While the Congress intended that a national market system encompass "all segments of the corporate securities markets including all types of common and preferred stocks * * * and options," 503/ it also recognized that securities with "unique characteristics" 504/ may require different "treatment" 505/ and gave the Commission "broad, discretionary powers" 506/ and "maximum flexibility" 507/ to establish "subsystems within the national market system which are tailored to the characteristics of the particular types of securities which are to be traded in each subsystem." 508/

The Commission has not yet designated the securities that will be "qualified" for trading in a national market system. 509/ The Commission has, however, stated its belief that "listed equity securities included in the consolidated [transaction reporting] system and a number of equity securities traded exclusively in the over-the-counter market generally possess characteristics * * * which justify their inclusion in the

503/ Senate Report, supra, n.17, at 7. See also Conference Report, supra, n.18, at 92.

504/ Conference Report, supra, n.18, at 92.

505/ Id., at 93.

506/ Senate Report, supra, n.17, at 7.

507/ Conference Report, supra, n.18, at 92.

508/ Id., at 93.

509/ January Release, supra, n.176, at 43.
'qualified' category." 510/ Accordingly, although Congress contemplated that a national market system would include standardized options, the Commission has not begun to consider whether standardized options are appropriate for inclusion as qualified securities or whether it would be more appropriate to design a "subsystem" of a national market system to comprehend standardized options trading. In fact, when issuing the January Release, the Commission specifically stated that it was "not yet prepared to determine what role standardized put and call option contracts should play in a national market system or the appropriate relationship which should exist between trading in equity securities underlying such options and trading in the options themselves." 511/

B. Options and the Objectives of a National Market System

The objectives of a national market system are far from being realized in the options markets. Buying and selling interests for multiply traded options classes, for example, are not centralized "so that each investor will have the opportunity for the best possible execution of his order, regardless of where in the system it originates." 512/

510/ Id.
511/ Id., at 44.
512/ Senate Report, supra, n.17, at 7. See also House Report, supra, n.21, at 50-51. See discussion at 50-52, 61-65, supra.
In addition, "the protections and benefits of the auction market [for multiply traded options classes] * * * remain limited," 513/ and "the linking of all [options] markets * * * through communication and data processing facilities [to] foster efficiency, enhance competition, increase the information available to brokers, dealers, and investors, facilitate the offsetting of investors' orders, and contribute to best execution of such orders" has not been accomplished. 514/ Moreover, 513/ Senate Report, supra, n.17, at 17. The example that the Senate Report provided concerning the limitations of auction trading principles in the stock markets is equally applicable in the options markets under present conditions:

[A] limited price order is presently "protected" as to price priority on the exchange on which it is held but it is not protected in any way [with] respect to trading on another exchange or in the third market. As a consequence, a limit order for a listed security held in only one of several markets for that security need not be executed before a transaction is effected at the same price or at a price less favorable to the other party in another market. In the Committee's view this is the basic problem caused by the fragmentation of the securities markets: the lack of a mechanism by which all buying and selling interest in a given security can be centralized and thus assure public investors best execution.

Id., at 16-17. See discussion at 61-65, supra.

514/ Section 11A(a)(1)(D) of the Exchange Act [15 U.S.C. 78c(a)(1)(D)]. It should be kept in mind that Congress viewed the linkage of competing market centers and marketmakers as the most appropriate means of achieving a national market system and assuring the practicability of executing investor orders in the best market. See, e.g., discussion at 71-72, supra.
competition "among exchange markets and between exchange markets and markets other than exchange markets" 515/ does not exist for option classes traded on only one options exchange, 516/ and competition "among brokers and dealers" 517/ in these classes is limited to that which can be obtained on the floor of the listing exchange. 518/ On the other hand, competition among the options exchanges and among options market-makers may not be "fair" 519/ and "the practicability of brokers executing investors' orders in the best market" 520/ may not be assured at present with respect to multiply traded option classes. 521/


516/ In this regard, the Congressional view that multiple trading is "appropriate to a national market system in which all market makers and brokers are permitted to deal freely with one another without unnecessary regulatory restraints" should be noted. Senate Report, supra, n.17, at 20.


