CHAPTER IV

SELF-REGULATORY ORGANIZATION SURVEILLANCE

OF THE STANDARDIZED OPTIONS MARKETS

I. INTRODUCTION

Market surveillance is the process of detecting trading practices that

may be inconsistent with the Securities Exchange Act (the "Act"), the

rules and regulations thereunder, and the rules of self-regulatory

organizations. Self-regulatory organizations engage in surveillance

activities because, among other reasons, the Act assigns them responsi-

bility, subject to Commission oversight, for assuring that their markets

are fair, honest, and orderly and that their members comply with the

federal securities laws. Specifically, Section 6(b) of the Act states:

> (b) An exchange shall not be registered as a national
> securities exchange unless the Commission determines that —
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> (1) Such exchange is so organized and has the capacity
> to be able to carry out the purposes of [the Act] and to
> comply, and . . . to enforce compliance by its members and
> persons associated with its members, with the provision of
> [the Act], the rules and regulations thereunder, and rules
> of the exchange.

<p align="center">*   *   *</p>

> (5) The rules of the exchange are designed to prevent fraudulent
> and manipulative acts and practices, to promote just and equitable
> principles of trade, to foster cooperation and coordination with
> persons engaged in regulating . . . securities and, in general, to
> protect investors and the public interest . . . .

<p align="center">(197)</p>

(6) The rules of the exchange provide that . . . its members and persons associated with its members shall be appropriately disciplined for violation of of the provisions of [the Act], the rules or regulations thereunder, or the rules of the exchange, by expulsion, suspension, limitation of activities, functions, and operations, fine, censure, being suspended or barred from being associated with a member, or any other fitting sanction.

In addition, Section 19(q) of the Act provides:

(g)(1) Every self-regulatory organization shall comply with the provisions of this title, the rules and regulations thereunder, and its own rules, and . . . absent reasonable justification or excuse enforce compliance--

(A) in the case of a national securities exchange, with such provisions by its members and persons associated with its members;
(B) in the case of a registered securities association, with such provisions . . . by its members and persons associated with its members. . . .

This chapter will discuss the surveillance systems that the self-regulatory organizations currently use to detect improper trading activities in the standardized options markets and related trading that may occur in the markets for their underlying stocks. In particular, it will describe and analyze the sufficiency of the information that the options exchanges and the New York Stock Exchange ("NYSE") have available and use for surveillance purposes. It will also evaluate the effectiveness of the techniques that these exchanges use to detect potentially improper option and related stock and option trading. 1/ The NYSE will be the only stock exchange

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1/ Appendix Exhibit 1 contains a description of the operations of each options exchange and the NYSE. It focuses on the order execution, price reporting, and trade match and comparison processes. In addition, this Appendix Exhibit discusses and describes the specific

whose surveillance information and techniques will be considered because option prices are generally based upon the prices at which a stock is trading on the NYSE. As a result, stock activity that has the purpose of benefiting option positions and option activity designed to benefit from market information about stock transactions that have not yet occurred are most likely to involve stock transactions on the NYSE.

The detection of trading that may be inconsistent with the federal securities laws can not, however, be the end of surveillance. When such trading is detected, it must be investigated to determine whether the Act or self-regulatory organization rules have been violated. Moreover, where violative conduct is found, the federal securities laws

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(footnote continued)

surveillance techniques that the options exchanges use to detect trading practices that may be inconsistent with the Act or exchange rules.

Appendix Exhibits 3-19 contain working papers and investigative reports that the self-regulatory organizations prepared. Many of these investigations have been not concluded, and, as a result, many of them are nonpublic.

Appendix Exhibit 20 also contains certain nonpublic information. This Appendix Exhibit contains (i) a summary of the parameters that the options exchanges use to define trading activity that will be scrutinized on a regular basis, (ii) a table summarizing the number of full- and part-time employees at each options exchange who perform surveillance functions, (iii) a table of the expenditures of each options exchange for surveillance purposes, and (iv) a table of option volume on each options exchange.

