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Introduction

Chair Wagner, Ranking Member Sherman, and distinguished members of the Subcommittee, thank you for the opportunity to testify today. My name is Ari Rubenstein and I am the CEO of GTS, a global electronic market making firm. GTS provides liquidity across multiple asset classes, including equities, equity options, fixed income, futures, ETFs, and foreign exchange. GTS accounts for 3-5% of daily cash equities volume in the United States and is one of the largest designated market makers at the New York Stock Exchange, responsible for trading nearly 900 public companies with a total market capitalization of approximately $13 trillion.

In my testimony today, I will address several key areas crucial to understanding and maintaining the robustness of our U.S. equity markets:

1. **The Strength of U.S. Equity Markets**: I will start by highlighting the unparalleled strength and efficiency of our equity markets. U.S. markets are the largest and best-performing globally, with an unmatched depth and liquidity that facilitate efficient capital allocation and innovation.
2. **Importance of Empirical Data in Regulation**: Next, I will emphasize the critical need for data-driven approaches in any regulatory changes. Our markets' success is built on precise, empirical evidence guiding policy decisions to ensure market improvements without unintended consequences.
3. **Interconnectedness of Proposals**: I will also address the interconnected and overlapping nature of the SEC's equity market structure proposals and the challenges that presents to analyzing their potential impact.
4. **Concerns with SEC Proposals**: I will then discuss the SEC's Regulation NMS Proposal, which aims to modify tick sizes, as well as the Order Competition Proposal and Best

Execution Proposal. Each of these proposals could have dramatic impacts on our equity markets, and must be thoughtfully analyzed before proceeding to prevent unintended consequences.

The Strength of U.S. Equity Markets

U.S. equity markets are the cornerstone of global finance, representing $49 trillion, or 44.9%, of the $109 trillion global equity market capitalization as of 2023.[1] The NYSE and Nasdaq are the two largest stock exchanges in the world, with a combined market capitalization of almost $54 trillion.[2] By contrast, the next largest exchange, Euronext, has a market capitalization of $7.2 trillion.[3]

Our markets are not only the largest, but also among the best performing, deepest, most liquid, and most transparent globally. They efficiently allocate risk and direct capital to innovation, bolstering our national prosperity. With all-time high retail investor participation,[4] reduced commission rates, and significant price improvement provided by wholesalers,[5] the retail experience has never been better. The unrivaled depth and liquidity of our markets allow for the certainty of execution that is fundamental to healthy markets, efficient capital formation, and price discovery.

Given the status of U.S. equity markets as the global gold standard, our starting point for any potential changes should be to do no harm. Once trust in U.S. markets is broken, it cannot easily be won back. As a result, we must ensure that changes to our equity market structure are only undertaken after extensive analysis supporting both the need for changes and avoidance of negative unintended consequences of such changes.

Importance of Empirical Data in Regulation

The strength of our markets prompts a critical question: how did we achieve this? Market makers like GTS play a crucial role by standing ready to both buy and sell at all times—and taking on the associated market risks—which in turn allows these firms to mitigate risks in the market and facilitate transactions through immediate liquidity and price discovery. This function is vital, particularly in volatile markets, ensuring that liquidity is available even when the market drops unexpectedly.

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[1] *See* SIFMA, Research Quarterly Report: US Equity & Related, 4Q23 (Jan. 2024), https://www.sifma.org/wp-content/uploads/2023/10/Research-Quarterly-Equity-and-Related-4Q23.pdf, at 4.

[2] *See* Statista, Comparison of the New York Stock Exchange (NYSE) and Nasdaq from January 2018 to March 2024, by market capitalization of listed companies, https://www.statista.com/statistics/1277195/nyse-nasdaq-comparison-market-capitalization-listed-companies/.

[3] *See* Statista, Largest stock exchanges in Europe, Middle East, and Africa (EMEA) as of March 2024, by market capitalization of listed companies, https://www.statista.com/statistics/265251/domestic-market-capitalization-in-europe-the-middle-east-and-africa/.

[4] *See, e.g.,* Derek Saul, Forbes, Retail Trading Just Hit An All-Time High. Here's What Stocks Are The Most Popular (Feb. 3, 2023), https://www.forbes.com/sites/dereksaul/2023/02/03/retail-trading-just-hit-an-all-time-high-heres-what-stocks-are-the-most-popular/.

[5] *See, e.g.,* Anne Haubo Dyhrberg, et al., The Retail Execution Quality Landscape (Mar. 14, 2023); Douglas Cifu, Chief Executive Officer, Virtu Financial, Measuring Real Execution Quality (updated Aug. 27, 2021), https://virtu-www.s3.amazonaws.com/uploads/documents/virtu-real-pi_20210827.pdf, at 2.