518/ In this connection, the Congressional goal of giving "encouragement * * * to all dealers to make simultaneous markets within the new national [market] system" should be kept in mind. Senate Report, supra, n.17, at 14.


520/ Id.

521/ As CBOE has stated:

[I]t is often impracticable for brokers to achieve best execution [for multiply traded classes] in the present circumstances. Since it is not now possible

(footnote continued on next page)
Since the objectives of a national market system have yet to be achieved with respect to standardized options trading, the Commission should solicit public comments, and perhaps set forth its views, concerning (i) the appropriate relationship between the evolution of a national market system for equity securities and the evolution of a national market system which would include standardized options and (ii) the steps that should be taken to establish a national market system which would include standardized options. More specifically, the Commission should seek public comments, and, if appropriate, express its views, regarding:

1. Whether standardized options should be included as "qualified" securities to be integrated into a national market system for stocks, or whether a "subsystem" of a national market system should be created for standardized options trading;

(footnote continued)

for brokerage firms to direct each order to the "best" market at a particular instant, there has been a tendency for the great bulk of the public orders handled by a particular firm to be transmitted automatically to a designated exchange, as being the "primary market," whether or not the prices or quotations on that exchange are the best prevailing at any given time.

CBOE Letter, supra, n.87, at 12-13 (footnotes omitted). See also discussion at 52-61, and 75-86, supra.

In this regard, the Congressional mandate that brokerage firm order routing systems be "neutral" in nature and give "preference to one execution facility over another only to insure best execution" should be kept in mind. See discussion at 15-17, and 77-80, supra, and 266-268, infra.
2. Whether national market system initiatives such as those recently undertaken in connection with a national market system for stocks would be appropriate with respect to standardized options; and

3. An orderly procedure for designing and implementing a national market system which would include standardized options.

When beginning to formulate views concerning the first steps that might be taken to facilitate the establishment of a national market system which would comprehend standardized options trading, three points discussed previously in this chapter should be noted. First, the development of market linkages providing for (i) coordinated openings for multiply traded option classes, and (ii) a prompt and efficient means of sending buy and sell orders among the options exchanges may do much to reduce the effects of fragmentation on the markets for multiply traded options. 522/ Further, the development of order routing techniques which would (i) consider the size of public orders in relation to current quotations in the markets that permit the trading of an option class so that small orders can routinely be sent to the market offering the best quotation, (ii) permit the immediate rerouting of orders from one market to another in the event that a market encounters operational or other difficulties that may prevent the prompt and efficient execution of public orders at the best available prices, and (iii) permit customers and registered representatives to route orders when one market is clearly better than another may go a

522/ See discussion at 71-74, supra, and 266-268, infra.
long way toward assuring "the practicability of brokers executing investors' orders in the best market" and that competition among options marketmakers and among the options exchanges is "fair." 523/ Finally, to the extent that market linkages, enhanced order routing systems, and other such national market facilities are in place, any expansion of the multiple trading of standardized options that is permitted may occur under circumstances more in accordance with those that the Exchange Act envisions than those that prevail at this time. 524/

C. The Form of a National Market System

A national market system which would include standardized options trading could take a wide variety of forms. It would, of course, be premature to attempt to describe an appropriate form at this juncture, particularly without the benefit of public and Commission views concerning many of the issues discussed in this chapter. While the "development of a national market system should remain essentially an evolutionary process, free of the rigidities inherent in any Commission attempt to dictate the ultimate

524/ See discussion at 71-86, 245-250, n.387, supra.
configuration of that system," brief consideration of four points may provide some perspective on national market system questions relating to standardized options.

1. A Comprehensive Quotation System

Section 11A(a)(1) of the Exchange Act provides:

(C) It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure —

* * *

(iii) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities. 526/

In this regard, the Commission has stated:

The Commission believes that the availability of comprehensive quotation information, a fundamental building block of the national market system, will improve both brokers' and public investors' knowledge of current prices at which reported securities can be bought or sold throughout the country. In turn, availability of this information should (i) lead to increased efforts by brokers to make informed order routing decisions from among the various competing market centers (in order to choose that particular market affording at a particular point in time, the most favorable

525/ January Release, supra, n.176, at 38.

