April 16, 2004

Mr. Jonathan G. Katz
Secretary
U.S. Securities & Exchange Commission
450 5th St NW
Washington, DC 20549

Re: Competitive Developments in the Options Markets: File No. S7-07-04

Dear Mr. Katz:

CBOE welcomes the opportunity to submit this comment letter in response to the Commission's concept release entitled "Competitive Developments in the Options Markets" ("Release").

The competitive landscape of the options industry has changed drastically over the past several years. Competition has increased and, as a result, so has the number of marketplace innovations. For instance, CBOE was the first floor-based options exchange to disseminate dynamic quotes with size. Most recently, CBOE introduced its Hybrid Trading System, which, as the Commission notes in its Release, greatly expanded the amount of intra-exchange competition, which in turn resulted in a "dramatic narrowing of quoted and effective spreads." Concurrent with CBOE's marketplace innovations, the Commission implemented numerous regulatory changes designed to strengthen the integrity of the markets, including, but not limited to: the introduction and application of a firm quote rule to options; application of Rule 11Ac1-6 (disclosure of order routing information) to options transactions; and the development of an intermarket linkage system. Underpinning the adoption of each of these enhancements by the Commission was the desire to strengthen the competitiveness and integrity of the options markets and to enhance fair treatment and best execution of customer orders. Unfortunately, payment for order flow ("PFOF") and certain types of internalization are muting the desired effects of the SEC's recent regulatory initiatives and run counter to SEC's efforts to attack conflicts of interest in the securities industry that may harm investors.

Since January 2000, CBOE has expressed its concerns with payment for order flow to the Commission and has urged the Commission to prohibit it in the options marketplace. PFOF raises serious conflicts of interest that can compromise a broker's fiduciary obligation to achieve best execution of its customers' orders, while at the same time it creates strong disincentives for all market participants to quote competitively. The same kind of conflicts may also arise with respect to internalization, since whenever a broker seeks to cross a customer's order that it represents as agent without first exposing that order for meaningful price discovery, there is a risk that the broker's self-interest may conflict with the interests of the customer. If the broker internalizes a portion of the customer's order as principal without adequate market exposure, the conflict results from the fact that an advantageous price to the broker is less likely to be attractive to the customer.

Over the past year the Commission has been vigilant in communicating a strong message to the securities industry: practices that create fundamental conflicts of interest between a broker's fiduciary duty of best execution to its customers and its own self-interest (e.g., directed brokerage, analyst

"independence" or mutual fund breakpoints[1]), not only jeopardize specific investor transactions, but also undermine public confidence in the integrity of the markets as a whole, and thus will be dealt with severely by the Commission. Payment for order flow and certain forms of internalization likewise create fundamental conflicts of interest, contribute to a degradation of quote quality, and are no less harmful to investors than other practices under attack by the Commission. It is time for the Commission to take appropriate steps to eliminate these conflicts by banning all forms of PFOF and limiting certain forms of internalization in the options markets.

Below is an executive summary of CBOE's responses to each of the issues raised in the Release. A detailed response to all of the questions posed in the Release is attached as Exhibit A. If CBOE may be of further assistance in this matter, please do not hesitate to contact the undersigned. We look forward to continuing to work actively with the Commission to address these profound and complex issues.

Sincerely,

William J. Brodsky
Chairman and Chief Executive Officer

cc:
Chairman William H. Donaldson
Commissioner Paul S. Atkins
Commissioner Roel C. Campos
Commissioner Cynthia A. Glassman
Commissioner Harvey J. Goldschmid
Annette L. Nazareth, Director, Division of Market Regulation
Robert L.D. Colby, Deputy Director, Division of Market Regulation
Elizabeth King, Associate Director, Division of Market Regulation

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[1] *See, e.g.,* Chairman Arthur Levitt, "Best Execution: Promise of Integrity, Guardian of Competition," Speech before the Securities Industry Association, November 4, 1999; Letter from Chairman Harvey L. Pitt, January 24, 2003; Annette L. Nazareth, Remarks Before the 2002 Options Industry Conference, May 3, 2002; Elizabeth King, Remarks at 2003 Options Industry Conference, April 25, 2003. *See also* Commissioner Cynthia A. Glassman, Remarks at the SIA Compliance & Legal Division's 35th Annual Seminar, March 23, 2004 (discussing conflicts of interest as at the heart of current industry scandals); and *see also*, Chairman William Donaldson's remarks given during his testimony before the U.S. Senate Committee on Banking, Housing and Urban Affairs (April 8, 2004) in which he discussed conflicts of interests in the mutual fund industry in that the use of broker commissions to compensate broker-dealers for distribution of a fund's shares "potentially compromises the best execution of a fund's portfolio trades, increases portfolio turnover, and corrupts broker-dealers' recommendations to their customers."

Executive Summary of
Chicago Board Options Exchange's
Responses to SEC Concept Release
"Competitive Developments in the Options Markets"

Payment for Order Flow

1. In a world where PFOF does not exist, order routing considerations are generally based on important factors that are designed to benefit the execution of orders for customers, such as price, speed of execution, and execution quality. The entry of PFOF into the mix changes the order routing considerations from these customer-based factors to a factor designed to benefit customers' brokers, with the result that order flow may be routed in large part based on which specialist pays the most for the order.

2. The routing of orders based on PFOF serves as a disincentive for all market participants, whether they won or lost the payment arrangement, to quote competitively. Moreover, it imposes one more cost on market participants, which also is not conducive to narrower quote spreads.

3. PFOF is inconsistent with the basic concepts of agency law and creates fundamental conflicts of interest between a broker's duty of best execution and its own self-interest. Such conflicts not only jeopardize specific investor transactions, but also undermine public confidence in the integrity of the markets as a whole.

4. There is no practical difference between cash payment and non-cash payment as both present the exact same conflicts. Moreover, the difficulty, if not inability, to effectively value all non-cash payment is one more reason why all forms of PFOF should be abolished.

5. Exchange-sponsored and non-exchange sponsored forms of PFOF (to the extent there is any validity to the distinction – a proposition with which we take issue) raise the exact same conflicts of interest and both should be eliminated completely from the marketplace. The Phlx's assertion that non-exchange sponsored PFOF is an acceptable practice is nothing more than a thinly veiled attempt to garner order flow at the expense of those exchanges that offer significant intramarket competition. Differentiating between exchange and non-exchange sponsored PFOF would also create unequal regulation and actually amplify the harmful effect of payment for order flow.

6. Reliance on decimalization to eliminate PFOF is not the answer and instead raises significant issues that make the cure worse than the disease (i.e., quote capacity concerns as described below under section entitled "Decimal Quoting"). The only way to eliminate PFOF is through direct prohibition of all types (soft and hard dollars) and forms (exchange- and non-exchange sponsored) of PFOF.

Internalization

1. Internalization in the options markets originally began as a means for firms to provide supplemental liquidity for larger orders so that they might obtain a better price for such orders.

2. Today, internalization increasingly occurs at prices where there is already sufficient liquidity in the marketplace to execute customer orders and at price points that do not improve upon existing

quotes by a meaningful amount. In these instances, the firm's participation does not add to (and in the long-term may actually detract from) the price discovery process.

3. Firms seeking to "participate" in the execution of their customer orders may direct those orders to an exchange where the firm has the greatest likelihood of maximizing its participation (i.e., the "path of least resistance"). This practice can deny the customer order a more meaningful chance at price improvement because it usually involves the exchange least likely to offer price improvement. In those cases where price improvement might be available elsewhere, brokers are cognizant that a better price for the customer necessarily is a less favorable price for it, which could lead some firms to avoid price discovery (and hence potential price improvement) rather than seek it.

4. This conflict of interest is only muted when a firm provides the order with meaningful exposure and opportunity for price improvement before trading against it at a price point in which no other market participants have an interest (i.e. a price where, otherwise, there would be insufficient liquidity) or at a price point that is superior to a trading crowd's original market (i.e. where the firm initiated meaningful price improvement for the customer).