Liquidity in our markets is highly dependent on and reactive to market structure. As a result, any small changes to market structure could adjust the incentives for market participants and disrupt the delicate balance that currently fosters the instant and reliable liquidity that is the hallmark of U.S. capital markets.

Given the direct linkage between liquidity and market structure, as well as the intricacies of our modern markets, any regulatory changes must be data-driven. A data-driven approach starts by first identifying market structure problems and goals, then assessing credible data, economic analysis, and alternatives, all with an eye toward ensuring that any changes—even if well-intended and justified—do not result in unintended negative consequences.

This type of empirical work is not easy, but it is necessary, and is not merely an excuse designed to delay or prevent new regulation. Market participants like GTS invest enormous time and energy on research and analysis of our strategies before deploying them into the markets. We should expect the same level of rigor be applied to any market structure changes given the complexities of our equity markets. This approach ensures that changes ultimately enhance market efficiency without detracting from the strong markets that regulators and market participants alike have worked so hard to achieve.

Interconnectedness of Proposals

Unfortunately, proper analysis of the SEC's market structure proposals is all but impossible because the SEC has set forth proposals that are interconnected and overlapping, with no analysis of cumulative costs and benefits; combined effects of the proposals together, whether baseline or otherwise; or the potential for unintended consequences across asset classes and market sectors resulting from the interaction among the proposals.

Yet a data-driven approach to understanding the interactions of these proposals is vital given that our equity market structure, and the ecosystem for trading, reflects an equilibrium of many different opposing forces and actions. Generally, tinkering with knobs and dials in one area of this ecosystem may have pronounced and sometimes unpredictable effects in other areas and on the ecosystem as a whole. The web of market structure rules primarily implemented by Regulation NMS (not to mention those of multiple self-regulatory organizations) requires careful analysis of complicated interactions to be able to assess the market impacts of tinkering with any particular knobs or dials.

These complicated interactions necessitate taking a measured, incremental, and data-centric approach to any individual market structure change. And the difficulties and risks are magnified where multiple changes are being considered at the same time, such as with the SEC's current equity market structure proposals.[6] Each one of these proposals could adjust market behavior in ways that directly impact the others.

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[6] *See* Regulation NMS: Minimum Pricing Increments, Access Fees, and Transparency of Better Priced Orders, Exchange Act Release No. 34-96494, 87 Fed. Reg. 80266 (Dec. 29, 2022); Order Competition Rule, Exchange Act Release No. 34-96495, 88 Fed. Reg. 128 (Jan. 3, 2023); Regulation Best Execution, Exchange Act Release No. 34-

Without adequate evaluation of these cumulative effects, any single proposal could significantly alter markets and incentive structures, potentially making additional rules unnecessary or changing the market dynamics that other proposals seek to address. Implementing these proposals hastily could have severe consequences for U.S. capital markets.

Regulation NMS Proposal

The SEC's Regulation NMS Proposal, aimed at modifying tick sizes, is understandable from the perspective that some data suggest that modifying our current tick regime may lower transaction costs for certain stocks and help improve equity markets. As a result, tick sizes are a fruitful area for potential work. However, even where potential market improvements may be attainable—as is the case with tick sizes—an empirical approach to potential regulatory change is imperative.

Highlighting this point is the fact that there is disagreement among stakeholders about how extensive any problem may be and the parameters around any proposed solution. For example, major market participants have released studies showing that a small number of tick-constrained stocks could benefit from smaller ticks,[7] and, conversely, market commentary and SEC studies have also suggested benefits to widening ticks for certain thinly traded securities.[8] However, the vast majority of stocks fall within a middle range where the impact of potential tick size changes is uncertain at best. There is further uncertainty surrounding mandated trading increments (in addition to quoting increments), with comparatively sparse study.

GTS strongly believes a prudent path forward should involve collecting and studying all necessary data and progressing incrementally. Incremental change is particularly important with tick sizes, because if tick sizes are not calibrated appropriately and are too granular, our markets could be marred by flickering quotes, fragmented liquidity and reduced depth, increased complexity and

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96496, 88 Fed. Reg. 5440 (Jan. 27, 2023); Disclosure of Order Execution Information, Exchange Act Release No. 34-96493, 88 Fed. Reg. 3786 (Jan. 20, 2023), *adopted in* Exchange Act Release No. 34-99679, 89 Fed. Reg. 26428 (Apr. 15, 2024).

