EXHIBIT B
May 31, 2018

Via E-mail & FedEx

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


Dear Mr. Fields:

NYSE Group, Inc. ("NYSE Group"), on behalf of New York Stock Exchange LLC ("NYSE"), NYSE Arca, Inc., NYSE American LLC, and NYSE National, Inc., appreciates the opportunity to submit comments to the Securities and Exchange Commission (the "Commission") regarding the Commission’s proposal to adopt a Transaction Fee Pilot under proposed Rule 610T of Regulation NMS (the "Proposal" or the "Transaction Fee Pilot").

For the reasons set forth below, NYSE Group opposes the Proposal in its current form. Most problematically, the Proposal would unfairly place transaction-pricing restrictions on a single category of market participant—national securities exchanges—while allowing other market participants to compete with national securities exchanges free of any such restrictions.

The Transaction Fee Pilot is based on the Commission’s former Equity Market Structure Advisory Committee ("EMSAC") recommendation for an "access fee pilot." While some market commentators called for the Commission to adopt, and indeed expand upon, the EMSAC recommendation, NYSE Group and others objected to the EMSAC proposal on a number of grounds. The stated purpose of the Proposal, which expands on EMSAC’s


3 See, e.g., Written Statement of Brett W. Redfearn to the SEC’s Equity Market Structure Advisory Committee, Reforming the U.S. Self-Regulatory Structure (Apr. 5, 2017) (urging that the pilot be expanded to (a) test a larger segment of securities; (b) include a segment of securities where rebates are not permitted; and (c) extend the pilot to include ‘inverted’ venues’); Letter from T.R. Lazo, Managing Director and Associate General Counsel, Securities Industry and Financial Markets Association, to Brent J. Fields, Secretary, Commission (Mar. 29, 2017) (advocating for the elimination of “rebates and linkages between passive, posting of limit orders and transaction pricing”).

4 The NYSE and others expressed concern about the EMSAC’s composition, as it lacked representation of nonfinancial public companies, individual investors, or retail broker-
access fee pilot recommendation, is to generate data that would allow the Commission to study the impact of transaction fees and rebates on order routing behavior, execution quality, and market quality. NYSE Group recognizes that these are important issues, and supports the Commission’s commitment to market integrity and efficiency. But the Proposal would inappropriately alter the competitive landscape among equity trading platforms, while failing to provide the Commission with the information it would need to effectively analyze and address these issues. Nor does the Commission articulate any benchmarks for success or failure in evaluating the impact of the fee changes that would be mandated in the Transaction Fee Pilot. For these reasons, NYSE Group strongly urges the Commission not to adopt the Proposal.

As discussed more fully below, the current Proposal is structurally flawed and if adopted as proposed, NYSE Group believes that it would be inconsistent with the Commission’s obligations under the Administrative Procedure Act for the following reasons:

- **The Commission has not considered the Proposal’s impact on competition between exchanges and off-exchange trading venues, and between issuers with securities subject to the Proposal’s pricing restrictions and those that are not.** By imposing fee-related restrictions on national securities exchanges only, and not off-exchange trading venues, the Proposal would undermine competition in the market and cause the national securities exchanges to suffer significant economic harm. In addition, issuers with securities subject to the Proposal’s pricing restrictions would suffer harm vis-à-vis issuers not subject to the Proposal’s pricing restrictions. The Commission further fails to identify any countervailing market benefit that justifies imposing such harms on those exchanges and issuers.

- **The Proposal would not provide the Commission with relevant data.** The Proposal is not designed to obtain data on the fundamental question for which it was intended—i.e., the causal effect of transaction-based fees and rebates on order routing behavior, execution quality, and market quality. By limiting its scope exclusively to national securities exchanges, the Proposal would not provide the Commission with usable data to inform the Commission’s policymaking on those issues.

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dealers. See, e.g., Letter from Thomas W. Farley, President, NYSE, Thomas A. Wittman, Executive Vice President, Head of Global Trading & Market Services and CEO, The Nasdaq Stock Market LLC ("Nasdaq"), and Jeffrey T. Brown, SVP, Schwab Office of Legislative and Regulatory Affairs, to Brent J. Fields, Secretary, Commission (Oct. 20, 2015) (expressing concern regarding the lack of issuer and retail representation on EMSAC); Letter from Chris Concannon, President and Chief Operating Officer, Cboe, Thomas A. Wittman, Executive Vice President, Head of Global Trading & Market Services and CEO, Nasdaq, and Thomas W. Farley, President, NYSE, to Honorable Jay Clayton, Chairman, Commission (Oct. 13, 2017) ("Exchange Letter") (expressing concerns regarding EMSAC proposal); Statement of Stacey Cunningham, Chief Operating Officer, NYSE, to EMSAC (Aug. 2, 2016); Letter from Elizabeth King, General Counsel and Corporate Secretary, NYSE, to Mr. Brent J. Fields, Secretary, Commission (May 13, 2016); Statement of Thomas Farley, President, NYSE, to EMSAC (Apr. 28, 2016); Statement of Thomas Farley, President, NYSE, to EMSAC (May 13, 2015).
I. The Commission has substantially underestimated the costs of the Proposal. The Commission does not accurately assess the Proposal’s costs to market participants—including issuers, investors, and national securities exchanges—and thus necessarily fails to perform a sufficient cost-benefit analysis.

- **Investors:** The Proposal risks increasing costs to investors by both directing investors to less-regulated off-exchange venues and widening spreads across the market. Although the Commission acknowledges that wider spreads directly impact investors’ execution costs, it has failed to consider that the Proposal would cause broker-dealers to widen spreads in response to lower exchange rebates as access fees fall and, in doing so, would negatively impact investors’ execution quality by increasing the costs to investors by at least $1 billion per year.

- **Issuers:** The Commission did not conduct any analysis of the impact the Proposal may have on issuers or their securities. Issuers of securities that are subject to the Proposal’s price restrictions would face increased costs associated with raising capital due to wider spreads. As a result, transactions in those securities would be more expensive and less attractive to investors, which would negatively impact issuers’ ability to raise capital. The relationship between spreads and the cost of capital is well understood—for NYSE-listed companies that conducted secondary offerings in 2017, those with average spreads under 20 basis points paid an average discount to market price of 2.6%; companies with spreads above 20 basis points had to discount their offerings nearly twice as much, to 4.9%. The Commission did not consider these negative impacts.

- **Exchanges:** The Commission failed to adequately address the costs to exchanges. The Commission underestimates both the compliance costs and lost revenue stemming from the Proposal, including the loss of exchange revenue due to the anticipated redirection of order flow from exchanges to off-exchange venues. The Proposal further fails to take into account that market participants may not revert order flow to exchanges once the Transaction Fee Pilot ends.

- **The Commission failed to consider less burdensome alternatives.** The Commission failed to consider alternatives to the Proposal that could effectively evaluate and address concerns surrounding broker-dealer conflicts of interest without simultaneously causing the myriad harms listed above.

I. The Proposal Would Undermine Competition and Cause Significant, Unnecessary Economic Harm to National Securities Exchanges and Issuers

The Proposal fundamentally undermines competition. First, the Proposal restricts one segment of the market—national securities exchanges—from offering order flow
incentives, while permitting off-exchange venues, including alternative trading systems ("ATSs"), to continue to offer such incentives. This differential treatment of market competitors would materially alter the competitive dynamic among equity trading platforms and irreparably undermine the ability of national securities exchanges to compete. Relatedly, the Proposal would also harm the ability of issuers whose securities are subject to access fee caps to compete with those issuers offering unrestricted securities.

