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17 CFR Part 240

Competitive Developments in the Options Markets; Proposed Rule

SECURITIES AND EXCHANGE COMMISSION

17 CFR Part 240

[Release No. 34–49175; File No. S7–07–04]

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Competitive Developments in the Options Markets

AGENCY: Securities and Exchange Commission (''SEC'' or ''Commission'').

ACTION: Concept release; request for comments.

SUMMARY: This Concept Release discusses changes in the options markets that have occurred since the start of widespread multiple trading of options that have had the greatest impact on competition. It also seeks comment on whether the Commission should take any action to improve the efficiency of the options markets and mitigate the conflicts of interest that may be impeding price competition in those markets.

DATES: Comments should be received by April 9, 2004.

ADDRESSES: To help us process and review your comments more efficiently, comments should be sent by hard copy or e-mail, but not by both methods. Comments sent by hard copy should be submitted in triplicate to Jonathan G. Katz, Secretary, Securities and Exchange Commission, 450 Fifth Street NW., Washington, DC 20549–0609. Comments also may be submitted electronically at the following e-mail address: *rule-comments@sec.gov.* All comment letters should refer to File No. S7–07–04. This file number should be included in the subject line if e-mail is used. All comments received will be posted on the Commission's Internet Web site (*http://www.sec.gov*) and made available for public inspection and copying in the Commission's Public Reference Room, 450 Fifth Street NW., Washington, DC 20549.

FOR FURTHER INFORMATION CONTACT: Elizabeth King, Associate Director, at (202) 942–0140, Richard Strasser, Attorney Fellow, (202) 942–0737, 450 Fifth Street NW., Washington, DC 20549–1001.

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I. Introduction

Competition among U.S. options exchanges dramatically expanded in the fall of 1999 when these markets began to compete by trading many of the same options products. This competition has had a number of benefits. Soon after this competition among the markets began, however, order entry firms started seeking opportunities to trade with their orders or be paid for their order flow from the competing markets. Since that time, payment for order flow and internalization of orders have become commonplace.

While there has been a great deal of informal discussion about the ways in which payment for order flow and internalization impact the options markets and other market participants, the Commission has not yet formally requested public comment on these and other similar practices, such as specialist participation guarantees, and whether these practices raise concerns. This Concept Release discusses the changes in the options markets since the start of widespread multiple trading of options that have had the greatest impact on competition. It also seeks comment on whether the Commission should take any action to improve the efficiency of the options market and mitigate the conflicts of interest that may be impeding price competition in those markets.

II. Overview of Recent Changes

A. Traditional Options Market Structure

Prior to the start of widespread multiple listing of equity options in 1999, the options exchanges then in operation (the American Stock Exchange (''Amex''), Chicago Board Options Exchange (''CBOE''), Pacific Exchange (''PCX'') and Philadelphia Stock Exchange (''Phlx''), collectively, ''floor-based options exchanges'') had priority rules that allocated trades among competing market participants on their floors. Some of these allocation methods were designed to enhance price competition, while others were designed to achieve other purposes, such as rewarding specialists or market makers for providing liquidity to the market.

To facilitate price competition on these markets, orders sent to the floors of each of the exchanges generally were exposed to an auction before a specialist and other market participants, including market makers and floor brokers in the crowd. Generally, contracts were allocated to the market participants in the following order: (1) The first identifiable bid or offer at the best price and (2) all other market participants on parity with the best bid or offer. This allocation principle was designed to promote price competition by rewarding market participants willing to set the best price.

Nevertheless, the options exchanges deviated from price-time priority to achieve other goals. For example, the exchanges developed specialist guarantees to reward specialists for committing capital on the exchange floor. Specialist guarantees give priority to a specialist over other market makers by allocating a certain percentage of each order to the specialist when that specialist's quote is equal to the best price quoted on the exchange.[1] In addition, the options exchanges provided limited opportunities for upstairs firms to trade with large

[1] *See infra* notes 46–50 and accompanying text.

customer orders where the crowd chose not to trade with them.[2]

In addition, the options exchanges developed automated execution (''auto-ex'') facilities to execute smaller orders quickly and efficiently at the prevailing bid or offer without first exposing those orders to an auction. These orders were automatically executed at the exchange's disseminated price, which in almost all cases was the price generated by the specialist's auto-quote.[3] Under a traditional options market structure, the specialist is the only market maker on the exchange with the capability to auto-quote, and these quotes are considered the quotes of all the market makers in the crowd.[4] Exchange rules generally permit a market maker to improve the price established by the specialist's auto-quote by announcing the better price in the crowd. The specialist (or an exchange quote reporter) then manually reflects this better price in the exchange's disseminated quote. This manual process is cumbersome, permitting market makers to improve the quote only in one series of an option at a time.[5] In addition, until recently, there was little incentive to improve the quote generated by the specialist's auto-quote because exchange rules allocating automatically executed orders did so regardless of whether a particular market maker improved the quote.[6]

B. Start of Multiple Listing

From 1977 until August 1999, most actively traded options were listed on only one exchange.[7] Moreover, unlike in equity securities, there is no over-the-counter market for standardized options. Consequently, firms had no choice as to where to send a customer's order for such singly listed options. The Commission has long held the view that multiple listing of equity options, subject to the Commission's oversight under the national market system, could spur competition among options markets to provide more efficient trading services resulting in lower transaction costs for investors.[8] To promote multiple listing, the Commission adopted Exchange Act Rule 19c–5 in 1989.[9]

Rule 19c–5 prohibits exchanges from having rules that limit their ability to list any stock options class because that options class is listed on another options exchange. Nevertheless, most options did not begin trading on multiple markets until August 1999.[10] Today, virtually all actively traded equity options trade on multiple markets, a development that has enhanced competition among the options exchanges.

C. A New Options Exchange

The launch of the International Securities Exchange (''ISE'') in May 2000, the first new exchange in over two decades, further intensified competition.[11] ISE introduced to the U.S. a market model for options in which multiple market makers on the exchange quote independently.[12] ISE's disseminated prices are the result of this intramarket competition.

Greater competition among options exchanges for order flow has manifested itself in many ways. Exchange transaction fees for customers have all but disappeared. Spreads are narrower. Markets have expanded and enhanced the services they offer and introduced innovations to improve their competitiveness. At the same time, inducements to order flow providers, including payment for order flow and internalization opportunities, have increased.

III. Impact of Enhanced Competition

A. Narrower Spreads

One of the most palpable results of enhanced competition in the options markets is the narrowing of spreads. Lower spreads can provide better prices for investors. In December 2000, the Commission staff issued the results of a preliminary study of one-week periods from August 1999 (a benchmark period prior to widespread multiple listing of actively traded options) and October 2000 (a benchmark period during which the actively traded options in the study were listed on more than one exchange) to determine, among other things, how multiple listing impacted quote competition and spreads in the options markets.[13] The staff found that average exchange-quoted spreads (*i.e.*, intraexchange spreads, representing the bid and the offer of one exchange) for the most actively traded options (*i.e.*, those under $20) decreased by 8% from the August 1999 period to the October 2000 period. Exchange-quoted spreads indicate how aggressively the market participants on individual exchanges

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[2] *See infra* notes 51–53 and accompanying text. This release uses the term ''upstairs firm'' to mean a broker-dealer that is seeking to facilitate or trade with its own public customer's options order on an exchange upon which the broker-dealer is a member. The broker-dealer may or may not be affiliated with the specialist in the option issue that is the subject of the customer order.

[3] This release uses the term ''auto-quote'' to refer to an electronic system specialists and other market makers use that automatically monitors and instantly updates quotations using a mathematical formula measuring certain characteristics of the options and underlying interest. This formula is based on a number of components that impact the value of the option, such as volatility, interest rate, and dividend. *See, e.g.*, Phlx Rule 1080, Commentary .01(a)–(b).

[4] *See e.g.*, Exchange Act Release No. 47959 (May 30, 2003), 68 FR 34441, 34442 (June 9, 2003) (approving SR–CBOE–2002–05).

[5] *See, e.g.*, Exchange Act Release No. 45677 (March 29, 2002), 67 FR 16476 (April 5, 2002) (approving SR–CBOE–2002–07). Any member of the trading crowd who submits a manual quote that improves an exchange's disseminated quote is considered to be a responsible broker or dealer under Rule 11Ac1–1(c) under the Act and it must be firm for the price of its quote up to its disseminated size. Rule 11Ac1–1(b) under the Act requires the exchange that receives the manual quote to disseminate it. *Id.*

[6] *Id.* As discussed below, the floor-based options exchanges reached a settlement with the Commission resulting from an enforcement action that requires, among other things, that those exchanges amend their existing rules governing their automated quotation and execution systems to increase incentives to quote competitively. *See infra* note and accompanying text.

[7] In August 1999, 32% of equity options were traded on more than one exchange. By September 2000, that number had risen to 45%. Over the same period, the percentage of aggregate option volume traded on only one exchange fell from 60% to 15%. Exchange Act Release No. 43085 (July 28, 2000), 65 FR 47918, 47919 (August 4, 2000) (proposing to extend Exchange Act Rule 11Ac1–1 to options). According to the Options Clearing Corporation, by September 2003, 98.3% of equity options traded on more than one exchange. For a discussion of the early development of multiple trading in the options markets *see* Exchange Act Release No. 24613 (June 18, 1987), 52 FR 23849 (June 25, 1987) (proposing Exchange Act Rule 19c–5).

[8] *See, e.g.*, Exchange Act Release No. 22026 (May 8, 1985), 50 FR 20310 (May 15, 1985).

[9] *See* Exchange Act Release No. 26870 (May 26, 1989), 54 FR 23963 (June 5, 1989).

[10] For a discussion of some of the factors that may have contributed to the multiple listing of actively traded options, *see* ''Poachers take stock, then wait and watch for more options: CBOE's trading of Dell has put even more pressure on U.S. exchanges to abandon their 'gentlemen's agreement,' '' Financial Times p. 26 (August 26, 1999).

[11] The ISE trades 597 options issues. Trading in these issues across all options exchanges represents about 90% of options industry volume. *See http://www.iseoptions.com* (Dec. 14, 2003).

[12] Under ISE's rules, one Primary Market Maker (''PMM'') and at least two Competitive Market Makers (''CMMs'') are assigned to each options class traded on the exchange. ISE Rule 802(c). Among other obligations, a PMM must enter continuous, two-sided quotes in all of the options classes to which it is assigned. A CMM must participate in the opening and make markets and enter into any resulting transaction on a continuous basis in at least 60% of the options classes in the group of classes to which it is assigned. ISE Rule 804. CMMs are able to stream their quotes on ISE electronically. By contrast, until recently, the floor-based options exchanges' disseminated quotes represented only the auto-quote price of the specialist or specialist-equivalent. The other market makers could effect changes in that quote only through open outcry or through the manual entry of quotes. *See, e.g.*, Exchange Act Release No. 47676 (April 14, 2003), 68 FR 19865, 19866 (April 22, 2003) (SR–CBOE–2002–05, proposing to establish CBOE's hybrid trading system).

[13] Special Study: Payment for Order Flow and Internalization in the Options Markets, Office of Compliance Inspections and Examinations and Office of Economic Analysis (Dec. 2000) [''SEC Staff Special Study''].

are setting their quotes. Quoting across exchanges over this period showed a much more dramatic change. The trade-weighted consolidated national best bid and offer (''NBBO'')[14] spreads fell from $0.29 in August 1999 to $0.18 in October 2000, a decline of nearly 38%.[15]

The actual transaction costs that investors paid for their options executions (measured by effective spreads) also declined from the August 1999 period to the October 2000 period.[16] The average effective spread for options priced below $20 was $0.21 in August 1999 and $0.17 in October 2000, a decline of approximately 19%. The most dramatic decline, however, was witnessed in smaller orders (typically orders of 50 or fewer contracts). For those orders, which are eligible for automatic execution, the average effective spread fell from $0.26 in August 1999 to $0.17 in October 2000, a drop of nearly 35%.

