	8	**373**
Permanent bar	0	0	0	0	0	2	**2**
Suspensions (calendar days)	398	564	2,597	112	3,685	0	**7,356**
Censures	5	28	28	12	17	1	**91**

Note: According to exchange officials, these numbers do not include the reallocation of NYSE and Amex specialist stocks.

Source: GAO prepared the table from exchange disciplinary action data.

CFTC and Futures Exchange Actions

While the investigative staff who develop trade practice abuse cases are futures exchange employees, committees that screen the evidence and adjudicate the cases are composed of exchange members. CFTC has no rules governing membership on exchange oversight committees. Instead, exchanges have developed their own membership rules, which have varied. However, all four exchanges have rules forbidding disciplinary committee members from hearing cases in which they have conflicts of interest.

In August 1989, CFTC issued a proposed rule prohibiting persons who have been sanctioned for major rule violations from serving on exchange governing boards, arbitration committees, and disciplinary committees for 3 years. This rule is likely to go into effect in early 1990.

The CME special review committee has proposed and NYMEX has adopted, subject to CFTC approval, a rule that includes voting nonmembers on all major disciplinary committees.

Compliance Staff and Budget Size

What are the relative budgets and sizes of compliance staffs at the futures exchanges and, for comparison, at securities markets?

We believe that differences in market structure make meaningful comparisons of the budgets and sizes of futures and securities exchange compliance departments virtually impossible. Even making these comparisons among futures exchanges is difficult because each exchange has a different organizational structure. We examined the relative size and experience of professional investigator staffs at futures exchanges. COMEX had the most investigators relative to contract volume[1] and CME and COMEX had the most experienced investigators as of June 30, 1989.

Futures and Securities Market Resources

The securities exchanges' budget data for floor trade practice abuse units are difficult to separate from the overall regulatory budgets, and consequently, cannot be compared to the data obtained from futures exchanges. Table III.1 shows budget and staffing data for the overall regulatory activities of both futures and securities exchanges. The differences among the exchanges budgets and staffing reflect differences in their size and regulatory responsibilities.

Table III.1: Exchange Regulatory Budgets and Staff (1988)

Dollars in millions

	Total budget	Number of staff
Futures exchanges		
CBT	$4.0	85
CME	3.1	86
NYMEX	2.4	37
COMEX	1.2	35
Securities exchanges		
NYSE	68.6	544
Amex	16.1	121
CBOE	3.9	103
NASD	76.6	927

Source: The exchanges.

Futures Market Compliance Budgets

Table III.2 shows compliance department budgets at the four exchanges. Because of differences in organizational structure and how exchanges reported the information, the numbers are not directly comparable

[1]This assumes that the relationship between 1988 and 1989 contract volume remained constant over the first 6 months of 1989.

Table III.2: Compliance Department Budgets (1988)

Exchange	Total budget
CBT	$1,464,000
CME	1,171,000
NYMEX	794,000
COMEX	587,000

Note: The CBT and NYMEX data are estimates of the trade practice program portion of budgets for organizational units with broader responsibilities. The CME data are for the entire compliance department. The COMEX data are for trade practice staff's salary only.

Source: The exchanges.

Sizes and Experience of Futures Investigative Staffs

The number of trade practice investigators each futures exchange employs is one measure by which to compare the relative size of its compliance department. The Chicago exchanges are generally larger and have more investigative staff than do the New York exchanges. As table III.3 illustrates, an analysis of staffing by contract volume shows some differences among exchanges. For example, COMEX had the most investigators relative to contract volume as of June 30, 1989. Also, a CBT investigator monitored almost 50 percent more contract volume than a CME investigator monitored at this date.

Table III.3: Number of Professional Investigatory Staff

Exchange	Contract volume 1/01/89 through 6/30/89 (millions)	Number of investigators as of 6/30/89	Annualized contract volume per investigator[a] (millions)
CBT	73	22	6.6
CME	55	24	4.6
NYMEX	21	9[b]	4.7
COMEX	10	10	2.0

Note: Data do not include exchange compliance directors.

[a]Calculated by dividing the contract volume by the number of investigators and multiplying by two.

[b]One of these positions was vacant from April 1989 to July 1989.

Source: The exchanges and the Futures Industry Association.

The number of investigators at each exchange is not in itself indicative of program effectiveness. Exchange officials said that because of the complexity of many trade abuses and the circumstantial nature of much of the evidence, staff familiarity with trading techniques and experience in developing a case are important. Table III.4 lists the number of professional investigators by years of experience as exchange floor employees or investigators. The table shows that CME has the most experienced trade practice compliance staff of the four exchanges with 10 staff who

have over 5 years of experience. COMEX and CBT rank second with four staff having over 5 years of experience, and NYMEX ranks third with two. Conversely, CBT has the most staff members, 10, with less than 1 year of experience; followed by NYMEX, with 4 staff; CME, with 2; and COMEX, with 1.

Table III.4: Experience of Investigatory Staff (As of June 30, 1989)

Exchange	5 years or more	Between 1 and 5 years	1 year or less
CBT	4	8	10
CME	10	12	2
NYMEX	2	3	4
COMEX	4	5	1

Source: The exchanges.

CFTC Enforcement Program and Resources

How effective are CFTC trade practice detection and enforcement programs? What is the potential impact of limited budget and staff resources on these programs?

We could not directly measure the effectiveness of CFTC's efforts to detect and discipline floor trade practice abuses because we do not know how many abuses are actually occurring in the market. This same lack of data prevents us from measuring the impact of any limitations that might exist in budget and staff resources on these programs. CFTC officials said, however, that their programs could be improved with additional resources.