5. Widespread internalization that does not provide meaningful price improvement for customers likely results in degradation of market quality and less favorable executions for all orders. If firms increasingly see internalization as a profit center and seek ways to participate in the most favorable orders, market makers are denied an opportunity to interact with a representative segment of order flow, which could cause them to cease making markets or widen spreads to accommodate this increased trading risk.

6. The SEC should reinforce the best execution obligations of firms internalizing customer orders, require meaningful order exposure, and provide guidance to exchanges and firms on enforcement against shopping orders to find the exchange with the "path of least resistance."

Specialist Guarantees

1. CBOE's current "specialist guarantee" rules enhance competition and allow it to attract and retain well-capitalized DPMs.

2. The current "specialist guarantee" percentages strike an effective competitive balance between the need to attract and retain well-capitalized specialists while at the same time helping to preserve intramarket competition by leaving non-specialists a significant portion of an order for which they may compete.

Extension of Commission Rule 11Ac1-5 (reports that measure order execution quality) to the Options Markets

1. CBOE believes that both the approach and the data elements contained in Rule 11Ac1-5 are unsuitable for options. There are scores of series for each options class, which would result in enormous amounts of data for options. That, in turn, would impose an enormous data collection and processing obligation upon the exchanges that would dwarf that of the equity markets.

2. If, however, order flow firms strongly recommend that Rule 11Ac1-5 extend to options, then any resulting proposal would need to be tailored to the unique characteristics of options.

Decimal Quoting

1. CBOE is skeptical that penny quoting alone would eliminate the problems of payment for order flow or have the same spread-reducing impact as in the equities markets. Even if this were to be the case, a conversion to penny pricing could cause significant disruptions to the options markets that might far outweigh any possible benefits. With penny pricing, each change in the price of the underlying could generate literally thousands of new option quotes being sent to OPRA for dissemination.

2. The cost to expand OPRA's market data system and network to handle the huge number of options quotes would be substantial and would have to be borne by the options exchanges and, ultimately, by their members. Similarly, most broker-dealers would have to expand their own systems to be able to accommodate the huge volume of quotation messages that OPRA would be sending.

3. The potential for penny jumping and other dislocations from penny pricing would be exacerbated in the options markets because liquidity is spread over numerous series per option class. If the SEC were to move to penny pricing in the options markets, it must first address difficult issues of cost, competition, effect on transparency, and market practices.

Extension of the Commission Limit Order Display Rule to Options Markets

CBOE currently requires its members to comply with the requirements of the Limit Order Display Rule. To the extent this obligation is not uniform across all exchanges, it should be.

SRO Oversight for Best Execution

1. CBOE does not believe its status as a self-regulatory organization and its interest in maximizing order flow to the exchange impacts in any way its ability or determination to carry out fully its regulatory responsibilities. To the contrary, CBOE has continually taken steps to enhance its best execution oversight.

2. CBOE believes it is imperative for there to be uniform and equal regulation of best execution practices among all of the options exchanges to avoid regulatory forum shopping.

Exhibit A

Responses of the
Chicago Board Options Exchange to
Questions Raised in SEC Concept Release
"Competitive Developments in the Options Markets"

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?

PFOF, whether it is characterized as exchange-sponsored or non-exchange-sponsored, creates a strong disincentive for both paying and non-paying market makers to quote aggressively. The practice is detrimental to investors and the markets and presents serious conflicts for brokers. The CBOE urges the Commission to ban it.

As noted by the Commission, PFOF arrangements have become quite common in the options industry.[2] PFOF typically involves "payment arrangements" in which certain firms send their retail order flow to the trading crowd where the Designated Primary Market Maker ("DPM") or specialist (collectively "specialist") has such a "payment arrangement." Because the "payment arrangement" is usually won by the specialist willing to provide the largest financial inducement to the order-providing firm, **the real competition for order flow ends when the payment arrangements are made**, and thus does not necessarily occur on an order-by-order basis depending on where best execution may be achieved. The fact that orders are routed based on payment arrangements and not on price provides a huge negative incentive to quote aggressively to both the specialist who has won the payment arrangement and the specialist who has lost.

The paying specialist (i.e., the specialist that won the payment arrangement competition) has no incentive to better his quote to attract that order flow because the order will be routed to him regardless of whether it has the best displayed price at the time.[3] To the contrary, the paying specialist has more of an incentive to widen his quotes because he only need match NBBO to receive the order. Moreover, PFOF may contribute to wider spreads because the specialist has to be able to recover the costs of PFOF.[4]

Similarly, the specialist that lost the payment arrangement also has a decreased incentive to attempt to improve price. Although the specialist ordinarily would have an economic incentive to better

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[2] Office of Compliance Inspections and Examinations and Office of Economic Analysis, "Special Study: Payment for Order Flow and Internalization in the Options Markets" at 5 (December 2000) (in August 2000, 78% of orders were routed pursuant to payment arrangements).

[3] While the paying market maker often guarantees NBBO as part of the PFOF arrangement, this "price-matching" requirement provides no incentive to improve prices beyond NBBO.

[4] The economic burden presented by payment for order flow makes it much more difficult for a market participant to tighten its spreads, and jeopardizes market participants' ability to continue investing in efficiency-enhancing technologies. To the extent that market participants cannot continue to invest in such new technologies, the efficiency of the market as a whole will suffer.

his price in a competitive attempt to capture order flow, he has already lost the payment arrangement competition. Accordingly, the specialist has less incentive to improve spreads because he isn't going to get the paid-for order flow even if he quotes the best price. Rather, the specialist that lost the payment arrangement has an incentive to widen his quotes because he has lost the opportunity to compete for a substantial segment of order flow (i.e., that 78% of the flow subject to PFOF arrangements). Because he now can only compete for a much smaller segment of the order flow, but his fixed costs do not correspondingly decrease, his per contract costs increase, which provides more of an incentive to widen rather than narrow spreads.[5] This leads to the result where neither of the specialists (i.e., that won and lost the payment arrangement competition) has an incentive to improve prices.

Because payment for order flow undercuts the ability of an exchange to compete on factors that benefit investors, it disadvantages exchanges such as CBOE that attempt to provide superior prices and services. It also forces us to engage in the practice despite our severe distaste of it in order to remain competitive with specialists on other markets that pay for flow.

Banning PFOF would significantly enhance specialists' incentives to quote aggressively. Without PFOF, specialists, market makers, and exchanges would compete for order flow on the factors that matter to, and benefit, investors: price and execution quality. Indeed, PFOF provides a way for less efficient markets to avoid competing on the basis of price and execution quality; instead, they compete by paying the broker to route order flow to those markets. This highlights the fundamental conflict, inherent in PFOF arrangements, between a firm's best execution obligations to its customers and its efforts to maximize its own profits. This conflict is well recognized by the Commission.[6] Unfortunately, the current "sunlight is the best disinfectant" policy of permitting this conflict to remain so long as it is disclosed has been and continues to be inadequate and ineffective in solving the problems associated with PFOF.[7]

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?

Spreads have narrowed for several reasons, and absent PFOF, likely would have narrowed more, and narrowed more quickly. The expansion of multiple listing over the past five years has resulted in more entities quoting per class. Similarly, the recent increase in intramarket competition has led to yet more quoters in each class. For example, over the past year, CBOE launched its Hybrid trading platform in 600 options classes. The Hybrid system improves the quoting capability of individual market makers, increasing quote competition. Other factors have contributed to the narrowing of spreads as well. Volatility today is a fraction of what it was several years ago. Interest rates are at 30-year lows. Stocks that used to trade at $120 in the bubble years of the late 1990s now trade in the teens and in penny increments on the underlying exchanges (instead of 1/8ths).

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[5] The SEC previously addressed this "dwindling universe" issue in its Request for Comment on SR-PHLX-00-01, when in the context of excessive specialist guarantees it noted that MMs' inability to compete for a larger portion of orders increased their costs on a per-unit basis and that "they will scarcely be able to compete by offering still better prices." Securities Exchange Act Release No. 43100 (July 31, 2000), 65 FR 48778, 48788 (Aug. 9, 2000).

