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April 25, 2016

Brent J. Fields
Secretary
U.S. Securities and Exchange Commission
100 F Street, NE
Washington DC, 20549

Re: Equity Market Structure Advisory Committee / File No. 265-29

Dear Mr. Fields:

On behalf of Decimus Capital Markets, LLC, we appreciate this opportunity to comment on several issues considered by the Equity Market Structure Advisory Committee (“Committee”) as a part of the ongoing review of the current equity market structure by the U.S. Securities and Exchange Commission (“SEC”). This comment letter focuses on the maker-taker pricing model and the payment for order flow model, two pivotal allocation mechanisms in the modern electronic marketplace.¹ While these allocation mechanisms are often contrasted to each other, often in favor of the maker-taker pricing model, it is important to note that both of them, *as implemented*, have often lacked transparency.² In any instance, there is a great degree of interdependence between these allocation mechanisms, and, in turn, it is hard to separate them from other key market structure-related issues, such as the tick size regime, the trade-at proposal, and off-exchange trading more generally. Accordingly, incremental changes need to be taken in a highly interconnected spectrum of lit and dark trading venues, and, as emphasized several times by the SEC’s leadership, reform measures have to be based on a holistic approach. With that framework

¹ For several publications on these topics by the authors, see HAIM BODEK, *THE PROBLEM OF HFT: COLLECTED WRITINGS ON HIGH FREQUENCY TRADING & STOCK MARKET STRUCTURE REFORM* (2013); HAIM BODEK & STANISLAV DOLGOPOLOV, *THE MARKET STRUCTURE CRISIS: ELECTRONIC STOCK MARKETS, HIGH FREQUENCY TRADING, AND DARK POOLS* (2015); Stanislav Dolgoplov, *The Maker-Taker Pricing Model and Its Impact on the Securities Market Structure: A Can of Worms for Securities Fraud?*, 8 VA. L. & BUS. REV. 231 (2014), <http://ssrn.com/abstract=2399821>; Stanislav Dolgoplov, *Regulating Merchants of Liquidity: Market Making from Crowded Floors to High-Frequency Trading*, U. PA. J. BUS. L. (forthcoming), <http://ssrn.com/abstract=2677087>; Stanislav Dolgoplov, *Wholesaling Best Execution: How Entangled Are Off-Exchange Market Makers?*, VA. L. & BUS. REV. (forthcoming), <http://ssrn.com/abstract=2744904>.

² See, e.g., EDGA Exch. Inc., Exchange Act Release No. 74,032, at 10 (Jan. 12, 2015), <http://www.sec.gov/litigation/admin/2015/34-74032.pdf> (“Following Trading Firm B’s reaction, Direct Edge, prior to EDGX commencing operations as an exchange, modified the handling of HNS [hide-not-slide] orders designated as ‘post only.’ Pursuant to this modification, a ‘post only’ HNS order could execute and take liquidity (and thus be charged a fee), but only in circumstances under which the execution would be at a less aggressive price and would result in the HNS order receiving price improvement in an amount that exceeded the loss of the rebate that it would have earned had it been posted before being executed. This was not explained in the proposed rules that EDGX filed with the Commission . . .”).

in mind, this comment letter outlines several issues relating to the maker-taker pricing model and the payment for order flow model and provides several recommendations.

The Maker-Taker Pricing Model and Access Fees

Given the role played by the maker-taker pricing model and concerns about certain related practices expressed by different commentators, it is appropriate to reexamine the basic assumptions of this model and its overall impact on liquidity. It is a positive development that a possible maker-taker pilot program is already on the Committee's agenda as a concrete step toward market reform. We think that the recent recommendations developed by the Regulation NMS Subcommittee³ provide an excellent roadmap for such a pilot program. In addition to its original purpose—or at least one of the chief purposes—of providing compensation for exposing orders, the maker-taker pricing model has become a complex combination of the following phenomena operating at the same time:

- This model is a pivotal driver of order flow across competing trading venues, which is highly sensitive to any changes to fee-rebate structures. One manifestation of this phenomenon is the emergence of a number of trading strategies heavily dependent on liquidity rebates.⁴ In fact, many of such strategies would be unprofitable in the absence of the maker-taker economics, which we see as a potential contributor to market fragility.
- This model is a key factor in the race to the maximum permissible access fee by many trading venues. The access fee cap has been set at \$0.003 per share by Regulation NMS.⁵ While the SEC viewed this cap as being “consistent with current business practices” with very few outliers at the time of the adoption of Regulation NMS,⁶ its significance for the maker-taker economics has increased, given that access fees fund the bulk of liquidity rebates. Generally, higher access fees are associated with higher liquidity rebates and higher volume, which we see as a vicious circle.
- This model is a means of a multifaceted segmentation for market participants with specific trading strategies. This phenomenon is illustrated by the coexistence of the “regular” and “inverted” varieties of the market-taker pricing model, which may raise additional issues relating to complexity, unintended consequences, and trading strategies arbitraging various fee-rebate structures. Overall, we interpret the existence of certain practices that leverage

³ Memorandum from EMSAC Regulation NMS Subcomm. to EMSAC (Apr. 19, 2016), <https://www.sec.gov/spotlight/emsac/emsac-regulation-nms-subcommittee-recommendation-041916.pdf>.

⁴ For a discussion of “rebate-capture” strategies as one illustration of this phenomenon, see Manoj Narang, Chief Exec. Officer, Tradeworx, Inc., Comment Letter to the SEC on Equity Market Structure app. at 8 (Apr. 21, 2010), <http://www.sec.gov/comments/s7-02-10/s70210-129.pdf>.

⁵ The access fee cap provision is found at Regulation NMS, Exchange Act Release No. 51,808, 70 Fed. Reg. 37,496, 37,631 (June 9, 2005) (to be codified at Access to Quotations, 17 C.F.R. § 240.610(c)), <https://www.gpo.gov/fdsys/pkg/FR-2005-06-29/pdf/05-11802.pdf>.

⁶ *Id.* at 37,545.

market structure to intermediate between trading venues as symptomatic of avoidable inefficiencies in routing and displaying liquidity.

- This model is a tool to sidestep the tick size regime. With access fees and liquidity rebates taken into account, which may also be tiered / volume-based, pricing grids of many trading venues are quite sophisticated and effectively replicate the economics of subpenny pricing. This perspective is further complicated by the fact that not all brokers use a pass-through mechanism to pass access fees and liquidity rebates to their customers.

Overall, given the dominance of the maker-taker pricing model and its natural inclination to magnify access fees and liquidity rebates, it is proper to question this homogenization of trading venues, which appears to have come at the expense of alternative / non-maker-taker models and the overall diversity in the marketplace. Another important perspective is the interaction of different fee-rebate structures adopted by individual trading venues using the maker-taker pricing model. For instance, the National Best Bid and Offer could be distorted by variations in fee-rebate structures, potentially hurting market participants whose orders are disadvantaged by routing practices that do not minimize costs. The synthetic subpenny economics implicit in the maker-taker pricing model could be subverted because a router is permitted to de-prioritize trading venues with lower access fees in favor of other factors, effectively disadvantaging limit orders posted on trading venues with lower access fees that are “traded through” and thus limiting potential diversity under the maker-taker pricing model. While forcing fee-based routing is contentious, this measure is likely to create more diversity in access fees across trading venues. At a minimum, brokers should be scrutinized for conflicts of interest: they could be routing to higher priced trading venues, for instance, in order to achieve volume tiering or preference affiliated trading venues, in a manner in which the economic benefit is not being passed directly or indirectly to their customers. While a pass-through mechanism is not required, this scenario may have system-wide implications for liquidity, and, if not addressed, it will continue to disadvantage market participants posting liquidity on trading venues that provide more favorable economics for liquidity takers.

Much has been written and said about possible undesirable incentives introduced by the market-taker pricing model, such as conflicts of interest between brokers and their customers in the absence of a pass-through mechanism,⁷ the problematic nature of tiered fee-rebate structures,⁸ and the existence of certain manipulative trading strategies.⁹ Although these concerns are very much

⁷ See, e.g., Robert Battalio et al., Can Brokers Have It All? On the Relation Between Make-Take Fees and Limit Order Execution Quality 35–36 (Oct. 20, 2015) (unpublished manuscript), <http://ssrn.com/abstract=2367462> (presenting evidence that “brokers who send all of their nonmarketable limit orders to a single venue offering the highest liquidity rebate (and charging the maximum permissible take fee) are not maximizing limit order execution quality” and suggesting that a pass-through mechanism “may provide at least some compensation” to investors).

⁸ See, e.g., BODEK, *supra* note 1, at 70–71 (criticizing the tiered rebate structure employed by some securities exchanges as anticompetitive under certain circumstances and suggesting “a reduction in the fee cap [in order] to encourage the development of more robust volumes on exchanges running alternative market models”).