CFTC Enforcement Program

CFTC's Division of Enforcement investigates potential trade practice abuses identified through various sources. The major source of CFTC trade practice enforcement actions is through trade practice investigations referred to the Division of Enforcement from the Division of Trading and Markets. According to CFTC officials, when Enforcement receives a referral, Trading and Markets has initially developed the case. Generally, however, additional proof is needed to establish whether a violation was actually committed. To complete an investigation, Enforcement investigators obtain evidence, including original audit trail source documents, and use it to reconstruct trading activity. They may also subpoena other evidence, such as bank records.

Once an investigation is completed, Enforcement determines if the evidence indicates a violation of the law or regulation. If so, Enforcement presents the case to the CFTC Commissioners. The Commissioners then determine whether a reason exists to issue a complaint. If CFTC issues a formal complaint, the case is filed with an administrative law judge or in federal court.

Table IV.1 shows that between January 1, 1984, and June 30, 1989, the trade practice disciplinary actions CFTC took at the four exchanges varied greatly. However, the data should not be used to draw any conclusions because some of the respondents include off-floor exchange members, and the universe of abuses at each exchange is unknown.

CFTC officials said that no actions were taken against NYMEX respondents during a period of minimal exchange disciplinary actions (see app. II) because, until mid-1987, the eastern region branch of the Division of Trading and Markets—the primary source of investigative leads for

NYMEX and other New York exchanges—emphasized recordkeeping violations rather than trade practice abuses.

While CFTC took disciplinary actions against COMEX respondents between 1984 and 1986, CFTC Enforcement officials said that they could not readily determine the source of the leads used to generate the actions. However, Enforcement officials said that the eastern region made only one COMEX-related referral during this period. According to CFTC officials, the New York region's program emphasis has changed and currently includes surveillance for a wider range of trade practice abuses. As a result, since mid-1987, the number of referrals to Enforcement has increased for both NYMEX and the other New York exchanges.

Table IV.1: CFTC Trade Practice Disciplinary Actions (January 1, 1984, Through June 30, 1989)

Exchange	Number of respondents penalized	Fines	Number of suspensions[a]	Number of revoked registrations[a]
CME	9	$170,000	0	5[b,c]
CBT	48	600,000	0	1[b]
COMEX	17	897,000	0	0
NYMEX	0	0	0	0
Other	36	945,000	3	1
Totals	**110**	**$2,612,000**	**3**	**7**

Note: The CFTC Division of Enforcement identified these cases as involving floor trade practice abuses. However, some cases involved both on-floor and off-floor activities and some of the respondents shown are not floor participants. For example, according to COMEX officials, more than half of the fines against COMEX respondents were against off-exchange respondents. This may also be true for the other exchanges.

[a]In fiscal year 1984, CFTC brought nine registration cases against floor brokers. We could not determine whether the registration action was based on trade practice violations.

[b]One individual's registration was revoked at both CME and CBT.

[c]One revocation is under appeal and another is pending.

Source: CFTC supplied the data; GAO categorized the data.

Additionally, CFTC has filed and simultaneously settled trade practice complaints against 8 of the 46 individuals indicted as a result of the FBI undercover investigation at CME and CBT. According to CFTC officials, settlement agreements provide that the individuals will never trade futures again either for their own or customer accounts.

CFTC Resources

We compared CFTC's budget request as submitted to the Office of Management and Budget (OMB), the OMB-approved request, and the funding Congress provided. This comparison shows that since 1984, OMB's

approved request and CFTC's actual funding levels were typically less than CFTC had requested for both its overall operations and its trade practice programs. However, we could not determine the impact of the shortfall on CFTC trade practice programs. CFTC officials said that with more resources they would increase direct oversight of exchange programs and the frequency and the timeliness of some current activities. However, they would still rely primarily on the exchanges to oversee the markets and to discipline rule violators.

Table IV.2 shows that, except for fiscal year 1989, when OMB's approved request was greater than CFTC's request, and fiscal year 1984, when CFTC received greater funding than requested, CFTC has received less funding and staff than requested for its overall operations for every fiscal year from 1985 to 1989. In its fiscal year 1990 budget request, CFTC requested nearly a 10-percent increase in funding over its estimated fiscal year 1989 actual funding level, including almost a 13-percent increase for trade practice programs. It requested 10 additional staff-years over 1989 levels in its original fiscal year 1990 request and 10 more in an amendment, for a total increase of 20 staff-years.

CFTC submitted its original request for 10 additional staff-years to compensate for unfunded 1989 staffing. It submitted the budget amendment after the FBI and CFTC acknowledged the undercover investigation at the Chicago futures exchanges in hearings before the Committee. At the hearings, the Committee asked CFTC to evaluate its oversight procedures and consider a number of changes, many of which have resource implications. Of the 20 additional staff-years requested, CFTC said that it will devote 12 to trade practice programs and the remaining 8 to other programs.

Table IV.2: CFTC Staffing and Budget
(Fiscal Years 1984 Through 1990)

	1984	1985	1986[a]	1987	1988	1989	1990
CFTC Request to OMB							
No. of staff	553	565	584	567	544	545	555[b]
Budget (thousands)	$26,156	$28,296	$31,943	$34,221	$34,012	$35,452	$37,984[b]
OMB-approved request							
No. of staff	523	533	533	508	518	545	(c)
Budget (thousands)	$24,691	$27,292	$27,222	$30,418	$32,813	$35,547	(c)
Actual funded levels							
No. of staff	492	512	480	491	510	535[d]	(c)
Budget (thousands)	$26,739	$27,564	$27,983	$29,761	$32,813	$34,723	(c)
Differences between OMB-approved and CFTC request							
No. of staff	−30	−32	−51	−59	−26	0	(c)
Budget (thousands)	−$1,465	−$1,004	−$4,721	−$3,803	−$1,199	+$95	(c)
Differences between funded levels and CFTC request							
No. of staff	−61	−53	−104	−76	−34	−10	(c)
Budget (thousands)	+$583	−$732	−$3,960	−$4,460	−$1,199	−$729	(c)

[a]Gramm-Rudman-Hollings budget limitations were implemented.