execution opportunities to their customers; (ii) foster improvements in existing methods of routing orders to all market centers; (iii) enhance fair competition among markets; and (iv) otherwise advance the objectives of a national market system specified by the Congress in Section 11A(a) of the Act. \[527/\]

Accordingly, the Commission adopted Rule 11Acl-1 \[528/\] to facilitate the prompt development of a composite quotation system for "equity securities as to which last sale information is reported in the consolidated transaction reporting system * * * contemplated by Rule 17a-15 \[529/\] under the Act * * *." \[530/\] Subject to certain exceptions, Rule 11Acl-1 provides:

> [E]very responsible broker or dealer shall be obligated to execute any order to buy or sell a reported security, other than an odd-lot order, presented to him by another broker or dealer, or any other person belonging to a category of persons with whom such responsible broker or dealer customarily deals, at a price at least as favorable to such buyer or seller as the bid price or offer price comprising such responsible broker's or dealer's published bid or published offer * * * in any amount up to his published quotation size. \[531/\]

Rule 11Acl-1 does not apply to options trading because options transactions are not reported in the consolidated system contemplated

---

\[528/\] 17 C.F.R. 240.11Acl-1.
\[529/\] 17 C.F.R. 240.17a-15.
\[531/\] 17 C.F.R. 240.11Acl-1.
by Rule 17a-15. 532/ Nor has Rule 11Acl-1 been applied to any exchange which "currently utilizes [a competing market maker] system generally for trading in reported securities." 533/ Although the Commission recognized that "compliance with Rule 11Acl-1 may be more difficult in a multiple market maker exchange environment," it did not consider modifying Rule 11Acl-1 or altering its basic approach to collection of quotation information to take into account multiple marketmaking in reported securities." 534/ However, the Commission also "clearly state[d] its intent that the adoption of Rule 11Acl-1 should not discourage competition among market makers and its commitment to give further consideration" to the problems associated with fashioning a rule such as Rule 11Acl-1 under circumstances involving "a large number of market makers on a single exchange floor." 535/

CBOE comments in response to Rule 11Acl-1 when it was proposed provide relevant insights into the difficulties that may accompany efforts to establish a rule comparable to Rule 11Acl-1 in the options markets. These

532/ Instead, consolidated options last sale information is reported through the system of the Options Price Reporting Authority ("OPRA"), which system was approved by the Commission under the since withdrawn Rule 9b-1. OPRA is a registered securities information processor under Rule 11Ab2-1 [17 C.F.R. 240.11Ab2-1].


534/ Id.

535/ Id.
comments are quoted at length to emphasize the nature and scope of the problems that may be associated with any attempt to provide "comprehensive quotation information" in the options markets:

Competing Market-Maker System. CBOE's options market differs from the traditional stock exchange market in that CBOE has replaced the traditional exchange specialist who has combined brokerage and market-making functions with (i) a single Board Broker who holds the book of agency limit orders and (ii) a group of competing market-makers who, in competition with each other, collectively perform the market-making function of the traditional specialist. There are also floor brokers on CBOE, but here, too, the broker and dealer functions are separated, since no CBOE member may on the same day execute orders as agent and as principal in options relating to the same underlying security. This market-making system, which was first introduced by CBOE when it began trading options in 1973, has to a large degree served as the model for the options programs of other exchanges that have subsequently begun to trade options.

Perhaps the most obvious difference between CBOE's competing market-maker system and the unitary specialist system is that under the former system there are many more individual market-makers entering bids and offers in each security. Further, since these market-makers may not represent agency orders, and because many types of options orders cannot be held in the Board Broker's book, there are also a great number of brokers in each trading crowd bidding and offering on behalf of customers. Typical trading crowds on CBOE include 8-10 market-makers, 4-6 floor brokers, plus the Board Broker, and considerably larger trading crowds are not uncommon. Reflecting these large and busy trading crowds, and the great number of persons entering bids and offers in each security, CBOE has developed a unique system for collecting and disseminating current quotations. In each crowd there is an exchange employee whose sole task is to monitor
the quotations that are made from moment to moment by market-makers, floor brokers and the Board Brokers, and to publish a representative bid and offer with respect to each security traded in the crowd at any time. During an average trading day, this system results in approximately 20,000 separate quotations being published for the 95 call and 5 put classes of options traded on CBOE. Each of these quotations represents a bona fide bid or offer entered by a person willing to buy or sell at the quoted price, although these quotations would not meet the firmness requirement of the proposed rule. However, we do not think that these quotations are any the less useful for not being firm, since the usefulness of these quotations is not dependent upon how long a time after their entry they remain good, but rather is that they provide a "sense" of the current state of the market that is not otherwise obtainable away from the floor. In fact, a likely result of imposing a firmness requirement on these kinds of quotations would be to detract from their usefulness, since under a firm quotation rule many quotations will not be entered at all, reflecting the reluctance of options market-makers to enter bids and offers into a system that does not provide the capability of quickly adjusting them in response to changing market conditions.

