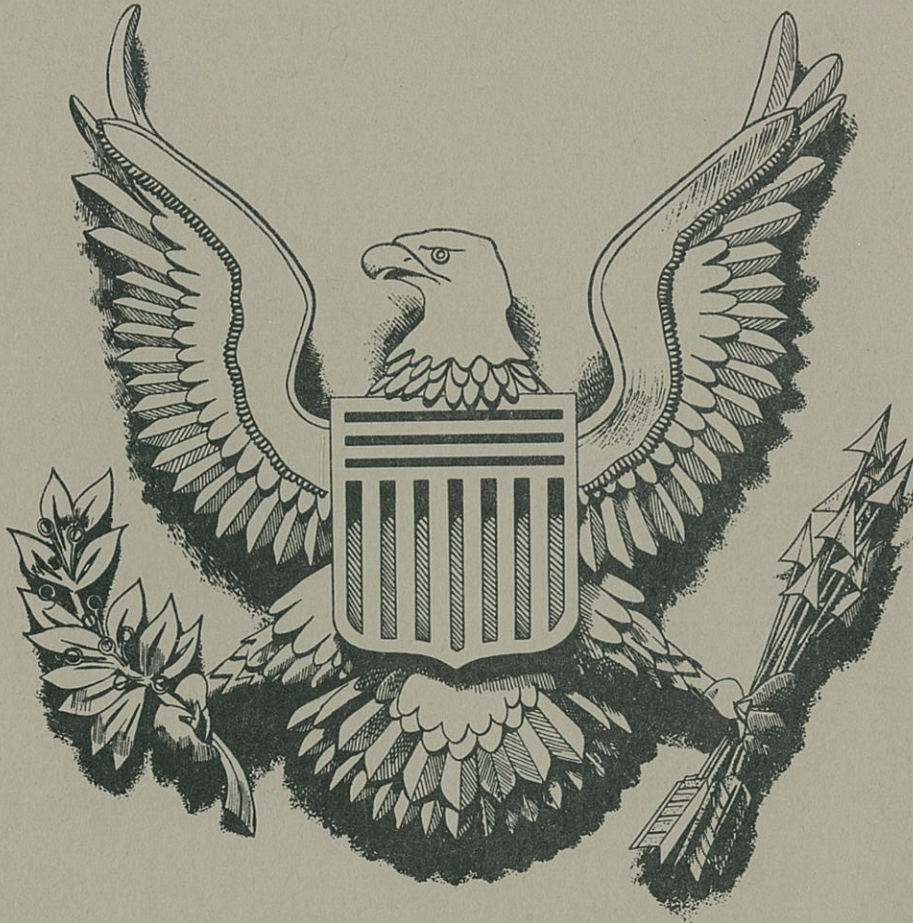


10/6/81
DWM

U.S. SECURITIES AND EXCHANGE COMMISSION



FIRST SIX-MONTH REPORT TO

The Senate Committee on Banking, Housing, and Urban Affairs

and

The House Committee on Energy and Commerce

REGARDING

**IMPLEMENTATION OF THE MARKET OVERSIGHT
AND SURVEILLANCE SYSTEM**

April 1, 1981

Table of Contents

	<u>Page</u>
I. Introduction	1
II. Activity in Conformity with the Congressional Workplan for MOSS.....	4
A. Hardware and Software Procurement	4
B. Collection of Clearing Data at Commission Headquarters	5
C. Receipt of Option Market Maker Stock Trading Data (Commission Responsiveness to SRO Concerns)	6
D. Obtaining Additional Trading Information from the SROs	12
III. Trading Algorithms Currently Being Processed by MOSS	13
IV. Policy for the Use of MOSS by the Commission	16
V. Policy for the Use of MOSS by the SROs	17
VI. Establishment of Closer Cooperation with the SROs .	18
VII. Benefits of the MOSS Project Thus Far	20
A. Trade Watch	20
B. Inspections	21
1. Inspections Dealing with SRO Surveillance Techniques	22
2. Inspections Dealing with the Possible Occurrence of Trading Violations	23
VIII. Costs of MOSS Thus Far to the SROs and the Commission	25
A. Costs to the SROs	25
B. Costs to the Commission	28

	<u>Page</u>
IX. Tasks to be Accomplished During Next Six-Month Period	29
X. Conclusion	30

Attachments

A. Summary Description of the MOSS Pilot	
B. Letter from Harold M. Williams, Chairman of the Commission, to Robert J. Birnbaum, President, Amex, dated November 25, 1980.	
C. Letter from Douglas Scarff, Director of the Division of Market Regulation, to the Heads of the Major Self-Regulatory Organizations, dated October 3, 1980.	
D. MOSS Project Expenses - Fiscal Year 1981	iii
E. Schedule for Receipt of SRO Information	

I. Introduction

On October 1, 1980, Congress authorized appropriations for the Securities and Exchange Commission (the "Commission") for fiscal years 1981 through 1983. 1/ Included in that budget authorization was approval of funding for the Commission's Market Oversight and Surveillance System ("MOSS"). This approval required the Commission to report to the Senate Committee on Banking, Housing, and Urban Affairs and the House Committee on Energy and Commerce (formerly the House Committee on Interstate and Foreign Commerce), at six-month intervals, on progress under the MOSS project, the purposes for which MOSS information is being used, the cumulative costs of the MOSS project both to the Commission and to the self-regulatory organizations ("SROs"), and the steps that the Commission intends to take in each ensuing six-month period to implement the MOSS project under the general schedule approved jointly by these Congressional oversight committees. Specifically, in authorizing the Commission to proceed with implementation of MOSS through fiscal year 1983, each of the oversight committees said:

The Commission will report to the Committee, at six-month intervals, on the cumulative cost of the MOSS project, both to the Commission and to the self-regulatory organizations, and on the effectiveness of the project in enhancing the surveillance of the securities markets. At the same time, the Commission will report to the Committee concerning steps it plans to take with respect to MOSS during the ensuing six

1/ Small Business Investment Incentive Act of 1980, Pub. L. No. 96-477, 94 Stat. 227 (1980). The portions of the Act relating to the Commission's budget authorization were originally reported out of Committee by the Senate and the House of Representatives on May 15 and May 14, 1980, respectively. See Report of the Senate Committee on Banking, Housing, and Urban Affairs to Accompany S. 2465, S. Rep. No. 96-752, 96th Cong., 2d Sess. (1980) ("Senate Report") and Report of the House Committee on Interstate and Foreign Commerce to Accompany H.R. 6830, H. Rep. No. 96-961, 96th Cong., 2d Sess. (1980) ("House Report"). The Committee reports contain identical language with respect to the MOSS authorization.

months and the projected expenditures, and estimated cost impact on the SROs, associated with those steps. 2/

This report is the first of the six-month reports that the Commission will be submitting to the Congress as the MOSS project proceeds.

The MOSS project was initiated in August of 1978. The project began as a two-part study and design effort conducted for the Commission by Monchik-Weber Systems Consulting, Inc., a private consultant with experience in designing manual and automated systems for use in the stock and option markets. 3/ The study examined the market surveillance capabilities of the Commission and the self-regulatory organizations and it concluded that, in view of significant developments in the complexity, structure, and trading volume in the securities markets, and in view of the increasingly sophisticated product mix of the securities markets resulting from the introduction of standardized options trading, the Commission must improve its oversight and surveillance capabilities. Recently, as part of the fiscal year 1981 through 1983 budget authorization process, Congress reached a similar conclusion:

The Committee believes that the proposed MOSS system is essential to the performance of the Commission's traditional oversight function with respect to the Nation's securities markets. Changes during the past decade in the market place and the financial community -- including greatly expanded

2/ Senate Report at 6, House Report at 3-4.

3/ On March 6, 1981, the United States General Accounting Office ("GAO") issued a report that was critical of particular Commission procedures followed in regard to its contractual relationships with Monchik-Weber. Previously the Commission had informed the GAO that it would modify its contracting procedures in accordance with GAO's findings. Because the GAO report does not deal in any way with the substance of the MOSS project, we do not believe that it is necessary in this document for us to comment upon the GAO report. The Commission intends to respond to the GAO Report by May 5, 1981. Moreover, under current plans, all contracts with Monchik-Weber relating to the MOSS project will expire by September 30, 1981.

market activity, increasing complexity of financial transactions, and the development of a new mix of financial products offered to the public have made it clear that the Commission must modernize its surveillance capabilities. 4/

In order to evaluate the feasibility of actually building a system such as MOSS, the Commission initiated a scaled-down pilot project of portions of the proposed system in New York City in early 1980. 5/ The pilot system began operations initially with only ten securities. Throughout 1980, and the early part of 1981, the Commission slowly added securities from the stock and option exchanges to the MOSS data base, and an initial set of 13 computer algorithms designed to detect unusual trading patterns was developed, tested, and processed with reference to this data base. By the middle of February 1981, this initial set of 13 algorithms was in place, and the system was reviewing some types of trading activity for approximately 670 stocks and 20 option classes on a daily basis. 6/ These totals are expected to increase slowly over the next several months as additional stages of the MOSS project are implemented. A summary description, in layman's language, of current MOSS operations appears as Attachment A to this report.

4/ Senate Report at 6, House Report at 4.

5/ The term "pilot project" may be somewhat misleading. The project is not a separate endeavor from the larger MOSS system envisioned in the budget authorization. Rather, it is expected that the MOSS pilot system will evolve into the larger MOSS system. The advantage of the pilot has been that it has given the Commission the ability to test the system design and data collection capabilities of MOSS on a scaled-down system using a manageable sample of stocks and options. This has afforded the Commission a number of benefits in the MOSS testing stage, and because the pilot has been designed in a manner to allow it to be transferred in modules into the first stages of the permanent MOSS system, some cost savings will be afforded to the Commission in connection with the implementation of those stages of the larger MOSS project.

6/ By comparison, if MOSS were fully operational at this time, the system would be reviewing trading activity in approximately 6,500 stocks on the major stock exchanges and NASDAQ and 274 options classes.

