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Via Electronic Mail (rule-comments@sec.gov)

Vanessa A. Countryman, Secretary
U.S. Securities and Exchange Commission
100 F Street NE
Washington, DC 20549-1090

Re: File No. S7-31-22: Order Competition Rule

Dear Ms. Countryman:

Robinhood Financial, LLC and Robinhood Securities, LLC[1] (together, "Robinhood") submit this letter in response to the U.S. Securities and Exchange Commission's ("Commission" or "SEC") recent rule proposal regarding the Order Competition Rule ("Proposed OCR" or "Proposal").[2] This is one of four rules the SEC has simultaneously proposed to completely restructure the U.S. securities markets (collectively, the "Proposals"). Together, these four rules would transform retail investing by having the government and self-regulatory organizations ("SROs") mandate and then micromanage what fees can be charged, what prices retail investors must receive, where retail investors' trades must be executed, and what information must be provided to investors. The breadth and complexity of these Proposals is unprecedented and unworkable. Moreover, in many areas, the Proposals are based on scant data, secret data, or no data at all. And, in several instances, the SEC openly concedes that they could result in worse prices and more expensive transactions for retail investors and cause retail investors to leave the securities markets.[3]

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[1] Both of these FINRA-member broker-dealers are wholly owned subsidiaries of Robinhood Markets, Inc.

[2] Proposing Release, Order Competition Rule, Exchange Act Release No. 96495 (Dec. 14, 2022), 88 Fed. Reg. 128 (Jan. 3, 2023) ("OCR Proposing Release").

[3] *E.g.*, OCR Proposing Release, 88 Fed. Reg. at 221 ("[I]f the Proposal results in the elimination of zero-commission trading, retail trading volume could decline and the overall pool of liquidity could shrink …."); Proposing Release, Regulation Best Execution, Exchange Act Release No. 96496 (Dec. 14, 2022), 88 Fed. Reg. 5440, 5534 (Jan. 27, 2023) ("Reg Best Ex Proposing Release") (potential for worse prices in illiquid securities); Reg Best Ex Proposing Release, 88 Fed. Reg. at 5530, 5533, 5536 (retail investors may be required to pay commissions due to increased transaction costs); Proposing Release, Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders, Exchange Act Release No. 96494 (Dec. 14, 2022), 87 Fed. Reg. 80,266, 80,280 (Dec. 29, 2022) ("Tick Size Proposing Release") (pricing increments that are too small can lead to decreased displayed liquidity, added complexity, and increased risk of stepping ahead).

Due to the scope and complexity of the Proposals and the dearth of supporting evidence, the Commission has made it difficult for the public to understand or meaningfully assess the collective impact of the rules, including their costs and negative effects on the marketplace. But one thing is certain: If adopted, they will push us backwards, towards a time when investing was less efficient, less accessible, and less fair. The SEC's Proposals will reverse a recent retail investor revolution, which Robinhood is proud to have facilitated, that allows everyday Americans to build long-term wealth through investing. Robinhood's model has transformed retail investing for the better and saved investors billions of dollars and counting. The innovations we spearheaded in the market, such as commission-free trading, no account minimums, fractional shares, and the first non-employer IRA with a match were possible because for the last fifty years, the SEC did what Congress authorized it to do—it encouraged competitive, innovative, and efficient markets. We now have a highly competitive system that facilitates innovation and is accessible to any individual who wants to participate. As a result, we no longer have a marketplace dominated by the "haves." The historical "have nots"—blue collar workers, women and people of color, young Americans and first-time investors, people from rural communities and inner cities alike, gig economy workers and freelancers—now participate in unprecedented numbers in the U.S. stock market.

Today, Robinhood has over 23 million customers, many of whom are younger and more diverse than yesterday's investors.[4] Our customers hail from every state in the country and are a representative cross-section of America. We're proud of our customer base, but we're not unique. Across the industry, retail-focused broker-dealers followed Robinhood's lead—dropping costly commissions and account minimums—and in the process opened nearly 70 million more accounts by late 2021 as compared to the number open in late 2017.[5] This is truly revolutionary progress. As policymakers on both sides of the aisle have long recognized, participating in the securities markets is the best way for individual Americans to generate long-term wealth, reduce our country's persistent

[4] Press Release, Robinhood, Robinhood Markets, Inc. Reports February 2023 Operating Data (Mar. 13, 2023), https://investors.robinhood.com/news/news-details/2023/Robinhood-Markets-Inc.-Reports-February-2023-Operating-Data/default.aspx (23.1 million total funded accounts); Gretchen Howard, *Latinx Investors Are Part of the New Wall Street*, Robinhood: Blog (Oct. 12, 2021), https://blog.robinhood.com/news/2021/10/12/latinx-investors-are-the-new-face-of-wall-street-and-crypto ("We see more than double the industry average of Latinx and Black investors on our platform, and we know that new investors in 2020 were younger and more diverse than experienced investors."); SEC, *Staff Report on Equity and Options Market Structure Conditions in Early 2021*, at 9 (2021), https://www.sec.gov/files/staff-report-equity-options-market-struction-conditions-early-2021.pdf ("Robinhood reported that its average customer is 31 years old and has a median account balance of $240.").

[5] Staff of H.R. Comm. on Fin. Servs., 117th Cong., *Game Stopped: How the Meme Stock Market Event Exposed Troubling Business Practices, Inadequate Risk Management, and the Need for Legislative and Regulatory Reform* 6 fig.1 (Comm. Print 2022).

income and investing diversity gaps, and drive economic growth. In recent decades, the U.S. securities markets have transformed from a marketplace wholly dominated by a handful of broker-dealers and exchanges that stifled competition, where most Americans could not afford to participate, to today's markets where the cost of trading has never been lower, stock prices have never been better, competition is thriving, and market participation has never been more widespread.

The Commission has historically recognized the importance of investor participation in the markets and taken steps to encourage more efficient markets that work better for the retail investor. Until now. Out of a misguided sense that government mandates should dictate where, how, and at what prices trades may occur, the Commission now proposes to upend the entire structure of today's securities markets with these four proposed rules. While we all agree that the markets must work for the benefit of retail investors, the SEC's complex and unsupported Proposals would not advance this goal. Instead, the Proposals are collectively regressive and would unwind much of the significant progress that has been made to drive costs down and encourage retail investor participation over the past half century. As altered by the Proposals, the customer experience in our markets will be slower, pricier, and less competitive; capital formation will be more difficult for smaller issuers; and increasing costs will likely expel from the market many of those investors who have only recently begun to participate. In other words, the Commission is trying to fix a market that isn't broken—and will break it in the process. For the above and other reasons, certain of the Proposals should be withdrawn in their entirety, and the others must be clarified, modified, and harmonized before they can be adopted.

The SEC's proposed rules can be ranked in order of most reckless and harmful to least intrusive:

- First, with its experimental so-called ***Order Competition Rule***, the SEC would—for retail investors only—revert to the exchange oligopolies that Congress directed it to abolish fifty years ago. The Proposed OCR would force retail orders to a single type of venue (a subset of exchanges) and a single order execution method ("qualified auctions") purportedly because the SEC is concerned that in today's market, retail customers may not get the benefit of *all* market participants (particularly large institutional investors) competing for their orders. But the SEC admits it does not know whether or which parties will participate in these auctions—in fact, it admits that large institutions may *not* participate.[6] The SEC also admits that auctions could result in worse prices for retail investors.

This radical proposal would cut off retail investors' access (through retail broker-dealers) to the well-developed system of venues that vigorously compete for their order flow and provide best execution and other services. That competition drives venues to improve prices, lower costs, and improve services for retail investors. The upshot of the Proposed OCR would be that retail investors' orders will be forced into government-mandated, centralized marketplaces that, while residing within for-profit corporations, effectively operate as public utilities with regulatory immunity and limited liability if they have technology problems, i.e., there is little recourse if investors are unhappy with the prices they receive due to errors. Indeed, the SEC acknowledges that retail investors could experience slower and less certain trading at worse prices while institutional investors and professional traders will continue to benefit from the competition provided by off-exchange venues and market makers. And that, in turn, will likely breed confusion and frustration, causing many retail investors to lose faith in the markets and stop participating altogether. These extreme, negative consequences are not mere speculation; the SEC admits that the Proposed OCR may drive retail investors out of the market. Further, our review of the Commission's economic analysis demonstrates that instead of saving investors $1.5 billion (which the Commission estimates), the Proposed OCR is likely to cost investors between $2.5 and $3 billion. This rule should be rejected in its entirety.[7]

- Through its proposed ***Regulation Best Execution*** (or "Proposed Reg Best Ex"), the SEC would create unnecessary regulatory obligations that are, at best, redundant because there is already a comprehensive set of best execution standards in place. Existing best execution rules of SROs (including the Financial Industry Regulatory Authority ("FINRA")) not only require broker-dealers to achieve the best price reasonably available for customers, they also require broker-dealers to regularly and rigorously test whether they have done so and subject broker-

[6] *See* Letter from David Howson, Executive Vice President & Global President, Cboe Global Markets, et al., to Vanessa Countryman, Sec'y, SEC (Mar. 24, 2023), https://www.sec.gov/comments/s7-32-22/s73222-20161714-330556.pdf (group of commenters including institutional investors object to the Proposed OCR and instead support improvements that come from "competitive forces" and "innovative, market-driven solutions").

[7] Notably, one of the exchanges that would be eligible to host qualified auctions has also recommended the Commission not adopt a prescriptive requirement to send retail orders to auctions and instead argued for market-driven innovations and enhancements. Letter from Hope M. Jarkowski, General Counsel, NYSE, to Vanessa Countryman, Sec'y, SEC, at 9 (Mar. 13, 2023), https://www.sec.gov/comments/s7-31-22/s73122-20159561-327567.pdf.

dealers to SRO examinations for compliance with those rules. While neither articulating any weakness in the current regulatory structure nor materially changing the fundamental best execution standard that broker-dealers are already required to follow, Proposed Reg Best Ex makes compliance with those obligations so onerous and expensive that the natural result, as the SEC expressly acknowledges, could change firms' business models, result in fewer retail broker-dealers, and increase fees and costs to retail investors with no evidence of any material additional benefit. This rule should be rejected in its entirety.

- The proposed ***Minimum Pricing Increment (Tick Size), Access Fee, and Transparency Rule*** ("Tick Size Proposal") would (among other things) harmonize and reduce the minimum price increment at which exchanges and other market participants can quote and trade exchange-listed stocks, restricting the increments at which investors can trade. We support sensible changes to tick size, access fees, and market data infrastructure, but believe the current proposal lacks support for the significant changes to market structure that the SEC proposes. The SEC should take a more incremental, data-driven approach and, first, fully implement the Market Data Infrastructure ("MDI") Rules, which will make additional information regarding orders available to the marketplace (e.g., new round lot sizes, odd-lot information, and auction information), and therefore help to fill key gaps in publicly available market data, encourage further price improvement, and make more data accessible to investors at lower prices by introducing competition into an otherwise monopolistic data market. Then, the SEC should repropose reasonable and incremental changes to minimum pricing increments. We believe a thoughtful approach would be to: (a) reduce the minimum pricing increments to $0.005 for tick-constrained stocks that would more clearly benefit from narrower tick sizes; (b) allow for a six-to-12-month period to study the effects of these changes on market quality; and, then (c) if warranted after further analysis, consider additional reductions to the minimum pricing increments as well as larger minimum pricing increments for less liquid stocks with naturally wider spreads, providing a mechanism to roll back any changes that, after analysis, decrease market quality. The SEC should also adopt exchange access fee caps that are proportional to the minimum pricing increments based upon existing access fee caps (30% of the tick size). Changes beyond those contemplated here risk increasing price volatility and confusion on the part of investors who may find that they are not receiving the prices they thought they would when they submitted their orders due to rapidly changing quotations.

- Finally, with its proposed ***<u>Disclosure of Order Execution Information</u>*** rule ("Proposed Rule 605"),[8] the Commission would expand reporting entities and expand or modify the types of data that must be disclosed so that broker-dealers and their retail customers can better assess the quality of the execution prices they receive. We believe this proposal should be refined, but support adoption of a modified version of the proposal.

The Proposals are also problematic because they overlap in ways that are contradictory, redundant, and mutually exclusive. If the Proposals are implemented and some successfully meet their objectives, others would be unnecessary. For these reasons, none of the Proposals may properly become law without being clarified and reproposed. And while there are certainly opportunities to improve on an already well-functioning marketplace, adopting a complex and interdependent suite of rules that would upend almost every aspect of trading for retail investors would be rash and unsupportable. Instead of proposing a thoughtful, incremental, and data-driven approach to reforming market structure inefficiencies and competitive imbalances, the SEC has taken a "Rube Goldberg machine" approach to rulemaking. This approach appears to be designed to experiment with the retail market—at the expense of retail investors—by implementing multiple solutions to the same alleged problem at once, rushing headlong into unknowable consequences without a plan (or even the ability) to measure the impact of different rules or recalibrate its approach as the market responds.

Because each individual proposal must be considered as both a standalone rule *and* a changeable aspect of a larger structural transformation, we set forth below in **<u>Section I</u>** our comments on the totality of the Commission's plan, including the cumulative effects of adopting multiple rules simultaneously and how each proposed rule would affect and be affected by the others. We then set forth in **<u>Section II</u>** a specific discussion regarding the Proposed OCR. Our comments are organized as follows.

I. THE COLLECTIVE IMPACT OF THE PROPOSALS

A. Today's Securities Markets Work Well For Retail Investors.

B. The Proposals Would Upend The Current Industry Practices That Have Worked Well For Investors And Issuers In Multiple Interrelated Ways.

C. The Proposals Violate Federal Law.

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[8] Proposing Release, Disclosure of Order Execution Information, Exchange Act Release No. 96493 (Dec. 14, 2022), 88 Fed. Reg. 3786 (Jan. 20, 2023) ("Rule 605 Proposing Release").

D. The SEC Shouldn't Experiment With Retail Investors' Financial Futures: Rulemaking Must Be Data-Driven, Supportable, And Incremental.

II. THE PROPOSED OCR SHOULD BE WITHDRAWN

A. The Proposed OCR Is Bad Policy.

B. The Proposal Is Illegal Because It Is Inconsistent With The SEC's Statutory Mandate.

C. The Proposal Is Unlawful Because The SEC Has Failed To Conduct A Reasonable Economic Analysis.

We provide our comments with a number of caveats.

First, it is impossible for us—or anyone—to comment on all the possible permutations that may arise depending on how the Commission chooses to reject, modify, or proceed with the Proposals. Integral to the public's ability to participate in the rulemaking process is the agency's obligation to "reveal the agency's views 'in a concrete and focused form'"[9]—to tell the public what it is *actually* proposing. When an agency's proposal is too nebulous or "open-ended,"[10] "interested parties will not know what to comment on" and will be unable to meaningfully critique the proposal.[11] Here, the Commission's proposals fail to provide the basic notice required by the Administrative Procedure Act because they do not inform the public what the Commission *is actually proposing to adopt*. Even without considering eventual changes that might be made to any individual proposals, given the inconsistencies between the proposals themselves, the Commission cannot conceivably adopt each rule as proposed at the same time. The net effect is that the Commission has failed, at this time, to give the public notice of what combination of rules it reasonably expects to adopt. For this reason alone, the Commission must repropose the rules. The Commission's failure to provide proper notice is exacerbated here by the difficulty of reasonably estimating the compound effect of these interconnected rules in this brief comment period, particularly where the Proposals may overlap, result in contradictory or unpredictable outcomes, or obviate each other.

Second, the Commission consistently underestimates costs and overstates benefits in its flawed economic analyses, often relying on assumptions instead of real data and never

[9] *United Church Bd. for World Ministries v. SEC*, 617 F. Supp. 837, 839 (D.D.C. 1985) (quoting *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 548 (D.C. Cir. 1983)).

[10] *Prometheus Radio Project v. FCC*, 652 F.3d 431, 453 (3d Cir. 2011).

[11] *United Church Bd.*, 617 F. Supp. at 839 (quoting *Small Refiner Lead*, 705 F.2d at 549).

providing (or even attempting to provide) a coherent and unified statement about the collective costs and benefits of the total proposed rule set. Furthermore, the Commission fails to adequately incorporate and offset the benefits that the already approved MDI Rules will have once implemented, while simultaneously introducing new costs by scaling back data content and substantially delaying the introduction of competition into the data market relative to the MDI Rules' adopted implementation table. The suite of rules the Commission has proposed as a whole is more complicated, more expensive, and more burdensome than the sum of its parts. If the Commission proposes to change any individual proposal, it is imperative that the industry have another opportunity to comment on how the adjustments or revisions would collectively affect market structure.

Third, the short time frame for comment, as well as the lack of transparency around significant CAT data used by the Commission to support its proposals, has precluded market participants like Robinhood from fully testing the Proposals with data, which is particularly necessary given the lack of empirical support the Commission itself has provided. Given that it is impossible for even market professionals to comprehensively study and comment on the rules, certainly retail investors—our customers—cannot be expected to engage meaningfully in this process despite Chair Gensler's calls for retail investor input.[12] We object and request that, after Commission staff work through the voluminous comment file anticipated on these proposals, a more reasonable, incremental and integrated proposal be reproposed with a manageable comment period so that firms and customers can assemble and evaluate the requisite data and meaningfully participate in this process.

In short, for the public to have the notice and opportunity to comment guaranteed by the securities laws and the Administrative Procedure Act, the Commission must put forward a coherent, cohesive proposal. If the requisite data is secret and available only to the Commission, a reasonable period of time must be allowed for others to assemble the requisite data to construct and run the regression analyses and simulations required to reasonably assess this hodgepodge of proposed changes. Further, the Commission does

[12] The SEC's Proposals are a marked departure from its rulemaking process relating to Regulation Best Interest, for example, where the SEC first conducted a study, solicited industry and investor input, proposed a rule with a lengthy comment period, and made adjustments based on those comments. Similarly, when the SEC adopted its last significant market structure changes—Regulation NMS—it first spent five years undertaking "a broad and systematic review to determine how best to keep NMS up-to-date." Final Rule, Regulation NMS, Exchange Act Release No. 51808 (June 9, 2005), 70 Fed. Reg. 37,496, 37,497 (June 29, 2005). Prior to even proposing Regulation NMS, the SEC's review "included multiple public hearings and roundtables, an advisory committee, three concept releases, the issuance of temporary exemptions intended in part to generate useful data on policy alternatives, and a constant dialogue with industry participants and investors." *Id.* This is the type of careful, data-driven approach the SEC should take here.

not appear to have considered the market instability it would introduce by requiring financial institutions to implement so many new and confusing infrastructure and technical changes. The Commission's willingness to indulge in widespread experimentation is reckless and directly contrary to decades of Commission action. Since its inception 90 years ago, the Commission has thoughtfully and continuously assessed the fairness and competitiveness of U.S. markets and calibrated its rules based on data and experience.[13] It has never before thrown a large plate of rulemaking spaghetti up against a wall to see what sticks. It should not do so now.

I. THE COLLECTIVE IMPACT OF THE PROPOSALS

The Proposals must be considered collectively as well as individually. To do that, we address in this Section the collective impact of the Commission's Proposals including:

- How the SEC's efforts, as directed by Congress, have historically encouraged competition and innovation among diverse venues and, as a result of these opportunities to compete for retail order flow, the markets have become more fair and efficient (**Section I.A**);

- How the Commission's four proposed rules would collectively upend the current industry practices that have worked well, resulting in harm to retail investors, smaller issuers, and the U.S. securities markets as a whole (**Section I.B**);

- How the Proposals exceed the SEC's statutory mandate and fail to provide a reasonable or comprehensive economic analysis, and the ways in which federal law prohibits the Commission from taking these discriminatory, anti-competitive, and unsupportable actions (**Section I.C**); and

- How the Commission's Proposals dangerously depart from traditional rulemaking, and why the SEC should continue to adhere to its time-honored incremental, data-driven approach instead of experimenting with the U.S. securities markets and the financial futures of retail investors (**Section I.D**).

[13] *See, e.g.*, Chair Arthur Levitt, SEC, Speech, Dynamic Markets, Timeless Principles (Sept. 23, 1999), https://www.sec.gov/news/speech/speecharchive/1999/spch295.htm ("The Commission believed then, as we do now, that our role is not to impose or dictate the ultimate structure of markets. Rather, it is to establish, monitor, and uphold the framework that gives competition the space and sustenance to flourish. Markets can then develop according to 'their own genius' for the ultimate benefit of investors.").

A. Today's Securities Markets Work Well For Retail Investors.

Robinhood's mission is to "democratize finance for all" and make the securities markets work better for retail investors. In many ways, this mission has become a reality. The current U.S. market structure model "has delivered significant benefits for retail investors,"[14] as Chair Gensler acknowledged in his swearing-in testimony in 2021.[15] Today:

- Retail investors pay dramatically less in commission costs (in most cases, zero) and execution fees than they have in the past, saving investors over $17 billion in the last two years and counting.[16]

[14] Comm'r Mark T. Uyeda, SEC, *Statement on Proposed Rule Regarding Order Competition* (Dec. 14, 2022), https://www.sec.gov/news/statement/uyeda-order-competition-20221214; *see also infra* notes 16-20 and accompanying text.

[15] *Nominations of Gary Gensler and Rohit Chopra: Hearing Before the S. Comm. on Banking, Housing & Urban Affairs*, 117th Cong. 8 (2021) (statement of Gary Gensler, Nominee), https://www.banking.senate.gov/imo/media/doc/Gensler%20Testimony%203-2-21.pdf.

[16] S.P. Kothari et al., *Commission Savings and Execution Quality for Retail Trades* 1-2 (Dec. 2, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3976300 (finding that "[s]ince the industry adopted Robinhood's zero-commission model in late 2019, retail investors have saved tens of billions in trading commissions, with Robinhood customers alone saving $11.9 billion during 2020-2021"); Samuel Adams & Connor Kasten, *Retail Order Execution Quality under Zero Commissions* 7-8 (Jan. 7, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3779474 ("Based on the commission rate for Charles Schwab before the commission cut, $4.95 per trade, and an estimated trade size of 200 shares … the average commission payment per hundred shares was $2.475. … The average payment per hundred shares of marketable and marketable limit orders by Citadel Securities to TD Ameritrade, Charles Schwab, and E*TRADE in January 2020 was $0.14.").

- Spreads are tighter than ever.[17] This results in retail investors receiving better prices, more price improvement, and higher investment returns.[18] Robinhood alone has provided $8 billion in price improvement over the past two years.[19]

- Innovation in product offerings and technology have made the securities markets more accessible than ever to retail investors. Retail brokers, and Robinhood in particular, have rolled out products and services that meet the needs and wants of today's retail investors and removed barriers to retail participation in the stock market, such as high-quality, user-friendly trading apps; fractional share trading; accounts with no minimum balances; jargon-free financial education; and access to tools and information previously available only to professional investors.[20]

As a result of broker-dealers like Robinhood focusing on increased retail access to the markets, today's retail investors are younger, have smaller account balances, and are more racially and ethnically diverse than they have been in the past.[21] Retail investors opened accounts at record rates in 2020-2021, and today, almost 150 million Americans

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[17] Charles Schwab, *U.S. Equity Market Structure: Order Routing Practices, Considerations, and Opportunities* 6 ex.2 (2022) (bid-ask spread was ~90bps in 1994; now in single digit bps).

[18] OCR Proposing Release, 88 Fed. Reg. at 133 ("The narrower the spreads, the lower the prices at which they will buy and the higher the prices at which they will sell, which translate into lower trading costs and higher investment returns."). *See also* Douglas Chu, CEO, Virtu Financial, Measuring Real Execution Quality, Benefits to Retail are Significantly Understated 2 (Aug. 27, 2021), https://virtu-www.s3.amazonaws.com/uploads/documents/virtu-real-pi_20210827.pdf ("Virtu alone provided over $3B in Real Price Improvement to retail investors in 2020").

[19] S.P. Kothari et al., *Commission Savings and Execution Quality for Retail Trades* 1 (Dec. 2, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3976300 (finding that "[d]uring 2020-2021, Robinhood customers benefited from more than $8 billion in price improvement compared to the national best bid and offer prices").

[20] *See* Shane Swanson, *The Impact of Zero Commissions on Retail Trading and Execution* 4 (2020), https://www.greenwich.com/equities/impact-zero-commissions-retail-trading-and-execution ("On the whole, Greenwich Associates finds that retail investors, in fact, have never had it better. Not only have their commission costs come down to zero, but the services they receive have never been more advanced.").

[21] *See* Mark Lush et al., *Investing 2020: New Accounts and the People Who Opened Them, FINRA Consumer Insights: Money and Investing*, Feb. 2021, at 2, https://www.finrafoundation.org/sites/finrafoundation/files/investing-2020-new-accounts-and-the-people-who-opened-them_1_0.pdf ("[N]ew investment platforms began addressing some of the traditional barriers to investing, such as not knowing how to open an account, limited access to a financial professional, the perception that large sums of money are required to enter the market, and sensitivity to the costs of investing.").

(approximately 60%) own stocks.[22] Today, there are no wealth or income barriers to opening a brokerage account; investors do not need to maintain an account minimum or pay high upfront fees to a broker to invest and trade. A retail investor can invest without paying a commission, and she can do it all on her mobile phone, with a user-friendly interface that demystifies the financial markets. She can invest any time of day, including after business hours. And the investor has all the information she needs within reach—she doesn't need to hire an expensive broker or adviser who will charge for recommendations or investment advice. Retail investors are able to easily invest because today's markets are fair, fast, transparent, low-cost, and liquid. A retail investor's order generally gets filled immediately in the amount she seeks, at or better than the price she sees on her screen at the time she places her trade.[23]

Due to this increased retail participation in the markets and the emergence of new, lower-cost products and services, retail investors have saved billions for their retirement and other financial goals.[24] This is something policymakers on both sides of the aisle have long desired.[25] But these benefits for retail investors should not be taken for granted;

[22] Lydia Saad & Jeffrey M. Jones, *What Percentage of Americans Own Stock?*, Gallup (May 12, 2022), https://news.gallup.com/poll/266807/percentage-americans-owns-stock.aspx.