[b]CFTC's original fiscal year 1990 budget request was for 545 staff-years and $37,399,000. However, on March 29, 1989, CFTC sent a budget amendment to OMB that increased the staff-years by 10 and the budget by $585,000.

[c]Not available.

[d]Estimated.

Source: CFTC supplied the data; GAO calculated the differences.

Two CFTC divisions administer the agency's trade practice programs. The Division of Trading and Markets, Contract Markets Section, is responsible for trade practice surveillance, and the Division of Enforcement is responsible for investigating and prosecuting trade practice abusers.

Table IV.3 shows CFTC budget data for the Contract Markets Section. Since fiscal year 1985, the OMB-approved request and the funding Congress provided were the same as or lower than what CFTC requested for staff and funds. In fiscal years 1984 and 1985, the OMB-approved request and the actual funding levels were higher than that requested. Of the 12 additional staff CFTC recently requested for its trade practice

programs in fiscal year 1990, CFTC officials said that 5 will be assigned to the Contract Markets Section for doing trade practice surveillance. The Director of Trading and Markets said that with additional resources the group could do more rule enforcement reviews, direct floor surveillance, and automation-related assessments.

Table IV.3: CFTC Contract Markets Section Staffing and Budget (Fiscal Years 1984 Through 1990)

	1984	1985	1986[a]	1987	1988	1989	1990
CFTC Request to OMB							
No. of staff	36.6	33	37	40	41	42	41[b]
Budget (thousands)	$1,515	$1,514	$1,947	$2,146	$2,457	$2,509	$2,617[b]
OMB-approved request							
No. of staff	36.6	33	31	35	37	42	(c)
Budget (thousands)	$1,783	$1,550	$1,750	$1,896	$2,226	$2,507	(c)
Actual funded levels							
No. of staff	34	34	33	37	32	35[d]	(c)
Budget (thousands)	$1,640	$1,650	$1,734	$2,060	$1,878	$2,182[d]	(c)
Differences between OMB-approved and CFTC request							
No. of staff	0	0	−6	−5	−4	0	(c)
Budget (thousands)	$268	$36	−$197	−$250	−$231	−$2	(c)
Differences between funded levels and CFTC request							
No. of Staff	−2.6	1	−4	−3	−9	−7	(c)
Budget (thousands)	$125	$136	−$213	−$86	−$579	−$327	(c)

[a]Gramm-Rudman-Hollings budget limitations were implemented.

[b]CFTC's original fiscal year 1990 budget request was for 36 staff-years and $2,324,000. However, on March 29, 1989, CFTC sent a budget amendment to OMB that increased the staff-years by 5 and the budget by $293,000.

[c]Not available.

[d]Estimated.

Source: CFTC supplied the data; GAO calculated the differences.

Table IV.4 shows CFTC budget data for Enforcement. The OMB-approved request and the actual funding levels for Enforcement were less than what CFTC requested in each fiscal year from 1984 to 1988. Additionally, in 1989, CFTC again received less actual funding than requested. Of the 12 additional staff that CFTC requested for its trade practice programs in

fiscal year 1990, CFTC officials said that 7 will be assigned to Enforcement to investigate and prosecute trade practice abuses. CFTC officials said that they could speed case processing with an increase of approximately 10 staff. They said that processing time is not a problem, but greater speed is always desirable because swift justice is a good deterrent to abusive activity. With increases beyond this number and with better timing data, the division could increase the number of cases investigated and prosecuted.

Table IV.4: CFTC Division of Enforcement Staffing and Budget (Fiscal Years 1984 Through 1990)

	1984	1985	1986[a]	1987	1988	1989	1990
CFTC Request to OMB							
No. of staff	138	159	160	160	150	149	154[b]
Budget (thousands)	$6,821	$7,741	$8,318	$9,330	$9,018	$9,555	$10,118[b]
OMB-approved request							
No. of staff	131.2	139	111	131	139	149	(c)
Budget (thousands)	$6,566	$7,097	$6,379	$7,660	$8,574	$9,657	(c)
Actual funded levels							
No. of staff	109	125	118	125	136	144	(c)
Budget (thousands)	$5,545	$6,717	$6,621	$7,362	$8,203	$9,118	(c)
Differences between OMB-approved and CFTC request							
No. of staff	−6.8	−20	−49	−29	−11	0	(c)
Budget (thousands)	−$255	−$644	−$1,939	−$1,670	−$444	$102	(c)
Differences between funded levels and CFTC request							
No. of staff	−29	−34	−42	−35	−14	−5	(c)
Budget (thousands)	−$1,276	−$1,024	−$1,697	−$1,968	−$815	−$437	(c)

[a]Gramm-Rudman-Hollings budget limitations were implemented.

[b]CFTC's original fiscal year 1990 budget request was for 149 staff-years and $9,826,000. However, on March 29, 1989, CFTC sent a budget amendment to OMB that increased the staff-years by 5 and the budget by $292,000.

[c]Not available.

Source: CFTC supplied the data; GAO calculated the differences.

Impact of High Technology Systems

What impact will high technology systems have on efforts to detect and curb trading abuses, including the possible deployment of new electronic trading systems?

To provide independent, precise, and complete trade timing information, CBT and CME are jointly developing the Automated Data Input Terminal system that uses hand-held trading terminals[1] and electronic broker workstations in conjunction with an order routing system. This system is intended to meet the need for better audit trail data without eliminating the open-outcry trading process. The exchanges are also developing automated trading systems that will be used instead of the open-outcry trading process to allow for trading outside normal hours.

We found, as discussed in appendix I, that both of these initiatives could provide more accurate trade records to better detect certain abuses. Automated trading systems could also prevent some abuses. CFTC should oversee the design, development, and implementation of the exchanges' automation initiatives to ensure that the exchanges obtain the benefits these systems can provide in preventing and detecting trade practice abuses. More detailed information on our review of the automation initiatives of the Chicago futures exchanges can be found in our report entitled Futures Markets: Automation Can Enhance Detection of Trade Abuses But Introduces New Risks (GAO/IMTEC-89-68, Sept. 7, 1989).

