designation, the designation can become a self-fulfilling prophecy. In other words, the exchange with the most volume in a multiply traded class will be designated as "primary" and thus will receive all automatically routed customer orders and more volume. As a result, exchanges other than the exchange designated as primary are effectively precluded from competing for automatically routed customer orders. Without exposure to customer orders, it may be unlikely that an exchange will be able to improve the quality of its market and thereby to attract more orders in the future. Such improvements may be unlikely because marketmakers on the secondary exchanges will not be able to assess accurately the supply of and demand for, or to adjust their positions easily with respect to, multiply traded classes if they do not have an opportunity to be exposed to, and trade with, customer orders. 177/

These order routing techniques may be largely responsible for the delisting of most multiply traded classes by the secondary exchanges. Once the large retail firms designate CBOE or AMEX as the "primary" market for a multiply traded class and begin to route customer

177/ The Directorate of Economic and Policy and Research suggests that public customers, not including member firms trading for their own account, are involved in a mean of approximately 58 per cent of the transactions that occur on the options exchanges. See Directorate of Economic and Policy Research Memorandum to the Commission, dated June 5, 1978, at 22.
orders to one of these exchanges automatically, the secondary exchange may be unable to maintain the quality of its market for that class and ultimately may be unable to attract sufficient orders to maintain any market at all. 178/ This result has occurred even where PSE and PHIL have traded the same option class without CBOE or AMEX involvement. 179/ In addition, experience has shown that major retail firm decisions concerning where to transmit their customer orders can effectively determine whether CBOE or AMEX will be the "primary" market for a multiply traded class. 180/

Automated routing of customer orders for multiply traded options on the basis of a primary market designation derived principally on the basis of volume may have effects on competition which raise significant issues under the Exchange Act. Furthermore, such order routing may not fulfill the obligations of brokers to execute customer orders at the best price available under the circumstances. More specifically, the order routing techniques that many firms use may hinder "fair competition among brokers and dealers [and] among exchange markets," 181/ and "the practicability of brokers executing investors' orders in the best market." 182/

178/ See discussion at 45-46, 71, supra.
179/ See PHILX Letter, supra, n.88, at 6 and Appendix B.
180/ See discussion at 58-60, supra.
182/ Id.
On the other hand, "economically efficient" executions may be obtained. 183/

Competition among options marketmakers and among the options exchanges in multiply traded classes may not be fair because exchanges that are not designated as "primary" and the marketmakers at those exchanges do not have the opportunity to attract or interact with orders that are automatically transmitted to the primary market. This opportunity may be denied to these market centers and market participants even if their market is of the same or better quality at a particular point in time than that of the market designated as "primary" and they have the marketmaking and operational capacity to absorb customer orders that they might attract. Moreover, if the quality of a market that is not designated as "primary" is better than the "primary" market in a particular instance, automatic routing of customer orders to the "primary" market will preclude the execution of those orders "in the best market." Also, it may be difficult for these market centers and marketmakers to improve the quality of their markets and their competitive position if they do not have the opportunity to interact with retail orders. 184/ As a result,

183/ Id.

184/ See n.177, supra.
automated order routing to a market designated as "primary" tends to maintain the primacy of that market and to maintain the status quo with regard to the volume and type of orders that other market centers and their marketmakers can attract. This preservation of the status quo may inhibit the development of strong, competing market centers. 185/

The Congress recognized the problems associated with automated routing of customer orders to a primary exchange. Section 11A(c)(1)(E) 186/ of the Exchange Act was specifically added in 1975 to give the Commission authority "to assure that any order transmission or switching system utilized by a brokerage firm * * * operates in a manner consistent with the development and operation of a national market system." 187/

As the Senate Report stated:

Large brokerage firms rely heavily on high speed systems for the direction of orders to a designated facility for execution. The Committee has been informed that many of these systems are currently geared to route orders for any particular security

185/ See, e.g., n.174, supra, and accompanying text and January Release, supra, n.176, at 45.

186/ This section provides the Commission with rulemaking authority to "assure that all exchange members, brokers, and dealers transmit and direct orders for the purchase or sale of qualified securities in a manner consistent with the establishment and operation of a national market system." 15 U.S.C. 78k-l(c)(1)(E).