Because much of the information that these Appendix Exhibits contain is nonpublic, they have been bound separately and will not be publicly disseminated. Copies have been provided, however, to the Commission, its staff, and the self-regulatory organizations.

and self-regulatory organization rules must be enforced and the conduct sanctioned with a view toward punishing the violator and deterring future violations. Recognizing that detection is merely the first step toward fulfilling its statutory obligations, each options exchange has programs to investigate potentially improper trading practices that its surveillance system reveals. Each exchange also has programs to enforce compliance with the law when violations are apparent. This chapter will evaluate the adequacy of these investigation and enforcement programs.

Many of the surveillance techniques described in Appendix Exhibit I are relatively new. In fact, the self-regulatory organizations developed many of these techniques during the last year, perhaps as a result of the concerns that the Commission expressed in October, 1977 regarding "the present ability of the self-regulatory organizations' surveillance systems to detect and prevent fraudulent, deceptive, and manipulative activity, both in options and in underlying securities, in a manner which is consistent with the maintenance of fair and orderly markets and the protection of investors and that complies with the requirements of the Act." 2/ While the self-regulatory organizations have improved their surveillance programs significantly since October, 1977, this chapter will suggest additional steps that the self-regulatory organizations and the Commission should take to improve further self-regulatory organization surveillance of the standardized options markets.

2/ Securities Exchange Act Release No. 14056 (October 17, 1977).

II. METHODOLOGY

The Options Study analyzed the surveillance systems of the options exchanges in three phases. In the first phase, each of the exchanges was asked to supply information concerning, among other things, the ways in which they process and provide for the execution of orders on their trading floors, assemble surveillance information, and conduct surveillance activities. The information that the exchanges submitted in response to the Options Study's request was used to prepare a summary of the operations and surveillance system of each exchange. The systems of the various exchanges were then compared to determine what similarities and differences might exist.

The second phase consisted of a detailed on-site inspection of each options exchange. The purpose of these inspections was to assure that the Options Study had a complete understanding of the surveillance system of each exchange and to determine the extent to which the exchanges were following the procedures that they had described in response to the Options Study's request. To conduct these inspections, an inspection outline was prepared for each exchange. The outline identified the data and files that the Options Study planned to examine, the purpose for examining each set of files, and the items that each file should have included to constitute a surveillance inquiry consistent with the procedures that the exchange had described. After the outlines were prepared, an information request was sent to each exchange asking that the exchange make available for

inspection the data and files specified. The inspection outline and information request that were used to inspect the CBOE are included in an Appendix Exhibit for illustrative purposes. 3/

The inspections of the exchanges varied in length. The exchanges that have the most option volume were given the most time. Approximately 200 person hours were spent at both the CBOE and the AMEX. Approximately 40 person hours were spent at the PSE and PHLX. The MSE inspection took approximately 16 person hours.

Finally, the Options Study inspected the NYSE for the purpose of evaluating its ability to reconstruct stock trading that takes place on its floor. The Options Study focused exclusively upon this aspect of the NYSE surveillance program because effective detection and investigation of related stock and options trading generally requires that the parties, terms, and time of stock orders and trades be identified and that stock transactions be sequenced according to the times that they occurred. Approximately 16 person hours were spent at the NYSE and approximately 10 market reconstructions were reviewed.

At each exchange the Options Study discussed surveillance techniques and particular cases with senior exchange officials responsible for surveillance activities. In addition, the Options Study spoke with staff members at each exchange who performed daily surveillance functions

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3/ Appendix Exhibit 2. This Appendix Exhibit has been bound together with the nonpublic Appendix Exhibits. See n.1, supra.

and discussed specific inquiries and investigations with the exchange staff members who conducted them. The Study did not have sufficient time or resources, however, to investigate independently questionable conduct that the exchanges detected or to review substantial amounts of raw surveillance information for the purpose of determining whether each exchange had detected every instance of potentially improper conduct that may have occurred in its marketplace.