[1]COMEX and NYMEX officials told us that their exchanges are also jointly developing a hand-held trading terminal.

Generic Risks of Electronic Trading Systems

What are the potential benefits and problems associated with using electronic futures trading systems in place of, or in conjunction with, traditional oral outcry systems? Also, what are the unique vulnerabilities of these systems?

As the exchanges increase their use of and dependence on automation to do futures trading, they need to ensure that risks associated with automation use do not reduce the exchanges' ability to provide efficient, fair, and equitable treatment to all market participants. Automated systems, such as those planned to be used instead of the current open-outcry process during after hours, offer the potential for better prevention and detection of trade practice abuses. However, replacing manual processes with automation requires that controls exist to ensure that the systems correctly and fairly perform the operations assigned. Generic risks associated with automated systems need to be adequately controlled to ensure correct transaction processing, responsive operations, secure operations, and continuous service.

We believe that CFTC needs to provide resources to do technical assessments of the exchanges' automated system initiatives to ensure that the exchanges take adequate steps to control the risks associated with the use of automated systems. More detailed information on our review of the automation initiatives of the Chicago futures exchanges is provided in our report entitled Futures Markets: Automation Can Enhance Detection of Trade Abuses But Introduces New Risks (GAO/IMTEC-89-68, Sept. 7, 1989).

Roles of Dual Trading and Broker Associations

What are the roles of dual trading and broker associations in the futures markets? Specifically, which exchanges permit these practices or groups? What rules or limits apply to them? How frequently are they involved in complaints or disciplinary actions? And, what type of complaints and disciplinary actions are associated with them?

A lot of attention has been directed to the effect of dual trading and broker associations on market integrity. Dual trading allows floor participants to trade for their personal accounts and those of customers on the same day. Market professionals generally agree that dual trading has several benefits, including increasing market liquidity. The primary abuse associated with dual trading—trading ahead of a customer order[1]—could more easily be detected if trade times were independent, precise, and complete because the exact sequence of each floor participant's trades could be readily determined, as could the time when the broker received the order. Restricting dual trading would not prevent floor brokers from using a third party to indirectly trade ahead of customers. In fact, the Justice Department indictments allege that some brokers were using third parties in an attempt to make illegal trades. Therefore, restricting dual trading is not a substitute for improved timing information in reducing opportunities to commit trading violations.

Broker associations—groups of independent floor brokers that share customer orders, commissions, or expenses—may have negative effects on market competition because they provide incentives for association members to trade within the association rather than with other market participants. Some officials are also concerned that to the extent that associations use less-experienced, lower-paid brokers to fill customer orders, they can profitably charge low commissions, eventually driving nonaffiliated brokers out of business and reducing market liquidity. However, others defend broker associations on the grounds that associations are better capitalized than individual independent floor brokers. They also have a long-term commitment to their brokerage business that makes them willing to fill orders during chaotic periods, such as those occurring during the October market crash. Because association members trading in a particular pit in effect function as a single broker, intra-association trading can facilitate the same trade practice abuses as dual trading. However, these abuses can also be committed by collusion between two or more floor participants who are not members of an association. Regulators and market participants have become increasingly

[1]Trading ahead of a customer order is executing an order for one's personal account, or an account in which one has an interest, while having in hand any executable customer order in that contract.

concerned over the role of broker associations. However, the regulation of broker associations is still in its early stages, except perhaps at CME, and the impact of broker associations on market competition and trade practice abuses is still unknown.

Dual Trading

All futures exchanges currently allow dual trading. Although dual trading provides dishonest brokers the opportunity to cheat customers, exchanges have (1) rules that prohibit abusive practices by dual traders and (2) oversight programs that attempt to detect and punish rule violators. In addition, CME has unique rules that have discouraged dual trading in the Standard & Poor's 500 stock index contract.[2]

Disciplinary actions related to trading ahead of or trading against[3] customer orders are associated with the ability to dual trade. Exchange records did not contain enough information to allow us to readily determine the extent to which other disciplinary actions may be associated with the ability to dual trade. Table VII.1 shows that dual trading abuses range from a low of 14 percent of the trade practice abusers penalized at CME to a high of 52 percent of those penalized at COMEX.

Table VII.1: Floor Participants Penalized for Dual Trading-Related Abuses
(January 1, 1984, Through June 30, 1989)

Exchange	Total number of floor participants penalized	Number penalized for dual trading-related abuses	Percent penalized for dual trading-related abuses
CME	177	25	14
CBT	64	16	25
NYMEX	16	4	25
COMEX	103	54	52

Note: Dual trading-related abuses include trading ahead of or against customer orders.

Source: GAO prepared the table from exchange disciplinary action data.

Dual trading provides brokers an opportunity to trade ahead of, or against, customers. These opportunities have raised concerns about the extent to which dual traders are cheating customers and have led to proposals to restrict dual trading. Trading ahead can allow brokers to take advantage of their advance nonpublic knowledge of orders that have an

[2]The Standard & Poor's 500 stock index futures contract is based on movement in the 500 stocks comprising the Standard & Poor's stock index.

[3]Trading against a customer order occurs when brokers noncompetitively take the other side of their own customers' orders, rather than competitively offering them to other floor participants, to the detriment of the customers or the other floor participants.

effect on market prices. They can directly trade ahead of customer orders by making more trades than needed to fill their customer orders and by then allocating the most favorable trades to their personal accounts and the least favorable trades to customers' accounts. Or, they can indirectly trade ahead, as alleged in the Department of Justice indictments, by disclosing customer orders to other floor participants who then trade ahead of the orders. Brokers can then manipulate trading records and can report the trades in a different order or a different time than the trades actually occurred to make it appear that they traded for their own account before receiving the customer order.