As the Commission has recognized, exchanges and off-exchange trading venues compete to provide transaction execution services, with many market participants willing to shift their business between providers based on price sensitivity. As a direct result of the regulatory scheme governing equity trading, including Regulation NMS and Regulation ATS, competition for order flow among trading venues is fierce. There are currently 13 registered equity exchanges, five of which were approved after Regulation NMS was adopted. Moreover, there are 33 registered ATSs and an additional 36 off-exchange trading venues that trade equity securities over-the-counter ("OTC"), including broker-dealers that internalize customer order flow. Off-exchange trading venues execute up to 40% of transactions in listed equity securities. In 2018, approximately $113 billion in U.S. equity-listed securities were traded on broker-dealer-operated non-exchange venues on average each day, with approximately 12% of all executions in U.S.-listed securities occurring on ATSs, and nearly 24% occurring on other OTC venues, such as broker-dealer internalizers.

Yet, the Proposal would restrict one segment of the market—national securities exchanges—from offering order-flow incentives, while allowing off-exchange venues to use those same incentive structures. While the Commission initially acknowledges that all trading centers—not just exchanges—may offer rebates to attract order flow, its proposed Transaction Fee Pilot does not accurately reflect that competitive dynamic. Few ATSs currently use maker-taker fee structures, but they have done so in the past and would be incentivized to do so in the future, if doing so would attract liquidity from exchanges. Further, broker-dealer internalizers offer other incentives to route orders to them, such as through payment for order flow, which is the economic equivalent of the "taker-maker" fee model. Restricting fee structures on exchanges only would encourage

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5 See, e.g., Proposal, supra note 1, at 13011 (noting that some have indicated that the maker-taker fee model "enables exchanges to compete with non-exchange trading centers"); Commission Division of Trading and Markets, Memorandum to EMSAC (Oct. 20, 2015) ("With 11 operating equities exchanges and dozens of ATSs, there is vigorous price competition among the U.S. equity markets and, as a result, fees are tailored and frequently modified to attract particular types of order flow, some of which is highly fluid and price sensitive.").


8 "As competition among trading centers intensified in the late 1990s, ATSs, and then exchanges, began to offer rebates to attract order flow." Proposal, supra note 1 at 13009.
those off-exchange venues to expand their use of order-routing incentives to gain a competitive advantage. And that dynamic, once in place, may very well persist even after the proposed Transaction Fee Pilot expires, particularly if off-exchange venues are successful in their efforts to attract order flow away from exchanges through economic incentives. The Commission provides no reason to believe, other than a conclusory assertion to the contrary, that off-exchange venues would revert to past practices at the Transaction Fee Pilot’s conclusion.

This approach is problematic for a number of reasons. First, it is fundamentally unfair and would impose a burden on competition between trading venues that the Commission has not considered. Excluding ATSs and other off-exchange venues from the Proposal would inevitably hamstring the exchanges’ ability to compete effectively. There is considerable evidence, including studies cited in the Proposal itself, that customer order flow moves freely from one exchange to another, often dictated by which venue offers the highest rebates. Both Nasdaq and Cboe EDGA Exchange, Inc. (“EDGA”) experienced a decrease in their market share upon voluntarily lowering fees and rebates,9 and the Battalio Equity Market Study—which the Commission relies on throughout the Proposal—suggests that broker-dealers may route customer orders based on fee and rebate considerations. If accurate, then the Proposal would drive order flow from the venues with capped rebates (i.e., exchanges) to the venues that engage in other order flow incentives without caps (i.e., off-exchange). By doing so, the Commission would significantly tip the competitive scales.

Second, the Proposal would distort the market in ways that harm investors. By encouraging off-exchange venues to more aggressively offer rebates and other economic incentives to attract order flow away from the exchanges,10 the Proposal would, in turn, cause a sustained increase in less transparent, off-exchange equity trading activity. Such a pronounced shift in trading activity is concerning for a few reasons. To begin, investors that trade on exchanges are afforded myriad protections under the Securities Exchange Act of 1934 (the “Exchange Act”) and its governing regulations that investors trading off-exchange are not similarly afforded.11 Thus, rather

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10 See Letter from Christopher Cox, Chairman, Commission, to Senator Christopher Dodd, U.S. Senate Banking Committee Chairman (May 17, 2007) (suggesting an outright ban on soft dollars). See also Proposal, supra note 1 at 13044. (stating that broker-dealer payment for order flow and any profit-sharing relationship could lead to potential conflicts of interest for broker-dealers when routing orders).

11 For instance, exchanges must file any changes to their fees and rebates with the Commission pursuant to section 19(b)(1) of the Exchange Act and Rule 19b-4. Additionally, Section 6(b)(4) under the Exchange Act mandates that exchange fees or rebates comply with certain standards, including that those fees and rebates are reasonably and equitably allocated among all members. Off-exchange venues, however,
than discouraging investors from participating in those less transparent, less regulated markets, the Commission risks directing substantial order flow from exchanges into ATSs and other off-exchange venues.

Further, the Proposal, as currently constructed, would likely undermine market quality because this increased order flow to dark venues would be accompanied by wider bid-ask spreads. While exchange transaction fees are paid by broker-dealers and, as the Commission notes, are not typically passed on to investors, the size of the bid-ask spread directly impacts investors' execution price and direct costs. Liquidity providers incorporate the value of exchange rebates into their assessment of how narrowly they can profitably quote a bid-ask spread in a given security. Liquidity rebates, therefore, allow liquidity providers to quote narrower spreads by providing another source of revenue. The Proposal, however, would limit the ability of the exchanges to provide that rebate, which would force liquidity providers to widen their spreads in order to earn the same level of compensation on a given transaction. As described in more detail in a posting on the NYSE website, NYSE Group estimates that annual trading costs to investors would increase by at least $1 billion per year during the course of the Transaction Fee Pilot as a result of these widening spreads. Finally, on-exchange limit orders contribute to pre-trade price transparency and may benefit from protected quote status. Similar orders sent to non-displayed, off-exchange venues do not contribute to pre-trade price transparency and are unprotected. Accordingly, not only would the Proposal cause irreparable economic harm to the national securities exchanges, but it also risks undermining investor protections and market quality by diverting substantial market share to off-exchange, dark venues.

Relatedly, the Proposal would harm the competitive dynamic between issuers whose securities are subject to the Proposal's price restrictions and those issuers whose securities are unrestricted. Much like competition among trading venues, issuers compete with each other to provide the most attractive investment opportunities, particularly to institutional investors, in order to raise capital. As noted, those securities subject to the Proposal's pricing restrictions would trade at wider spreads than comparable, unrestricted securities. Thus, throughout the duration of the Proposal, issuers of those restricted securities would likely be forced to offer larger discounts to raise capital through secondary follow-on offerings in order to remain competitive with issuers offering comparable, unrestricted securities. Moreover, wider spreads would

are not subject to similar requirements under the Exchange Act, nor are those venues subject to Regulation SCI's enhanced resiliency requirements.