[23] Market makers often provide retail brokers additional liquidity above and beyond the amount available at the best quoted price. For example, if a retail investor places an order to purchase 300 shares and the best quoted price is 100 shares, market makers provide retail brokers with size improvement and often will fill the 300-share order in its entirety, generally at, or most likely better than, the best quoted price.

[24] For example, investors have had billions of dollars in savings, just by trading lower-cost index products. Sam Potter, *The Indexing Boom Has Saved S&P Investors a Cool $357 Billion*, Bloomberg (July 29, 2021, 11:18 AM), https://www.bloomberg.com/news/articles/2021-07-29/the-indexing-boom-has-saved-s-p-investors-a-cool-357-billion#xj4y7vzkg.

[25] *See, e.g.*, *Oversight of the U.S. Securities and Exchange Commission: Hearing Before the S. Comm. on Banking, Housing, & Urban Affairs*, 117th Cong. 1 (2021) (testimony of Chair Gary Gensler, SEC), https://www.banking.senate.gov/imo/media/doc/Gensler%20Testimony%209-14-21.pdf ("We keep our markets the best in the world through efficiency, transparency, and competition. These features lower the cost of capital for issuers, raise returns for investors, reduce economic rents, and democratize markets."); *Appropriations for Fiscal Year 2020: Hearing before the Subcomm. on Fin. Servs. & Gen. Gov't of S. Comm. on Appropriations*, 116th Cong. 6 (2019) (statement of Chair Jay Clayton, SEC), https://www.govinfo.gov/content/pkg/CHRG-116shrg19104901/pdf/CHRG-116shrg19104901.pdf ("Other countries want to replicate [U.S. retail investor participation] because such broad investor participation in our capital markets is a significant competitive advantage for our economy, and participation in our capital markets has made many Americans' lives better and their retirements more secure."); Chair Mary Jo White, SEC, Speech, Opening Remarks at the Fintech Forum (Nov. 14, 2016), https://www.sec.gov/news/statement/white-opening-remarks-fintech-forum.html ("There is relatively widespread agreement that fintech

they are a modern phenomenon and the product of decades of private sector innovation and incremental change guided by Congress and the SEC. Fifty years ago, there were much higher trading costs and much lower levels of retail investor participation. Only about 25 million Americans (12%) owned stock in 1975.[26] Even when a retail investor could access the markets (overcoming obstacles such as minimum account balance requirements), trading itself was expensive due to high broker commissions and high exchange fees.[27] Those commissions and fees were high because of the uncompetitive nature of the industry. Before 1975, broker-dealers were generally required to execute trades for their customers on exchanges.[28] The exchanges operated much like public utilities because of the oligopoly they enjoyed. Without competition or with limited competition, exchanges and broker-dealers could impose high costs. And because exchanges are SROs that enjoy immunity from private claims under federal law and rule-based limitations on liability, broker-dealers had limited ability to hold them accountable when retail investors suffered substantial losses due to exchange problems.

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innovations have the potential to transform key parts of the securities industry—and to do so in ways that could significantly benefit investors and our capital markets."); Chair Mary L. Schapiro, SEC, Speech, Remarks at the Stanford University Law School Directors College (June 20, 2010), https://www.sec.gov/news/speech/2010/spch062010mls.htm ("[I]n an area very near to my heart, how can we increase voter participation by retail investors?"); Chair Arthur Levitt, SEC, Speech, Plain Talk About Online Investing (May 4, 1999), https://www.sec.gov/news/speech/speecharchive/1999/spch274.htm ("All of us are participants in an extraordinary social phenomena. The democratization of our markets is a desirable development which regulators should not frustrate. Our mission is not to prevent losers or to modulate the sometimes mercurial movement of our markets.").

[26] Richard Phalon, *Owners of Stocks Decline by 18.3 Percent Since 1970*, N.Y. Times (Dec. 10, 1975), https://www.nytimes.com/1975/12/10/archives/owners-of-stocks-decline-by-183-percent-since-1970-shareholders.html (25 million Americans owned stock); Bureau of the Census, U.S. Dep't of Com., Series P-25, No. 601, *Current Population Reports: Projections of the Population of the United States: 1975 to 2050* 2 (1975), https://www.census.gov/content/dam/Census/library/publications/1975/demo/p25-601.pdf (total population of approximately 212 million).

[27] *See, e.g.*, Charles M. Jones, *A Century of Stock Market Liquidity and Trading Costs* 2 (May 23, 2002), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=313681 (finding that "average proportional commissions on NYSE stocks climbed steadily from 1925 to the late 1960's and early 1970's to a high of almost 1%").

[28] Jason Zweig, *Lessons of May Day 1975 Ring True Today*, Wall St. J. (Apr. 30, 2015, 11:20 PM), https://www.wsj.com/articles/lessons-of-may-day-1975-ring-true-today-the-intelligent-investor-1430450405; Fred Tomczyk, *Lessons from 40 Years of Mayday on Wall Street: Column*, USA Today (May 1, 2015, 6:32 AM), https://www.usatoday.com/story/opinion/2015/05/01/mayday-anniversary-wall-street-investment-column/26463281/.

1. *The Benefits That Retail Investors Enjoy Today Are The Result Of The SEC Encouraging Venue Competition And Eschewing A Centralized Model For Order Execution.*

As with any industry that relies on a public utility model for underlying infrastructure, the securities industry was long characterized by lack of incentive to innovate or increase efficiency.[29] Trading in listed securities occurred primarily on the New York Stock Exchange ("NYSE") and, to a lesser extent, the American Stock Exchange ("AMEX").[30] This centralized model (or oligopoly) led to complacency. And this complacency led Congress to conclude in 1975 that "[r]ather than responding to changing investor needs and striving for more efficient ways to perform their essential functions, the principal stock exchanges and the majority of established securities firms appear to have resisted industry modernization and to have been unable or unwilling to respond promptly and effectively to radically altered economic and technological conditions."[31]

Congress addressed the "lack of venue competition" problem by empowering the Commission to facilitate the development of an equity market structure that was more flexible and competitive, and that would be driven by "changing economic circumstances consistent with the public interest" rather than "unnecessary and artificial restraints on competition."[32] Congress conducted extensive hearings, reviewed reports from the SEC, Department of Justice, and industry participants, and recorded over 4,600 pages of testimony from almost 100 witnesses.[33] Coming out of these extensive proceedings, the Securities Acts Amendments of 1975 ("1975 Amendments") laid the groundwork for major market structure changes that occurred over the next several decades. The 1975 Amendments authorized the Commission to facilitate the development of a national market system ("NMS") with the goals of assuring economically efficient trading and fair competition among broker-dealers, exchanges, and other market centers. Most notably, one of the first changes the SEC recognized that it needed to make under its new authority was to eliminate exchanges' oligopoly on order execution by eliminating prohibitions

[29] Jason Zweig, *Lessons of May Day 1975 Ring True Today*, Wall St. J. (Apr. 30, 2015, 11:20 PM), https://www.wsj.com/articles/lessons-of-may-day-1975-ring-true-today-the-intelligent-investor-1430450405.

[30] In 1972, NYSE accounted for 71.4 percent of trading volume; AMEX accounted for 17.5 percent of trading volume, and smaller regional exchanges and over-the-counter trading collectively accounted for 11.1 percent. H.R. Rep. No. 94-123, at 49-50 (1975).

[31] S. Rep. No. 94-75, at 1 (1975).

[32] H.R. Rep. No. 94-123, at 44.

[33] *Id.* at 45.

against off-exchange trading. That paved the way for more competition and the emergence of off-exchange markets and market makers.

The Commission did not stop there. The Commission pursued changes and improvements to the NMS, over time and incrementally through studies, pilots, and rulemaking. Many of the changes it made were designed to further enhance competition and break up the virtual oligopoly of the primary exchanges. The Commission's 1996 order handling rules opened the door for quote-based competition between exchanges and off-exchange venues like emergent alternative trading systems ("ATSs"), then known as electronic communications networks, or ECNs.[34] The Commission also eliminated NYSE's prohibition on off-exchange trading in NYSE-listed stocks. At each turn, the Commission's actions increased competition and therefore increased incentives to innovate, drive efficiencies, reduce commissions and fees, and enhance the retail investor's overall experience.

This was not always a certain outcome. There have been instances in the past where the SEC has also considered centralizing the U.S. securities markets. But each time the Commission considered this type of model, it has wisely abandoned such efforts. One such instance was in the early 2000s, when the SEC explored the creation of a centralized limit order book or "CLOB." This centralized framework for market structure, which has troubling similarities to the Commission's Proposed OCR, was never adopted because it reduced the opportunity for markets to compete and failed to strike "the appropriate balance of market competition and order competition."[35] Even the then-Chairman of the Federal Reserve weighed in, noting the dangers when policymakers micromanage the markets:

> We would do well to borrow the advice offered to the medical profession and, first, do no harm. It has never proved wise for policymakers to try to direct the evolution of markets, and it strikes me as especially problematic at this juncture. The structure of our equity markets is extraordinarily dynamic; hardly a week goes by that a new trading venue is not announced or an enhancement to an existing system is not trumpeted …. Given the pace of change in our markets, it is difficult to contemplate how a government mandate

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[34] Adopting Release, Order Execution Obligations, Exchange Act Release No. 37619A (Sept. 6, 1996), 61 Fed. Reg. 48,290 (Sept. 12, 1996).

[35] *Regulation NMS: The SEC's View: Hearing Before the Subcomm. on Cap. Mkts., Ins. & Gov't Sponsored Enters. of the H. Comm. on Fin. Servs.*, 109th Cong. (2005) (testimony of Chair William H. Donaldson, SEC), https://www.sec.gov/news/testimony/ts031505whd.htm.

> could be implemented; systems might well be obsolete before we were half-way through the planning process.[36]

The SEC's Division of Market Regulation also recognized in its Market 2000 report the dangers of doing what the SEC is proposing to do today. There, the Division correctly stated that imposing a centralized order execution facility on the markets was not only inconsistent with the SEC's historic approach to rulemaking, but also bad policy:

> The determination to refrain from imposing a single structure on the equity markets … is, in many respects, the same judgment the Commission made following enactment of the 1975 Amendments. The Commission could have required the creation of a single order-execution facility or the abrogation of all restraints on competition. Implicitly, the Commission rejected both approaches and, instead, pursued discrete, incremental market improvements. The strength and size of the U.S. equity markets today are testament to the fundamental soundness of the Commission's judgment at that time. The Division continues to believe that the vitality and variability of private-sector solutions to market structure issues justifies a limited Commission role.[37]

When the SEC eventually adopted and then implemented Regulation NMS in 2007, it chose a framework for connecting exchanges and off-exchange market centers together with market data and a trade-through rule. The SEC wisely avoided micromanaging where and how orders could be executed and at what price, and sought to strike a balance between order-by-order competition and venue competition.[38] The result was dramatic. NYSE saw its market share in its listed securities decrease from nearly 80% to approximately 20% as a result of the increased competition from Nasdaq, ECNs, and broker-dealers.[39] These new participants have contributed to lower fees, tighter spreads,

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[36] *Evolution of Our Equity Markets: Hearing Before the S. Comm. on Banking, Hous. & Urban Affs.*, 106th Cong. (2000) (testimony of Chair Alan Greenspan, Federal Reserve Board), https://www.federalreserve.gov/boarddocs/testimony/2000/20000413.htm (cautioning against a CLOB).

[37] Div. of Mkt. Regul., SEC, *Market 2000: An Examination of Current Equity Market Developments* 15 (1994) https://www.sec.gov/divisions/marketreg/market2000.pdf.

[38] Final Rule, Regulation NMS, 70 Fed. Reg. at 37,498-99.

[39] Memorandum from SEC Div. of Trading & Markets, to SEC Market Structure Advisory Comm. 11 tbl.2 (April 30, 2015), https://www.sec.gov/spotlight/emsac/memo-rule-611-regulation-nms.pdf; *id.* at 12 tbl.4 (percentage of off-exchange executions increased by 21.6% for NYSE-listed stocks and 9.2% for Nasdaq-listed stocks after Rule 611 of Reg NMS was implemented).

better prices, and better services for retail customers. They should not now be painted as villains by policymakers, including by Chair Gensler.[40]

2. *Today's Market Structure Enhances Competition Between Market Venues, To The Benefit Of Investors.*

As described above, under the Commission's stewardship, the market has evolved from mandated trading on utility-like exchanges to a competitive landscape in which exchanges compete with each other and with other trading venues. Like most retail brokers, Robinhood can send trades directly to exchanges to be executed or to other broker-dealers called off-exchange market makers or wholesalers, which can directly execute the customer orders or, consistent with their own best execution obligations, send them to exchanges or ATSs or other liquidity providers. Chair Gensler has demonized off-exchange trading[41] and the Commission's Proposals would marginalize or eliminate the role of wholesalers and other off-exchange sources of liquidity. Wholesalers and other off-exchange venues were born, grew, and thrived primarily due to the exchanges' historical failure to innovate and compete. As the market has evolved, off-exchange venues have developed innovations and services to compete against exchanges and other market centers including the following:

- ***Price Improvement.*** When a wholesaler "internalizes" a customer trade (that is, trades directly with the customer from its own inventory), it will provide the retail customer at least the best published price that any member of any exchange is willing to pay—the national best bid and/or offer ("NBBO"). But wholesalers typically go beyond that and provide an even better price. That's known as "price improvement." When Robinhood evaluates where to send new customer orders, it analyzes a number of factors including, most importantly, how much price

[40] *See, e.g.*, *Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide, Part III: Hearing Before the H. Comm. on Fin. Servs.*, 117th Cong. 92 (2021) (testimony of Chair Gary Gensler, SEC) https://www.govinfo.gov/content/pkg/CHRG-117hhrg44837/pdf/CHRG-117hhrg44837.pdf ("The high concentration of retail orders routed to a small number of wholesalers raises a number of questions about market structure. In essence, does this segmentation and related sector concentration best promote fair, orderly, and efficient markets?"); *Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide: Hearing Before the H. Comm. on Fin. Servs.*, 117th Cong. 91 (2021) https://www.govinfo.gov/content/pkg/CHRG-117hhrg43966/pdf/CHRG-117hhrg43966.pdf (statement of Rep. Maxine Waters, Chairwoman, H. Comm. on Fin. Servs.) ("I'm more concerned than ever that some investors are being fleeced, and massive market makers … may pose a systemic threat to the entire system.").

[41] *See, e.g.*, Chair Gary Gensler, SEC, *Statement on Proposal to Enhance Order Competition* (Dec. 14, 2022), https://www.sec.gov/news/statement/gensler-order-competition-20221214.

improvement its customers have received from each wholesaler.[42] Wholesalers provide more price improvement in order to compete with exchanges and other venues for more order flow from retail broker-dealers.

- ***Size Improvement and Certain Executions.*** Wholesalers also provide "size improvement" by executing the full size of customers' orders at the best available price, even when the customer's order is larger than the best displayed bid or offer. For example, if a customer wants to buy 150 shares, the best price displayed in the market could be limited to 100 shares. To purchase the remaining 50 shares, the customer would typically have to pay a higher price. But wholesalers often execute the entire 150-share order at the best price displayed in the market, in order to provide "size improvement" and remain competitive with other market venues.

- ***Guaranteed Executions in All Stocks, Including Thinly Traded Stocks.*** Because wholesalers compete with each other and with exchanges, they are incentivized to invest in their relationships with broker-dealers by executing and providing favorable pricing to *all* of the retail broker-dealer's customer orders. When orders for thinly traded or less liquid stocks are sent to exchanges, they may not get executed because there are no willing counterparties to the trade. If they do get executed, they are more likely to experience price "disimprovement," that is, an investor buying a thinly traded stock will pay prices increasingly higher than the NBO as the few counterparties in the market become less and less willing to sell. To compete for order flow, wholesalers are incentivized to internalize orders that would not otherwise get executed or would get executed at deteriorating prices because they are particularly difficult to trade and generally not profitable, such as orders in thinly traded stocks in which fewer market participants want to trade.[43]

This execution model helps explain why Robinhood's customers (and customers at other broker-dealers that route orders to wholesalers for execution) receive the NBBO or better on the vast majority of their orders.[44] In short, off-exchange trading venues provide

[42] Robinhood does not consider the amount of payment for order flow ("PFOF") as one of these factors because it receives the same PFOF rate from every wholesaler to which it routes.

[43] Ironically, the SEC calls this a "valuable service." *See* OCR Proposing Release, 88 Fed. Reg. at 186 ("[W]holesalers receive order flow from retail brokers that contains variation in quoted spreads and adverse selection risk, wholesalers can target an average level of price improvement across this heterogeneous order flow, resulting in a relatively consistent degree of execution quality.").

[44] *Our Execution Quality*, Robinhood, https://robinhood.com/us/en/about-us/our-execution-quality/ (last visited Mar. 27, 2023) (84.79% of orders receive the NBBO or better).

benefits to retail broker-dealers and their customers that exchanges do not in order to compete with each other and with exchanges to execute retail investors' trades. These benefits relate not only to price and size improvement but also to speed, certainty, and consistency in executions as well as services like trade corrections for orders entered erroneously by retail customers. And, unlike exchanges, off-exchange venues do not have rule-based limited liability to investors when something goes wrong, such as the "trading glitch" on the NYSE earlier this year, which affected hundreds of stocks.[45] The current market structure incentivizes both order competition and venue competition, as envisioned by the 1975 Amendments and as solidified in Regulation NMS, and retail investors enjoy the benefits of being able to invest easily and at a low cost. The Proposals would upend today's equity markets and reverse much of the progress that the Commission has made in facilitating a competitive, efficient market structure.

B. The Proposals Would Upend The Current Industry Practices That Have Worked Well For Investors And Issuers In Multiple Interrelated Ways.

1. The Proposals Will Harm Retail Investors And Small Companies With Less Actively Traded Securities.

The Proposals ignore the economic realities that govern on- and off-exchange trading and would dismantle the current system of healthy venue competition, which has benefited retail investors and U.S. securities markets more generally. While the full cumulative effect of these four inconsistent and changeable proposed rules is unclear, one thing is certain: Retail investors and issuers, particularly small companies with less actively traded securities, will be worse off than they are today. We summarize these harms below and describe them more fully in our individual letters regarding each of the proposed rules.

As a result of both the ***Proposed OCR*** and ***Proposed Reg Best Ex***, retail investors will:

- Experience delay and uncertainty when placing orders to buy stock;[46]

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[45] *NYSE Says Manual Error Triggered Major Trading Glitch*, Reuters (Jan. 25, 2023, 11:52 AM), https://www.reuters.com/markets/us/nyse-says-sell-short-restriction-was-triggered-erroneously-2023-01-25/.

[46] The SEC acknowledges that qualified auctions will undermine prompt and certain executions of retail orders by making retail order execution "less streamlined" and introducing "a new layer of intermediation" that indisputably will slow down execution of customer orders. OCR Proposing Release, 88 Fed. Reg. at 226.

- Frequently receive worse pricing as a result of delayed order executions and/or the curtailment of broker-dealer judgment on how to execute an order;[47]

- Receive even worse pricing for stock trades, especially those stocks of smaller companies that are traded less frequently due to the reduced competition among venues executing retail orders;[48] and

- Experience new or higher costs and other fees to invest and trade, including potentially paying commissions, and have less access to innovative products and services as compliance and transaction costs across the industry rise and some broker-dealers' revenue sources, including payment for order flow ("PFOF") are reduced or eliminated.[49]

The SEC acknowledges that investors generally receive *worse* executions on exchanges than they do today from off-exchange market makers.[50] By marginalizing or eliminating the role of off-exchange market makers, the Proposed OCR and Proposed Reg Best Ex will reduce meaningful competition with exchanges for retail investor order flow and trigger these harmful effects.

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[47] To be sure, the SEC concedes in the OCR Proposing Release that some orders will receive worse executions due to slippage and price disimprovement. The SEC acknowledges that there is no guarantee that a retail order will be filled in full or in part during a qualified auction and, at the same time, slippage may occur because there is the "potential that the NBBO could change while the qualified auction was in process." *Id.* at 214. The SEC also acknowledges that "a segmented order would not have certainty of an execution in a qualified auction at a price equal to the NBBO or better." *Id.* at 147.

[48] *Id.* at 215.

[49] Notably, the SEC acknowledges throughout the release that commissions may return or increase for retail customers as a result of the implementation of Proposed Rule 615. *E.g.*, *id.* at 179 ("The Proposal could also result in costs to individual investors, such as some retail brokers potentially resuming charging commissions for NMS stock trades, although the likelihood of this may be low."); *id.* at 216 ("An additional concern is that if the Proposal results in a significant or complete loss of PFOF, then retail brokers would be forced to start charging commissions again for online NMS stock and ETF trades."); *id.* at 218 ("One concern is that the loss of PFOF would cause PFOF brokers, and potentially other discount brokers, to resume charging commissions for online NMS stock trades. Just as PFOF brokers led discount brokers into zero-commission trading in 2019, it is possible they too could lead discount brokers back to charging commissions if they stopped receiving PFOF."); *id.* at 225 ("If wholesalers reduce PFOF or begin charging a fee for routing services, PFOF retail brokers would have to absorb this cost and earn lower profits and/or pass on a share of this cost to their customers.").

[50] *E.g.*, *id.* at 198 tbl.14.

Today, broker-dealers like Robinhood are *not* required to send every customer order directly to an exchange. Rather, broker-dealers are required to seek "best execution" for their customers' orders, no matter which venue ultimately executes the order. This discretion to choose the best place to execute a customer's order ultimately benefits the retail customer because it means that broker-dealers like Robinhood can choose among different competing venues—including off-exchange market makers, ATSs, and exchanges—to find the place that will provide the best price reasonably available. The flight of retail orders from exchanges to wholesalers was driven by a multitude of competitive factors as described above, and the primary reason that retail order flow has not returned to exchanges is that exchanges have failed to win back that order flow through competitive pricing, innovation, and service (including protection on errors).

The equity market structure that exists today in the U.S. is the reason why retail investors enjoy exceptional executions and the U.S. securities markets are the most liquid, transparent, and fair markets in the world. Under the SEC's Proposals, this current framework will disappear as retail orders are redirected to newly contrived, experimental auctions operated by SROs. The result is predictable: (1) there will be fewer brokers competing to provide the best executions and services to retail customers; (2) retail investors will no longer be guaranteed speedy and certain executions at the best available price or better; (3) retail investors will no longer be assured of having disputes promptly resolved if there is a glitch or erroneous price; and (4) retail investors will pay more to trade.

There are also numerous flaws in the ***Tick Size Proposal*** that could make the stock market worse for retail investors. First, the SEC's proposal to narrow tick sizes to tenths and fifths of a cent ($0.001 and $0.002, respectively) would likely decrease the available orders (liquidity) at the best displayed bid and offer. Among other things, the Tick Size Proposal could cause "flickering quotations" (where a stock quote rapidly switches back and forth between prices) that would frustrate and confuse investors, who may find that they are not receiving the prices they thought they would when they submitted their orders. This problem will only be made worse by reducing incentives to display trading interest and increasing incentives to engage in "pennying"—whereby quicker market participants can gain trading queue priority and snatch up better-priced orders before other investors by adjusting their bid and offer prices by an economically insignificant amount—increasing trading costs for investors. Second, the proposed changes could harm investors and U.S. markets by forcing them into overall worse execution prices. In particular, the harmonization of quoting and trading increments could leave retail investors with fewer price increments at which market participants are willing to interact with their order flow. Stated differently, by reducing liquidity providers' flexibility to execute investors' orders at prices that are better than their quotes, the Tick Size Proposal would deprive investors of additional price improvement, a stated goal of both the Proposed OCR and Proposed Reg Best Ex. Notwithstanding the harms that the Tick Size Proposal would cause to the markets, it also has the potential to create operational challenges for market participants and to confuse retail investors by unnecessarily complicating how stock trading works.

2. The Proposals Are Both Duplicative And Contradictory.

In addition to harming retail investors and the securities markets overall, the Proposals are problematic from a fundamental rulemaking and process perspective. Each rule, if implemented, would change the landscape in ways that could make the other rules unnecessary or redundant. At the same time, the Proposals are contradictory.

For example, the Proposed OCR would—for retail investors only—revert to the exchange utility model that Congress directed the SEC to abolish fifty years ago. Off-exchange market makers would no longer be permitted to immediately execute a customer order at any price at or better than the NBBO unless they can offer the government-mandated midpoint price or better.[51] The "problem" the SEC claims it is trying to solve with the Proposed OCR is that retail investors are not receiving as much price improvement as they theoretically could. As discussed above, this so-called problem may be mitigated at least in part after the SEC's MDI Rules are implemented. The SEC also believes that Proposed Rule 605 would improve execution quality for both individual and institutional investors, in terms of execution prices, speed of execution, size improvement, and fill rates, by increasing competition between firms handling customer orders.[52] This so-called price improvement "problem" also may be moot if the SEC's Tick Size Proposal is implemented. That proposal would substantially reduce the trading increment (by a tenth, a fifth, and a half) which would "enhance the opportunity for [retail investor] orders to receive more favorable prices than they receive in the current market structure," also a key objective in the Proposed OCR. The Tick Size Proposal would also require off-exchange and exchange venues to quote and trade at the same price increments, which could result in greater parity in execution quality. Furthermore, the obligation to route orders to one of the OCR auctions only if a broker is unable to achieve a midpoint price becomes extreme and unrealistic in a market where the minimum tick size is $0.001. In effect, for nearly half of market volume, the combined proposals would require executions at an effective increment of $0.0005. Notably, the Commission does not comment on whether the drastic changes required by the Proposed OCR would still be necessary if more order information is made publicly available after the MDI Rules, Proposed Rule 605, and/or Tick Size Proposal are implemented.