Turning to the cost side of the cost-benefit equation, in a competing market-maker system the costs of implementing a firm quotation system would be enormous. In order to collect and publish current quotations under its present system, CBOE employs 46 quotation reporters for its 100 option classes, and this number will expand as more put classes are added. Yet expensive as this is, it could not begin to meet the requirements of a firm quote rule under which each quotation, including size, would have to be identified with the particular market-maker, floor broker or Board Broker that was responsible for it. In addition, under a firm quote rule there would have to be the capability of permitting each member who had previously submitted a quote to withdraw or
modify that quote on an immediate basis so as to terminate his responsibility for a quote that is no longer current. Any system that might be developed to accomplish this would, we believe, necessarily result in each market-maker, floor broker and Board Broker being literally tied to his own computer terminal. Apart from the enormous financial costs of such a system, its implementation would undoubtedly result in radical changes in the nature of any competing market-maker system operating under it. Reflecting these enormous costs and other burdens, we believe that as a practical matter it would be impossible for an exchange to provide meaningful market-making competition on its floor and at the same time comply with the proposed rule.

In fact, given the number of persons that are constantly entering quotes in CBOE's options market, the inclusion of size information alone, apart from any firmness requirement, gives rise to technical difficulties almost as great as those presented by a firm quote rule. The problem is much like that discussed above: namely, that without a system to identify particular quotes with the persons making them, specific size information is meaningless. We are studying the possibility of including in published quotation information under our present system some indication of approximate size based upon the quote reporter's sense of the number of options being bid or offered at the published price, but even this raises technical questions of capacity with respect to our equipment and that of quote vendors.

Finally, we would point out that as a result of the foregoing, the imposition of a firm quote rule in respect of options would mean that those exchanges such as CBOE that trade options under a competing market-maker system would probably have to abandon that system, resulting in an overall decline in the level of competition. Even if these exchanges could somehow adapt their competing market-maker systems to function under a firm quotation rule, the systems costs necessary to
effectuate such an adaptation would place these exchanges at a serious competitive disadvantage compared to those options exchanges that operate under a unitary specialist system.

Options are Derivative Securities and are Traded in Several Different Series. The price of an option is largely dependent on the price of the underlying security, and for certain "in-the-money" options this dependence is virtually absolute. This means that bids or offers that may be made for an option at any time cannot hold once the market for the underlying security has changed. Thus, unlike stocks, in the case of options one must monitor one's quotations not only against transactions in the quoted security, but also against transactions in the underlying security. And, as if this were not enough, there is the added complicating fact that options are traded in a number of different series, varying as to expiration price, expiration date or both, and here, too, price relations must be kept in line.