12 See Proposal, supra note 1, at 13010.


14 For instance, a broker-dealer routing a sell (buy) order from a typical buy-side firm to an exchange would likely interact with resting bids (offers) that are priced marginally lower (higher) in absence of the full rebate the liquidity provider presently earns. As a result, the customer would sell at a lower price (buy at a higher price) in light of the wider spread, but would not receive the benefit of the lower exchange transaction fee, which the Commission acknowledges is not generally passed through from broker-dealer to customer.
increase implementation costs to an institutional investor taking a position (or unwinding a position) in securities subject to the Proposal. For example, multiple issuers sponsor Exchange Traded Products ("ETPs") based on the same or similar indices, and thus directly compete with each other for investment funds. The increased costs associated with an ETP subject to the Proposal’s pricing restrictions would impose an inappropriate burden on that ETP’s ability to compete with other comparable ETPs. Similar concerns apply to operating company issuers that are subject to the Proposal’s pricing restrictions compared to issuers of securities in the same sector that are not so constrained. The Commission has failed to consider these burdens on issuer competition as well.

As a result, if the Commission were to adopt the Proposal in its current form, it risks running afoul of its legal obligation to enforce and promote efficient markets. Sections 3(f) and 23(a)(2) of the Exchange Act, taken together, in fact prohibit the Commission from adopting any rule that would impose an unnecessary burden on competition or efficient markets.\(^\text{15}\) Thus, the fact that the Transaction Fee Pilot would actually harm competition, while undermining existing investor and market protections, is inconsistent with the Commission’s statutory authority under the Exchange Act.\(^\text{16}\) For that reason alone, the Commission should not adopt the Transaction Fee Pilot.

The Commission has also not articulated a valid justification for this problematic approach. In comments submitted in response to the EMSAC access fee pilot recommendation, several market participants, including NYSE Group, advised that the Commission include off-exchange venues in the ambit of the Proposal to avoid causing the competitive harms detailed above.\(^\text{17}\) The Commission, however, has not adequately addressed those concerns.\(^\text{18}\) The Commission explains that it did not propose to apply the Proposal to off-exchange venues because those markets are not currently subject to Access Fee Caps under Rule 610(c) and imposing the Proposal’s pricing restrictions would “have the effect of imposing . . . an entirely new regulatory regime” on those entities.\(^\text{19}\) In the Commission’s estimation, such an approach would be too complex to implement.

While NYSE Group appreciates those concerns, the Commission is not permitted to treat exchanges and off-exchange trading venues disparately because doing otherwise

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16 Cement Kiln Recycling Coal. v. EPA, 493 F.3d 207, 217 (D.C. Cir. 2007) (finding violation of Administrative Procedure Act where agency issued regulations violating the scope and substance of its statutory mandate); Ethyl Corp. v. EPA, 306 F.3d 1144 (D.C. Cir. 2002) (same).
17 See, e.g., Exchange Letter, supra note 4.
18 See Home Box Office v. FCC, 567 F.2d 9, 35-36 (D.C. Cir. 1977) (noting that an agency is obligated to "respond[] to significant points raised by the public" before issuing a final rule).
19 See Proposal, supra note 1, at 13016. This statement is also accurate only for some, but not all, off-exchange markets. For example, an ATS would be subject to the access fee cap under Rule 610(c) if the ATS disseminates its quotations pursuant to an effective national market system plan, such as by posting them to an alternative display facility.
would be too difficult.\textsuperscript{20} An "[agency's] complex mandate doesn't relieve it of the requirements of reasoned decisionmaking."\textsuperscript{21} Moreover, the Commission has enacted equally complex market reform efforts, including the National Market System Plan to Implement a Tick Size Pilot Program (the "Tick Size Pilot"), and has done so uniformly across market participants. The Commission does not sufficiently explain how uniformly applying the Transaction Fee Pilot would be any more complex or onerous than those other regulatory efforts.\textsuperscript{22}

In sum, the Transaction Fee Pilot, as currently proposed, grants off-exchange venues an inappropriate competitive advantage over the exchanges, potentially resulting in significant order flow relocation, and permanent market reorientation. These consequences are fundamentally unfair, undermine existing market protections and efficiencies, and thus place the Commission at risk of violating the Exchange Act.\textsuperscript{23}

II. The Proposal is Not Reasonably Designed to Evaluate the Effects of Transaction Fees on Order Routing Behavior, Execution Quality, and Market Quality

In proposing the Transaction Fee Pilot, the Commission asserts that the Proposal is the most effective means to examine the causal effect of transaction fees on order routing behavior, execution quality, and market quality.\textsuperscript{24} Thus, the Commission is obligated to demonstrate how the Proposal would effectively allow it to address that problem.\textsuperscript{25} The Commission has not done so here. By excluding off-exchange venues from its requirements, the Proposal would not provide usable data concerning the causal relationship between fees, incentives, and order flow.

\begin{itemize}
  \item \textsuperscript{20} Comcast Corp. v. FCC, 526 F.3d 763, 789 (D.C. Cir. 2008) (holding that agencies cannot "treat similarly situated parties differently," without providing an adequate explanation or substantial record evidence to justify such disparate treatment).
  \item \textsuperscript{21} New England Power Generators Ass'n, Inc. v. Fed. Energy Regulatory Comm'n, 881 F.3d 202, 212 (D.C. Cir. 2018) (holding that "[the agency's] complex mandate doesn't relieve it of the requirements of reasoned decisionmaking"); see also Chamber of Commerce v. SEC, 412 F.3d 133, 143 (D.C. Cir. 2005) (noting that difficulty in implementation "does not excuse the Commission from its statutory obligation").
  \item \textsuperscript{22} See Gulf Power Co. v. FERC, 983 F.2d 1095, 1101 (D.C. Cir. 1993) (holding that an agency "must explain its reasoning" when departing from prior precedent).
  \item \textsuperscript{23} See Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm, 463 U.S. 29, 57 (1983) (agencies are prohibited from issuing regulations that fail to demonstrate a "rational connection between the facts found and the choice made").
  \item \textsuperscript{24} See Proposal, supra note 1, at 13039, n.215. Execution quality measures are similar to liquidity measures and tend to include transaction costs, the speed of execution, the probability that the trade would be executed, and the price impact of the trade. See Regulation NMS Rules 605 and 606. Market quality encompasses execution quality but also relates more generally to how well the markets function. Market quality measures include liquidity, price discovery, and volatility in prices. \textit{Id}.
  \item \textsuperscript{25} See State Farm, 463 U.S. at 57; Jifry v. FAA, 370 F.3d 1174, 1180 (D.C. Cir. 2004).
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A. The Proposal Would Not Provide the Commission with Accurate and Reliable Data

The Proposal would not provide the Commission adequate data to analyze the relationship between fees and order routing decisions because it fails to collect data representative of the entire market, and also fails to account for broker-dealer remuneration in connection with order routing decisions, other than exchange fees and rebates. As a result, it is inconsistent with the Commission's legal obligation to tailor its regulations to identify and study those issues. The Commission states that the Proposal "is designed to study, among other things, the potential conflicts of interest faced by broker-dealers when routing orders as a result of transaction fees and rebates," and that "[t]he data generated by the proposed pilot should help inform the Commission, as well as market participants and the public, about any such effects and thereby facilitate a data-driven evaluation of the need for regulatory action in this area." NYSE Group supports the Commission's efforts to better understand potential conflicts of interest that harm investors. However, the Proposal, as designed, would not provide the Commission with sufficient data to evaluate that important issue.