Average realized spreads (another measure of trading costs) for options priced below $20 were $0.18 in August 1999 and $0.17 in October 2000.[17] Average realized spreads for larger orders (*i.e.*, those above 50 contracts and ineligible for automatic execution at that time) actually increased from $0.10 in August 1999 to $0.16 in October 2000 (a 60% increase). This increase partially offset a fall in the average realized spread for smaller orders in these options, which declined from $0.23 in August 1999 to $0.16 in October 2000, a drop of approximately 30%.

The findings of academic economic studies that have examined the substantial increase in multiple listing of active options since late 1999 are consistent with the Commission staff's findings.[18]

B. Marketplace Innovations

In addition to narrowing spreads, the expansion of multiple trading has led the options markets to implement market structure innovations designed to attract more order flow by enhancing the efficiency, transparency, and liquidity of their markets. Such innovations include increasing the automated processing of orders routed to the floor-based options exchanges, expanding access to exchanges' automated execution systems to include broker-dealer orders as well as customer orders, and displaying the size of trading interest in quotations. Finally, exchanges have implemented electronic systems that enhance intramarket competition by permitting market makers independently to auto-quote.

1. Expansion of Auto-Ex Systems

In response to evolving market structures, technological advances, and enhanced competition among the markets, options exchanges have made changes to their auto-ex systems. Initially, auto-ex systems were designed to provide instantaneous executions for small public customer orders. In response to competitive pressures and a growing demand for quicker and more efficient executions, the options exchanges began increasing the maximum number of contracts eligible for execution through their auto-ex systems.[19] After the start of multiple listing, the use of auto-ex systems has expanded significantly.

In 2000, all of the floor-based options exchanges simultaneously increased the maximum number of options contracts in an order eligible for automated execution from fifty to seventy-five contracts[20] and quickly increased the size again to 100 contracts.[21] In 2001, three of the options exchanges—Amex, Phlx, and PCX—increased their maximum guaranteed order size for automated execution to 250 contracts.[22] In 2003, Amex increased its maximum guaranteed order size for automated executions to 500 contracts.[23]

The competitive responses with respect to one of the most widely traded exchange-traded funds, QQQ, which

[14] The NBBO is the interexchange best bid or offer, where each side of the best bid and offer, regardless of the quoting exchange, is used. Although an NBBO was not calculated for the options markets at the time the study was conducted, the SEC staff calculated one for purposes of the study.

[15] The SEC Staff Special Study concluded that, in addition to multiple listing, the drop in the consolidated NBBO spread also could have been attributed, at least in part, to the entrance of ISE into the market at that time. *See* SEC Staff Special Study, *supra* note 13 at text accompanying notes 72–73.

[16] The effective spread is twice the absolute difference between the trade price and the midpoint of the bid-ask spread at the time the trade report was received by the Options Price Reporting Authority. The lower the effective spread, the lower the cost to the investor.

[17] The realized spread is a measure of trading costs, taking into account the informational impact of the trade. It compares execution prices to the bid/offer mid-point five minutes after the execution occurs, which provides a hypothetical measure of a trade's profitability to the executing broker. Effective spreads and realized spreads reflect the direct costs to investors of trading on a given options market.

[18] *See, e.g.*, Battalio, Robert, Brian Hatch, and Robert Jennings, ''Toward a National Market System for U.S. Exchange-Listed Equity Options,'' Journal of Finance, forthcoming (covering June 2000 to January 2002 and indicating that bid-ask spreads have declined since multiple listing of most active options) and De Fontnouvelle, Patrick, Raymond P.H. Fishe, and Jeffrey H. Harris, ''The Behavior of Bid-Ask Spreads and Volume in Options Markets During the Competition for Listings in 1999,'' Journal of Finance, Vol. 58, No. 6 pp. 2437–2463 (2003) (indicating that spreads became significantly narrower around August 1999 when a large number of options moved from single to multiple listing). The results of these studies are consistent with other research that studied earlier periods. *See, e.g.*, Mayhew, Stewart ''Competition, Market Structure, and Bid-Ask Spreads in Stock Option Markets,'' Journal of Finance v.57 n.2 (April 2002) pp. 931–958 (examining CBOE options from 1986 to 1997 and indicating that options listed on multiple exchanges had narrower spreads than those listed on a single exchange) and ''The Effect of Multiple Trading on the Market for OTC Options,'' SEC (1986).

[19] During the 1980s, options exchanges permitted orders in sizes of between five and ten options contracts to be executed through their auto-ex systems. *See, e.g.*, Exchange Act Release Nos. 21695 (Jan. 28, 1985), 50 FR 4823 (Feb. 1, 1985) (File No. SR–CBOE–84–30) (permitting automated executions of up to five contracts); 22015 (May 6, 1985), 50 FR 19832 (May 10, 1985) (File No. SR–CBOE–85–14) (permitting automated executions of up to ten contracts); and 27599 (Jan. 9, 1990), 55 FR 1751 (Jan. 18, 1990) (File No. SR–Phlx–89–03) (permitting automated executions of up to ten contracts). PCX allowed automated executions of up to ten contacts in 1993. *See* Exchange Act Release No. 32703 (July 30, 1993), 58 FR 42117 (August 6, 1993) (File No. SR–PSE–92–37).

Over the next decade, the maximum number of options contracts per order permitted for automated execution steadily increased from ten contracts to fifty contracts. *See, e.g.*, Exchange Act Release Nos. 24899 (Sept. 10, 1987), 52 FR 35012 (Sept. 16, 1987) (File No. SR–Amex–87–21); 28411 (Sept. 6, 1990), 55 FR 37784 (Sept. 13, 1990) (File Nos. SR–CBOE–89–27 and SR–CBOE–89–29); 29837 (Oct. 18, 1991), 56 FR 55146 (Oct. 24, 1991) (File No. SR–Phlx–91–33); and 34946 (Nov. 7, 1994), 59 FR 59265 (Nov. 16, 1994) (File No. SR–PSE–94–18); 32906 (Sept. 15, 1993), 58 FR 49345 (Sept. 22, 1993) (File No. SR–Phlx–92–38); 36601 (Dec. 18, 1995), 60 FR 66817 (Dec. 26, 1995) (File No. SR–Phlx–95–39); 41821 (Sept. 1, 1999), 64 FR 50313 (Sept. 16, 1999) (File No. SR–CBOE–99–17); 41823 (Sept. 1, 1999), 64 FR 49265 (Sept. 10, 1999) (File No. SR–PCX–99–04); and 42094 (Nov. 3, 1999), 64 FR 61675 (Nov. 12, 1999) (File No. SR–Amex–99–43).

[20] *See* Exchange Act Release Nos. 43516 (Nov. 3, 2000), 65 FR 69079 (Nov. 15, 2000) (File No. SR–Amex–99–45); 43517 (Nov. 3, 2000), 65 FR 69082 (Nov. 15, 2000) (File No. SR–CBOE–99–51); 43515 (Nov. 3, 2000), 65 FR 69114 (Nov. 15, 2000) (File No. SR–Phlx–99–32); and 43518 (Nov. 3, 2000), 65 FR 69111 (Nov. 15, 2000) (File No. SR–PCX–00–32).

[21] *See* Exchange Act Release Nos. 43887 (Jan. 25, 2001), 66 FR 8831 (Feb. 2, 2001) (File Nos. SR–Amex–00–57 and SR–PCX–00–18); 44008 (Feb. 27, 2001), 66 FR 13599 (March 6, 2001) (File No. SR–CBOE–01–03); 44054 (March 8, 2001), 66 FR 15314 (March 16, 2001) (File No. SR–Phlx–2001–31) (permitting automated executions of up to 100 contracts in QQQ options); and 44404 (June 11, 2001), 66 FR 32857 (June 18, 2001) (File No. SR–Phlx–2001–51) (permitting automated executions of up to 100 contracts in all options).

[22] *See* Exchange Act Release Nos. 45628 (March 22, 2002), 67 FR 15262 (March 29, 2002) (File No. SR–Amex–2001–94); 45641 (March 25, 2002), 67 FR 15445 (April 1, 2002) (File No. SR–PCX–2001–48); 45629 (March 22, 2002), 67 FR 15271 (March 29, 2002) (File No. SR–Phlx–2001–89) (permitting automated executions of up to 250 contracts in QQQ options); and 45893 (May 8, 2002), 67 FR 34746 (May 15, 2002) (File No. 2002–25) (permitting automated executions of up to 250 contracts in all options).

[23] *See* Exchange Act Release No. 47673 (April 14, 2003), 68 FR 19242 (April 18, 2003) (File No. SR–Amex–2003–08). Amex floor officials have the discretion to raise the auto-ex limit to 500 contracts on a case-by-case basis.

tracks the Nasdaq 100 Index, illustrate the fiercely competitive nature of the options markets since the start of multiple listing. In 2002, CBOE began allowing automated executions of up to 500 contracts in QQQ options.[24] Amex immediately matched the CBOE's proposal.[25] ISE soon announced that its Primary Market Maker in the QQQ options would guarantee a size of up to 2,000 contracts in the two near-term expiration months and up to 1,000 contracts for all other expiration months for customer orders in QQQ options. Amex soon matched ISE's move.[26] In late 2002, Phlx matched ISE's and Amex's maximum guaranteed automated execution order size for QQQ options.[27] In early 2003, PCX matched the other exchanges.[28]

In addition to increasing the size of public customer orders eligible for automated execution, in 2001, the options exchanges began permitting non-market maker broker-dealer orders to be executed through their respective auto-ex systems.[29]

2. Enhanced Automation of Trading on Floor-Based Exchanges

The floor-based options exchanges have also increased the automated handling of orders on their facilities. For example, Phlx, CBOE, and Amex enhanced the integration of their automated execution systems with their order books to enable incoming orders to trade automatically with booked orders that establish the prevailing market.[30] Similarly, several exchanges are automating the execution of orders on the book that lock or cross a quote generated by the exchange's auto-quote systems.[31] In addition, Amex automated the allocation of contracts between specialist and registered options traders under certain circumstances where the specialist would otherwise manually allocate such contracts.[32]

3. Displaying Size in Quotes

Displaying information about the size of options quotes is another recent enhancement in the options markets. Since its inception in May 2000, the ISE displayed quotations accompanied by size within its market. At that time, the Options Price Reporting Authority (''OPRA'') did not collect from the options exchanges and disseminate to quotation vendors the sizes associated with options quotations. In addition, the floor-based options exchanges did not independently display the sizes of their market participants' quotations.

In response to the increased transparency offered on ISE's electronic system, the floor-based exchanges began to implement technology to disseminate quotations with size. In addition, OPRA enhanced its systems to collect and disseminate quotations with size from the options exchanges. In 2001, each of the options exchanges began disseminating the size associated with their quotations through OPRA.[33]

4. Automated Systems That Enhance IntraMarket Quote Competition

ISE's electronic structure enables it to collect and disseminate competitive quotes from multiple market makers. Because ISE's market makers only trade with incoming orders when their quotes represent the best price,[34] they have a strong incentive to quote aggressively. As a result, ISE's disseminated prices represent the best quote of any market maker or priced order in the ISE order book and frequently set or match the best bid or offer in the market.[35]

Unlike the ISE, quotes on the floor-based options exchanges historically represented the auto-quotes of the specialists. These quotes, however, are considered the quotes of all market makers on the exchange. When orders are routed to a floor-based options exchange for automated execution, they generally trade at the auto-quoted price. Such orders are allocated to market makers in the crowd on a ''wheel,'' where they each take portions of an order in turn. Thus, market makers do not have an incentive, or even a practical ability, to improve the disseminated quote.