⁹ See, e.g., Behruz Afshar, Securities Act Release No. 9983, Exchange Act Release No. 76,546, Investment Company Release No. 31,926, at *3, 12–16 (Dec. 3, 2015) (initiation), <https://www.sec.gov/litigation/admin/2015/33-9983.pdf> (addressing “manipulative trading known as ‘spoofing’ to collect [liquidity] rebates,” which was based on the usage

valid, they deal with how specific variations of the maker-taker pricing model are implemented and thus do not necessarily describe the maker-taker pricing model as a whole. Accordingly, it is important to address key questions on the very nature of this pricing model, including its impact on overall liquidity.

For instance, with respect to the issue of whether regulatory intervention should be used to constrain the maker-taker pricing model, one common argument for the status quo articulated during the past Committee meetings and elsewhere is that this model encourages provision of liquidity, leads to price improvement and lower bid-ask spreads, and ultimately benefits a wide range of market participants, including retail investors. The corresponding conclusion is that a wholesale abolition of the maker-taker pricing model or any further restrictions on access fees, which serve as a primary funding source for liquidity rebates, would decrease liquidity and impose costs on numerous investors. However, this argument is not universally true. It is certainly correct that, in the presence of a binding tick size regime, the very existence of the “regular” type of the market-taker pricing model provides an additional incentive to display orders at any *given* price, which may also lead to greater depth. On the other hand, an improved displayed price is not a foregone result—and its lack may even result in an otherwise avoidable net wealth transfer from a taker of liquidity to a maker of liquidity—given that a typical liquidity rebate is less than a typical tick size.¹⁰ From this perspective, there is a substantial cost-benefit wedge, which implies that price improvement is not necessarily an unambiguous outcome, although *some* incentive is definitely possible on an aggregate—rather than transaction-by-transaction—basis.

Furthermore, an improved displayed price is not even possible in the scenario of penny-wide bid-ask spreads, although the maker-taker pricing model would still be the key driver of order flow. Consider, for example, that rebate-oriented trading strategies have tended to get “the biggest bang for the buck” in low-priced securities with penny-wide bid-ask spreads, with such names as Citigroup and Bank of America having been a chief source of rebate capture from a historic perspective.¹¹ One would presume that volume in such names is driven to lower cost trading venues and thus dampen the total volume potentially associated with rebate capture. However, the success of rebate-oriented strategies in low-priced securities with tight bid-ask spreads implies that the

of undisplayed order types and the lack of cancellation fee for “customer” orders). As pointed out earlier by one of the authors, it is often hard to classify problematic maker-taker-related practices as “market manipulation,” as this term requires the existence of distortions aimed at producing artificial prices. Dolgoplov, *The Maker-Taker Pricing Model and Its Impact on the Securities Market Structure*, *supra* note 1, at 250–57. On the other hand, this enforcement action points to the scenario of artificial price moves from a microstructural / inside the spread / one-tick perspective.

¹⁰ This relationship largely follows from Regulation NMS, as this regulatory measure caps access fees, which serve as a funding base for liquidity rebates, at \$0.003 per share and restricts subpenny pricing, with some exceptions for low-priced stocks applying to both of these provisions. Regulation NMS, 70 Fed. Reg. at 37,631–32 (to be codified at Access to Quotations, 17 C.F.R. § 240.610(c) & Minimum Pricing Increment, 17 C.F.R. § 240.612).

¹¹ Some commentators maintained that liquidity rebates are needed for securities with penny-wide bid-ask spreads. *See, e.g.*, Comment Letter from Tradeworx to the SEC, *supra* note 4, at 8 (arguing that “[one] cent is not a large enough spread to defray the cost of adverse selection”). However, the value added by this additional liquidity in already very tight markets should be questioned.

maker-taker pricing model does not significantly constrain inefficient posting and routing in such scenarios without a mandate comparable to Rule 611, i.e., the order protection / trade-through rule of Regulation NMS, that would require routing to the trading venue displaying liquidity by market participants willing to trade at significantly lower rebates, forgo rebates, or offer liquidity under inverted rebate schemes.