[6] *See, e.g.,* Annette L. Nazareth, Remarks Before the 2002 Options Industry Conference, May 3, 2002.

[7] *See, e.g.,* Allen Ferrell, "A proposal for Solving Payment for Order Flow," 74 S. Cal. L. Rev. 1027 (May 2001), "The disclosure requirements placed on brokers are largely off-target…. a significant portion of small investors would fail to read, to understand, and to act upon the disclosed information when selecting a broker." *Id*. at 1071-2.

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?

Market participants on exchanges with less intramarket competition are far more likely to enter PFOF arrangements than are their counterparts on more competitive exchanges. On exchanges with less intramarket competition, a specialist that pays for order flow is likely to trade with a greater percentage of that order flow solely because there are fewer other market makers to share in the order. This makes the specialist more willing to pay for order flow because he obtains more of the benefit of the payment. The more order flow the specialist trades, the more economical this cost will be (*i.e.*, the per contract cost decreases). Contrast this to an exchange with substantially more intramarket competition, such as CBOE. A specialist or DPM that pays for order flow must still compete with market makers in the crowd to fill those orders. With more market participants vying for orders, each individual participant is likely to trade fewer contracts, and the paying specialist or DPM is less able to obtain the benefit of his payments. Consequently, specialists on markets with less intramarket competition have a distinct economic advantage with respect to funding PFOF. That being said, enhancing intramarket competition by itself is not likely to end the practice of payment for order flow for several reasons. First, exchanges without such intramarket competition are likely to continue to pay for order flow. Second, certain exchanges that permit multiple market maker quotations employ facilitation mechanisms such as the BOX's Price Improvement Period which, when coupled with BOX's Directed Order process, allow firms paying for order flow to internalize orders without competitively quoting.

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?

The current specialist guarantee rules on CBOE significantly enhance competition by rewarding DPMs for providing liquidity and other services, while at the same time providing sufficient incentive to other market makers to assure their continued presence as sources of additional competition. DPMs serve to "market" the exchange by attracting order flow to it, and perform many agency functions relating to linkage and the limit order book. In addition, DPMs have a 100% quoting requirement whereas market makers on CBOE are obligated to continuously quote a maximum 60% of the series. Specialist guarantees enable the Exchange to attract and retain well-capitalized DPMs, who can compete for order flow and improve the competitiveness and liquidity of the exchange.

CBOE believes the current 40% specialist guarantee strikes an effective competitive balance between the need to attract and retain well-capitalized specialists while at the same time helping to preserve intramarket competition by leaving non-specialists at least 60% of an order.[8] Market makers must compete to obtain all, or a share of, that remaining portion of the order. And of course, on CBOE, specialist "guarantees" do not actually *guarantee* that a DPM will obtain *any* portion of an order as a DPM must be on the best bid or offer to participate, which means that a market maker may always obtain 100% of an order by improving the prevailing price, in effect shutting out the DPM and others.[9]

[8] On CBOE, the DPM is entitled to 30% of an order when joined by three or more market makers.

[9] Our analysis of specialist guarantee rules is limited to application on CBOE and we express no opinion on how those rules might operate on other exchanges.

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?

A market maker's incentive to quote aggressively can be impacted by the percentage of orders that an upstairs firm internalizes. Internalization was originally intended to be a way for brokers to facilitate the execution of their customers' difficult trades (often referred to as "facilitation"). When there is insufficient liquidity or otherwise limited trading interest, facilitation allows a broker to provide supplemental liquidity to enhance execution of the customer's order. This "liquidity-providing" form of internalization helps provide the best execution for the order because as favorable an execution would not otherwise be available in the marketplace. In contrast, when a firm's internalization practices extend beyond the "liquidity-providing" stage and involve the firm's taking the opposite side of its customer's transactions without improving the market by a meaningful amount or where sufficient market maker interest exists, the firm's interest becomes directly adverse to its customer's interest. Aside from the obvious conflict issues (which we address in more detail in Response to Question 11), this "liquidity-taking" form of internalization also serves as a disincentive to market makers to quote competitively. As more orders are internalized, there are fewer orders for which market makers can compete. Similar to the response on payment for order flow, if a market maker loses order flow to internalizers despite posting competitive prices, the market maker has less incentive to quote aggressively. And, as the SEC has previously noted, market makers' inability to compete for a larger portion of orders increases their costs on a per-unit basis, which inhibits their ability to compete by "offering still better prices."[10]

Accordingly, all things being equal, a market maker is 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 without regard to the existing amount of liquidity being offered.

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?

Payment for order flow affects execution quality of customer orders by influencing broker-dealers' best execution decision making. As noted in the responses above, payment raises significant conflicts of interest for order flow providers. Instead of routing orders based on price and speed of execution, payment-accepting firms may be induced to route orders based on which market pays the most for order flow. In other words, instead of routing orders solely based on factors that benefit the execution of the customer's order, such firms might route orders based on financial considerations that benefit those firms. This can affect the overall quality of executions obtained for the paid order flow. In this respect, PFOF raises the same conflict of interest concerns as other practices that have drawn Commission scrutiny recently, such as soft dollars and directed brokerage, where the SEC has raised questions as to whether customers' interests have been subordinated to those of professionals.

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[10] Securities Exchange Act Release No. 43100 (July 31, 2000), 65 FR 48778, 48788 (Aug. 9, 2000).

Payment for order flow also can lead to inferior executions overall because it leads market makers to have a diminished incentive to quote aggressively. (See our response to Question 1 on this) We do not believe that orders can receive the best possible prices when all market participants bidding for those orders have a diminished incentive to quote competitively. Elimination of PFOF will eliminate all disincentives to quoting competitively and as such should result in all orders receiving better executions.

Trade through rules are effective at ensuring that orders received by the CBOE receive the best-displayed price across markets.[11] It is important to note, though, that trade through rules do not ameliorate the potential harm to execution quality from payment for order flow. In this regard, no best-execution program can determine what price a market participant might have quoted had there been no PFOF to influence the routing decision. Such rules do not prevent the influence on order routing decisions nor do they address the disincentive to quote competition.

Questions 7-10

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?

In setting the price and size of their quotes, market makers factor several variables into their pricing models, including but not limited to, their perception of the risk associated with all orders and the cost of PFOF. Market makers' quotes are representative of the price at which they are willing to trade, regardless of with whom (i.e., professional v. nonprofessional). That market makers generally are equally willing to trade with professional and nonprofessional orders is evidenced today by the fact that most exchanges allow all order types to receive automatic executions regardless of whether they are professional or nonprofessional, informed or noninformed.[12]

Certainly, the elimination of all types and forms of PFOF will enhance market participants' incentive to quote competitively. In the absence of PFOF, market makers will have greater incentive to put up their best prices knowing they actually have a chance to compete for an order. The opportunity to receive better-priced executions would be available to all orders, professional and nonprofessional alike.

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[11] We note that the Amex MM Association has made some inconsistent assertions about CBOE's performance in connection with the linkage. Not only is the association incorrect about the operation of the linkage plan, but we also disagree strenuously with its mischaracterizations of CBOE linkage activity. Rather than use the concept release as a vehicle to complain about the numerous disturbing practices by Amex market makers, CBOE prefers to address the broad structural issues raised in the SEC release.

[12] Conceptually, CBOE disagrees with the SEC's characterization of nonprofessional orders as "uninformed" while at the same time characterizing professional orders as "informed." It is our experience that nonprofessional (i.e., customer) orders may be very informed while, conversely, some professionals may be very uninformed.

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?

Customer orders that are internalized in whole or in part may receive less favorable executions because the conflict of interest inherent in certain forms of internalization can lead such orders to be handled in a manner that provides less opportunity for price improvement to the customer. Further, as indicated in our response to Question 5, certain types of internalization may ultimately result in degradation of market quality and less favorable executions for all orders.