Brokers profit from trading against customer orders by filling orders at worse prices than could be obtained competitively and by keeping the difference between the competitive price and the price given the customer. Exchange officials told us that directly trading against a customer is so easily detected that it is rarely attempted. However, as was alleged in the Department of Justice indictments, brokers can indirectly take the opposite side of customer orders by using other floor participants as intermediaries. The violators then use their knowledge of recent price changes to manipulate trading records to make it appear that they filled the customer orders at competitive prices.

Non-dual trading floor brokers working together can trade ahead of and against customers. However, dual trading may facilitate these abuses by providing brokers with a personal account in which to capture their illegal profits. Without dual trading, colluding floor participants would have to find other means to transfer funds among themselves. CFTC officials said that dual trading makes abuses more likely to occur by giving brokers greater opportunity and capacity to commit abuses. Dual trading also adds to the public perception that futures markets are dishonest.

On the basis of membership concerns about abusive practices, in June 1987, CME implemented rule changes that substantially reduced dual trading in the Standard & Poor's 500 stock index futures contract. According to the CME special review committee report, the share of volume attributable to dual traders fell from over 50 percent to approximately 10 percent because of the rule changes.

The CME special committee to review exchange trading practices recommended that dual trading be prohibited, with several exceptions, in futures contracts that the exchange would determine have sufficient liquidity in the absence of dual trading. Instead of implementing this

proposal, the CME Board of Governors adopted a rule change, subject to member referendum, under which dual trading would be allowed in any contract month[4] in which the verifiability of trade times exceeded a 90-percent accuracy standard.

CME set June 30, 1990, as the target date for implementing the proposed rule change. If a contract month failed to meet the 90-percent standard by that date, then dual trading would be prohibited with the same exceptions as proposed by the special review committee. That is, brokers could dual trade if they (1) had been given specific written authorization, to be renewed annually from each and every public customer for whom they were filling orders; (2) were filling orders for other members; and (3) were predominantly conducting spread[5] transactions. Although CME has strongly defended dual trading in the past, the CME special committee reported that its proposals respond to the widely held belief that brokers use dual trading to cheat customers.

In House Agriculture Committee hearings, exchange officials testified that dual trading benefits market customers and is important for overall market liquidity and efficiency. Separately, CBT, COMEX, and NYMEX officials have defended dual trading. They said that dual traders provide better trade execution for customers and a flexible supply of brokerage services so that futures exchanges can quickly meet increases in customer order volume. These officials advocate deterring dual trading abuses through strong surveillance and disciplinary action programs.

While it is widely accepted that dual trading contributes to market liquidity, CME's experience with limiting dual trading in the Standard & Poor's 500 stock index futures contract appears to support the claim that limiting dual trading in mature liquid contracts may not necessarily harm market users. However, according to a CBT official, this lack of impact may be due to the particular characteristics of this contract, especially the low level of spread trading. Other commentators have also argued that the impact of restricting dual trading depends on many characteristics of the contract traded in addition to contract volume.

[4]The contract month is the calendar month in which the futures contract matures and becomes deliverable.

[5]A spread is the purchase of one futures delivery month against the sale of another futures delivery month of the same or related commodity.

CFTC is assessing the role of dual trading in fostering trading abuses and the impact of dual trading restrictions on market liquidity. It plans to complete the study in October 1989.

While dual trading provides an opportunity for brokers to take advantage of customers, the Department of Justice indictments show that any abuse that a dual trading broker can commit alone can also be committed by non-dual trading brokers and traders working together. Therefore, it is unclear to what extent eliminating dual trading will reduce trade practice abuses. A better deterrent to trade practice abuses would be for the exchanges to precisely and independently time the progress of customer orders while they are on the exchange floor. If used properly, this timing data would better enable the exchanges to identify and document cases in which brokers provide their customers with prices inferior to those being competitively offered by other market participants.

Broker Associations

While all futures exchanges currently allow broker associations, no commonly agreed upon definition of these groups exists. CFTC expects to propose regulations establishing a uniform definition and uniform reporting requirements for such associations in the first quarter of fiscal year 1990. CME, NYMEX, and COMEX have restrictions on trading between affiliated members. Only CME calls these relationships broker associations. Data are unavailable on the number of complaints related to broker associations. Exchange officials said that with the exception of intra-association trading violations, no specific complaints are peculiar to broker associations and that data are not maintained on the number of actions against members of broker associations. Exchange officials also said that with the exception of intra-association trading violations, the disciplinary actions taken against broker association members are no different than those imposed for violations committed by other abusers.

Broker associations create a conflict of interest by providing incentives for association members to execute customer orders within the association rather than with other floor participants. They also provide an opportunity for abuse by providing incentives for association members to share information concerning customer orders and positions that may provide noncompetitive trading advantages to association members.

Critics are also concerned that nonassociation brokers may find it difficult to match the low commissions of association members and may eventually leave the markets. This could result in associations handling an increasingly large share of customer orders, thereby beginning to

have some control over market pricing. Also, by reducing the number of floor participants, broker associations could potentially reduce market liquidity.

However, the CME special review committee noted that most experts it contacted stated that broker associations are beneficial because (1) capital is committed to covering all association members' trading errors; (2) well-organized associations can quickly respond to changing needs for brokers as demand for services shifts among trading pits; and (3) clearing members, in many cases, find it expedient to deal with one association in filling orders in more than one pit. The CME committee also noted that the combination of better capitalization and the long-term commitment of associations to their brokerage businesses appeared to have been a factor in the willingness of broker associations to fill orders in chaotic markets, such as those occurring in October 1987.