The very same arguments could apply to Proposed Reg Best Ex. Increased disclosure and changes to pricing increments could improve execution quality and render this rule

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[51] As another example of the Proposals' engaging in price-setting by mandating midpoint executions, *see* Reg Best Ex Proposing Release, 88 Fed. Reg. at 5460.

[52] Rule 605 Proposing Release, 88 Fed. Reg. at 3832.

unnecessary. At the same time, the Proposed OCR also could render Proposed Reg Best Ex unnecessary because the Proposed OCR virtually eliminates any discretion a broker-dealer has to handle a retail customer order (and thus any potential conflicts); rather than seeking the best market for a customer order (as Proposed Reg Best Ex would require), broker-dealers would be required to send all retail orders in NMS stocks to a qualified exchange. Through its Proposed Reg Best Ex, the SEC also would change how broker-dealers use the NBBO and measure price improvement to assess execution quality. It would require retail broker-dealers that receive PFOF to incorporate extensive new data into their decision-making and transform how they decide where to route customer orders. While these decisions by broker-dealers would presumably be significantly impacted by the imposition of mandatory qualified auctions, the SEC fails to analyze or explain how changes to the Proposed OCR would affect Proposed Reg Best Ex, or vice versa.

At the same time, the Proposed OCR is inconsistent with Proposed Reg Best Ex and Proposed Rule 605. For example, both proposed rules identify speed of execution as important criteria for execution quality. However, the Proposed OCR devalues speed as an important metric because this rule would intentionally slow down the execution of retail customer orders and force these orders to venues (i.e., qualified auctions) where there is no certainty that they will be executed at all.

In sum, out of misplaced concern that off-exchange trading and PFOF somehow deprive retail investors of potential price improvement, the Commission's Proposals attempt to do everything, everywhere, all at once. The SEC would try to improve investors' ability to analyze off-exchange trading and vote with their feet (Proposed Rule 605), while also changing how off-exchange venues are required to price customer trades (the Tick Size Proposal), while also making compliance more expensive for certain broker-dealers routing customer orders to off-exchange venues (Proposed Reg Best Ex), while also prohibiting certain types of off-exchange trading with retail investors (the Proposed OCR). Each proposal seeks to address the same alleged problem in a different way, creating multiple redundancies and conflicts. It is not clear where the impact of any one rule might begin and end, making it impossible for the public to make sense of the incoherent set of Proposals and undermining the Commission's attempts at rulemaking. This leaves one to suspect that the Commission itself does not reasonably expect to adopt all of these rules and is effectively hedging its bets or potentially anticipating that one proposal could draw comments that would indirectly be supportive of another. For investors and market participants, this process is needlessly complex, confusing, and possibly misleading.

C. The Proposals Violate Federal Law.

The SEC's Proposals to abruptly and fundamentally transform the structure of the U.S. securities markets are not only bad policy, but they are unlawful because they (1) lack any meaningful cost-benefit analysis and are therefore inconsistent with the SEC's statutory duty to consider their effects; (2) exceed the SEC's statutory authority; and (3) are arbitrary and capricious.

1. The Proposals Independently And Cumulatively Fail To Provide A Reasonable Cost-Benefit Analysis.

The SEC's economic analysis is woefully insufficient. Under Sections 3(f), 11A(a)(1)(c), and 23(a)(2) of the Exchange Act, the SEC has a statutory duty to consider the effect of a new rule on efficiency, competition, and capital formation. More specifically, the SEC is required to "consider or determine whether an action is necessary or appropriate in the public interest" and "in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation."[53] The SEC is not permitted to adopt any rule that "would impose a burden on competition not necessary or appropriate" in furtherance of its mandate.[54] Its "failure to 'apprise itself—and hence the public and the Congress—of the economic consequences of a proposed regulation' makes promulgation of the rule arbitrary and capricious and not in accordance with law."[55] The SEC's analysis falls short in a number of significant ways.

First, the Commission fails to meaningfully grapple with existing regulatory protections and other regulatory initiatives that have already been adopted, but not yet implemented. The SEC cannot accurately assess any potential increase or decrease in competition, capital formation, or efficiency without fully considering the existing baseline.[56] That baseline includes rules already adopted and slated to be implemented, yet the Commission fails to account for the anticipated impact of pending market infrastructure enhancements. Without doing so, it cannot accurately assess the relative benefit of additional initiatives that might prove to be redundant or even counterproductive after the changes it has already adopted have taken effect. Specifically, the SEC adopted its MDI Rules more than two years ago to enhance the quality and accessibility of market data and address gaps in existing publicly available market data, such as the fact that it only includes pricing information for certain types of orders (e.g., orders of 100 shares or more). The MDI Rules are intended to ameliorate these flaws. Among other things, they would revise the NBBO to redefine round lot, establish a data field for the best available orders smaller than a round lot ("odd lots"), add orders priced outside an exchange's best bid and offer (called "depth of book"), and

[53] 15 U.S.C. § 78c(f).

[54] *Id.* § 78w(a)(2).

[55] *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148 (D.C. Cir. 2011) (quoting *Chamber of Commerce v. SEC*, 412 F.3d 133, 144 (2005)).

[56] *Am. Equity Inv. Life Ins. Co. v. SEC*, 613 F.3d 166, 178 (D.C. Cir. 2010).

add orders participating in auctions. These changes are anticipated to inform the Proposals' analyses regarding price improvement for retail customers (including differences in price improvement between on- and off-exchange executions).

The MDI Rules are now law. They are part of the baseline and are intended and expected to improve market data in a manner that, among other things, leads to additional price improvement—something each proposal individually seeks to achieve. Chair Gensler has stated, "The NBBO is designed to aggregate information across different exchanges. I believe there are signs, however, that the NBBO is not a complete enough representation of the market."[57] Chair Gensler criticizes the NBBO for, among other things, failing to reflect odd lots and being priced (by legal requirement) in pennies and not smaller increments. But these structural deficiencies in existing market data may prevent the NBBO from more fully reflecting market interest, and therefore make it more difficult for broker-dealers and their customers to assess whether they actually received "best" execution. Since the MDI Rules are intended to improve market data to better reflect available trading interest in the market, this might change trading behavior in a way that obviates the need to impose more costly and onerous structural and technical changes on market participants. The Commission cannot assess these potential new rules until the MDI Rules are fully implemented. But the SEC is leapfrogging over the MDI Rules, ignoring how they will improve the NBBO, to remake the entire structure of the equities market. Without even assessing the extent to which the proposed rules would still be necessary after the MDI Rules are fully implemented, the Commission would require market participants to implement extensive technology changes, subscribe to new forms of data, dilute or eliminate the value of off-exchange venues, and introduce the risk of unknowable and unintended consequences.

Second, the Commission does not even attempt to analyze the cumulative costs and benefits of its overlapping and sometimes inconsistent Proposals. The Commission provides its cost-benefit analysis for each specific proposal, but it has not provided a comprehensive analysis. For example, the Commission estimates that Proposed Reg Best Ex will *increase* competition between venues, but its Proposed OCR would *decrease* venue competition by redirecting retail orders to "qualified auctions," which are likely to be run by a small handful of exchanges. Ironically, the Commission would reinstate a centralized model that forces orders to exchanges after Congress and the SEC spent a quarter of a century dismantling a structure that required orders to be executed on exchanges.

Third, the Commission significantly overstates potential benefits and underestimates costs within each rule proposal. For example, the Commission's Proposed OCR estimates

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[57] Chair Gary Gensler, SEC, Speech, Prepared Remarks at the Global Exchange and FinTech Conference (June 9, 2021), https://www.sec.gov/news/speech/gensler-global-exchange-fintech-2021-06-09.

that investors could gain $1.5 billion or more in potential price improvement.[58] Not only does this amount to a paltry sum per investor that does not outweigh the costs of the proposal (let alone the cumulative costs of the other proposals), the Commission's premise for this purported $1.5 billion savings is fundamentally flawed. The SEC incorrectly presumes that all money paid to broker-dealers as PFOF will be redirected to retail customers in the form of greater price improvement. This presumption lacks any merit. By the SEC's own admission, there is no guarantee that market participants will participate in qualified auctions and, if they do not participate, investors could receive worse prices.[59] The $1.5 billion also assumes that orders sent to qualified auctions will experience slippage, i.e., the offer rising before a buy order can be executed or the bid falling before a sell order can be executed, at the same rate and to the same degree as orders executed off-exchange. This is an exceedingly unlikely assumption; orders executed in or following exchange auctions are more likely to experience a higher degree of slippage,[60] due to both inevitable execution delays and the lack of any obligation by auction participants to interact with retail orders, unlike the guarantees provided by wholesalers. Indeed, our analysis estimated that rather than a $1.5 billion benefit to customers, the Proposed OCR would *cost* customers an estimated $2.5 to $3 billion.[61]

Moreover, the $1.5 billion in *potential, speculative* price improvement is also not a "benefit" when one considers that, today, investors receive a greater amount of certain, predictable price improvement with no commissions. Over the last two years, Robinhood alone has provided $8 billion and counting in price improvement to its retail customers. If the price improvement provided by all other broker-dealers is added with Robinhood's and considered over time, it easily dwarfs $1.5 billion.[62] It is not a "benefit" to retail investors or U.S. markets if the SEC forces them to forfeit a predictable amount of price improvement so that they could, theoretically, sometimes receive a marginally higher amount on certain trades. The SEC's analysis also assumes that the "benefits" of the Proposed OCR will be *on top of* existing price improvement that retail investors receive; it does not sufficiently consider that its Proposals would disrupt the market structure so much that existing price improvement cannot be relied upon to continue at the same levels. It is also not clear how much additional benefit would result from the Proposed

[58] OCR Proposing Release, 88 Fed. Reg. at 130.

[59] *Id.* at 214.

[60] *Id.* at 214-15.

[61] *See* Appendix A to this letter.

[62] For example, a study by one wholesaler indicates that they alone provided $3 billion in price and size improvement to retail investors in 2020. Douglas Chu, CEO, Virtu Financial, Measuring Real Execution Quality: Benefits to Retail Are Significantly Understated 2 (Aug. 27, 2021), https://virtu-www.s3.amazonaws.com/uploads/documents/virtu-real-pi_20210827.pdf.

OCR's qualified auctions after the implementation of the MDI Rules, Proposed Rule 605, and the Tick Size Proposal.

In its eagerness to vilify off-exchange trading and PFOF, the Commission also significantly underestimates the costs of its Proposals. The Proposals are fueled by a perceived urgency to enhance price improvement because the Commission believes, without support for that belief, that retail customers are being cheated out of additional price improvement opportunities. The Commission is focused, in particular, on why wholesalers do not *always* provide more price improvement—and the Commission has blamed PFOF. However, the Commission already has reviewed this practice numerous times, including recently in 2000, 2010, and 2016. Each time, based on data and analysis, the Commission repeatedly decided that PFOF should not be eliminated because of its potential benefits.[63] Rather, PFOF—like trading commissions—may be a conflict that can and should be managed, as with other conflicts, through disclosure and regulation.[64] In fact, a substantial body of research has shown that PFOF does not have a material economic impact on execution quality[65] and, by reducing customer transaction costs, it

[63] *See, e.g.*, Memorandum from SEC Div. of Trading & Mkts., to Equity Mkt. Structure Advisory Comm. (Jan. 26, 2016), https://www.sec.gov/spotlight/equity-market-structure/issues-affecting-customers-emsac-012616.pdf; Concept Release on Equity Market Structure, Exchange Act Release No. 61358 (Jan. 14, 2010), 75 Fed. Reg. 3593 (Jan. 21, 2010); Off. of Compliance Inspections and Examinations & Off. of Econ. Analysis, SEC, *Special Study: Payment for Order Flow and Internalization in the Options Markets*, https://www.sec.gov/news/studies/ordpay.htm#SUMMARY (Dec. 19, 2000); Final Rule, Payment for Order Flow, Exchange Act Release No. 34902 (Oct. 27, 1994), 59 Fed. Reg. 55,006 (Nov. 2, 1994).

[64] PFOF creates conflicts of interest that must be disclosed and managed—it would not be appropriate for a broker-dealer to route a customer order to a venue that provides worse executions for customers but pays higher PFOF rates to the broker-dealer. *See, e.g.*, Exchange Act Rule 10b-10(d)(8). Robinhood, consistent with industry practice across retail broker-dealers, receives the same PFOF rates from every wholesaler to whom it routes orders. *See also* Jim Swartwout, *Demystifying Payment for Order Flow*, Robinhood (Mar. 4, 2021), https://robinhood.engineering/demystifying-payment-for-order-flow-119581544210.

[65] *See, e.g.*, Christopher Schwarz et al., *The "Actual Retail Price" of Equity Trades* (Sept. 14, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4189239 (finding that "[a]cross brokers, variation in PFOF cannot explain the large variation in price execution"); Samuel Adams & Connor Kasten, *Retail Order Execution Quality under Zero Commissions* (Jan. 7, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3779474 (suggesting that "the elimination of commissions for retail investors improved execution quality for orders directed to third-party market makers"); Pankaj K. Jain et al., *Trading Volume Shares and Market Quality: Pre- and Post-Zero Commissions* (Dec. 2, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3741470 (finding that "effective spreads decline[d]" after the introduction of zero-commission trading); James J. Angel et al., *Equity Trading in the 21st Century: An Update* (2015), https://www.worldscientific.com/doi/10.1142/S2010139215500020 (stating that "the revenues that brokers obtain from their order flows may be competed away as they

also can improve execution quality. Notably, the Commission acknowledges that PFOF is a cost to the wholesaler, but "is not a cost to investors."[66]

Fourth, although the SEC repeatedly claims that its Proposals "may" have certain effects, the SEC fails to substantiate those predictions "beyond mere speculation."[67] The SEC's claimed "benefits" are unknown. The costs of the Proposals are also wholly unknown to the SEC by its own admission. And where the SEC has recognized costs, its assessment does not fully or accurately factor in all costs. For example, one impact of the Proposals will likely be to eliminate certain widespread, well-functioning market arrangements, such as PFOF, entirely. The SEC's economic analysis, however, does not sufficiently acknowledge, let alone account for the impacts of, such changes.[68] If the SEC wants to eliminate PFOF or other order execution practices that are called into question by the Proposals, like off-exchange execution, it must own up to it and factor those changes into its analysis.

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lower their commissions and offer greater service to their customers in an attempt to attract their orders. Indeed, evidence exists that suggests that competition among brokers to obtain customer order flow has driven a significant portion of these payments [for order flow] back to retail customers"); Robert H. Battalio et al., *To Pay or Be Paid? The Impact of Taker Fees and Order Flow Inducements on Trading Costs in U.S. Options Markets* (Nov. 3, 2011), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1954119 (In comparing options exchanges that use a maker-taker model to exchanges that use a PFOF model, researchers found that "[f]ocusing solely on execution prices, we find that the cost of liquidity on exchanges utilizing the PFOF model is 80 bps higher than on exchanges utilizing maker-taker pricing. Nevertheless, when taker fees are incorporated into the analysis, the cost of liquidity on the PFOF exchanges is 74 bps lower." (emphasis added)).

[66] OCR Proposing Release, 88 Fed. Reg. at 206 n.520 ("The Commission does not adjust wholesaler realized spreads for the PFOF they pay to retail brokers because PFOF, while a cost to wholesalers, is not a cost to investors.").

[67] *Bus. Roundtable*, 647 F.3d at 1150. For example, the Commission's economic analysis in the OCR Proposing Release is replete with highly speculative language. E.g., OCR Proposing Release, 88 Fed. Reg. at 178 ("While acknowledging there is substantial uncertainty in the eventual outcome, the Commission estimates that qualified auctions as designed by the Proposal would result in additional price improvement for the marketable orders of individual investors that could reduce the average transactions costs of these orders by 0.86 basis points ('bps') to 1.31 bps."); *id.* ("Given this estimate, the Commission preliminarily estimates that the Proposal could potentially result in a total average annual savings").

[68] Proposed Reg Best Ex acknowledges that many broker-dealers may choose to "de-conflict" by ceasing to pay or accept PFOF or other remuneration, but the impact of this is not fully considered by the SEC.

2. The Proposals Exceed The SEC's Statutory Authority.

The Proposals fail at the outset because they exceed the SEC's statutory authority. Like other federal agencies, the SEC "'literally has no power to act … unless and until Congress confers power upon it.'"[69] Here, Congress instructed the SEC to "facilitate" the "establishment of a [NMS] for securities."[70] The Commission, under this authority, is not an "'economic czar' for the development of a national market system,"[71] nor may it "dictate the ultimate configuration of the [NMS] or, through regulatory fiat, force all trading into a particular mold."[72] Congress envisioned a more limited role. As Section 11A of the Exchange Act provides, the Commission, in facilitating the establishment of an NMS, may issue certain specific rules to govern the interconnectedness of the various preexisting trading venues—for example, by regulating the "distribution" of "quotations."[73] Neither Section 11A nor any other provision has granted the SEC an unlimited license to rework almost every facet of the equity market's structure, from root to branch. Indeed, if Congress *had* granted the SEC a power of such "vast economic and political significance," it would have said so "clearly,"[74] not scattered that authority across the nearly dozen ancillary provisions the Commission cites throughout its proposals.[75] The SEC's assertion of "unfettered authority" to redraw the U.S. market structure raises serious constitutional concerns, as the Constitution "provides strict rules to ensure that Congress," not a federal agency, "exercises the legislative power."[76] The SEC's authority must be read to avoid unnecessarily triggering such serious constitutional concerns.

According to the Proposals, the SEC states that it is primarily basing its authority on Section 11A of the Exchange Act, but the Commission misapplies Section 11A. The Commission often cites as the source of its authority the general statement of policy objectives in Section 11A(a), but policy objectives do not convey rulemaking authority. The Commission must look to Section 11A(c) for specific delegations of rulemaking authority; however, as already noted, none of those specific grants authorize the market-

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[69] *N.Y. Stock Exch. LLC v. SEC*, 962 F.3d 541, 553 (D.C. Cir. 2020) (quoting *La. Pub. Serv. Comm'n v. FCC*, 476 U.S. 355, 374 (1986)) (alteration in original).

[70] 15 U.S.C. § 78k-1(a)(2).

[71] S. Rep. No. 94-75, at 12 (1975).

[72] Development of a National Market System, Exchange Act Release No. 15871 (Mar. 29, 1979), 44 Fed. Reg. 20,360, 20,360 (Apr. 4, 1979).

[73] 15 U.S.C. § 78k-1(c)(1)(A).

[74] *West Virginia v. EPA*, 142 S. Ct. 2587, 2605 (2022) (quoting *Utility Air Regulatory Group v. EPA*, 573 U.S. 302, 324 (2014)).

[75] *See, e.g.*, OCR Proposing Release, 88 Fed. Reg. at 242.

[76] *Jarkesy v. SEC*, 34 F.4th 446, 459 (5th Cir. 2022).

structure remake the Commission envisions here. This is not to say that the policy objectives are *irrelevant* to the analysis; Congress explicitly constrained the Commission's rulemaking authority by requiring the Commission to exercise that authority "in accordance with [Section 11A's] findings" and "objectives,"[77] but that is just another reason why the Commission's proposals are unlawful. Specifically, Section 11A bars the Commission from taking regulatory action unless it furthers (1) fair competition among broker-dealers, exchanges, and other market centers, and (2) the economically efficient execution of securities transactions. The Proposals contravene both of these objectives. Rather than encourage competition, the Proposals would establish an anti-competitive framework for handling retail orders, picking winners and losers among execution venues, intermediaries, investors, and issuers. Also, rather than encouraging efficient securities transactions, the Proposals would create a system where retail orders could languish unexecuted in auctions, or be executed at an inferior price due to delay and quote volatility, as opposed to receiving immediate executions at or better than the best available price, like they do today. U.S. equity markets work so well for investors of all types today precisely because the SEC has (at least until now) endeavored to strike the appropriate balance between venue competition and order competition.

The Proposals also have the cumulative effect of preferencing exchanges over other venues and market participants. In particular, the Proposed OCR mandates that all broker-dealers route what the SEC considers "profitable order flow" away from off-exchange market makers to qualified auctions. Wholesalers would be prohibited from executing retail investors' orders as principal unless they comply with the limited and impractical exception in that rule—executing orders at a government-set price of the midpoint between the best bid and ask. The Tick Size Proposal's reduction of the minimum pricing increments would make this proposition all the more difficult by spreading trading interest among too many ticks and reducing the available liquidity at the midpoint. The Commission has unabashedly admitted the anticompetitive nature of its proposal: "Qualified auctions could reduce wholesaler market share for the execution of the orders of individual investors, <u>which could result in the transfer of revenue and profit from wholesalers to other market participants</u>" (specifically, exchanges).[78] This admission alone should render the proposal illegitimate.[79]

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[77] 15 U.S.C. § 78k-1(a)(2).

[78] OCR Proposing Release, 88 Fed. Reg. at 179. In addition to discriminating against broker-dealers, the SEC would discriminate against certain exchanges by putting up barriers to competition to new entrants that may want to receive retail order flow: "[t]he 1% threshold also would impose a hurdle for a new entrant that wished to register as a national securities exchange to become an open competition trading center." *See id.* at 152.

[79] *Cf.* Comm'r Luis A. Aguilar, SEC, Speech, An Insider's View of the SEC: Principles to Guide Reform (Oct. 15, 2010), https://www.sec.gov/news/speech/2010/spch101510laa.htm

By forcing retail orders to exchange auctions where there is no liquidity backstop, the SEC's proposal would inflict significant harm on retail investors and create inefficient executions, which is further inconsistent with the Commission's mandate. Rather than recalibrating the delicate balance of power between exchanges and off-exchange venues in a targeted fashion, the SEC would stifle competition from off-exchange trading by dictating that retail order flow be sent to exchanges' qualified auctions.[80] These centralized auctions would likely be run by a small number of exchanges that would be largely unaccountable to the retail investors whose orders they handle. Off-exchange market centers would be prohibited from competing for retail investors' orders unless they complied with government price-setting terms. The SEC's *de facto* mandate to route to exchanges would reestablish exchanges as quasi-utilities that lack incentive to innovate or compete.[81]

The SEC's Proposed Reg Best Ex also tilts the market in favor of exchanges. Under this rule, nearly every order a wholesaler touches, whether it routes an order to an ATS as riskless principal or internalizes it, will be considered a "conflicted transaction" and subjected to heightened procedures, compliance costs, and evaluation. In contrast, exchanges are not subject to any best execution obligation with regard to retail investors' orders. Orders executed on exchanges will not be considered "conflicted transactions," even though the exchanges also may provide PFOF in the form of rebates and pricing tiers, which raise similar conflicts of interest concerns.

Exchanges are already competitively advantaged today, relative to off-exchange venues. For example, only exchanges can sell and set prices for proprietary data products and related technical infrastructure that broker-dealers must pay for in order to meet their regulatory obligations. The Commission's Proposed OCR would exacerbate this issue by driving all retail trading to exchanges and therefore consolidating all retail market data with the exchanges. The Tick Size Proposal would also increase the exchanges' market power with respect to market data. Combined with the MDI Rules, the Tick Size Proposal would increase the need for broker-dealers to access the exchanges' proprietary depth-of-book market data feeds. The Commission's Proposals do not consider how this monopoly over data and connectivity could affect costs for broker-dealers, but it is

("[A]nother guiding principle is that we must resist creating two-tiered markets or separate standards of protection. This means that we should not carve out areas where, it is thought, certain protections are not necessary, depending upon the investor, the intermediary, or the investment. The fact is there is only one capital market and it is highly integrated.").

[80] Instead of sending orders to exchanges, market makers could execute retail orders at the midpoint of the NBBO but doing so is not practical or economical in all instances.

[81] In the past, when exchanges were largely government utilities, they were mutualized, not-for profit entities. The idea of quasi-utilities is all the more egregious in today's world where exchanges are generally for-profit, publicly traded companies.

plausible that exchanges would exploit this advantage by raising costs. Exchanges are publicly traded companies with a responsibility to make decisions in their shareholders' best interest by increasing profits. As former Commissioner Robert Jackson noted: "[W]e at the SEC have far too often continued to treat the exchanges with the same kid gloves we applied to their not-for-profit ancestors. The result is that, even while one of our fundamental mandates is to encourage competition, the SEC has stood on the sidelines while enormous market power has become concentrated in just a few players."[82] The Commission's Proposals would only further augment exchanges' market power.