III. SURVEILLANCE INFORMATION

1. The Sources of Surveillance Information

There are four basic sources of market surveillance information. The first source is transaction information. Transaction information is derived from the process of trading. At the options exchanges and the NYSE, transaction information is generally obtained from documents produced on the trading floor. It contains information identifying the brokers who have executed a trade, the firms that will clear the trade, the price at which the parties have agreed to buy and sell, the number of shares or contracts involved in the transaction, and the time that the trade was entered into the price reporting system of the exchange. In addition, transaction information can include bid and ask prices for a stock or option. Bid price information in a market identifies the prices at which market participants are willing to buy the securities,

and ask price information identifies the prices at which market participants are willing to sell the securities. The transaction information of the options exchanges may also contain an indication of the most recent price at which the stock underlying a class of options was sold.

The second source of surveillance information is derived from the clearing process. Clearing involves, among other things, the matching of buy and sell orders after a trade has taken place. This matching is necessary to assure that, where appropriate, buyers pay for and receive the securities that they bought and that sellers are paid for and deliver the securities that they sold. To accomplish this matching and bookkeeping, clearing corporations must know who has traded with whom, at what price, and in what volume. Accordingly, clearing information identifies at least the clearing firms that represent the buyers and sellers of securities, the number of shares or contracts that they have agreed to trade, and the price at which the trade has occurred. Transactions that are submitted for clearing late or that are not submitted for clearing at all can usually be ascertained by comparing clearing information to transaction information.

The standardized options clearing process contains additional information. The Options Clearing Corporation ("OCC") clears all standardized options transactions and is organized differently from the stock clearing corporations. The most significant difference from an informational point of view is that the OCC has established three types of accounts

in which trades can be cleared: customer, marketmaker, and firm proprietary accounts. Trades in which member firms act as a dealer or principal, other than in a marketmaking capacity, should clear only in firm proprietary accounts. Trades in which exchange members act as marketmakers should clear in marketmaker accounts. _4/ At each clearing firm, trades effected on behalf of customers should clear on an aggregate basis in one customer account. Broker-dealer firms that are not members of OCC will carry their transactions in such customer accounts. As a result of this account system, OCC clearing information allows one to determine whether trades were cleared for a customer, marketmaker, or firm. _5/

In addition, the clearing process can provide the exchanges with information identifying the buying and selling broker for each trade that is cleared, the marketmaker account for which a floor broker executed a trade, the clearing firm that will actually clear the trade if that firm is not a member of the exchange, and whether the trade was an opening or closing transaction if in a customer or firm proprietary account. Opening transactions are those in which an option position is being increased or established, and closing transactions are those that reduce or eliminate an existing option position. Marketmaker accounts are maintained

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_4/ See Appendix Exhibit 1 at pp. 1-13 for a discussion of the various types of on-floor marketmakers. Only on-floor marketmakers may clear option transactions in a marketmaker account.

_5/ OCC, of course, will clear a trade in the account for which the trade is reported. As a result, if a firm's trade is reported, due to error or improper purpose, as a customer's trade, OCC may clear the trade in a customer account.

on a net basis and therefore do not indicate whether marketmaker trans-actions are opening or closing positions.

The third surveillance information source is kept at broker-dealer firms and relates to the accounts that the firms maintain. Account infor-mation is required to contain the specific identity of the customer, marketmaker, or firm account for which a trade was done as well as a record of the trading activity and positions of each such account. A record of the time of entry and terms of all orders for an account should be maintained, and the price and volume of any executions that are received should be available. The time of entry is the time that a firm receives or transmits an order for execution. In addition, a record of the time at which a report of execution was received should be maintained. Commission rules require that firms keep books and records which include this information. 6/

Finally, surveillance information may be obtained from customer or member complaints, reports by exchange members or employees, companies that have issued securities, the news media, members of the financial community, and other self-regulatory organizations. Exchange rules often require members or employees to file reports of unusual trading activity that they observe.

