

May 25, 2018

Mr. Brent J. Fields, Secretary
Securities and Exchange Commission
100 F. Street, NE
Washington, D.C. 20549

Re: Transaction Fee Pilot for NMS Stocks, File No. S7-05-18

Dear Mr. Fields:

I appreciate the opportunity to provide feedback and comment to the Securities and Exchange Commission with respect to its March 14th proposal for an access fee pilot. In my judgment the proposal is very thoughtful and well-designed and so I applaud the Commission for this initiative. The structure of fees and rebates that arise under Regulation NMS is extremely complex and potentially results in important conflicts of interest that undercut the quality of execution experienced by investors in America's capital markets. Much of the complexity is a direct consequence of the incentives facing exchanges and brokers under our regulatory system.

Facilitating analysis of the incentives and behavior that result from the permitted structure of fees and rebates is important in order to understand the extent to which it leads to conflicts of interest in the routing of orders by brokers to exchanges and harm to the execution quality experienced by buy-side investors. The development of a pilot framework based upon a randomized control design will facilitate the analysis of the effects of the structure of fees and rebates on order routing (including the potential conflict of interest) and execution quality. The randomized design underlying the access fee pilot will facilitate the ability of both the Commission and outside researchers to undertake causal inference using the data being generated; such empirical analyses are much more powerful and persuasive than conventional cross-sectional regressions.

By way of introduction and to facilitate the interpretation of this letter, I should note that I had the opportunity to serve as the Commission's Chief Economist under both Chairman William Donaldson (12 months) and Christopher Cox (25 months) from 2004 to 2007, during the interval in which Regulation NMS was re-proposed, adopted by the SEC and implemented. During this period I also helped to lead the efforts of the economics group at the SEC in implementing a randomized control pilot study of the removal of up-tick restrictions on short-sales and facilitating public provision of that data, thereby leading to various studies of short sales by outside academics.

More recently, I served as a member of the SEC's Equity Market Structure Advisory Committee (EMSAC) and its NMS subcommittee, which recommended in 2016 to the Commission the undertaking of an access fee pilot. Indeed, while I supported the EMSAC proposal, in my judgment the Commission's proposal is a very significant improvement over the EMSAC proposal; indeed, the Commission deserves considerable credit for sorting out and identifying the

relevant design issues and substantially improving upon EMSAC's proposal. Especially significant is the inclusion by the Commission of a "no rebate" treatment bucket in that the payment of rebates to brokers by exchanges is an important source of the conflict of interest in routing. This is a much more suitable design than the inclusion of a low cap on fees (such as the two mil cap in one of the EMSAC's treatment groups) in light of the use by exchanges of rebates in excess of fees¹ and the broader potential for cross-subsidization of trading revenues by data and co-location revenues and even by the trading revenues from other stocks. Other major improvements in the Commission's proposal relative to the EMSAC design include the use of much larger treatment groups (enhancing the potential statistical analysis that could emerge) and the inclusion of lower market value stocks (with the likely winding down of the tick size pilot), as liquidity issues may be especially important for such stocks.

My academic expertise has addressed many related questions. In recent years I have analyzed the conflicts of interest that have resulted from the structure of fees and rebates² under Regulation NMS as well as the nature of market power by exchanges for the structure of equity trading.³ I have been involved in evaluating much of the academic research about the structure of fees and rebates and the related conflicts of interest as well as studies of regulatory pilots as an academic discussant. My earlier work in the equity market structure arena has included the earliest published study of the interaction between the order flow and limit order book,⁴ a study of competition between platforms in the pre-NMS period⁵ and a survey of market microstructure theory.⁶ I also have undertaken visible research in financial economics in various other domains including trading networks and bid-ask spreads in the bond market, arbitrage and trading, foundational aspects of mortgages, and taxes and asset allocation. I was one of the founders of the *Review of Financial Studies* (which is among the three leading journals in finance) in the mid-1980s and its second executive editor and served as President of both the Society for Financial Society and the Western Finance Association. Besides the EMSAC, I also have served as a member of both the Model Validation Council of the Federal Reserve System and the Advisory Committee of the Office of Financial Research as well various non-governmental groups, such as the Systemic Risk Council and the Shadow Financial Regulatory Committee.

To the extent that some commenters are critical of the type of randomized control study envisioned by the Commission in the context of access fees, there are several points that I would

¹ See, C. Spatt, May 24, 2018, "Is Equity Market Structure Anti-Competitive?"