ISE soon began to capture market share from the other options exchanges. In response to competition from ISE and to comply with the terms of a settlement agreement the floor-based options exchanges reached with the Commission, the floor-based exchanges introduced new technology to their trading platforms to enhance the speed and efficiency of executions on those markets.[36] One of the more recent innovations is CBOE's hybrid trading platform, which it began rolling out in 2003. This new trading platform combines features of the open outcry

[24] *See* Exchange Act Release No. 45676 (March 29, 2002), 67 FR 16478 (April 5, 2002) (order approving File No. SR–CBOE–2001–70).

[25] *See* Exchange Act Release Nos. 45756 (April 15, 2002), 67 FR 19603 (April 22, 2002) (notice of filing and immediate effectiveness of File No. SR–Amex–2002–29).

[26] *See* Exchange Act Release No. 45828 (April 25, 2002), 67 FR 22140 (May 2, 2002) (File No. SR–Amex–2002–30).

[27] *See* Exchange Act Release No. 46531 (Sept. 23, 2002), 67 FR 61370 (Sept. 30, 2002) (File No. SR–Phlx–2002–47).

[28] *See* Exchange Act Release No. 47667 (April 10, 2003), 68 FR 19244 (April 18, 2003) (File No. SR–PCX–2003–14).

[29] *See* Exchange Act Release Nos. 45032 (Nov. 6, 2001), 66 FR 57145 (Nov. 14, 2001) (File No. SR–PCX–00–05); 46517 (Sept. 20, 2002), 67 FR 61182 (Sept. 27, 2002) (File No. SR–PCX–2002–50); 46479 (Sept. 10, 2002), 67 FR 58654 (Sept. 17, 2002) (File No. SR–Amex–2002–57); 45758 (April 15, 2002), 67 FR 19610 (April 22, 2002) (File No. Phlx–2001–40); 46660 (Oct. 15, 2002), 67 FR 64951 (Oct. 22, 2002) (File No. SR–Phlx–2002–50); 45967 (May 20, 2002), 67 FR 37888 (May 30, 2002) (File No. SR–CBOE–2002–22); 46113 (June 25, 2002), 67 FR 44486 (July 2, 2002) (File No. SR–CBOE–2002–35); and 46598 (Oct. 3, 2002), 67 FR 63478 (Oct. 11, 2002) (File No. SR–CBOE–2002–56).

[30] Exchange Act Release Nos. 48472 (Sept. 10, 2003), 68 FR 54513 (Sept. 13, 2003) (permits automated execution on Phlx of eligible inbound customer and off-floor broker-dealer limit orders against booked customer limit orders at the exchange's disseminated quote); 45244 (Jan. 7, 2002), 67 FR 1526 (Jan. 11, 2002) (allows certain orders entered through CBOE's order routing system to trade automatically against the book); and 42652 (April 7, 2000), 65 FR 20235 (April 14, 2000) (incoming market and marketable limit orders bypass Amex's auto-ex system and match against orders in the book).

[31] *See* Exchange Act Release Nos. 44462 (June 21, 2001), 66 FR 34495 (June 28, 2001) (approving CBOE proposal to allow orders on the book to be executed automatically where a quote generated by the exchange's auto-quote system is equal to or crosses the exchange's best bid or offer as established by a booked order); and 44468 (June 22, 2001), 66 FR 34505 (June 28, 2001) (approving PCX pilot program to allow automated execution of marketable limit orders against market makers when the limit orders are crossed or locked by PCX's auto-quote system). *See also* File No. SR–Phlx–2003–30 (Phlx proposal to execute automatically limit orders on the book when the exchange's auto-quote (or a specialist's quote) crosses or locks the exchange's best market as set by an order in the book).

[32] Exchange Act Release No. 45974 (May 22, 2002), 67 FR 37886 (May 30, 2002).

[33] *See* Exchange Act Release Nos. 44145 (April 2, 2001), 66 FR 18662 (April 10, 2001) and 44383 (June 2, 2001), 66 FR 30959 (June 8, 2001); and CBOE Regulatory Circular RG 01–50 (April 17, 2001).

[34] See ISE Exchange Approval, infra note 52, text accompanying nn. 93–94.

[35] The Commission's Office of Economic Analysis studied ten of the most actively traded options issues (AOL, Citigroup, Cisco, Dell, IBM, Microsoft, Intel Wrap, Pfizer, Peoplesoft, and QQQ Wrap) for the period of June 2–6, 2003 (prior to the implementation of CBOE's hybrid trading system, discussed below) and found that ISE was at the best bid and at the best offer in these options significantly more frequently than any other options exchange. The study also found that ISE was alone at the best bid and offer significantly more frequently than any other exchange. ISE was at the inside bid 87% of the time compared to 56% of the time for CBOE, the next closest competitor. ISE was at the inside ask 83% of the time (compared with 61% for CBOE, the next most frequent). ISE was alone at the inside bid 12% and alone at the inside ask 11% of the time (compared to CBOE's 3% and 5%, CBOE was the second most frequent in each).

[36] See, *e.g.*, ''CBOE Bets Streaming Quotes Will Cool ISE—The Chicago Board Options Exchange is launching a hybrid-trading system with streaming market-maker quotes to counter its all-electronic rival,'' Wall Street & Technology p. 41 (July 1, 2003). As discussed in Section V. E. infra, the enforcement settlement required the floor-based options exchanges, among other things, to amend their existing rules governing their automated quotation and execution systems to increase incentives to quote competitively.

market with an electronic, competing dealer model.[37]

As is the case with ISE's model, CBOE's hybrid trading platform allows market makers and designated primary market makers (''DPM's) (CBOE's specialist equivalent) to submit electronically quotes that represent their own trading interest. In addition, floor brokers in the crowd may enter orders on behalf of their customers. The best bid and offer among submitted market maker quotes and customer orders is disseminated as CBOE's best bid or offer. As such, the hybrid trading platform greatly expands the potential sources of intraexchange quote competition on CBOE.[38]

Preliminary research on the first group of securities phased into CBOE's hybrid platform shows a dramatic narrowing of quoted and effective spreads in those securities on CBOE. The Commission's Office of Economic Analysis examined average quoted and effective spreads of the first 22 options classes phased into CBOE's hybrid trading platform and found that average quoted spreads decreased from $0.2422 over the 20 trading days before each of the options was phased into the system, to $0.1929 in the 20 trading days after the options were phased in, a decrease of over 20%.[39] The average effective spread for these securities on CBOE decreased from $0.1170 to $0.0974, a decline of nearly 17%. Two control samples were used to ensure that these observed changes were not driven by other, coincidental changes in market conditions'quotes on the same options on the other exchanges, and quotes on other CBOE options that did not switch to the hybrid platform. No similar decrease in quoted and effective spreads was observed in the control sample.

Other registered options exchanges have developed their own innovative technology platforms. For example, in May 2003, the Commission approved PCX's new hybrid trading platform which will accommodate independent quotations from three types of market makers.[40] As they do today, Lead Market Makers (''LMMs'') would continue to provide two-sided markets throughout the trading day, while conducting their trading activities on the floor of the exchange. Remote Market Makers would be permitted to enter quotes and effect trades from off-site locations and to select their appointed issues. Floor Market Makers, which are registered market makers with basic obligations on the PCX options floor, would continue to trade as they do today and would supply independently generated quotes with size. Members could choose not to generate their own quote independently by acting as Supplemental Market Makers, which would add liquidity at the same price that is then being disseminated by the LMM. PCX began phasing in the new platform on October 6, 2003. Like the CBOE hybrid system, PCX's system should enhance intraexchange quote competition.

C. Payment for Order Flow, Specialist Guarantees, and Internalization

While encouraging innovations by options exchanges, multiple listing also resulted in competition among markets in the form of payment for order flow, enhanced specialist participation rights, and internalization. Unlike the forms of competition described above, which clearly benefit customers, these arrangements principally benefit intermediaries in the first instance, which may or may not pass on those benefits to their customers. The broad proliferation of these arrangements in the options markets followed widespread multiple listing of the most active options in 1999.[41]

When most options were traded on only one market, order entry firms had no choice where they routed their customers' orders for execution. As the number of trading venues for those options increased, however, order entry firms could choose between these venues in executing customers' orders. Indeed, where the same option trades on multiple venues, a broker-dealer's best execution obligation requires regular and rigorous review of execution quality. As a result, options markets and the market participants that trade there have sought to make their markets more attractive to order entry firms whose order flow they are attempting to attract. As discussed above, market participants have adapted to greater competition by tightening spreads and the exchanges themselves have done so by enhancing services.

At the same time, the specialists and market makers on the options markets have begun competing for order flow by offering cash or non-cash inducements, known as payment for order flow, to firms to send their orders to a particular exchange.[42] Another inducement exchanges use to attract order flow is permitting firms to trade with—or internalize—their own customers' orders. Both practices are a way to share the profit a dealer makes on a trade with the intermediary representing a customer order.

[37] Exchange Act Release No. 47959 (May 30, 2003), 68 FR 34441 (June 9, 2003).

[38] For options that are not yet trading on the hybrid platform, CBOE's disseminated quote represents, for the most part, only the automatically generated quotations of the DPM. Market makers are able to impact the CBOE quote only in open outcry or by inputting quotes manually. As a result, there is virtually no intraexchange quote competition in CBOE options that are not trading on the hybrid platform.

[39] Because the 22 options classes were phased in over multiple days between June 12 and July 11, 2003, to compare spreads consistently it was necessary to assign event dates from ''20 to 20 to each of the classes. An event date of ''20 was the date 20 trading days before an option was phased into the hybrid platform. An event date of 0 was the date it was phased in, and an event date of 20 was the date 20 trading days after a class was phased in.

[40] *See, e.g.*, Exchange Act Release No. 47838 (May 13, 2003), 68 FR 27129 (May 19, 2003) (order approving PCX's hybrid trading platform for options). See also SR–Phlx-2003–59 (proposal to establish a new Phlx electronic trading platform that would permit exchange members to submit streaming electronic option quotations via an electronic interface with Phlx's Automated Options Market System); and SR–Amex-2003–89 (proposing to establish a new trading system that would permit registered options traders to auto-quote independent of the specialist's quote).

[41] In its December 2000 study, the SEC staff examined the rise of payment for order flow arrangements in the options markets and found that the percentage of retail customer options orders that were paid for under a payment for order flow arrangement soared from August 1999, when virtually no orders were subject to such arrangements, to August 2000, when nearly 78% of such orders were. *See* SEC Staff Special Study, *supra* note 13. The staff found that cash payments were the most common form of payment for order flow in the options markets, although other inducements also were noted. For instance, some firms routed customer options orders to affiliated specialists. Firms that route order flow to an affiliated specialist are able to benefit through increased profits generated by that specialist, which does not have to pay cash for its affiliates' order flow. Other firms have entered into reciprocal order flow arrangements, under which each agrees to route customer order flow to the other.

[42] The Commission has defined payment for order flow broadly as ''any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration to a broker or dealer from any broker or dealer, national securities exchange, registered securities association, or exchange member in return for the routing of customer orders by such broker or dealer to any broker or dealer, national securities exchange, registered securities association, or exchange member for execution, including but not limited to: research, clearance, custody, products or services; reciprocal agreements for the provision of order flow; adjustment of a broker or dealer's unfavorable trading errors; offers to participate as underwriter in public offerings; stock loans or shared interest accrued thereon; discounts, rebates, or any other reductions of or credits against any fee to, or expense or other financial obligation of, the broker or dealer routing a customer order that exceeds that fee, expense or financial obligation.'' 17 CFR 240.10b–10(d)(9). In the Commission staff's December 2000 study the staff concluded that while payment for order flow clearly impacted broker-dealers' order routing decisions, such arrangements had not, at that point, had a material adverse impact on effective spreads. The staff concluded that further monitoring of the arrangements was warranted. *See* SEC Staff Special Study, *supra* note 13.