Exchanges, to be sure, face some constraints on their ability to compete with off-exchange execution venues. For example, off-exchange market centers and exchanges are generally subject to the same rule prohibiting them from accepting, ranking, or displaying orders in increments smaller than a penny.[83] Yet, in practice, while off-exchange venues frequently execute orders in price increments smaller than one penny, exchanges often do not because it is, in the SEC's words, "impractical."[84] It has been argued that this impracticality limits exchanges' ability to compete in terms of providing price improvement; however, this imbalance can be easily corrected through a tailored approach—including changes to existing exchange rules—without throwing the baby out with the bathwater. A tailored approach to addressing these concerns would increase competition and improve market quality by empowering exchanges to compete at the same level as off-exchange market centers rather than reducing off-exchange market centers' ability to compete by imposing unnecessary restrictions or costs. Concentrating more market power at exchanges is particularly anti-competitive because exchanges are protected from liability when there is a problem, as there was earlier this year at the NYSE. On January 24, a technical issue at the NYSE caused wild price swings in its opening auction, resulting in erroneous prices for hundreds of stocks.[85] When events like these occur, investors whose trades were executed at erroneous prices have little recourse against exchanges, which have limited liability to investors whose orders are sent there. When Nasdaq experienced "glitches" during Facebook's 2012 IPO, trading for as many as

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[82] Comm'r Robert J. Jackson Jr., SEC, Speech, Unfair Exchange: The State of America's Stock Markets (Sept. 19, 2018), https://www.sec.gov/news/speech/jackson-unfair-exchange-state-americas-stock-markets.

[83] Some limited exceptions have been made for exchanges' Retail Liquidity Programs to permit them to accept and rank orders in subpenny increments. *Cf.* OCR Proposing Release, 88 Fed. Reg. at 144 & n.151 (citing the SRO rule change approvals for RLPs).

[84] Tick Size Proposing Release, 87 Fed. Reg. at 80,271-72.

[85] Alexander Osipovich, *NYSE Glitch Causes Erroneous Prices in Hundreds of Stocks*, Wall St. J. (Jan. 24, 2023, 7:26 PM), https://www.wsj.com/articles/dozens-of-nyse-stocks-halted-in-opening-minutes-after-wild-price-swings-11674585962.

30 million shares was affected.[86] By one estimate, Nasdaq's glitch cost investors $500 million, yet it repaid only $62 million when all was said and done.[87] While investors have little recourse against national securities exchanges, non-exchange market centers like market makers are directly accountable to retail broker-dealers because they are incentivized to compete for order flow. Therefore, when a "glitch" impacts a retail investor's order, both the off-exchange market maker and the customer's broker-dealer typically take responsibility for the glitch and make the customer whole. The SEC's anti-competitive Proposals would marginalize both broker-dealers and off-exchange venues, ultimately harming retail investors.

3. The Proposals Are Arbitrary And Capricious.

Even apart from the absence of statutory authority, the SEC's Proposals are arbitrary and capricious because they are (1) unnecessary, (2) ineffective and counterproductive, and (3) afford the public no meaningful ability to comment.

First, the SEC proposes these changes without any evidence they are necessary or even supportable. In particular, Proposed OCR and Proposed Reg Best Ex are unnecessary because they are solutions in search of a problem. Retail investors have never had it better; millions of investors trade today with no commissions and no account minimums, have a wider selection of investment opportunities than ever before (for example, through products like fractional shares and access to IPOs), and manage their own finances with intuitive, easy-to-use platforms. The evidence clearly shows that commission-free trading has saved retail investors billions of dollars; that the current markets create opportunities to trade stocks that would otherwise likely be too expensive for retail investors; and that for all types of stocks, retail investors are able to buy lower and sell higher than ever before.[88] The SEC tries to rebut that data only with admissions

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[86] Jenny Strasburg et al., *Nasdaq's Facebook Problem*, Wall St. J. (May 21, 2012, 8:02 AM), https://www.wsj.com/articles/SB10001424052702303610504577416530447015656.

[87] Josh Constine, *NASDAQ's Glitch Cost Facebook Investors ~$500M. It Will Pay Out Just $62M. IPO Elsewhere*, TechCrunch (Mar. 25, 2013, 2:49 PM), https://techcrunch.com/2013/03/25/ip-oh-my-gosh-all-that-money-just-disappeared.

[88] *See, e.g.*, S.P. Kothari et al., *Commission Savings and Execution Quality for Retail Trades* 1 (Dec. 2, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3976300 ("PFOF has saved retail investors billions in unnecessary fees by allowing broker-dealers like Robinhood to eliminate trading commissions. We also find that retail investors, and especially Robinhood customers, have enjoyed substantial price improvements on trades executed off-exchange and that off-exchange retail trades generally experience better execution quality than trades of similar sizes on public exchanges."); James Angel et al., *Equity Trading in the 21st Century* 5 (USC Marshall Sch. Bus., Working Paper FBE 09-10, 2010), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1584026 (finding that virtually every measurable dimension of U.S. equity market quality has improved—generally finding that execution speeds and retail

that it does not know what impact its proposed market transformation would have, cannot predict those impacts, and has no evidence to support the cost-benefit analysis it is required to conduct. Moreover, existing rules and regulations, like existing FINRA best execution Rule 5310, as well as the extensive SEC and FINRA guidance that has developed around best execution, *already* address the topics Proposed Reg Best Ex purportedly attempts to fix. Stated another way, the SEC has not and cannot identify any market failure that cannot be addressed by the existing rule set.

<u>Second</u>, not only are the Proposals unnecessary, they will create harmful, counterproductive consequences, as the combined impact of the rules will introduce delay and uncertainty into retail order execution, and drive up costs for retail investors. The combined costs of the proposed rules are extensive. The Proposals will make markets less competitive, investing more expensive, and capital formation more difficult for smaller issuers. Market competition will decrease as a result of the combined impact of the proposed best execution and order competition rules which will, among other things, impose the Commission's politicized view on what is best for retail customers, rather than allowing competitive forces to reveal, as they already have, what customers actually value—low-cost trading through retail broker-dealers that are able to offer superior services and consistent, high quality executions as a result of the current market structure.

The Proposed OCR and Proposed Reg Best Ex also threaten capital formation, especially for less actively traded securities, which tend to be the securities of smaller companies, by reducing customers' ability to have orders in those securities executed at advantageous prices, thus further draining liquidity for these companies, as described above. And the markets will be less efficient because, among other reasons: (1) many of the currently proposed rules are duplicative of or substantially overlap with existing rules; (2) the proposed auctions intentionally introduce delay and an additional layer of intermediation into the execution of retail orders; and (3) the rules threaten the role of off-exchange trading, which has contributed to huge efficiencies for retail investors in recent decades.

<u>Finally</u>, and as noted above, the Proposals fail to afford the public proper notice and a meaningful ability to comment. The issues reflected in the SEC's proposal are not just ones of substance, but of process. The SEC is doing too much too quickly, leaving neither the public nor the SEC itself the time needed to develop thoughtful, data-driven, and properly tailored proposed rules. The overlapping, interlocking and foundational nature of all of the changes the SEC proposes to make—coupled with the uncertainty as to which provisions will or will not make the final cut—exacerbates the problem, as no one

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commissions have fallen; bid-ask spreads have fallen and remain low; and market depth has increased).

reasonably knows what the final suite of rules will look like and how they will interact in an already interconnected and complex market structure environment. The SEC needs to return to the drawing board, work with the industry and investors on developing a more concrete, reasonable proposal, and then reopen the comment period.

D. The SEC Shouldn't Experiment With Retail Investors' Financial Futures: Rulemaking Must Be Data-Driven, Supportable, And Incremental.

Robinhood stands with retail investors and is always in favor of enhancing the markets for their benefit. We pioneered zero-commission, no-account-minimums trading, as well as other products and services that have opened the markets up to millions of new investors. We provide high quality education and training. We are committed to the democratization of finance for all, not just the wealthy. But the Proposals, as a whole and in some cases individually, would not make the market better for retail investors. The specific flaws in each rule are set forth below and in our separate letters regarding each of the other Proposals. Apart from these substantive flaws, there are process flaws, as discussed above, that make the Proposals unlawful. Rather than taking the necessary time to engage in rulemaking based on a methodical, data-driven approach, the SEC's rulemaking appears to be based on a political agenda, unsupported speculation and theories.

This is not surprising based on the Inspector General's report on the SEC's recent management and performance challenges. As that report observed, the aggressive agenda that has characterized *this* SEC has had a negative effect on rule proposals:

> We met with managers from the SEC's divisions of Trading and Markets, Investment Management, Corporation Finance, and Economic and Risk Analysis, some of whom raised concerns about increased risks and difficulties managing resources and other mission-related work because of the increase in the SEC's rulemaking activities. For example, some reported … <u>difficulties hiring individuals with rulemaking experience</u>. In the interim, <u>managers reported relying on detailees, in some cases with little or no experience in rulemaking. Others told us that they may have not received as much feedback during the rulemaking process</u>, either as a result of shortened timelines during the drafting process or because of shortened public comment periods. … [S]ome believed that <u>the more aggressive agenda—particularly as it relates to high-profile rules that significantly impact external stakeholders—potentially</u>

> (1) limits the time available for staff research and analysis, and (2) increases litigation risk.[89]

This is not acceptable and shouldn't be the case. The SEC historically has been data-driven and methodical. This is a basic tenet of SEC rulemaking that has been long recognized by SEC Commissioners and should not be controversial.[90] As aptly noted by Commissioner Aguilar, when it comes to rulemaking and market structure, "[k]nowledge is always better than speculation."[91] The carelessness with which the SEC has proposed this massive transformation, cloaked in 1,600 pages of technical jargon, is antithetical to sound public policy. Rather than rushing to implement multiple, significant rule changes with unknown and likely severe consequences, we join commenters representing a variety of market participants in urging the SEC to take a thoughtful and incremental approach to market

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[89] Off. of Inspector Gen., SEC, *The Inspector General's Statement on the SEC's Management and Performance Challenges* 3 (2022), https://www.sec.gov/files/inspector-generals-statement-sec-mgmt-and-perf-challenges-october-2022.pdf (emphasis added).

[90] *See, e.g.*, Comm'r Luis A. Aguilar, SEC, Speech, Exemplifying Fundamentals—Back to Basics (Mar. 28, 2011) https://www.sec.gov/news/speech/2011/spch032811laa.htm ("A regulator must possess expertise that is informed by current, accurate data and must exercise judgment that is grounded in the mission of the institution and service to the public at large."); Chair Mary Jo White, SEC, Keynote Address: Securities Traders Association 83rd Annual Market Structure Conference, Equity Market Structure in 2016 and for the Future (Sept. 14, 2016), https://www.sec.gov/news/speech/white-equity-market-structure-2016-09-14 (touting the Commission's "deliberate, data-driven process to assess … more fundamental changes to equity market structure" because "[b]road changes to this market structure—especially those executed precipitously or without adequate data—can have serious unintended consequences for investors and issuers as their impact is fully realized, sometimes years down the road"); Comm'r Robert J. Jackson, Jr., SEC, *Statement on the Proposed Transaction Fee Pilot for NMS Stocks* (Mar. 14, 2018), https://www.sec.gov/news/statement/statement-johnson-open-meeting-nms-2018-03-14 ("More broadly, targeted pilot programs—particularly in complex areas like this one [i.e., how fees and rebates affect order routing], where intuitions are strong but evidence is scant—are and should continue to be a critical part of our rulemaking effort. They allow us to generate valuable data to determine whether and how rulemakings might benefit investors—and to carefully tailor them to investors' needs.").

[91] Comm'r Luis A. Aguilar, SEC, *U.S. Equity Market Structure: Making Our Markets Work Better for Investors* (May 11, 2015), https://www.sec.gov/news/statement/us-equity-market-structure.

structure reform.[92] Anything different would be an irresponsible and unlawful experiment with retail investors' finances.

At Robinhood, we agree that the markets have evolved for the better for retail investors, thanks to greater competition among market centers and trading venues that have flourished since Congress and the SEC eliminated the exchange oligopoly 50 years ago. This elimination has allowed market makers and other trading venues to compete against exchanges to provide the best executions for retail investors. Notwithstanding these gains, we agree there are certain improvements that can be made to further benefit retail investors and allow exchanges to better compete with off-exchange execution venues. Accordingly, we support the following, data-driven approach to enhancing market structure:

- First, fully implement the MDI Rules.

- Second, enhance the current order execution disclosures required by SEC Rules 605 and 606. Our comment letter regarding Proposed Rule 605 identifies specific changes the SEC should make to its proposed rule.

- Third, repropose the Tick Size Proposal with a minimum pricing increment of $0.005 for tick-constrained stocks, and adopt exchange access fee caps that are proportional to the minimum pricing increments based upon existing access fee caps, as outlined in our letter on this proposal.

These are improvements that can and should be made through a methodical, study-backed and data-driven approach. Unfortunately, the changes that the SEC has proposed are neither methodical nor driven by study or data, resulting in serious flaws. Rather, the SEC's sweeping Proposals, based on speculation and theory rather than data and analysis, will harm investors and the markets by introducing an unprecedented level of instability and uncertainty into the world's largest, most stable, and most accessible markets. As former Commissioner Aguilar aptly stated, "new regulatory regimes and rules promulgated by the SEC must have real and verifiable investor protections."[93] These Proposals do not come close to that standard.

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[92] *E.g.*, Letter from Hope M. Jarkowski, General Counsel, NYSE, to Vanessa Countryman, Sec'y, SEC (Mar. 13, 2023), https://www.sec.gov/comments/s7-31-22/s73122-20159561-327567.pdf; Letter from David Howson, Executive Vice President & Global President, Cboe Global Markets, et al., to Vanessa Countryman, Sec'y, SEC (Mar. 24, 2023), https://www.sec.gov/comments/s7-32-22/s73222-20161714-330556.pdf.

[93] Comm'r Luis A. Aguilar, SEC, Speech, An Insider's View of the SEC: Principles to Guide Reform (Oct. 15, 2010), https://www.sec.gov/news/speech/2010/spch101510laa.htm.

II. THE PROPOSED OCR SHOULD BE WITHDRAWN

Robinhood supports regulatory and industry efforts that make our market structure work better for retail investors. But we are concerned that the Proposal will have the opposite effect and result in worse trade executions for retail investors. We also believe that the Proposal will degrade market quality for publicly traded companies, particularly many smaller companies with less actively traded securities. Under the Proposal, the SEC will redirect retail investors' orders from an open, competitive marketplace to a centralized set of exchange-run auctions, where their orders may go unexecuted or receive inferior executions. More specifically, the Proposed OCR would classify most retail orders as "segmented orders." Segmented orders in NMS stocks must be sent to a "qualified auction" for execution unless they fall within a limited exception. The SEC estimates that only six exchanges and three ATSs would be qualified to host such auctions[94]—but there is no guarantee that they will opt to do so. Qualified auctions for segmented orders would last for a period of 100 to 300 milliseconds. This may not seem like a significant amount of time, but considering that today's average market order is executed in less than 4 milliseconds,[95] it is an unacceptably long delay. And because there is no guarantee that an order will be executed in a qualified auction, a customer's order could languish and remain unexecuted in an auction.

This model of consolidating retail trading on a single venue type, which the SEC is proposing, is a failed model that was tried and abandoned decades ago when exchange rules mandated that orders trade on their exchanges and not in a competitive, open marketplace. At that time, both Congress and the SEC wisely recognized that it was an unfair, anticompetitive practice that resulted in inferior executions. Now, the SEC seeks to turn back the clock to the days when markets were less fair, less competitive, and less efficient. In doing so, the Proposal would cause great harm to retail investors and the U.S. markets more generally. It would make trading slower and more expensive and prevent retail investors from receiving guaranteed, prompt executions at or better than the currently best displayed price. The SEC even acknowledges that, as a result of its Proposed OCR, retail investors may leave the securities markets.[96] This is not only bad policy at odds with Congressional intent and a bad deal for retail investors, but it is also

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[94] OCR Proposing Release, 88 Fed. Reg. at 221. In lieu of sending an order to a qualified exchange, a broker-dealer could execute the order at the midpoint of the NBBO, but this is impractical for many retail orders.

[95] *Id.* at 196 tbl.11 (Table 11 shows that 50% of orders internalized by off-exchange market makers are executed in 3.56 milliseconds; the fastest 10% of orders internalized by off-exchange market makers are executed in less than 1 millisecond).

[96] *Id.* at 221.

deeply problematic from a legal perspective because it violates the SEC's statutory mandate and rulemaking authority.

The SEC's economic analysis is fatally flawed. It is replete with speculation and conditional statements—the SEC admits that it does not know the extent of either the benefits or the costs of the Proposal. It is based on error-prone and unreliable data to which market participants do not even have access (so cannot seek to recreate or otherwise test the SEC's analysis). Its estimate that the Proposed OCR will result in a $1.5 billion benefit to customers is based on incorrect assumptions about how retail orders will be executed; when those assumptions are corrected, our analysis estimates that, in reality, the Proposed OCR will result in a $2.5-$3 billion cost to customers. And, remarkably, it does not take into account the economic effect of the pending MDI Rules or the contemporaneous Proposed Rule 605 and Tick Size Proposal, the combined effects of which may very well obviate any basis for the Proposed OCR.

We discuss below: (A) why the Proposed OCR is bad policy (retail investors, small companies, and the U.S. markets will be worse off if the Proposal is adopted); (B) how it is illegal and will turn back the clock to the 1970s and create a marketplace that is less competitive, less fair, and less efficient, in violation of the SEC's statutory mandate; and (C) how it is illegal because the SEC has failed to conduct a reasonable economic analysis, in violation of its rulemaking authority. For all of these reasons, the Proposed OCR should be withdrawn.

A. The Proposed OCR Is Bad Policy.

Today, retail investors most value: (1) achieving a near-immediate execution of their market orders; (2) full execution of their orders at or better than the best price they see at the time they place their orders; and (3) zero commissions and low transaction costs. The current market structure serves these objectives well, as discussed above in Section I of this comment letter. In contrast, the Proposed OCR would jeopardize *each* of these retail investor priorities by turning the clock back to a market reminiscent of the 1970s when orders were required, by rule, to trade on public exchanges and could not be immediately executed by market makers and other market centers at a price that was at or better than the current best displayed price. By causing worse executions for retail investors, the Proposed OCR also would undermine investor confidence in the markets, potentially resulting in less retail market participation. In addition to harming retail investors, the Proposal would harm public companies, particularly small companies with less actively traded securities. Notably, the SEC acknowledges all of these negative consequences for retail investors and small companies in the Proposal, which makes the Proposed OCR all the more problematic.

1. *The Proposed OCR Will Harm Retail Investors By Causing Delayed And Uncertain Executions And Resulting In Inefficient Executions, As The SEC Acknowledges.*

Today, retail investors are generally accustomed to seeing prompt executions of their orders on their computers or phones at or better than the prices displayed on their screen at the time they submit a market order. In fact, that is a required element of FINRA's best execution rule, Rule 5310, for market orders because broker-dealers are required to consider speed and certainty of execution in determining whether they are providing orders with best execution.[97] Like FINRA, the SEC and courts have historically emphasized the importance of timely and certain executions.[98] The Proposal, however, goes against this long tradition of SEC and FINRA guidance by *intentionally slowing* the execution of retail orders, which in turn will result in delays, orders not receiving timely executions, and in some cases, orders not receiving any executions at all via qualified auctions. The Proposal will do this by mandating that retail orders in NMS stocks be routed to an exchange to participate in a "qualified auction," which could take up to 300 milliseconds (*not including* the additional time that it will take to route orders to auctions). And because there is no guarantee that orders will receive executions in qualified auctions, they may languish and remain unexecuted in the auctions.

Notably, the SEC acknowledges that its Proposal could result in these negative outcomes. Specifically, the SEC concedes that qualified auctions will undermine prompt and certain executions of retail orders by making retail order execution "less streamlined."[99] The SEC also admits that the Proposal will introduce "a new layer of intermediation ... to the lifecycle of each trade."[100] The SEC further admits that the time it takes to run a qualified auction for a retail order would be *28 to 84 times longer* than the current median time for

[97] *See* FINRA Rule 5310, https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310.

[98] *E.g.*, Best Execution, SEC.gov (last modified May 9, 2011), https://www.sec.gov/answers/bestex.htm ("Some of the factors a broker must consider when seeking best execution of customers' orders include: the opportunity to get a better price than what is currently quoted, the speed of execution, and the likelihood that the trade will be executed."); *Newton v. Merrill, Lynch, Pierce, Fenner & Smith, Inc.*, 135 F.3d 266, 270 n.2 (3d Cir.) (en banc), *cert. denied*, 525 U.S. 811 (1998).

[99] OCR Proposing Release, 88 Fed. Reg. at 226.

[100] *Id.*

an off-exchange venue to execute a retail customer's order.[101] Finally, the SEC admits that the Proposal "might reduce the efficiency with which marketable individual investor orders are executed."[102]

Moreover, by mandating that retail orders are routed first to exchange-run auctions, the Proposal also would force these orders to go to venues that, today, provide the slowest and least certain executions at prices that are generally worse than currently offered by wholesalers.[103] The SEC acknowledges this fact in the Proposal by noting the "substantial variation" in the time it takes off-exchange venues to execute a retail order as principal versus the amount of time it takes an exchange venue.[104] The *median execution time for orders sent to an exchange is 7 times longer* than the median execution time for orders executed by off-exchange market makers.[105] Qualified auctions will be *even slower* because they have a built-in delay that does not exist for exchange executions today. Apart from the 100-300 millisecond delay, there will be additional delays because of the many new, complicated steps that broker-dealers must take after they receive a customer order and before they can execute that order: the broker-dealer must (1) identify the order as a "segmented order"; (2) assess whether an exception applies; (3) determine which "qualified auction" it will send the order to; (4) decide whether it will identify the "originating broker" on the order; and (5) determine what limit price it will assign to the order when it sends it to a qualified auction.

Incredibly, the Proposal states, without evidence, without data, and without a reasonable basis, that "the Commission <u>believes</u> that the overall efficiency with which marketable orders of individual investors are executed <u>would not be significantly affected</u> by the Proposal."[106] But this "belief" is contradicted not only by the numerous facts and other SEC statements in the Proposal set forth above, but also the SEC's own example of how the Proposal might interject unnecessary steps (and therefore delays) into the execution of a hypothetical retail order, as illustrated in Table 1 below. Orders that go through such a complex execution process *will be significantly and negatively affected*. Today, a retail

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[101] *Id.* at 196 & tbl.11 (median time to execution for internalized orders of 3.56 milliseconds compared to 100 milliseconds and 300 milliseconds). Qualified auctions would take 4 to 12 times longer than the current median time for executing orders that wholesalers route to an exchange. *Id.* (median time of execution of 24.36 milliseconds compared to 100 milliseconds and 300 milliseconds).

[102] *Id.* at 226.

[103] *See supra* note 88.

[104] OCR Proposing Release, 88 Fed. Reg. at 196 & tbl.11.

[105] *Id.* at 196.

[106] *Id.* at 226.

order may receive a guaranteed execution in *two steps*. Under the SEC's proposal, the retail order might take significantly more steps and may *not ever receive a full and/or timely execution* via an auction. This is the opposite of promoting an "efficient execution," which is one of the SEC's statutory mandates.

Table 1: Comparison of How A Retail Order May Be Executed Today Versus Under the Proposal

How an Order Is Executed Today	How an Order May Be Executed Under the Proposal (based on the SEC's example)[107]
1. A retail broker-dealer receives an order from a retail investor.	1. A retail broker-dealer receives and identifies a "segmented order."
2. The retail broker-dealer sends the order to an off-exchange market maker, which (a) is bound to the same obligations for price protection as all exchanges and other trading venues; and (b) provides substantial discretionary price improvement beyond these obligations based on extremely competitive existing routing practices.	2. The retail broker-dealer sends the segmented order to a qualified auction with a specified limit price.
	3. After 100-300 milliseconds, the segmented order does not get executed in the auction.
	4. The retail broker-dealer could route the order to a wholesaler with a representation that the order had not received an execution in a qualified auction at the specified limit price.
	5. The wholesaler does not want to internalize the order so resubmits the order to a qualified auction with a revised specified limit price.
	6. After another 100-300 milliseconds, the segmented order still does not get executed in the auction.
	7. The wholesaler could again resubmit the order to a qualified auction at a

[107] This is the example provided by the SEC in its Proposal. OCR Proposing Release, 88 Fed. Reg. at 148.

How an Order Is Executed Today	How an Order May Be Executed Under the Proposal (based on the SEC's example)[107]
	different limit price, internalize the order, or route it to an exchange continuous order book.

Unfortunately for retail investors who are used to immediate executions of the entire amount of their order, at or better than the best price, the qualified auction requirement creates uncertainty of execution, uncertainty of how many fills it might take to execute the order, and uncertainty of whether the orders will be filled at or better than the best price displayed to the customer. The potential for a retail customer's order to bounce around under the Proposal, as shown in the SEC's own example, not only *significantly* delays the execution of retail orders, but it also erodes investor confidence that the markets are working efficiently and in their best interests. And, as discussed below, this convoluted mandate for executing retail investors' orders will invariably result in worse prices if the market moves away from the price that the investor saw on their screen when placing the order. This example, alone, shows that the Proposal is inconsistent with the SEC's statutory mandate to promote efficient executions of securities transactions.