187/ Senate Report, supra, n.17, at 104. See also House Report, supra, n.21, at 41, 92.
to only one market center, e.g., the NYSE. The functioning of such systems in this manner is inconsistent with the development and operation of a national market system. It may also be inconsistent with a broker's obligation to obtain "best execution" for his customers. [Section 11A(c)(1)(E)] would accordingly give the SEC the responsibility to require brokers to utilize order switching services which are "neutral" as to market centers, giving preference to one execution facility over another only to insure best execution. 188/

More recently, the Commission has stated:

The Commission believes 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). Order routing systems which are not "neutral" appear inconsistent with development of a national market system since, among other things, they may impede fair competition among qualified markets and function in a manner incompatible with broker adherence to principles of "best execution." 189/

In accordance with this Congressional mandate and Commission policy, it may be appropriate for the Commission, the self-regulatory organizations, and the brokerage community to begin to develop more flexible methods that brokerage firms can use to determine the exchange to which public orders for multiply traded options should be sent. Although manual order-by-order

188/ Id., at 104-105.

routing for multiply traded option classes may not be practicable due to the time and cost involved for firms with substantial customer volume, brokerage firms and the self-regulatory organizations should consider the feasibility of designing automated order routing systems that (i) consider the size of the 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, and (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. Of course, customers and registered representatives should also be able to route orders when one market is clearly better than another. As plans to expand multiple trading are presented, the Commission may wish to consider the progress that has been made toward the development of such order routing systems. Moreover, if the Commission is not satisfied with the progress that is being made toward the development of these systems, it may consider initiating rulemaking
proceedings to facilitate their establishment. \footnote{With respect to the development of neutral order routing facilities for a national market system for certain stocks, for example, the Commission stated: Should development of comprehensive, "neutral" order routing systems, linking all qualified markets and permitting brokers and dealers to route orders to any such market directly from their offices, not be undertaken voluntarily by the self-regulatory organizations, the Commission is prepared to initiate rulemaking to consider appropriate means of ensuring that result. January Release, \textit{supra}, n.176, at 40.}

Again, to the extent that quotation information that the self-regulatory organizations disseminate with respect to multiply traded classes needs to be improved to provide an adequate basis for such modifications in the order routing systems of the brokerage firms, the Commission, the self-regulatory organizations, and the firms should work to establish a quotation system that will meet the order routing needs of the industry. \footnote{See discussion at 73-74, \textit{supra}, and 258-268, \textit{infra}.}

It should be noted that the Commission has solicited public comments with respect to whether "the routing of [stock] orders, by brokers, on an order-by-order basis, to the best market, in size, as determined by quotations made available pursuant to Rule 11Ac1-1 under the Exchange Act, should be a characteristic of a national...
Commentators have strongly urged that mandatory order-by-order routing to the highest bid or lowest offer should not be an element of a national market system under existing circumstances. The Securities Industry Association, for example, stated:

We do not see how mandatory routing to the highest bid or lowest offer will improve the securities industry's ability to serve its customers. In an environment of competing market centers, the routing decision involves many considerations, only some of which are subject to mathematical quantification. Especially if a customer's order is larger than one or two round lots, the professional agent must evaluate many factors such as available size, expected depth of the market behind the quotation, 192a/

192/ Securities Exchange Act Release No. 14885, supra, n.189. Since Rule 11Acl-l applies only to quotations for stocks included in the consolidated transaction reporting system and standardized options have not been included in recent national market system initiatives, public views were not solicited concerning the feasibility of order-by-order routing in the options markets. See n.176, supra, and discussion at 258-265, and 266-268, infra.

192a/ The Securities Industry Association also noted "that while Rule 11Acl-l under the Act requires responsible brokers and dealers and third market makers to stand 'firm' behind so much size as they have displayed in the composite quotation system, it does not oblige such persons to display all the size in which

(footnote continued on next page)
customer willingness to accept multiple tickets, comparative execution costs, comparative clearance and settlement costs, transfer tax consequences, comparative floor brokerage, market tone, speed of execution, possibility of intraquote execution, and so on. The agent must weigh the possible advantages of routing to a particular market against the risk of missing the market posted in that—and possibly—other market centers. ** In the institutional context, factors other than posted quotations will heavily influence the agent's professional judgment. Inasmuch as institutional interest today accounts for more than two-thirds of the composite transaction volume in listed securities, mandatory routing to the highest bid or lowest offer would be a uniquely inappropriate routing technique. Competition for institutional customers are especially intense, and institutional customers are especially rigorous judges of the quality of their executions. If persistent routing to the highest quoted bid or lowest quoted offer were an appropriate competitive strategy to attract and retain such customers, the process of competition already would have discovered it.