1. Payment for Order Flow Arrangements

Under a typical payment for order flow arrangement, a specialist offers an order entry firm cash or other economic inducement to route its customer orders to that specialist's exchange because the specialist knows it will be able to trade with a portion of all incoming orders, including those from firms with which it has payment for order flow arrangements. The more dominant the specialist is on a particular exchange (*i.e.*, the fewer market makers with which it must compete for order flow), the more order flow it will trade with and the more it will be able to pay for order flow. Consequently, specialists benefit from exchange rules that guarantee the specialist the ability to trade with a certain percentage of the order flow for which they pay. Such ''specialist guarantees'' are discussed further below.

A specialist on an exchange where its role is less dominant (*i.e.*, where market makers in the crowd successfully compete with the specialist to trade with incoming orders), cannot, on its own, pay as much for order flow. For this reason, to compete, exchanges where there is substantial competition among market makers were the first to impose fees upon their members to fund payment for order flow collectively. Such exchange fees were designed to ensure that market makers that may trade with customers on the exchange contribute to the cost of attracting that order flow. Currently, all of the options exchanges have such ''exchange-sponsored payment for order flow programs'' in place.[43]

Section 19 of the Act and Rule 19b-4 adopted under the Act permit such payment for order flow arrangements to become effective upon filing and therefore do not require prior Commission approval because the arrangements impose fees that apply only to members of the exchange.[44] In soliciting public comment on one such proposal, the Commission noted that while it is concerned about payment for order flow generally, the Act provides a self-regulatory organization (''SRO'') wide latitude in imposing fees on its members.[45]

2. Specialist Guarantees

All five options exchanges currently have rules that guarantee a specialist a proportion of each order when its quote is equal to the best price on the exchange.[46] These so-called ''specialist guarantees'' reward market making firms willing to perform the obligations of a specialist by ensuring that they will be able to interact as principal with a certain percentage of incoming orders. Specialist guarantees are special allocation provisions that differ from the general rules of the exchanges that assign executions based on priority, parity, and precedence.[47] Specialist guarantees are intended to attract and retain well-capitalized firms that are responsible under exchange rules for assuring fair and orderly markets and fulfilling other responsibilities that enhance the exchange.

The Commission has closely scrutinized exchange rule proposals to adopt or amend a specialist guarantee where the percentage of specialist participation would rise to a level that could have a material adverse impact on quote competition within a particular exchange. For instance, in 2000 Phlx filed a proposal with the Commission to raise its specialist participation to 80% for certain options orders.[48] This specialist guarantee may have helped Phlx compete with other exchanges because its specialists, all things being equal, may have been able to pay more to attract order flow than other exchanges' specialists that received a lesser guarantee.

The Commission was concerned, however, that the Phlx proposal could have significantly discouraged price competition on that market by ''locking up'' such a large proportion of each order that it would have hindered market makers in the crowd from competing with the specialist. The Commission believed that, over the long-term, the decrease in intramarket competition could have widened spreads and diminished the quality of prices available to investors.[49] Moreover, the Commission was concerned that, if it approved the Phlx proposal, other exchanges could have proposed similar specialist guarantees to remain competitive,[50] thereby permanently undermining intramarket competition on each exchange. Phlx ultimately withdrew the proposal.

3. Internalization

Internalization opportunities are another form of economic inducement that exchanges use to attract order flow. One such arrangement is referred to as a facilitation guarantee, whereby an upstairs firm that brings a large customer order to the exchange (typically at least 50 contracts) may trade as principal with a certain percentage (up to 40%) of the contracts in that order under certain circumstances.[51] Exchanges use facilitation guarantees to induce upstairs firms to execute their customer orders on the exchange by limiting the degree to which the exchange crowd may interact with those orders. Like specialist guarantees, facilitation guarantees modify general exchange rules that assign executions based on priority, parity, and precedence, and like specialist guarantees and payment for order flow, exchange rules providing facilitation guarantees raise competitive and regulatory issues.

Prior to widespread multiple listing, exchange rules gave crowd participants precedence in trading with all orders. As a result, an upstairs firm could not trade with any portion of its customer's order with which crowd members wanted to trade. After August 1999, however, as the options markets began to list multiply the most actively traded options, competition among exchanges for incoming orders intensified, and the options exchanges adopted rules that provided upstairs firms more

[43] Exchange Act Release Nos. 48053 (June 17, 2003), 68 FR 37880 (June 25, 2003) (SR–Amex-2003–50); 47948 (May 30, 2003), 68 FR 33749 (June 5, 2003) (SR–CBOE–2003–19); 43833 (Jan. 10, 2001), 66 FR 7822 (Jan. 25, 2001) (SR–ISE–00–10); 43290 (Sept. 13, 2000), 65 FR 57213 (Sept. 21, 2000) (SR–PCX–00–30); and 47090 (Dec. 23, 2002), 68 FR 141 (Jan. 2, 2003) (SR–Phlx-2002–75).

[44] *See* Exchange Act Section 19(b)(3)(A)(ii) (15 U.S.C. 78s((b)(3)(A)(ii)) and Rule 19b–4(f)(2) (17 CFR 240. 19b–4(f)(2)). Within 60 days of filing of a proposal filed under Exchange Act Section 19(b)(3)(A), the Commission may summarily abrogate the proposal and require that the proposal be refiled (if at all) under Section 19(b)(1) of the Act, in which case the Commission must approve it prior to it becoming effective. *See* Exchange Act Section 19(b)(3)(C), 15 U.S.C. 78s(b)(3)(C).

[45] *See* Exchange Act Release No. 43290 (Sept. 13, 2000), 65 FR 57213, 57214–215 (Sept. 21, 2000) (notice of filing and immediate effectiveness of SR–PCX–00–30); *see also* Exchange Act Release Nos. 43112 (August 3, 2000), 65 FR 49040 (August 10, 2000) (notice of filing and immediate effectiveness of SR–CBOE–00–28) and 43833, 66 FR at 7825 (approving SR–ISE–00–10, imposing such fees is a legitimate business decision of the exchange).

[46] The term specialist is used in this release to include, in addition to specialists, DPMs, LMMs and PMMs.

[47] Each exchange has rules of priority, parity, and precedence that govern the order in which bids and offers participate in a transaction. For a discussion of exchanges' execution priority rules *see* Exchange Act Release No. 43100 (July 31, 2000), 65 FR 48778, 48785 (August 9, 2000) (File No. SR-Phlx–00–01, proposing to amend Phlx's enhanced specialist participation provisions) [''Notice of Phlx 80/20 Proposal''].

[48] The 80% provision would have applied to orders for the top 100 options based on volume allocated to a Phlx specialist after January 1, 1997 (*i.e.*, new allocations). Although the proposal had a number of provisions other than the 80% allocation provision, the Commission expressed particular concern with that provision. *Id.*, 65 FR at 48784.

[49] *Id.*

[50] *Id.* at 48789.

[51] Of course, if no other market participant on the exchange is willing to trade with a particular order, the upstairs firm may internalize the entire order.

opportunities to participate in the execution of certain customer orders they bring to the exchanges. For example, ISE adopted a rule in February 2000 that permits upstairs firms to interact as principal with up to 40% of orders of 50 contracts or more that the firm presents to the exchange after an auction and other conditions are satisfied.[52]

After the Commission approved ISE's proposal, each of the other options exchanges adopted similar rules.[53] To qualify for the guarantee, all require the facilitation orders to be at least 50 contracts, and the maximum guarantee right is 40% of the contracts in those orders. Moreover, if both a specialist and an upstairs firm would be entitled to a guarantee with respect to the same trade, the combined guarantee of the two firms may not exceed 40% of the contracts to be traded, thereby allowing the trading crowd to compete for at least 60% of any such transaction.[54] Unlike internalization in the over-the-counter equity market, the options exchanges' rules permit a firm to trade with its own customer's order only after an auction in which other members of that market have an opportunity to participate in the trade at the proposed price or an improved price. This auction provides some assurance that the customer's order is executed at the best price any member in that market is willing to offer.

[52] In the Matter of the Application of the International Securities Exchange, LLC For Registration as a National Securities Exchange, Release No. 42455 (Feb. 24, 2000) (''ISE Exchange Approval''). When an order is entered into the facilitation mechanism, ISE sends a facilitation broadcast to crowd participants informing them of the proposed transaction. The broadcast contains information on the terms and conditions of the order, including the facilitation price, and the crowd is given ten seconds to respond. The upstairs firm entering the facilitation order will be allocated 40% of the original size of the facilitation order, but only after better-priced orders, quotes, and public customer orders at the facilitation price are executed. In approving the ISE's rule, the Commission noted: ''It is difficult to assess the precise level at which guarantees may begin to erode competitive market maker participation and potential price competition within a given market. In the future, after the Commission has studied the impact of guarantees, the Commission may need to reassess the level of these guarantees. For the immediate term, the Commission believes that forty percent is not clearly inconsistent with the statutory standards of competition and free and open markets.'' *Id* at text accompanying nn. 118–119.

[53] *See* Exchange Act Release Nos. 42835 (May 26, 2000), 65 FR 35683 (June 5, 2000); 42848 (May 26, 2000), 65 FR 36206 (June 7, 2000); 42894 (June 2, 2000), 65 FR 36850 (June 12, 2000); and 47819 (May 8, 2003), 68 FR 25924 (May 14, 2003) (orders approving, respectively, File Nos. SR–CBOE–99–10; SR–PCX–99–18; SR–Amex–99–36; and SR–Phlx–2002–17).

[54] *See* Notice of Phlx 80/20 proposal, *supra* note 47, 65 FR at 48786.

IV. Concerns With Payment for Order Flow, Specialist Guarantees, and Internalization

While payment for order flow, specialist guarantees, and internalization are responses to a more competitive marketplace, critics assert that these practices are detrimental to the options markets because they can decrease quote competition, interfere with a broker-dealer's best execution obligation, and can conflict with a market's role as an SRO.[55]

A. Quote Competition

One concern frequently raised about payment for order flow arrangements is that they may diminish quote competition. Specifically, the concern is that a market maker or specialist that receives order flow because of a payment for order flow arrangement will have less need to quote aggressively to attract order flow, and as a result, spreads may be wider than they otherwise would be. A related argument is that payment for order flow arrangements raise costs for market makers and, as a result, the market makers may widen spreads to offset the costs of paying for order flow. Rules or practices that permit or encourage internalization may also reduce intramarket price competition and, therefore, cause spreads to widen.[56] In addition, because an upstairs firm can choose among several exchanges to send its order flow, market makers may be concerned that if they quote too aggressively, the upstairs firm facilitating its customers' orders may take those orders to another, less competitive, exchange where the upstairs firm could internalize a greater portion of those orders, possibly at prices that are inferior from the customers' perspective. The Commission requests comment on these concerns.

Question 1.To what extent, if any, does payment for order flow in the options markets affect a specialist's or market maker's incentive to quote aggressively?

Question 2. If commenters believe that payment for order flow diminishes a specialist's or market maker's incentives to quote aggressively, why have spreads narrowed over the past few years while payment for order flow increased?

[55] For a discussion of the concerns with payment for order flow, see SEC Staff Special Study, *supra* note 13. *See also* Phlx Petition, *infra* note 95 and Susquehanna Petition, *infra* note 96.

[56] *See* Exchange Act Release No. 43084 (July 28, 2000) 65 FR 48406, 48419 (August 8, 2000) (proposing Exchange Rules 11Ac1–5 and 11Ac1–6).

Question 3. Where multiple market participants can quote independently and incoming orders are allocated to the market participant that sets the best quote, are market participants more or less likely to enter payment for order flow arrangements than those on markets with less intramarket quote competition?

Question 4. Do current exchange rules guaranteeing specialists a certain portion of orders affect quote competition? To what extent is intramarket quote competition preserved by requiring that non-specialist market makers be permitted to compete for at least 60% of an order without bettering the specialist's quote? Is the harm to quote competition, if any, decreased on those markets that permit market makers to auto-quote?