As previously stated, internalization (or in this case, facilitation) was originally intended to be a way for brokers to facilitate the execution of difficult trades. Increasingly, however, some firms desire to internalize options orders merely to take the other side of their customers' orders. This likely means that such orders are being internalized not because they are difficult to execute but because of the profit potential in trading against such orders. The result is that an agent for an order (charged with seeking best execution for that order) may view internalization as providing an opportunity to profit more by executing the customer order at a less favorable price to the customer. Undeniably, just as with payment for order flow, this type of internalization has the potential to encourage firms to consider their own economic interests over those of their customers.

CBOE has observed that oftentimes a firm seeking to "participate" in the execution of its customer order may direct that order to an exchange where the firm has the greatest likelihood of maximizing its participation (this can sometimes be a floor-based exchange or it can be an all electronic exchange). We refer to this as the "path of least resistance". This path not only allows a firm to maximize participation, but also it can deny the customer order a more meaningful chance at price improvement because the exchange where participation can be maximized is usually the exchange least likely to offer price improvement.[13] In those cases where price improvement might be available elsewhere, the internalizing broker's interest becomes directly adverse to its customer's because a better price for the customer necessarily is a worse price for the broker. As a result, some firms may increasingly avoid order exposure and interaction rather than seek it.

This conflict of interest can, understandably, have a negative impact on the execution quality of internalized orders vs. non-internalized orders (of course non-internalized orders that are routed pursuant to PFOF may also be denied a meaningful chance at price improvement). CBOE believes that this conflict is only muted when a firm trades against its own customer's order after providing the customer order with meaningful exposure and opportunity for price improvement before trading against it at a price point in which no other market participants have an interest (i.e. a price where, otherwise, there would be insufficient liquidity).

Moreover, as CBOE has previously explained in its submission opposing the Boston Options Exchange's Price Improvement Period,[14] widespread internalization likely results in less favorable executions for all orders. As noted above, brokers can choose whether to internalize an order or expose it

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[13]This practice has evolved to include so-called "if-then" orders, in which brokers may delay transmission of an order to any marketplace until they have determined in which venue their participation will be greatest. The concerns raised by this practice have been exacerbated by a lack of uniformity among the exchanges in dealing with "if-then" orders thereby creating a regulatory arbitrage situation that is not favorable to investors.

[14] James C. Miller III, et al. "Market Implications of the Proposed Rule Change by Boston Stock Exchange, Inc. Establishing Boston Options Exchanges and the Associated Price Improvement Period," at 8-9.

to a crowd for the opportunity for price improvement. If firms increasingly see internalization as a profit center and seek to internalize the orders that appear favorable to them, they will deny market makers an opportunity to interact with a representative universe of order flow. Increasingly left with a less representative pool of orders with which to trade, market makers that can will cease making markets and emulate the internalization model, and market makers that can't will adjust spreads to accommodate this increased trading risk. This reaction ultimately provides less favorable executions for all customers.

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?

Not in all instances, because exchange rules vary regarding the type and extent of the auction that must occur. If exchange rules require an auction with broad exposure and sufficient time for market participants to provide responses to the auction process, the auction will help ensure that the order gets filled by market makers offering a more favorable execution, or will show that there is no better execution available, and in such a case, internalization may be appropriate. By contrast, an auction that is visible and/or audible to a negligible number of market participants for an inadequate duration is much less likely to generate price improvement. Of course, the auction process is being increasingly circumvented by the proliferation of "if-then" orders (as described in footnote 12).

Questions 13-16: Conflicts Between the Roles of Market and SRO (Questions 13-16)

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?

CBOE does not believe its status as a self-regulatory organization and its interest in maximizing order flow to the exchange impacts in any way its ability or determination to carry out fully its regulatory responsibilities. To the contrary, CBOE has continually taken steps to enhance its best execution oversight. For example, CBOE has devoted substantial resources to its Best Execution Assurance Program for immediate review of questionable executions of customer orders received through CBOE's Order Routing System, other than orders resting on the limit order book, and which are compared against the NBBO.[15]

[15] Order Routing System orders not executed at the CBOE disseminated quote or better (firm quote), orders that are not executed at NBBO or better, and orders executed ahead of orders in the book (book priority) are automatically displayed to CBOE Regulatory Staff, who review them and seek price adjustments in appropriate circumstances.

In addition, CBOE has implemented a series of measures designed to reduce any potential for undue or inappropriate member influence on CBOE's governance or regulatory process. As we described in a May 13, 2003, letter to Chairman Donaldson, a Special Governance Committee consisting of four Public Governors of our Board conducted a thorough review of CBOE's governance structure and made recommendations for changes to the governance structure and practice.[16] These changes, which were then adopted by CBOE, include balancing the Board equally between public and non-public directors, providing that at least half the members of the Executive Committee, Audit Committee and Compensation Committee be public directors, and requiring that the Chairman of the Audit and Compensation Committee be public directors. In addition, CBOE established a standing Regulatory Oversight Committee of the Board, consisting entirely of public directors, to oversee the independence and integrity of the regulatory functions of the Exchange and ensure that the regulatory functions of the Exchange remain free from any potential inappropriate influence of CBOE members.

The above are some of the steps CBOE has taken to improve the operation of its governance structure and regulatory roles. We believe these steps provide a strong infrastructure to help ensure that that the benefits of self-regulation are maintained while minimizing conflict concerns. We do not believe in jettisoning the self-regulatory structure. We strongly disagree with the suggestion or principle that payment for order flow, whether exchange-sponsored or not, and internalization practices in the options markets should be singled out as potentially compromising an options exchange's ability effectively to enforce best execution obligations of its members. As we explained in a letter to former SEC Chairman Pitt on a similar question last year, we take strong issue with the notion that facilitation rules or exchange-sponsored payment plans would in any way sway us from vigorous oversight of members' best execution obligations.[17] If anything, our concerns with payment for order flow and internalization should stimulate us to be more aggressive in combating the conflicts arising from these practices.

CBOE is committed to ensuring that firms comply with their best execution obligations.[18] The CBOE's efforts in ensuring best execution compliance could be enhanced by the issuance of a joint circular by all of the options exchanges. Beginning in June 2002, the Commission staff undertook a joint effort with the options exchanges to develop such a joint circular on permissible and impermissible practices relating to internalization. This circular has not yet been issued. Without such guidance, firms may forum-shop to find the most permissive market for internalization. This problem highlights the need for the Commission to impose uniform standards that will apply in this area.

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

The "recent regulatory changes" to which the Commission refers (the introduction and application of a firm quote rule to options, application of Rule 11Ac1-6 to options transactions, and the development of an intermarket linkage system) have done nothing to stem the prevalence of PFOF and

[16] Letter dated May 13, 2003, from William J. Brodsky, Chairman and Chief Executive Officer, CBOE, to The Honorable William H. Donaldson, Chairman, SEC, regarding the March 26, 2003 Letter on Governance.

[17] Letter dated February 10, 2003, from William J. Brodsky, Chairman and Chief Executive Officer, CBOE, to The Honorable Harvey L. Pitt, Chairman, SEC, regarding January 24, 2003, Letter on Payment for Order Flow and Internalization. See also our Responses to Questions 27 and 28.