CME, NYMEX, and COMEX have rules restricting trading between members of the same broker association or affiliated members. CME rules restrict how often a broker association member can trade for customers and for their own accounts against members of the same association. CME limits intra-association personal account and customer order trading to 15 and 25 percent of a broker's monthly volume, respectively. However, its special review committee proposed banning broker association members from trading for their personal accounts with other members of the same association who are executing customer orders. According to a CME official, the exchange Board of Governors approved this proposal; however, it still must be reviewed by CFTC. NYMEX and COMEX officials told us they interpret their cross-trading[6] rules as prohibiting such trading. So that they can monitor compliance with their rules, CME and COMEX require broker association or affiliated members to register with the exchange, or to otherwise make their existence known.

The NYMEX regulatory review task force recommended that the exchange register members of informal broker affiliations. According to exchange officials, NYMEX currently records the names of those with formal broker affiliations. CBT is requiring members of broker associations to register so that their trading can be monitored. It has not limited intra-association trading because, according to a CBT official, no broker associations

[6]Cross-trading is the offsetting or noncompetitive match of the buy order of one customer against the sell order of another, a practice that is permissible only when executed as required by the Commodity Exchange Act, CFTC regulations, and exchange rules.

exist at CBT to the best of the exchanges' knowledge. The Futures Industry Association also supports registering broker group members so that they can be monitored but believes that the decision on limiting their trading should be left to the exchanges. CFTC is studying issues related to the definition and regulation of broker associations.

Exchange disciplinary records do not typically identify whether rule violators are broker association members. The only disciplinary actions that we could associate with broker associations were those related to violations of CME's intra-association trading limits. Table VII.2 shows that CME has fined some floor participants for violating intra-association trading limits.

Table VII.2: CME Intra-Association Violations of Trading Limits

	1988	1989
Number penalized	14	20
Fines	$20,500	$37,500
Suspensions (business days)	5	10

Note: These figures are not included in GAO calculations of floor trade practice abuses because the violations are not necessarily serious trade practice abuses and because similar rules do not exist at other exchanges.

Source: GAO prepared the table from CME disciplinary action data.

Use of Management Information

How do CFTC and the futures exchanges and, by comparison, the securities regulators, use the management information they collect on trade practice abuses to improve oversight systems, target patterns of abuse, or allocate scarce resources?

CFTC uses investigatory and disciplinary action information to judge specific exchange actions and to monitor exchange progress from one rule enforcement review to another. However, it does not formally analyze trends or compare results across exchanges. Currently, CFTC uses exchange investigative logs to target problems and gauge investigatory activity during a specific time period at a particular exchange. It uses disciplinary action notices, maintained in an automated database, to target particular disciplinary actions for further review and to measure disciplinary activity at a particular exchange. Finally, although CFTC and SEC collect and use floor trade practice abuse information to manage their programs in similar ways, unlike CFTC, SEC does some formal trend analyses.

CFTC cannot use its data to analyze trends and to compare results among exchanges because no uniform definitions exist that would enable exchange officials and CFTC to classify investigations and disciplinary actions involving floor trade practice abuses. Such analyses and comparisons could help CFTC identify patterns in exchange oversight results that might highlight issues for review; evaluate the relative effectiveness of different exchange approaches to detecting, investigating, and punishing abusers; and identify aspects of successful programs that all exchanges could adopt. For example, by tracking and comparing the exchanges' performance, CFTC could determine those detection methods that generate the most leads and could then direct other exchanges to incorporate these methods as appropriate.

CFTC and the exchanges are beginning to develop uniform definitions through the Joint Compliance Committee.[1] The differences in the number of disciplinary actions attributed to trade practice abuses that CFTC and the exchanges reported to this Committee illustrate this lack of uniformity in definitions. Furthermore, without consistent information from all the exchanges relating to trade practice investigations and disciplinary actions, CFTC cannot do formal trend analyses and exchange comparisons to accomplish the objectives we just described.

[1]The Joint Compliance Committee first met in May 1989, under CFTC encouragement, to provide a forum for exchange officials to share information on exchange compliance procedures. The committee has no formal duties or authority, but represents a move toward more coordinated compliance efforts.

The exchanges define trade practice investigations differently. For example, CBT reports the results from computerized screening of trading data as trade practice investigations; COMEX, however, only reports instances in which it finds suggestions of suspicious activity after reviewing trading documents. A CFTC official said that although CFTC has not provided definitions of trade practice investigations, it evaluates exchange definitions during rule enforcement reviews to ensure that investigation logs accurately reflect investigative activity.

CFTC staff classify exchange-reported disciplinary actions in four general categories—"market surveillance," "financial," "trade practice," or "other." A CFTC official said that the classification is based on the staff's knowledge of the industry and familiarity with the information in the disciplinary action notices. While none of the categories have uniform definitions, he said that "trade practice" is the most ambiguous, thereby making accurate classification more difficult. For example, individual CFTC staff may decide differently on whether specific recordkeeping violations are trading abuses or other types of violations.

As a result of these classification problems, CFTC cannot analyze and compare specific kinds of abuses using its database. CFTC's computer is programmed to sort trading abuse information in only three ways—by the name of the exchange, by the name of the abuser, and by the general category of abuse. As a result, if CFTC needed information about a specific type of abuse, such as prearranged trading, staff would have to assemble and analyze the data manually.

A CFTC official said that the Joint Compliance Committee has reached a general consensus on definitions for trade practice investigations and violations but that no formal agreements have been made. Should the Joint Compliance Committee fail to reach a formal resolution at its upcoming October meeting, this official said that CFTC would issue a letter to the exchanges outlining its understanding of what the exchanges had agreed to and its expectation that the agreements would be implemented. Our recommendation to CFTC is designed to encourage this result.

Like CFTC, SEC collects information on exchange oversight efforts that staff use for several purposes, such as determining the scope of periodic oversight reviews. Unlike CFTC, SEC uses its database of exchange disciplinary actions to identify trends that suggest common problems across all exchanges. For example, from 1982 to 1984, SEC compared disciplinary action dismissals in the markets it regulates and found that except

for one exchange, such dismissals rarely occurred. This trend indicated that most exchanges did not initiate disciplinary actions unless they had almost conclusive evidence to support a violation charge.