Question 5. Is a market maker's incentive to quote aggressively impacted by the percentage of orders that an upstairs firm can internalize? For example, all things being equal, is a market maker less likely to quote aggressively if exchange rules or customs permit an upstairs firm to internalize a substantial portion of each order that it brings to the exchange?

B. Best Execution

With respect to equity securities, the Commission has stated that a broker does not necessarily violate its duty of best execution by receiving payment for order flow (or internalizing its agency orders), but the duty also is not necessarily satisfied by routing orders to a market center that merely guarantees an execution at the NBBO.[57] Nevertheless, concerns have been raised that a broker that routes its customer orders to a particular market with which it has a payment for order flow arrangement may not be meeting its best execution obligations with respect to those orders.[58] Critics of payment for order flow arrangements assert that a broker that routes its customers' orders pursuant to such an arrangement is

[57] Exchange Act Release No. 42450 (Feb. 23, 2000), 65 FR 10577, 10584 [''Fragmentation Release'']. A broker must take price (including opportunities for price improvement) into consideration in determining where to route its orders for execution, but price is not the only criteria that a broker may consider. It may also consider factors such as the trading characteristics of the security involved and the cost and difficulty of obtaining an execution in a particular market center, among other factors.

[58] The duty of best execution requires a broker to seek the most favorable terms reasonably available under the circumstances for a customer's transaction. *See, e.g.*, Exchange Act Release Nos. 43084, 65 FR at 48408 and 37619A (Sept. 6, 1996), 61 FR 48290, 48322 at text accompanying n. 349 (Sept. 12, 1996) (adopting Rule 11Ac1–4 and amending Rule 11Ac1–1 under the Act, also known as the Order Handling Rules).

more likely to be doing so to further its own self interest rather than the interests of its customers.[59]

Facilitation guarantees could also raise best execution concerns. Where a firm can profit by internalizing its customers' orders, it has an incentive to take those orders to an exchange that permits it, by rule or practice, to internalize the largest portion of its customers' orders. In the order approving ISE's exchange application, the Commission stated that a broker-dealer that withdraws ''a facilitated order that may be price improved simply to avoid executing the order at the superior price is a violation of a broker's duty of best execution.'' [60] The Commission acknowledged, however, that the intermarket nature of such conduct might make it difficult for any one market to detect and deter such abusive trading behavior. Nevertheless, the Commission stated that it expects the options markets to work together through the Intermarket Surveillance Group to develop methods and procedures to monitor their members' trading on other markets for possible best execution violations.[61]

Question 6. Do customer orders that are routed pursuant to payment for order flow arrangements ever receive less favorable executions than orders not subject to such arrangements? To what extent do exchanges' rules requiring that members avoid trading through better prices on other exchanges ensure that any order, regardless of the reason for its being routed to a particular exchange, receives at least the best published quotation price?

Some may argue that specialists in the options markets establish the prices and sizes of their quotes based in part on the assumption that their counterparties will be other professional traders. The desirability of trading with uninformed order flow due to the lower risks of trading with non-professionals should translate into those orders, on average, receiving better prices than the specialist's quote.[62] Under this argument, specialists may use payment for order flow as an indirect way of providing a better execution to uninformed or non-professional orders.

Question 7. Do market makers establish the price and size of their public quote based on the assumption that they may trade with an informed professional, which involves more risk than trading with an uninformed non-professional?

Question 8. If commenters agree that public quotes are based on the assumption that the market maker may trade with a professional, are such quotes wider than they would be if market makers only received uninformed, non-professional orders?

Question 9. Are market makers willing to trade with non-professional orders at prices better than their quote?

Question 10. If the Commission were to eliminate payment for order flow would non-professional orders get better prices?

Question 11. Do customer orders that are internalized in whole or in part on an exchange receive less favorable executions than orders that are not internalized? If so, why?

Question 12. Do exchange rules requiring that an auction occur prior to a trade ensure that internalized orders are executed at the best available price?

C. Conflicts Between the Roles of Market and SRO

An exchange is keenly interested in maximizing the order flow sent to its market because much of the revenue the exchange earns come from those orders. At the same time an exchange has an obligation to enforce its members' best execution obligations. Consequently, an SRO has a significant conflict in assessing whether an order sent to its market would have received a better execution on another market. Payment for order flow and internalization further heighten best execution and other regulatory concerns because of the conflict that a broker faces between its interests and those of its customer. An SRO that too closely scrutinizes whether its members are meeting their best execution obligations could risk driving the members to competing exchanges with less stringent enforcement procedures.

Exchange-sponsored payment for order flow arrangements raise the particular issue of whether an SRO, which regulates its member broker-dealers, can effectively carry out its regulatory obligations with respect to best execution enforcement when it also requires its market makers to pay fees which, by their nature, are to be used solely to pay firms to send orders to the exchange.

Question 13. Is an SRO's enforcement of its members' best execution obligation affected by the SRO's interest in attracting and retaining order flow from those same members?

Question 14. To what extent do payment for order flow practices generally, or exchange-sponsored payment for order flow specifically, exacerbate the conflict an SRO has in carrying out its obligation to enforce its members' best execution obligation?

Question 15. Does exchange-sponsored payment for order flow affect specialists' or market makers' incentives to quote aggressively differently than other types of payment for order flow? If so, in what respects?

Question 16. What safeguards, if any, should an options exchange have in place to ensure that it can carry out its regulatory responsibilities with respect to those of its members that accept payment for order flow or internalize trades? For example, would an independent SRO to oversee how brokers meet their best execution obligations be feasible and desirable?

V. Regulatory Initiatives

Traditionally, the Commission has not used restrictions on payment for order flow as a means to address concerns that the practice may raise. Instead, the Commission and the markets have taken steps to improve market transparency and price competition, which, in turn, are designed to address many of these concerns. As discussed below, these steps include implementing Exchange Act Rule 11Ac1–6, converting to decimal pricing, implementing an intermarket linkage, applying the Quote Rule to options, and removing certain barriers to transparency and competition as a result of the enforcement settlement between the Commission and the floor-based options exchanges.

A. Exchange Act Rule 11Ac1–6

Rule 11Ac1–6, adopted in November 2000, requires broker-dealers to publish quarterly reports detailing where they route their customer orders for execution and the relationship the broker-dealer has with the venues to which it routes those orders, including any profit-sharing or payment for order flow arrangements the broker-dealer may have with those venues.[63] This rule

[59] *See, e.g.*, letter to Harvey L. Pitt, Chairman, SEC, from William J. Brodsky, Chairman & CEO, CBOE, (Feb. 10, 2003) wherein CBOE stated: ''P[ayment] F[or] O[rder] F[low] can induce broker-dealers to decide to maximize firm profits by directing their orders to those markets paying the most for those orders.''

[60] ISE Exchange Approval, *supra* note at text accompanying n. 118.

[61] *Id.* at n. 118.

[62] Non-professional or uninformed traders may be less likely to understand the ''true'' value of a security and therefore may be willing to pay more for it or sell it for less than would a professional trader. For a discussion of informed and uninformed traders and payment for order flow, *see* Allen Ferrell, A Proposal for Solving Payment for Order Flow, 74 S. Cal. L. Rev. 1027, 1078–80 (May 2001).

[63] 17 CFR 240.11Ac1–6 (b)(1)(ii)–(iii). Exchange Act Release No. 43590 (Nov. 17, 2000), 65 FR 75413 (Dec. 1, 2000).

applies to transactions in options as well as those in equity securities. These quarterly reports provide investors with information about possible motivations a broker-dealer may have in routing its customers' orders to a particular venue. Rule 11Ac1–6 is limited, however, in that it does not provide information on the execution quality that a market center offers once it receives an order. That information is required for equity securities, but currently not for options, by Exchange Act Rule 11Ac1–5, which the Commission adopted at the same time as Rule 11Ac1–6.

Rule 11Ac1–5 requires each equity market center, including each exchange, to publish monthly reports detailing the execution quality that the market center provides for equity orders that are routed to it for execution. Rule 11Ac1–5 reports allow market participants to evaluate, among other things, which markets have the lowest spreads, which execute orders the quickest, and which are the most likely to price improve orders or to execute orders at prices inferior to the prevailing best bid or offer.

A recent study of NYSE-listed securities using Rule 11Ac1–5 reports found that ''reports based on SEC Rule 11Ac1–5 appear to have value beyond public trade and quote information available elsewhere.''[64] The researchers found that the value of the reports ''qualifies industry complaints about the high cost of producing this data, because the additional price competition should benefit all market participants.'' The study further concluded that ''the Securities and Exchange Commission's emphasis on disclosure as a means of affecting public policy can produce beneficial effects for many market participants, at least in the case of equity trading. It appears that publishing standardized execution quality statistics encourages (coerces) brokers to consider these statistics in their routing decisions.'' The authors found that although ''brokers appear to use other, publicly available data for routing decisions prior to the SEC's enactment of the rule, the reliance on the 'non-official' statistics decreases after Rule 11Ac1–5 becomes effective.''

When it adopted Rule 11Ac1–5 and Rule 11Ac1–6, the Commission considered but decided not to apply Rule 11Ac1–5 to the options markets, stating:

> The Commission continues to believe that there is a need for improved disclosure of execution quality in the options markets, particularly now that there is widespread trading of options on multiple exchanges and expanding payment for options order flow. Nevertheless, potentially difficult issues would have to be addressed before options could be included within Rule 11Ac1–5. For example, a consolidated BBO is not, at this time, calculated and disseminated for options trading. A consolidated BBO is an essential element for nearly every statistical measure in the Rule, such as calculating price improvement and classifying types of limit orders (*e.g.*, inside-the-quote and at-the-quote limit orders). Although each exchange potentially could calculate its own consolidated BBO, the calculations might vary at times and fail to provide a uniform basis for comparable statistics. In addition, categorization of orders on a security-by-security basis would be much less practical for the options markets, where there may be hundreds of series of options for one underlying security.[65]

In the SEC staff study discussed above,[66] the staff made the following observations regarding market quality information available to broker-dealers in the options markets:

- Broker-dealers do not have adequate market execution quality information to compare reliably the quality of executions between specialist firms.
- The options exchanges are developing execution quality reports, but these reports may not enable broker-dealers that route customer orders adequately to compare execution quality on different options exchanges because each report uses different measures and methodologies to calculate execution quality.
- An NBBO would facilitate the creation of uniform measures of execution quality.
- Independent execution quality vendors have been unable to develop reliable execution quality reports for order routing firms because the exchanges have not provided them with adequate execution data.

Since the study was conducted, OPRA, which transmits quotations and trade reports from the options markets to vendors for dissemination to the public, has developed a consolidated NBBO data feed for the options markets that is available to vendors.[67] The NBBO that OPRA disseminates is the highest priced bid and the lowest priced offer quoted at the time on any of the five registered options exchanges.[68] The minimum price increment for purposes of the NBBO is no less than $0.05, and, absent a change in the NBBO, the minimum size increment for purposes of the NBBO is no fewer than 10 contracts.[69]

Below, the Commission seeks comments on whether it should extend Rule 11Ac1–5 to the options markets.