In any instance, the very incentive for liquidity providers to offer price improvement is largely financed by access fees ultimately borne by end consumers of liquidity. These fees, which are typically larger than corresponding liquidity rebates, must be balanced against decreased bid-ask spreads. Accordingly, any true liquidity improvement created by this model—rather than being a mere driver of order flow across competing trading venues—must be traced to some fixed imperfection in the market for liquidity rather than a mechanic economic reallocation between makers and takers through access fees and liquidity rebates.¹² More generally, with respect to identifying the link between the use of the maker-taker pricing model and unambiguous improvements in liquidity, the existing empirical studies are far from being unanimous.¹³ On the other hand, the maker-taker pricing model could be tailored to provide an additional incentive to designated market makers by offering larger liquidity rebates compared to those offered to other market participants, and this approach has already been implemented by several securities exchanges.

¹² See, e.g., Thierry Foucault, Pricing Liquidity in Electronic Markets (U.K. Gov't Office for Sci., The Future of Computer Trading in Financial Markets – Foresight, Driver Review No. 18, 2012), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289023/12-1051-dr18-pricing-liquidity-in-electronic-markets.pdf (“[M]ake/take fees may help to [sic] better equilibrate the supply and demand of liquidity in securities markets. Their effectiveness however depends on the size of the tick[,] and make/take fees will disappear if minimum price variations constraints vanish.”).

¹³ There are several empirical studies on the connection between the maker-taker pricing model and bid-ask spreads, with some of them specifically accounting for access fees. Compare Katya Malinova & Andreas Park, *Subsidizing Liquidity: The Impact of Make/Take Fees on Market Quality*, 70 J. FIN. 509, 511 (2015) (analyzing transactions in stocks on the Toronto Stock Exchange in connection with the introduction of liquidity rebates and concluding that “the ‘cum fee’ trading costs, measured by the effective bid-ask spread plus (twice) the taker fee, did not change, despite the decline in the ‘raw’ bid-ask spread, which does not include the taker fee”), with Marco Lutat, *The Effect of Maker-Taker Pricing on Market Liquidity in Electronic Trading Systems – Empirical Evidence from European Equity Trading* 1 (E-Fin. Lab, Paper No. 2010-2, 2010), <http://ssrn.com/abstract=1752843> (analyzing transactions in stocks on the SWX Europe Exchange in connection with the introduction of the maker-taker pricing model and concluding that “maker-taker pricing does not affect [relative quoted] spreads”), with Laura Cardella et al., *Make and Take Fees in the U.S. Equity Market* 36–37 (Apr. 1, 2015) (unpublished manuscript) (on file with authors), <http://ssrn.com/abstract=2149302> (analyzing transactions in stocks on U.S. securities exchanges and concluding that “a change in the total fee [i.e., the fee retained by the securities exchange in question after accounting for liquidity rebates and access fees] has no effect on both the quoted spread as well as the net-of-fees spread [while] the allocation of the total fee across the make and take sides has a significant effect on the quoted spread and the net-of-fees spread”), and with Shawn M. O’Donoghue, *The Effect of Maker-Taker Fees on Investor Order Choice and Execution Quality in U.S. Stock Markets* 4, 35 (Jan. 23, 2015) (unpublished manuscript) (on file with authors), <http://ssrn.com/abstract=2607302> (analyzing transactions in stocks on U.S. trading venues and finding evidence that “suggests that the fall in effective spread more than compensates for the increase in the taker fee”).

Moreover, the use of the market-taker pricing model does not appear to play a key role in enhancing liquidity in smaller-cap stocks, as compared to alternative incentive programs.¹⁴ Since less liquid securities are typically traded in an environment with wide bid-ask spreads, the incentive provided by liquidity rebates is not as significant compared to an environment for more liquid securities with much lower or even penny-wide bid-ask spreads and a potentially greater number of competing trading venues.

Payment for Order Flow Arrangements and Off-Exchange Market Making

Another key issue that has been considered by the Committee is the phenomenon of payment for order flow. This phenomenon, which is especially relevant for off-exchange market making, and its contribution to undisplayed liquidity have been discussed for several decades, and crafting an incremental change to address the *bulk* of problematic practices in this area is hardly feasible. Some regulatory regimes have chosen different approaches to off-exchange market making with respect to undisplayed liquidity and payment for order flow arrangements. For instance, since the adoption of MiFID, the European Union has required “systematic internalizers,” a category analogous to off-exchange market makers in the United States, to publish firm quotes for liquid securities and to make such quotes public on a regular and continuous basis, and this feature is retained in MiFID II. Moreover, with the adoption of MiFID II, payment for order flow arrangements are to be banned as well.¹⁵ At the same time, we are not in favor of any radical measures that would completely ban payment for order flow or threaten the existence of off-exchange market making as such. A series of incremental changes is a better policy option.