[18] As evidence of our commitment to policing for best execution, CBOE took enforcement action against a member firm that tried to effect a facilitation cross on CBOE, but executed the cross on another exchange at an inferior price than that offered by the CBOE trading crowd. We were willing to take necessary enforcement action even if it could have resulted in collateral consequences for our ability to attract and maintain order flow.

internalization in the options markets. To the contrary, there is exponentially more PFOF and internalization today than there was when the Commission published its Special Study in December 2000. The approval of the BOX's PIP should lead to even more payment for order flow and internalization. As described above, both PFOF and certain internalization practices are having significant negative consequences on investors and the markets, and as described above, the exchanges are not currently in a position to prevent those negative results. Orders today are routed much more frequently due to nonprice considerations (i.e., who is willing to pay the most or where can a firm cross the most) than they are due to other considerations such as price, liquidity, and speed. CBOE believes that such nonprice routing considerations undermine the effectiveness of the "recent regulatory changes" to which the Commission refers. The absence of direct and decisive Commission action will do nothing but continue to foster the status quo. The CBOE cannot state strongly enough that firm and decisive Commission action is necessary to eliminate the impact from the conflicts of interest created by PFOF and widespread internalization. As such, CBOE urges the Commission to ban all forms of PFOF and to restrict internalization in the manner described above. Only then will the "recent regulatory changes" to which the Commission refers begin to have their full and desired effects.

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?

Without regulatory action by the Commission, the problems caused by PFOF and certain internalization practices will worsen, and execution quality will continue to suffer. Payment for order flow and certain internalization practices effectively provide some of the market participants that engage in such practices a means to avoid vigorous price competition. There currently is little incentive for these market participants to move away from this model, as doing so would expose them to more competitive price discovery, with a reduction in their profits. Moreover, the approval of the BOX's PIP and proposals by the ISE to adopt a similar procedure inevitably will prompt other exchanges to do likewise. This will result in a structure of fragmented markets competing to attract order flow on the basis of offering frictionless facilitation procedures.

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?

In the absence of the SEC's banning all forms of PFOF, firms should be required to rebate directly to their customers all funds they receive as an inducement for routing order flow to a particular exchange. At least that way, customers would see some tangible benefit from the monetization of their orders by their agents. A rebate of anything less than the full amount of the payment received by the firm allows the firm to profit at its customer's expense.[19] Of course, some reporting obligations would have to be imposed to ensure that proper rebating takes place. CBOE believes that a requirement that firms rebate

[19] Some payment-accepting firms that do not rebate claim that the funds enable them to benefit customers in other respects, for example, by being able to offer lower commissions. CBOE believes the trend towards lower commissions is more competition driven and in support of this notes that many firms that do NOT accept payment similarly have lowered commissions.

any payment they receive could serve to help eliminate PFOF as it would lessen, if not completely eliminate, the incentive for firms to sell their order flow.

As noted above, PFOF allows less efficient markets to attract order flow through payments rather than competing on the basis of price and execution quality. Rebating would at least serve to partially compensate investors for this loss in price and execution quality. Such compensation, however, is likely to be incomplete. A recent study found that PFOF causes spreads to widen more than the per-trade amount of the payment. Accordingly, rebating even the entire order flow payment to the investor would still leave the investor worse off.[20]

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

Non-cash inducements (i.e., soft-dollars) pose the exact same conflicts of interest and other problems presented by cash PFOF, and lead to the same potential harm to investors.[21] For this reason, any potential difficulty in valuing non-cash inducements supports the outright elimination of PFOF, rather than a rebating solution. Assuming the Commission determines to require rebating, the Commission will also have to impose uniform standards for valuing non-cash inducements. Although developing market-based valuation standards for certain types of non-cash payments may be feasible, it is not clear if it is possible to cover all possible such inducements, or whether they would be susceptible to a market-based valuation. Nevertheless, the SEC should not use the difficulty in valuing non-cash inducements as a reason not to require rebates to customers. At a minimum, the SEC could ban payment for order flow unless a firm rebates the payment to the customer. If a firm finds it too difficult to value non-cash payment for rebate to customers, then it should not accept the non-cash payment.

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?

The net result of a total ban on PFOF (cash and non-cash) will be more aggressive competition on the basis of the features that matter to, and will benefit, investors: price and execution quality. This conclusion is supported by the Commission's own Special Study, in which the SEC expressed concern that PFOF "contribute[s] to an environment in which quote competition is not always rewarded, thereby discouraging the display of aggressively priced quotes."[22] The Special Study concluded that "[w]hile the fierce competition brought on by increased multiple-listing produced immediate economic benefits to investors in the form of narrower quotes and effective spreads, by some measures these improvements

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[20] C.A. Parlour & U. Rajan, "Payment for Order Flow," 68(3) *J. of Financial Economics*, June 2003. The authors find that "with payment of order flow, spreads widen to more than compensate for this payment; hence, there is no equilibrium in which market makers earn zero profits. While brokerage commissions for market orders can fall, the total transactions cost to submitting a market order remains positive." *Id.* at 381.

[21] The conflict of interest associated with "soft-dollars" is an issue the Commission is currently addressing in different contexts. *See, e.g.,* Commissioner Harvey J. Goldschmidt, "Mutual Fund Regulation: A Time for Healing and Reform," December 4, 2003.

[22] *See* Special Study, Executive Summary, *citing* Securities Exchange Act Release No. 43590 (November 17, 2000), 65 FR 75414 (Dec. 1, 2000).

have been muted with the spread of payment for order flow and internalization."[23] A ban also would remove a noxious conflict of interest that can cause intermediaries to place their own economic interests ahead of customers.

These negative effects on the market do not depend on whether PFOF takes a cash or non-cash form. Payment is payment regardless of the form it takes, and therefore CBOE supports a total ban on PFOF, including both cash and non-cash inducements. Indeed, a failure to ban both types of PFOF will merely shift the preferred method from hard dollars to soft-dollars. This will not solve the conflicts of interest and other problems caused by PFOF. Rather, the only effective solution is a total ban on all forms of PFOF. Such a ban is likely to be readily enforceable, because most of the large specialist organizations are members on multiple exchanges as are order-entry firms. It will be very difficult for a specialist to make illicit payments to increase order flow and market share without notice by competitors.

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?

It is possible that banning PFOF and not certain types of internalization may advantage certain firms over others, but there is a simple solution. If internalization is limited to the circumstance for which it was intended (i.e., provide supplemental liquidity where it is truly needed), integrated firms will not have an incentive to over-internalize, and any perceived advantage of one type of firm over another will be immaterial. Thus, if internalization is limited to circumstances where firms subject an order to a meaningful exposure to the trading crowd (or over a screen on an electronic exchange), internalization will only occur when it provides the best execution for the customer's order. Given such limitations, there would not be any element of unfair advantage, and no reason to prohibit firms from operating as broker and dealer provided they comply with safeguards currently in place (*i.e.,* information barriers between the two).

By contrast, we believe that revamping the Exchange Act to eliminate the ability to act as broker and dealer for customer orders could have a profoundly negative impact on the stability of options exchanges and have repercussions throughout the securities industry far beyond payment for order flow and internalization. For this reason, we do not believe that the Commission should revisit the issue.

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?

As described above in our response to Question 4, CBOE views specialist guarantees as a procompetitive measure that rewards specialists commensurate with the added risk they take by virtue of assuming a continuous quoting obligation and agency responsibilities. For the reasons set forth above, internalization should be limited to circumstances where firms offer the opportunity for price improvement after a meaningful exposure to the market participants. In such circumstances, any internalization that occurs will necessarily provide the best execution for the customer's order.

[23] Special Study, at Section VIII.

Regardless of what the SEC ultimately determines to do in that regard, however, it should summarily put an end to all PFOF practices.

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?

CBOE believes specialist guarantees promote inter-exchange competition and, therefore, does not support banning them. By contrast, CBOE believes that PFOF limits competition, and should be banned. Thus, banning PFOF and not specialist guarantees would promote competition in the options markets, and CBOE supports that outcome. CBOE does not support the opposite scenario, however. Banning specialist guarantees while allowing PFOF would allow the negative effects of PFOF to continue, while discouraging the positive effects of specialist guarantees. A ban on specialist guarantees would discourage specialists from engaging in the many market enhancing and procompetitive behaviors to which they are currently obligated.[24]

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?

As discussed above, CBOE believes specialist guarantees promote inter-exchange competition and, therefore, does not support banning them. The Exchange also believes that all forms of PFOF and "liquidity-taking" forms of internalization should be permanently and completely abolished from the options markets. Our responses to Questions 1 and 11 indicate why specialists and market makers would have greater incentives to quote better prices if these practices were eliminated.