B. Decimals

On January 28, 2000, the Commission ordered the SROs to convert from fractional quotes to quotes in decimals.[70] The conversion from fractions to decimals for quotations in all equity securities and options was successfully completed on April 9, 2001.[71] As a result, the minimum quoting increment for equity securities narrowed from 1⁄16th of a dollar ($0.0625) to a penny ($0.01). The minimum quoting increment for option issues quoted under $3.00 a contract was set at $0.05 (down from 1⁄16th or $0.0625) and for options issues quoted at $3.00 and greater it was set at $0.10 (down from 1⁄8th or $0.125). Research conducted with respect to the equities markets supports the conclusion that the move to decimal pricing has contributed to a substantial decrease in spreads in the equities markets.[72] The

[64] Boehmer, Ekkehart, Robert Jennings, and Li Wei, Public Disclosure and Private Decisions: The Case of Equity Market Execution Quality (August 31, 2003 Draft), available at *http://www.nyse.com.* Wei is from the NYSE's Research Division. Boehmer was a Director of Research at the NYSE while the research for the study was being completed. The authors studied order-routing behavior for NYSE-listed stocks from June 2001 to February 2003 and found that market share was significantly negatively related to effective spreads and execution speed. They determined that this fact was consistent with the argument that brokers use information in Rule 11Ac1–5 reports to make order routing decisions. Based on the authors' estimates, a one-cent increase in effective spreads reduces monthly order flow by 522,060 shares for each stock traded. In addition, a one-second increase in execution speed resulted in a loss of 89,760 shares per stock. *Id.* at 17.

[65] Exchange Act Release No. 43590 (Nov. 17, 2000), 65 FR 75413 (Dec. 1, 2000).

[66] *See supra* notes 13–17 and accompanying text.

[67] Exchange Act Release Nos. 47231 (Jan. 22, 2003), 68 FR 4258 (Jan. 28, 2003) (order permanently approving OPRA's BBO proposal); and 46992 (Dec. 13, 2002), 67 FR 78031 (Dec. 20, 2002) (approving OPRA's BBO proposal for 120 days).

[68] If the same best-priced bid or offer is quoted on more than one exchange, the exchange that is quoting at that price for the largest number of options contracts will be identified by OPRA as the market that is quoting the best bid or offer. If the same best bid or offer for the same number of options contracts is quoted on more than one exchange, the exchange that was first in time to quote that bid or offer for that number of contracts will be identified as the market with the BBO.

[69] Markets may, consistent with their own exchange rules, disseminate bids and offers that improve the NBBO by less than $0.05, or that increase the size at a given quote by fewer than ten contracts. Such improvements, however, would not be reflected in the OPRA NBBO. As discussed further below, all of the registered options exchanges currently set the minimum quotation increment at $0.05 for option issues quoted under $3 a contract and at $0.10 for option issues quoted at $3 and greater. As a result, currently, no exchange member may quote an increment through one of the registered options exchanges that is less than $0.05. Accordingly, OPRA's NBBO reflects the best-priced quotations on the registered options exchanges.

[70] Exchange Act Release No. 42360 (Jan. 28, 2000), 65 FR 5003 (Feb. 2, 2000).

[71] Exchange Act Release No. 44568 (July 18, 2001), 66 FR 38390 (July 24, 2001).

[72] *See, e.g.*, The Impact of Decimalization on the Nasdaq Stock Market, Final Report to the SEC Prepared By Nasdaq Economic Research and Decimalization of Trading on the New York Stock Exchange: A Report to the Securities and Exchange

move to decimal pricing in the equities markets, and, in particular, the resulting narrowing of spreads, has been cited as one of the factors that has led to a decrease in the use of payment for order flow with respect to equity securities.[73]

Research is more limited, however, on the impact on spreads of the shift from quoting in fractions to quoting in decimals (and any resulting impact the shift might have had on payment for order flow) in the options markets.[74] While the Commission is not aware of any comprehensive studies showing how narrower spreads might impact payment for order flow in the options markets, experience in the equities markets suggests that, as the amount of profit a dealer can make from trading the spread declines, so too does the amount of money that dealer is willing to pay for attracting the orders with which it interacts.

It is conceivable that the same result could occur in the options markets if options were quoted in one-cent increments. In other words, widespread payment for order flow may suggest that current pricing in the options markets is inefficient. If payment for order flow is a symptom of inefficient pricing in the options markets, removing the five-cent and ten-cent minimum price increments in those markets might allow the markets to price options contracts more accurately, which could result in a narrowing of spreads. If spreads narrowed, each transaction would be worth less to market participants that profit from those spreads and, as a result, they would be less likely to pay to attract orders or else they would be willing to pay less to attract them. At the same time, however, penny pricing in the options markets could greatly increase quote traffic, which could diminish the quality and timeliness of options quotation information. Below, the Commission seeks comments on how penny pricing in the options markets could impact payment for order flow.

C. Intermarket Linkage

In early 2003, the options exchanges began sending orders through a linkage designed to facilitate the routing of orders between exchanges.[75] The intermarket linkage is based on the national market system principle that brokers should have the ability to reach easily a better price in another market to encourage efficient pricing and best execution of customer orders.[76] The linkage plan requires exchanges to avoid executing trades at prices inferior to the best available price (called a ''trade-through'').[77]

The linkage provides market participants with an automated means for accessing the best prices in the options markets, no matter which exchange is offering those prices at a given time. Moreover, by discouraging market participants from trading at prices inferior to the NBBO, the linkage will likely enhance price competition across markets.[78] Therefore, the linkage may help to ameliorate some of the competitive and best execution concerns that payment for order flow and internalization raise.[79]

D. Applying the Quote Rule to Options

In December 2000, the Commission amended Exchange Act Rule 11Ac1–1,[80] (''Quote Rule'') to apply it to options, in another move designed to improve market transparency and price competition in the options markets.[81] The Quote Rule requires national securities exchanges and associations to establish procedures for collecting from their members bids, offers, and quotation sizes for reported securities and for making that information available to vendors. The rule also

Commission (Sept. 7, 2001). *See also* Hendrik Bessembinder, ''Trade Execution Costs and Market Quality after Decimalization,'' Journal of Financial and Quantitative Analysis, forthcoming (finding that quoted and effective spreads declined substantially on Nasdaq and NYSE after decimalization).

[73] *See* ONLINE TRADING In Slow Times, Net Brokers Look For New Revenue, Investor's Business Daily, Section A, p.5 (August 3, 2001): ''Under decimals, the smallest spread between the bid and offer price for a stock is now just a penny. Prior to the Nasdaq's switch to decimals in April, spreads were at least 1/16, or .0625, of a dollar. That smaller spread is eating into the profit of market-makers like Knight Trading Group Inc. That's forced them to cut back on a practice called payment for order flow. In return for a commitment to send Knight much of their customers' orders, Knight has been paying brokerages up to a couple of dollars on each trade. Now that they're struggling to remain profitable, market-makers can't afford to pay out as much.'' *See also* comments of Bernard L. Madoff, Bernard L. Madoff Investment Securities LLC, at SEC Market Structure Hearing, October 29, 2002: ''I remember everybody saying ban payment for order flow. They're still saying ban payment for order flow. We don't even pay for order flow any longer, although we're considering going back to paying for order flow. [A]ll of these things are constantly resurfac[ing].''

[74] One industry study suggests that quoted and effective spreads for options decreased from the period before decimals to the period after decimal implementation. Report on the Impact of Decimal Pricing, prepared by CBOE (Sept. 10, 2001). CBOE studied certain options on securities listed on NYSE, Nasdaq and AMEX and found that quoted and effective spreads decreased from the pre-decimal to the post decimal period. CBOE discounted the results, however, given that spreads for a control group of securities that had shifted to decimals prior to the study period also declined over the period. CBOE further stated that the lack of a significant decline in spreads was expected given that the change in minimum quoting increments in the options markets (*i.e.*, from \$0.0625 to \$0.05 and from \$0.125 to \$0.10, depending on the price of the option) was much less dramatic than the change in the equity markets where the minimum quoting increment declined from \$0.0625 to \$0.01.

[75] On October 19, 1999, the Commission directed the options exchanges to file a national market system plan for linking the options markets. Exchange Act Release No. 42029 (Oct. 19, 1999), 64 FR 57674 (Oct. 26, 1999). The options exchanges submitted multiple plans on January 19, 2000. Exchange Act Release No. 42456 (Feb. 24, 2000), 65 FR 11402 (March 2, 2000). CBOE and Amex submitted identical plans. PCX and Phlx submitted plans that were distinct from the CBOE/Amex plan and from each other. On July 28, 2000, the Commission approved the plan proposed by Amex and CBOE, which ISE joined after the Commission approved its exchange application. Exchange Act Release No. 43086 (July 28, 2000), 65 FR 48023 (August 4, 2000) (''Linkage Approval Order''). In November 2000, PCX and Phlx also joined that plan. Exchange Act Release Nos. 43573 (Nov. 16, 2000), 65 FR 70851 (Nov. 28, 2000) (admitting Phlx) and 43574 (Nov. 16, 2000) 65 FR 70850 (Nov. 28, 2000) (admitting PCX).

[76] *See* Exchange Act Section 11A(a)(1)(C)(iv). 15 U.S.C. 78k–1(a)(1)(C)(iv).

[77] Section 8(c) of the Plan for the Purpose of Creating and Operating an Intermarket Option Linkage (''Linkage Plan'') states: ''The Participants agree that, absent reasonable justification and during normal market conditions, members in their markets should not effect Trade-Throughs.''

[78] The Linkage Plan does not prohibit one market from trading through a superior quote on another market. Rather, it requires market participants to avoid initiating a trade-through, unless an exception applies (*e.g.*, the bid or offer traded through was being disseminated from an exchange whose quotes were not firm with respect to that option class). In addition, under the Linkage Plan, if the party whose quote was traded through complains, the market participant that initiated the trade-through must (unless it cancels the offending trade) either (1) send an order through the linkage to satisfy the quote that was traded through or (2) correct the price of the trade that constituted the trade-through to a price at which a trade-through would not have occurred. The price correction must then be reported through OPRA. *See* Section 8 of the Linkage Plan. If a market participant receives an order when it is not quoting at the NBBO, it may execute the order at the NBBO without violating the Linkage Plan. Linkage Approval Order, 65 FR at 48026. Notwithstanding the lack of a trade-through prohibition in the Linkage Plan, a broker-dealer that exhibits a pattern or practice of initiating trade-throughs may be in violation of the securities laws and rules, including best execution principles and SRO rules regarding just and equitable principles of trade.

[79] *See* Linkage Approval Order, 65 FR at 48029.

[80] Exchange Act Rule 11Ac1–1, 17 CFR 240.11Ac1–1.

[81] Exchange Act Release No. 43591 (Nov. 17, 2000), 65 FR 75439 (Dec. 1, 2000). In addition to amending the Quote Rule to apply to options, the Commission adopted a trade-through disclosure rule. Under that rule, Exchange Act Rule 11Ac1–7, which the Commission repealed in December 2002, broker-dealers, with certain exceptions, were required to disclose to their customers the fact that the customers' orders to buy or sell listed options were executed at prices inferior to the best quotes that were published at the time the customers' orders were executed. The rule did not apply to customer orders that were executed on options markets that participated in an intermarket linkage plan approved by the Commission that had provisions reasonably designed to limit intermarket trade-throughs. *See id.*, 65 FR at 75443–47. *See also* Exchange Act Release No. 47013 (Dec. 17, 2002), 67 FR 79454 (Dec. 27, 2002) (repealing Rule 11Ac1–7).

requires that broker-dealers' quotations be firm, subject to certain exceptions.