*(footnote continued)*

they might conceivably be willing or able to trade. Notwithstanding the composite quotation system, therefore, it will remain crucial to effective customer service to evaluate professionally the market behind any given quotation." Letter to George A. Fitzsimmons, Secretary, Securities and Exchange Commission, from Robert H. B. Baldwin, Chairman, Securities Industry Association, dated August 4, 1978 at 12-15. (footnote omitted).
The implementation of the composite quotation system makes it particularly urgent that the upstairs community remain free to develop, through the process of competitive evolution, routing techniques which best fulfill their customers' expectations. The Commission has often predicted that the composite quotation system will enable brokers to make more informed routing decisions, and foster improvements in existing methods of routing. To the extent that the Commission's forecast proves accurate, the upstairs community will, under competitive pressure, adjust its routing techniques and systems accordingly. It would be counterproductive of the Commission's expectation, and the interests of investors, to deprive the upstairs community of the latitude and the competitive impetus to make the most efficient use of the newly available quotation information. 192b/

These considerations may be equally applicable to order routing decisions in the options markets. In addition, the derivative nature of options pricing and the lack of firm options quotations with size may make the development of automated order routing techniques for standardized options even more difficult. 192c/ On the other hand,

192b/ Id. See also File No. S7-735.

192c/ See discussion at 73-74, supra, and 258-268, infra.
the competing marketmaker systems that the options exchanges use may provide these exchanges with the capacity to absorb, at quoted prices, any option orders of small size that may be received.

The Options Study is not aware of any studies that have been conducted or data that have been gathered identifying (i) the number of customer orders that are automatically routed to an options exchange in multiply traded classes, (ii) the average number of contracts involved with each order, and (iii) the frequency with which these orders are transmitted. The Commission and the self-regulatory organizations may wish to gather such data as a first step toward the creation of order routing systems for multiply traded options.

5. The Multiple Trading of Standardized Options and Recent Initiatives Toward the Development of a National Market System

In January, 1978, the Commission announced the initiatives that it considers "necessary to accelerate implementation of a national market
These initiatives encompassed only stocks for which last sale information is reported in the consolidated transaction reporting system and included (i) improvements in the consolidated transaction reporting system to refine "the way last sale information is distributed and recalled for display," (ii) the establishment of a composite quotation system to "improv[e] the quality of quotation information" with respect to stocks included in the consolidated system, (iii) "the prompt development of comprehensive market linkage and order routing systems to permit efficient transmission of orders ([a]) among the various markets and ([b]) from brokers and dealers to all qualified markets," and (iv) a central limit order file for public agency orders would assure that "all agency orders in qualified securities, regardless of location, receive the benefits of auction-type trading protections."

Since January, certain steps have been taken to implement these initiatives: Modifications have been made in the consolidated transaction reporting system.

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193/ January Release, supra, n.176, at 32.
195/ January Release, supra, n.176, at 42.
196/ Id., at 38.
197/ Id., at 39.
198/ Id., at 40.
reporting system; progress has been made toward the development of a composite quotation system; market linkages have been established between most of the market centers that multiply trade a stock included in the consolidated transaction reporting system; and public discussion has begun with regard to the appropriate method for achieving an efficient order routing system from the offices of brokers and dealers to all market centers and a central limit order file. When evaluating plans to expand the multiple trading of standardized options, the Commission should consider the effect that such expansion may have upon the further implementation of these initiatives and the overall development of a national market system. In this regard, it should be kept in mind that Section 11A(a)(2) of the Exchange Act directs the Commission "to facilitate the establishment of a national market system" and that Section 19(b)(2) of that Act requires that the


203/ See File No. S7-735.

Commission disapprove any proposed rule change of a self-regulatory organization if the Commission can not find that such a proposal "is consistent with the requirements of [the Exchange Act]." 205/

Table 19 indicates the total amount of revenues that PHLX, PSE, and MSE obtained from their options programs during 1976, 1977, and the first three months of 1978. The table also indicates the percentage of total exchange revenues that these options revenues represent. Data is presented for these three exchanges because they are the only secondary stock market centers that permit the trading of options and that are participating in the implementation of the initiatives announced in the January Release. 206/

Table 20 shows the total income that these exchanges derived from their options programs during the same time periods and the percentage of total exchanges net income that options net income represents. Finally, Table 21 indicates the total amount of revenue that these secondary stock exchanges obtained from transaction charges for options transactions on their floors and the percentage of total options revenues that this amount represents.