The Commission asks what effect a ban (on PFOF and internalization) would have on those "non-dominant" markets seeking to attract order flow from the dominant market. We'll answer this question separately with respect to PFOF and internalization.

On the PFOF front, as we indicate throughout this letter, payment-accepting firms have a strong incentive to route orders to the market participants that won the payment arrangement (i.e., pay the most for those orders). As a result, the "dominant" market in this scenario is that market willing to pay the most for the order flow. Conversely, the "nondominant" markets are those that do not receive the order flow because they lost the payment arrangement. Removing PFOF as a routing consideration will cause the routing factors to shift to price and other important factors (such as speed). In this environment, nondominant markets will have a strong ability to attract order flow away from the dominant market by offering more competitive pricing. This will be a tremendous improvement over the status quo and we believe that customers will benefit significantly.

Regarding internalization, the exchanges that offer the "path of least resistance" typically receive the bulk of orders a firm wishes to internalize. In this respect, the "dominant" markets are those that make themselves the most conducive to internalization. Eliminating "liquidity-taking" forms of

[24] While it is possible that a ban on specialist guarantees might make it somewhat less likely that a specialist would engage in PFOF, that depends on the amount of intra-exchange competition in the crowd rather than on specialist guarantees.

internalization will require firms to consider factors other than their own profitability when determining where to route and execute orders. One of these factors, consistent with best execution, should be price and in this regard, the markets that are currently classified as "nondominant" will have a chance to compete with the "dominant" markets on the basis of price. This, too, will serve to benefit investors.

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. 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?

PFOF, regardless of the form it takes, raises the same conflict of interest issues. Similarly, we presume that PFOF raises the same issues whether applied to the equity or option markets. Just as we believe that the options markets are most qualified to address issues relating to the options industry, however, we similarly believe that the equity markets should respond to the PFOF issues as they relate to the equity markets. Nevertheless, the options markets have different dynamics than the equity markets, and it would be reasonable for the SEC to determine to ban PFOF only in the options markets. CBOE acknowledges that PFOF in the equity markets has been virtually eliminated due to penny trading increments.

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?

Banning only exchange-sponsored PFOF would not solve any of the problems associated with PFOF but instead make them worse. It would simply provide markets with less intramarket competition, such as Phlx, a competitive advantage with respect to paying for order flow over markets like CBOE, where there is more intramarket competition. As such, it would result in unequal regulation among competing markets and be contrary to the fair competition tenets of Section 11A of the Act.

The very reason CBOE has an exchange-sponsored PFOF program is that CBOE's competing market-maker structure, which promotes intramarket competition, puts DPMs at a competitive disadvantage with respect to paying for order flow. Specifically, because of the large number of competing market makers on CBOE a DPM is likely to participate in a much smaller percentage of that order flow than would a specialist on an exchange like the Phlx where there is little if any intramarket competition. CBOE's marketing-fee program simply levels the playing field. Accordingly, banning exchange-sponsored PFOF would not solve any problems associated with PFOF; it would simply advantage exchanges where there is less intra-exchange competition—and where specialists therefore have a greater ability to pay for order flow—over exchanges where there is more intra-exchange competition. This perverse result should not be permitted, and Phlx's proposal should be seen for what it really is, a thinly-veiled effort to obtain a competitive advantage over CBOE. In fact, although CBOE remains steadfast in its opposition to PFOF, if the choice is between allowing all types of PFOF to continue or banning only exchange-sponsored PFOF, CBOE would advocate allowing all types of PFOF to continue.

Moreover, the distinction between exchange and non-exchange sponsored PFOF is largely illusory. Exchanges can have just as much involvement in non-exchange sponsored plans as they do with exchange-sponsored plans. For example, some exchanges that may not sponsor payment programs may in fact facilitate them by waiving or rebating market data or other exchange-imposed fees with the understanding that the members benefiting from such waivers or rebates will use them to pay for orders. Similarly, we understand that certain options exchanges have required members to commit to pay for order flow as a condition of their being granted specialist assignments in desirable options classes. These kinds of exchange inducements to encourage or even require specialists to pay for order flow (which CBOE does not employ) strike us as constituting exchange sponsorship as much as, if not more than, our marketing fee program.

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?

No, banning only exchange-sponsored PFOF while allowing non-exchange sponsored PFOF and all forms of internalization to exist would, in CBOE's view, be the worst possible regulatory response the SEC could potentially make. As demonstrated in our previous responses relating to PFOF, the conflicts of interest PFOF raises are just as prominent, if not more so, in a non-exchange sponsored payment regime. Banning only exchange-sponsored PFOF will not have any positive affect on quote widths or best execution and, to the contrary, is likely to lead to a deterioration of both as the disincentives to quote competitively only extend to those exchanges that already are the most competitive on an intra-exchange basis. As we demonstrated in our responses relating to internalization, allowing internalization without adequate order exposure has a negative effect on the incentive to quote competitively, is wrought with conflicts of interest, and does nothing to guarantee best execution. Therefore, we fail to see how allowing unexposed internalization and non-exchange sponsored PFOF to coexist will address the SEC's concerns.

CBOE urges the Commission to take strong and decisive action and ban all forms of PFOF and the "non-exposure" internalization practices referenced above in our Responses to Questions 11 and 12.

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?

Yes, brokers should be prohibited from internalizing customer orders unless such orders are sufficiently exposed in a manner that is meaningful. As stated above in question 11, internalization is intended to occur only when necessary to allow a broker to facilitate the execution of an order where existing market maker liquidity may be insufficient to provide an execution as beneficial to the customer as when supplemented by the facilitating firm. CBOE believes internalization should be prohibited unless (i) the order is exposed to a meaningful opportunity for price improvement, and (ii) the internalizer only participates at a price point in which there is insufficient liquidity to execute the order or at a price point that is superior to the trading crowd's original market by more than a deminimis amount (i.e. where the internalizer initiated meaningful price improvement for the customer). CBOE's recommendations would preserve the worthwhile goal of facilitation, while banning abuses attendant to internalization including seeking out the marketplace of least resistance. CBOE notes that, on any given order, the marketplace of least resistance could be a floor based exchange or an all-electronic exchange.

A "meaningful opportunity for price improvement" is something that is largely affected by the circumstances surrounding an order. As part of fulfilling best execution obligations, agents should always seek a meaningful opportunity for price improvement. This involves an evaluation of which marketplaces are most likely to afford the best quality execution to a particular order. Factors such as the size of the order, the subject option class, and market conditions generally are all-relevant to that evaluation and may be more or less significant with respect to a particular order. Firm compliance departments are well suited to evaluate if their traders are considering competitive market centers when seeking best execution for internalized orders. Inevitably, these factors involve subjectivity. CBOE believes, however, that certain objective considerations should be universally applied by brokers as part of seeking a meaningful opportunity for price improvement. These are: (1) the more market participants that are exposed to an order, the more meaningful the opportunity for price improvement (e.g. a marketplace with twenty quoters is more likely to elicit price improvement than a marketplace with two quoters); and (2) the longer an order is exposed (within reason), the greater the chance for price improvement (e.g. a fleeting or momentary exposure to market participants is unlikely to elicit the most competitive responses). In that regard, we fail to see how a three second "exposure" on the BOX's PIP to a limited number of participants can be considered true exposure. We continue to be very troubled that the Commission seems to equate order exposure with the ability of some large firms to design “superfast” computer programs to respond instantly to certain proposed crosses on a screen based trading system.

As indicated above, we believe firm compliance departments are best positioned to determine if best execution and a meaningful opportunity for price improvement are being sought for customers. Firms compliance departments should conduct a periodic review of their internalization practices to determine if best execution and a meaningful opportunity for price improvement were attained.

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?

No. See answer to question 29.

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?