¹⁴ See, e.g., *How Roadblocks in Public Markets Prevent Job Creation on Main Street*, Hearing Before the Subcomm. on TARP, Fin. Servs. & Bailouts of Pub. & Private Programs of the H. Comm. on Oversight & Gov't Reform, 112th Cong. 34–35 (2012) (remarks of Joseph Mecane, Executive Vice President and Chief Administrative Officer, U.S. Markets, NYSE Euronext), <https://www.gpo.gov/fdsys/pkg/CHRG-112hhrg73616/pdf/CHRG-112hhrg73616.pdf> (discussing “various market maker programs on our exchange where we incentivize those liquidity providers to meet certain liquidity and quoting obligations,” stating that, “in some of these [smaller-cap] names . . . we’re paying out all the revenue that we generate and it’s not necessarily enough to help get the liquidity to where we would like it to be,” and expressing support for issuer-to-market maker compensation arrangements).

¹⁵ For the key provisions regulating systematic internalizers and prohibiting routing-based compensation in MiFID II, see Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on Markets in Financial Instruments and Amending Regulation (EU) No 648/2012, arts. 14–17, 2014 O.J. (L 173) 84, 110–13, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0600&from=EN>; Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on Markets in Financial Instruments and Amending Directive 2002/92/EC and Directive 2011/61/EU, art. 27(2), 2014 O.J. (L 173) 349, 412, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0065&from=EN>. For the similar provisions regulating systematic internalizers in MiFID, see Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on Markets in Financial Instruments Amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and Repealing Council Directive 93/22/EEC, art. 27, 2004 O.J. (L 145) 1, 22–23, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32004L0039&from=EN>.

For instance, the regulators' additional oversight of off-exchange market makers in terms of their compliance with the duty of best execution, including more scrutiny of routing and reporting practices, the magnitude of price improvement, and potential discrepancies in the use of the consolidated private data feeds for pricing, routing, and disclosure,¹⁶ is a desirable step. Moreover, another concern relates to whether payment for order flow arrangements are adequately documented and what documents are typically retained and thus available for regulatory inspection, and this concern may have best execution implications as well.¹⁷ Potential measures could include devoting more resources to the regulators' oversight of such arrangements' documentation, and a self-regulatory solution in addition to the existing reporting requirements could be based on voluntary standardized disclosure relating to such arrangements by brokerage firms and off-exchange market makers.

Another practical step is a lower access fee cap, as this measure would make lit markets more attractive by decreasing the cost of routing to these trading venues, while impacting brokers' incentives, and encourage more competition between lit and dark markets. Another potential measure is to subject order flow directed to off-exchange market makers to competition, such as mandatory exposure in lit markets. The importance of subjecting internalized order flow to increased competition for potential price improvement was emphasized by one of us earlier,¹⁸ and, in fact, it was also suggested years ago in the course of the debates surrounding the adoption of Regulation NMS.¹⁹ Furthermore, while the much-discussed trade-at rule is quite controversial, it should remain on the Committee's agenda as a potential tool to address practices relating to off-exchange trading and payment for order flow arrangements. More specifically, the trade-at rule would effectively ban passive / matched de minimis price improvement, which we consider a problematic phenomenon. Such price improvement practices have been scrutinized in off-

¹⁶ For a detailed discussion of the reach of the duty of best execution to and potential breaches of this duty by off-exchange market makers, see Stanislav Dolgoplov, *Wholesaling Best Execution*, *supra* note 1.

¹⁷ See, e.g., *Broker Routing Conflicts: Payments and Best Execution*, KOR GROUP (June 16, 2014), <http://kortrading.com/broker-routing-conflicts-payments-and-best-execution/> (stating that "it may also be true that by inhibiting competition with backroom, off-the-record handshake payment deals for retail order flow, discount brokers are not getting the best execution possible for their customers").

¹⁸ See BODEK, *supra* note 1, at 69 ("One straightforward and proven solution would be to require trades that are negotiated off-exchange to be exposed to the electronic crowd on-exchange for competitive price improvement, a practice which benefits retail customers and enhances the liquidity made available to the public marketplace."). Citing this insight, Commissioner Luis A. Aguilar recommended to the SEC to "explore ways of exposing off-exchange trades to more competition" and mentioned the option of "requir[ing] trades negotiated in dark pools and with internalizers to be exposed to the exchanges for potential price improvement." Luis A. Aguilar, Comm'r, U.S. Sec. & Exch. Comm'n, U.S. Equity Market Structure: Making Our Markets Work Better for Investors (May 11, 2015), <http://www.sec.gov/news/statement/us-equity-market-structure.html>.