Table 1 summarizes the data that can be derived from transaction, clearing, and account information.

6/   17 CFR 240.17a-3 and 240.17a-4.

Table #1

Surveillance Data Available

Transaction Information	Clearing Information	Account Information
- Date of Transaction - Time Transaction is Price Reported - Volume of Transaction - Price of Transaction - Option Series - Option Type (Put or Call) - Identity of Executing (Selling) Clearing Firm - Identity of Contra (Buying) Clearing Firm - Identity of Executing (Selling) Broker _/ - Identity of Contra (Buying) Broker Broker _/ - Last Sale In Underlying Security as Reported on Consolidated Tape - Current Bid/Ask in Underlying Security on NYSE - Current Bid/Ask in Options - Transactions That Occur Late or Out-of-Sequence	- Date of Transaction - Opening or Closing Transaction - Volume of Transaction - Price of Transaction - Option Series - Option Type (Put or Call) - Firm, Market-Maker, or Customer Account - Identity of Executing (Selling) Clearing Firm - Identity of Contra (Buying) Clearing Firm - Identity of Executing (Selling) Broker _/ - Identity of Contra (Buying) Broker ._/ - Transactions that a Marketmaker Leaves with a Floor Broker for Execution - Transactions that a Clearing Firm Which is a Member of an Exchange Compares For a Nonmember Clearing Firm (CMTA Trades)	- Date Order is Received - Terms of Order - Time of Order Entry - Time Report of Execution is Received - Identity of Individual Customer, Firm, or Market-Maker Account - Identity of Aggregate Customer Accounts and Correspondent Accounts - Current Positions in Accounts - Account Trading History

207

_/ The word "broker" is used in this context to mean an exchange floor member who has participated in a trade. It includes marketmakers as well as floor brokers.

2. The Organization and Capture of Surveillance Information

   a. Transaction Information

   The CBOE, PSE, PHLX and MSE capture transaction information from

the trade reporting process on the trading floor. The information is

obtained from order or transaction price reporting tickets that these

exchanges collect when trades occur. In general, floor brokers report

their trades on order tickets, and marketmakers report their trades

on transaction price reporting tickets. The information that the tickets

contain is key punched directly on the trading floor into an exchange

computer for surveillance and other purposes. This information is used

to prepare computer reports of transaction information.

   The CBOE transaction report may be used to illustrate the trans-

action information that these options exchanges typically capture. The

CBOE transaction report is called the Market Data Retrieval Listing

("MDR"). 7/ The MDR identifies the date the trade took place, the options

class and series that was traded, the time the trade was entered into

the CBOE price reporting system, the price to which the parties agreed,

the number of contracts involved in the trade, the buying and selling

brokers, changes in the bid and ask prices for the options, the last

sale price of the underlying stock when the option trade was reported,

and whether the trade was reported out-of-sequence, late, or involved

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7/ Exhibit 1 contains examples of MDRs.

a spread or straddle which received priority over the book. It should be noted that the time that a trade is entered into the price reporting system is not the time that the trade actually occurred. There is inevitably some delay between the time that the parties agree to trade in a trading crowd and the time that an order or transaction price reporting ticket is transmitted to an exchange employee and is key punched into the price reporting system and the exchange computer. 8/ This delay is not uniform among all orders and may result in the reporting of some trades in a sequence that is different than the sequence in which the trades actually occurred.

Transaction information at the AMEX and the NYSE is significantly less complete than at the CBOE and the other options exchanges. The Daily Journal Report ("AMEX Journal") is the computerized report of options transactions that are entered into the price reporting system of the AMEX. 9/ This report indicates for each option series, in time sequence, the time that each trade was entered into the price reporting system of the exchange, the number of contracts traded, and the price at which the trade occurred. Changes in the bid and ask prices for the options are also reflected, as is ` ˋ most recent sale price of the underlying stock. The times that ι ΞX Journal indicates that transactions occurred are more likely to ˎpproximate the time that the parties actually consummated the trade than the time that trades are entered into the

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8/ See Appendix Exhibit 1 at pp. 43-46.