Together these tables demonstrate the critical role that options revenues play in the economy of these secondary stock exchanges. During 1977 and the


206/ AMEX data is not presented because discrete options net income was not available for this exchange. CBOE data is not presented because CBOE derives all of its revenues from activities related to options and, as an exchange that does not permit the trading of stock, is not a participant in the recent initiatives to develop a national market system.
first quarter of 1978, for example, options revenues made up more than 40% of the total revenues of PHLX and more than 30% of the total revenues of PSE. More significantly, options net income accounted for 186.7% of PHLX's net income in 1977 and 153% of PSE's net income during the first quarter of 1978. Further, the $9716 of net income that PHLX earned from its option program during the first quarter of 1978 was not sufficient to offset losses that the exchange sustained from its other activities. MSE, by contrast, sustained losses throughout the entire period including a $99,295 loss on its option program during the first quarter of 1978.

This data suggest the profound effect that an expansion of multiple trading of standardized options may have on the economies of these secondary stock exchanges. If an expansion of multiple trading extends to a significant number of the option classes that these exchanges list and they lose even a small portion of their options orders, their financial well-being, and thus their ability to participate as meaningful competitors in the continuing development of a national market system,

Table 20 illustrates the importance of options transaction charges to the financial viability of PHLX, PSE, and MSE. On PHLX, transaction charges presently account for more than 60 per cent of total option revenues, and on PSE and MSE these charges amount to more than 30 per cent of such revenues. Accordingly, a decline in the number of options transactions executed on any of these exchanges would directly and quickly impact the exchange's financial health.
may be jeopardized. As AMEX has stated with regard to expanded multiple trading in the context of the NYSE Plan:

The Amex believes that the NYSE's entry into options trading at this time poses a substantial risk that one or more exchanges, faced with the loss of a significant part or all of their options business, may be unable to withstand the resulting financial burdens and could be forced to cease operations or seek to consolidate with other market centers. This would not only have repercussions in the options area but could also seriously affect efforts to develop a national market system for equity securities.

Other exchanges, operating with substantially reduced order flow in options, will find that their ability to compete is greatly impaired. As other exchanges find it more difficult to compete, the dominant position of the NYSE in both equities and options will be further entrenched.

It is the Amex's view that if its options program should falter, its equities market would also suffer serious repercussions. Specialists and floor brokers who currently depend on both securities to sustain their operations would find that the reduced revenue flow would be inadequate to enable them to maintain an appropriate level of service. 208/

And as PSE has stated in the same context:

Dual trading of options by the New York Stock Exchange is a question which cannot be addressed separately from other national market system issues. At a time when substantial progress is being made in the development of a national market system composed of competing equity market centers, it would be

208/ AMEX Letter, supra, n.90, at 60–61.
particularly unfortunate to see this progress ended by allowing dual trading of options by the New York Stock Exchange. 209/

On the other hand, the Commission has twice stated that the "preservation of any market's present share of national order flow" should not be a determinative factor when weighing competitive consequences as a national market system evolves. 210/ Indeed, the Exchange Act requires that the Commission "balance the perceived anti-competitive effects of [a] regulatory policy or decision at issue against the purposes of the Exchange Act that would be advanced thereby and the costs of doing so" 211/ and does not impose an obligation upon the Commission to justify its actions as "the least anti-competitive manner of achieving a regulatory objective." 212/

IV. THE INTEGRATION OF TRADING OF OPTIONS AND THEIR UNDERLYING SECURITIES

In 1935, the Commission requested that each national securities exchange adopt rules prohibiting stock specialists and odd-lot dealers and their firms and partners from acquiring options with respect to the stocks in

209/ PSE Letter, supra, n.89, at 7.


211/ Senate Report, supra, n.17, at 13-14. See also Conference Report, supra, n.18, at 94.

212/ Id.
which such specialists or odd-lot dealers were registered. 213/ In addition, the Commission requested that each exchange prohibit other members, while on the exchange floor, from initiating the purchase or sale of stock for their own account, or any account in which they or their partners had an interest, if the member also had sold or purchased options on the same stock. 214/
The Commission suggested these rules because of abuses in the use of options in the operations of manipulative "pools" during the late 1920's and early 1930's. 215/ It was the general view at the time of the passage of the Exchange Act that options enabled "manipulators of every sort" to "carry on large-scale operations with a minimum of financial risk." 216/ Although such abuses were not limited to pool operations,


214/ Id.