2. The Proposed OCR May Result In Worse Prices For Retail Customers, As The SEC Acknowledges.

Today, retail orders executed by off-exchange venues receive consistent, high-quality executions, including superior prices compared to routing those orders to exchanges. The SEC's own evidence and the Proposal recognize that the current dynamic of retail broker-dealers routing to market makers who compete for order flow on the basis of execution quality already results in superior executions for customer orders than existing alternatives.[108] By all metrics that the industry uses to measure the quality of executions

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[108] *Cf. id.* at 186 ("[W]holesalers appear to compare favorably to exchanges in the execution quality of orders routed to them, suggesting that execution quality could be another key factor in the decision of retail brokers to route to wholesalers. In particular, marketable orders routed to wholesalers appear to have higher fill rates, lower effective spreads, and lower E/Q ratios. These orders are also more likely to receive price improvement and, conditional on receiving price improvement, receive greater price improvement when routed to wholesalers as compared to exchanges. ... [T]he Commission understands that wholesalers are more responsive to retail brokers that provide them with order flow, including, for example, following customer instructions not to internalize particular orders. More broadly, wholesalers appear to provide retail brokers with a high degree of consistency with regard to execution quality.") (footnotes omitted); *id.* at 134 ("The low adverse selection costs of the segmented marketable orders of individual investors generally enable wholesalers to offer better prices for such orders than would be available for unsegmented orders routed to national securities exchanges."); *id.* at 180 ("[W]holesalers are typically able to execute the

of retail orders, the SEC's data demonstrates that off-exchange executions (or execution by off-exchange market makers) is generally better for customer orders than routing to an exchange for execution.[109] For example, according to the Proposal[110]:

- Fill rates are higher for orders executed through off-exchange transactions, meaning more orders are filled in full or in larger part;
- The effective spread and effective-over-quoted ratios are lower for orders executed by off-exchange venues than routing to an exchange, indicating that retail customer orders receive executions closer to the midpoint, which is more favorable for those orders; and
- The amount of price improvement that retail customer orders receive via off-exchange venues is higher than when routing to exchanges, both in terms of the percentage of shares that receive price improvement and the amount of price improvement per share.

Notably, the only category where off-exchange market makers do not beat exchanges—in the SEC's view—is a category called "realized spread," which the SEC uses as a proxy for an executing broker's potential "profit." The SEC's data shows a higher "realized spread" for wholesalers compared to exchanges. This is the *only* "problem" the SEC points to when it compares wholesaler versus exchange metrics—that off-exchange market makers earn too much profit. However, there is no evidence that this affects execution quality. The only objectively reasonable takeaway from this data is that the SEC is not concerned with the quality of the prices that retail investors actually receive.

marketable orders of individual investors at better prices than these orders would receive if they were routed to an exchange."); *id.* ("[T]he orders that wholesalers internalize present lower adverse selection risk and receive higher execution quality relative to marketable orders wholesalers receive and execute in a riskless principal or agency capacity."); *id.* ("Additional results show that, relative to orders executed on exchanges, orders internalized by wholesalers are associated with lower price impacts (*i.e.*, lower adverse selection risk), lower effective half-spreads (*i.e.*, higher price improvement), and higher realized half-spreads (*i.e.*, higher potential profitability).") (footnotes omitted); *id.* at 186 ("[W]hile wholesalers receive order flow from retail brokers that contains variation in quoted spreads and adverse selection risk, wholesalers can target an average level of price improvement across this heterogeneous order flow, resulting in a relatively consistent degree of execution quality."); *id.* at 215-16 ("[T]he Proposal would undermine the wholesaler business model, which in turn could hinder the ability of wholesalers to continue to provide consistency in their execution services."). (Collectively, "SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges.")

[109] OCR Proposing Release, 88 Fed. Reg. at 189 tbl.5.

[110] *Id.* at 189-90 tbls.5 & 6.

Rather, the SEC appears to be more concerned with ensuring that so-called "profitable" retail orders are directed away from off-exchange venues and to qualified auctions—in other words, the SEC's Proposal appears designed to shift profits from wholesalers to exchanges, thus picking winners and losers among otherwise equally permissible execution venues.

Again, it is clear that worse prices for retail customers are a natural consequence of the Proposal. To this end, because the Proposal will force retail orders to exchanges' qualified auctions, and prohibit off-exchange market makers from competing for this flow except in limited situations, retail investors could receive worse prices under the Proposal than they do today, due to the following factors (notably, the SEC admits these negative consequences):

1. Off-exchange market makers will be less incentivized to provide guaranteed fills or price improvement and size improvement for retail orders (which the SEC acknowledges);[111]

2. Market participants may choose not to participate in auctions, which will increase the likelihood that prices will move away from retail investors (which the SEC acknowledges);[112]

3. The long duration of the qualified auctions relative to today's executions will increase the likelihood of "slippage" or "price disimprovement"—i.e., that prices could move away from retail investors after they place their orders (which the SEC acknowledges);[113] and

[111] *Id.* at 215-16 ("[T]he Proposal would undermine the wholesaler business model, which in turn could hinder the ability of wholesalers to continue to provide consistency in their execution services.").

[112] *Id.* at 214.

[113] *Id.*

4. Orders in smaller companies with less actively traded securities are likely to receive worse executions in an auction setting relative to an off-exchange market maker (which the SEC acknowledges) (*see infra* Section II.A.4).[114]

Regarding the first point, the SEC acknowledges that market makers today provide consistent executions at or better than the best displayed price, up to the size of the order even if the best price exceeds this size.[115] They are able to provide this service because they receive consistent order flow from retail broker-dealers that they may internalize (or execute as principal); under the Proposal, they will no longer receive this consistent order flow, meaning they will no longer have a reason to provide this service. Notably, this is a valuable service that the SEC has acknowledged wholesalers provide.[116] The "new" liquidity providers the SEC anticipates that retail orders will interact with in qualified auctions (and the exchanges on which the auctions will occur) have no such obligation to retail customers' orders.

Regarding the second point, the SEC acknowledges that market participants may not participate in qualified auctions[117] and, if they do not, retail orders sent to auctions could receive worse prices than they do today: "[T]here could be a general lack of interest from liquidity suppliers to participate in a qualified auction"[118] and, if this is the case, retail orders could be executed "at inferior prices compared to what they might have received under the current market structure."[119] At the same time, the SEC acknowledges that if they do participate in qualified auctions, prices for retail orders on exchanges (outside the qualified auctions) could be worse than they are today: "More specifically, if liquidity is diverted to qualified auctions, there is the risk that the NBBO could widen because some

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[114] *Id.* at 186 ("More specifically, while wholesalers receive order flow from retail brokers that contains variation in quoted spreads and adverse selection risk, wholesalers can target an average level of price improvement across this heterogeneous order flow, resulting in a relatively consistent degree of execution quality."); *id.* at 234 (acknowledging an alternative to Proposed OCR that would result in "more certainty regarding individual investor orders executing in qualified auctions, particularly in less liquid securities where there may be a higher chance that no liquidity suppliers bid in the auctions.").

[115] *See supra* note 108, SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges.

[116] OCR Proposing Release, 88 Fed. Reg. at 186.

[117] *See* Letter from David Howson, Executive Vice President & Global President, Cboe Global Markets, et al., to Vanessa Countryman, Sec'y, SEC (Mar. 24, 2023), https://www.sec.gov/comments/s7-32-22/s73222-20161714-330556.pdf (group of commenters including institutional investors object to the Proposed OCR).

[118] OCR Proposing Release, 88 Fed. Reg. at 214.

[119] *Id.*

market participants might reduce the frequency or the size of the orders they submit to the [Limit Order Book ("LOB")], including orders that set the NBBO prices."[120] Either way, the retail customer will be disadvantaged and receive worse prices. This is not a good deal for the retail investor.

Regarding the third point, "slippage" or "price disimprovement" occurs when a customer receives a worse price than the best quotes prevailing at the time the order is placed.[121] In addition to causing delayed and uncertain executions, the Proposal could result in worse executions for retail investors by causing slippage. As discussed above in Section II.A.1, the Proposal will do this by preventing off-exchange market makers from immediately executing a retail order at or better than the best displayed price, except in very limited circumstances. Instead, the SEC will dictate that retail orders are sent to a "qualified auction" on an exchange, which will *not* provide immediate, reliable executions at or better than the best displayed price. And because there is no guarantee that orders will receive *any* execution in qualified auctions, they may languish and remain unexecuted following auctions, as shown in Table 1 above. During this time, the best displayed price at the time the customer entered an order may no longer be available. In short, because the qualified auctions will increase the amount of time it takes to execute a retail order and the uncertainty that these orders will be executed, the greater the likelihood that retail orders will receive worse prices.

The SEC acknowledges that slippage could occur under the Proposal and result in worse prices for retail customers. To this end, the SEC concedes that there is no guarantee that a retail order will be filled in full or in part during a qualified auction[122] and, at the same time, orders may receive worse prices because of the "potential that the NBBO could change while the qualified auction was in process."[123] The SEC further acknowledges that there are circumstances, such as fast moving markets, in which a routing broker may determine that the best prices would not be available via auction and "market conditions suggest that auction would be unlikely to generate better prices than the NBBO."[124] Finally, the SEC acknowledges that there is "uncertainty regarding [auction messages']

[120] *Id.* at 221.

[121] Reg Best Ex Proposing Release, 88 Fed. Reg. at 5472 n.215; FINRA Rule 5310.09(b)(2), https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310.

[122] OCR Proposing Release, 88 Fed. Reg. at 147 ("Given the absence of a 'reserve price' or 'backstop' requirement, a segmented order would not have certainty of an execution in a qualified auction at a price equal to the NBBO or better ....").

[123] *Id.* at 214.

[124] *Id.* at 148-49.

overall effects on the risk of adverse quote movements."[125] Even the SEC's own estimates, which are skewed in favor of the Proposal, state there is an almost 5% probability that the best price could move negatively away from an investor during a qualified auction.[126] The risk that the market moves away from a customer order during a qualified auction would be compounded by the effects of the Tick Size Proposal—with smaller tick sizes, we can expect a significant increase in quote volatility and a reduction in the duration of displayed quotes, which will contribute to the volume of retail orders that end up receiving inferior prices (or no executions) during or after auctions lasting up to 300 milliseconds.

At the same time that it acknowledges that the qualified auctions under the Proposal could result in worse prices for retail investors, the SEC makes a number of unsupported assumptions in an effort to downplay the very real harm that will occur. For example, in assessing the likelihood of slippage in qualified auctions, the SEC applies wholly inapposite slippage rates. We discuss the SEC's unsupported slippage assumptions in more detail below, in Section II.C (describing why the SEC has failed to conduct a reasonable economic analysis).

3. The Proposed OCR Could Introduce Excessive, Unnecessary Costs, As The SEC Acknowledges.

The Proposal could further harm retail investors by introducing new, unnecessary transaction costs. The SEC concedes this fact. Today, many retail investors pay no or very low commissions. Zero-commission trading has attracted a whole new generation of investors.[127] The introduction of zero-commission trading, pioneered by retail broker-dealers, is facilitated by off-exchange market makers' payment for this order flow to retail broker-dealers. To this end, sending retail customer orders to off-exchange market makers provides retail broker-dealers, and by extension their retail customers, with a number of benefits:[128]

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[125] *Id.* at 215.

[126] The SEC's data indicates the probability of the NBBO quotes adversely moving after the internalization of an individual investor order is about 1.8% at 25ms after the trade, 2.8% at 100ms after the trade, and 4.6% at 300ms after the trade. *Id.* at 214.

[127] Deloitte Center for Financial Services, *The Rise of Newly Empowered Retail Investors*, at 4 (2021), https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-the-rise-of-newly-empowered-retail-investors-2021.pdf.

[128] *See supra* note 108, SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges; *see also* OCR Proposing Release, 88 Fed. Reg. at 203-04.

- It saves retail broker-dealers the direct and indirect expenses of market access and maintaining smart order routing technology and exchange and ATS connections. These are costs that retail broker-dealers do not need to incur and, thus, do not need to pass on to their customers.

- Off-exchange market makers also may compensate retail broker-dealers for order flow (or "PFOF"). PFOF allows retail broker-dealers to further reduce or eliminate costs and fees to their retail customers.

- Finally, off-exchange market makers timely address erroneous and inferior prices on retail customers' orders and do not enjoy limited liability for failing to act in such situations, as exchanges do.

In these ways, the current market structure—in which off-exchange venues play an important part in executing retail customer orders—has evolved to benefit retail investors by facilitating zero-commission trading and/or other low-cost or no-cost products and services. The Proposal will undermine all of the benefits that retail investors enjoy by diverting retail orders from off-exchange market makers to qualified auctions. This diversion would reduce market makers' opportunities for revenue which, in turn, will likely decrease the amount of PFOF that they are able to pay to retail broker-dealers and the costs they are willing to incur to execute retail orders. It also will decrease their willingness to address and rectify trades for retail investors that are erroneous or executed at inferior prices. These are services that exchanges will not provide with qualified auctions.[129] On top of these direct costs, the Proposal will introduce significant transaction and compliance costs into the market, across all trading centers. The reduction or elimination of PFOF arrangements and increased transaction and compliance costs across the industry have the potential to result in increased costs to and fewer products and services for investors. Notably, the SEC acknowledges throughout the Proposal that commissions may return or increase for retail customers as a result of the Proposed OCR.[130] It is difficult to understand how the SEC reasonably believes the

[129] *See supra* note 108, SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges; *see also* OCR Proposing Release, 88 Fed. Reg. at 203-04.

[130] "Among the possible effects are a decline in profitability for wholesalers. Some retail brokers could also experience costs from wholesalers reducing the amount of PFOF they pay to retail brokers or from reducing or charging for the order handling services they offer to retail brokers. <u>Some of these costs could ultimately be passed on to individual investors, such as through the resumption of commissions for NMS stock trades being charged by some retail brokers</u>." OCR Proposing Release, 88 Fed. Reg. at 203-04. The SEC states that its analysis "does <u>not include costs</u> that may arise in the form of potential increases in (or the return of) commissions retail brokers charge to individual investors or other reductions in the services that retail brokers currently offer." *Id.* at 178 n.345. The SEC also acknowledges that, if zero-commission trading is eliminated, then "<u>retail trading volume could decline</u> and the overall

Proposal will put retail investors in a better place than they are today with these increased costs.

4. The Proposal Will Harm Small Companies And Result In Worse, More Volatile Prices For Their Securities, As The SEC Acknowledges.

It is clear that mandatory participation in qualified auctions, as the Proposal would dictate, will result in worse executions for smaller companies with less actively traded securities and worse prices and less liquidity for these stocks. Today, diverse venues such as off-exchange market makers and exchanges compete against each other every day for retail order flow. One important way that off-exchange market makers compete for this flow is by providing favorable pricing to *all* of a retail broker-dealer's orders, even less liquid or thinly traded stocks.[131] The Proposal will eliminate the competition between off-exchange and exchange venues by requiring that retail orders be sent to qualified auctions. By eliminating this competition, off-exchange market makers will no longer be incentivized to compete for retail order flow by providing certain executions for all stocks, including the less actively traded securities of smaller companies. As a result, investors will receive worse execution quality for these securities.

Notably, the SEC recognizes the risk that some companies will receive worse prices under the Proposed OCR, but does not offer a solution to this problem.[132] Specifically, the Proposal acknowledges the important role of market makers in providing favorable pricing to *all* of a retail broker-dealer's orders, even those in less liquid or thinly traded stocks, which might experience worse prices if routed directly to an exchange. Off-exchange market makers are willing to provide consistent execution quality because they can profit by executing more frequently traded stocks, which offsets losses and risks they are willing to take on less liquid stocks. The SEC acknowledges that this is a "valuable service[]."[133] At the same time, the SEC acknowledges that this important service likely

pool of liquidity could shrink." *Id.* at 221 (collectively, "SEC Statements that Costs to Retail Investors Could Increase As a Result of the OCR.").

[131] *See supra* note 108, SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges.

[132] For example, historically, when orders were required to be executed on-exchange, the NYSE "specialist" model imposed affirmative market-making obligations to address this issue. If the SEC would force orders back to exchanges, it must similarly come up with a solution to this issue.

[133] OCR Proposing Release, 88 Fed. Reg. at 186.

will disappear under the Proposed OCR;[134] the natural consequence is that there would be *worse executions* for these less liquid securities. The SEC offers no solution to this problem that this Proposal will create, merely stating: "The Commission believes, however, that while bidders in qualified auctions may not provide as much consistency as wholesalers, some orders could receive improved execution quality while others would receive reduced execution quality (relative to wholesalers)."[135]

In short, the Commission is asking retail customers to give up the *reliability* of consistent and best executions generally provided by off-exchange market makers to orders for worse executions provided by qualified auctions. The Commission is also asking small businesses, which are the backbone of America, to accept worse prices for their securities and more difficult conditions for raising capital. Not only does this harm individual investors, it harms small issuers whose securities are less liquid and less actively traded. Such an outcome runs contrary to one of the most important themes underpinning U.S. financial regulation—improving investor interest in less actively traded securities to provide capital to smaller and emerging companies.[136] It also runs counter to the SEC's stated mission, which is to promote investor protection and facilitate capital formation.

B. The Proposal Is Illegal Because It Is Inconsistent With The SEC's Statutory Mandate.

The SEC states that the Proposal is based on Section 11A of the Exchange Act.[137] However, in addition to lacking statutory authorization as discussed above in Section I.C.2, the Proposed OCR is inconsistent with other restrictions Section 11A places on the Commission's authority. Congress adopted Section 11A in 1975, directing the SEC to "use its authority under the [Exchange Act] to facilitate the establishment of a national market system for securities."[138] Congress made clear that in "using its authority," the Commission must act "in accordance with" five objectives,[139] namely: "(i) economically efficient execution of securities transactions; (ii) fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other

[134] *See supra* note 108, SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges. *See also* Thomas Ernst, Chester Spatt & Jian Sun, *Would Order-by-Order Auctions Be Competitive?* (Dec. 13, 2022).

[135] OCR Proposing Release, 88 Fed. Reg. at 216.

[136] *E.g.*, Jumpstart Our Business Startups Act, Pub. L. No. 112-106, 126 Stat. 306 (2012); SEC, Report to Congress on Decimalization (July 2012).

[137] OCR Proposing Release, 88 Fed. Reg. at 136.

[138] 15 U.S.C. § 78k-1(a)(2).

[139] *Id.*

than exchange markets; (iii) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities; (iv) the practicability of brokers executing investors' orders in the best market; and (v) an opportunity, consistent with the foregoing objectives of efficient execution of securities transactions and practicability of brokers executing investors' orders in the best market, for investors' orders to be executed without the participation of a dealer."[140] One of the objectives of these 1975 Amendments was to clear the way for technology-driven innovation to enhance competition and, therefore, improve the quality of the U.S. equities market.[141]

In addition, Exchange Act Section 3(f) requires any SEC rulemaking to consider or determine whether an action is necessary or appropriate in the public interest and whether the action will promote efficiency, competition, and capital formation. And Section 23(a)(2), in turn, provides that the SEC shall not adopt any such rule or regulation which would impose a burden on competition not necessary or appropriate in furtherance of the purposes of this title.

In addition to being bad policy as discussed above in Section II.A, and exceeding the Commission's authority as discussed above in Section I.C.2, the Proposed OCR is also unlawful because, contrary to the mandates in Exchange Act Sections 11A(a)(2), 3(f), and 23(a)(2): (1) it would cause economically *inefficient* executions of securities transactions for many retail investors; and (2) it would create an anticompetitive, discriminatory model for the handling of retail orders, where these orders cannot be executed in open, competitive markets but rather must be sent to centralized, SEC-mandated "qualified auctions."

[140] *Id.* § 78k-1(a)(1)(C).

[141] S. Rep. No. 94-75, at 1 (1975) ("Rather than responding to changing investor needs and striving for more efficient ways to perform their essential functions, the principal stock exchanges and the majority of established securities firms appear to have resisted industry modernization and to have been unable or unwilling to respond promptly and effectively to radically altered economic and technological conditions."); H.R. Rep. No. 94-123, at 49 (1975) ("Communication and data processing technologies have multiplied and made significant advances. Yet, the organized securities markets continue to operate by and large as they did when the Securities Exchange Act was adopted in 1934. Essentially the evolutionary process has been stunted and distorted by various rules and practices which, operating under the banner of regulatory need, have unnecessarily erected barriers to competition, insulated markets, and resulted in misallocations of capital, widespread inefficiencies, and potentially harmful fragmentation of trading markets.").

1. The Proposal Is Inconsistent With The SEC's Mandate To Promote Economically Efficient Executions Of Securities Transactions.

The Proposal does not promote the economically efficient execution of securities transactions for retail orders; rather, it would cause economically *inefficient* transactions for many investors. This is a clear violation of Sections 3(f) and 11A of the Exchange Act. While the SEC states the Proposal *may* increase price improvement opportunities for *some* customer orders *by a single penny* (*and only for orders that are more than $100*), this so-called "benefit" is highly speculative and uncertain, by the SEC's own admission, as detailed below in Section II.C. Moreover, this so-called benefit of a single penny *is far outweighed by the very real and non-speculative costs* of the Proposal. These costs are undeniable and are discussed in other sections of our comment letter, but summarized below.

<u>First</u>, contrary to the SEC's statutory mandate of ensuring economically efficient executions, the Proposal would inject delay and uncertainty into the execution of retail orders. Perhaps the best evidence that the Proposed OCR will result in "inefficient executions" is the example provided by the SEC of how an order could be executed under the Proposal versus how it is executed today, as shown in Table 1 above.

<u>Second</u>, the Proposal would increase price disimprovement and slippage (thus resulting in worse prices for retail investors). By the SEC's own admission, due to the delays of the qualified auction "the NBBO could change while the qualified auction is in place"[142] and there are circumstances where the best price may not be available via auction.[143]

<u>Third</u>, the Proposal could increase transaction costs for retail investors. The SEC expressly acknowledges this fact, at numerous points in the Proposal.[144] At the same time, the Proposal could also result in worse prices for retail investors. Again, the SEC expressly acknowledges this fact in the Proposal.[145]

<u>Finally</u>, the Proposal would increase transaction prices for companies that are less actively traded. As noted above, the SEC acknowledges that off-exchange market makers provide consistent execution quality for illiquid securities and, because the role of these market

[142] OCR Proposing Release, 88 Fed. Reg. at 214.

[143] *Id.* at 148-49.

[144] *See supra* note 130, SEC Statements that Costs to Retail Investors Could Increase As a Result of the OCR.

[145] OCR Proposing Release, 88 Fed. Reg. at 215-16.

centers will be diminished under the Proposed OCR, "some orders ... would receive reduced execution quality (relative to wholesalers)."[146]

2. *The Proposals Are Inconsistent With The SEC's Statutory Mandate To Facilitate A National Market System And Promote Competition.*

The Proposed OCR is also inconsistent with Sections 3(f), 11A, and 23(a)(2) of the Exchange Act because it undermines fair competition between off-exchange venues and exchange venues that sponsor qualified auctions. To this end, the Proposal is anticompetitive because (1) it mandates a single, centralized model of "qualified auction" trading; and (2) it redirects what it views as "profitable order flow" from open, competitive markets where multiple market participants can compete for this order flow (including exchanges) to "qualified auctions" that are likely to be run by a small number of exchanges. Promoting venue-by-venue competition has been an integral part of the SEC's mandate, and the Proposal undermines that by explicitly reducing the number of participants that may compete to execute a retail order.

In the Section 11A proceedings and following efforts related to market structure, Congress and the SEC emphasized the importance of relying on competitive economic forces—not regulatory fiat—to drive development of the securities markets.[147] Congress

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[146] *Id.*

[147] *See, e.g., Concerning Market Structure Issues Currently Facing the Commission, Hearing Before the Subcomm. on Securities of the S. Comm. on Banking, Housing & Urban Affairs* (Oct. 27, 1999) (Testimony of Arthur Levitt, Chairman, SEC) ("What should be the role of the Commission in the development of the marketplace of the future? Our role is to maintain and monitor a framework in which fair competition can flourish, and to assure market integrity. It is not now and has never been to dictate the ultimate structure of the markets. As we have for the past 65 years, we expect the markets themselves to develop workable solutions. Our markets have not achieved their great successes as a result of government fiat, but rather through efforts of competing interests working to meet the demands of investors and to fulfill the promises posed by advancing technology. We approach regulation of the markets in this way for a very simple reason—it best serves the interests of investors."); Notice of Filing of Proposed Rule Change by New York Stock Exchange, Inc. to Rescind Exchange Rule 390; Commission Request for Comment on Issues Relating to Market Fragmentation, Exchange Act Release No. 42450 (Feb. 23, 2000), 65 Fed. Reg. 10,577, 10,584 (Feb. 28, 2000) ("Notice of Proposed Rule to Rescind Exchange Rule 390") ("Section 11A of the Exchange Act charges the Commission with maintaining and strengthening a national market system for securities. In fulfilling this responsibility, the Commission has not attempted to dictate the ultimate structure of the securities markets. Instead, it has sought to establish, monitor, and strengthen a framework that gives the forces of competition sufficient room to flourish and that allows the markets to develop according to their own genius. The Commission remains committed to allowing the forces of competition to shape market structure in the first instance.").

stated that it is neither "feasible [n]or desirable for the Commission or any other agency of the government to predetermine and require a particular structure" of the marketplace.[148] Rather, "[t]he objective is to enhance competition and to allow economic forces, interacting within a fair regulatory field, to arrive at appropriate variations of practices and services. Neither the markets themselves nor the broker-dealer participant in these markets should be forced into a single mold."[149] The SEC has echoed this sentiment: "It has never been a function of the Commission (or among the purposes of the Act) to take, or refrain from taking, regulatory action solely to preserve any market center's existing order flow."[150]

Notably, Congress and the SEC have expressly considered whether it is consistent with the goals of a NMS to mandate centralized, on-exchange trading. They have unequivocally decided that *it is not*. In February 2000, NYSE filed a proposed rule change to rescind Exchange Rule 390, which prohibited the off-exchange execution of orders in NYSE-listed stocks in many instances.[151] When the SEC approved the rule, it stated that rules requiring on-exchange execution "typically succeed only in distorting competition and introducing unnecessary costs."[152] Despite its robust tradition of not preferencing a

[148] H.R. Rep. No. 94-123, at 50 (1975).