I. Activities in Conformity with the Congressional Workplan for MOSS

In its three-year funding authorization for the Commission, the Congress established a workplan for MOSS for fiscal years 1981, 1982, and 1983. Under this workplan, the Commission is authorized by Congress, during fiscal year 1981, to: (1) procure the hardware and software necessary to transfer the MOSS pilot project to the Commission's headquarters in Washington, D.C.; (2) begin collecting in Washington, D.C., the clearing data that the pilot project is already collecting in New York City from the National Securities Clearing Corporation ("NSCC") and the Options Clearing Corporation ("OCC"); (3) begin collecting directly from the various exchanges data on equity trade and order activity of option market makers; and (4) begin discussions with the exchanges and the NASD in preparation for receiving additional information for MOSS, including broker-dealer quotation and trading information for market makers on NASDAQ, the automated quotation and trading system of the National Association of Securities Dealers, Inc. ("NASD"). 7/

A. Hardware and Software Procurement

In conformity with this Congressional schedule, the Commission's staff has begun the procurement process to acquire the hardware and software required to transfer completely the operation of the pilot project to the Commission's headquarters in Washington, D.C. The staff has drafted a Request for Proposal ("RFP") for the acquisition of the necessary computer equipment and has obtained a delegation of procurement authority from The General Services Administration ("GSA") to acquire this equipment. Under the terms of Bulletin No. 81-9 of the Office of Management and Budget ("OMB"), 8/ the Commission is required to obtain an exemption from OMB for the expenditure of funds for computer equipment or related services. The Commission has obtained the necessary exemption from OMB and has published a preliminary notice of the RFP in the Commerce Business Daily. 9/ As a result of this process, the staff

7/ Senate Report at 4, House Report at 4-5.

8/ Memorandum from David A. Stockman, Director, OMB, to all Executive Departments, dated January 30, 1981, Re: Moratorium on Procurement of Certain Equipment.

9/ Commerce Business Daily, March 16, 1981, at 20.

expects to have placed orders for delivery of the necessary equipment before the end of the current fiscal year. 10/

The staff has also begun to produce the computer software necessary to transfer the current MOSS pilot system to Washington, D.C. In order to exercise close control over this process, much of this work is being performed internally by existing Commission staff members. Some work, however, will have to be performed by outside consultants. Our best estimate at this time is that this work will be completed in July of this year, at which time the pilot system will be merged into the first stage of the full MOSS system. Initially, the system will be operated on the Commission's existing computer equipment, pending delivery of the additional computer equipment for which we have begun the procurement process. This arrangement will permit the procurement of software to occur concurrently with the procurement of computer equipment. This overlap will also shorten considerably the time required to transfer the system completely to the Commission's headquarters in Washington, D.C. The delivery of this additional equipment will be necessary, however, to permit significant further development of MOSS in conformity with the Congressional workplan, including adding additional securities to the system, adding and refining further surveillance algorithms, and receiving the over-the-counter market data contemplated under the workplan. 11/

B. Collection of Clearing Data at Commission Headquarters

When the system is transferred to Washington, D.C., it will be necessary for the Commission to begin receiving directly at Commission headquarters cleared trade

10/ It is difficult, prior to the actual selection of a supplier, to determine a precise date for delivery of the contemplated computer equipment with any degree of certainty. Delivery dates will be influenced by equipment availability and the backlog of orders that exists with the supplier which is eventually selected. In any event, we currently anticipate that this computer equipment will be installed by January, 1982.

11/ Senate Report at 4, House Report at 5.

information from NSCC and OCC. Currently, such information is delivered on a daily basis by messenger, from the NSCC and OCC offices in Manhattan, to the MOSS project location in Manhattan. ^{12/} With the transfer of the MOSS system to Washington, D.C., however, it will be necessary to receive cleared trade information directly at Commission headquarters, either through an enlargement of the current commercial courier arrangement, or through direct transmission of such data to the Commission over telephone lines. ^{13/} The eventual system to be utilized, however, will be chosen cooperatively by NSCC, OCC, and the Commission, and it will be the system that is the most cost-effective arrangement for both the clearing corporations and the Commission.

C. Receipt of Option Market Maker Stock Trading Data
(Commission Responsiveness to SRO Concerns)

Pursuant to the Congressional implementation schedule for MOSS, the Commission began receiving, during fiscal year 1981, information regarding the underlying stock trading and order activity of option market makers. The receipt of this information from all of the option exchanges was delayed until February of 1981, however, because of a variety of reasons, not the least of which was the desire of the Commission to be as responsive as possible to a number of issues raised by the SROs with regard to the use and protection of such information.

Specifically, on May 5, 1980, the American Stock Exchange, Inc. ("Amex") wrote to the Commission staff and raised several legal issues concerning the degree to which the confidentiality of information being requested for purposes of MOSS, regarding the stock trading activity of option market makers, could be protected by the Commission

^{12/} OCC sends this information from its Chicago offices to its Manhattan offices by commercial courier on a daily basis.

^{13/} A principal problem with this latter approach, however, is the volume of data to be transmitted. For example, at the highest reliable transmission speeds available for standard commercial telephone lines, the transmission of data from OCC could take up to 13 hours each day at current trading volumes. On the other hand, the use of higher transmission speeds would require the leasing of more costly communications lines and the use of more expensive transmission equipment.

from unwarranted public disclosure. 14/ In its letter, the Amex asked the Commission to consider whether stock trading information received pursuant to MOSS could be protected from public disclosure under the Freedom of Information Act, 5 U.S.C. §552, ("FOIA"), whether the Privacy Act of 1974, 5 U.S.C. §552a, ("Privacy Act") applied to the uses of stock trading information by MOSS, whether the Trade Secrets Act, 18 U.S.C. §1905, was applicable to trading information contained in the MOSS data base, and whether Monchik-Weber Systems Consulting, Inc. (the Commission's primary contractor on the MOSS project at the time) could be considered a "representative" of the Commission pursuant to Commission Rule 17a-1, 17 CFR §240.17a-1, 15/ for the purpose of receiving and handling trading information from the SROs for use in the MOSS system.

The Commission staff believed that the Amex letter raised some legitimate policy issues concerning the treatment of not only sensitive option-related stock trading information in the MOSS data base, but also the treatment of all trading information in the MOSS data base. Because of this, and because of a desire to reassure the self-regulatory organizations of the Commission's intentions to protect the confidentiality of non-public trading information, wherever possible, the Commission's staff thoroughly studied the issues raised by the Amex letter and presented each of these issues to the full Commission for resolution. On November 25, 1980, the Commission sent a

14/ Letter from Richard O. Scribner, Executive Vice President of the Amex, to Benjamin Milk, Executive Director of the Commission, dated May 5, 1980 ("Amex Letter").

15/ Rule 17a-1 provides, in part:

(c) Every national securities exchange, registered securities association, registered clearing agency and the Municipal Securities Rulemaking Board shall, upon request of any representative of the Commission, promptly furnish to the possession of such representative copies of any documents required to be kept and preserved by it pursuant to paragraphs (a) and (b) of this section. (emphasis added)

letter to the Amex with copies to each of the other self-regulatory organizations addressing the issues raised by the Amex's May 5 letter. 16/

First, with respect to disclosure of trading information contained in the MOSS data base under the FOIA, the Commission concluded that virtually all of the information that was not currently in the public domain and that was being requested from the SROs for the purposes of the MOSS project could be withheld from public disclosure under various exemptive provisions of the FOIA, including Sections (b)(4), (6), (7)(A), (7)(E), and (8) of that statute. In addition, the Commission committed itself to vigorously defend any FOIA action to compel public disclosure of sensitive trading information being used by MOSS, and to consult with the self-regulatory organizations, pursuant to the Commission's confidentiality procedures (17 C.F.R. §200.83), before disclosing any non-sensitive trading information that no longer appeared to be confidential. 17/

The extent of the Commission's commitment to the self-regulatory organizations to prevent the unwarranted public disclosure of confidential trading information furnished by the SROs to the MOSS system is perhaps best illustrated by the following passage from the Commission's November 25 letter:

As important as our belief that several exemptive sections of the FOIA apply to the information that will be requested of the self-regulatory organizations for MOSS purposes is the policy determination

16/ Letter from Harold M. Williams, Chairman of the Commission, to Robert J. Birnbaum, President, Amex, dated November 25, 1980, at 1-2. A copy of this letter appears as Attachment B to this Report. Copies of this letter were also sent to James E. Dowd, President, Boston Stock Exchange ("BSE"), Charles J. Henry, President, Chicago Board Options Exchange ("CBOE"), K. Richard B. Niehoff, President, Cincinnati Stock Exchange ("CSE"), John C. Weithers, President, Midwest Stock Exchange ("MSE"), Gordon S. Macklin, President, NASD, John H. Phelan, Jr., President, New York Stock Exchange ("NYSE"), Charles E. Rickershauser, Jr., Chairman, Pacific Stock Exchange ("PSE"), and Elkins Wetherill, President, Philadelphia Stock Exchange ("Phlx").

17/ Id., at 1-2.

that we have reached in connection with the review of this matter to assert the available exemptions to prevent public disclosure of privileged or confidential trading information that the self-regulatory organizations believe would: (1) compromise the competitive position or rights of personal privacy of market participants; (2) unnecessarily expose operational or condition reports of financial entities such as the SROs and their members; or (3) disclose information regarding the investigatory techniques of the SROs or actual trading situations under review by the SROs or the MOSS system. In that connection, the Commission will vigorously defend any FOIA action brought by third parties who seek to obtain the release of such information. 18/

Second, in order to take every possible precaution against the inadvertent release of confidential trading information, the Commission instituted a procedure to label automatically all computer printouts from the MOSS project with a legend stating that confidential treatment had been requested for information in the printout and that the procedures of 17 C.F.R. §200.83 must be followed in response to any request for public disclosure.

Third, the Commission concluded that the Privacy Act of 1974 would pose no problems for the storage and use of MOSS data on a routine basis, because the Act is inapplicable to the particular types of market information to be furnished to the Commission by the SROs in connection with MOSS. The Commission reached this conclusion based on the legislative history and the implementing guidelines for the Privacy Act adopted by OMB. 19/ The legislative history of the Act and the OMB Guidelines indicate that not all records concerning natural persons fall within the purview of the Act. For

18/ Id., at 1-2.