215/ H.R. Rep. No. 1383, 73d Cong., 2d Sess. 10-11 (1934). See also S. Rep. No. 792, 73d Cong., 2d Sess. 9 (1934); Stock Exchange Practices, Report of Comm. on Banking & Currency, S. Rep. No. 1455, 73d Cong., 2d Sess. 47 (1934). Manipulative pools were typically composed of individuals who, after gaining access to a substantial block of a particular security, engaged in a number of activities, including the dissemination of false information regarding the security and creating misleading indications of activity and price movements designed to attract sufficient public customers for the stock to allow the pool to dispose of its stock position at artificially high prices. Options were often used as a method of gaining access to the stock.

the granting of an option to pools or confederates was found to be involved with most manipulative schemes, and the services of a specialist were considered invaluable to pool managers. 217/

The stock exchanges ultimately adopted rules similar to those that the Commission had suggested. 218/ Professional securities traders and marketmakers not on exchange floors, on the other hand, were not, and have never been, subjected to comparable options trading restrictions. Moreover, the ability of options marketmakers to trade underlying stocks has never been limited.

Soon after the initiation of standardized options trading, the Commission requested public comments on the question of "whether specialists, marketmakers, floor traders and block positioners should be permitted to trade or otherwise have an interest in options (puts and calls) in any securities in which they are registered, make a market, or trade for their own accounts on exchanges, either from on or off the floor or in the over-the-counter market." 219/ Subsequently, the Commission determined to permit specialists and odd-lot dealers on

217/ Id., at 47.
218/ See, e.g., NYSE Rules 96 and 105 and AMEX Rules 103 and 175.
the floors of the secondary stock exchanges to trade listed options on their specialty stocks and to allow floor traders on those exchanges to trade listed options with respect to underlying securities in which such floor traders held a position. 220/ At that time, the Commission was of the view that the potential for manipulative activity that might result from such "concurrent trading" was "relatively insignificant" on the secondary stock exchanges due to the small percentage of stock order flow directed to them. 221/ The Commission, however, has not yet permitted specialists on the primary stock exchanges to trade listed options with respect to the stocks for which such specialists are registered and has not allowed registered stock marketmakers on these exchanges to trade options on the stocks in which such marketmakers hold positions.

Nor has the Commission permitted the trading of standardized options and their underlying stocks at the same physical location on an exchange floor. In 1975, when approving the PHLX proposal to allow standardized options trading on the PHLX floor, for example, the Commission stated:

[PHLX] is the first exchange to propose trading of an option on the same exchange as the underlying security is traded. In its plan, [PHLX] has undertaken to take


221/ Id.
action ** to lessen potential regulatory problems associated with such trading; [Among other things,] the Exchange will physically separate the option trading floor from its regular floor for trading stocks and other securities to prevent visual and direct auditory communication between the two trading areas. This action is designed primarily to bar the misuse in its options market of information obtained by floor members relating to activity in an underlying security where the information has not yet received public dissemination ** .

Similarly, when approving the MSE plan to permit standardized options trading on that exchange in December, 1976, the Commission specifically noted that MSE had "constructed a separate floor for trading options." 223/

Many proposals have been made to integrate further the markets for options and their underlying securities. This tendency toward integration appears to result because (i) option prices are to a large extent dependent upon, and derivative from, the prices of their underlying securities, and (ii) integrating the trading of options and their underlying stocks may enhance the liquidity of both stock and options markets. NYSE, for example, has proposed to permit its stock specialists to trade options on their specialty stocks and to allow registered NYSE stock marketmakers to trade options for their own accounts. 224/

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224/ SR-NYSE-76-54. See also Securities Exchange Release No. 12924 (October 27, 1976), 10 SEC Docket 786 (November 9, 1976), and NYSE Letter, supra, n.85, at 9-10.
In addition, PSE and PHLX, as secondary exchanges for stocks on which standardized options are traded, have proposed the elimination of the physical barriers that separate the stock and options trading floors at those exchanges. **225/** Further, MSE and PSE have proposed **226/** that their members be permitted to hold simultaneous appointments as options marketmakers and registered stock marketmakers, in the case of MSE, or alternate stock specialists, in the case of PSE. **227/** Moreover, CBOE **228/** and NASD **229/** have proposed to permit the trading of

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225/ SR-PSE-77-13; SR-PHLX-77-6. See n.8, supra.

