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Facilities and Systems Committee
Chicago Board Options Exchange
Chicago, Illinois

Gentlemen:

Enclosed for your review is a brief overview on system trends within the Securities Industry. It is anticipated that this presentation, with your approval, will be included in documentation presented at the next CBOE Board meeting.

I invite your comments and I am at your disposal to answer any questions you may have.

Very truly yours,

Gerald Tellefsen
Vice President

Enclosure

DRAFT

SYSTEM TRENDS IN THE SECURITIES INDUSTRY--AN OVERVIEW

The future success of the CBOE will be influenced strongly by its ability to refine and broaden its data processing resources so it can retain its competitive edge in options trading and have the flexibility and support to enter into new markets. Therefore, it is vital that the CBOE be prepared to provide modern systems that incorporate equipment and services that provide the benefits inherent in modern technology. The proposed OSS is an example of the kind of system required. And, when one reviews the planned functions of OSS, the magnitude of its competitive impact can be readily gauged.

Additionally, the basic OSS architecture should provide the foundation on which new order input, execution, and reporting services can be built. This foundation, together with existing floor support systems should provide the CBOE with the system resources to retain its leadership role in the face of increasing competitive pressures.

The CBOE must continue to evaluate new support services aimed at providing more competitive markets for the public. And, as Dr. Lorie once said, "If it's a good idea, and you don't do it, someone else will".

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During the last 15 years the area of computer based business systems has grown significantly in nearly all industry segments. However, nowhere has this growth been as dramatic (and traumatic)

as in the Securities industry. The major reasons for this unparalleled growth are fourfold:

- Rising Operations Expense
- Competition
- Regulatory Pressures
- Technological Advances

The chronological evolution of computer support systems for both member firms and exchanges occurred basically in four overlapping stages:

Stage 1--Stand alone (non-shared) systems designed to reduce the burden of manual paper processing, such as back office accounting systems

- P & S
- Stock Record
- Dividends
- Bookkeeping

Stage 2--Systems developed to speed information flow and market data dissemination

- Quotation vendor systems (Quotron, Bunker, Ramo, Ultronics)
- Consolidated tape (CTA, OPRA)
- Customer account inquiry retrieval systems
- MDS II (SIAC)

Stage 3--Systems aimed at speeding order flow and execution reporting

- Member firms: Order match/message switch
- Service companies: SICOM, BTSI, SIGNET 80, DNS
- Exchanges: Direct Order Turnaround (SIAC), Common Message Switch (SIAC), Automated Bond System (SIAC), COMEX (PSE)

Stage 4--Large-scale shared processing systems designed to centralize and share order data and execution processing to provide better services to the public

- WHAM (Weeden)
- Central Market Systems
  - NYSE
  - MLPFS
  - SIA
  - Peake-Mendelson
  - Ect.

The industry is now near the end of Stage 3 and on the brink of Stage 4 which has much more comprehensive and loftier objectives than Stage 3. No less than eleven separate variations of central market systems have been proposed and are under varying levels of examination. And, while the gestation period for whichever systems are eventually selected for development and implementation cannot now be forecast accurately, it is likely to be within the range of 2 to 5 years. In the interim, Stage 3 systems will continue to be developed.

These future Stage 3 systems will generally be designed to support existing business operations rather than supplant them, and in many cases will involve high speed communications networks and more sophisticated terminal equipment. A major impetus for this development is the desire to increase market share by providing more competitive support services. For example, many member firms are now in the process of upgrading their "on-line" systems to include options and commodity order matching, cashiering operations and local retrieval of customer account data by registered representatives. Concurrently, Exchanges are now exploring ways to increase the capabilities of existing systems while evaluating ways in which available computer resources can be used or augmented to support new business opportunities. For example, the SIAC/DOT system can be expanded to handle market orders of larger size as well as limit orders. It was also designed to route execution reports and member firm order and administrative traffic to member firm terminals on the floor. DOT, plus other SIAC systems could be shared or modified to support new market opportunities such as options or commodities trading. Alternatively, CBOE computer systems might be augmented to accommodate put, bond or equity trading markets.

It is clearly apparent that those organizations with powerful computer system resources are in a stronger position to provide more competitive support services. Therefore, to remain competitive, have a firm control over operations expense and be able to meet new regulatory requirements, it will be necessary for the CBOE to continue to evaluate their automation plans to ensure that they are directed towards building a solid base of computer and staff resources designed to encompass planned automation systems (such as OSS) and new high potential applications. The total business data processing needs for the next 3-5 years should be included in the plan so that the flexibility and capability to move quickly in new directions can be maintained and costly time-consuming conversions from one hardware configuration to another and from one software application to another will be avoided. To do this, it is possible that funds not originally budgeted may be required. However, the payback in the near future could be substantial, not only from the viewpoint of future cost avoidance, but from being able to remain competitive in an environment where sophisticated data processing capabilities will continue to play an increasingly major role in successful business development.