¹⁹ See, e.g., Ellen L.S. Koplou, Exec. Vice President & Gen. Counsel, Ameritrade, Inc., Comment Letter to the SEC on the Proposed Regulation NMS 9 (June 30, 2004), <https://www.sec.gov/rules/proposed/s71004/amer063004.pdf> ("Ameritrade strongly believes that true price transparency and discovery will not be achieved until the Commission requires internalized orders to be subject to public display and available for interaction prior to execution. Requiring firms that internalize order flow to publicly display those orders and to make them available for interaction with other orders prior to execution would increase transparency for all investors.").

exchange market making, sometimes in the context of very liquid securities, although characterizing all transactions in this segment as de minimis would be incorrect. Given the existing distinction between de minimis and non-de minimis price improvement practices, we see a possibility of requiring exposure of internalized order flow to competition for orders not meeting a quantified de minimis requirement. Such a rule could be analogous to the minimum price requirement triggered by the Manning obligations under FINRA Rule 5320.²⁰

Competition Between the Maker-Taker Pricing Model and Payment for Order Flow Arrangements in Off-Exchange Market Making

As another consideration with respect to potential regulatory tools, one argument in support of the retention of the maker-taker pricing model points to the interaction of different types of trading venues in interconnected securities markets. For instance, as stated in the memorandum prepared by the SEC’s Division of Trading and Markets, the existence of the maker-taker pricing model may be seen as a competitive response to off-exchange trading:

The payment of transaction-based rebates is a primary tool that exchanges use to compete with off-exchange venues. Accordingly, most exchanges have adopted maker-taker fee structures to incentivize broker-dealers to direct order flow to them in an effort to compete with off-exchange venues as well as other exchanges. If the maker-taker model were eliminated or substantially impaired, more trading interest might be redirected from exchanges to non-exchange execution venues and the exchanges’ ability to compete thus could be undermined, which could have a detrimental effect on the public price discovery process.²¹

Yet, as suggested by the same statement, the very existence of the maker-taker pricing model on securities exchanges is also an inevitable result of their competition with each other—not just off-exchange trading venues. Furthermore, the prevalence of high access fees in lit markets, as a consequence of the race to the maximum permissible access fee, is one of the chief factors driving order flow off-exchange. In any instance, the extent of competition between the maker-taker pricing model and the payment for order flow model should not be overestimated. For instance, these two allocation mechanisms do not always compete for same types of orders via monetary inducements: a “regular” maker-taker exchange would *charge* market orders access fees, while an off-exchange market maker would *pay* for those orders. By contrast, an “inverted” maker-taker

²⁰ For this rule, which quantifies several tiers of “[t]he minimum amount of price improvement necessary for a member to execute an order on a proprietary basis when holding an unexecuted limit order in that same security, and not be required to execute the held limit order,” see 5320. *Prohibition Against Trading Ahead of Customer Orders*, FINRA, <http://www.finra.org/finramanual/rules/r5320> (the last amendment effective as of July 9, 2012) (Supplementary Material - .06 Minimum Price Improvement Standards).

²¹ Memorandum from the SEC Div. of Trading & Mkts. to the SEC Mkt. Structure Advisory Comm. 13 (Oct. 20, 2015), <https://www.sec.gov/spotlight/emsac/memo-maker-taker-fees-on-equities-exchanges.pdf>.

exchange would pay for market—or marketable—orders and thus compete with off-exchange market makers. Moreover, off-exchange market makers themselves may reroute certain types of orders to securities exchanges in order to collect liquidity rebates, a practice demonstrating that orders directed to off-exchange market makers are not necessarily drawn away from securities exchanges.

Furthermore, in order to evaluate this argument for consistency, the respective magnitudes of monetary inducements offered by the maker-taker pricing model and the payment for order flow model need to be compared. It should be noted that the memorandum prepared by the SEC’s Division of Trading and Markets lumped together incentives under these two models.²² Overall, as we discuss in detail below, average per share amounts collected under payment for order flow arrangements are smaller than the range indicated in the above-mentioned SEC memorandum, which, in turn, leads to important policy conclusions.