First, while the Commission recognizes that "liquidity is dispersed across a large number of trading centers," the Proposal would exclude large swaths of those trading centers from its reporting requirements, and would not gather any insight into the trading patterns at those centers. The Commission would not be able to use data generated by the Proposal to follow order flow across all trading venues in the market, leaving it with an incomplete picture of the issue it seeks to study. Any conclusions that the Commission draws from the Proposal would not accurately reflect the full scope of potential broker-dealer conflicts that arise across the market. Indeed, off-exchange transactions, including client flow being directed to trade on off-exchange venues against principal liquidity, often present the highest potential for broker-dealer conflict. Thus, the Proposal raises many of the same concerns that the Commission raised regarding the limited applicability of the Nasdaq and Battalio studies, because it is, in the words the Commission used to describe those studies, "limited in ways that are likely to reduce the strength of conclusions that relate to the impact of transaction-based fees and rebates on order routing decisions and the existence or magnitude or potential conflicts of interest between broker-dealers and customers."

Simply put, if the Commission seeks to address broker-dealer conflicts, then the Proposal must study the full life cycle of a customer order. For example, a broker-dealer typically divides an institutional client order ("parent order") into smaller orders ("child orders"), which are then routed to both exchanges and off-exchange venues. Any thoughtful examination of execution quality or potential broker-dealer conflicts concerning a particular parent order would necessarily need to track each child order through the market, including those orders that never reach the public markets because they were executed off-exchange, or reach the public exchanges only after attempting to

26 Jifry, 370 F.3d at 1180.
27 See Proposal, supra note 1, at 13016.
28 See Proposal, supra note 1, at 13008 (emphasis added).
29 See Proposal, supra note 1, at 13044.
interact with myriad off-exchange execution venues. Accordingly, the Commission would not be able to compare execution quality across trading venues because the Proposal would not provide data concerning the effects of transaction fees on execution quality market-wide.

Nor does the Commission provide an adequate reason for refusing to collect this data from off-exchange venues. By way of comparison, under the Tick Size Pilot, broker-dealers, including ATSs, are required to collect and report numerous data points, including the daily collection of a wide array of market-maker activity in Tick Size Pilot securities. That requirement is not unlike the Transaction Fee Pilot requirement that exchanges collect and report daily order handling and execution statistics. The Commission offers no valid reason why it was reasonable to require broker-dealers to collect and report data under the Tick Size Pilot, but unreasonable to ask them to do the same under the Transaction Fee Pilot. Until the Commission either includes off-exchange venues in the Proposal, or explains its reasons for not doing so, it risks violating its clear legal mandate to issue internally consistent regulations.

Second, the Proposal does not consider, let alone measure, the role that broker-dealer commissions, payment for order flow, or volume discounts play in broker-dealer order routing decisions. That information is critical to understanding how broker-dealer incentives may cause conflicts with client interests, particularly concerning trades on off-exchange venues that do not publish their fees. Thus, the Proposal would not provide quality data concerning the effect of broker-dealer incentives on order flow decisions because it does not account for the full scope of incentives available in the market. Nor does the Proposal account for the effect that the upcoming amendments to Rule 606 might have on broker-dealer order routing behavior. To the extent that these

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30 For example, if an investor places a parent order to purchase 100,000 shares when the national best bid and offer ("NBBO") is $9.99 x $10.00, child orders of that parent order that are routed to off-exchange destinations could result in the national best offer rising to $10.01 as participants perceive increased demand. If additional child orders are then sent to exchanges and receive midpoint fills under the new $9.99 x $10.01 NBBO, those exchange midpoint fills would seem "high-quality" under the Proposal, but in reality the broker's routing of related child orders have caused 5 basis points of market impact. Yet, the Proposal does not attempt to collect information on the execution quality received by any child orders routed to off-exchange venues, and thus does not reflect the full spectrum of execution possibilities for a given customer order.

31 On May 6, 2015, the Commission issued an order approving the Tick Size Pilot, as modified by the Commission, to be implemented within one year after the date of publication of the Order for a two-year pilot period. See Securities Exchange Act Release No. 74892 (May 6, 2015), 80 FR 27513 (May 13, 2015). The Commission subsequently published proposed rule filings by each of the exchanges to require their members (i.e., broker-dealers) to comply with the data collection and reporting requirements of the Tick Size Pilot. See, e.g., Securities Exchange Act Release No. 77469 (Mar. 29, 2016), 81 FR 19269 (Apr. 4, 2016) (SR-NYSE-2016-27).

32 See Gulf Power Co., 983 F.2d at 1101 (holding that an agency "must explain its reasoning" when departing from prior precedent).

33 See id.; see also State Farm, 463 U.S. at 43; Dist. Hosp. Partners v. Burwell, 786 F.3d 46, 58-59 (D.C. Cir. 2015).
amendments become effective prior to or during any Transaction Fee Pilot, and that their heightened disclosure requirements impact order routing practices, the Commission would also have difficulty parsing whether changes in order-routing behavior were the result of the amendments to Rule 606 or the Transaction Fee Pilot. In fact, the Proposal fails to consider that adopting the Commission’s proposed amendments to Rule 606 order routing disclosure requirements could militate against the need for the Proposal at all, as a broker-dealer would likely change behavior rather than provide disclosure to customers that indicates that it is engaging in routing behavior primarily in its own self-interest.

Because the Proposal would not provide the Commission with usable data to study the relationship between exchange fees and order-routing decisions nor the impact of exchange fees on execution quality, the Proposal is not rationally connected to the Commission’s decision to study the effect of fees on customer order routing. Thus, the Commission should, at a minimum, revisit the structure and scope of the Proposal in such a way that is consistent with that obligation.

B. The Proposal Contains Other Design Flaws

The Commission notes that “[t]he cap on access fees established by Rule 610(c) [(the “Access Fee Cap”)] sought in part to prevent high access fees in excess of the cap from undermining Regulation NMS’s price protection and linkage requirements, while preserving the business model used by trading centers dependent upon revenue from fees.” The Commission does not evaluate whether there is any evidence that the Commission’s objectives in adopting the cap on access fees—i.e., undermining Regulation NMS’s price protection and linkage requirements—are not being met. Instead, the Commission proposes to change and expand the cap on access fees for the ostensible purpose of studying the effects on other Commission objectives, but fails to undergo the extensive cost-benefit and competitive-impact analyses undertaken prior to adopting Regulation NMS.

The Commission’s Proposal would not only lower the access fees permitted under the Access Fee Cap, but also proposes to expand the application of access fee caps to fees for the execution of an order against any quotation or non-displayed orders. Rule 610(c) was a narrowly tailored limitation to “preclude individual trading centers from raising their fees substantially in an attempt to take improper advantage of strengthened protection against trade-throughs and the adoption of a private linkage regime.” When adopting the Access Fee Cap, the Commission further stated that the cap was designed to promote “the NMS objective of equal regulation of markets and broker-dealers by applying equally to all types of trading centers and all types of market participants.”

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34 See State Farm, 463 U.S. at 43 ("[T]he agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'").