[149] *Id.* at 51.

[150] Off-Board Trading by Members of National Securities Exchanges, Exchange Act Release No. 11942 (Dec. 19, 1975), 41 Fed. Reg. 4507, 4516 (Jan. 30, 1976); *see also* S. Rep. No. 93-13, at 94 (1973) ("[T]he Subcommittee approaches the question of a 'central market system' not from the point of view of returning all trading in NYSE-listed stocks to the NYSE and subjecting all participants in that trading to NYSE rules and procedures, but from the point of view of preserving the competing markets that have developed, breaking down barriers to communication and competition between them, and imposing those rules—and only those rules—which are necessary to protect public investors.").

[151] Notice of Proposed Rule to Rescind Exchange Rule 390, 65 Fed. Reg. 10,577.

[152] Order Approving Proposed Change to Rescind Exchange Rule 390, Exchange Act Release No. 42758 (May 5, 2000), 65 Fed. Reg. 30,175, 30,176 (May 10, 2000) ("In an age when advancing technology and expanding trading volume are unleashing powerful forces for change and new competitive challenges for the U.S. securities markets, both at home and abroad, the continued existence of regulatory rules that attempt to prohibit competition can no longer be justified. Such rules typically succeed only in distorting competition and introducing unnecessary costs.").

particular venue,[153] the SEC is now doing just that by mandating that retail investors' orders be sent to exchanges' qualified auctions.

By undermining the goal of fair competition, the SEC is also undermining the most significant motivator behind the 1975 Amendments and the creation of a national market system:[154]

> [T]he Congress evinced a preference for an approach which would permit a national market system to evolve through an interplay of competitive and economic forces interacting in a fair regulatory field, as "unnecessary regulatory restrictions are removed." <u>This free-market approach, which appears designed to permit the Commission to rely upon market forces rather than regulatory fiat to achieve mandated objectives ... would not seem to be given a fair chance of success if … rules create artificial disincentives to the achievement of the goals expressed</u>.[155]

Unabashed, the SEC freely acknowledges the anticompetitive effects of the Proposed OCR and the artificial disincentives that its rulemaking would create, e.g.:

- "[T]he Proposal would undermine the wholesaler business model, which in turn could hinder the ability of wholesalers to continue to provide consistency in their execution services."[156]

- The Proposal "could also affect competition in the market for trading services by enhancing the competitive position of exchanges and ATSs that operate qualified

[153] *See* S. Rep. No. 93-13, at 93 (1973) ("[T]he goal of the Congress is not to protect the income of the members of the NYSE, but to protect the interests of public investors."); *id.* at 96 ("The efforts of government and industry in this area should be directed, not to the creation of barriers between different groups of participants in the securities markets, but to the elimination of barriers which presently impede their communication and competition.").

[154] *E.g.*, Amendment or Abrogation of Exchange Off-Board Trading Rules, Exchange Act Release No. 11628 (Sept. 2, 1975), 40 Fed. Reg. 41,808, 41,814 (Sept. 9, 1975) ("As a preliminary observation ... Congress appears to have determined that it is desirable to encourage the broadest possible competition in order to achieve, to the maximum extent possible, continuity, depth and liquidity in the secondary trading markets."); *id.* at 41,815.

[155] *Id.* at 41,815 (citation and footnote omitted) (emphasis added).

[156] OCR Proposing Release, 88 Fed. Reg. at 215-16.

auctions relative to wholesalers as well as exchanges and ATSs that do not meet the criteria to operate qualified auctions."[157]

- "The Commission recognizes that there would likely be significant competitive effects associated with the introduction of qualified auctions as mandated by [the Proposed OCR]. Qualified auctions could reduce wholesaler market share for the execution of the orders of individual investors, which could result in the transfer of revenue and profit from wholesalers to other market participants that end up supplying more liquidity to the marketable orders of individual investors."[158]

- "The Proposal would likely cause wholesalers and some retail brokers to incur significant adjustment costs to their operations. It is unknown whether the current industry practice of routing nearly all retail order flow to wholesalers would persist were the Commission to adopt this rule, because wholesalers might charge for this service and retail brokers might find it more profitable to develop their own routing services."[159]

The SEC attempts to justify the anticompetitive effects of the Proposed OCR by saying it will result in more investor order interaction.[160] However, this objective cannot justify an anticompetitive mandate to trade on a single venue type and is a clear violation of the SEC's statutory mandate. The SEC considered, and rejected such an objective as a basis for NYSE Rule 390:

> The Commission believes that <u>whatever beneficial effect Rule 390 may have in enhancing the interaction of investor orders can no longer justify its anticompetitive nature</u>. To the extent the Rule promotes the interaction of investors' orders, it does so in an undesirable way—by attempting a direct restriction on competition. <u>Such attempts can never be wholly successful and typically succeed primarily in distorting, rather than eliminating, competition and introducing unnecessary costs</u>.[161]

By mandating a single model of order execution and on-exchange trading, the Proposal also places the kind of artificial restraint on competition that Congress directed the SEC

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[157] *Id.* at 179.

[158] *Id.*

[159] *Id.* at 203.

[160] *Id.* at 159.

[161] Order Approving Proposed Change to Rescind Exchange Rule 390, 65 Fed. Reg. at 30,177-78 (emphasis added).

to eliminate. To the extent the SEC perceives a problem with the handling of retail orders, its role is not to dictate a single, centralized model for order handling.[162] If market participants are willing to provide additional price improvement to retail investors, those opportunities will emerge through the natural forces of competition, as venues compete with each other to provide the best executions. For example, the market has naturally developed ways to achieve the Commission's stated goal of additional price improvement for retail customer orders, such as through exchange Retail Liquidity Programs ("RLP"), which have emerged in recent years.[163] But the SEC would ignore those nascent efforts and prevent broker-dealers from routing to them in favor of qualified auctions.[164] The fact that volume executed through RLPs is currently small does not mean the Commission should end run and suppress market innovation by mandating order execution through a single venue type: qualified auctions.[165] Rather, the Commission should keep an eye on the development of RLPs and other developments—including as other rules, like the MDI Rules, Proposed Rule 605, and a modified Tick Size Proposal, come into effect. The exchanges currently hosting RLPs should be expected to continue to either refine them until they are more attractive to market participants or look for another way to achieve the same goal that better addresses the needs of broker-dealers and their customers. Like off-exchange market makers, RLPs execute orders in subpenny increments so the SEC cannot attribute their lack of volume to an uneven playing field. Even one of the exchanges that would, in theory, be hosting qualified auctions, has commented *against* the implementation of the Proposed OCR's "prescriptive" model of qualified auctions that could "stifle competition" and "potentially undermine the national market system."[166] It

[162] *See, e.g.*, *Concerning Market Structure Issues Currently Facing the Commission, Hearing Before the Subcomm. on Securities of the S. Comm. on Banking, Housing & Urban Affairs* (Oct. 27, 1999) (Testimony of Arthur Levitt, Chairman, SEC) ("The Commission's goal is not to settle on and impose a single solution, but to assure that the structure of the markets offers investors a wide range of services."); *see also id.* ("The success of the U.S. securities markets has been achieved through a structure that has encouraged vigorous competition between market participants in meeting the needs of investors. Many of the innovations and advances we've seen in our markets are the product of this competition."); Notice of Proposed Rule to Rescind Exchange Rule 390, 65 Fed. Reg. at 10,577 ("Market centers (including exchange markets, over-the-counter market makers, and alternative trading systems) have an incentive to offer improvements in execution quality and to reduce trading costs in order to attract order flow away from other market centers.").

[163] *See* OCR Proposing Release, 88 Fed. Reg. at 144 n.151 (citing the SRO rule change approvals for RLPs).

[164] *Id.* at 163-64.

[165] *Id.* at 187.

[166] Letter from Hope M. Jarkowski, General Counsel, NYSE, to Vanessa Countryman, Sec'y, SEC, at 9 (Mar. 13, 2023), https://www.sec.gov/comments/s7-31-22/s73122-20159561-327567.pdf.

has instead opted for market-driven enhancements that could achieve the Commission's goal of increased order interaction.[167]

This is a critical point to emphasize: there is nothing to prevent exchanges from establishing and running the types of auctions the SEC is now proposing to force on the markets. If an exchange believes that qualified auctions would be good for investors and good for the markets, they could establish them today. The fact that they have not suggests there is no market interest and market participants do not believe it is a good idea. History bears this out. The idea of centralized auctions has been floated at various points and has failed to gain traction. For example, the NYSE's MatchPoint auction,[168] initiated in 2008, never became a meaningful destination venue. The Arizona Stock Exchange, founded in 1991, offered two auctions each day; it closed in 2001 due to lack of trading volume. These examples further prove there is nothing preventing exchanges and other market participants from offering qualified auctions if they are a product and service that market participants and the public want. The SEC has failed to articulate why it is necessary to propose an anticompetitive, illegal rule that would *force* a centralized execution model on the marketplace.[169]

Moreover, the SEC's sudden focus on developing a centralized execution model that significantly reduces the role of non-exchange venues is baffling and misplaced. The SEC has long recognized the important role that off-exchange market makers play in providing liquidity and reliable, consistent executions to customers' orders.[170] The SEC even

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[167] *Id.*

[168] *NYSE to Start MatchPoint Trading Facility Jan. 22*, Reuters (Jan. 7, 2008), https://www.reuters.com/article/nyseeuronext-matchpoint/nyse-to-start-matchpoint-trading-facility-jan-22-idUSBNG12139720080107.

[169] While auctions might have been tried in the past and failed, this model has never been seriously discussed as a potential solution to the market structure issues at play here. For example, the SEC's Equity Market Structure Advisory Committee never discussed or proposed it, and it wasn't it a part of the any of the discussions by SEC Chairs post-implementation of Regulation NMS.

[170] For example, in the context of adopting Exchange Act Rule 19c-1, which limited the scope of Exchange Rule 390's precursor, the SEC previously touted the benefits of market makers and the desirability of allowing them to compete with exchanges: "Thus it would appear that the perfection of competition among market makers offers the greatest promise of maximizing the depth and liquidity of the securities markets considered as a whole, under circumstances requiring the least interference by governmental or quasi-governmental bodies in the market making process." Off-Board Trading by Members of National Securities Exchanges, 41 Fed. Reg. at 4512. *See also* S. Comm. on Banking, Housing & Urban Affairs, 94th Cong., Summary of Principal Provisions of Securities Acts Amendments of 1975, at 11 (Comm. Print 1975) ("The Subcommittee on Securities concluded in its Report that market making capacities must be strengthened to absorb the large trading imbalances created by

recognizes the important role they play in the Proposal, acknowledging that when retail broker-dealers route order flow to market makers with the understanding that the market makers will execute the order flow with a high percentage and dollar value of price improvement, this means that market makers will execute and provide favorable pricing to *all* of the retail broker-dealer's orders, even orders in less liquid or thinly traded stocks, which might experience worse prices if routed directly to an exchange.[171]

Given these facts, the only logical explanation for the Proposed OCR (alone and particularly when combined with the Tick Size Proposal and Proposed Reg Best Ex) is that the SEC is looking for a backdoor way to eliminate the practice of PFOF, without actually proposing rules to eliminate this practice. Under Chair Gensler, the SEC has sought opportunities to vilify PFOF, sometimes even hijacking other, meaningful market dynamics to push the position that PFOF is bad for customer orders.[172] We see more evidence of this sort of "scaremongering" regarding PFOF in the Proposed OCR. For example, the Proposal discusses at length the amount of money that is paid in PFOF and how much volume is handled by firms that accept PFOF. What the SEC has failed to do, however—either previously or in any of its proposals—is provide any meaningful studies or evidence that retail investors are worse off as a result of payment for order flow than they would be without PFOF.

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institutional transactions, and it expressed its belief that this could be best achieved by encouraging vigorous competition among market makers.").

[171] *See supra* note 108, SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges.

[172] *Compare* SEC, Staff Report on Equity and Options Market Structure Conditions in Early 2001 (Oct. 14, 2021) (discussing PFOF throughout the SEC Staff's report on the unusual trading in GameStop stock in January 2021) *with* Comm'r Hester M. Peirce & Comm'r Elad L. Roisman, SEC, *Statement on Staff Report on Equity and Options Market Conditions in Early 2021* (Oct. 18, 2021), https://www.sec.gov/news/public-statement/peirce-roisman-staff-report-2021-10-18 ("In the wake of an anomalous market event, it can be tempting to identify a convenient scapegoat and leverage the event to pursue regulatory actions without regard to the factual record. The report, however, finds no causal connection between the meme stock volatility and conflicts of interest, payment for order flow, off-exchange trading, wholesale market-making, or any other market practice that has drawn recent popular attention. Indeed, in our discussions about causes of the January episode, whether with staff or with market participants, we have seen *no evidence* that these practices were a cause of these events.").

C. The Proposal Is Unlawful Because The SEC Has Failed To Conduct A Reasonable Economic Analysis.

The SEC has an obligation to base its rulemaking on real data, studies, and facts. This is a basic tenet of SEC rulemaking that has been long-recognized by Commissioners.[173] As aptly noted by Commission Aguilar, when it comes to rulemaking and market structure, "[k]nowledge is always better than speculation."[174] In proposing and adopting rules, the SEC also is required to (1) conduct a reasonable cost-benefit analysis that considers the effects and burdens on competition, efficiency, and investor protection; and (2) ensure that any rule adopted would not impose a burden on competition that is not necessary or in furtherance of the purposes of the Exchange Act.[175] It should go without saying that the SEC is not supposed to base rulemaking on unsupported theories, speculation, or flawed premises—and yet that is precisely what the Proposal does. In short, as Commissioner Peirce aptly noted, the SEC has "not done the work necessary to justify the extensive changes" in the Proposed OCR.[176]

As discussed below, the SEC's Proposal fails to satisfy its statutory obligations for rulemaking because: (1) the SEC is asking retail investors to accept a highly speculative $1.5 billion in price improvement, substantially less than they receive now (Robinhood alone provided $8 billion in price improvement in the last two years); (2) the SEC's primary thesis is based on speculation, false premises, and flawed assumptions; (3) the SEC admits that it based its economic analysis of "benefits" on flawed assumptions regarding realized spreads; (4) the SEC admits that its economic analysis and analysis of costs and benefits is "uncertain"; (5) the SEC uses a flawed slippage assumption to downplay costs; (6) the SEC's economic analysis is based on error-prone, unreliable data; (7) the SEC's analysis undercounts costs and fails to consider certain other costs, including the major systemic risks its wholesale changes would introduce, and the potential costs associated with technical and operational issues; and (8) the SEC's cost-benefit analysis is incomplete and

[173] *See supra* note 90.

[174] Comm'r Luis A. Aguilar, SEC, *U.S. Equity Market Structure: Making Our Markets Work Better for Investors* (May 11, 2015), https://www.sec.gov/news/statement/us-equity-market-structure.

[175] Section 23(a)(2) of the Exchange Act provides that the Commission shall not adopt any rule or regulation which would impose a burden on competition not necessary or appropriate in furtherance of the purposes of this title. Section 3(f), in turn, requires the Commission, when it is engaged in rulemaking pursuant to the Exchange Act and is required to consider or determine whether an action is necessary or appropriate in the public interest, to consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation.

[176] Comm'r Hester M. Peirce, SEC, *Ordering Competition* (Dec. 14, 2022), https://www.sec.gov/news/statement/peirce-order-competition-20221214.

insufficient because it does not consider pending rules that will go into effect, or the effect of the other Proposals.

1. The SEC Is Asking Retail Investors To Give Up Predictable Price Improvement For A Lesser Amount Of Speculative, Potential Price Improvement.

The SEC's primary stated purpose in overhauling the current equity market structure and implementing its risky, untested proposals is a theoretical possibility that *some* investors *might* receive a *single penny* of price improvement for *certain* orders of more than $100. In total, this would amount to $1.5 billion of price improvement, according to the SEC's assumptions. However, the SEC has failed to conduct any meaningful economic analysis or study to prove its untested theory. Rather, its economic analysis is based on speculation, false premises, and incorrect propositions, as discussed below.[177] To be sure, even if some investors might theoretically receive an extra penny in their pockets, the reality is that the proposals are more likely to increase overall transaction costs to all retail investors, result in worse executions due to delay and latencies, and create worse prices for less actively traded securities. The SEC admits that investors may receive worse executions and higher overall transaction costs at several places in its Proposal.[178] Thus, it is clear by the SEC's own admission that any theoretical, speculative "penny benefit" of these proposals cannot justify the very real and overwhelming costs. Any reasonable retail investor would eagerly forgo an extra theoretical penny if it meant a reliable, consistent, and speedy execution at or better than the currently best displayed price.

Moreover, the SEC fails to grapple with the fact that, today, investors receive multi-billions of dollars in price improvement—Robinhood alone provided $8 billion in price improvement in the last two years. This is essentially certain price improvement that the SEC is asking investors to give up, in return for a highly speculative, lesser amount of price improvement. As stated above, the SEC acknowledges that, as a result of its Proposal,

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[177] As Commissioner Uyeda noted: "Unfortunately, the proposing release attempts to prove that the practices of wholesalers are suboptimal through circular reasoning." Comm'r Mark T. Uyeda, SEC, *Statement on Proposed Rule Regarding Order Competition* (Dec. 14, 2022), https://www.sec.gov/news/statement/uyeda-order-competition-20221214. The SEC acknowledges "considerable uncertainty in the costs and benefits of this rule because the Commission cannot predict how different market participants would adjust their practices in response to this rule." OCR Proposing Release, 88 Fed. Reg. at 203. But this is the analysis the SEC is supposed to do—and the results it is supposed to know with confidence—before embarking on rulemaking.

[178] *See supra* note 130, SEC Statements that Costs to Retail Investors Could Increase As a Result of the OCR; *see supra* note 108, SEC Statements that Off-Exchange Market Makers Provide Better Execution Quality Than Exchanges.

retail investors could receive worse prices.[179] The SEC also acknowledges that, as a result of its Proposal, investors could leave the securities markets.[180] This is not a good outcome for retail investors or U.S. securities markets more generally.

2. The SEC's Primary Thesis Is Based On Speculation, False Premises, And Flawed Assumptions.

As noted above, the SEC estimates that qualified auctions will result in more than $1 billion in savings to retail customers, which translates to about one extra penny in savings for *some* orders of $100 or more. The SEC's hypothesis is that some retail orders executed through qualified auctions may receive a greater amount of price improvement than they are currently receiving today. Putting aside the fact that any so-called "benefit" would amount to a single penny and only for *some* orders of $100 or more, the language the SEC uses to talk about this hypothesis makes clear that it is more academic and experimental than practical or realistic. For example, the SEC states that its thesis "would be expected" to hold up, *but only if* two conditions are met (1) there is "full competition" and participation by liquidity providers in qualified auctions, and (2) there are "no other costs" that could influence participation:

> In a <u>fully competitive market</u>, competition among liquidity providers <u>would be expected</u> to drive the amount of price improvement that an order receives to a level commensurate with its adverse selection cost <u>(setting aside other relevant costs)</u>.[181]

It is striking that the SEC's theoretical penny of price improvement relies on two critical elements that the SEC assumes and for which the SEC has *failed to provide any factual support or evidence*.

Regarding (1), the SEC admits that there is substantial uncertainty about whether market participants will actually participate in qualified auctions. As the SEC concedes in the Proposal, "there could be a general lack of interest from liquidity suppliers to participate in a qualified auction."[182] Notably, if there is a lack of interest in auctions, the SEC acknowledges that investor orders will "perhaps" be executed "at inferior prices compared to what they might have received under the current market structure."[183] As

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[179] *See supra* note 130, SEC Statements that Costs to Retail Investors Could Increase As a Result of the OCR.

[180] OCR Proposing Release, 88 Fed. Reg. at 221.

[181] *Id.* at 130.

[182] OCR Proposing Release, 88 Fed. Reg. at 214.

[183] *Id.*

Commissioner Peirce noted, while "allowing a broader set of market participants to interact with retail order flow is a goal of the proposal, institutional investors may not expend much effort to participate regularly in auctions."[184] Indeed, there are a number of reasons, including some caused by the Proposed OCR, why market participants would not participate in auctions, including the following:

- Many institutional investors are unlikely to participate because they do not trade the same securities as retail investors and they do not trade the same quantity of securities. Rather, institutional investors' orders tend to be larger and these orders are often worked in off-exchange venues, in order to avoid "leakage" (i.e., information about their orders being leaked to the marketplace). The SEC acknowledges this fact in the Proposal.[185]

- Market participants may not want to incur the expense of building and maintaining technology designed to send orders to and participate in qualified auctions. It is unlikely that the contra-side of retail orders executed in qualified auctions will be another retail order or an institutional order and much more likely that it will be a market maker or other broker-dealer that has the type of sophisticated trading models required to interact with multiple auctions simultaneously while also monitoring multiple continuous markets that are not subject to the same 100-300 millisecond delays.

- Wholesalers have no incentive to participate in the qualified auctions they initiate on behalf of a retail order because—unlike the options markets' price improvement auctions—they are not guaranteed a share of the execution, even if they participate in the auction at the best price. Instead, they are last in line for auctions. In fact, should a originating broker-dealer choose not to identify themselves in the auction, the intermediary is fully prevented from interacting with the order, making it likely they would not want to play the intermediary role at all.

- Information regarding auction orders may be used by sophisticated market participants to take advantage of information regarding retail investors' pending, unexecuted orders. Market participants can use this knowledge to trade

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[184] Comm'r Hester M. Peirce, SEC, *Ordering Competition* (Dec. 14, 2022), https://www.sec.gov/news/statement/peirce-order-competition-20221214. *See also* Letter from David Howson, Executive Vice President & Global President, Cboe Global Markets, et al., to Vanessa Countryman, Sec'y, SEC (Mar. 24, 2023), https://www.sec.gov/comments/s7-32-22/s73222-20161714-330556.pdf (group of commenters including institutional investors object to the Proposed OCR).

[185] OCR Proposing Release, 88 Fed. Reg. at 220.

advantageously for themselves in the continuous market rather than participating in the auction.

- Should an originating broker-dealer choose to share its identity in an auction, this information will now be available to anyone who stores market data. If a retail broker-dealer introduces a significant amount of segmented order flow, there is substantial concern that bad actors will use this data to manipulate markets at the expense of retail customers. This is troublesome given the SEC's belief that most retail broker-dealers will choose to identify themselves.[186]

- If the originating broker-dealer discloses its identity, certain market participants will be disincentivized from interacting with orders from certain originating broker-dealers if these broker-dealers are associated with so-called "toxic" order flow.[187]

- The analysis fails to take into account whether and to what extent sending the vast majority of retail order flow to the lit market rather than executing it off-exchange will have on its profitability. Since the SEC uses profitability as a proxy for how much price improvement could be given to an order, the fact that this flow may be significantly less profitable once it is forced on exchange undermines the SEC's estimate.

The Commission's recently proposed rule to broaden the definition of "broker-dealer" also makes it highly unlikely that institutional investors will participate in auctions in any meaningful way.[188] The SEC's proposal would require institutional investors to register as dealers if they "routinely express[] trading interests that are at or near the best available prices on both sides of the market" and communicate this interest "in a way that makes them accessible to other market participants."[189] Concern about dealer status will likely result in an even smaller than expected number of institutional investors participating in the auctions. This means that the only reliable participants in auctions would be broker-dealers who trade with select retail investor flow, and only if it benefits them, and who owe no duty of best execution to these retail investors.

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[186] *See* OCR Proposing Release, 88 Fed. Reg. at 175 (estimating only 20 broker-dealers would choose the certification option that allows a broker-dealer not to identify itself).

[187] *Id.* at 158.

[188] Further Definition of "As a Part of a Regular Business" in the Definition of Dealer and Government Securities Dealer, Exchange Act Release No. 94524 (Mar. 28, 2022), 87 Fed. Reg. 23,054 (Apr. 18, 2022).

[189] *Id.* at 23,065.

Regarding its second key assumption, the SEC theorizes, without any basis, that any order flow it shifts to an exchange auction will automatically translate into more price improvement for retail customers because exchange participants, like institutional investors, will trade at better prices than off-exchange market makers. Again, the SEC provides no factual basis for this assumption. To the contrary, there is no guarantee that a meaningful number of liquidity providers would participate in qualified auctions and provide price improvement better than the amount that off-exchange venues provide today. At the same time, the SEC admits that investors' costs could increase and prices could be worse under the Proposed OCR, which would negate any speculative, theoretical "benefit" of $1.5 billion in price improvement.[190] The SEC fails to consider these increased costs in its economic analysis. This failure should be sufficient to render the Proposal invalid as a procedural matter because it means that the speculative "one-penny benefit" that is the basis for its Proposal is likely to be far outweighed by the very real costs to investors of implementing this rule. Below are examples of these admissions:

- "Such adverse selection <u>may reduce market quality for all participants and may ultimately reduce efficiency and lower capital formation</u>."[191]

- "[T]he Commission does not believe that segmented orders would have significantly greater risk of inferior execution prices under Proposed Rule 615 than currently provided by wholesalers, but <u>the variability of execution prices could increase</u>."[192]

- "Among the possible effects are a decline in profitability for wholesalers. Some retail brokers could also experience costs from wholesalers reducing the amount of PFOF they pay to retail brokers or from reducing or charging for the order handling services they offer to retail brokers. <u>Some of these costs could ultimately be passed on to individual investors, such as through the resumption of commissions for NMS stock trades being charged by some retail brokers</u>."[193]

While the SEC acknowledges that the reduction or elimination of PFOF—which will be a direct consequence of its Proposal—could result in more costs to retail investors, it also fails to consider this likelihood in its calculations of the theoretical one-penny "benefit" that investors might experience through qualified auctions. The SEC concedes this fact,

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[190] *See supra* note 130, SEC Statements that Costs to Retail Investors Could Increase As a Result of the OCR.