² Angel, J., L. Harris and C. Spatt, 2011, "Equity Trading in the 21st Century," *Quarterly Journal of Finance* 1, 1-53; Angel, J., L. Harris and C. Spatt, 2015, "Equity Trading in the 21st Century: An Update," *Quarterly Journal of Finance* 5, 1-39; and Spatt, C., 2018, "The New Realities of Market Structure and Liquidity: Where Have We Been? Where Are We Going?" Chapter 13 (page 247-263) in *Public Policy and Financial Economics: Essays in Honor of Professor George G. Kaufman for His Lifelong Contributions to the Profession*, World Scientific Publishing Co., Singapore.

³ See, C. Spatt, May 24, 2018, "Is Equity Market Structure Anti-Competitive?"

⁴ See B. Biais, P. Hillion, C. Spatt, 1995, "An Empirical Analysis of the Limit Order Book and the Order Flow in the Paris Bourse," *Journal of Finance* 50, 1655-1689.

⁵ See B. Biais, C. Bisiere and C. Spatt, 2010, "Imperfect Competition in Financial Markets: An Empirical Study of Island and Nasdaq," *Management Science* 56, 2237-2250.

⁶ See B. Biais, L. Glosten and C. Spatt, 2005, "Market Microstructure: A Survey of Microfoundations, Empirical Results, and Policy Implications," *Journal of Financial Markets* 8, 217-264.

emphasize. First, to the extent that the principles of financial theory provide a relatively clear framework for assessing the conflict of interest and impediments to Best Execution that emerge in the substantive context, there would be natural alternatives to the proposed regulatory pilot, such as directly moving forward to implement of uniform pricing for orders that add and remove liquidity without the necessity of a pilot. Relative to the current complex system of fees and rebates, this would provide considerable simplicity and eliminate the distortions in order routing and thereby, promote best execution. Indeed, in most commercial settings it would be considered inappropriate (and even illegal) for a purchasing broker or agent to receive a rebate for directing a purchase from a particular supplier. While I would view eliminating the underlying distortion as an appropriate alternative if market participants want to reject the proposed randomized regulatory pilot study, my comment letter will focus on the Commission's excellent proposal for a randomized control study and enhancement of it. I recognize that there is much that the Commission can learn from randomized control studies in this context and that the Commission might be inclined to consider these issues more cautiously than moving ahead with a rule-making to simply eliminate rebates, and so will focus the remainder of my letter on issues related to the design and implementation of randomized control studies in this context. This would be especially useful given the complexity of the access fee context.

Second, I also wish to emphasize the importance of randomization in selecting stocks for control status and the various treatments. This is fundamental to the ability to undertake causal inference in this setting (e.g., avoiding the possibility that the selection of treatment status influences the empirical findings). For example, the effectiveness of the analysis of the prior pilot on up-tick restrictions on short selling in significant part reflected the importance of randomized assignment to the various treatment groups and the control sample. In this spirit, I would be strongly opposed to "opt out" provisions, which would greatly undercut the value of the pilot design. The impact of "opt outs" by issuers (or even exchanges) would undercut the ability of economists to draw sharp inferences based upon performance differences between the treated and control stocks; indeed, I would be very concerned about the non-random character of "opt outs," which for example, could disproportionately reflect firms that were especially responsive to feedback from the listing exchange or could disproportionately reflect less liquid stocks, which would be especially important for the access fee pilot. Third, another crucial dimension of the design in my view is that various data would be publicly provided so that analysis of the market responses could be undertaken by knowledgeable observers (such as academics) and interested parties as well as the Commission staff. This builds upon the Commission's past experience with regulatory pilots, such as the up-tick restrictions on short sales as well as the recent tick size. The public access to data and the ability of the Commission to benefit from diverse perspectives seems especially important for the access fee pilot in light of the complexity of this aspect of the market design and the central role of access fee incentives for order routing and best execution.

Additionally, one aspect of the Commission proposal to which I am unsympathetic is the possibility of exempting market makers from the zero rebate bucket. I fear that this would undercut the effectiveness of the pilot. Many of the market makers also function as brokers and engage in trades on behalf of customers. Indeed, a market maker exemption could give larger brokers a significant competitive advantage over small brokers.

In standard models in economic theory there are a number of alternative solutions to potentially resolve underlying agency problems that emerge from the differential incentives of the principal

(buy-side investor) and agent (his broker). These solutions include banning the payments to the broker from the exchange, requiring that the broker pass through the payments to the buy-side customer and disclosure of the specific payment to the buy-side customer and disclosure of the execution performance of the broker. However, several of these approaches raise a number of practical challenges and furthermore, the existing disclosure regimes have not successfully addressed the conflict of interest and the challenge of best execution. Indeed, for retail customers it would be very surprising if a legalistic and hypothetical disclosure could provide the relevant information to the consumer and be an effective remedy. More broadly, whether the SEC imposes “best execution” obligations on brokers, the practical implementation of such standards has been limited. In turn, this emphasizes the importance of our regulatory setting not creating incentives that undercut best execution, such as the incentive of brokers to route to obtain the benefit of rebates in light of the retention of rebates by most brokers.

