Remarks of

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One of the pressing problems facing the securities industry and the Commission is the problem of adjusting to the rapidly changing nature of our capital markets. I would like to focus today on one crucial aspect of this phenomenon -- the technological adjustment.

As we know, the securities markets of the Sixties experienced unprecedented growth. In 1959, there were about 12½ million individual shareowners; by 1965, this figure had reached 20 million, and as of last year there were an estimated 29 million shareowners. Additionally, 100 million have participated indirectly through their savings, pension funds, insurance policies, and mutual funds. Trading volume exceeded every expectation. While the volume of shares traded on all registered stock exchanges has declined in the first six months of this year about 18 percent from 1968 first-half high, it rose 160 percent In the over-the-counter market the between 1964 and 1968. increase also has been substantial. As the overall volume has increased the mix of this volume has significantly changed. While the block volume (trades of 10,000 shares or more) on the New York Stock Exchange has risen from less than three percent of total volume in 1964 to fourteen percent today, the number of transactions in the last two years on that exchange has dropped by 28 percent; and in the same two-year period, the one-hundred-share round-lot transactions are down 36 percent and the odd-lot volume is down 37 percent, while transactions of 10,000 shares and over have more than doubled.

A major trend during the past decade has been rapid growth of institutions. Institutions now account for over 60 percent of the dollar value of public trading on the New York Stock Exchange. The size of institutional orders has also risen substantially and over 70 percent of them are for over 1,000 shares. This explains, in part, why

the number of trades has declined more than share volume over the last two years. Portfolio turnover of the institutions continued to increase until the first quarter of this year. Leading this increased activity were the mutual funds, whose turnover rate increased from 19 percent in 1964 to 50 percent a year ago, and is at a current rate of 39 percent. Institutions as a group have been heavy net buyers of stocks in recent years and in fact their net acquisitions have been larger each year since 1963 with a record \$9.6 billion total added last year by private noninsured pension funds, open-end investment companies and insurance companies (both life and property and liability companies). This was more than a fifth greater than in 1968. Moreover, while these investors have reduced their portfolio activity this year below the rate of late 1969, their net stock purchases in the first quarter of this year were still significantly greater than in the comparable 1969 period.

The securities industry did not anticipate some of these market developments; for example, when I first came to the Commission in 1964, a New York Stock Exchange official predicted that NYSE volume would not reach 8 to 10 million shares a day until 1980. No one really foresaw the tremendous surge of activity which was imminent.

The extent to which the industry will be able to adjust adequately not only to the present volume, (even with its current fall-off) but also to the anticipated increased levels of public activity in the years to come will be dependent on its ability to meet the increasing technological demands. As illustrative of this challenge one can look at the over-the-counter markets and the developments taking place there. In 1963, our Special Study of Securities Markets observed that while the over-

the-counter markets were at that time already very large and important, they were also heterogeneous, diffuse, relatively obscure, and, at times, even "mysterious" to a great many investors.

The Special Study noted further that the ultimate safeguard respecting the integrity of interdealer markets (where the customers' broker normally goes to fill his orders) is often said to be the factor of competition among the dealers who "make" the markets. The Study observed, however, that even with the presence of several dealers ostensibly making markets in a security, there may not be a truly competitive market for that security. Many factors tending to restrict competition were cited.

Even where competitive markets were found to exist, for the investor to receive the advantages of such competition he still had to rely on his broker to check the markets to obtain the best price discoverable upon the exercise of reasonable diligence. In this regard, although both the NASD and the Commission had broadly recognized the principle of best execution, several conditions and practices in the over-the-counter market were found by the Study to result in less favorable executions. More recently, in periods of high activity, such as 1968, we found that the customers' normal expectation of "best execution" was seriously impaired because the wires into the market makers' trading desks were often so jammed that the retail trader could not get through to get a quote on the security. been estimated, for example, that a market maker may receive 10 quotation requests for each executed trade. I am confident that many of you have had such difficulties.

Among other approaches to these and other fundamental problems of the over-the-counter markets, the Special Study concluded:

"The possibilities of automation are of great importance to the industry itself, because of the potential for improved efficiency and economy. They are of at least equally great importance to the public, because of the potential for solution of basic problems that have historically characterized both the operation and regulation of overthe-counter markets."

The Study called on the NASD for leadership in this area and the NASDAQ system has been the Association's first response.

The Commission, in carrying out its supervisory responsibilities in connection with the NASD's program for automating over-the-counter quotations, has from the outset placed primary emphasis on the following public policies: first, that the problems connected with the proper execution of customer's orders be mitigated to the maximum extent feasible; second, that particulary in its early phases and during the time when the strains of infancy would be at their peak, every reasonable effort be made to establish and maintain high standards of performance for market making and for qualification of securities. Here the objective would be to minimize the necessity for governmental or self-regulatory intervention which might for a long time severely damage the integrity and the utility of this new market mechanism; third, that to the maximum extent possible sufficient flexibility be retained to facilitate system modifications without material disruption; fourth, that the positive competitive

forces upon which the over-the-counter markets have been erected not be adversely affected and, indeed, should continue to improve; and <u>fifth</u>, that some of the cloud of mystery that, from the public's viewpoint, has over-hung the over-the-counter market be lifted.