The Quote Rule has applied in the equities markets since 1978.[82] The rule was not applied to options at that time, however, because they had only begun to trade a few years earlier.[83] Although each of the options exchanges had adopted rules requiring their market makers or specialists to have firm quotes for public customers, the rules did not extend to other market participants and were subject to exceptions unavailable in the Commission's Quote Rule.[84] In the release proposing to apply the Quote Rule to options, the Commission stated:

> The reliability and availability of quotation information are basic components of a national market system and are needed so that broker-dealers are able to make best execution decisions for their customers' orders, and customers are able to make order entry decisions. Quotation information has significant value to the marketplace as a whole because a quotation reflects the considered judgment of a market professional as to the various factors affecting the market, including current levels of buying and selling interest. Both retail and institutional investors rely on quotation information to understand the market forces at work at any given time and to assist in the formulation of investment strategies.
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> The Commission is proposing a firm quote rule for options [in conjunction with a trade-through disclosure rule] to ensure that the published quotes of options exchanges are accessible to orders from both customers and broker-dealers. Currently, the options exchanges' quotes need not be firm for broker-dealer orders. Therefore, market markers on an exchange may not be able to trade with quotes on competing exchanges even when these market makers are representing customer orders. Yet market makers are expected to match the prices on competing exchanges or to trade with those quotes, before trading at an inferior price. * * * A firm quote requirement for options is needed to ensure that these quotes will, in fact, be honored when orders are routed from other markets.[85]

E. Enforcement Settlement

The September 2000 regulatory settlement between Amex, CBOE, Phlx, PCX, and the Commission as well as a separate settlement between these exchanges and the Department of Justice were also designed to enhance transparency and competitiveness in the options markets.[86] Among other things, in the settlement with the Commission, the options exchanges agreed to remove or amend certain rules and procedures that may have hindered or prevented the multiple listing of options. For example, the exchanges were required to remove provisions from the Joint-Exchange Options Plan (''JEOP), which sets forth procedures that the options exchanges followed to list new options to reduce the amount of advance notice that an exchange was required to provide before it could begin trading an option that was already trading on another exchange.[87] In July 2001, the Commission approved a proposal filed by all of the options exchanges as well as the Options Clearing Corporation to replace the JEOP with the Options Listing Procedures Plan.[88]

Moreover, the exchanges agreed to adopt procedures that prevent the exchanges from threatening, harassing, or retaliating against their members that seek to trade options already traded on another exchange.[89] In addition, the exchanges agreed to make changes to the way in which OPRA acquires and allocates market data transmission capacity so that OPRA is not used as a means to limit the multiple listing of options.[90]

Finally, the settlement directs the exchanges to amend their then-existing rules governing their automated quotation and execution systems to increase incentives to quote competitively.[91] Some of the enhancements that have been implemented in connection with the Settlement Order are discussed in Section III B4 above.

VI. Additional Steps That Could Be Taken To Address Concerns About Payment for Order Flow, Specialist Guarantees, and Internalization

There are several possible regulatory alternatives that the Commission could pursue to address concerns with payment for order flow, specialist guarantees, and internalization. These alternatives range from taking no regulatory action at this point to banning these arrangements. The Commission seeks comments on the alternatives it could pursue to address concerns with these arrangements.

A. Should the Commission Take Action at This Point?

As discussed above, the options markets have undergone fundamental changes in the past few years. Options exchanges and market participants in those markets continue to adapt to the regulatory changes, including the implementation of an intermarket linkage plan, application of the Quote Rule, imposition of an order routing disclosure rule, and the requirement to price options in decimals. Competition among the options markets has led to the development of systems that permit greater intramarket competition, which has narrowed spreads. Some commentators have suggested that competitive forces in the options markets have shown themselves sufficient to increase the quality of execution and no further regulatory action is needed at this time.[92]

Question 17. Do recent regulatory changes together with competitive forces in the options markets make additional regulatory action at this time unnecessary?

Question 18. What would be the likely consequences to the options markets in terms of competition and execution quality should the Commission decide to take no regulatory action at this time? Specifically, do commenters believe that the current trend toward narrower spreads in the options markets could itself eliminate payment for order flow, specialist guarantees, and internalization?

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[82] *See* Exchange Act Release No. 14415 (Jan. 26, 1978), 43 FR 4342 (adopting Rule 11Ac1–1 for equity securities). *See also* Exchange Act Release No. 14711 (April 27, 1978), 43 FR 18556 (deferring effective date of rule to August 1978).

[83] Exchange Act Release No. 14415, *supra* note at n.49.

[84] *Id.* at 75442.

[85] Exchange Act Release No. 43085 (July 28, 2000), 65 FR 47918, 47925 (August 4, 2000).

[86] *See* Exchange Act Release No. 43268 (Sept. 11, 2000) (''SEC Settlement Order'') and *United States* v. *American Stock Exchange* LLC, et al, Proposed Order, Stipulation and Competitive Impact Statement, 65 FR 57829 (Sept. 26, 2000). In the SEC Settlement Order, the Commission found, among other things, that the options exchanges listed in the settlement failed to comply with Exchange Act Rule 19c—5 as incorporated into their respective rules by refraining from multiply listing certain options listed on a single exchange that were available for multiple listing. SEC Settlement Order at text accompanying n. 3.

[87] *See* SEC Settlement Order, *supra* note, 65 FR at 57840.

[88] Exchange Act Release No. 44521 (July 6, 2001), 66 FR 36809 (July 13, 2001).

[89] Exchange Act Release Nos. 43252 (Sept. 6, 2000), 65 FR 55653 (Sept. 14, 2000) (SR–Amex–00–50); 43253 (Sept. 6, 2000), 65 FR 55655 (Sept. 14, 2000) (SR–Amex–00–52); 43251 (Sept. 6, 2000), 65 FR 55658 (Sept. 14, 2000) (SR–CBOE–00–45); 44131 (March 29, 2001), 66 FR 18136 (April 5, 2001) (SR–PCX–01–11); and 44057 (March 9, 2001), 66 FR 15312 (SR–Phlx–01–03).

[90] On April 15, 2003, the options exchanges filed with the Commission a proposal to amend the OPRA plan to satisfy this obligation. *See* OPRA–2003–01.

[91] SEC Settlement Order, *supra* note 86, 65 FR at 57841.

[92] *See* Battalio *et al, supra* note. The authors suggest that the increased competition from multiple listing and the threat of regulatory action in the form of an intermarket linkage were sufficient to improve execution quality in the options markets to a level comparable to that of the equities markets and therefore additional regulation may not be required.

B. Should the Commission Require Brokers to Rebate All or a Portion of Payments They Receive?

One of the principal concerns about payment for order flow is that it creates a conflict with a broker's best execution obligation. Requiring brokers to rebate to their customers any payments they receive in exchange for routing those customers' orders to a particular exchange may mitigate much of the conflict.

Question 19. Should brokers that receive payment for order flow be required to rebate all or a certain portion of those payments to their customers or demonstrate that the economic benefit of payment for order flow has been passed on to customers? If so, how should the amount of any such rebate be determined, and how would a firm demonstrate that it passed the payment for order flow benefit to customers?

Question 20. How would any non-cash inducements to route order flow be valued for purposes of any such rebate?

C. Should the Commission Ban Payment for Order Flow, Specialist Guarantees, and Internalization?

The Commission could decide that payment for order flow, specialist guarantees, and internalization in the options markets impair the integrity of those markets and pose harm to investors and ban such arrangements or significantly limit them.

Question 21. What would be the effect of banning all payment for order flow arrangements in the options markets? If the Commission determined that a ban on payment for order flow were warranted, would a ban only on cash payments be sufficient or would non-cash inducements also have to be banned? If commenters believe that the Commission should impose such a ban, could such a ban be easily evaded in light of the numerous forms that payment for order flow arrangements can take?

Question 22. If the Commission were to ban all payment for order flow, but continue to permit firms to internalize their customers' orders, would it provide an unfair advantage to integrated firms that have customer order flow they can internalize? If a ban on payment for order flow unfairly advantaged integrated firms with broker and dealer operations, should the Commission revisit the issue of whether firms should be permitted to operate both as a broker and as a dealer for customer options orders? [93]

Question 23. Should the Commission ban some or all specialist guarantees and internalization (*i.e.*, dealer participation arrangements) in the options markets? Should any such ban only be done in conjunction with a ban on payment for order flow?

Question 24. What would be the impact, if any, on competition in the options markets if the Commission were to ban either payment for order flow or dealer participation arrangements without banning the other type of arrangement?

Question 25. What would be the impact of a complete ban on all such practices? For example, if the Commission banned payment for order flow and dealer participation arrangements, who would benefit? Would specialists and market makers quote better prices? Would they retain the economic benefit they now share with order entry firms? What effect would a ban have on non-dominant markets or firms seeking to attract order flow from the dominant market participants?

Question 26. In response to a recent request for the views of the options markets on payment for order flow arrangements, one of the markets stated that the Commission's review of payment for order flow and internalization should not be limited to the options markets but rather should include the equities markets as well.[94] Are there differences between the equities and options markets that warrant different treatment? If so, what are those differences? If different treatment is not warranted, should the Commission consider a market-wide ban on payment for order flow and dealer participation arrangements?

D. Should the Commission Ban Only Exchange-Sponsored Payment for Order Flow?

On February 3, 2003, Phlx filed with the Commission a petition for rulemaking that asks the Commission to ban exchange-sponsored payment for order flow programs, citing many of the concerns about payment for order flow discussed above.[95] Similarly, on June 11, 2003, Susquehanna International Group, LLP (''Susquehanna'') requested that the Commission exempt it from SRO rules that require it to contribute to exchange-sponsored payment for order flow programs.[96] In the alternative, Susquehanna requested that the Commission treat the exemptive application as a petition for rulemaking under Rule 192 of the SEC's Rules of Practice [97] to repeal transaction and marketing fees adopted by various options exchanges.

1. Phlx Petition

In its petition, Phlx asks the Commission to adopt a rule banning exchange-sponsored options payment for order flow programs.[98] According to Phlx, exchange-sponsored payment for order flow arrangements raise a number of concerns. First, Phlx believes that such arrangements can interfere with market forces by ''creating a known and stable price point (the exchange-mandated fee) that affects payment for order flow negotiations.''

Second, Phlx argues that exchange-sponsored payment for order flow arrangements can have detrimental effects on market makers by requiring them effectively to subsidize the specialists' order flow payments. Phlx contends that this subsidization raises costs for market makers, which, to cover those costs, may have to widen their spreads or reduce the level of liquidity they provide. Phlx believes that this subsidization is inconsistent with Section 11A of the Exchange Act, which requires fair competition among brokers and dealers.[99]

Finally, Phlx asserts that exchange-sponsored payment for order flow arrangements provide a potential disincentive for an SRO to police its members in complying with their regulatory obligations.

For these reasons, Phlx requests that the Commission adopt a rule that would prohibit: (1) An options exchange from

[93] *See* SEC, Report on the Feasibility and Advisability of the Complete Segregation of the Functions of Dealer and Broker (June 20, 1936) (''Segregation Study'').

[94] Letter to Harvey L. Pitt, Chairman, SEC from Salvatore F. Sodano, Chairman & CEO, Amex (Feb. 10, 2003).

[95] Letter to Jonathan G. Katz, Secretary, SEC, from Meyer S. Frucher, Chairman & CEO, Phlx, (Feb. 3, 2003), Petition for Rulemaking File No. 4–474, (''Phlx Petition'').

[96] *See* Letter to Jonathan G. Katz, Secretary, SEC, from Joel Greenberg, Chief Legal Officer, Susquehanna International Group, LLP, re Application for Exemptive Relief from Exchange Sponsored Payment for Order Flow Programs (June 11, 2003), Petition for Rulemaking File No. 4–474, (''Susquehanna Petition''). Susquehanna states that it is a market maker on every U.S. options exchange other than ISE, that it makes a market in 2000 options classes and acts as a specialist or designated primary market maker in some options classes.

[97] 17 CFR 201.192.

[98] *See* Phlx Petition, *supra* note. Phlx submitted its petition pursuant to Rule 192 of the Commission's Rules of Practice. 17 CFR 201.192. Phlx would exclude from its proposed prohibition payment for order flow arrangements made directly between individual exchange members or between an individual member and a non-member broker-dealer. It would also exclude programs or arrangements whereby an exchange provides its members with volume discounts or rebates or programs in which the exchange shares market data revenues with its members.

[99] 15 U.S.C. 78k–1.

organizing, sponsoring, or administering a payment for order flow program in connection with the routing of options orders; (2) an options exchange from imposing fees or assessments to fund payment for order flow payments in connection with the routing of options orders; and (3) an options exchange member from participating in any options payment for order flow program that is organized, sponsored, or administered by an options exchange or by any group or association of unaffiliated members.