[191] OCR Proposing Release, 88 Fed. Reg. at 179.

[192] *Id.* at 147-48.

[193] *Id.* at 203-04.

which means the costs of its Proposals are undercounted and not accurate, by the SEC's own admission. To this end:

- The SEC states that its analysis "does not include costs that may arise in the form of potential increases in (or the return of) commissions retail brokers charge to individual investors or other reductions in the services that retail brokers currently offer."[194]

- The SEC also acknowledges that, if zero-commission trading is eliminated, then "retail trading volume could decline and the overall pool of liquidity could shrink."[195]

The SEC's lack of rigor and almost flippant approach to the real risk of returning commissions and declining retail investor participation in the marketplace is concerning. If commissions increase or return, there is minimal, if any, value in proposals that, at best, might marginally and hypothetically increase price improvement for some orders.[196]

3. The SEC Admits That It Based Its Economic Analysis And Analysis Of "Benefit" On Flawed Assumptions Regarding A Flawed Metric.

The SEC uses as a critical input a metric called "realized spreads." This metric is treated as a proxy for market maker profits: the theory is that if an off-exchange market maker took less profit on a given trade, there could be greater price improvement for that trade. However, the SEC freely admits that its economic analysis is flawed because its measure of "realized spreads" is not, in fact, a valid proxy for market maker profits: "[r]ealized spreads *do not measure the actual trading profits* that market makers earn from supplying liquidity."[197]

The SEC's "realized spreads" metric is not an appropriate basis for this analysis for a number of other reasons. First, the SEC had to pick a point in time at which to measure realized spread. It elected one minute after the trade. But that measure incorrectly assumes that market makers are always trading out of their proprietary positions acquired from internalizing retail customer orders *at exactly one minute* after each

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[194] *Id.* at 178 n.345.

[195] *Id.* at 221.

[196] *See* Comm'r Hester M. Peirce, SEC, *Is This the Best Execution We Can Get?* (Dec. 14, 2022), https://www.sec.gov/news/statement/peirce-best-execution-20221214 ("At some points in the release, the discussion hints that a broker-dealer, to meet its requirements under the rule, should convert PFOF into price improvement. Why is withholding price improvement from the customer worse than charging the customer a (likely higher) commission?").

[197] OCR Proposing Release, 88 Fed. Reg. at 188 n.426.

individual trade. It is an academic convenience, not a real measure of profit, and it is an oversimplification to look at one time horizon rather than multiple. Additionally, as the SEC acknowledges, "realized spreads" are not a valid measure of market maker profits because they "do not account for other costs … such as fixed costs for setting up their trading infrastructure and costs for connecting to trading venues and receiving market data."[198] It is bad enough for the Commission to promulgate a rule on the premise that there will not be adverse effects from eliminating the profitability of providing a critical market function; it is even worse when the measure of profit being used is so sloppy that it neglects to net out corresponding costs.

Even if "realized spread" were an adequate way to measure price improvement available in the market that is not being captured when wholesalers internalize retail orders, the SEC's analysis using "realized spreads" is based on flawed assumptions. As set forth in the analysis at Appendix A, the SEC's analysis assumes either that retail investors will spontaneously start using marketable limit orders instead of market orders or that realized spreads for market orders executed via qualified auction would be the same as realized spreads that exist today for marketable limit orders executed via an exchange limit order book. Neither of these assumptions holds up. And when they are corrected, the SEC's hypothetical $1.5 billion benefit to customers turns out to actually be a $2.5-$3 billion *loss* to customers.[199]

4. The SEC Admits That Its Economic Analysis And Analysis Of Costs And Benefits Are "Uncertain."

The SEC admits there is "uncertainty" or even "considerable uncertainty" with respect to its costs and benefits analysis. In truth, and as explained throughout this letter, a number of the costs of this proposal *are* certain, serious, and not properly accounted for by the Commission. But below is a non-exclusive list of examples where the Commission admits to not having fully determined the proposal's adverse consequences, as well as its supposed benefits:

- "The Commission <u>acknowledges considerable uncertainty in the costs</u> that would arise from Proposed Rule 615, due to whether the current market practice of routing through wholesalers would persist."[200]

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[198] *Id.*

[199] *See* Appendix A at 11, 14.

[200] OCR Proposing Release, 88 Fed. Reg. at 179.

- "The Commission acknowledges considerable uncertainty in the costs and benefits of this rule because the Commission cannot predict how different market participants would adjust their practices in response to this rule."[201]

- "[B]ecause the Commission does not have, and in certain cases does not believe it can reasonably obtain, data that may inform the Commission on certain economic effects, the Commission is unable to quantify certain economic effects. Further, even in cases where the Commission has some data, quantification is not practicable due to the number and type of assumptions necessary to quantify certain economic effects, which render any such quantification unreliable. The Commission's inability to quantify certain costs, benefits, and effects does not imply that the Commission believes such costs, benefits, or effects are less significant."[202]

- The Commission preliminarily believes that the introduction of qualified auctions for NMS stocks would increase competition to supply liquidity to marketable orders of individual investors. This might enhance order execution quality for individual and institutional investors as well as improve price discovery. The magnitude of the improvements in order execution quality that individual and institutional investors may experience as a result of this Proposal might be less than indicated for a variety of reasons (though it may also be greater), including the implementation of MDI Rules, the effect of which is not yet in the data."[203]

- "While acknowledging there is substantial uncertainty in the eventual outcome, the Commission estimates that qualified auctions as designed by the Proposal would result in additional price improvement for the marketable orders of individual investors that could reduce the average transactions costs of these orders by 0.86 basis points ('bps') to 1.31 bps."[204]

- "Given this estimate, the Commission preliminarily estimates that the Proposal could potentially result in a total average annual savings ...."[205]

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[201] *Id.* at 203.

[202] *Id.* at 179.

[203] *Id.* at 203.

[204] *Id.* at 178.

[205] *Id.*

- "The Commission anticipates that qualified auctions thereby could benefit investors ...."[206]

The Commission also admits that qualified auctions may have a negative impact on quotes and therefore prices, and there is uncertainty as to costs and benefits:

- "Overall, the results of the Commission's fade analysis suggest that auction messages would result in minimal adverse movements in best quotes due to the low adverse selection risk of individual investors, but, for the reasons discussed above, there may be greater variability in the risk of adverse quote movements. Because auction messages would differ from SIP messages, there is uncertainty regarding their overall effects on the risk of adverse quote movements."[207]

- "[W]hile bidders in qualified auctions may not provide as much consistency as wholesalers, some orders could receive improved execution quality while others would receive reduced execution quality (relative to wholesalers)."[208]

The Commission further admits there is uncertainty as to what effect the proposed auction priority would have on competition and liquidity, which are critical inputs into its cost and benefit assessment:

- "The Commission is uncertain what effect the proposed requirement to give customer orders priority if auction responses are at the same price would have overall on the competition to supply liquidity to individual investor orders."[209]

Finally, in what one might call the Commission's "thesis statement," the *amount* of qualified, speculative language is problematic:

- "The Commission preliminarily believes that the introduction of qualified auctions for NMS stocks would increase competition to supply liquidity to marketable orders of individual investors. This might enhance order execution quality for individual and institutional investors as well as improve price discovery. The magnitude of the improvements in order execution quality that individual and institutional investors may experience as a result of this Proposal

[206] *Id.* at 157.

[207] *Id.* at 215.

[208] *Id.* at 216.

[209] *Id.* at 222.

might be less than indicated for a variety of reasons (though it may also be greater)."[210]

5. The SEC Uses False Assumptions Regarding Slippage To Downplay The Costs To Retail Investors.

The SEC makes a number of unsupported assumptions regarding slippage in an effort to "downplay" the very real harm and costs of its Proposal. For example, in assessing the likelihood of slippage, the SEC applies inapposite slippage rates to the likelihood that there will be slippage during qualified auctions. Slippage occurs when the bid/ask spread changes between the time an order is requested and the time it is executed. Accordingly, the longer it takes to execute an order, the greater the likelihood for slippage. Notwithstanding this truism, the SEC applies the same slippage rates for orders "internalized" by market makers to assess the potential slippage in qualified auctions—even though internalized orders are a wholly inadequate proxy for qualified auction executions because (1) the SEC acknowledges that "internalized" orders are executed much faster than orders on exchanges; and (2) the qualified auction process will inject additional delays and uncertainty into customer executions, as acknowledged by the SEC and discussed above.[211]

The SEC's slippage analysis also undercounts the effect of slippage under the Proposed OCR because it does not take into account the potentially negative compounding effects of the yet-to-be-implemented MDI Rules or the simultaneous Tick Size Proposal. The new round lot sizes, potential new tick sizes, and their impact on quote prices and depth of book have yet to be assessed, but could be material, including with respect to the slippage that orders executed on exchanges experience. The SEC does not even acknowledge that possibility.

Using its flawed slippage numbers, the SEC further posits a belief (without any reasonable basis), that although there will be slippage, the potential slippage for a customer order would be less than the estimated price improvement offered in qualified auctions. However, the SEC's belief ignores reality and the manner in which the Proposed OCR is designed. The potential for slippage, combined with the fact that market makers can only internalize an order after a qualified auction at the NBBO at the time of order receipt means that, practically, if an order fails to execute in an auction, "the quotes may move against the order during this time and the wholesaler would have to route it to an exchange LOB or expose the order in another qualified auction before it could

[210] *Id.* at 203.

[211] To be sure, the SEC acknowledges the significant uncertainty regarding the impact of qualified auctions on the execution quality of customer orders ("uncertainty regarding [auction messages'] overall effects on the risk of adverse quote movements"). *Id.* at 215.

execute."[212] This eliminates both the customer's chance at a high quality execution from the market maker and the market maker's chance to interact with the order.

6. The SEC's Economic Analysis Is Based On Error-Prone and Unreliable Data.

The SEC's economic analysis is based on data from the Consolidated Audit Trail ("CAT"), but CAT has not been fully implemented and this data is prone to errors. The SEC essentially concedes this fact in the Proposal, stating that it manipulated the data on which its analysis is based to account for errors: "The analysis employed filters to clean the data and account for potential data errors."[213] When faced with discrepancies between CAT and Rule 605 data, the SEC speculates that the difference may be due to the fact that CAT data covers more marketable orders,[214] but without knowing the actual cause of the discrepancies the SEC is basing its analysis on speculation and hypotheses that could be wrong. Additionally, the SEC's reliance on CAT data is highly problematic because only the SEC has access to this data. Accordingly, there is no way for market participants to meaningfully react to the SEC's calculations and assumptions and therefore no opportunity to meaningfully comment on the Proposed OCR.

7. The SEC's Analysis Is Flawed Because It Undercounts Certain Costs And Fails To Consider Other Costs.

The SEC dramatically underestimates the transaction and compliance costs the market as a whole will experience in seeking to build and implement qualified auctions. Specifically, the SEC: (i) underestimates certain implementation and compliance costs; (ii) fails to quantify other costs at all because the SEC says they "cannot be quantified"; and (iii) ignores the systemic risks its wholesale changes would introduce and potential costs associated with technical and operational issues.

i. The SEC underestimates certain implementation and compliance costs. The SEC estimates the overall compliance costs for retail broker-dealers—both initial and ongoing costs—will be approximately $400,000 to, among other things, (1) identify segmented orders, (2) mark segmented orders, (3) add segmented orders and certification to existing order marking systems, and (4) establish a process for certifying that the originating broker-dealer's identity will not be disclosed.[215] This is an unreasonably low estimate. For example, broker-dealers who don't wish to attribute their segmented orders may

[212] *Id.* at 214.

[213] *Id.* at 192 n.443.

[214] *Id.* at 207.

[215] *Id.* at 212-13 tbl.21.

have to introduce these orders to auctions themselves and develop complex routing infrastructure just to fill customer orders that do not execute in an auction. This will resemble a system more like an algorithmic trading firm, incurring significant ongoing costs for direct feeds and cutting edge hardware. Other SEC estimates are also unreasonably low. For example, the SEC estimates that it will cost an open competition trading center only an initial $79,000 to get set up to "administer and regulate auctions." This is an extremely low amount for building and testing trading technology that does not currently exist, not to mention the costs of ensuring regulatory compliance with new order types and processes that have never been tested before and will be subject to Commission scrutiny.

ii. The SEC fails to quantify certain costs at all. The SEC acknowledges that it failed to estimate certain costs.[216] There are a number of costs that retail broker-dealers will incur, which the SEC states "cannot be quantified" and does not attempt to quantify, such as the following:

- Reduction in the amount of PFOF they receive from off-exchange market makers.[217]

- The risk that market makers will stop taking some or all of retail broker-dealers' order flow, forcing them to readjust their business models, perhaps by establishing costly exchange memberships and connections, including the technology costs to build and maintain the sophisticated smart order routers needed to achieve compliance with existing best execution obligations (compounded by Proposed Reg Best Ex): "Maintaining market access at many venues is costly, so broker-dealers have an incentive to use the services of other broker-dealers who maintain market access at most, if not all, market centers. Wholesalers are the dominant providers of market access for retail brokers and bundle their market access services with execution services."[218]

The SEC also does not quantify the following costs:

- If orders are sent to qualified auctions and depending on how the SEC construes Proposed Reg Best Ex and the Proposed OCR together, broker-dealers may need to conduct separate best execution analyses for each market center's continuous order book *and* auctions (despite the fact that there should be no need for best

[216] *Id.* at 212.

[217] *Id.* at 179.

[218] *Id.* at 183.

execution evaluations for auctions, which largely eliminate broker-dealer discretion with respect to order execution).[219]

- Beyond retail broker-dealer costs, all market participants and infrastructure touching qualified auctions will experience increased costs.

- Market data providers, including FINRA (ADF) will have compliance costs associated with adding auction messages.

- Market participants will require increased capacity to transfer and store data given the number of messages that will be involved in auctions, especially for orders that do not get executed in auctions and are potentially routed multiple times to multiple trading centers.

- Broker-dealers and exchanges will need to build logic to comply with the anti-gaming restrictions in Proposed Rule 615(f).[220]

- New fees and costs may be introduced for customers to offset costs imposed elsewhere in the market.

The SEC's failure to quantify some of the most significant costs and risks is a real concern—it minimizes the burdens that real people and market participants will bear and renders the SEC's rule proposal arbitrary and capricious.

iii. The SEC fails to consider the significant costs of introducing major systemic risk into the stock markets. The SEC's analysis ignores the systemic risk its wholesale changes would introduce and the potential costs associated with related technical and operational issues. The SEC's simultaneous proposals must be expected to act as an unwanted and dangerous shock to the system. The SEC assumes that: each exchange will establish auction connectivity and technology without technical glitches or problems; each routing firm will build its connections and technology perfectly; and each affected market participant, including each qualified auction, already has sufficient infrastructure to handle vastly increased order messaging and order traffic. The Proposed OCR completely ignores in its economic analysis the systemic risk that it would introduce into the equities market by creating an untested, complex infrastructure that will require extensive technology and process changes by exchanges, wholesalers, and institutional investors.

[219] *Id.* at 163.

[220] *Id.*

8. *The SEC's Cost-Benefit Analysis Is Incomplete And Insufficient Because It Does Not Consider Pending Rules That Will Go Into Effect, Or The Impacts Of The Other Proposals.*

The Proposed OCR is premature. The Commission itself acknowledges that the cost-benefit analysis related to the Proposed OCR *cannot be accurately calculated* because the pending MDI Rules have not yet gone into effect:

> Given that the MDI Rules have not yet been implemented, they likely have not affected market practice and therefore data that would be required for a comprehensive quantitative analysis of a baseline that includes the effects of the MDI Rules is not available. <u>It is possible that the baseline (and therefore the economic effects relative to the baseline) could be different once the MDI Rules are implemented</u>.[221]

As we stated above in Section I, the MDI Rules, having been adopted, *are* the baseline—the SEC cannot just ignore them; its economic analysis has to take into account costs and benefits as if the MDI Rules are fully implemented. Better yet, it should implement those rules before pursuing more drastic market structure reforms.

Similarly, the Commission's cost-benefit analysis fails to consider the impact of all four of the SEC's simultaneously proposed rules. For example, the Commission's Tick Size Proposal (if adopted) would significantly affect quoted and effective spreads and therefore price improvement, which is directly relevant to the Proposed OCR and is the primary reason why the SEC is proposing this rule. A reduced tick size of $0.005, with robust venue competition, will result in better prices for investors regardless of the specific amount of order competition on a single venue. Exchanges could begin to use the trading increment used by off-exchange market participants, i.e., $0.001, to level the playing field between on-exchange and off-exchange participants, without unnecessarily and excessively tilting the competitive advantage toward one set of venues (e.g., exchanges) vs. another (e.g., off-exchange market makers).

Additionally, the reduction in PFOF, which the SEC concedes could be caused by the Proposed OCR and exacerbated by Proposed Reg Best Ex, could result in the elimination of zero-commission trading, which in turn, means that "retail trading volume could decline and the overall pool of liquidity could shrink."[222] That would further reduce the $1.5 billion of theoretical price improvement upon which the Proposed OCR is based.

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[221] *Id.* at 202; *see also id.* at 203.

[222] *Id.* at 221.

Finally, Proposed Rule 605 will change the data that is available to the SEC regarding order execution quality metrics under Rule 605. The SEC has relied on existing Rule 605 data to support the Proposed OCR. But if Rule 605 data is incomplete and needs to be revised, such data should not be relied on to support rulemaking until it can be updated and reanalyzed. If the Commission believes that additional order execution quality information is important for investors, as it has argued in the proposing release for its Proposed Rule 605, this updated data is no less important for the SEC to consider in its Proposed OCR. To be sure, it is possible that enhanced order execution data could impact the Commission's analysis of transparency and competition and lead it to conclude that the Proposed OCR is unnecessary. The Commission need not engage in potentially harmful speculation or experimentation with the Proposed OCR without first obtaining the data necessary to understand how those changes would impact the market.

Relatedly, the SEC has hypothesized that Proposed Rule 605 "would serve to improve execution quality for both individual and institutional investors"[223] and "promote increased competition on the basis of execution quality."[224] The Commission further posits this increased competition would occur because market participants can use the disclosed information to choose broker-dealers that provide better execution quality, which would incentivize broker-dealers to compete for customer order flow by offering better execution quality, for example, by "adjusting their routing practices to increase the extent to which they route orders to the market centers offering better execution quality and limit the extent to which they route orders for other potential reasons."[225] Again, to the extent Proposed Rule 605 could have these beneficial effects—as the SEC posits—it would render the basis for the Proposed OCR wholly unnecessary.

Implementing the MDI Rules, allowing exchanges to better compete with a reduced tick size of $0.005, exchanges opting to use a trading increment of $0.001, and better routing disclosures present opportunities to provide a better experience for retail investors and for exchanges to win back retail orders through competitive pricing and innovations, not an anti-competitive order routing mandate.

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[223] Rule 605 Proposing Release, 88 Fed. Reg. at 3872.

[224] *Id.*; *id.* at 3832 ("One academic study examining the introduction of Rule 605 found that the routing of marketable order flow by broker-dealers became more sensitive to changes in execution quality across market centers after Rule 605 reports became available. The authors attribute this effect to broker-dealers factoring in information about the execution quality of market centers from Rule 605 reports when making their order routing decisions.") (footnote omitted).

[225] *Id.* at 3873.

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Robinhood appreciates the opportunity to comment on the Proposed OCR. As described above, the Proposed OCR, despite its name, is the opposite of competitive—by dictating that retail orders be executed in "qualified auctions," it would deprive such orders of the superior execution quality that off-exchange market maker competition has made prevalent in recent years. It will place market makers and retail broker-dealers at a competitive disadvantage relative to other market participants. This artificial restraint on competition will have a negative effect on investors, who will see slower fills at worse prices. The SEC's cost-benefit analysis is flawed and incomplete; our own analysis, in Appendix A, indicates that instead of a potential $1.5 billion in savings, the Proposed OCR will result in a potential $2.5-$3 billion cost to retail investors. In sum, the OCR as proposed, when taken into the context of other anticipated proposals, is unnecessary and redundant in terms of benefits sought, excessive in terms of complexity introduced, and anti-competitive and costly in that it devalues venue competition in the service of order competition, which is already being addressed among other proposals. Accordingly, the Proposed OCR should be withdrawn. Instead, the MDI Rules, amendments to Rule 605 (or Rule 606), and our modified tick size recommendation should be implemented and allowed to take effect, before any more drastic, onerous rules—namely, Proposed Reg Best Ex and the Proposed OCR—are reevaluated.

Please contact Robinhood's Deputy General Counsel, Lucas Moskowitz, at lucas.moskowitz@robinhood.com if you have any questions or comments.

Sincerely,

DocuSigned by:
Steve Quirk
C15454D9007244A...

Steve Quirk
Chief Brokerage Officer
Robinhood Markets

APPENDIX A

Rule 615 Would Increase Trading Costs for Individual Investors

March 2023

1. Executive Summary

The Proposal of Rule 615 (hereafter "the Proposal") contends that executing individual investor orders through qualified auctions, rather than directly via wholesalers, would yield average annual savings for individuals of approximately $1.5 billion. This estimate is based on the "difference in realized spreads between marketable orders executed on exchanges and individual investor marketable orders that were executed after being routed to wholesalers" (page 263, underline emphasis added).[1] The Proposal finds that realized spreads are lower on exchange than for wholesalers, a finding they interpret as arising from less than perfect competition among wholesalers, which an auction system is hypothesized to remedy.

We disagree with the Proposal's $1.5 billion estimate for three reasons. First, embedded in the Proposal is the assumption that through qualified auctions, orders from individual investors will experience similar realized spreads to orders currently executed on-exchange. We highlight the fundamental differences between individual investor and on-exchange order flows in Section 2, demonstrating why we expect differences in realized spreads will remain in a qualified auction system.

Second, granting for a moment the Proposal's premise that realized spreads on-exchange are a good measure for the costs individuals would pay in an auction system, we show in Section 3 that the Proposal's main result reverses when properly controlling for differences in order types between the exchange and wholesale samples. Instead of decreasing costs for individual investors, our corrected version of the Proposal's methodology indicates **adopting Rule 615 would increase average annual trading costs for individual investors by approximately $3.06 billion**.

[1] Realized spreads are defined as the difference between execution prices and quote midpoints five minutes after the trade. The Proposal further adjusts realized spreads for currently paid rebates and expected auction fees when estimating potential cost savings from an auction system.

Third, we foresee a distinct possibility that the effective spreads individual investors would pay under an auction system could match the effective spreads currently paid by on-exchange orders. Under this alternative methodology the average annual trading costs for individual investors would **increase by $2.58 billion to $2.86 billion** depending on sample source and methodological process, as we detail in Section 4.

2. Order Flow to Wholesalers is Intrinsically Different from Order Flow On-Exchange

a. Order Type

The Proposal would direct order flows currently going to wholesalers to an auction system. The Proposal further assumes that individual investor order flow will pay similar realized spreads under an auction system as order flow on-exchange does today. However, the flows to wholesalers and those to exchanges have a number of observable and substantive differences. Table 5 on page 214 of the Proposal contains statistics comparing Rule 605 order flow and execution quality across wholesalers and on-exchange market makers. Aside from differences in average price per share traded and dollar volume, the largest distinction appears when comparing market orders to market limit orders. Of the wholesaler's combined market and marketable limit order flow, 79.19% is *market orders* with a 99.79% fill rate. In comparison, 99.97% of the on-exchange combined market and marketable limit order flow is *marketable limit orders*, which only have a 25.77% fill rate. The Proposal's $1.5 billion estimate is therefore predicated on one of two assumptions: either (i) individual investors transition to using predominantly market limit orders, or (ii) realized spreads for market orders in an auction system pay the same realized spreads as on-exchange market limit orders. Neither of these assumptions is plausible.

Individual investors are unlikely to transition to market limit orders. Individual investors have a clear revealed preference for market orders, whether that be due to convenience or because of the difference in fill rates. The fill rate drops by more than 50% for both on-exchange and wholesaler order flow when moving from market orders to marketable limit orders.

Second, assuming retail investors do not transition to marketable limit orders, it is unlikely that auctioned individual investor market orders would pay the same realized spreads as on-exchange marketable limit orders. Returning to Table 5 in the Proposal, we see a 2.79 basis point difference in marketable limit versus market order realized spreads on exchanges. We believe this is due to economically important differences between individual investors' market orders and the marketable limit orders encountered on exchanges. Specifically, order flow from individual investors is unlikely to contain private information whereas the institutional investors' order flow to exchanges is more likely to be from informed investors. In addition, investors submitting market orders appear to prefer a higher fill rate. Additionally, the idea of marketable limit orders receiving similar spreads as market orders contradicts economic reasoning, as market orders and market limit orders interact with the order book differently. An issued market order will "walk up" the standing limit orders, which creates price uncertainty but a much higher fill rate, while a marketable limit order has a much lower chance of being fully filled but has a set price if it is. Therefore, marketable limit orders are expected to have greater realized spreads.