19/ Office of Management and Budget Privacy Act Implementation Guidelines and Responsibilities, 40 Fed. Reg. 28,948 (1975) ("OMB Guidelines"). The Privacy Act specifically required the Office of Management and Budget to adopt such guidelines. See Privacy Act of 1974, 5 U.S.C. §552a, Pub. L. No. 93-579, §6.

example, the Senate Report accompanying the Privacy Act took particular care to state that the term "individual" under the Act should be interpreted narrowly:

to distinguish between the rights which are given to the citizen as an individual under this Act and the rights of proprietorships, businesses and corporations which are not intended to be covered by this Act. This distinction was to insure that the bill leaves untouched the Federal Government's information activities for such purposes as economic regulations. 20/

In addition, the OMB guidelines, in interpreting the administration of the Act, also drew a further distinction between natural persons acting in a non-commercial capacity and natural persons performing entrepreneurial functions:

[A] distinction can be made between individuals acting in a personal capacity and individuals acting in an entrepreneurial capacity (e.g., as sole proprietors) and that this definition (and, therefore, the Act) was intended to embrace only the former. ... Agencies should examine the content of the records in question to determine whether the information being maintained is, in fact, personal in nature. A secondary criterion in deciding whether the subject of an agency file is, for purposes of the Act, an individual, is the manner in which the information is used; i.e., is the subject dealt with in a personal or entrepreneurial role. 21/

Accordingly, because MOSS is intended to deal with the trading activity of individuals, sole proprietorships, partnerships, and securities firms who are acting in an entrepreneurial capacity on the floors of the nation's stock and options exchanges, the Privacy Act should not cause any foreseeable problems in implementing or operating the MOSS system. In addition, the possibility that the Privacy Act could pose any problem at all for the Commission is reduced even further by the fact that, as the Commission noted in its reply to the Amex, there are no plans to create a system of records within the MOSS project that would be indexed by the names or account numbers of public customers.

20/ S. Rep. No. 1183, 93d Cong., 2d Sess. 79 (1974).

21/ OMB Guidelines, at 28,951.

Fourth, the Commission examined the applicability of the Trade Secrets Act 22/ to information contained in the MOSS data base, and concluded that, although the Act is clearly applicable to information in the MOSS data base, the provisions of the Act do not pose any particular problems, either for the Commission or for the SROs, in implementing MOSS. In short, the Trade Secrets Act is applicable to the MOSS data base only with respect to information furnished to the Commission by the SROs: (1) which is within the scope of 18 U.S.C. §1905; (2) which is exempt from disclosure under an exemption to the FOIA; and (3) which the Commission, notwithstanding the availability of an FOIA exemption, seeks to disclose. Because several exemptive provisions of the FOIA are available to the Commission to prevent public disclosure of information furnished to MOSS by the SROs, and because it is the clearly stated policy of the Commission to prevent public disclosure of such information in the MOSS data base, wherever possible, 23/ we believe that the provisions of the Trade Secrets Act do not pose any immediate problems for the Commission or the SROs with regard to MOSS. Nevertheless, the Commission has assured the SROs that, in the event that the Trade Secrets Act ever becomes an issue with regard to any information in the MOSS data base, the Commission will consult with the SROs prior to taking any action regarding the treatment of such information. 24/

22/ The Trade Secrets Act imposes criminal liability on federal government employees or officers who disclose business-related information obtained in the course of their duties in any manner not "authorized by law." On the other hand, the release of records that are not exempt under the FOIA is generally required by law, 5 U.S.C. §552(c), and therefore is generally considered to be "authorized by law" within the meaning of the Trade Secrets Act. Accordingly, Trade Secrets Act issues only arise if the Commission considers the discretionary disclosure of business-related information that is already subject to an FOIA exemption. In such cases, the Commission must consider whether the information is within the scope of 18 U.S.C. §1905, and, if so, whether the disclosure of such information would be "authorized by law."

23/ See discussion supra, at 8-9; see also Amex letter, at 1-2.

24/ Amex letter, at 4.

Finally, in response to concerns raised by the SROs, the Commission designated Monchik-Weber Systems Consulting, Inc., as a "representative" of the Commission for purposes of receiving information from the SROs for use in MOSS pursuant to Section 17(a)(1) of the Securities Exchange Act of 1934, 15 U.S.C. §78(q)(1), and Rule 17a-1, 17 CFR §240.17(a)-1. In addition, the Commission informed the SROs that Monchik-Weber was obligated by contract to abide by the same prohibitions against personal or unauthorized use or public disclosure of information obtained from the SROs in connection with MOSS as are Commission employees and members of the Commission itself. 25/

D. Obtaining Additional Trading Information from the SROs

In authorizing the Commission to proceed with MOSS through fiscal year 1983, Congress instructed the Commission to begin technical discussions with the SROs, in fiscal year 1981, regarding the manner in which certain SRO information files could best be provided to MOSS in fiscal year 1982. 26/ These information files are:

1. NASD broker/dealer quotes;
2. NASD end of day broker volume;
3. NASD broker/dealer quote drops;
4. Broker/dealer symbol cross reference files;
5. Broker/dealer security relationship files;
6. Unmatched option trades; and
7. SRO inquiry and investigation files. 27/

During the first six months of fiscal year 1981, the Commission's technical staff has begun the initial internal planning process relating to the eventual receipt of this information. Actual discussions with the SROs to resolve the details associated with receiving this information,

25/ It should be noted also that such conduct restrictions would remain binding on Monchik-Weber after its association with the MOSS project had ended. As stated earlier, under current plans, all contracts with Monchik-Weber relating to the MOSS project will expire by September 30, 1981. See note 3, supra.

26/ Senate Report at 4, House Report at 5.

27/ In referring to "NASD" information, we assume that the Congress means information relating to NASDAQ trading activity.

however, have not yet begun. These discussions will be held during the last six months of the current fiscal year. This schedule is compatible with the Commission's own internal plans, because the Commission does not anticipate that the MOSS project will begin to collect these data files from the SROs until sometime after new computer equipment has been installed at the Commission in the middle of fiscal year 1982. An earlier collection date for this information does not appear feasible at this time because of constraints that exist in the capacity of the Commission's existing computer equipment to store and process large volumes of additional MOSS data, without interfering with other on-going data processing obligations at the Commission.

When discussions are held with the SROs concerning the eventual provision of this additional data, the Commission will make every effort to assure that the actual process of providing the data to the Commission will be accomplished in a manner consistent with the needs of the Commission which is the most cost-effective and convenient for the individual SROs involved.

III. Trading Algorithms Currently Being Processed By MOSS

MOSS is currently operating with a total of 13 trading algorithms. 28/ These algorithms are designed to indicate automatically, and provide detailed trading histories relating to, the following trading aberrations: 29/

- 1) Relatively large intra-day price movements in equity securities;
- 2) Gap openings beyond a certain range in equity securities;
- 3) Loss of trading continuity (relatively large price changes on a trade-to-trade basis) in equity securities;

28/ When MOSS becomes fully operational, approximately 40 types of trading aberrations will be monitored automatically on a daily or periodic basis.

29/ Each of the trading aberrations listed in this section is indicative of one or more possible types of manipulative behavior, violations of obligations to maintain a fair and orderly market, or violations of other Commission or SRO rules.

- 4) Consecutive plus and zero plus or minus and zero minus ticks in equity securities;
- 5) Occurrence of greater than normal volatility in individual equity securities;
- 6) Occurrence of less than normal volatility in individual equity securities (especially in conjunction with expiration dates in related options);
- 7) An unusually high percentage of trading volume in a single security accounted for by one market participant (performed for both equity and option securities); 30/
- 8) An unusually high percentage of trading volume in a single security accounted for by a relatively small group of market participants (performed for both equity and option securities);
- 9) One market participant accounting for trading volume in an equity security that is greater than a certain percentage of that security's float over a particular period of time;
- 10) One market participant accounting for trading volume that is greater than a certain percentage of a particular security's trading volume over a particular period of time (performed for both equity and option securities);
- 11) Option market makers who have short positions in expiring call option series whose strike price is at or near the current price of the underlying stock, and who account for a significant amount of sell trades or orders in the underlying stock prior to the option's expiration (performed for options and underlying stocks);

option writers are subject to OCC assignment to sell equity at strike price to holder of call.

ie, short calls capping the stock price to delay or prevent the need to cover their position

ie, stocks are rising into the money

30/ The term "market participant" in algorithms 7-10 means different things in relation to trading activity in the stock markets and in the option markets. A market participant in the stock markets refers to an individual clearing firm account. A market participant in the option markets refers to an individual market maker or firm proprietary account, or the aggregate customer account of a retail member firm. This distinction is necessary because of the different manner in which clearing information is currently being captured and stored in the stock and option markets.

ie, stocks are falling out (in?) the money.
- 15 -

subject to OCC assignment to buy stocks at strike price to holders of puts

12) Option market makers who have short positions in expiring put option series whose strike price is at or near the current price of the underlying stock, and who account for a significant amount of buy trades or orders in the underlying stock prior to the option's expiration (performed for options and underlying stocks); and

ie, short puts pressing up the stock price to prevent or delay the need to cover their position.

13) Option market makers who account for a certain amount of closing transactions ^{31/} in an option, following trading activity by them in the underlying stock on the same side of the market, as their option position (performed for options and underlying stocks).

IF short call, must sell stock; so sell ~~own~~ calls are in the money, so sell ~~own~~ own stock to keep stock below the strike price

long/exercise short/OCC assignment

IF long call, can exercise option to buy stock, so buy stock separately to meet market over strike price at which the option pays off to holder.