35 See Proposal, supra note 1, at 13010.


37 Id. (emphasis added).
The Commission proposes to create a new regulatory scheme by expanding the cap on fees that exchanges may charge for execution not only against a protected quote, but for execution against any quote on an exchange, including depth-of-book and non-displayed orders. In addition, the Commission’s Proposal would limit not only the rebates that an exchange pays, but any pricing that is linked to providing or removing liquidity on an exchange. These are likewise completely new limitations on exchanges’ business that are unrelated to Regulation NMS’s Access Fee Cap. Pure and simple, these are unjustified pricing restrictions.

The Commission has not only failed to articulate why it would be fair and reasonable to impose pricing restrictions on exchanges only, but it has also failed to sufficiently articulate the statutory basis to impose the price restrictions contained in the Proposal in the first place. While the Proposal contains cursory, vague, generalized references to Sections 3(b), 5, 6, 11A, 15, 17, and 23(a) of the Exchange Act, there is no explanation as to how those specific statutory sections, either individually or collectively, provide the Commission with the authority to carry out the Proposal’s broad rate-setting requirements. Indeed, there is no discussion of the Commission’s statutory authority at all, nor how the Proposal fits within the purported statutory authority. For example, while the Commission has statutory authority under Section 6 of the Exchange Act to ensure that the rules of national securities exchanges “provide for the equitable allocation of reasonable dues, fees, and other charges,” it provided no analysis or discussion demonstrating its reasoned decision-making of how the specific fee structures to be mandated in the Proposal would be equitably allocated or reasonable. The Commission cannot simply skip this analysis or assume it has unrestricted authority to conduct pilots on the basis that the Proposal is intended to be temporary.

III. The Commission Did Not Adequately Consider the Costs of the Proposal on Investors, Issuers, and National Securities Exchanges

The Commission is obligated to consider and address the costs associated with the Proposal. However, the Proposal’s cost-benefit analysis contains numerous flaws that are inconsistent with the Commission’s obligation to provide a “reasoned basis” for its regulations. The Commission should further study the issue before imposing an expensive and disruptive Proposal.

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38 An agency must explain the precise statutory basis for its actions. See SEC v. Chenery Corp., 332 U.S. 94, 197 (1947) (“It will not do for a court to be compelled to guess at the theory underlying the agency’s action; nor can a court be expected to chisel that which must be precise from what the agency has left vague and indecisive.”); Indiana Coal Council, Inc. v. Lujan, 774 F. Supp. 1385 (D.C. Cir. 1991).

39 Compare with Indiana Coal Council, Inc., 774 F. Supp. at 1385 (holding that agency’s explanation of its statutory authority was adequate in light of the agency’s “nearly . . . full page analysis of the [basis for its] authority”).

40 See State Farm, 463 U.S. at 43 (“The agency must examine the relevant data and articulate a satisfactory explanation for its action . . . .”); see also United States Sugar Corp. v. EPA, 830 F.3d 579, 650 (D.C. Cir. 2016); Appalachian Power Co. v. EPA, 135 F.3d 791, 818 (D.C. Cir. 1998).
A. The Proposal Underestimates Costs to Investors

The Proposal does not adequately address costs to investors. For reasons discussed, the Proposal risks both directing investors to less-regulated, off-exchange venues and widening spreads across the market, which would increase costs to investors.\textsuperscript{41} As noted, NYSE Group estimates that the cost to investors would increase by at least $1 billion per year during the course of the two-year Transaction Fee Pilot.\textsuperscript{42} While all investors would absorb the costs of wider spreads, the benefits from the proposed reduction in access fees would accrue primarily to sell-side brokers and proprietary traders, leaving institutional and retail investors with increased costs and no corresponding benefit. However, the Commission never addresses those costs, opting instead to focus solely on how the Proposal would mitigate broker-dealer conflicts of interest to the benefit of investors. While that is a laudable goal, it does not obviate the Commission’s responsibility to consider and address these concomitant harms, including widening spreads. Moreover, the Commission’s assumed benefit to investors—i.e., addressing broker-dealer conflicts—prematurely assumes that the Transaction Fee Pilot would in fact mitigate such conflicts of interest. Thus, the Commission relies on speculative benefits to outweigh concrete harms. That approach is insufficient.\textsuperscript{43}

The Proposal also fails to consider investor costs associated with increased broker-dealer commissions. The Commission assumes, without support, that broker-dealers would not be able to account for lost rebate revenue by “significantly increas[ing]” their commission fees because “competition among broker-dealers” would prevent them from doing so.\textsuperscript{44} That assumption, however, is contradicted by the Commission’s own statement that investors would not in fact “switch broker-dealers even if it appears that their broker-dealer may have acted on conflicts of interest.”\textsuperscript{45} Again, the Commission cannot have it both ways; investors would either respond to unfavorable broker-dealer activity by switching broker-dealers or they would not. The Commission must explain this contradiction prior to adopting the Proposal.\textsuperscript{46}

B. The Proposal Underestimates Costs to Issuers

The Proposal also underestimates costs to issuers. Under the Regulatory Flexibility Act (“RFA”), the Commission is obligated to consider—and mitigate—any negative effects that the Proposal would have on small businesses.\textsuperscript{47} The Commission, however, makes short shrift of those concerns, simply stating that it does not believe that the Proposal would disproportionately harm small-capitalization stocks,\textsuperscript{48} without providing any

\begin{footnotes}
\textsuperscript{41} See supra Part I.

\textsuperscript{42} See supra note 13 and accompanying text.

\textsuperscript{43} See \textit{State Farm}, 463 U.S. at 43.

\textsuperscript{44} See id. at 13065.

\textsuperscript{45} See id. at 13043.

\textsuperscript{46} See, e.g., \textit{Business Roundtable v. SEC}, 647 F.3d 1144, 1153-54 (D.C. Cir. 2011)

\textsuperscript{47} 5 U.S.C. §§ 601-612.

\textsuperscript{48} See id. at 13019.
\end{footnotes}
support for that conclusion—and how it is consistent with the Commission's own acknowledgment that maker-taker fee structures may aid in narrowing displayed spreads. 49

Other than a short discussion of smaller capitalization issuers, the Commission does not appear to have conducted its own analysis of what impact the Proposal may have on issuers or their securities. 50 For instance, the Commission does not adequately address whether issuers would be able to remain competitive if the Proposal's fee caps negatively affect their liquidity. As discussed, those issuers of securities subject to the Proposal's price restrictions would find it more costly to raise capital in secondary offerings due to wider spreads. 51 The Commission posits that exchanges' ability to maintain a "protected quote" for these stocks would sufficiently attract liquidity providers to offset the effect of reduced rebate incentives under the Proposal. That conclusion, however, fails to take into account that Rule 611 of Regulation NMS already provides such an incentive, and that rebates not only serve as an additional incentive to post liquidity, but also to narrow the publicly displayed quotes for that security. As the Commission acknowledges that maker-taker fee structures aid in narrowing displayed spreads, it must also acknowledge that restricting those incentive structures may, in turn, widen those spreads. Thus, Rule 611 would not offset the negative impact of the Proposal's rebate caps.