If neither of these assumptions holds, then the values given in the Proposal estimating increased individual investor welfare are biased upward. The difference in realized spreads between order flow on-exchange and through wholesalers cannot be used as a measure of potential savings to individual investors because of the drastic differences in the compositions of market orders and marketable limit orders in wholesale and on-exchange trades. If neither of the assumption holds and individual investors continue to use market orders, we can reasonably expect them to receive the same realized spreads as on-exchange market orders. In Section 3 we demonstrate that under this economically more plausible assumption, trading costs for individual investors would substantially *increase* instead of *decrease*.

b. Price Impact

In addition to the differences in order type, investors routing orders to exchanges are economically different from those routing orders to wholesalers, especially in the private information they convey. An observable measure of private information is average price impact, defined as the difference between the price of the stock at the time of a trade and the price of the stock after a given amount of time. In the case of Rule 605 reports, this time difference is 5 minutes, and stock price is taken from the national best bid and offer (NBBO) midpoint. If the stock moves in the same direction of the trade, for example if the stock is bought and the price moves up over the next five minutes, then that trade had a positive price impact. (Conversely, if the stock is sold and the price moves down over the next five minutes, then also that trade had a positive price impact.) In the Proposal's Table 5, the price impact for on-exchange order flow is 1.24 basis points greater than that for wholesaler order flow. That is to say, trades made on-exchange predict an average additional 1.24 basis point change in price, implying a higher level of private information from traders on-exchange. This indicates an intrinsic difference in investor type.

Market makers offer different spreads to investors based off of the anticipated private information in each trade. With inherently dissimilar investors, the assumption that the wholesaler order flow will receive the same realized spreads as on-exchange order flow when exposed to more competition becomes implausible.

c. Theoretical Argument

The Proposal's argument is that increased competition via qualified auctions will decrease market makers' profits. However, qualified auctions may not be the source of increased competition the Proposal claims them to be. Ernst, Spatt and Sun (2022) build a theoretical model where there exist two methods for brokerages to execute orders: allocate to market makers or order-by-order auctions. They find that a winner's curse scenario drives auctioning parties to reduce their proffered price improvement, which inevitably reduces investor welfare.

3. Realized Spreads Are Higher on Exchanges Than for Comparable Orders to Wholesalers

This section explains how the Proposal's $1.5 billion estimate for individual investor savings rests on a comparison of wholesaler *market* orders with on-exchange *limit* orders. We instead compare wholesaler market orders only to on-exchange market orders, and wholesaler limit orders only to on-exchange limit orders. This produces an estimated loss of $3.06 billion for individual investors.

a. Rule 605 Data Content

To illustrate how the Proposal effectively compares wholesaler market orders to on-exchange limit orders, we step through an example of how the Proposal processes raw data. One of the main data sources the Proposal employs is a set of disclosures mandated by SEC Rule 605 ("Rule 605 reports" hereafter). The Proposal also uses data from the Consolidated Audit Trail ("CAT"), which is not publicly available as discussed in supra note 440 of the Proposal, so our analysis focuses on Rule 605 reports which are publicly available. Rule 605 mandates both stock exchanges such as NYSE and wholesalers such as Citadel Securities ("Citadel" hereafter) to report monthly summaries of execution quality statistics, including average realized and effective bid-ask spreads.[2] Rule 605 mandates a standard format for the data in which the statistics are aggregated into buckets covering all orders for a given stock with the same order type (market, marketable limit, limit, etc.) and similar size (100-499 shares, 500-1999 shares, etc.). In Table 1 we provide an excerpt of example data for Citadel and NASDAQ covering ticker "PTON" in January of 2022:[3]

Table 1: Example Rule 605 Data

Venue	Month	Ticker	Order type	Size	# Orders	# Shares	Average realized spread ($)	Average effective spread ($)
Citadel	202201	PTON	Market	100-499	26,148	4,939,315	0.001	0.0046
Citadel	202201	PTON	Marketable Limit	100-499	79,821	13,985,381	0.0728	0.0163
Citadel	202201	PTON	Market	500-1999	15,623	13,002,070	0.0043	0.0055
Citadel	202201	PTON	Marketable Limit	500-1999	24,073	21,169,301	0.0409	0.0173

[2] The results in the Proposal are very similar for the two data sources and we have no reason to believe that the issues we identify here do not apply to the CAT analysis as well. We use the same definitions of realized and effective spreads as the Proposal. The effective spread for buy (sell) orders is the transaction price minus the NBBO midpoint immediately prior to the order (midpoint minus transaction price), scaled by that midpoint. The realized spread is calculated as the price impact subtracted from the effective spread.
[3] The Rule 605 reports contain other order types (e.g. limit orders with prices inside the NBBO) but these are not included in the Proposal's analysis or our own because their pricing is outside the control of market makers.

Citadel	202201	PTON	Market	2000-4999	4,446	11,774,268	0.0186	0.0131
Citadel	202201	PTON	Marketable Limit	2000-4999	5,719	16,640,301	0.0133	0.0193
Citadel	202201	PTON	Market	5000+	1,112	6,593,018	0.0348	0.0222
Citadel	202201	PTON	Marketable Limit	5000+	1,758	11,666,346	0.0331	0.0219
NASDAQ	202201	PTON	Market	100-499	349	63,435	-0.6961	0.1177
NASDAQ	202201	PTON	Marketable Limit	100-499	339,955	58,310,753	-0.0105	0.0157
NASDAQ	202201	PTON	Market	500-1999	154	138,011	-0.8369	0.1139
NASDAQ	202201	PTON	Marketable Limit	500-1999	43,580	37,007,524	0.0005	0.0157
NASDAQ	202201	PTON	Market	2000-4999	88	250,026	0.0462	0.0411
NASDAQ	202201	PTON	Marketable Limit	2000-4999	6,635	19,888,201	-0.0216	0.017
NASDAQ	202201	PTON	Market	5000+	8	49,500	-0.9711	0.2859
NASDAQ	202201	PTON	Marketable Limit	5000+	1,613	10,554,774	0.0109	0.0192

This table contains example data taken from Rule 605 reports from the wholesaler Citadel and the exchange NASDAQ. We download the reports from their respective websites.

b. Proposal's Aggregation Procedure and Resulting Trading Cost Impact Estimates

The Proposal proceeds by first combining entries of marketable limit orders and market orders across all size types[4] into a single entry for each stock-month summarizing all trading venues in each category (exchange, abbreviated EX, and wholesale, abbreviated WH).[5] Following the example above, after combining the data from 16 different exchanges and 4 different wholesalers, Table 2 shows how the data collapse:

Table 2: Proposal Aggregation of Rule 605 Data Example

Category	Month	Ticker	$ Volume	Average realized spread (bp)	Average effective spread (bp)
EX	202201	PTON	4,391,362,973	0.18	3.10
WH	202201	PTON	3,817,412,038	4.19	2.35

This table shows how the Proposal's aggregation methodology combines the raw Rule 605 data presented in Table 1. We follow the Proposal's methodology as closely as possible, applying filters as described in supra note 419 of the Proposal and dropping observations with an average execution dollar volume of more than $200,000. Instead of using the value weighted average price (VWAP) from TAQ data as the Proposal does to calculate $ Volume and the two spread measures, we use end of month prices for each ticker taken from the Center for Research in Security Files (CRSP).

[4] Except for those excluded by filters as listed in supra note 419 of the Proposal and dropping entries with an average execution dollar volume of more than $200,000.

[5] The Proposal also converts the average spread statistics into half spreads, expressed as basis points of 2X the monthly value weighted average price of each stock. The Proposal then aggregates these spreads to the category-stock-month level by taking the volume weighted average for each category-stock-month. The $ Volume category is summed across all relevant category-stock-month entries.

The Proposal then computes average realized and effective spreads for the entire Q1 of 2022. Full-quarter WH and EX spreads are both averages across all the stock-months weighted by WH $ volume. Averaging across firm-months using the same weights for both EX and WH allows the Proposal to avoid a composition bias wherein the EX and WH averages could be different because more of the WH volume occurs in smaller stocks with wider bid-ask spreads, whereas more of the EX volume occurs in larger stocks with narrower bid-ask spreads.[6] WH $ volume to weight the averages is the appropriate choice because the Proposal examines the potential impact on individual investor trades, which are largely routed through wholesalers.

We collect the Rule 605 reports used in the Proposal and follow their aggregation procedures. Table 3 shows that we closely replicate their estimates of EX and WH effective and realized spreads.

Table 3: Replication of the Proposal's Spread Estimates

Document:	Proposal	Replication
Sample: Aggregation:	All Ticker/Months	All Ticker/Months
EX Effective Spread (bp)	3.11	2.96
WH Effective Spread (bp)	2.05	2.09
EX Realized Spread (bp)	-0.67	-0.52
WH Realized Spread (bp)	0.72	0.75

This table contains estimates of realized and effective spreads. Values for the Proposal column are from Table 6 of the Proposal, while values for the Replication column are from our own analysis. We follow the Proposal's methodology as closely as possible, applying filters as described in supra note 419 of the Proposal and dropping observations with an average execution dollar volume of more than $200,000. As in the Proposal, we weight on-exchange spreads by the $ volume of wholesaler's order flow. Instead of using the value weighted average price (VWAP) from TAQ data as the Proposal does to calculate $ Volume and the two spread measures, we use end of month prices for each ticker taken from the Center for Research in Security Files (CRSP). We also use the 4 largest wholesalers and 16 exchanges, whereas the Proposal utilizes data from all wholesalers and all exchanges.

The realized spread estimates translate into the Proposal's "competitive shortfall" estimates, the Proposal's measure for potential savings from an auction system. This "competitive shortfall" equals the WH realized spread minus the EX realized spread, adjusted for the rebates currently paid by exchanges to

[6] See Tables 5 through 7 of the Proposal.

liquidity providers and the auction fees that would be required under the new system. Table 4 shows the Proposal's estimates using CAT data and Rule 605 data, the latter of which we closely replicate.

Table 4: Replication of the Proposal's Competitive Shortfall

	Proposal		Replication
Data:	CAT	Rule 605	Rule 605
Sample:	All	All	All
Matching:	Ticker/Months	Ticker/Months	Ticker/Months
WH Realized Spread (bp)	0.85bp	0.72bp	0.75bp
− EX Realized Spread (bp)	-1.22bp	-0.67bp	-0.52bp
− Adjustments (bp)	0.99bp	0.81bp	0.81bp
Competitive shortfall (bp)	1.08bp	0.58bp	0.46bp
Competitive shortfall ($)	$1.50bn	$0.80bn	0.63bn

This table contains estimates of competitive shortfall, the difference between realized spreads for wholesalers and realized spreads on exchanges, adjusted for liquidity rebates and proposed auction fees. Values for the Proposal columns are from Tables 18 and 19 of the Proposal. We use the Proposal's adjustments to estimate the competitive shortfall in basis points, and use their multiplier to calculate the $ value of competitive shortfall. This multiplier is based off of an analysis of CAT data in Jan 2022, where the Proposal estimates the percentage of $ volume which will participate in their auctions and the corresponding savings generated by those trades receiving the competitive shortfall.

c. Problems with The Proposal's Aggregation Procedure

By aggregating across all order types and sizes, the Proposal assumes that wholesaler market and marketable limit orders will pay the average realized spreads equal to the current on-exchange average realized spreads across both market and marketable limit orders. We show this assumption is untenable because orders routed to wholesalers are mostly market orders, which pay higher effective spreads on exchanges. Orders routed to exchanges, by contrast, are mostly marketable limit orders that consistently pay lower realized spreads.

We begin by replicating the Proposal's procedure on sub-samples that include only market orders (i.e., orders without any price limit) and only marketable limit orders (i.e., buy orders with limits at or above the best bid and sell orders with limits at or below the best offer).

Table 5: Comparison of the Replication of the Proposal's Effective and Realized Spreads with the Same Replication but with Corrected Aggregation Methods

	Replication	Our Analysis		
Sample:	All	Market orders	Marketable limit	All

Aggregation:	Ticker/Month	Ticker/Month	Ticker/Month	Ticker/Month/Type
EX Effective Spread (bp)	2.96	4.44	3.37	4.17
WH Effective Spread (bp)	2.09	1.59	3.65	2.09
EX Realized Spread (bp)	-0.52	**3.11**	-0.75	**2.16**
WH Realized Spread (bp)	0.75	**0.43**	1.75	**0.75**
% of EX sample		0.2%	99.8%	
% of WH sample		72.7%	27.3%	

The table presents estimates of average effective and realized spreads under different assumptions. For the Replication column, we follow the Proposal's methodology as closely as possible applying filters as described in supra note 419 of the Proposal and dropping observations with an average execution dollar volume of more than $200,000. As in the Proposal, we weight on-exchange spreads by the $ volume of wholesaler's order flow. Instead of using the value weighted average price (VWAP) from TAQ data as the Proposal does to calculate $ Volume and the two spread measures, we use end of month prices for each ticker taken from the Center for Research in Security Files (CRSP). We also use the 4 largest wholesalers and 16 exchanges, whereas the Proposal utilizes data from all wholesalers and all exchanges

For the Market orders (Marketable limit) column, we repeat the Proposal's procedure on the subset of observations in Rule 605 reports that are market orders (marketable limit). For the All column with Ticker/Month/Type aggregation, we repeat the Proposal's procedure but aggregate to the ticker/month/order type level, instead of ticker/month, and then average across these finer buckets using the $ volume traded on wholesalers in each bucket.

Table 5 shows that while spreads are lower on-exchange than through wholesalers for marketable limit orders, they are substantially higher for market orders on EX than for WH (4.44bp vs 1.59bp for effective spreads, 3.11bp vs 0.43bp for realized spreads). Because the Proposal aggregates across order types, it effectively assumes that the market orders routed to wholesalers would receive realized spreads similar to those available on exchanges for marketable limit orders. This is implausible for the reasons stated in Section 2: individual investors are unlikely to transition to market limit orders, and market orders are unlikely to be treated as market limit orders.

An additional flaw in the Proposal's logic is identified in Table 5. The estimated investor savings of about $1.5 billion hinge on the assumption that, when exposed to greater competition, individual investor order flow will experience lower realized spreads than when it was routed through wholesalers. Even if competition were to increase, the price impact arising from a greater propensity of EX trades being informed will persist regardless of whether WH trades are routed to the auction system. If price impact remains constant, investor savings can only be driven by substantially decreased effective spreads on exchanges. Hypothetically, effective spreads would decrease because competing market makers would offer better spreads to trades with smaller price impact. However, this is contradicted by the results in Table 5. In spite of lower price impact (1.33 basis points versus 4.12 basis points), market orders experience higher effective spreads and, as a result, higher realized spreads. That is to say, if we partition on-exchange order flow into informed (marketable limit) and uninformed (market orders), the uninformed traders actually get worse effective spreads, contrary to the Proposal's claim of what should happene to uninformed order flow in a competitive environment. Thus, the increased competition on-exchange doesn't decrease trading costs for low price impact investors. Instead, investors experience wider spreads and incur higher costs.

d. De-Biased Estimates of Realized Spreads and Trading Cost Impacts

As a result of the dramatic differences in order types across WH and EX, a comparison of spreads for WH and EX venues within the same stock/month bucket regardless of order types yields an upward biased estimate of potential savings. We correct for this bias by instead comparing spreads within the same order type for each stock/month bucket, where type is market order or marketable limit order. Returning to the PTON example, our finer aggregation results in the entries presented in Table 6:

Table 6: Corrected Aggregation of Rule 605 Data Example

Venue	Month	Ticker	Order type	$ Value	Average Realized Spread (bp)	Average Effective spread (bp)
EX	202201	PTON	Market	31,532,780	-24.50	10.90
EX	202201	PTON	Marketable Limit	4,359,830,193	0.36	3.05
WH	202201	PTON	Market	2,843,710,140	2.89	1.95
WH	202201	PTON	Marketable Limit	973,701,898	8.00	3.52

This table shows how our aggregation methodology combines the raw Rule 605 data presented in Table 1. We follow the Proposal's methodology as closely as possible, applying filters as described in supra note 419 of the Proposal and dropping observations with an average execution dollar volume of more than $200,000. Instead of using the value weighted average price (VWAP) from TAQ data as the Proposal does to calculate $ Volume and the two spread measures, we use end of month prices for each ticker taken from the Center for Research in Security Files (CRSP).

Instead of aggregating to the month-security level as the proposal does, here we aggregate to the more granular month-security-order type level. As in the Proposal, averages are weighted by the $ traded volume in each entry.

Our procedure offers a clean prediction for the potential realized spreads WH orders could receive with EX-level competition in an auction system by looking at how orders of the same type fared on exchanges during the same stock-month.

The results, in the final column of Table 5, indicate that instead of EX realized spreads being negative and below WH realized spreads, they are positive and above them.[7] Following the Proposal's procedure, we can translate these into estimates of "competitive shortfall" as follows:

Table 7: Replication of the Proposal's Competitive Shortfall with Corrected Aggregation

	Proposal		Replication	Our Analysis
Data:	CAT	Rule 605	Rule 605	Rule 605
Sample:	All	All	All	All
Aggregation:	Ticker/Month	Ticker/Month	Ticker/Month	Ticker/Month/Type
WH RS (bp)	0.85bp	0.72bp	0.75bp	0.75bp
− EX RS (bp)	-1.22bp	-0.67bp	-0.52bp	2.16bp
− Adjustments (bp)	0.99bp	0.81bp	0.81bp	0.81bp
Competitive shortfall (bp)	1.08bp	0.58bp	0.46bp	**-2.22bp**
Competitive shortfall ($)	$1.50bn	$0.80bn	$0.63bn	**-$3.06bn**

This table contains estimates of competitive shortfall, the difference between realized spreads for wholesalers and realized spreads on exchanges, adjusted for liquidity rebates and proposed auction fees. Values for the Proposal columns are from Tables 18 and 19 of the Proposal. We use the Proposal's adjustments to estimate the competitive shortfall in basis points, and use their multiplier to calculate the $ value of competitive shortfall. The Replication columns are from our own analysis.

For the column with Ticker/Month/Type aggregation, we repeat the Proposal's procedure but aggregate to the ticker-month-order type level, instead of ticker-month, and then average across these finer buckets using the $ volume traded on WH in each bucket.

Using the bias-corrected version of the Proposal's procedure on the same data, Table 7 demonstrates that adopting the auction system would cause individual investors to *lose* an estimated average of $3.06 billion per year.

e. Subsamples by Stock Type, Price Group, And Liquidity Bucket

[7] The spread estimates for WH are identical by construction using our finer aggregation because our sample hasn't changed and we continue to weight by WH dollar volume. The EX values change because the relative weights across order types and sizes within each stock/month now conform to the relative weights in the SEC's aggregation.

To further test the robustness of the results, the analysis is partitioned by stock type, price group, and liquidity bucket in Table 8. Realized spreads for on-exchange order flow are consistently higher than through wholesalers with the corrected aggregation.

Table 8: Comparison of Estimation of Execution Quality for Marketable Orders by Stock Type, Price Group, and Liquidity Bucket between Replication and Replication with Corrected Aggregation

Aggregation:			Stock/Month	Stock/Month/Type		Stock/Month	Stock/Month/Type	
Type	Liquidity Group	Price Group	EX RS	EX RS	WH RS	EX ES	EX ES	WH ES
SP500		<$30	-1.07	0.88	0.57	2.29	2.65	1.27
SP500		$30-$100	-0.59	1.17	-0.02	1.18	2.13	0.61
SP500		>$100	-0.09	1.73	0.39	1.36	1.94	0.72
Non SP500	Low	<$30	3.66	16.29	19.51	43.66	49.11	48.58
Non SP500	Low	$30-$100	-0.13	18.97	16.49	33.97	48.12	36.53
Non SP500	Low	>$100	-1.27	10.28	20.46	25.94	21.45	29.86
Non SP500	Medium	<$30	-1.49	7.26	7.42	20.76	27.36	22.52
Non SP500	Medium	$30-$100	-0.32	5.65	5.07	10.60	13.71	11.03
Non SP500	Medium	>$100	0.12	6.65	4.98	9.37	10.86	8.70
Non SP500	Large	<$30	-2.09	4.95	1.56	8.36	12.06	6.53
Non SP500	Large	$30-$100	-1.05	2.17	0.63	4.21	6.88	2.83
Non SP500	Large	>$100	-0.72	4.57	0.76	4.20	6.12	2.17
ETF	Low	<$30	5.30	9.97	9.20	14.06	17.12	11.23
ETF	Low	$30-$100	3.40	8.51	4.94	8.04	13.38	5.51
ETF	Low	>$100	0.98	11.09	2.40	4.48	8.47	2.62
ETF	Medium	<$30	1.43	6.20	3.47	5.76	8.42	4.24
ETF	Medium	$30-$100	0.88	3.82	2.09	3.77	5.43	2.36
ETF	Medium	>$100	0.20	2.25	1.34	2.52	3.28	1.52
ETF	Large	<$30	-0.61	1.92	1.00	3.02	3.34	2.09
ETF	Large	$30-$100	-0.21	0.97	0.57	1.14	1.54	0.68
ETF	Large	>$100	-0.07	0.13	0.18	0.49	0.74	0.29

This table presents estimates of effective and realized spreads in basis points across different subsets of stocks and using different methodologies. Throughout we follow the Proposal's methodology as closely as possible, applying filters as described in supra note 419 of the Proposal and dropping observations with an average execution dollar volume of more than $200,000. Instead of using the value weighted average price (VWAP) from TAQ data as the Proposal does to calculate $ Volume and the two spread measures, we use end of month prices for each ticker taken from the Center for Research in Security Files (CRSP).

We partition the analysis in this table similar to the partitions in the Proposal's Table 9. Stock type is based on whether a security is an ETF, or a common stock in the S&P 500 or Non-S&P 500. Price buckets are based on a stock's average end of month price. Stocks within each security type-price bucket, except S&P 500 stocks, are sorted into three equal liquidity buckets based on the stock's total share trading volume during each full month.

4. Effective Spreads as an Alternative Measure

a. Realized Spreads Are a Poor Proxy for Revenues from Market Making

The Proposal calculates realized spreads as the 5-minute price impact subtracted from the effective spread. Realized spreads calculated using a 5-minute horizon measure the intermediaries' profits assuming that they execute offsetting trades at an average price equal to the midpoint 5 minutes after each trade. If this were the case, the negative realized spreads on-exchange in the Proposal would indicate that on-exchange market makers consistently lose money. This makes no economic sense. Instead, market makers use more flexible strategies that mostly wait for crossing orders to arrive – which they often do well before 5 minutes – and otherwise wait until an opportune time to demand liquidity from other market makers in the "intermediation chain" (see Menkveld, 2016).

b. Effective Spreads

Instead of using predicted market maker profits (realized spreads) as a measure for investors' welfare, we can use a more direct measure: costs paid by investors. These costs are captured in the effective spread.[8] To better understand which measure an auction system could realistically affect, consider the difference between these two measures:

$$\text{Realized Spread} - \text{Effective Spread} = \begin{cases} \frac{p_0 - m_{300}}{m_0} - \frac{p_0 - m_0}{m_0} = -\frac{m_{300} - m_0}{m_0} & \text{for buy orders} \\ \frac{m_{300} - p_0}{m_0} - \frac{m_0 - p_0}{m_0} = \frac{m_{300} - m_0}{m_0} & \text{for sell orders} \end{cases},$$

where p_0 is the transaction price, m_0 is the pre-trade NBBO midpoint, and m_{300} is the NBBO midpoint 300 seconds (5 minutes) after the trade is executed. In words, the realized spread differs from the effective spread only by the stock return based on pre- and post-trade midpoints – also known as price impact. As discussed above, price impact is a function of the likelihood that the order contains private information about the stock's value, and so is naturally larger for on-exchange orders than individual investors' orders.

[8] The effective spread for buy (sell) orders is the transaction price minus the NBBO midpoint immediately prior to the order (midpoint minus transaction price), scaled by that midpoint.

The price impact calculated by individual investors' orders is unlikely to change regardless of how the orders are routed, as the private information held by those investors remains the same. Realized spreads are therefore a mix of the pricing determined by intermediaries, as measured by effective spreads, and the price impact determined by the average information content of orders.

To summarize, effective spreads are preferable to realized spreads as a measure of the hypothetical cost of trading in an auction system because (i) they are not affected by the private information of orders, (ii) do not require any assumptions about the subsequent trading strategies of market makers, and (iii) do capture the salient transaction cost for the investors themselves: how much their prices differ from the quote midpoint at the moment they initiated their trade.

c. Results from Estimates Using Effective Spreads

The Proposal assumes that when wholesale trades are moved to an auction system, the realized spreads on them would be the same as the currently witnessed realized spreads for on-exchange orders. The previous section explains why this is economically implausible. If we believe that an auction system would mimic the on-exchange experience for investors, a more plausible scenario is for effective spreads in the auction system to be equal to the currently witnessed on-exchange level of effective spreads. Table 9 shows that, using the same gap caused by exchange rebates and auction fees the Proposal uses, the competitive shortfall would be -2.06bp or -1.87bp (instead of 1.08bp or 0.58bp), and result in cost *increase* of $2.86 or $2.58 billion (instead of decrease of $1.50 or $0.80 billion).

Table 9: Comparison of Estimated Competitive Shortfall with Effective Spreads

	Effective Spreads	
	CAT	Rule 605
WH ES (bp)	2.11bp	2.05bp
− EX ES (bp)	3.18bp	3.11bp
− Adjustments (bp)	0.99bp	0.81bp
Competitive shortfall (bp)	-2.06bp	-1.87bp
Competitive shortfall ($)	**-$2.86 billion**	**-$2.58 billion**

This table presents competitive shortfall estimates using effective, rather than realized, spreads. Rule 605 values are taken from the Proposal's Table 6. CAT values are taken from the Proposal's Table 9. Rebates & Fees and the Dollar Shortfall multiplier are backed out from the Proposal's Table 18.

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