The NASD's program appears thus far to have met these tests and we expect that experience with NASDAQ, assuming its full and proper use by the industry, will demonstrate that the conclusions of the Special Study with regard to the potentials of automation were essentially correct. The Level 1 service, which you were shown earlier, will initially provide a representative up-to-the minute interdealer bid and ask quotation to the registered representative (and thus to his public customers) for two to three thousand over-the-counter securities -- that is, there will be more current and meaningful price information available than heretofore. There are already presently in use approximately 30,000 Level 1 terminals all around this country that carry quotations on NYSE and other listed securities and to which NASDAQ securities are to be added. Additionally, the investing public for the first time should soon have access, through NASDAQ and the news media, to daily volume figures and representative closing bid and ask quotations for a large proportion of these securities.

The system is designed to encourage competition in the over-the-counter market; and there are many examples of how this may come about. The major market maker has in the past been found mostly in the major financial centers. The retail firm doing a significant over-the-counter business, more often than not, has also been based in these areas because of, among other reasons, it private wire system and more immediate geographic access to the primary market maker. With NASDAQ, however,

this picture may well change. By using the Level 3 device to input his quotations and to keep them upto-date, a market maker's quotations can now be instantaneously exposed on a national scale through the Level 2 equipment in trading and order departments of all retail firms, including the larger ones based in the financial centers. The regional market maker can thus have, as a practical matter, real time access to these centers. Conversely, the Level 2 device will provide the regional retailer with both a more immediate and complete picture of the "market." It will enable him, for example, to learn some essential facts about the activity in New York City as quickly and as cheaply as the national firm based in that city. This should broaden the market and promote national competition.

The system's broadcast capability also indicates another major potential effect of NASDAQ. With the ability of the retail firm, by a single interrogation in lieu of multiple phone or wire calls, to discern the current market interests in the security, the firm will be in a better position to "shop the market" and to obtain the best execution for its customer. Moreover, by alleviating much of the line congestion now characteristic of busy markets, NASDAQ should enable both the market maker and the retail firm to more effectively use their time and resources.

With respect to the cost savings which we hope will in time occur with the optimum use of the system, I would also like to stress that considerable time and effort was devoted to formulating a rate structure for NASDAQ. Here the NASD was faced with some fundamental questions of policy. For example, should rates be uniform throughout the country? (Obviously the cost of

furnishing the services to broker-dealers in different parts of the country might be substantially different). Should there be optional service arrangements for high users and/or for low users? Without reciting all of the details of the present rate structure, it is obvious that the NASD has attempted to answer questions of this nature in favor of furthering the posture of the overthe-counter markets generally. As a result, the NASD has, for example, provided low usage Level 2 and 3 services at reduced rates. These services are expected to operate at smaller profit margins for Bunker-Ramo, the system operator, than the standard service. important point is that these services are to be used by the smaller firms who have more limited quotation needs and who might not otherwise have participated in the market. As another illustration, the geographical uniformity of the rate structure is intended to insure that no broker-dealer in the Continental United States will be disadvantaged because of his remoteness from major market areas. Thus, even though the costs of providing service to a broker in the State of Georgia may be greater than it would be to provide the same service to a broker in the State of New York, the two brokers will each pay the same charges for the same service. Needless to say, the Commission has been intensely interested in the resolution of these questions and believes the decisions made to date are good.

As with any new system that promises advancement, there are also pitfalls to be avoided. As you may know, the Commission in the last year and a half has had significant enforcement difficulties with market manipulators and promoters of worthless securities. It was felt that in order to protect the NASDAQ system from those who would use it to play this "shell game" that certain minimal standards should be imposed to provide, among other things, that securities of such companies would not be quoted. Incidentally, I believe you will

find these standards will not unduly restrict legitimate expressions of interest by the brokerage community in securities which have a genuine market interest.

While NASDAQ can present an exciting picture for the future it must also be realized that with the increased communication and dissemination of live market interests (and I emphasize the word "live"), we at the Commission, the NASD and the industry will at the same time, undoubtedly have to face not only some new problems resulting from this new technology but also some older ones that may now take on even greater significance.

While I in no way intend to minimize the importance of both the NASD and the Commission doing their utmost to protect the integrity of the system, in the last analysis its ultimate success will depend largely on the reliability of the quotations which it will carry. For this, the primary responsibility will rest with you. I think all will agree that the system, if misused, carries a potential for much harm. You have the privilege of being a self-regulated industry which in turn imposes a responsibility to see that your activities are in the public interest.