C. The Proposal Underestimates Costs to Exchanges

The Commission underestimates the cost of the Proposal on exchanges, both in terms of compliance costs and lost revenue. First, the Commission has not properly considered compliance costs associated with implementing the Proposal. The Commission estimates that it would cost each exchange approximately $196,659 to implement and maintain the Transaction Fee Pilot for the duration of the pilot period. That estimate, however, is based on mere conjecture concerning how many personnel hours (e.g., technologists, attorneys, project managers, business managers, compliance, regulatory, etc.) it would take to implement and maintain the Transaction Fee Pilot, and is unsupported by the costs that exchanges recently incurred implementing the Tick Size Pilot. The costs for exchanges to implement and maintain the Tick Size Pilot's similar

49 See id. at 13011.

50 The RFA applies with equal force in situations where, as here, third-party entities incur downstream costs associated with the regulated sectors providing information required by an agency. See Aeronautical Repair Station Ass'n v. FAA, 494 F.3d 161, 177 (D.C. Cir. 2007) (finding that regulatory costs to those affected as contractors to a regulated entity must be considered under the RFA). Thus, the Commission is obligated under the RFA to adequately address the Proposal's costs to small-capitalization issuers covered under the statute.

51 In 2017, NYSE-listed companies conducted 250 secondary offerings of common stock. Companies with average spreads under 20 basis points paid an average discount to market price of 2.6%; companies with spreads above 20 basis points had to discount their offerings nearly twice as much, to 4.9%, based on an analysis conducted using vendor-provided pricing data for secondary offerings and NYSE TAQ data for spread calculations. The analysis included all NYSE-listed secondary offerings of common stock in 2017, and grouped the listed companies by their 2017 average spread.
data-collection and reporting requirements were immense, especially due to complications arising from implementing and interpreting those requirements during early phases of the pilot's rollout. The Commission's cost estimates, however, do not make reference to, let alone account for, the costs incurred by the exchanges in implementing the Tick Size Pilot.52

Indeed, based on its prior experience implementing the Tick Size Pilot, and other similar initiatives, NYSE Group estimates that it would cost at least $464,645 per each of its four equity exchanges to make the necessary systems and related changes to support the Transaction Fee Pilot.53 For instance, while the Commission predicts only eight hours to compile the initial securities list, NYSE Group anticipates it could take as many as 44 hours to do so.54 Similarly, the Commission predicts that it would take only 12.5 hours to develop and maintain systems to comply with the Proposal's daily symbol publications,55 while NYSE Group believes that it could take as many as 300.5 hours to develop and maintain those systems. Finally, while the Commission allocates 160 hours associated with producing order routing data,56 NYSE Group estimates that it would actually require over 400 hours—in other words, more than double the Commission's estimates. And these estimates, which are based on the same metrics used by the Commission, do not even account for the possibility that unforeseen implementation and interpretation issues could arise during the early stages of the Proposal, much like during the rollout of the Tick Size Pilot, which would further increase costs to exchanges.57 The Commission's cost estimates, therefore, greatly underestimate the Proposal's implementation and compliance costs to exchanges.

The Proposal similarly grossly underestimates the exchanges' revenue shortfalls stemming from order flow moving to off-exchange venues. First, the Commission provides no support for its assumption that "many of the likely impacts of [the Transaction Fee Pilot] on efficiency, competition, and capital formation would be temporary in nature and would affect markets only for the duration of the proposed
Pilot.\textsuperscript{58} The Commission is obligated to do so.\textsuperscript{59} Moreover, that assumption is contradicted by the Commission's own finding that broker-dealers would not change their behavior unless the Transaction Fee Pilot lasts for at least one year.\textsuperscript{60} On the one hand, the Commission says that the market quickly reacts to changes in (and elimination of) pricing changes, but on the other hand, claims that the market does not react unless the changes are in effect for at least a year. The Commission cannot have it both ways; the market is either pliable or resistant to change, and the Commission is legally obligated to explain that inconsistency.\textsuperscript{61} Further, as discussed above, the Commission ignores the fact that market participants may not revert to pre-Transaction Fee Pilot models once the pilot ends.\textsuperscript{62} The Commission's failure to explain these analytical inconsistencies runs counter to its responsibility to provide a "reasoned basis" for its rulemaking.\textsuperscript{63}

Moreover, the Commission's statement that "[l]ower access fees . . . could attract marketable order flow from the ATSs and back to the exchanges, which could tilt the competitive equilibrium in favor of the national securities exchanges" is similarly flawed. The Commission appears to believe that lower access fees are the primary force driving order flow to off-exchange venues and that lowering those fees would necessarily result in order flow returning to the exchanges. However, the Commission fails to account for the fact that market participants choose to send orders to off-exchange venues for reasons other than avoiding fees. This is because off-exchange venues can offer advantages to investors and broker-dealers that exchanges cannot, including investor anonymity, the ability to trade in more granular tick sizes, the flexibility to segment the treatment of different types of clients, the ability to choose trading counterparties, and the ability to accommodate customer errors. Thus, off-exchange venues have inherent advantages over exchanges, separate and apart from access fees, and the Commission's assumption that simply lowering fees would "tilt the competitive equilibrium in favor of the national securities exchanges," lacks a reasoned basis.\textsuperscript{64}

The Commission's specific cost estimates fare no better. The Commission assumes in its cost-benefit analysis that the Proposal's restrictions would cause the exchanges to lose $91.8 million in revenue. However, that calculation is based on a flawed premise.

\textsuperscript{58} See Proposal, supra note 1, at 13040. The Commission's data collection and compliance cost analysis is similarly conclusory. The Commission simply delineates the costs to exchanges in terms of the costs to comply with the Proposal's data collection and publication requirements and bases its calculations on presumed hourly estimates and personnel costs with no clear analytical support.

\textsuperscript{59} See Amerijet Int'l, Inc. v. Pistole, 753 F.3d 1343, 1350 (D.C. Cir. 2014) ("[C]onclusory statements would not do; an agency's statement must be one of reasoning."); Business Roundtable, 647 F.3d at 1155 (demonstrating that conclusory statements do not constitute reasoned decisionmaking).

\textsuperscript{60} See id. at 13052.

\textsuperscript{61} See Gulf Power Co., 983 F.2d at 1101.

\textsuperscript{62} See supra Part I.

\textsuperscript{63} Business Roundtable, 647 F.3d at 1153-54.

\textsuperscript{64} See State Farm, 463 U.S. at 43; see also United States Sugar Corp., 830 F.3d at 650.
The Commission calculates revenue shortfall by multiplying the maximum reduction in margin between access fees and rebates under the Proposal by the exchanges’ existing market share percentages. Thus, that calculation assumes that exchanges would remain equally competitive for order flow by simply adjusting their access fees within bounds of the Proposal. But that assumption is flatly contradicted by both the Battalio and Nasdaq studies. As those studies demonstrate, and the Commission hypothesizes in proposing the Transaction Fee Pilot, fee structures impact order routing behavior—and the Proposal would shift the competitive balance in favor of off-exchange venues, which can offer unfettered economic incentives to attract order flow. Thus, the assumption that the Proposal would not affect the exchanges’ market share strains reason, and the Commission cannot rely on that calculation consistent with its “duty . . . to examine and justify the ‘key assumptions’ underlying” its Proposal. Accordingly, the Commission must reevaluate the Proposal’s costs to exchanges because its current treatment of that issue is analytically flawed.

IV. The Commission Did Not Properly Analyze Alternatives to Implementing a Costly and Unnecessary Transaction Fee Pilot

Finally, the Commission has not reasonably considered less costly and more effective alternatives to the Proposal. Indeed, the Commission already has sufficient data to thoroughly examine the relationship between access fees and broker-dealer conflicts. NYSE Group, among others, has in fact already suggested several less onerous options in its comments on the EMSAC pilot that the Commission could consider in lieu of the Proposal. For reasons explained below, these alternative methods are preferable to the Proposal’s onerous requirements, and the Commission’s failure to consider these alternatives is inconsistent with its legal obligations.