The emphasis of the project through the Fall of 1980 was placed on (1) programming of the algorithms; (2) identification and elimination of errors in the algorithms; (3) refinement of the parameters of the algorithms; and (4) refinement and reformatting of the reports generated by the system as the requirements of the Commission's staff became more apparent. By early 1981, a sufficient number of the algorithms had been stabilized to warrant increasing the number of analysts assigned to reviewing the output from the project. This was accomplished by reassigning existing staff members from other functions, and specifically by drawing upon the staff of the Commission's Office of Market Surveillance, Program Management and Options in the Division of Enforcement and the staff of the Office of Inspections, Examinations and Surveillance in the Division of Market Regulation.

Similar to long and short puts except reversed

31/ The term "closing transaction" for option market makers means, in this instance, transactions that reduce or eliminate a previously existing short or long option position. Option market makers technically do not effect "opening" and "closing" transactions as do other types of option accounts, because the positions of option market makers are automatically netted at OCC on a daily basis.

IV. Policy for the Use of MOSS By the Commission

The daily output from the MOSS project is now sufficiently large and useful to warrant a general Commission policy statement on the use of MOSS data relative to the self-regulatory process. MOSS will be used to monitor trading activity in all significant stock and options markets on a daily basis, with a view to identifying situations indicative of operational problems, market manipulation and other trading aberrations. The Commission intends to use the MOSS system primarily in an oversight capacity to audit the fundamental market surveillance function performed by the self-regulatory organizations. The Commission recognizes and strongly supports the statutory scheme of self-regulation that contemplates substantial reliance upon SROs for market surveillance. Neither the design nor the application of MOSS will operate to usurp the role of SROs in directly regulating their members. The Commission does, however, have the direct statutory responsibility to assure that the SROs perform their market surveillance function adequately, thereby contributing to the broad statutory goal of maintaining fair and orderly markets. MOSS will enable the Commission to conduct this critical audit function.

In practice, the Commission's MOSS policy will operate in the following manner. While closely monitoring the trading activities at the SROs on a daily basis through MOSS, the Commission will continue to rely primarily on the SROs to investigate possible trading abuses by SRO members. Where circumstances warrant, however, the Commission staff will conduct its own investigations, if immediate action is deemed necessary to protect the integrity of the nation's securities markets. The discharge of this latter independent enforcement responsibility does not, and need not, operate to undermine or conflict with the Commission's full support for the concept of self-regulation of the securities industry. The administration of the concept of self-regulation is a cooperative effort involving both the Commission and the self-regulators. This cooperative effort has worked well in the past, and we believe that it will continue to do so in the future.

V. Policy for the Use of MOSS by the SROs

The Commission believes that, because of closer inter-relationships among the various securities markets and the greater complexity of financial instruments traded in those markets, there is a need for all of the SROs to exchange greater amounts of trading data among themselves on a routine basis for market surveillance and other regulatory purposes. Recently, partly as a result of the MOSS project, the Securities Industry Association ("SIA") and the various SROs initiated a series of meetings to explore methods by which greater amounts of intermarket cooperation in the regulation of trading activities by their members could be achieved. The Commission believes that this is a very positive development, and it is precisely the type of cooperative action on the part of the SROs that should ultimately lead to better regulation of trading activities in all marketplaces. In connection with this, the SROs in the past have asked the Commission to permit them to use the MOSS data base for their own regulatory purposes. In making this request, the SROs have pointed out that some MOSS information would be helpful to them in monitoring certain types of activities on their own trading floors, and that MOSS would also be particularly helpful to them in monitoring intermarket trading activities, because the Commission, through MOSS, is currently the only entity in the nation which is receiving and storing detailed trading information from all of the existing marketplaces on a daily basis.

We agree that a significant regulatory purpose would be served by allowing the SROs to have appropriate access to the MOSS data base for certain purposes, and we see no necessary conflict between the use of MOSS by the Commission for oversight purposes, and the use of MOSS by the SROs to improve their own internal market surveillance and regulatory programs. The specific programs and parameters in use by the Commission to oversee the day-to-day performance of the SROs could be shielded from the SROs to the extent necessary, and the SROs could use the MOSS data base to operate automated programs of particular interest to them.

Specifically, we believe it would be appropriate for the Commission to explore the possibility of the SROs eventually using the MOSS data base: (1) as a "research and development" tool to develop and test additional automated market surveillance programs for their own marketplaces; and (2) as a common source of automated intermarket trading

information from all markets. 32/ The costs of creating the MOSS data base would, of course, be borne by the Commission as part of the creation of the overall MOSS system, and the Commission will also attempt to share, by way of some reasonable allocation, the costs of allowing the SROs to use the MOSS system to create additional automated market surveillance and other regulatory programs for their marketplaces.

VI. Establishment of Closer Cooperation with the SROs

As part of the process by which MOSS is being integrated into the Commission's overall regulatory program, the Commission's Division of Market Regulation has assumed, since the beginning of the fiscal year, responsibility for coordinating Commission efforts on MOSS with the securities industry, the Congress, and the public. 33/

Implementation of this new MOSS phase has involved substantial staff efforts to strengthen lines of communication with the SROs in recognition of the sensitivities in the securities industry with regard to the uses of MOSS. Staff contact has included numerous discussions with the leadership of the principal self-regulatory organizations and the SIA. The SIA, in fact, has been asked to take a leading role in coordinating the efforts of the SROs in dealing positively with MOSS. In addition, on October 22, 1980, senior representatives of the Commission met in New York City with the President and senior officials of the American Stock Exchange, Inc., to explain the administration and organization of the MOSS project and to answer any questions which the Amex staff might have in regard to the MOSS project. This meeting was followed on November 14, 1980, by a similar meeting in Chicago with the President and senior officials of the CBOE, at which time the

32/ Routine and unrestricted access to intermarket trading information in the MOSS data base would, of course, be contingent upon some agreement by the SROs to allow the sharing of this information among themselves on a routine and unrestricted basis.

33/ See letter from Douglas Scarff, Director, Division of Market Regulation, to the heads of the major self-regulatory organizations, dated October 3, 1980. A copy of this letter appears as Attachment C to this report.

Commission representatives promised to do whatever possible to deal with the SROs' concerns regarding MOSS. In order to give substance to this promise, Commission staff members involved in these meetings with the SROs assumed a principal role in drafting the Commission's November 25, 1980, letter to the Amex and to the other self-regulatory organizations regarding methods to protect the confidentiality of SRO trading information in the MOSS data base. ^{34/} In addition, during the annual convention of the SIA in Boca Raton, Florida, in December of 1980, the Chairman of the Commission and the Director of the Division of Market Regulation made themselves available to discuss MOSS at length with SRO representatives.

Throughout all of these discussions, the Commission has attempted to be as open and frank as possible with the SROs. ^{35/} The Commission believes that all of these discussions with the SROs have been positive, and we intend to continue such activities in the future.

^{34/} See discussion *supra*, at 6-12. This letter received a favorable response generally throughout the securities industry.

^{35/} The Commission is continuing to discuss the details of MOSS openly with the SROs. On March 6, 1981, an officer of the NYSE in charge of the exchange's automated Stock Watch program, met with members of the Division of Market Regulation to discuss proposals which the NYSE had to improve its automated market surveillance capability. As a part of this meeting, the Commission staff discussed with the NYSE official the generic types of surveillance algorithms which are currently in use in the MOSS pilot system and which are planned for the full MOSS system, and suggestions were made to the NYSE as to how similar algorithms could be adopted by the NYSE to improve surveillance capabilities at the exchange. Additional meetings of this type are planned with representatives of the other self-regulatory organizations.

VII. Benefits of the MOSS Project Thus Far

The benefits to the Commission of the MOSS project, thus far, have included: (1) improved efficiency of the Commission's existing trade watch function; and (2) improved ability of the Commission's SRO inspection program to conduct surveillance inspections and to monitor possible market performance problems in periods of unusually high trading volume. 36/

A. Trade Watch

The Commission, for years, has had a routine trade watch function housed within its Division of Enforcement. This program, however, has operated at somewhat of a primitive level, with Commission staff dependent entirely upon commercially available quotation and last sale information, manual Fitch sheets, 37/ and other public sources of historical trading activity. In addition, the Commission has had no routine means to digest these separate sources of information on a daily basis to identify possible trading aberrations in the marketplace.

36/ These improvements in the Commission's ongoing activities should, of course, be qualified by a number of factors, including the fact that: (1) MOSS has only been operating in any permanent manner for the last six months; (2) during the last six months, the system has been monitoring on the average only approximately 10% of the stocks and options which will be contained in the full system; (3) because of a desire on the part of the Commission to be as responsive as possible to several legal issues raised by the SROs, some surveillance algorithms have been implemented completely only within the last eight weeks; and (4) the system is currently operating with only about 25% of the surveillance algorithms which will be employed under the full system.

37/ "Fitch Sheets" are printed listings of information contained on the various transaction tapes of major securities exchanges. They are produced by Francis Emory Fitch, Inc., of New York.

The MOSS project, however, has improved the Commission's trade watch program in two ways. First, the MOSS computer system automatically scans a substantial amount of trading information from several markets on a daily basis and automatically identifies for Commission staff members those instances of questionable trading activity which may deserve closer scrutiny by the Commission. Second, the MOSS computer automatically gathers and appends to each trading alert report detailed automated trading and clearing information necessary for a Commission analyst to review the alert. This "consolidated format" technique has significantly reduced the time required by Commission analysts to review particular trading situations in the marketplace. It also has made it possible for Commission analysts to discard quickly those alerts which can obviously be explained by the detailed trading information supplied on the report, and to concentrate their energies only on truly meaningful trading situations.

When situations are identified which appear to involve the trading activities of SRO members, the appropriate SRO will ordinarily be contacted to determine whether its surveillance system also has identified the same conduct, and, if so, what the SRO is doing about it. 38/

B. Inspections

One of the most significant positive impacts of the MOSS project, thus far, has been on the Commission's SRO inspection program. Currently, two branches within the Office of Inspections, Examinations and Surveillance of the Division of Market Regulation conduct periodic on-site inspections of the capabilities of the various SROs to detect and prosecute known forms of trading fraud on the floors of the stock and option exchanges, and on NASDAQ.