9/ A page from the AMEX Journal is shown in Exhibit 2.

price reporting system at the other options exchanges. This is because AMEX trades are entered into its price reporting system by a reporter stationed in the trading crowd rather than by exchange employees who must wait for members to turn in order or price reporting tickets. For the same reason, the AMEX Journal is likely to reflect more accurately the actual sequence of trades. 10/

Information identifying the options transactions in which AMEX specialists and registered option traders ("ROTs") participated as principal are added to the Journal on the basis of reports that the specialists and ROTs are required to file at the end of each trading session. The reports list, among other things, each specialist or ROT option transaction and the specialist's or ROT's report of the time that the trade took place. These reports are prepared manually and are integrated onto the Journal by computer to the extent that they are legible and the times and volumes that the reports contain match the times and volumes of reported transactions. If these items do not match, the information on the reports must be reconciled and added to the Journal manually. As AMEX volume has increased, it has become necessary to add approximately 80% of all specialist and ROT option transactions to the Journal by hand. Fifteen clerical people require a full day to integrate transactions onto the Journal when AMEX trading volume is normal. Of course, options trades that specialists or ROTs do not report can not be identified in the Journal.

10/ See Appendix Exhibit 1 at pp. 21-23.

The NYSE Daily Transaction Journal ("NYSE Transaction Journal")
contains even less transaction information than the AMEX Journal. 11/
It lists, in time sequence for each stock, the time that the trade
was entered into the price reporting system, the price that was reported,
and the number of shares traded. Changes in the bid and ask prices
for the stock are also shown. Each hour of trading is contained in
a separate column and the minutes during which trades occurred or bid
or asked prices were changed are indicated at the right of each
column. Information identifying the trades in which the NYSE specialists
and registered traders and marketmakers participated as principals,
while available on forms that they prepare on a daily basis in accordance
with exchange rules, is not routinely integrated onto the Transaction
Journal. Nor are trades that occur by means of the Intermarket Trading
System ("ITS") or the Designated Order Turnaround System ("DOT")
regularly integrated onto the Journal. 12/

It should be noted that neither the AMEX Journal nor the NYSE
Transaction Journal regularly identifies the parties that participate
in each trade. This is because these exchanges, unlike the CBOE and
the other options exchanges, do not collect order or transaction
price reporting tickets when a trade occurs. Thus, the AMEX and the

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11/ A page from an NYSE Transaction Journal is provided in Exhibit 3.

12/ See Appendix Exhibit 1 at pp. 67-72.

NYSE can not capture for routine surveillance purposes the information that such tickets contain.

b. Clearing Information

The options exchanges also create clearing information from the order and transaction tickets that brokers and marketmakers prepare on the trading floor. On the CBOE, AMEX, and MSE, floor members usually submit these tickets to the firms that are going to clear the trades, and the firms enter the information into their computer systems. 13/ Each clearing firm's trades are then submitted to the exchange where they took place for purposes of matching and transmittal to OCC for clearance. On the PSE and PHLX, brokers and marketmakers submit their tickets to an exchange employee who compares the information that they contain. Trades with terms that match are entered into the exchange computers and sent to OCC. As a result, each options exchange is able to produce a computerized report of all the trades that it submits to OCC.

The CBOE's trade matching and comparison report can be used to illustrate the information that most options exchange comparison reports contain. This report is known as a Matched Transaction Listing ("MTL"). 14/ The MTL identifies the two firms that will clear the trade, the brokers that executed the trade, whether the trade is to clear in a customer,

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13/ Appendix Exhibit 1 at p. 26, n.2 describes a different method of generating clearing information.