A. Request Data from Broker-Dealers

To avoid the harms discussed above, the Commission should consider using existing data available in the records of broker-dealers as an alternative to the Transaction Fee Pilot. Institutional customers and retail brokers already demand detailed order routing and execution-quality metrics from their broker-dealers and/or wholesalers. As a result, broker-dealers have already devoted significant resources to performing trade-cost analyses and have already collected and produced voluminous routing and execution-quality data to their customers, both at the parent-order and aggregate levels. This data

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65 See id.
66 See id. at 13020.
67 United States Sugar Corp., 830 F.3d at 650; see also Appalachian Power Co., 135 F.3d at 818.
68 See supra Part II.
69 See Exchange Letter, supra note 4 (urging the Commission to adopt its proposed amendments to Rule 606 and Regulation ATS, as well as to provide enhanced best execution guidance, prior to proposing a pilot that addresses access fees).
70 Home Box Office, 567 F.2d at 35-36.
71 See Exchange Letter, supra note 4.
is similarly available to the Commission. Indeed, the Commission has plenary examination authority over these entities and could easily request whatever data it deemed necessary to examine these issues through less burdensome methods.

Notably, broker-dealers—and not exchanges—are the only source from which the Commission can obtain information concerning execution quality of a client’s original order. An exchange cannot measure an order’s speed of execution because it does not have access to the time the broker-dealer received or routed the originating order, nor can an exchange measure the likelihood of the broker receiving an execution, as its data is limited to its own market, and it is therefore unable to measure execution probability as compared to other exchanges and trading centers to which orders may be routed. Broker-dealers, on the other hand, are required under Rules 605 and 606 of Regulation NMS to collect and report information concerning order timing, the venue(s) to which orders are routed, and whether the orders were executed. That includes those broker-dealers that operate ATSs and other off-exchange venues as well. Thus, the Commission can effectively examine the relationship between exchange fees and broker-dealer conflicts simply by examining existing broker-dealer data.

B. Improve Broker-Dealer Disclosure by Finalizing Changes to Exchange Act Rule 606 and Amending Regulation ATS

In lieu of a costly and ill-conceived Transaction Fee Pilot, the Commission could also finalize its proposed amendments to Rule 606, or its proposed amendments to Regulation ATS, which would both improve disclosure of conflicts of interest and enhance the operational transparency of ATSs. Indeed, the U.S. Department of the Treasury recommends adopting, “a final rule implementing the changes it proposed in 2016 to Exchange Act Rules 600 and 606.” Implementing these proposals would allow the Commission and the public to examine the relationship between fees and order routing, including those orders routed to off-exchange venues, which would allow the Commission to avoid collecting a partial, and therefore unusable, data set.

Further, disclosure is the only feasible regulatory action that the Commission could take to mitigate the broker conflicts inherent in a market with multiple trading venues on orders may be executed. Unless the Commission were able to mandate that the fees paid or remuneration received by a broker were identical for each venue choice available for routing orders, a conflict will exist. Lowering exchange transaction fees or eliminating

72 See Regulation NMS Rules 605, 606.


rebates would not eliminate, or even mitigate, these conflicts. Thus, in addition to the data collection flaws in the Proposal described above, it is unclear why the Commission believes that restricting exchange fees and rebates could be a viable regulatory measure to address broker conflicts.

C. **Expand Proposal to Analyze Other Forms of Broker-Dealer Remuneration**

As discussed, the Proposal is analytically flawed because it does not take into account forms of broker-dealer remuneration apart from fees and rebates.\(^{76}\) As the NYSE Group has asserted from the introduction of the EMSAC proposal,\(^{77}\) the Commission must study the impact of all forms of remuneration and incentives used to attract order flow in order to properly understand the related conflicts that may arise between broker-dealers and their customers. The Proposal should, therefore, require that ATSs and broker-dealers report their remuneration practices. Without doing so, the Proposal would simply encourage broker-dealers to route orders to nontransparent off-exchange venues, and the Commission would have no information concerning the incentives that those venues offer in exchange for that order flow.\(^{78}\)

* * * * *

NYSE Group supports the Commission’s efforts to remediate the potential conflicts that arise between broker-dealers and their customers. However, the Transaction Fee Pilot, as currently proposed, would not further this goal. The Proposal would irreparably harm the ability of the national securities exchanges to compete with off-exchange trading venues, and would not provide the Commission with the information it needs to design and implement effective regulations to address conflicts of interest across market participants. The Commission already has many of the tools necessary to better understand these issues, and should opt to pursue these less onerous methods rather than implementing the Proposal in its current form.

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\(^{76}\) 81 FR 49431.

\(^{77}\) See Exchange Letter, supra note 4.

\(^{78}\) In addition, because the pilot would reduce direct costs to intermediaries and the pilot is intended to study the potential misalignment of incentives, broker-dealers should be required to provide data showing how the lower costs to intermediaries are returned to customers.
NYSE Group appreciates the opportunity to comment on the proposed Transaction Fee Pilot. NYSE Group strongly encourages the Commission to utilize its current regulatory authority to analyze all remuneration broker-dealers receive in connection with their order routing and to approve the other proposals referenced herein as part of a more reasonable review of transaction fees and their potential impact on broker-dealer routing decisions. Please feel free to contact myself at [redacted] should you have any questions related to this matter.

Respectfully submitted,

[Signature]

Elizabeth K. King
General Counsel and Corporate Secretary
NYSE Group, Inc.

cc: Honorable Jay Clayton, Chairman
    Honorable Michael S. Piwowar, Commissioner
    Honorable Kara M. Stein, Commissioner
    Honorable Robert J. Jackson, Jr., Commissioner
    Honorable Hester M. Peirce, Commissioner
    Brett Redfearn, Director, Division of Trading and Markets
May 25, 2018

Transaction Fee Pilot: An Impact Assessment

After much anticipation, the SEC has proposed a “Transaction Fee Pilot,” which would impose additional price controls on exchange access fees and rebates. As proposed, all equity exchanges (but not alternative trading systems (“ATS”) or other over-the-counter (“OTC”) trading venues) would be required to reduce access fees and/or reduce or eliminate rebates on 3,000 stocks for a period of up to two years. While some commentators equate a lower access fee with a better trade price, we have seen little analysis of the Proposal’s actual cost or benefit to investors. To fill this void, we are presenting two approaches that attempt to roughly quantify the Proposal’s potential impact on investors.

The analysis involves numerous assumptions, and we welcome any and all feedback. First, we assume that a reduction in access fees will result in a reduction in rebates. Second, we assume that with a lower rebate, spreads will widen.

The widening of spreads is generally accepted as a cost to investors because of the related increased transactions costs, particularly for agency liquidity-seeking order flow. Importantly, a wider spread will result in higher trading costs for this type of flow regardless of whether the order trades on an exchange or an off-exchange venue that derives prices from exchanges.

As demonstrated in the chart below, we find that as access fees decline, the cost to investors will increase by at least $1bn, increasing to nearly $4bn should such changes be applied to the entire market. While all investors would absorb the costs of wider spreads, the benefits from the proposed reduction in access fees would accrue primarily to sell-side brokers and proprietary traders.