38/ Recently, the Division of Market Regulation has begun reviewing and working with the output of the project on a regular basis. This has increased the Division's detailed understanding of specific types of trading strategies in both the stock and the option markets, and it should not only enhance the oversight function of the first stages of the MOSS project, but it should also assist the Division in dealing effectively with various rule change proposals and other regulatory items involving complex trading matters on the nation's stock and option exchanges.

In the two years since it was created, the inspections program has been very successful, and it has identified a number of specific surveillance and operational difficulties at the various SROs.

1. Inspections Dealing With SRO Surveillance Techniques

Since the implementation of the MOSS pilot program, the Commission's inspections staff has begun to use the MOSS data base to identify particular types of problems at particular SROs and to conduct very detailed advance preparation on these problems prior to actually visiting an SRO. Cases in point are two recent inspections of the stock/option surveillance programs of the Amex and the CBOE conducted during February of this year.

Specifically, toward the end of January 1981, Commission staff members began to notice that option market maker stock trading and order information used in the basic stock/option manipulation surveillance programs of the Amex and the CBOE and supplied to the Commission by both exchanges on a daily basis, 39/ appeared incomplete and inconsistent when subjected to close scrutiny. Accordingly, inspections staff members were assigned to review daily printouts of the stock trade and order files of the two options exchanges, and a number of problems with the information on these files immediately became apparent. The Commission's inspection staff noted all of the deficiencies appearing in each day's data, and categorized the possible reasons for such deficiencies. Inspection dates were arranged at each exchange for the middle of February, and, during the period prior to each inspection, the Commission staff continued to compile lists of deficiencies on the reports in some detail.

On February 18-19 and 25-26, 1981 respectively, the Commission conducted on-site inspections of the effectiveness and accuracy of the stock/option surveillance programs of the CBOE and the Amex. Special audits of exchange, market maker, and clearing firm records relating to option and underlying stock trading activities were conducted, and the reasons for each type of data deficiency noted previously on the MOSS printouts were documented. Interviews concerning these deficiencies were conducted with senior

39/ Both the Amex and the CBOE supply automated information to the MOSS project on a daily basis concerning the underlying stock trade and order activity of their option market makers.

exchange officials, and specific methods to remedy the problems were suggested by the Commission staff. On March 5 and March 10, 1981 respectively, deficiency letters were mailed to the Amex and the CBOE memorializing the results of each inspection.

Both inspections were among the most precise, most productive, and least costly 40/ surveillance inspections conducted by the Commission in some time. Most of the analytical work of the inspection teams had been accomplished through detailed review of MOSS printouts prior to the time that the inspection teams actually arrived at each exchange. The purpose of both inspections was largely to document the reasons for what had been noticed earlier through MOSS. In addition, because of the specificity of the examination processes made possible by the prior review of MOSS information, both inspections were perhaps the least disruptive inspections to the SROs conducted by the Commission in some time, and the period of time between the completion of each inspection and the receipt of a Commission deficiency letter by each SRO which was inspected was substantially less than normal.

2. Inspections Dealing with the Possible Occurrence of Trading Violations

Specialists on national securities exchanges are charged with statutory obligations to maintain fair and orderly markets. 41/ Specifically, this means that specialists are required to maintain adequate depth and continuity of trading in their assigned securities in difficult market situations, and that it is a violation of exchange rules and of the Securities Exchange Act of 1934 to allow an assigned security to rise or fall precipitously.

Two indications of possible poor specialist performance in a difficult market are "gap openings" and poor price continuity. A gap opening occurs when a security's opening price differs substantially from the previous day's closing

40/ Each inspection was completed in approximately 1-1/2 days, including exit interviews with exchange staff.

41/ Section 11(a)(2) of the Act and Rule 11b-1 thereunder, 2 Fed. Sec. Laws (CCH) ¶¶15,441, 21,001.

price for the same security. 42/ Poor price continuity is the occurrence of successive trades in a security at relatively large price differences. Algorithms currently being run by MOSS automatically log instances of gap openings and poor price continuity in stocks within the system's data base. On November 5, 1980, and on January 7, 1981, 43/ heavy trading volume and relatively wide price swings occurred in a substantial number of securities traded on the nation's stock markets. For both of these trading sessions, MOSS produced an unusual number of gap openings and continuity alerts for stocks being monitored by the system. 44/

On January 7, 1981, 20 of one exchange's securities being monitored by MOSS gapped down more than 13% on the opening trade of the day. Eight securities on this exchange also showed possible continuity problems. On another exchange on January 7, 1981, MOSS identified possible gap opening and/or continuity problems in 43 separate securities being monitored by the system. In addition, on November 5, 1980, MOSS identified a total of 57 potential price and/or continuity problems on these two exchanges. On both of these trading days, many of the stocks involved in gap openings on both exchanges opened at either the high or low price for the day, and then eventually returned to prices which were relatively near the previous day's close. 45/

42/ It is one of the functions of a specialist to establish an equitable opening price for each security assigned to him.

43/ November 5, 1980, was the date following the 1980 presidential election, and January 7, 1981, was the date upon which the markets declined significantly following sell recommendations by Joseph Granville, a well-known investment advisor and market analyst.

44/ On that date, MOSS was monitoring approximately 600 stocks.

45/ The fact that MOSS identified a number of possible gap opening and price continuity problems for these two trade dates does not mean necessarily that performance violations occurred. The purpose of the MOSS gap opening and price continuity algorithms is to flag trading situations for further review by the Commission staff to assure that SROs have acted appropriately in responding to such situations.

Consistent with the oversight purposes of MOSS, the Commission's inspection staff selected a total of 17 trading instances from both trade dates for discussion with the first exchange's staff, and a total of 14 trading instances from both trade dates for discussion with the second exchange's staff. ^{46/} The exchange staffs described their activity on the dates in question, and provided additional facts which formed a more complete picture of the specialist activity identified by MOSS. It was determined that the first exchange had removed a stock from one of its specialist firms for poor performance related to gap openings which occurred on that exchange in that security on January 7 and 8, 1981. The exchange decided, however, that none of the other instances in its stocks identified by MOSS on those trade dates and discussed with Commission staff members required further investigation. In our discussions with the staff of the second exchange, it was determined that the exchange had initiated formal investigations regarding possible specialist performance problems in 31 stocks on these two trade dates. On the other hand, it was determined that several instances of possible specialist performance problems identified by MOSS on these trade dates were not pursued by the exchange staff beyond the initial inquiry stage. In addition, most of the investigations regarding possible poor specialist performance on these two trade dates on that exchange were still open at the time the exchange was contacted by the Commission staff.

Because it is impossible, without further work at both exchanges, to determine whether the staffs of these exchanges acted appropriately in dealing with the possible gap opening and continuity problems which occurred on their exchanges on November 5, 1980, and January 7, 1981, a review of these issues will be scheduled as part of upcoming Commission inspections. The availability of MOSS information in Washington, D.C., however, will make it possible for these inspections to be much more precise in nature, and to include review of trading instances for which SRO action was terminated at the initial inquiry stage as well as those instances for which substantial SRO investigatory files are available.

VIII. Costs of MOSS Thus Far to the SROs and the Commission

A. Costs to the SROs

The Commission is very mindful of keeping the cost impact of the MOSS project to the SROs at a minimum. As part of this

^{46/} The staff selected the largest gap openings and apparent continuity problems for this review.

effort in March of this year, the staff of the Commission contacted all of the self-regulatory organizations currently affected by MOSS and asked them to provide to the Commission the total incremental costs which they had incurred because of MOSS in the first six months of MOSS operations (October 1, 1980 - March 31, 1981). In addition, the Commission staff asked the SROs to provide an estimate of the costs of MOSS to their operations during the ensuing six-month period. The reports which were received back from the self-regulators are as follows:

COST TO SROs

	<u>Oct. 1980 - Mar. 1981</u> (Actual)	<u>April 1981 - Sept. 1981</u> (Projected)
NYSE	- 0 -	- 0 -
Amex	2,325	882
CBOE	5,484	5,484
PSE	3,280	7,468
Phlx	5,224	22,475 <u>47/</u>
NSCC	900	900
OCC	<u>9,375</u>	<u>11,000</u>
Total	\$26,588	\$48,209

After examining the cost reports from the self-regulators, we are satisfied that the actual incremental costs of MOSS are running at levels which are at or below those projected by the Commission for the system at this stage of

47/ This item includes a one-time programming cost at the Phlx to automate its processing of underlying stock trades and orders of option market makers. The Phlx is effecting this change voluntarily to increase the efficiency of its regulatory program concerning stock/option manipulation.

its development. 48/ In fact, considering the relative size of these costs and the routine budgets of each of the SROs and their subsidiary securities information processing and clearing corporations, the costs of MOSS to these organizations are running at relatively low levels. 49/ Both the Commission and the SROs believe, however, that eventually MOSS will cause some additional costs to the SRO community. It is not expected, however, that these costs will be unreasonable, given the overall size of the SROs with which we will be dealing, or that such costs will rise

48/ As part of the Congressional authorization process last year, the Commission estimated that the first year start-up and operational costs of MOSS to the SROs as a whole would be approximately \$90,000. This cost level was also deemed to be "reasonable" for the first year of MOSS operation by Congress. See Senate Report, at 7. In addition, as can be seen by the SRO cost figures on the previous page, the costs of MOSS to the SROs during its first year of operation are running at levels which are significantly below those deemed reasonable by Congress as part of the Congressional authorization process.

49/ For example, the annual operating budget of the CBOE is approximately \$23,000,000, and therefore, the incremental costs to this exchange which are directly attributable to MOSS account for only approximately .05% of the exchange's operating budget. Similarly, at the Amex and PSE, costs of MOSS account for approximately .008% and .05% respectively of the budgets of those exchanges. At the Phlx, even including its one-time programming costs not directly required by MOSS, the expenses of the exchange possibly related to MOSS account for only .49% of the exchange's budget. The costs of MOSS to OCC and NSCC for the current fiscal year are similarly small, with MOSS expenses accounting for .29% and .006% of those organization's budgets respectively.

substantially. 50/ In any event, the Commission will attempt in the future, as it has in the past, to reduce the costs and inconvenience of MOSS to the SROs to a minimum.