When considering the routing practices of five major retail brokerage firms,²³ one key characteristic reflects dramatic differences in policies toward off-exchange routing. More in line with common practices, E*Trade and Scottrade route their order flow to both securities exchanges and off-exchange market makers and accept payment for order flow. At the same time, Charles Schwab and TD Ameritrade route all of their order flow to off-exchange market makers and do accept payment for order flow, while Fidelity routes some of its order flow to off-exchange market makers without accepting any payment for order flow as a result of its recent policy change.²⁴

For Charles Schwab, E*Trade, Scottrade, and TD Ameritrade, average per share amounts offered by off-exchange market makers under payment for order flow arrangements vary from \$0.0009 to \$0.0015. The only exception is Citigroup Global Markets, as it offers substantially larger average per share payments to E*Trade (\$0.0027) and TD Ameritrade (\$0.0024) compared to other off-exchange market makers. However, with respect to Citigroup Global Markets in particular, it should be emphasized that this off-exchange market maker executes the largest share—and often the bulk—of *limit* orders and a relatively small share of *market* orders for E*Trade and TD Ameritrade compared to other off-exchange market makers. This observation is consistent with the monetization of the maker-taker pricing model through subsequent limit order routing by

²² See Memorandum from the Div. of Trading & Mkts., U.S. Sec. & Exch. Comm’n, to the Equity Mkt. Structure Advisory Comm. 7 (Jan. 26, 2016), <https://www.sec.gov/spotlight/equity-market-structure/issues-affecting-customers-emsac-012616.pdf> (“Currently, the rates for payment for order flow received by three of the largest retail brokers range from \$0.0010 to \$0.0031 per share for equity securities.”).

²³ Our assessment is based on Rule 606 reports for equity transactions of (i) Charles Schwab, E*Trade, Fidelity, and TD Ameritrade for the fourth quarter of 2015 and (ii) Scottrade for the first quarter of 2015, as it was the latest available report allowing for a meaningful comparison.

²⁴ See, e.g., *Retail Brokers Show Dramatic Routing Differences*, KOR GROUP (Aug. 14, 2015), <http://kortrading.com/retail-brokers-show-dramatic-routing-differences/> (“Fidelity stopped accepting Payment For Order Flow towards the end of 2014, instead diverting all flows to price improvement (although when they did accept PFOF in 2014, their rates were roughly half that of Schwab and Etrade.”).

Citigroup Global Markets,²⁵ perhaps to extract the benefit of volume-tiered pricing offered by one or more securities exchanges, given that such pricing is generally not available to originating retail brokers.²⁶ By contrast, an average liquidity rebate for Fidelity, E*Trade, and Scottrade for routing orders to securities exchanges varies from \$0.0021 to 0.0031, which has a different magnitude than the payment for order flow range that varies from \$0.0009 to 0.0015 and excludes Citigroup Global Markets, given the importance of limit order handling for this off-exchange market maker.

These metrics allow for general inferences and provide some guidance for policy measures. Overall, when adjusting for some off-exchange market makers' routing practices that impact payment for order flow arrangements, such as rerouting limit orders to securities exchanges in order to extract liquidity rebates, we note that *payment for order flow amounts are significantly smaller than liquidity rebates*. While this observation is, in some respects, an “apples-and-oranges” comparison, it still indicates the lack of one-to-one competition between securities exchanges and off-exchange market makers in terms of monetary inducements and hence a possibility of decoupling the issue of a lower access fee cap from the concern about a plain level field for on-exchange and off-exchange trading.

Despite the constraint on monetary inducements that could be offered by securities exchanges in a world with a lower access fee cap, securities exchanges and off-exchange market makers would still compete on the basis of price improvement in order to attract order flow. While securities exchanges are more handicapped in offering subpenny price improvement compared to off-exchange market makers, a greater attractiveness of and an enhanced degree of interaction of orders in lit markets, as well as the recent spread of retail liquidity programs, would serve as a balancing factor. In other words, even with the assumption that comparing the respective magnitudes of payment for order flow amounts and liquidity rebates is a valid test, it is our view that *the access fee cap could be cut at least in half and perhaps by as much as two thirds* without jeopardizing the competitive position of securities exchanges vis-à-vis off-exchange market makers using the payment for order flow model.

Recommendations

Our recommendations to the Committee are as follows:

²⁵ One caveat is that the “limit orders” category in Rule 606 reports lumps together marketable and non-marketable limit orders, categories that would be treated differently under the market-taker pricing model.