14/ An example of an MTL is provided as Exhibit 4.

marketmaker, or firm proprietary account, whether the transaction was opening or closing, the option class and series being traded, the number of contracts traded, and the price to which the parties have agreed. If the clearing firm that will actually clear the trade is not a member of the exchange on which the trade was executed, this firm will be identified as the "give-up" firm. AMEX comparison reports contain all of this information except for an identification of the brokers who executed the trade. This information is not entered into the AMEX clearing process.

Trades that are matched or submitted late are added to the comparison reports as they are received. Errors and omissions that may occur in the clearing process may be corrected by means of position adjustments. On a daily basis OCC also provides each options exchange with a computer tape containing complete information regarding each transaction that exchange members cleared or adjusted on the previous day. Information with respect to options positions that were exercised or assigned is included.

Clearing information at the NYSE does not contain as much data as at the options exchanges. The NYSE Reconciliation Clearance Sheets ("NYSE Clearing Sheets") display only the price and volume of each transaction and the firms that cleared the trade. 15/ No account infor- mation is contained because the stock clearing corporations do not

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15/ An example of NYSE Reconciliation Clearance Sheets is provided in Exhibit 5.

maintain separate customer, marketmaker, or firm proprietary accounts

for their members as at OCC. The brokers who executed a trade

are not indicated on the stock clearing sheets because this information

is never entered into the clearance process.

c. Account Information

Transaction and clearing information provides an essentially complete

picture of reported marketmaker option trades and positions. In addition,

Daily Position Reports that the OCC produces contain, for each account

carried at OCC, the current positions in the account for all option

series, the positions in the account on the previous day, and the

transactions which were cleared since the previous trading session. 16/

With respect to marketmaker stock activities, the AMEX and PHLX

obtain reports of all marketmaker stock orders, trades, and positions

on a daily basis. At these exchanges, specialists and ROTs report

this information on forms that the exchanges provide. AMEX Form 958-C

is typical of these forms. 17/ It identifies the specialist or ROT,

his clearing agent, the time that the specialist or ROT reported that

he transmitted each stock order from the AMEX floor for execution,

the type and terms of the order, the number of shares to be bought

or sold, the price and volume of any executions, and the specialist's

or ROT's position in the stock at the opening of trading. The form

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16/ An OCC Daily Position Report is shown as Exhibit 6.

17/ An example of AMEX Form 958-C is contained in Exhibit 7.

does not contain information concerning the time that all or part of the order was executed or the time that a report of execution was received.

At the PSE, the marketmaker clearing firms provide similar information daily. PSE Form OTR-1 is used for this purpose. 18/ This form identifies, by stock, the time, amount, and limit for each order that a marketmaker entered, the time and place that the order was executed, the number of shares that a marketmaker bought or sold during the day, and the price that he paid or received. The time that the order was entered is the time that the marketmaker sent the stock order from the PSE floor for execution, and the time of execution is the time that an execution report was received. Stock position information is not entered on the form. At the CBOE and MSE, clearing firms provide daily reports of marketmaker stock trades. These exchanges, however, obtain marketmaker stock position and unexecuted order information only on a request basis.

As a general matter, the time that marketmaker stock orders are transmitted for execution, the terms of the order, and the time, price, and volume of any part of the order that is executed can be obtained from stock order tickets that the marketmaker's clearing firm maintains. Since marketmakers usually enter their stock orders through the firm that clears their option trades, this firm is generally able to provide

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18/ Exhibit 8 is an example of Form OTR-1.

complete stock position, transaction, and order information. If a market-maker does not enter a stock order through the firm that clears his option trades, or carries his stock positions at a firm other than his options clearing firm, it is much more difficult, and may be impossible, to obtain marketmaker stock activity information.