[7] *See, e.g.,* Cboe, Cboe Proposes Tick-Reduction Framework to Ensure Market Structure Benefits All Investors (Sept. 22, 2022), https://www.cboe.com/insights/posts/cboe-proposes-tick-reduction-framework-to-ensure-market-structure-benefits-all-investors/ ("Cboe Tick Proposal"); Citadel Securities, Market Lens: Unlevel Playing Field? What 605s Can Tell Us About Tick Sizes (Sept. 2022), https://www.citadelsecurities.com/wp-content/uploads/sites/2/2022/09/Market-Lens-September-2022.pdf; Adrian Griffiths, Head of Market Structure, MEMX, Tick Constrained Securities: Why GE's basis point spread was four times higher before its reverse split—and what we should do about it (Aug. 2021), https://memx.com/wp-content/uploads/MEMX-Market-Structure-Report-Tick-Constrained-Securities.pdf.

[8] *See, e.g.,* Securities and Exchange Commission, Order Directing the Exchanges and the Financial Industry Regulatory Authority To Submit a Tick Size Pilot Program, Exchange Act Release No. 34-72460, 79 Fed. Reg. 36840 (June 30, 2014); Cboe Tick Proposal (proposing consideration of "a tick-widening framework that facilitates an enhanced liquidity aggregation process for securities trading with wider spreads"); Yashar Barardehi, et al., DERA Working Paper, Tick Sizes and Market Quality: Revisiting the Tick Size Pilot (Nov. 28, 2022, preliminary), https://www.sec.gov/files/dera_wp_ticksize-pilot-revisit.pdf (finding that for stocks with very wide spreads, *i.e.*, 15 cents or more, the tick pilot generally improved market quality).

operational risk, increased message volume and transaction costs, and increased market data and reporting related costs.[9]

In the months since the Regulation NMS Proposal was released, we have seen a consolidation of industry support behind advancing a more limited version of the proposal that aligns with our views of proceeding in a data-driven, incremental fashion.[10] Under this approach, the SEC could proceed with adjusting the tick size to a half-penny for only those stocks determined to be tick-constrained, then engage in further analysis based on the effectiveness of this change before determining whether additional changes are justified. Through this process the SEC should also analyze whether potentially widening tick sizes for certain stocks with wider spreads would be beneficial.

In short, the Regulation NMS Proposal presents the perfect use-case for the SEC to change paths from an overly complex and untested proposal, to adoption of a narrower rule change based on empirical support.

Order Competition Proposal

The Order Competition Proposal, mandating segmented auctions in equity markets, introduces significant uncertainties and operational complexities. This concept is relatively uncharted territory, with heightened potential risks to market stability.[11] A number of the uncertainties identified by the SEC in this proposal—including a lack of interest from liquidity suppliers to participate in auctions and less certainty in execution quality[12]—must be extensively analyzed before any further action on the proposal is considered. In addition to these market uncertainties, the operational complexities such auctions would entail, such as simultaneous auctions running in the same name on the same venue or across different venues with different operational configurations,[13] are hard to overstate and their effects are even more difficult to fully comprehend.

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[9] *See, e.g.,* James Angel, Tick size regulation: costs, benefits and risks (2012), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/289037/12-1068-eia7-tick-size-regulation-costs-benefits.pdf; Securities and Exchange Commission, Regulation NMS, Exchange Act Release No. 34-51808, 70 Fed. Reg. 37496, 37551-52 (June 29, 2005).

[10] *See, e.g.,* SIFMA, Letter to Vanessa Countryman, Secretary, Securities and Exchange Commission (Mar. 31, 2023) ("SIFMA generally supports a minimum tick size of $0.005 (*i.e.*, as a quotation increment, but not trading increment) for tick-constrained stocks, but is concerned that the Commission has not established the appropriate methodology for determining which stocks are tick-constrained. SIFMA requests that the Commission further engage with market participants to establish the appropriate methodology for identifying tick-constrained stock that could trade in a $0.005 increment.").

[11] One recent study notes that the question of how retail flow should be executed—whether broker routing or an order-by-order auction—is "comparatively unexplored," and indicates that market makers may enjoy higher profits from order-by-order auctions relative to broker routing, but retail investors may be worse off, particularly in illiquid stocks or when liquidity is limited. *See* Thomas Ernst, et al., Would Order-By-Order Auctions Be Competitive? (Mar. 8, 2023). The SEC staff previously noted in a statement on thinly traded securities that research indicates that batch auctions, as compared to continuous trading markets, may or may not improve liquidity and price efficiency. *See* Division of Trading and Markets, Securities and Exchange Commission, Background Paper on the Market Structure for Thinly Traded Securities (Oct. 17, 2019), https://www.sec.gov/files/rules/policy/2019/thinly-traded-securities-tm-background-paper.pdf, at 8.