2. Susquehanna Request

In its letter, Susquehanna asks the Commission, by rulemaking or order, to exempt it from SRO rules that require Susquehanna and other similarly situated firms to contribute to exchange-sponsored payment for order flow programs. Susquehanna argues that such programs are detrimental to the markets and market participants in a number of respects. For example, Susquehanna believes that forcing market makers to participate in the programs will ultimately cause them to widen their spreads to pay for the programs, which will raise investors' transaction costs. Susquehanna also believes that such programs place exchange market makers at a competitive disadvantage versus market participants that are not members of the exchange, which are not required to pay the exchange-imposed fees. Susquehanna contends that exchange-sponsored payment for order flow programs, the fees of which are assessed on a per contract basis, unfairly discriminate against firms such as Susquehanna, which transact a large number of contracts. Moreover, Susquehanna argues that exchange-sponsored payment for order flow arrangements drain market maker resources away from other services that they could offer to their customers, such as improvements in products, technology, customer service, and communications.

In addition, Susquehanna contends that such programs create a conflict of interest for SROs that administer the programs at the same time they are tasked with ensuring that their members meet their best execution obligations. The firm also contends that such programs damage investor confidence by leading investors to believe that their orders are routed to the venues that pay for order flow rather than to those venues that offer the best price or other execution terms. Finally, Susquehanna contends that such programs can be administered in an arbitrary and potentially discriminatory manner. For all of these reasons, Susquehanna requests that the Commission exempt it (and similarly situated firms) from all such exchange-sponsored payment for order flow programs.

The Commission seeks comment generally on the Phlx Petition and on the Susquehanna Petition and specifically is requesting comments on the following issues raised in those petitions.

Question 27. What would be the effect on the options markets and market participants if the Commission were to restrict only those payment for order flow arrangements that are sponsored or sanctioned in some way by a registered options exchange, as Phlx has proposed in its petition? In particular, would such a restriction favor a specialist that can be assured of trading with the largest proportion of order flow routed to its exchange? In other words, would such a ban unfairly disadvantage an exchange on which market makers compete more aggressively with the specialist?

Question 28. Would banning exchange-sponsored programs, while continuing to permit other types of payment for order flow and dealer participation arrangements, address the concerns discussed above regarding wider spreads, best execution, and SRO conflicts of interest?

E. Should the Commission Establish Uniform Rules and Enforcement Standards Regarding Internalization and Specialist Guarantees?

With respect to facilitation guarantees, the Commission has stated that it is a violation of a broker-dealer's best execution obligation to withdraw a facilitated order that may be price improved on one market to avoid executing the order at the superior price.[100] CBOE contends, however, that in the absence of uniform rules and policies across all options exchanges that would curb such trading behavior, none of the options exchanges is able, on its own, to prevent it. CBOE contends that industry efforts over the past several months to address potentially abusive facilitation practices have been unsuccessful due to the exchanges' varying views regarding these issues. Therefore, CBOE has asked the Commission to impose uniform rules and enforcement standards that would apply in this area. In particular, CBOE recommends that the Commission take action to ensure that ''options exchanges' rules allow an executing broker to participate with some portion of its customer's order only if [the] order has been exposed first to the market in a manner that provides a meaningful opportunity for price improvement.''[101]

Question 29. Should the Commission take action, as CBOE recommends, to prohibit a broker from internalizing all or part of its customers' orders if those orders have not first been exposed to the market in a manner that provides what CBOE terms ''a meaningful opportunity'' for price improvement? What would constitute ''a meaningful opportunity'' for price improvement?[102]

Question 30. Do the options exchanges' current rules requiring that an order first be exposed to an auction before a firm can internalize it provide a meaningful opportunity for price improvement?

Question 31. What improvements could be made to the current framework for cross-market surveillance in the options markets to improve the ability of SROs to bring a best execution case against a broker that presents an order to be facilitated on one market and cancels that order, later executing it at an inferior price on another market?

Question 32. Are there other practices, occurring frequently with respect to facilitation guarantees that are inconsistent with best execution obligations? For example, are there circumstances under which an upstairs firm should not be permitted to ''shop'' an order it is seeking to facilitate at more than one exchange to determine where it can get the most favorable terms for that order?

Question 33. Are the options exchanges' rules with respect to facilitation guarantees (and the application of those rules) consistent regarding which conduct should and should not be permitted?

F. Should the Commission Apply Rule 11Ac1–5 to Options?

In 2000, when the Commission deferred applying Rule 11Ac1–5 to

[100] *See supra* note 60 and accompanying text.

[101] Letter to Harvey L. Pitt, Chairman, SEC, from William J. Brodsky, Chairman & CEO, CBOE (Feb. 10, 2003).

[102] For point of reference, *see* Exchange Act Release No. 46514 (Sept. 18, 2002), 67 FR 60267 (Sept. 18, 2002) (order approving File No. SR–ISE–2001–19 regarding facilitation of customer orders, wherein the Commission stated its belief that: ''in the ISE's fully automated market, a 10-second response period will afford electronic crowds sufficient time to compete for customer orders submitted by an E[lectronic] A[ccess] M[ember] into the Exchange's Facilitation Mechanism, thereby promoting just and equitable principles of trade, protecting investors and the public interest, and not imposing any burden on competition'' and ''the Commission believes that the timeframes necessary for exposure and execution of orders be adjudged in light of that marketplace's model. For this reason, the Commission does not believe that a fully automated market such as the ISE should be tied to timeframes relevant to the procedures of a floor-based exchange.'')

options, it noted ''potentially difficult issues would have to be addressed before options could be included within Rule 11Ac1–5.'' These issues include the creation of an NBBO for the options markets and the practical problem of the categorization of orders on a security-by-security basis, given that there may be hundreds of series of options for each underlying equity security. The Commission continues to believe that execution quality information benefits investors and other market participants in determining which markets offer the type of execution that they value.

As discussed above, OPRA has begun offering vendors an NBBO for the options markets, thereby removing one of the key obstacles to extending Rule 11Ac1–5 to options. Although the OPRA NBBO is somewhat limited in that it does not reflect price changes of less than $0.05 or update size changes of fewer than 10 contracts (in the absence of a price change), it would appear to provide options exchanges with a standardized NBBO that would permit them to make the calculations required by Rule 11Ac1–5.[103]

Question 34. Would Rule 11Ac1–5 data be useful to firms routing customers' options orders to exchanges and to those customers?

Question 35. If Rule 11Ac1–5 data would be useful for options orders, what adjustments, if any, would options market centers need to make to calculate and disseminate Rule 11Ac1–5 statistics? For example, is the OPRA NBBO a sufficient measure to enable market centers to make the Rule 11Ac1–5 calculations that require a consolidated BBO? If not, what changes would need to be made to the OPRA NBBO to make it suitable for such calculations?

Question 36. Are there other reasons why Rule 11Ac1–5 should not be applied to the options markets? For example, do the anticipated benefits of having better execution quality information for the respective options market centers justify the costs that the market centers would incur in calculating and disseminating the Rule 11Ac1–5 statistics?

G. Would Penny Quotes in Options Reduce Payment for Order Flow?

The Commission believes that an argument can be made that payment for order flow may be a symptom of a broader problem of an inefficient market that can be rectified only by better aligning the quoting increments of the options markets with those of the equities markets. With few exceptions, the U.S. equities markets quote in minimum increments of one cent, while the options markets continue to quote in ten-cent increments for options priced $3.00 and over and five-cent increments for options priced under $3.00. As discussed above, research with respect to equity securities has indicated that the move to penny increments has greatly reduced spreads in equities,[104] which, in turn, appears to have played a role, at least in the short-term, in reducing payment for order flow. The same result could occur with respect to options if the minimum pricing increment decreased to one cent.

Question 37. If options were quoted in penny increments, would payment for order flow in the options markets cease or be diminished?

Question 38. Would a move to penny quoting in the options markets place an undue strain on existing system capacity? If so, which market participants would be most negatively impacted (*e.g.*, broker-dealers, exchanges, vendors)?

Question 39. If so, are there ways to alleviate potential strains on system capacity to allow the options markets to begin quoting in penny increments?

Question 40. Are there other issues that make a move to penny quoting in the options markets infeasible or inadvisable? For example, what would be the impact on the rapidity of quote changes (*i.e.*, ''flickering quotes'')?

Question 41. If exchanges required brokers to pay directly for the capacity that they use, would the brokers quote more efficiently, and thereby make a move to penny pricing in the options markets more feasible?

H. Should the Commission Apply the Limit Order Display Rule to Options?

As discussed above, in December 2000, the Commission extended the Quote Rule to the options markets. Exchange Act Rule 11Ac1–4 (''Limit Order Display Rule''),[105] a rule that complements the Quote Rule and that is in place in the equities markets, does not currently apply to options. Adoption of the Limit Order Display Rule, as well as other order handling rules, in the equity markets dramatically narrowed spreads as customer limit orders began to compete with the quotes of market professionals to set the best prices in the market.[106]

With certain exceptions, Rule 11Ac1–4 requires, among other things, that specialists and over-the-counter market makers immediately publish customer limit orders that improve the specialist's or market maker's quote in a particular security.[107] While certain of the options exchanges have proposed rules that would require the immediate display of customer limit orders,[108] currently there is no uniform limit order display requirement that applies across the options markets. Nevertheless, the increase in intramarket competition brought about by certain of the market structure changes discussed above could suggest that a uniform limit order display rule should apply to the options markets.

Question 42. Should the Commission apply a limit order display obligation to the options markets?

Question 43. Would the benefits of a uniform display requirement justify the costs of imposing such an obligation on options market participants?

Question 44. Do the options markets have unique characteristics that would make the application of a uniform limit order display obligation there less feasible than in the equities markets? If so, what are those characteristics?

Question 45. If a limit order display obligation would be beneficial for the options markets, what modifications, if any, to Rule 11Ac1–4, would be required before it could be applied to options market participants?

Question 46. If a uniform limit order display requirement is not appropriate for the options markets, are there other safeguards that could be put in place to ensure that customer limit orders are immediately displayed?

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[103] For example, Rule 11Ac1–5 requires market centers to disseminate for market orders and marketable limit orders the average effective spread for executions of orders covered by the rule. The ''average effective spread'' is the share-weighted average of effective spreads for order executions calculated, for buy orders, as double the amount of difference between the execution price and the midpoint of the consolidated best bid and offer at the time of order receipt. *See* Rule 11Ac1–5 (a)(2).

[104] *See supra* note 72 and accompanying text.

[105] 17 CFR 240.11Ac1–4.

[106] NASD found that, as a result of the Limit Order Display Rule and other market structure changes implemented at the time, quoted spreads in the securities NASD studied declined, on average, by forty-one percent. Effective spreads declined, on average, by twenty-four percent. *See* NASD Economic Research, Market Quality Monitoring: Overview of 1997 Market Changes (March 17, 1998).

[107] 17 CFR 240.11Ac1–4(b). In the alternative, the specialist or market maker may, among other things, immediately execute the limit order or route it to another market center that will display it. 17 CFR 240.11Ac1–4(c).

[108] *See, e.g.*, Exchange Act Release Nos. 43126 (August 7, 2000), 65 FR 49621 (August 14, 2000) (seeking public comment on File No. SR–Phlx–00–34) and 43550 (Nov. 13, 2000), 65 FR 69979 (Nov. 21, 2000) (seeking public comment on File No. SR–PCX–00–15). *See also* File No. SR–Amex–00–27.

VII. Solicitation of Additional Comments

In addition to the areas for comment identified above, we are interested in any other issues that commenters may wish to address relating to the options markets. Please be as specific as possible in your discussion and analysis of any additional issues. Where possible, please provide empirical data or observations of market trends to support or illustrate your comments.

By the Commission.

Dated: February 3, 2004.

Margaret H. McFarland,

Deputy Secretary.

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