With respect to customer accounts, the CBOE, AMEX, PSE, PHLX, and MSE require their members to report aggregate long or short positions of individual customers exceeding 100 contracts in any option class, and to report any change in such positions. This reporting requirement is necessary because OCC maintains only one aggregate account for all customer option activity at each clearing firm. Such reports, however, do not display customer account trading activity in options, and also do not show customer account positions or trading activity in the under-lying stock. Customer account option trading information can presently be obtained only by sending a general request for such information to the firm that cleared the customer's options transactions and to the brokerage firm that entered the customer's options order. Similarly, when customer stock trading information is required by an exchange for surveillance purposes, it must be obtained by making a general request, on a case-by-case basis, of clearing firms that were active in the stock for information identifying the accounts that engaged in the stock trading being examined.

Members of each options exchange must also file reports with exchanges if their options positions in proprietary accounts exceed the reporting thresholds. Their options trading can also be monitored by using the transaction and clearing information that is normally available. Because firm proprietary options trades reported as such are always kept in a separate account at the OCC and are identified on option order tickets, they are readily distinguishable in routine surveillance reports which record this information. If a member firm clears proprietary option orders through another firm as a customer, however, resulting trades would be shown in the customer account of the firm that executed the orders and not in the proprietary account of the firm that entered the orders.

Firm proprietary stock trading, on the other hand, can not generally be distinguished from customer and marketmaker stock trades on stock order tickets or in the stock clearing process. This is because the stock clearing corporations do not maintain separate accounts for firm proprietary stock positions and because the stock exchanges have not required that order tickets indicate whether a trade is being done on a principal or agency basis. As with customer trading, information concerning whether stock trades indicated in the clearing sheets were effected for a firm proprietary account can only be obtained by making a request of the clearing firm, on a case-by-case basis, to identify the party for whom the firm cleared the trade. In addition, firm proprietary stock trades that are cleared through another firm in a customer account are not likely to be discovered by means of a request sent to the firm that initiated the trades.

Table 2 contains a summary of the transaction and clearing information that each options exchange captures on a routine basis. The transaction and clearing information that the AMEX and NYSE capture with regard to stock trading is included for comparative purposes.

Table #2

Comparison of
Surveillance Data Available
to
Surveillance Data Captured

Data Available

Data Captured

	CBOE	AMEX (Options)	AMEX (Underlying Stocks)	PSE	PHLX	MSE	NYSE (Underlying Stocks)
Transaction Information							
–Time Entered into Price Reporting	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Price	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Volume	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Security (Option Series/Stock)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Type (Put or Call)	Yes	Yes	/	Yes	Yes	Yes	/
–Executing (Selling) Clearing Firm	No	No	No	No	Yes	No	No
–Contra (Buying) Clearing Firm	No	No	No	No	Yes	No	No
–Executing (Selling) Broker __/	Yes	(Partial)	No	Yes	Yes	Yes	No
–Contra (Buying) Broker __/	Yes	(Partial)	No	Yes	Yes	Yes	No
–Last trade in Underlying Stock As Reported on Consolidated Tape	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Current Bid/Ask in Underlying Stock on NYSE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Transactions That Occur Late or Out-of-Sequence	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Sale (Short or Long)	/	/	Yes	/	/	/	Yes
Clearing Information							
–Opening or Closing	Yes	Yes	/	Yes	Yes	Yes	/
–Volume	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Price	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Security (Options Series/Stock)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Type (Put or Call)	Yes	Yes	/	Yes	Yes	Yes	/
–Account Type (M,F,C)	Yes	Yes	No	Yes	Yes	Yes	No
–Account Identification	No	No	No	No	No	No	No
–Executing (Selling) Clearing Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Contra (Buying) Clearing Firm	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Executing (Selling) Broker __/	Yes	Yes	Yes	Yes	Yes	Yes	No
–Contra (Buying) Broker __/	Yes	Yes	No	Yes	Yes	Yes	No
–Transactions that a Clearing Firm which is a Member of an Exchange Compares for a Non-Member Clearing Firm (CMTA Trades)	Yes	Yes	/	Yes	/	Yes	/
–Transactions That Clear Late	Yes	Yes	Yes	Yes	Yes	Yes	Yes
–Transactions That Settle Outside of the Clearing System	/	/	No	/	/	/	No
–Position Adjustments	Yes	Yes	/	Yes	Yes	Yes	/

__/ The word "broker" is used in this context to mean an exchange floor member who has participated in a trade. It includes marketmakers as well as floor brokers.