B. Costs to the Commission

The Commission's start-up costs for the MOSS project for the first six months of the current fiscal year are \$820,758, with the largest share of this being allocated to one-time costs associated with obligating the funds necessary to acquire the project's computer equipment. 51/ The project costs for the second half of the current fiscal year are budgeted at \$939,242, with the largest share of this total being allocated to one-time costs associated with producing and testing the software necessary to install the new computer equipment, and to transfer the current MOSS pilot operation from New York City to Washington, D.C.

In order to reduce costs and to retain as much control as possible over the technical tasks associated with the establishment of the permanent MOSS system, the Commission

50/ For example, even though MOSS currently is reviewing on a daily basis only approximately 10% of the available stocks and options which are traded in the nation's marketplaces, the SROs are currently supplying to the project in automated form most of the information which the Commission will need to implement the entire project. In fact, MOSS is currently receiving detailed trading information on all NYSE and Amex equity securities and all listed options on the four option exchanges on a daily basis, and the costs to the SROs of providing this information should not increase significantly as the project grows.

51/ A description of the MOSS budget showing major categories of expenditures for the project for fiscal year 1981 appears as Attachment D to this report.

has reassigned several of its existing data processing employees to the project on a full-time basis. Accordingly, some of the programming necessary to transfer the MOSS pilot operation to Washington, D.C. and to start up the new computer equipment can be accomplished by these existing Commission employees.

IX. Tasks to Be Accomplished During Next Six-Month Period

Throughout the text of this report, we have discussed the items which the Commission staff expects to accomplish in the MOSS project over the next six months. It may be useful for the Committee, however, for us to summarize these items once again.

Items to be completed during the next six-month reporting period (April - September 1981):

- o Transfer existing MOSS pilot operation from New York City to Commission headquarters. (Estimated completion date - July 1981).
- o Add additional stocks and options to the MOSS data base. (Estimated completion date - September 1981).
- o Add additional surveillance algorithms to the MOSS data base. (Estimated completion date - September 1981).
- o Initiate discussions with relevant SROs regarding obtaining existing SRO information relating to broker-dealer symbol cross reference and security relationship files, and SRO inquiry and investigation files for possible floor violations. (Initiation date - July 1981).
- o Initiate discussions with the NASD relating to obtaining and processing NASDAQ data as part of the MOSS system, and initiate discussions with option exchanges relating to obtaining and processing reported and unmatched trade information. (Initiation date - July 1981).

- o Complete procurement process for MOSS computer hardware. (Estimated completion date - August 1981).

All of these work items and dates are consistent with the overall project implementation schedule established by the Congressional oversight committees.

During the next six-month period, we do not intend to add to the system any additional information to be provided by the SROs. Accordingly, costs of the system to the SROs should not increase for this reason during the next reporting period. 52/

X. Conclusion

We hope that this report has been responsive to the wishes of the Committee. The MOSS project is an ambitious undertaking for the Commission and its success will ultimately depend on close cooperation among the Commission, the various SROs, the SIA, and the Congress. If the Committee has any questions concerning the text of the report or the operation of the MOSS system itself, please do not hesitate to contact the Commission staff through Matthew Schneider, Director of Legislative Affairs, at (202) 272-2500.

52/ A schedule for discussing overall MOSS information requirements with the SROs and for actually receiving such information from the SROs appears as Attachment E to this report.

ATTACHMENTS



Attachment A

SUMMARY DESCRIPTION OF THE MOSS PILOT PROJECT

1. Scope

In contrast to the full MOSS design, which provides for some real-time 1/ and on-line 2/ analysis functions, the pilot phase of MOSS is being operated on an off-line basis, using batch 3/ processing and analyses of daily trading activity. In addition, because of computer capacity limitations, trading activity on the regional stock exchanges and transactions in NASDAQ securities are not currently being analyzed by the MOSS pilot project.

2. Location

The MOSS pilot system is currently physically located at the offices of Monchik-Weber in New York City. The pilot system's programs are being run on a Tandem mini-computer, and hard copy reports are transmitted to the Commission on a daily basis. As the current facilities manager for the MOSS pilot project, Monchik-Weber is responsible for collecting and processing all of the individual data inputs required for the system and producing the automated analytical reports that are currently prescribed by the system.

3. Data Collection and Entry

Data input items that are collected and entered on a same-day basis include: (1) all quotation and trading information for each trading session relating to all stocks listed on the New York Stock Exchange, Inc. ("NYSE") and the American Stock Exchange, Inc. ("Amex"); (2) all quotation and trading information for each trading session relating to all options listed on the nation's four option exchanges; 4/(3) data that is entered into the MOSS

1/ "Real-time" processing means the ability to process and collect information related to particular events as those events are occurring.

2/ "On-line" processing means the ability to interact currently with an automated data base containing information which was collected and stored previously.

3/ "Batch" processing means the ability to receive reports on a delayed basis, by applying fixed computer programs to an automated data base which was collected and stored previously.

4/ Standardized options are currently traded on the Chicago Board Options Exchange, Inc. ("CBOE"), the Pacific Stock Exchange, Inc. ("PSE"), the Philadelphia Stock Exchange, Inc. ("Phlx"), and the Amex.

system on a daily basis by Monchik-Weber regarding the underlying stock trades and orders of option market makers; 5/ and (4) data that is entered into the MOSS system on a daily basis by Monchik-Weber regarding routine maintenance for the system's security master file, dividend file, and broker identification file.

Data input items that are collected and entered on a delayed basis include: (1) all cleared stock transactions for each trading session which are cleared through the National Securities Clearing Corporation ("NSCC"); and (2) all option transactions for each trading session which are cleared through the Options Clearing Corporation ("OCC"). Options data is processed on T+3 (trade date plus 3) and stock data is processed on T+5 (trade date plus 5).

4. Data Processing

All of this data is processed automatically by programs within three basic subsystems which comprise the MOSS pilot system: (1) the Transaction Collection Subsystem; (2) the Data Base Subsystem; and (3) the Trading Alert Subsystem.

a. Transaction Collection Subsystem

The Transaction Collection Subsystem processes and enters basic ticker information into the pilot project data base. Trade and quote reports for all stocks contained on Tape C of the Consolidated Tape Association 6/ and all trade and quote reports for all listed options are collected and entered into the pilot data base on a real-time basis, and a tape is produced for batch processing at the end of the day by the MOSS pilot system. After the end of each trading session, the pilot computer extracts from this tape those trades and quotes that relate to securities which are currently within the scope of the pilot project. As this data is being extracted, each trade and quote is automatically checked for errors, and summaries are created which

5/ The Amex and the CBOE provide the underlying stock trade and order information to the pilot in automated form on a daily basis. The PSE and the Phlx currently provide this information to the pilot in manual form, although there is some indication that both exchanges may shortly automate their internal processing of information relating to the trading activity of their option market makers in underlying securities.

6/ This Tape contains the price, volume, and time of trade report for all trades involving stocks listed on the NYSE and the Amex, regardless of whether the trades occurred on these exchanges or on one of the regional stock exchanges.

reflect the open, high, low, close, and cumulative trading volume for each security, according to the exchange on which the transaction occurred. At the completion of this validation and summarization process, each transaction is entered into a daily file in the pilot data base, and summary records which are produced for all securities are entered into a daily price/volume summary file. In addition, hard copy reports are produced reflecting these summaries, trade cancellations and other corrections to ticker data, and transactions rejected by the system.

b. Data Base Subsystem

The Data Base Subsystem performs internal maintenance of the various data files in the pilot system, monitors file growth, and controls the entry and exit of information in these data files. Daily entries of maintenance information to security master files, dividend files, and broker identification files are processed through a batch program that validates the data and updates the file to which it pertains. As part of this process, daily information regarding the underlying stock trades and orders of option market makers is also entered into the pilot system's data base. In addition, maintenance logs, internal audit reports, and summaries of daily maintenance activities are automatically produced. These reports are used by the facilities manager of the MOSS pilot to maintain adequate processing control over the pilot operation on a day-to-day basis.

c. Trading Alert Subsystem

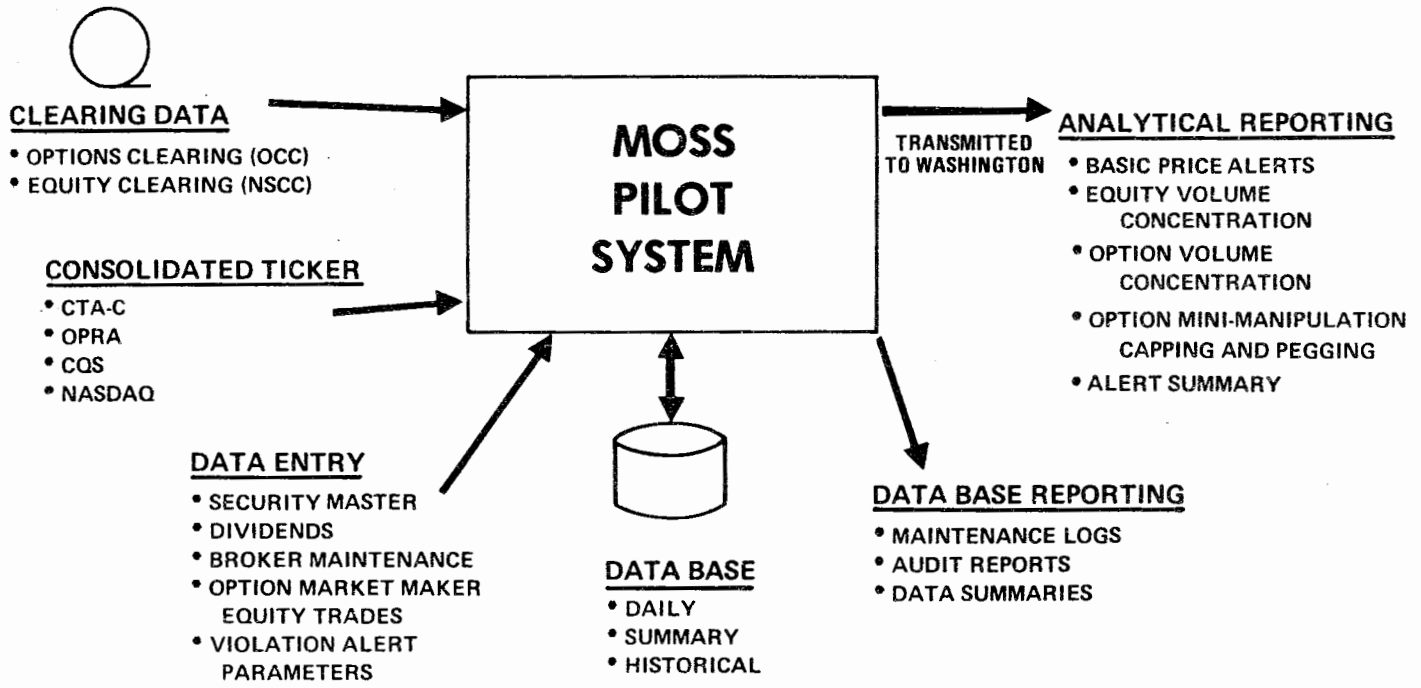
The Trading Alert Subsystem performs the analytical functions necessary to produce, on a batch basis, exception reports that identify unusual trading patterns in the stock and option markets. Each specific analysis of the trading and clearing data utilizes a set of adjustable computer algorithms. 7/ These algorithms have been developed by the Commission staff and they represent automation of several manual techniques which previously have proven successful in identifying unusual trading situations in the stock and option markets.