In the average option class traded on CBOE, there are 8 to 10 different series available at any time, and in certain classes the number has been much higher, reflecting that additional series have been opened on account of price movements in the underlying security or on account of stock splits or distributions. In those underlying securities where puts as well as calls are available, the number of series is double those stated above. Since options that relate to three underlying securities are traded at each post on the CBOE floor, each market-maker (and, potentially, each floor broker) in the crowd must monitor the market in 24-30 different securities at the same time (48-60 securities where puts are traded), and must be prepared to modify or withdraw his quotes on account of changes in the market for any of these securities. Plainly if the bids and offers of brokers or dealers were firm under these circumstances, the market could not function. And, as discussed below, the notion that this problem could be solved through the application of a limited time grace period falls of its own weight.
Combination Orders. As previously noted, options are often traded as spreads, straddles or other combinations. Commonly these are bid or offered at net prices, leaving it to the broker or dealer to fill the separate components of the order at whatever prices net to a price as good as or better than that stated in the order. Thus an order to "buy" a particular spread involving the purchase of one option and the concurrent sale of another at a net price of 3 could be filled by buying the first option at 7-1/2 and selling the other option at 4-1/2 or buying the first at 7-3/8 and selling the second at 4-3/8. Often a broker or dealer holding such a combination order will enter a bid or offer for one "leg" of the combination, provided he is able to fill the other leg at a price that will permit the entire order to be filled at the net price. But no broker or dealer would enter quotes for one leg only if it meant they were firm until withdrawn. Either such contingent quotes would have to be excluded from the operation of the rule, or they would just not be entered. Yet given the importance of these kinds of orders in the options market, their exclusion would significantly reduce the usefulness of published quotation information and would result in a non-published market-within-the-market available only to certain professionals but not to the public. 536/

Clearly, these factors should be considered in connection with any proposals or plan to establish a composite quotation system for options that may be included in a national market system.

536/ Letter to George A. Fitzsimmons, Secretary, Securities and Exchange Commission, from Joseph W. Sullivan, President, CBOE, dated August 1, 1977, at 2-6 (footnote omitted).
2. Market Linkage and Order Routing Systems

When announcing the initiatives that "the Commission considers necessary to accelerate implementation of a national market system," the Commission stated:

The Commission intends to encourage and, if necessary, mandate the prompt development of comprehensive market linkage and order routing systems to permit the efficient transmission of orders (i) among the various markets for qualified securities, whether on an exchange or over-the-counter ***, and (ii) from brokers and dealers to all qualified markets. The Commission believes that communications and data processing facilities which link all qualified markets and permit orders in qualified securities to be transmitted promptly and efficiently from brokers or dealers to any qualified market, and from one such market to another, are necessary to increase the opportunities for brokers to secure best execution of their customers' orders, to ensure effective competition among qualified markets and to achieve the purposes of a national market system established by the Congress in Section 11A(a) of the Act.

The Commission also stated its belief that "all systems used to route orders to and among qualified markets should operate in a 'neutral' fashion (i.e., they should permit brokers and dealers utilizing those systems to route orders to and among all such markets on a non-discriminatory basis)." Further, when adopting Rule 11Acl-1, the Commission stated:

537/ January Release, supra, n.176, at 32.
538/ Id., at 39.
539/ Id., at 39-40 (footnote omitted).
540/ See discussion at 258-260, supra.
Although the Commission cannot predict with certainty the effect quotation information disseminated pursuant to the Rule will have on brokers' decisions as to which of the several markets should be selected for execution of their customers' orders, the Commission's expectations are that implementation of Rule 11Ac1-1, and the resultant general availability of relatively "firm" quotations and quotation sizes for reported securities, will have a favorable impact on brokers' order routing decisions and upon the changing nature of brokers' agency obligations to their customers. 541/

Market linkage and order routing systems similar to those that the Commission has suggested for the stock markets may be equally appropriate for the options markets. 542/ Without the availability of options quotations that are firm and contain size, however, such systems may not be maximally effective. Brokers and dealers, for example, may be reluctant to send options orders to a market displaying the highest bid or lowest offer if he cannot (i) identify the party or parties who have made that bid or offer, (ii) hold that party or parties to the bid or offer, and (iii) ascertain the number of contracts bid for or offered. On the other hand, to establish a quotation rule which would contemplate options quotations that are firm, identify the market participant making the quote, and contain the number of contracts bid for or offered

542/ See discussion at 71-86, 245-249, and n.387, supra.
may be the death knell to the competing marketmaker system of options trading on exchange floors. 543/

3. Nationwide Limit Order Protection

The Commission has stated that it "continues to believe that one of the basic principles upon which a national market system must be based is the assurance that all agency orders in qualified securities, regardless of location, receive the benefits of auction-type trading protections." 544/ Accordingly, the Commission has suggested that the self-regulatory organizations develop a "central limit order file (the 'Central File') for public agency orders to buy and sell qualified securities in specified amounts at specified prices * * *." 545/ As the Commission explained:

The objectives of a Central File are relatively simple: to make available a mechanism in which public limit orders can be entered and queued for execution in accordance with the auction trading principles of price and time priority and by means of which such orders can be assured of receiving an execution prior to the execution of any other order by a broker or dealer in any market at the same or an inferior price * * *

Public limit orders would assume their place in, and have an equal opportunity to achieve an execution throughout, that system without regard to the market or geographical location from which those orders were entered or in which other transactions required to

543/ See discussion at 260-265, supra.