The Commission could set forth a more comprehensive description or definition of what constitutes best execution. Firm compliance departments would then be clear on what practices are inappropriate. While CBOE believes that the conduct referenced in the question is clearly inappropriate, we also believe that a pattern or practice of routing orders for internalization to the “path of least resistance” as described in our response to Question 11 (even if that path/market is displaying the same price as other markets) is inappropriate. CBOE believes firms should be obligated to adhere to clearly defined best execution principles that make clear that continually seeking the marketplace that will allow for maximum internalization is not consistent with best execution. Firm compliance departments could then monitor for compliance with those defined best execution principles. Among other things, compliance departments should review all instances in which its traders internalize customer orders to determine if best execution was attained.

As to enhancing surveillance, SROs are not in the best position to surveil for this conduct because oftentimes the "orders" in question are never formally presented to trading crowds (“if-then” orders).

Further, to prevent these venue shopping abuses, SROs would need information related to the time of order receipt by the firm from the customer. This information coupled with an analysis of quote information can reveal if a broker is truly seeking a best execution for the customer. Rigorous use of this information by firm compliance departments will go a long way toward ensuring customer orders receive best possible executions.

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?

While there is nothing inherently wrong with a firm checking prices at multiple exchanges, a firm should not shop an order so that it can participate to the greatest extent, instead of where it has the best chance to attain a better price for customers. “Shopping” an order in search of a favorable price for the order is consistent with best execution; however, “shopping” an order to find the point of least resistance is not. See footnote 12 for a description of "if-then" orders.

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?

Certain rules are consistent in that 40% is generally the maximum guaranteed amount that a firm may internalize. In other respects, these rules are not consistent. For example, some exchanges allow 40% guarantees for internalization on the bid/offer while other exchange only allow 20%. Also, BOX allows internalization of orders smaller than 50 contracts, which is not consistent with the purported original intent of facilitation rules - providing supplemental liquidity to fill large customer orders. More importantly, CBOE believes the manner in which best execution is monitored in connection with internalization is not consistent and that the SEC should take steps to ensure such consistency.

Questions 34-36: Should the SEC Apply Rule 11Ac1-5 to Options?

> **Question 34. Would Rule 11Ac1-5 data be useful to firms routing customers’ options orders to exchanges and to those customers?**
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> **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?**
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> **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?**

Exchange Act Rule 11Ac1-5 requires a market center that trades national market system securities to prepare and make available to the public monthly electronic reports that include uniform statistical measures of order execution quality. For each national market system security traded by the market center, the report would include 20 subcategories (based on order type and size), and each subcategory could include up to 20 columns of statistical information. When the SEC proposed Rule

11Ac1-5 in 2000, it limited the rule to exchange-listed and Nasdaq National Market stocks, but requested comment as to whether the rule should extend to options. CBOE commented in a letter to the SEC on the proposal that we had serious concerns about the entire proposed market execution data proposal.[25] CBOE stated in the letter that the proposal would require production of vast amounts of technical data mandated by regulators and designed solely for digestion by academics, consultants, and analysts. We seriously doubted whether the requirement of a static set of execution quality metrics was the approach the SEC should be taking to enhancing broker-dealers' order routing decisions and facilitating best execution. We noted in our comment letter that our concern would be even more pronounced if Rule 11Ac1-5 were extended to include options.

CBOE continues to believe that both the approach and the data elements contained in Rule 11Ac1-5 are unsuitable for options. As the Commission has noted in the past, there are significant differences between the options market and the stock market. As a derivative product, options are priced, traded, and handled in a very different manner than are stocks. These differences make much of data under Rule 11Ac1-5 inappropriate for options. The rule also does not include important aspects of options market execution, such as the ability of a market center to handle combination orders such as spreads and straddles.

In addition to the differences between options and stocks, there is a substantial difference in the number of options series per stock versus the solitary quote for each underlying stock. There are scores of series for each options class, with varying liquidity, trading dynamics, and pricing across the series. In contrast, there is only one bid-ask quote per stock. Not only would an approach like Rule 11Ac1-5 result in enormous reams of data for options, but also it would produce distorted data that did not reflect the distinction between various options series. In the Concept Release the Commission asks whether the implementation of an options NBBO would remove concerns about the ability to extend Rule 11Ac1-5 to options. While the creation of an NBBO for the options markets should help to standardize a benchmark to use for measurements of execution quality, it does not alleviate the significant differences in the options markets versus the stock markets that make application of Rule 11Ac1-5 to options highly problematic. In addition, it would not remove the enormous data collection and processing that would be needed to provide market execution quality statistics for the multitude of equity options series.

While continuing to have doubts on the efficacy of an extension of Rule 11Ac1-5 to include options, we do not want to suggest that additional disclosure of market execution data by the options markets is not needed. In fact, both our order flow providers and market makers have asked us (and presumably the other options exchanges) to produce execution data. In response to these requests, CBOE has initiated its Best Execution Assurance Program ("BEAP") to make members aware of how CBOE's systems, procedures and rules help them satisfy their best execution obligations when they direct orders to CBOE for execution.[26] Among other things, BEAP provides periodic reports with statistical market execution data to member firms to enable them to evaluate the quality of executions on CBOE. The reports also identify orders that may have been executed outside of the NBBO and show what action, if any, was taken to adjust the price of the order. We believe the BEAP Program has proven very valuable to broker-dealers in their order routing decisions and will stimulate our competitors to respond with their own initiatives.

Nevertheless, we value highly the views of order flow firms on this issue. If they believe that adequate information does not exist on execution quality across options markets to evaluate for best

[25] Letter dated October 9, 2000, from CBOE to Mr. Jonathan G. Katz, Secretary, SEC, regarding Release No. 34-43084.

[26] Securities Exchange Act Release No. 43113 (August 3, 2000).

execution purposes, then we would welcome suggestions for improvements in this area. Only if the order flow firms strongly recommend that Rule 11Ac1-5 extend to options should the Commission consider this approach, and any such resulting proposal would need to be tailored carefully to reflect the unique characteristics of options.

Questions 37-41: Decimal Pricing

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

When the Commission ordered the conversion of equities and options quotations prices from fractions to decimals in June 2000, the minimum price variation for equities was established at $0.01, whereas the minimum price variation for options was set at $0.05 or $0.10 depending on whether the quoted price for the options is below $3.00. These minimum price variations were not established in the first instance by the Commission, but instead were set forth in a "Decimals Implementation Plan" submitted on July 24, 2000, by the Participants in an "Exchange Committee on Decimals" and were then filed with and approved by the Commission under Rule 19b-4 as rule change proposals of the Committee Participants.

In addition to recommending these minimum price variations, the Plan reserved the right of the Participants to implement a "penny pilot" in selected options in order to determine the impact of penny pricing on options trading in a controlled environment. However, no such penny pilot for options was ever proposed on account of the fear that even in a limited pilot, quoting options in pennies could increase the volume of quotes in the options included in the pilot to the extent that it would swamp the systems processing capacity of the Options Price Reporting Authority ("OPRA") and of OPRA's downstream vendors. The effect could be to seriously compromise OPRA's ability to provide current options market data to investors, thus reducing transparency in the options market. This, together with the risk that options quotes expressed in pennies would change so frequently as to become "flickering" and unusable to most investors, has served to prevent any options exchange from proposing to extend penny quotes to options, even in a limited pilot.

On the other hand, as the Commission notes in the Concept Release, in the equities market, where penny pricing has prevailed since 2001, it appears that bid-ask spreads have narrowed and the extent of payment for order flow has been reduced, and that these salutary developments may be attributable at

least in part to quoting equities in pennies. This has caused the Commission to ask whether the experience with penny quoting in equities provides a reason to extend penny quoting to options.

Our response to this question is most definitely "No." While we do not disagree that penny quoting in equities may have been a contributing factor – perhaps the principal contributing factor – to the reduction in payment for order flow in the equities market, we are not at all certain that the same result would be obtained in the options market. Even if it is possible that quoting options in pennies could lead to a reduction in payment for order flow in the options market,[27] we are convinced that this does not justify making this change at this time, since it would likely cause serious harm to options investors that would far outweigh any possible benefits.