* * *

A schematic representation of the current pilot operation appears on the next page of this attachment.

7/ All MOSS algorithms are adjustable. A more detailed discussion of the types of algorithms currently being operated under the pilot system appears in the text of the report, at 13-15.

MOSS PILOT OPERATION IN NEW YORK





OFFICE OF
THE CHAIRMAN

Attachment B

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

November 25, 1980

Mr. Robert J. Birnbaum
President
American Stock Exchange, Inc.
86 Trinity Place
New York, New York 10006

Dear Bob:

On May 5, 1980, Richard O. Scribner, Executive Vice President of the American Stock Exchange ("Amex"), wrote to Ben Milk, Executive Director of the Commission, raising several issues concerning the degree to which the confidentiality of securities trading information being requested for the Commission's proposed Market Oversight and Surveillance System ("MOSS") could be protected from public disclosure. This matter has been reviewed by the entire Commission, and this letter represents the Commission's views on the issues raised in Mr. Scribner's letter.

The Commission has determined that virtually all of the securities trading information which is now being requested from all of the self-regulatory organizations for purposes of the MOSS project and which is not currently in the public domain can be withheld from public disclosure under several sections of the Freedom of Information Act ("FOIA"), 5 U.S.C. 552. Specifically, we believe that the exemptions afforded by subsections (b)(4), (6), (7)(E), and (8) of 5 U.S.C. 552 are available to the Commission to exempt from public disclosure the type of non-public daily trading information being furnished to MOSS for surveillance and regulatory purposes. In addition, depending upon the use of such information once it is received by the Commission, other exemptive portions of the FOIA, particularly subsection (b)(7)(A), may become available in particular situations. While some of the information received from the self-regulatory organizations may not retain its confidential nature indefinitely, the Commission will, of course, make such judgments on a case-by-case basis, if an FOIA request is received. As discussed below, however, the Commission will take affirmative steps to protect such information from public disclosure upon its receipt and, consistent with current confidentiality procedures (17 CFR 200.83), will consult with the self-regulatory organizations before disclosing any information that appears to be no longer confidential.

As important as our belief that several exemptive sections of the FOIA apply to the information that will be requested of the self-regulatory organizations for MOSS purposes is the

policy determination that we have reached in connection with the review of this matter to assert the available exemptions to prevent public disclosure of privileged or confidential trading information that the self-regulatory organizations believe would: (1) compromise the competitive position or rights of personal privacy of market participants, (2) unnecessarily expose operational or condition reports of financial entities such as the SROs and their members; or (3) disclose information regarding the investigatory techniques of the SROs or actual trading situations under review by the SROs or the MOSS system. In that connection, the Commission will vigorously defend any FOIA action brought by third parties who seek to obtain the release of such information.

The May 5, 1980 letter from Mr. Scribner also raised the issue that the Commission's then proposed confidentiality procedures may not be appropriate for information submitted to the Commission on magnetic tape or through other electronic media and then reduced to printed computer documents. In addition, Mr. Scribner stated that since the computer printouts would not contain the confidentiality markings contemplated by the provisions of 17 CFR 200.83, information contained on such documents might be inadvertently released. We have reviewed these concerns, and have determined that the confidentiality procedures recently adopted by the Commission are sufficiently broad to encompass the treatment of automated trading information. In order to be as responsive as possible to the Amex concerns regarding the marking of computer printouts so as to protect information for which confidential treatment has been requested, however, the Commission will automatically legend all MOSS printouts containing such information with the statement that confidential treatment has been requested for information contained on such printouts and that the procedures of 17 CFR 200.83 must be followed regarding any request for public disclosure.

Mr. Scribner also asked that the Commission clarify the applicability of the Privacy Act of 1974, 5 U.S.C. 552a, to information contained in the MOSS system relating to the trading activities of market professionals. We have reviewed this matter and have concluded that the Privacy Act is inapplicable to such information furnished by the SROs in connection with MOSS. An "individual," for purposes of the Privacy Act, is "a citizen of the United States or an alien lawfully admitted for permanent residence." 5 U.S.C. 552a(a)(2). The legislative history and the implementing guidelines adopted by the Office of Management and Budget ("OMB") 1/ indicate that not all records concerning

1/ Office of Management and Budget Privacy Act Implementation, Guidelines and Responsibilities, 40 Fed. Reg. 28,948 (1975) [hereinafter cited as "OMB Guidelines"]. The Privacy Act required the Office of Management and Budget to adopt such guidelines. See Privacy Act of 1974, Pub. L. No. 93-579, §6.

natural persons fall within the purview of the Act. The Senate Report concerning the same sections of the Act states that the term "individual" should be interpreted "to distinguish between the rights that are given to the citizen as an individual under this Act and the rights of proprietorships, businesses, and corporations which are not intended to be covered by this Act. This distinction was to insure that the bill leaves untouched the federal government's information activities for such purposes as economic regulations." 2/ The legislative history of the Privacy Act, thus, seems to distinguish between records pertaining to natural persons that are covered by the Act, and records concerning business entities that are outside the scope of the Act.

The OMB guidelines, in interpreting the administration of the Act, also draw a further distinction between natural persons acting in a non-commercial capacity and natural persons performing entrepreneurial functions:

"[A] distinction can be made between individuals acting in a personal capacity and individuals acting in an entrepreneurial capacity (e.g., as sole proprietors) and that this definition (and, therefore, the Act) was intended to embrace only the former. * * * Agencies should examine the content of the records in question to determine whether the information being maintained is, in fact, personal in nature. A secondary criterion in deciding whether the subject of an agency file is, for purposes of the Act, an individual, is the manner in which the information is used; i.e., is the subject dealt with in a personal or entrepreneurial role." 3/

The Commission believes that such information would pertain to those persons functioning in an "entrepreneurial" rather than "personal" capacity; and hence, the use of such information by MOSS would not be within the scope of the Act. Accordingly, we believe that the Privacy Act is inapplicable to information relating to the trading activities of market professionals furnished to the Commission by the SROs for the purposes of MOSS. In addition, it should be noted that currently there are no plans to create systems of records within the MOSS system which would be indexed according the names or account numbers of public customers.

2/ S. Rep. No. 1183, 93rd Cong., 2d Sess. 79 (1974).

3/ OMB Guidelines, supra, note 19, at 28,951.

Mr. Robert J. Birnbaum

Page Four

The Commission was also asked to clarify the applicability of the Trade Secrets Act, 18 U.S.C. 1905, to information contained in the MOSS data base. The Trade Secrets Act imposes criminal liability on federal government employees or officers who disclose business-related information obtained in the course of their duties in any manner "not authorized by law." On the other hand, the release of records that are not exempt under the FOIA is required by law, 5 U.S.C. 552(c), and therefore generally is considered to be "authorized by law" within the meaning of the Trade Secrets Act. Accordingly, if the Commission were to consider the discretionary disclosure of business-related information that is subject to an FOIA exemption, it must consider whether the information is within the scope of 18 U.S.C. 1905, and, if so, whether the disclosure of such information would be "authorized by law."

It appears, therefore, that the Trade Secrets Act will become applicable to the MOSS data base only with respect to information furnished to the Commission by the SROs: (1) which is within the scope of 18 U.S.C. 1905; (2) which is exempt from disclosure under an exemption to the FOIA; and (3) which the Commission, notwithstanding the availability of an FOIA exemption, seeks in its discretion to disclose. Because the policy of the Commission with regard to the entire MOSS data base is to prevent public disclosure under the FOIA of any information obtained from the SROs for which a FOIA exemption exists, however, the provisions of the Trade Secrets Act do not raise immediate concerns. In the event that a situation does arise in which the Commission, after consultation with the SROs, seeks to disclose information under the FOIA for which an FOIA exemption is available, the Commission would fully consider whether such a disclosure would be prohibited by the Trade Secrets Act.

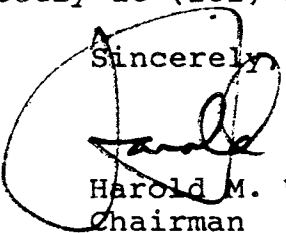
The exchange's May 5, 1980 letter also asked the Commission to clarify the position of Monchik-Weber Systems Consulting, Inc. ("Monchik") in receiving securities trading information to be used in the MOSS system. Accordingly, we are designating Monchik as a "representative" of the Commission for purposes of receiving information for use in the MOSS system pursuant to Section 17(a)(1) of the Securities Exchange Act of 1934, 15 U.S.C. 78q(1), and Rule 17a-1(c), 17 CFR 240.17a-1(a), thereunder. In addition, it is important to note that Monchik is obligated by contract to abide by the same prohibitions against personal or unauthorized use or public disclosure of any information obtained from the SROs in connection with MOSS, as are Commission employees and members of the Commission itself.