226/ SR-MSE-77-28; SR-PSE-77-17. See n.9, supra.

227/ None of the secondary stock exchange proposals, however, would remove existing restrictions prohibiting stock specialists on these exchanges from holding option marketmaker appointments. SR-MSE-77-28, SR-PSE-77-17. See n.9, supra.

228/ CBOE Plan, n.6, supra. CBOE submitted a proposal that would permit the trading on its floor of stocks and other securities exchangeable or convertible into those stocks. Currently, only standardized options are traded on the CBOE floor. The CBOE Plan proposed to utilize a competing marketmaker system for the trading of stock and other non-option securities. This system, like the CBOE options market, would depend upon multiple marketmakers, with marketmaking obligations identical to those currently imposed upon registered CBOE option marketmakers, to perform the marketmaking function. CBOE Plan, Proposed Rule 8.7. Also like the CBOE options market, limit orders would be handled and executed by independent Board Brokers who would perform no marketmaking function and would not be permitted to trade for their own account.

229/ NASD Plan, n.4, supra. This Plan is described in Section V of this chapter.
options and their underlying securities at the same physical location and by the same individuals and firms.

This section will discuss various factors that the Commission should consider when evaluating proposals to permit the further integration of trading in options and their underlying securities on an exchange floor. It will also make some general observations concerning, among other things, the integration proposals that have been made. The NASD proposal to permit dual marketmaking in the over-the-counter markets will be considered in the next section.

A. The General Considerations

To evaluate particular proposals to integrate the trading of options and their underlying securities, the Commission should weigh and balance various competing considerations. Improvements in the quality of the markets for stocks and their related options that may result from integration, for instance, must be balanced against (i) competitive and market information advantages that may accrue to certain market

230/ Trading derivative and underlying securities at the same physical location will be referred to in this chapter as "side-by-side trading." This practice has also been referred to as "contiguous trading."

231/ Simultaneous marketmaking in an option and its underlying security by the same person or firm will be referred to as "dual marketmaking" in this chapter.
participants, (ii) opportunities to engage in manipulative and other improper trading practices that may be created, (iii) possible conflicts between stock and options marketmaking obligations that may arise, and (iv) increased difficulties in conducting adequate market surveillance that may accompany integration. Moreover, when attempting to quantify improvements in market quality and the severity of the regulatory concerns that may result from a particular integration proposal, the extent of integration proposed and the characteristics of the market center making the proposal should also be taken into account.

1. The Quality of Markets

The primary purpose of most proposals to integrate the trading of options and their underlying securities is to improve the liquidity and depth of the markets for both securities. NYSE stated this rationale in connection with its concurrent trading proposal:

If concurrent trading were permitted, specialists — who are also odd-lot dealers — and other market-makers would be able to use options to hedge stock positions acquired in fulfilling their obligations to the marketplace in the underlying stock. Clearly, this would reduce market-making risks, facilitating specialists’ ability to buy or sell blocks of stock when there is an absence of orders. Similarly, specialists would be better able to maintain fair and orderly markets when there is a disparity between supply and demand. Allowing specialists to use options to hedge stock positions would increase their ability and willingness to commit capital to market-making in the underlying stocks. Thus, the end result would be to improve specialist performance
and enhance the depth and liquidity of NYSE markets in listed securities. Similar market benefits could be expected to accrue from the ability of competitive traders and registered competitive market-makers to engage in options trading. 232/

Integration may also result in pricing efficiencies in the markets for options and their underlying securities. Option pricing efficiencies may be obtained if integration provides option marketmakers with more quotation, transaction, and order information with respect to trading in underlying securities more quickly than is currently the case. Similarly, integration may improve stock pricing efficiency if stock marketmakers are able to obtain more rapidly quotation, transaction, and order information concerning option trading that may be indicative of changes in the supply of or demand for a stock. Such information may permit stock and options marketmakers to adjust their quotations and positions to reflect more rapidly and more accurately changes in supply and demand for their securities. 233/

232/ NYSE Letter, supra, n.85, at 10.

233/ Ultimately, increasing the pricing efficiency in the markets for options and for their underlying securities may improve the liquidity of the markets for both securities. This result may obtain because stock and option marketmakers may be able to reduce the risks that their marketmaking activities entail. These risks may be reduced because marketmakers may be more certain that their transactions and quotations reflect more recent and complete order, transaction and quotation information concerning both the stock and its related options. With reduced

(footnote continued on next page)