The main harm to investors from quoting options in pennies would be the direct result of the enormous increase in the number of options quotations that would result from this change. Unlike stocks, as to which there is typically one best bid and one best offer in any given market at any time, for each class of options (i.e., all options on the same underlying stock) there can be as many as several hundred thousand open series being quoted at the same time. In addition, on each options exchange there are typically many market-makers in each class of options, each of whom may be quoting hundreds of different options series at any one time. Finally, because options are derivative instruments whose prices reflect price changes in the underlying stock, each change in the quoted price of an underlying stock can result in a change in the quote for most if not all of the series of options on that stock, if the impact of the price change in the stock is sufficiently great to cause a change in the value of the option at least equal to the minimum price variation in which options are quoted. Because options quotes of market makers are generated automatically by auto-quote computers, each time there is a change in the price of an underlying security, literally thousands of new option quotes are likely to be generated and sent to OPRA for dissemination. It is easy to see why quoting options in pennies instead of nickels or dimes would likely increase the number of messages processed by OPRA by literally tens of thousands of messages per second.[28]

While it is possible to expand OPRA's market data system and network to handle the huge number of options quotes that would likely result from quoting options in minimum price variations of $0.01, the cost of doing this would be substantial. This cost would have to be borne by the options exchanges and, ultimately, by their members. Beyond this, expanding the capacity of the OPRA system and network to handle all of these quotes would force all of OPRA's vendors and most broker-dealers to expand their own systems to be able to accommodate the huge volume of quotation messages that OPRA would be sending down its pipeline. Even if the vendors were to determine to offer only a limited options market data service that would not include every quote disseminated by OPRA, at least some OPRA vendors as well as brokers with order routing responsibilities would have to be able to receive the full OPRA transmission. We doubt that any vendors or broker-dealers would today agree to spend what it

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[27] This is by no means clear. *See* Battalio & Holden, "*Why doesn't decimal trading eliminate payment for order flow and Internalization?,"* Working Paper, 1996.

[28] OPRA's recent peak in message dissemination was about 20,000 messages per second (mps), and the OPRA system currently has capacity to process as many as 52,000 mps. Although it is not possible to know exactly what would be the impact on message traffic through OPRA as a result of extending penny quoting to options, several years ago an independent study conducted for OPRA by Stanford Research Institute estimated that penny quoting could increase options quotes on what were then [five] options exchanges by as much as 250%, resulting in peak OPRA message traffic of about 730,000 mps. The fact that there are now six options exchanges, and that these exchanges have either implemented or are planning to implement trading systems that allow each market maker in a crowd to generate its own quotes for each series it trades, rather than only one quote per crowd as was the case at the time of the SRI study, can only increase further the number of options quotes from what was envisioned in that study.

would take to expand their existing systems to be able to accommodate a vastly expanded OPRA data feed.

Although, for the reasons expressed above in this letter, we urge the Commission to eliminate payment for order flow from the options market, we do not believe penny quoting in options is likely to be an effective way to do this. First, we are not convinced that quoting in pennies would have the same impact on payment for order flow in the options market that it appears to have had in the market for equities. In the Concept Release, the Commission itself identified several factors in the options market that may cause quote spreads to be wider than they might otherwise be, and thus wider than even the current $0.05 and $0.10 minimum intervals. As the Commission observed, payment for order flow itself can perversely have a self-perpetuating effect by causing quote spreads to widen regardless of how narrow the minimum price interval may be. Also, as the Commission observed, order routing decisions in respect of options, even if not impacted by payment for order flow, can be influenced by other internalization possibilities. This in turn can cause order providers to be less aggressive in narrowing spreads and reducing payment, lest they lose order flow to other exchanges where internalization is otherwise achievable, even if at less advantageous prices from their customers' perspective. This, of course, illustrates the basic problem with internalization generally, whether accomplished through payment for order flow or otherwise; it places an order providing firm's obligations to obtain best execution for its customers at odds with its self-interest in internalizing the order to capture the profit opportunity the order represents. Since there are these external forces that can keep quote spreads artificially wider than the current minimum price intervals, it is far from certain that narrowing these intervals to a penny will cause actual quote spreads to shrink across the market. Even if spreads were to decrease to some extent, any benefit reflected in a reduction in payment for order flow would be outweighed by the enormous harm done to the quote dissemination mechanism and the associated damaging of transparency caused thereby. In sum, we believe it is wrong to think the conflict of interest between order providers and their customers represented by payment for order flow can now be effectively addressed by anything short of a direct prohibition. Simply reducing the minimum quoting interval for options to a penny is not likely to be effective in eliminating payment for order flow because it is not directed at the essential conflict inherent in the practice.

This is not to say that there should never be consideration of permitting options to be quoted in narrower intervals than the $0.05 and $0.10 intervals that currently apply. In fact, making such a change could make pricing in the options market more efficient wholly apart from any impact it may have on payment for order flow. Before implementing this change, even in a limited pilot, however, we believe it is essential first to address its impact on transparency. This will require resolving difficult issues of cost, competition and market economics, which will take some considerable time and effort. Other issues related to quoting in pennies, such as the risk that this would allow certain market professionals to "penny jump" ahead of customer orders, will also have to be addressed. Meanwhile, we think it is imperative to provide a regulatory response to payment for order flow that will be more effective that simply quoting options in pennies and than may be implemented promptly without the adverse consequences of introducing penny quoting in options before market data capacity issues have been resolved.

Finally, we must observe that the approach to penny quoting in the recently approved BOX structure strikes us as the worst possible way to narrow the minimum quoting interval. The BOX PIP allows internalized trading in pennies, but does not permit penny quotes to be disseminated. In other words, BOX's answer to the question of how to handle the huge volume of quotes resulting from reducing the minimum quotation interval to a penny is simply not to disseminate these quotes at all, thereby eliminating all transparency for penny quotes. Further, no one except an internalizing firm is permitted to quote in pennies in the nontransparent PIP. This inequitable structure presents the worst of all possible situations. Because there are no visible quotes in pennies, there is no way for the PIP to narrow spreads by pennies, or to have any possible impact on reducing payment for order flow. Public

customers who may wish to improve the published quote by more than one penny, but less than the nickel or dime minimum quoting interval applicable to everyone but internalizers in the PIP, are prevented from doing so. Finally, the risk of being penny-jumped in the PIP can act as a disincentive to quote aggressively in the first instance. Thus, rather than narrowing spreads, the most likely effect of the PIP is to cause spreads to widen. Moreover, the ability to internalize by a penny actually increases the potential for this type of payment for order flow by providing a market-maker with a relatively low-cost means of being able to internalize the most profitable of the orders he has paid for. Rather than allowing the PIP to serve as a model for reducing the minimum quotation interval in options, we suggest that the PIP should be closely monitored, and if our worst fears prove to be realized, the PIP should be eliminated.

Questions 42-46: Limit Order Display

For more than two years, at the SEC's insistence, CBOE has enforced compliance with its own version of a limit order display rule that for all practical purposes operates in much the same manner. While CBOE acknowledges that Rule 11Ac1-4 has no application to the options exchanges, the SEC has made it clear to CBOE that its DPMs are required to display limit orders immediately, and in any event not to exceed 30-seconds. CBOE has enforced this requirement.

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

CBOE already requires the immediate display of limit orders. To the extent this obligation is not uniform across our industry, it should be, regardless of whether the SEC requires other exchanges to include such provisions in their rules or extends the applicability of the Display Rule 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?

CBOE has already incurred the costs of complying with the limit order display requirement and believes that the same limit order display requirements should apply uniformly.

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?

A uniform limit order display obligation should apply to the options markets with recognized exceptions for contingency and complex orders, as well as those exceptions currently applicable in the equity markets.

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?

See our response to Question 44.

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?

CBOE believes that any limit order display requirement should operate uniformly among all options exchanges.