544/ January Release, supra, n.176, at 40.

545/ Id. (footnote omitted).
yield priority to orders in the Central File were
effected. Execution priority for orders entered
in the Central File over all other orders would be
required by rule. 546/

CBOE, however, has pointed out that there "are several characteristics
of options trading that will make the development of a composite book for
options more complex than in the case of stocks." 547/ Specifically,
CBOE stated:

a. The options market is a derivative market,
in the sense that prices are basically dependent on
underlying stock prices. But it is a derivative
market of a special kind because, for any given stock
price movement, there may be a considerably greater
need for cancellations and entries of new orders in
options than in stocks, thus putting much greater
pressures on any system for handling limit orders.
In other words, price movements in the underlying
market can produce accentuated order surges in the
option market as compared with the underlying market
itself.

b. On CBOE *** the broker and dealer functions
of the specialist have been separated and assigned to
different categories of members -- a single "board
broker" and competing "market makers" for each security
traded. In the development of any composite book for
multiple market centers within a national market system,
one of the most complex questions is whether and how to deal
with the interaction between the book and the auction
process in the separate markets. This complexity may be
greatly compounded where one or more of the market centers
has the traditional specialist system and one or more has
the CBOE system involving separation of the specialist
function. On the one hand, if the system were such that a

546/ Id. (footnotes omitted).

547/ Letter to George A. Fitzsimmons, Secretary, Securities and Exchange
Commission, from Joseph W. Sullivan, President, CBOE, dated
May 3, 1976, at 1.
specialist could take advantage of his combined functions while competing market makers of the CBOE-type had no direct access to the book, the fairness of competition between two types of markets would be seriously affected; but on the other hand, if the system were designed to give each market maker direct access, a whole new set of technological and economic problems would have to be considered. 548/

It should be noted, however, the CBOE is presently developing, and experimenting with, an automated limit order book and order routing system for its options market. Among other things, the Order Support System would (i) provide CBOE member firms with "the ability to direct public orders electronically to the [trading] post and to the Board Broker's book from their floor communications booths, while reports of orders executed by the book will be transmitted automatically back to the firms' wire systems at computer speeds" and (ii) "maintain a computerized book of public limit orders." 549/ If permitted, NYSE may implement similar systems. 550/

With the existence of such electronic systems, nationwide limit order protection for option transactions may be relatively simple to obtain. More specifically, the feasibility of adapting, or linking, such systems to form a "central limit order file" for standardized options should

548/ Id., at 1-2.
550/ See discussion at 47-48, supra.
be explored. Of course, the derivative nature of option pricing and the concerns associated with the different marketmaking systems that the options exchanges use should be considered in connection with any proposal to establish a central limit order file for options as part of a national market system.

4. Off-Board Trading Restrictions

In the January Release, the Commission determined to "defer further consideration" of remaining off-board trading restrictions until it had an opportunity to evaluate industry and self-regulatory organization.

Along these lines, CBOE has stated:

As for a common book for options, OSS could conceivably be adapted in the future to support several geographically-dispersed trading floors, if such a capability were required. However, all of our design studies (beginning in 1974) suggest that as a practical matter (even if technically feasible) a common book encompassing more than one auction market in options would likely be quite inefficient, counterproductive, and not compatible with our competing market-maker system. OSS should probably not be viewed as a vehicle for providing such a facility.


In addition to the points that CBOE has raised concerning the problems that a central limit order file may present, the effect that such a file may have on the income of options specialists should be considered, particularly if such specialists would lose the brokerage that they now receive when executing option limit orders. See discussion at 130, supra.
responses to the national market system initiatives" it had announced. 553/
As the Commission continues its review of these restrictions, it may wish
to include similar restrictions that are in effect at the options
exchanges. 554/

553/ January Release, supra, n.176, at 41.
554/ See n.330 and n.337, supra.