Transaction Fee Pilot: Liquidity Taking Cost/Benefit Distribution

All figures in basis points

Top-Down Assessment of Fee Pilot Proposal

We first estimated costs using a top-down approach, which applies the proposed Fee Pilot changes to current average market-wide statistics. We assumed that rebates on trades in securities in each proposed Trade Groups would fall by the same amount as access fees would fall. For Group 3 (the “no-rebate” group) we assumed that market forces would reduce the access fee to $0.0002. We expect Group 3 to settle at a rate below Group 2’s $0.0005 cap as there is no rebate allowed on the other side of the trade; we also note that flat-fee venues which charge both sides of a trade today are generally priced between $0.0000 and $0.0003. As shown in the following table, this yields a blended access fee reduction of $0.00082 per share.

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In order to find the expected new average spread, we identified the following calculation to apply the impact of the rebate reduction to consolidated spreads:

\[
\text{New Consolidated Spread} = \text{Current Consolidated Spread} + \text{Rebate Reduction} \times 2
\]

The Current Consolidated Spread is the median market-wide bid-ask spread, and the Rebate Reduction is the $0.00082 blended average fee change. The Rebate Reduction is multiplied by 2 as we anticipate market makers will adjust both their bids and offers to account for the new pricing structure. This calculation results in a 1.1% increase in average spreads, to 28.1 basis points (bps).

As noted by the SEC in its proposal, brokers that are subject to exchange fees and rebates generally do not pass those costs/credits to their customer. We therefore assess principal and agency flow differently as principal flow is impacted by both explicit exchange fees and spread costs, while the ultimate customer behind an agency order incurs spread costs but usually does not pay explicit exchange fees. We also assume that the principal flow benefit from the fee reduction applies to maker/taker activity, but the higher spread cost applies to all principal and agency flow in the market.

Our cost to investors is found by calculating the cost to cross the new, wider spread; our cost to principal traders is found by calculating the cost to cross the new, wider spread netted against the benefit from lower access fees. Spread costs here are considered to be ½ the quoted spread for liquidity-taking flow, per standard transaction cost analysis measurement of performance against arrival price.

Our results show, on net, an estimated cost of $1.08bn to the industry, of which $721MM would be incurred by agency flow.
### Estimated Costs to Liquidity Takers

<table>
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<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Current Consolidated Spread</td>
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<td>Current consol (wgt avg)</td>
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<td>Avg Daily Volume</td>
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<tr>
<td>Avg Daily Notional</td>
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<td>AvgPx</td>
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<td>Maker/Taker %</td>
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<tr>
<td>Principal Take %*</td>
<td>51%</td>
</tr>
<tr>
<td>Access Fee/Rebate Change</td>
<td>0.00082</td>
</tr>
<tr>
<td>Access Fee/Rebate Change (bps)</td>
<td>0.159</td>
</tr>
<tr>
<td>New Consolidated Spread</td>
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<tr>
<td>% Change in Spread</td>
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<tr>
<td>Principal Benefit - Take</td>
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<tr>
<td>Principal Cost - Take</td>
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<tr>
<td>Agency Benefit - Take</td>
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<tr>
<td>Agency Cost - Take</td>
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<td><strong>Annualized Total</strong></td>
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<tr>
<td>Cost (bp)</td>
<td>-0.12</td>
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</table>

*Based on observed flows in NYSE Tape A and NYSE Arca trading.

We believe that this result is somewhat conservative, primarily due to the assumptions of 1) no change in quote size despite the wider spread, 2) no shift in venue market share, and 3) applying the NYSE and NYSE Arca principal/agency ratio despite the fact that the market-wide agency taking share is much higher. This second assumption likely limits our estimated cost substantially, as a quick glance at major retail brokerage firms’ 606 reports indicates that nearly all held market orders are executed OTC. These conservative assumptions are offset by the exclusion of taker/maker (i.e., rebate to take and fee to add) venues’ impact on principal flow, the assumption that all agency flow does not pay explicit exchange fees, and by not assigning any benefit to liquidity-providing agency flow from a wider spread. We also assume a representative amount of volume in each of the pilot groups, which could be incorrect in either direction.

The below chart shows the distribution of the spread cost increase and the access fee decrease for the proposal’s three groups compared to the current market average. This again assumes an even distribution of liquidity characteristics across stocks. The access fee paid by brokers is small relative to spread costs in today’s world, and could fall as much as 93% for Group 3 stocks.

https://www.nyse.com/equities-insights
Bottom-Up Assessment of Rebate Elimination

We also estimated changes from eliminating rebates across the market as a whole. We used a “bottom-up” approach that looked at the difference in quoted spreads for each stock trading on Cboe EDGX Exchange, Inc. ("EDGX", which is a maker-taker venue) and Cboe EDGA Exchange, Inc. ("EDGA," which is a flat-fee venue). EDGA and EDGX are very similar in that neither is a listing market, and both operate on the same technology in the same location. Accordingly, any differences in spreads between the two markets could be due to the different pricing models available on each exchange.

In aggregate, the EDGA average spread is roughly twice that of EDGX, but there is substantial variation by symbol. To account for this variation, we applied the difference in spread to the current consolidated spread for each symbol, capped that difference to 25%, and then further limited the maximum spread difference to the ratio of the primary exchange spread to the EDGX spread (these limitations were to account for the variance between venues and the fact that we are modeling a world with narrower differences in exchange pricing). The chart below shows the differences in average quoted spread between these two venues, the primary market and the consolidated quote.
We believe that eliminating rebates would widen spreads, as demonstrated by EDGA's wider spreads relative to EDGX. Accordingly, applying this wider spread to current trading activity of all NMS securities on all equity exchanges would result in an impact of roughly $3.8bn per year, once again born largely by agency liquidity-taking flow. We also checked this result by setting all stocks to group 3 in the first model; our result in that case was a similar $3.7bn impact.

To recap, we have used two different models to assess the impact of reduced fees and rebates on liquidity-seeking flow. We find a $1bn cost from the proposed Transaction Fee Pilot, rising to $3.8bn should such limitations be applied across the market. As stated, any such analysis requires numerous assumptions, and we encourage input from market participants on how we could further refine this assessment of investor cost.

- Kevin Tyrrell and Steven Poser

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**May 15, 2018**

**A New Era of Trading on NYSE: Now Trading All NMS Securities**

On April 9, 2018, the New York Stock Exchange broke with 225 years of tradition and began trading stocks listed on other exchanges. By April 25th NYSE was trading more than 8,000 total names across the NMS universe - over 5,400 of which were listed on Tapes B (regional exchanges) and C (Nasdaq). By the beginning of May, NYSE had achieved an average market share of 0.75% in Tapes B & C trading.

**Participant Types & Usage**

The NYSE market model for Tapes B & C is similar to the existing model for NYSE-listed securities. While Tapes B & C names do not benefit from a Designated Market Maker (DMM), the NYSE Floor Brokers and Supplemental Liquidity Providers (SLPs) continue to play key roles and together account for nearly 30% of liquidity provision.

Across all participants, activity is slightly more concentrated in active names compared to more-established venues. The top 100 most-active Tapes B&C names on NYSE account for about 61% of total volume compared to 56% at other maker/taker venues.