218

3. Conclusions and Recommendations

   a. Surveillance Information

An effective market surveillance system must be able to produce essential trading information quickly and accurately. It must be able to identify the brokers participating in each trade, the firms clearing the trade, the time that the trade occurred, the price to which the parties have agreed, the number of shares or contracts bought and sold, and whether the trade was executed for a customer, firm, or marketmaker account. Ultimately, the system must be able to identify, where appropriate, the customer that effected a transaction. In addition, the system must be able to identify bids, offers, and orders that were present in the trading crowd to obtain a complete picture of the trading environment at a particular time. To the extent that this information is readily available, the ease of performing surveillance functions and designing surveillance programs is increased. Indeed, without such information, it may not be possible for a self-regulatory organization to comply with its statutory obligations.

A surveillance system must also provide its user with a physical record of the trading that the system monitors. Such a record, often referred to as an audit trail, is necessary to verify the information that the system produces. In particular, documentary evidence must be maintained if potentially improper trading practices that the system detects are to be successfully investigated and resolved.

(1) AMEX Surveillance Information and Audit Trail

Each of the exchanges that permits the trading of standardized options has some ability to identify the parties, reporting time, and terms of trades that take place on its trading floor. In addition, each of these exchanges has some ability to obtain a physical record of those trades. The extent of these abilities, however, varies significantly.

The CBOE, PSE, MSE, and PHLX can identify the buying and selling brokers, the firms that will clear the trade, the time that the transaction was entered into the price reporting system, the price, the number of contracts for each trade, and whether the trade was executed for a customer, firm or marketmaker account. This information is available the day after the trades occur. It is customarily obtained from order and transaction reporting tickets that these exchanges collect when trades are executed and is key punched into exchange computers from the trading floor. The order and transaction reporting tickets are kept in case they are needed for surveillance purposes at some later date.

The AMEX, on the other hand, does not maintain as complete a record of each trade that occurs on its floor. As a result, it can not verify trade information by using its own records. Moreover, the AMEX can not identify, on a regular, automated basis, the brokers that execute each trade or the firms that will clear the trade. Consequently, the AMEX must resort to the slow and costly process of manually reconstructing trading from specialist and ROT reports and from order tickets obtained from member firms

to detect and investigate questionable trading practices that may take place
on its floor. The need to use manual processes to reconstruct trading
makes it at best costly and time consuming, and at worst impossible,
for the AMEX to perform many of the surveillance procedures that the
other options exchanges perform routinely.

The AMEX has recognized that its surveillance system does not routinely
provide information that is essential to an effective detection program.
It has also recognized that a computer could perform more efficiently and more
completely many of the functions that are now done manually. Moreover,
its recent inability to conduct a conclusive investigation into a series of
possible fictitious trades at one options post on its floor has caused
the AMEX to conclude that it must install a complete audit trail to
be able to monitor its market effectively. In this regard, the AMEX
has stated:

> Beginning in late September 1978, a pilot test
> of a new trade reporting procedure for options con-
> tracts will be conducted during trading hours on the
> Floor of the Exchange. This test is being undertaken
> to examine new procedures related to the capture and
> reporting of trade information and to establish an
> expanded data base of trade information for surveillance
> purposes.

> * * *

> Initially, the pilot test will be conducted at one
> post at which a number of moderately active options are
> traded. As experience is gained, as members become
> more acclimated to the new procedure, and if the test
> proves successful, it will be expanded during the first