Mr. Robert J. Birnbaum
Page Five

Finally, Mr. Scribner's letter states that the costs of compliance with the Commission's March 13, 1980 letter may be substantial. The Commission's technical staff has reviewed this statement, and based upon the results of that review we have concluded that any costs which may be associated with compliance with our March 13 letter are negligible, and certainly not disproportionate to costs which are now routinely assumed by all of the SROs to comply with various regulatory requests made of them on a periodic basis. The MOSS system is part of the Commission's overall regulatory program, and the SROs must be prepared to assume reasonable costs of providing to the Commission information which is necessary to permit the Commission to accomplish its responsibilities under the federal securities laws. If, however, at any time, as the MOSS project proceeds, you believe that the costs of providing particular trading information to the Commission for use in the MOSS system are disproportionate to those which you could reasonably be expected to assume in fulfilling your normal regulatory responsibilities, we will be pleased to discuss these items with you.

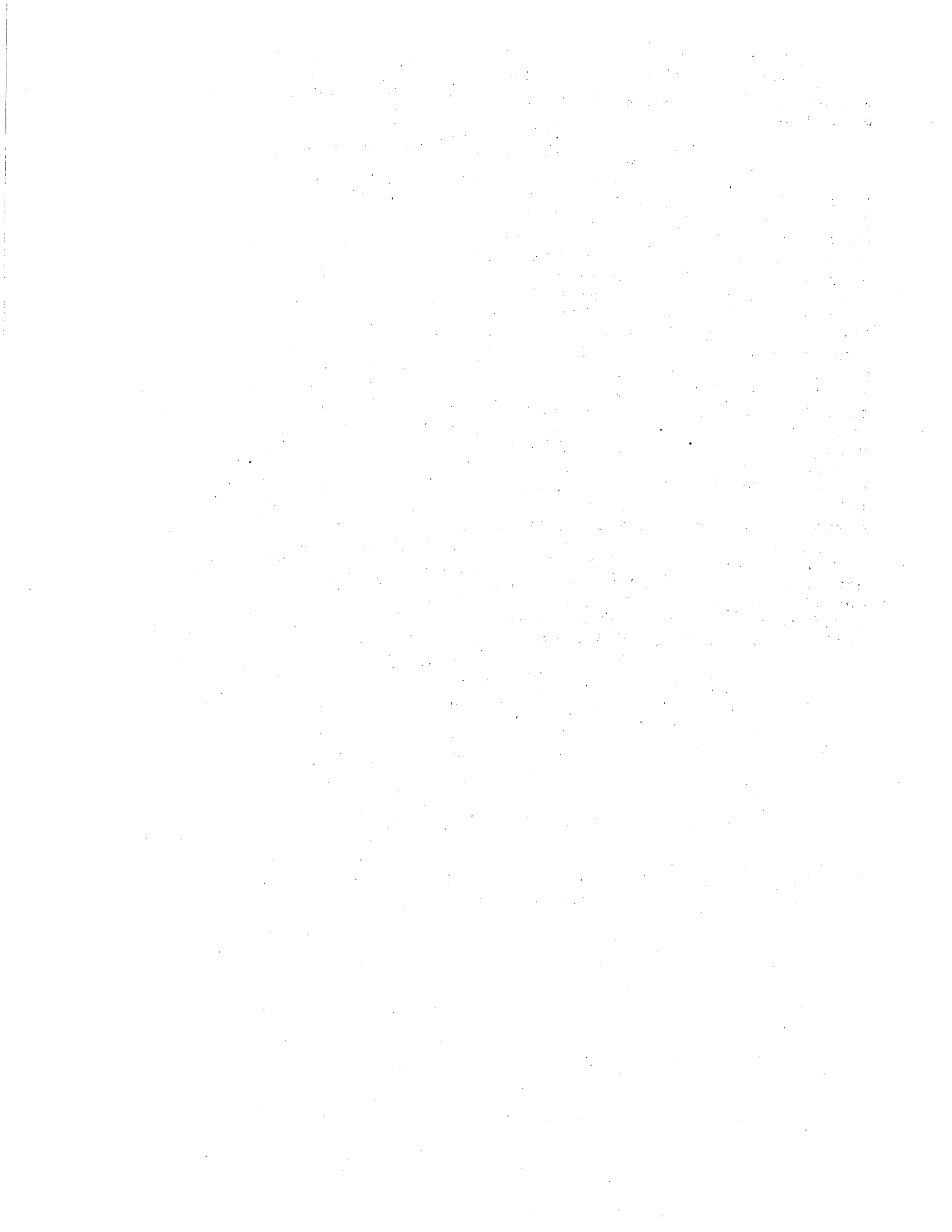
I hope that this letter has helped resolve the issues that have been raised in previous correspondence between the exchange and the Commission's staff. If you have any further questions regarding any of the items discussed in this letter, please contact Douglas Scarff directly at (202) 272-3000.

Sincerely,



Harold M. Williams
Chairman

cc: James E. Dowd
Charles J. Henry
Gordon S. Macklin
K. Richard B. Niehoff
John J. Phelan, Jr.
Charles E. Rickershauser, Jr.
John G. Weithers
Elkins Wetherill





Attachment C

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

DIVISION OF
MARKET REGULATION

October 3, 1980

[To the head of each SRO]

Dear _____

As the Commission enters fiscal year 1981, work has already commenced on the next phase in the development of our Market Oversight and Surveillance System ("MOSS"). In accordance with the Commission's plan to integrate MOSS into its overall regulatory program, the Division of Market Regulation will now assume responsibility for coordinating the Commission's efforts on MOSS with the securities industry, the Congress and the public. This function will be performed by the Division's Office of Inspections, Examinations and Surveillance, with John Larouche taking principal operating responsibility for MOSS coordination.

As the MOSS program moves from the drawing board to pilot operation and develops into a full scale in-house system, it continues to be a collective and cooperative effort involving a number of Commission units. In this regard, the Commission is most fortunate in having recruited Wayne Ginion to its staff to create a new industry systems unit within our data processing area. Mr. Ginion, formerly associated with Monchik-Weber, will provide the Commission with valuable in-house systems expertise for MOSS implementation. In addition, the MOSS project will continue to benefit from extensive participation by the Division of Enforcement, particularly with respect to market surveillance, as well as the Office of the Executive Director, primarily with respect to procurement policy.

The successful implementation of MOSS is a crucial element in the Commission's continuing market regulation oversight program. Accordingly, I am committed to working in close consultation with the self-regulatory organizations to assure that MOSS is established and operated in a manner consistent with the best elements of traditional self-regulation and mutual cooperation. Toward this end, John Larouche and Wayne Ginion will be contacting each of the self-regulatory organizations over the next several weeks to plan for the delivery of securities trading information to the MOSS system in accord with the schedule agreed upon by the industry, the Commission and Congressional oversight committees in May of this year. In addition, because I perceive the MOSS project as an integral part of the overall regulatory

Page Two

program of this Division, I personally will be very much involved in this effort over the weeks and months ahead. In doing so, I expect to establish a close working relationship with each participating SRO concerning the progress of MOSS.

Once the Commission staff has established initial contact with your organization regarding the activities to be undertaken during the implementation phases of MOSS, it may be useful for us to sit down and explore any concerns you may have with particular details of the project in the context of your self-regulatory program. I am confident that, working together to assure the successful implementation of the MOSS project, the quality of self-regulation throughout the securities industry will be enhanced. I look forward to your counsel and cooperation.

Sincerely,

Douglas Scarff
Director

Attachment D

MOSS PROJECT EXPENSES FY 1981

<u>One-time Costs</u>	<u>October 1980- March 1981</u>	<u>April-September 1981</u>
Computing Equipment		
- Transaction Collection	250,000*	-0-
- Data Base/Batch Procurement	350,000*	-0-
Software Development	-0-	600,000
Implementation, Training, Documentation, Project Expenses	58,560	189,126
 <u>Operating Costs</u>		
Personnel	6**	2**
Non-Personnel		
Outside Services Consolidated Ticker Service	64,680	64,680
MOSS Pilot in New York (Oct-Sept)	97,518	85,436
	820,758	939,242
Total		1,760,000

* Funds committed upon issuance of RFP.

** Personnel assigned to MOSS pilot - no new funding required.



Attachment E

SCHEDULE FOR RECEIPT OF SRO INFORMATION

TARGET ORGANIZATIONS <hr style="border: none; border-top: 1px solid black; margin: 0;"/> DATA REQUIRED	ESTABLISHED IN PILOT	FISCAL YEAR OF MOSS DEVELOPMENT / IMPLEMENTATION																			
		81				82				83				84				85			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<u>CLEARING CORPORATIONS</u>																					
1	MATCHED EQUITY TRADES	★																			
2	EQUITY ADJUSTMENTS	★																			
3	UNMATCHED EQUITY TRADES	★																			
4	MATCHED OPTION TRADES	★																			
5	OPTION ADJUSTMENTS	★																			
6	OPTION EXERCISE/ASSIGNMENTS	★																			
7	OPTION POSITIONS	★																			
<u>EXCHANGES & NASD</u>																					
8	NASD BROKER QUOTES																				
9	NASD EOD BROKER VOLUME																				
10	NASD BROKER QUOTE DROPS																				
11	BROKER SYMBOL CROSS REFERENCE																				
12	BROKER/SECURITY RELATIONSHIP																				
13	INSPECTIONS																				
14	REG T EXTENSIONS																				
15	COMPLAINTS																				
16	SECURITIES VIOLATIONS/ PENDING ACTIONS																				
17	SALES PERSONNEL																				
18	BROKER/DEALER FOCUS																				
19	UNMATCHED OPTION TRADES																				
20	OPTION MARKETMAKER EQUITY TRADES & ORDERS	★																			
21	INQUIRY/INVESTIGATIONS																				

★ Data which is to be provided for the Pilot System

▬ Discussions with SROs

▲ Beginning of receipt of information from SROs