²⁶ While providing additional color on the apparent diversity and sophistication of such limit order routing, one of these reports merely states that “Citigroup Global Markets may utilize NYSE ARCA for the display of limit orders.” E*TRADE Sec. LLC, SEC Rule 606 Disclosure for the Fourth Quarter of 2015, at 2 n.2, 4 n.4. However, in the case of Scottrade, there is no apparent distinction between Citigroup Global Markets and other off-exchange market makers with respect to the breakdown between limit orders and market orders. Not surprisingly, this market participant offers the same average per share payment, \$0.001, to Scottrade as other off-exchange market makers.

- The Committee should support a maker-taker pilot program along the lines proposed by the Regulation NMS Subcommittee. A pilot program eliminating asymmetric fee-rebate structures or greatly limiting their respective magnitudes would be helpful in evaluating the role played by the maker-taker pricing model as implemented in today's securities markets. Furthermore, given the collective action problem associated with the race to the maximum permitted access fee, a market-wide pilot program should be more informative compared to unilateral experimentation by any given exchange, as illustrated by mixed results produced by recent initiatives of NASDAQ and NSX. Moreover, it would be informative to test a range of securities: in addition to including highly liquid securities, such those with prevailing penny-wide bid-ask spreads, it is important to analyze lower-cap stocks as well.
- The Committee should support a lower access fee cap, as a longer-term measure in addition to the proposed market-taker pilot program, in the form of a potential amendment to Regulation NMS. A lower access fee cap would work in both directions by addressing a number of problematic maker-taker practices, such as trading strategies involving “post only” intermarket sweep orders or conflicts of interest between brokers and their clients, and providing an additional incentive for bringing order flow back to lit markets, and this measure would also address the race to the maximum permissible access fee. Moreover, even a substantial cut would not necessarily compromise the competitive position of securities exchanges vis-à-vis off-exchange market makers. Finally, a diminished reliance on the maker-taker economics would encourage a variety of alternative market models for providing liquidity. This measure has gained considerable support within the industry,²⁷ and, in our opinion, the access fee cap could be lowered to \$0.001 per share. Overall, we think that a competition among models with different magnitudes of the maker-taker economics anticipated by the SEC at the time of the adoption of Regulation NMS²⁸ has not materialized.
- The Committee should consider additional regulatory mechanisms for promoting competition that would enhance price improvement for marketable orders, such as mandatory exposure of order flow directed to off-exchange market makers and a required minimum price improvement. While such regulatory tools have to be approached with caution, further multifaceted experimentation, especially through pilot programs, deserves attention. In particular, the Committee should review on-exchange internalization practices in the equity options space, such as price improvement auctions, as a way to implement analogous mechanisms in equity markets for internalized order flow that currently is not

²⁷ See, e.g., Douglas A. Cifu, Chief Exec. Office, Virtu Fin. LLC, Comment Letter to the SEC on the Tick Size Pilot 2 (Dec. 19, 2014), <https://www.sec.gov/comments/4-657/4657-63.pdf> (“We submit that a reduction in the market access fee cap to a level that is reflective of current market dynamics will ultimately reduce the distortive effect of the maker-taker pricing and simplify our overall fragmented market structure.”).

²⁸ See Regulation NMS, Exchange Act Release No. 51,808, 70 Fed. Reg. 37,496, 37,545 (June 9, 2005), <https://www.gpo.gov/fdsys/pkg/FR-2005-06-29/pdf/05-11802.pdf> (“Some markets might choose to charge lower fees, thereby increasing their ranking in the preferences of order routers. Others might charge the full \$0.003 and rebate a substantial proportion to liquidity providers. Competition will determine which strategy is most successful.”).

subjected to competitive forces on an order-by-order basis. More specifically, we recommend a rule that would require exposure of internalized order flow to competitive price improvement, for instance, through an exchange auction facility, for orders not meeting a minimum threshold price improvement requirement.

- The Committee should advocate for greater transparency in off-exchange market making, including payment for order flow arrangements. The focus should be on additional scrutiny of routing and reporting practices, potential discrepancies in the use of the consolidated private data feeds for pricing, routing, and disclosure, the magnitude of price improvement, and adequate documentation of payment for order flow arrangements instead of “handshake” deals with no paper trail, as well as best execution practices, adequacy and accuracy of disclosure, and applicable compliance tools, techniques, and methodologies.

We are looking forward to the Committee’s further work to assess the state of equity market structure and propose reform measures.

Sincerely,



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