Conclusions

To better manage its oversight of exchange trade practice programs, CFTC needs to analyze information on investigations and disciplinary actions related to trade practice abuses to identify trends and to compare exchange results. To do this analysis, CFTC needs to ensure that information on trade practice abuse investigations and on disciplinary actions is consistent.

Recommendations

We recommend that CFTC

- establish milestones for completing definitions of trade practice violations and trade practice investigations so that they can be consistently differentiated from other types of rule violations and so that the definitions are uniform across exchanges and
- begin making formal trend and comparative analyses of exchange investigations and disciplinary actions.

Floor Broker and Trader Income

How do exchange sanctions and fines against trade practice abusers compare with floor broker and trader income?

The exchanges could not provide us with any information on floor broker or trader income. Exchange officials said that they do not consider income when determining a sanction. Instead, they examine the severity of the abuse, especially the extent to which customers were harmed.

Comparison of Rule Enforcement Review Results

How do rule enforcement review results for the New York futures exchanges compare with those for the Chicago exchanges?

CFTC found similar deficiencies during rule enforcement reviews at both the Chicago and New York exchanges. In its most recent reviews at the Chicago and New York exchanges, CFTC reported that each exchange needed to improve some aspect of its trade practice oversight or disciplinary action program, as well as its compliance department staffing and audit trail system.

Other FBI Investigations

Has the FBI conducted investigations at the New York futures exchanges or any other exchanges besides the Chicago exchanges? If so, would you provide a summary of the results of the investigations? If no FBI investigations have been conducted at the other exchanges, is there any reason for the lack of investigation at the other exchanges?

According to an FBI official, the agency has not done investigations similar to those at CME and CBT at any other exchange. These are the first such investigations the agency has done. They were undertaken through the initiative of the U.S. Attorney's Office for Northern Illinois, the jurisdiction of which includes the Chicago exchanges. The U.S. Department of Justice has announced that due to the apparent success of these investigations, similar operations may be undertaken elsewhere.

CFTC Sanctions

What sanctions can CFTC impose on individual brokers and traders and the futures exchanges? What additional sanctioning authority would GAO recommend that Congress provide to CFTC?

The Commodity Exchange Act authorizes CFTC to take injunctive and administrative actions against violators. Under injunctive actions, CFTC can obtain temporary restraining orders, preliminary and permanent injunctions, a freeze on violator assets, a receiver for the frozen assets, and other equitable relief that can be obtained from the federal courts. CFTC typically uses injunctive orders in "boiler room operation" cases so that CFTC can halt ongoing violations and freeze firm assets so as to compensate defrauded customers later. In these situations, CFTC can pursue further action against violators through the Department of Justice or a U.S. Attorney.

Administrative actions allow CFTC a wide range of penalties against exchanges and individuals. CFTC can penalize persons or firms by suspending or revoking trading privileges and registrations and by assessing a civil penalty of not more than $100,000 per violation. Similarly, CFTC can impose cease and desist orders and assess civil monetary penalties of up to $100,000 on contract markets, or on their officers or directors, for each violation. Finally, CFTC can either (1) suspend the exchange for a maximum of 6 months or (2) revoke the contract market designation of any exchange if it is not enforcing or has not enforced its rules or if the exchange, or any director, officer, agent, or employee of the exchange is violating or has violated any CME or CFTC rules, regulations, or orders.

CFTC officials, in their April 25, 1989, response to your request, reported that they believe that the penalties available to them against trade practice abusers are sufficient. We have no evidence to contradict their views. CFTC officials indicated, however, that they are concerned with two issues associated with sanctions and civil penalty collections. First, they recommended that the Commodity Exchange Act be amended to delete the requirement that CFTC consider net worth, size of business, or ability to continue in business in determining the amount of civil monetary penalties assessed. As a result of these considerations, CFTC officials said that in some cases they have not imposed the level of penalty that a particular violation may warrant. In other cases, CFTC's civil monetary penalties have been reduced or eliminated on appeal.

Second, CFTC recommended that the Commodity Exchange Act be amended to provide for an automatic trading prohibition and, if applicable, the automatic suspension of CFTC registration upon a failure to appeal or pay a civil monetary penalty order within 15 days from the due date. Typically, a person has 30 days to pay a monetary penalty imposed by an administrative law judge or CFTC as a result of a litigated decision. If the person fails to pay, CFTC can send a letter demanding payment and, if the fine is still unpaid, CFTC can refer the matter to a collection agency or ultimately to the Department of Justice. During this time, however, the person can continue trading on the exchanges.

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Glossary[1]

Futures Violations[2]

Accommodation Trading	Entering transactions to assist another floor participant in accomplishing improper trading objectives.
Bucketing	Failure to introduce an order to the marketplace, traditionally occurring when a floor broker noncompetitively takes the other side of a customer order to the detriment of the customer or other floor participants.
Cross-Trading	Matching customer orders without offering them competitively.[3]
Cuffing	Delaying the filling of customer orders to benefit another member.
Curb Trading	Trading after the official close of trading.
Prearranged (Noncompetitive) Trading	Agreeing to some aspects of a transaction before it is openly executed on the exchange floor.
Trading Against Customer Orders	Noncompetitively taking the other side of one's own customer's order, rather than competitively offering it to other floor participants, to the detriment of the customer or other floor participants.

[1]These are informational, not legal, definitions.

[2]Futures exchange rules also preclude disclosing customer orders except to the exchange or CFTC and allocating the best trades to one's own account or to that of preferred customers.

[3]Crossing the orders of two customers is generally permitted, provided the broker first offers the orders competitively and meets certain other regulatory requirements. CBT, with the exception of a stock index product, has chosen not to allow crossing orders because the exchange views it as incompatible with the open-outcry system. CME officials told us that the exchange allows this practice because under its rules the customer order is executed at a price better than it would otherwise have received.