Recent evidence by Battalio, Corwin and Jennings (2016) highlights that the routing decisions by some brokers is influenced by the nature of rebates or fees obtained and given the retention of the rebates and fee payments by the broker (rather than flowing through to the buy-side customer) is at least suggestive of the agency conflict influencing the routing decision.⁷ The natural experiment envisioned in the SEC pilot in which different securities would face different regulatory-induced access fees in conjunction with the enhanced disclosures proposed would strengthen the potential causal inference that the response to the incentives would allow.

One aspect of the current system of incentive fees and rebates that is not widely emphasized is that the exchanges typically tier the rebates to provide volume discounts.⁸ For example, on a maker-taker exchange orders that add liquidity receive rebates; for sufficient activity in a month the broker is rewarded with rebates that increase with the level of activity through an alternative tiered pricing schedule, somewhat analogous to the tiering of rebates in airline frequent flyer programs, but considerably more intricate. This is a mechanism to enhance the attractiveness of marginal orders relative to the exchange’s cost of offering the rebates. It should be noted that most exchange trading occurs through the 10 equity exchanges operated by three affiliate families (NYSE, NASDAQ and BATS/CBOE), who make the relevant pricing decisions. The tiering of rebates and associated volume discounts, the role of each exchange as a unique supplier of both its proprietary data and its co-location services along with cross-subsidization and interaction of the various products of the exchanges (some rebate levels exceed the permitted fees under Regulation NMS, 30 mils, and the exchange may have incentives to subsidize trading to promote the profitability of data). Yet, at present it is difficult to evaluate the impact of the interaction between access fees and the non-competitive market structure, especially in light of the extraordinary limited disclosures related to how routing is influenced and potentially distorted by the level of these rebates. At present, we lack disclosures (even ex post) of the rebates paid by each exchange to each broker and the underlying pricing tiers, which reinforces the difficulty in assessing the impact of the structure of access fees on distorting best execution, conflict of interest and the competitiveness of exchange pricing.

At present and outside the access fee pilot context, there are not disclosures of the realized pricing tiers achieved by the various brokers. This seems puzzling and would seem important for

⁷ See R. Battalio, S. Corwin and R. Jennings, 2016, “Can Brokers have it All? On the Relationship between Make-Take Fees and Limit Order Execution Quality,” *Journal of Finance* 71, 2193-2238.

⁸ See, C. Spatt, May 24, 2018, “Is Equity Market Structure Anti-Competitive?”

understanding the markets. The Commission proposal does provide for new disclosures (such as average and median fees and rebates by exchange) and tying these to the base and top tier levels. This would seem valuable in general, i.e., even beyond the pilot context. I would encourage the Commission to consider further augmenting these disclosures both within the pilot setting and beyond. The issues of conflict of interest and competitiveness of exchange pricing are central ones for regulators, brokers and the buy-side to be able to evaluate.

An important aspect of the treatment and control outcome is the extent of asset price movement after the execution across the various regulatory treatments; that would provide information about the differential execution quality and hence the role of conflict of interest from the perspective of the time of trade across the different fee and rebate regimes. Of course, a central purpose of the pilot study is to ascertain how conflict of interest in order routing and execution quality manifest themselves across the regulatory regimes and even potentially the types of stocks and types of brokers for which these issues are especially severe. Furthermore, I do think that it also will be important to examine order execution quality using traditional price impact measures created by industry experts and examine how these vary with the underlying treatment status.

In summary, I do think that the Commission's proposed access fee pilot is an important and valuable initiative that will help the Commission and outsiders better evaluate the performance of brokers in meeting their best execution obligations and the potential conflict of interest that emerges from access fees and suggest potential remedies. At the same time, I do suggest several enhancements to the proposed disclosures that I feel would further aid our understanding of best execution and conflicts of interest in trading.

Sincerely,

Chester Spatt

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Cc: Hon. Jay Clayton, Chairman

Hon. Michael S. Piwowar, Commissioner

Hon. Kara M. Stein, Commissioner

Hon. Hester Peirce, Commissioner

Hon. Robert J. Jackson, Jr., Commissioner

Jeffrey Harris, Director of the Division of Economic and Risk Analysis

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