[12] *See* Order Competition Rule, 88 Fed. Reg. at 214-216.

[13] *See id.* at 161.

Past experiences, such as the SEC's tick size pilot program, demonstrate the risks of regulatory changes based on theory rather than data.[14] The pilot, intended to widen tick sizes for certain small cap stocks, resulted in negative market impacts ranging from $300 million to $900 million.[15] These findings underscore the need for incremental, data-driven approaches, beginning with robust data collection and potentially pilot programs, before making permanent changes.

Given all of these factors, we believe the Order Competition Proposal presents a substantial risk to markets as an untested and experimental solution to an unproven problem. We strongly believe it is crucial to develop a data-driven understanding of the potential problem this proposal is intended to address and credible empirical analysis of potential solutions before imposing new rules that upend current market structure.

Best Execution Proposal

The SEC's Best Execution Proposal would establish, for the first time, a Commission-level best execution standard for broker-dealers. Best execution, however, is not a new concept in the securities markets, with well-established obligations set forth in FINRA and MSRB rules that date back to 1968.[16] As a result, much of the proposal appears to be redundant and overlapping with existing obligations.

However, the proposal goes beyond existing principles-based rules to include prescriptive provisions on, among other things, specified policies and procedures, governance, and a new conflicted transactions regime. As a result, the proposed rules are not only redundant, but also represent a potential third best execution rule mandated upon the industry.

This construct creates enormous potential for confusion and regulatory inefficiencies—including as-yet-unknown diverging interpretations in enforcement by different regulators. And despite the obvious negative externalities of the proposal, the SEC has failed to articulate a compelling justification for the new rule. In fact, there remains a lack of empirical analysis to show how or why the current framework is problematic, nor any meaningful benefit to customers from a new rule.[17] This proposal truly does appear to be a solution in search of a problem.

Even if a problem did exist with the current best execution framework, a new SEC rule would not be the appropriate avenue for addressing such a problem. If the SEC has legitimate concerns

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[14] *See* Assessment of the Plan to Implement a Tick Size Pilot Program (revised Aug. 2, 2018), https://www.sec.gov/files/TICK%20PILOT%20ASSESSMENT%20FINAL%20Aug%202.pdf.

[15] *See, e.g.,* Alexander Osipovich, Wall Street Journal, SEC's Stock Trading Experiment Cost Investors Over $300 Million, Study Finds (Sept. 6, 2018), https://www.wsj.com/articles/secs-stock-trading-experiment-cost-investors-over-300-million-study-finds-1536206461; Bill Alpert, Barron's, Congress' Failed Stock Market Experiment Cost Investors $900 Million (Sept. 14, 2018), https://www.barrons.com/articles/sec-tick-size-pilot-program-1536961160.

[16] *See, e.g.,* Gary Gensler, Chair, Securities and Exchange Commission, Statement on Best Execution Proposal (Dec. 14, 2022), https://www.sec.gov/news/statement/gensler-best-execution-20221214 ("The predecessor to FINRA first adopted a version of a best execution standard in 1968. In 2016, the Municipal Securities Rulemaking Board (MSRB) implemented a separate rule for broker-dealers dealing in municipal securities.").

[17] *See, e.g.,* Regulation Best Execution, 88 Fed. Reg. at 5523 ("However, the Commission lacks detailed data on broker-dealers' current order handling practices and documentation practices that would allow it to predict the extent of changes as a result of this proposal. The Commission therefore cannot ascertain the extent to which these benefits would be realized, as discussed below." (internal footnote omitted)).

about gaps with the self-regulatory organizations' best execution rules—assuming empirical analysis shows such gaps exist—the most effective way to handle them would be through its oversight of self-regulatory organizations and the implementation and enforcement of existing rules.

We believe, like all things related to market structure, the SEC must take a data-driven approach to this rulemaking, including identification of a problem that needs to be addressed and analysis of alternatives to achieve the best solution. The current best execution proposal falls well short of this standard.

Conclusion

Just as a doctor would never treat an undiagnosed patient, market structure changes should be approached with careful analysis and precision. Given the health of U.S. equity markets, the SEC should proceed thoughtfully and incrementally, focusing on empirical data to support any further regulatory action.

Thank you for your attention. I look forward to your questions and further discussion on this critical topic.