There are a few further general observations with respect to the NASDAQ I would like to make. As I previously indicated, it is hoped the system will foster an increased ability for over-the-counter dealers to compete. Increased competition should lead you to make tighter markets and it should, in the long run, produce greater investor interest and confidence in the over-the-counter market. As a result, the industry as a whole should benefit.

Indeed, in my opinion, the industry should even now be preparing itself for the increased paper work that

may well result from the very possible increase in volume ahead. This should be done so as to avoid the painful back office problems that beset the industry earlier. We have been trying to be of help in this area by working with the Association to expedite the establishment and expansion in operations of the newly-created National Clearing Corporation. The National Clearing Corporation will provide the mechanism for an urgently needed nationwide net-by-net clearing system for the over-the-counter market. Here again, automation will be our servant. We expect that this system, which is evolving many new ideas, will begin operation with a pilot program in the next three months.

There have been other systems which in some cases are now operating and others which are still on the drawing board, that are intended, in large measure through use of improved technology, to assist in eliminating much of the operational stresses in the industry. It might be helpful to summarize some of these developments.

First, the North American Rockwell report has urged that the securities industry now take specific action in attempting to develop an integrated, viable clearance - settlement depository system. It has also recommended the implementation of a locked-in system whereby as each transaction is completed the names of the brokers, number of shares, name of stock, etc. are immediately recorded and retained so as to eliminate the possibility of having an "uncomparable" trade. Such a system, which is now being studied by both the New York and American Stock Exchanges, would of course require the use of the computer as a memory bank.

Another approach has been recommended by the American Bankers Association. First, they have recommended immediate implementation of the already developed CUSIP number system. As you may know, this is a uniform system of numbering securities and issuers for identification purposes. At present the CUSIP list contains about one million issues. They have also recognized the need for the development of standardized man-machine readable transfer and trade comparison forms and stock certificates. This system is, of course, a prerequisite to most further steps since, until securities can be rapidly and fully identified in a standardized fashion, industry-wide computer systems will not be feasible.

Some plans are now off the drawing board and are being presently used. For example, the New York Stock Exchange's Central Certificate Service ("CCS") began computerized delivery in mid-1968. As of the end of July, 74.2 percent of all eligible transactions on the exchange were processed by the computer and more than 530 million shares were on deposit. These shares had an approximate market value of \$21 billion. Additionally, the Midwest and Pacific Coast Exchanges have established computerized clearing and settlement systems.

The computer has or is in the process of also taking over many other functions on the exchanges. They now drive the transaction tapes; they control the post display units showing last sale, bid and asked and the tick. They report activity in the bond market, maintain stock watch surveillance and provide more extensive market data on a real time basis.

Some also envision in the near future that the specialist's "book" will be a cathode ray tube display

with entries and deletions merely done by the touch of a button. Computers may someday automatically differentiate market and away-from-the-market orders and route the former to the proper floor broker and the latter to the specialist. Computers have already begun to execute odd lots automatically on several exchanges, and certain individual brokerage houses have installed computers or utilized service bureaus to route in-house messages and do most of the bookkeeping.

Computers are also creating an entirely new service the automated trading information system designed primarily
to find matches for large blocks of securities. There
are three such systems presently in operation - Instinet,
Autex, and the New York Stock Exchange's Block Automation
System. While Instinet operates without the services
of separate brokers as intermediaries, and negotiations
are conducted via the computer, the others rely on the
services of brokers and provide information as to the
available markets.

It seems clear that the securities industry of the future will not be able to function without the computer. At some point before too long, from the moment a customer walks into a brokerage house the computer will be working for him as well as for the broker. It will aid the investment advisor by giving him trends, averages and background data. When an order is placed it will do the in-house bookkeeping and route the order to the proper market. The computer will also clear and settle the transaction, route it back to the broker's office, place it in the proper margin or cash account and send out the confirmation slip. And the computer will help maintain general surveillance over the industry.

Industry-wide cooperation in fully utilizing computer technology is essential for the efficient operation of our securities markets. New technology must be implemented and outmoded rules must be revised. As the industry becomes more dependent upon the computer, however, we must be careful at the same time to fully understand the economics of stock brokerage data processing. We must develop new techniques of surveillance, safeguards against manipulation, protection against failure, and most of all, we must retain the flexibility to deal with new situations as they arise.

I for one welcome these changes and sincerely believe they will contribute significantly to the stability of an industry that has grown increasingly complex and interdependent.

If we have learned anything from the experience of the past decade, it is that we cannot depend on the methods of yesterday to provide for the industry of tomorrow. The changes I have mentioned are a beginning, but they must be refined and new ideas must be developed if this industry is to continue to grow.