Trading Ahead of Customer Orders	Trading for one's personal account, or an account in which one has an interest, while having in hand any executable customer order in that contract.
Wash Trading	Entering or purporting to enter into transactions to provide the appearance of trading activity without resulting in a change in market position.

Securities Violations

Excessive Mark Ups/Mark Downs	When an over-the-counter (OTC) securities dealer executes a trade for a customer from inventory and charges an undisclosed and excessive price for the trade. NASD rules define what is an excessive price.
Excessive Quote Spread	Failing to maintain appropriate differences, or spreads, between bid and offer prices. Market rules define excessive.
Failure to Honor a Market Quote	Failure of market makers to trade at their publicly disseminated price and size quotation.
Failure to Issue Intermarket Trading System (ITS) Preopening Notification	Preopening notification to other market makers is necessary whenever market makers, in arranging an opening transaction in their market in an ITS stock, anticipate that the opening transaction will be at a price that represents a certain level of change from the stock's previous day's consolidated closing price—the last price on the last day on which ITS transactions in the stock were reported—of more than an amount allowed by exchange rules. The violation is the failure to issue the preopening notification, preventing traders in other markets from participating in trading the orders.
Failure to Make a Market Quote	Failure of a market maker to stand ready both to buy and to sell at the market maker's quoted prices.

Fictitious Trades	Reports of transactions submitted to an exchange price reporting system that did not occur.
Frontrunning	Taking advantage of nonpublic information on an impending large transaction in one or more equities or derivatives of an equity when the markets adjust to the price at which the transaction occurs.
Illegal Short Sales	Selling listed securities the seller does not own, thereby causing a decline in market price (a minus tick), or at a price equal to that of the preceding transaction but lower than the last different price (a zero minus tick), in violation of SEC and self-regulatory organization rules.
Improper Cross Transactions	Pairing a purchase order with a sell order in the same security at the same time and price without following exchange rules and procedures.
Improper Stabilization Bid	Making a stabilizing bid, not in accordance with SEC rules, to facilitate a distribution of securities.
Market Making Violations—Excessive Destabilizing Trades by Floor Members	A pattern of excessive trading activity by floor members trading as principals in the same direction as the market is moving, rather than buying as market prices decline and selling as market prices rise, as exchange rules require. Exchange rules also determine what is excessive activity.
Market Making Violations—Failure to Properly Represent an Order in the Market	Failure by a specialist, market maker, or floor broker to ensure that an order receives proper execution pursuant to applicable terms of the order and in accordance with self-regulatory organization rules.
Market Making Violations—Specialist Investment Account Violation/NYSE	Limitation on the types of transactions a specialist can make while the specialist has an investment account position in a particular stock.

Market Making Violations—Unsatisfactory Performance by OTC Market Maker	A market maker's failure to perform according to market maker rules. It could refer to a number of violations, such as quoting an excessive difference between bid and ask prices. Unsatisfactory performance also occurs when a market maker fails to accurately report volume, including failing to report that there was no volume.
Marking (Marking-The-Close)	Making securities transactions or market quotations at or near the end of the trading session to increase or decrease the closing price.
Off-Board Trading	Transactions involving listed securities that were not executed on a national securities exchange in accordance with SEC and self-regulatory organization regulations.
Restriction on Acting as Market Maker and Floor Broker	Equities and options market makers are prohibited from acting as both a floor broker and a market maker for the same stock and for all options for the same underlying security on the same business day.
Stock Manipulation—Domination or Control	A pattern of trading or trade reporting designed to artificially influence the price or volume of a security. Such a pattern is established through controlling the supply or demand of a specific security.
Stock/Option Market Manipulation—Capping	Making stock transactions shortly prior to an option's expiration date to depress or prevent a rise in the stock price so that previously written call options—rights to buy a fixed amount of a given stock at a specified price within a limited period—will expire worthless and the premium received from them will be protected.
Stock/Option Market Manipulation—Pegging	Making stock transactions shortly before an option's expiration date to prevent a decline in the stock price so that previously written put options—rights to sell a fixed amount of a given stock at a specified price within a limited period—will expire worthless and the premiums received from them will be protected.

Stock/Option Market Manipulation—Mini-Manipulation	An attempt to influence over a relatively small period of time the price movement in a stock to benefit a previously established options position.
Stock/Option Market Manipulation—Trades Not Made in Open Outcry	Trades that are made without exposing the order to other floor participants and, therefore, without the opportunity for other traders to participate in the trade on the exchange floor.
Unauthorized Withdrawal/ National Association of Securities Dealers Automated Quotation (NASDAQ) Market Maker	A NASDAQ market maker's failure to obtain permission from the National Association of Securities Dealers before withdrawing from the market. Unauthorized withdrawal may result in the market maker being unable to reenter quotes for 20 business days.
Unsatisfactory Market Maker/Specialist Performance	Conduct inconsistent with a specialist's obligation to maintain a fair and orderly market in accordance with the Securities Exchange Act and self-regulatory organization rules.
Unsatisfactory Performance by OTC Market Maker	A market maker's failure to perform according to market maker rules. It could refer to a number of violations, such as quoting an excessive difference between bid and ask prices. Unsatisfactory performance also occurs when a market maker fails to accurately report volume, including failing to report that there was no volume.
Wash Trading	Entering into or purporting to enter into transactions to provide the appearance of trading activity without resulting in a change of position.

Related GAO Products

Commodity Futures Trading Commission and the Chicago Futures Exchanges' Detection of Trade Practices Abuses (GAO/T-GGD-89-8, Feb. 23, 1989).

Chicago Futures Market: Initial Observations on Trade Practice Abuses (GAO/GGD-89-58, Mar. 13, 1989).

Futures Trading: Automation Can Enhance Detection of Trade Abuses But Introduces New Risks (GAO/IMTEC-89-68, Sept. 7, 1989).

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