

**Written Testimony of**

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**Before the U.S. House Committee on Financial Services**

**“Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide, Part II”**

**March 17, 2021**

Good morning. Thank you Chairwoman Waters, Ranking Member McHenry, and Members of the Committee for inviting me to testify today.

My name is Mike Piwowar, and I am the Executive Director of the Milken Institute Center for Financial Markets.<sup>1</sup> I had the pleasure of serving as a Visiting Academic Scholar, Senior Financial Economist, Commissioner, and Acting Chairman of the U.S. Securities and Exchange Commission (“SEC” or “Commission”). I am testifying today on my own behalf.

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Thank you for calling this second hearing on the lessons learned from the January trading frenzy in Gamestop and other so-called meme stocks. In the first hearing, members of this Committee identified a number of issues that the SEC should prioritize in its regulatory, compliance, and enforcement roles. I hope that my testimony today will be helpful in guiding some of those priorities.

The Commission has already said that they are reviewing actions taken by regulated entities to determine whether they may have disadvantaged investors or otherwise unduly inhibited their ability to trade certain securities.<sup>2</sup> The SEC’s Division of Examinations has said that one of their 2021 examination priorities will be to examine

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<sup>1</sup> The Milken Institute is a nonprofit, nonpartisan think tank that promotes evidence-based research that serves as a platform for policymakers, industry practitioners, and community members to come together in catalyzing practical solutions to challenges we face both here in the U.S. and globally. The Center for Financial Markets conducts research and constructs programs designed to facilitate the smooth and efficient operation of financial markets—to help ensure that they are fair and available to those who need them when they need them.

<sup>2</sup> Statement of Acting Chair Lee and Commissioners Peirce, Roisman, and Crenshaw Regarding Recent Market Volatility (Jan. 29, 2021), available at <https://www.sec.gov/news/public-statement/joint-statement-market-volatility-2021-01-29>.

broker-dealers to assess whether they are meeting their legal and compliance obligations when providing retail customers access to complex strategies, such as options trading.<sup>3</sup> The Commission also said that they are investigating whether abusive or manipulative trading activity prohibited by the federal securities laws occurred during this episode.<sup>4</sup>

I have complete confidence that the Commission and its compliance and enforcement staff will identify and pursue any evidence of noncompliance or wrongdoing. Accordingly, I focus my testimony on the regulatory policy issues that have been raised in the aftermath of the January trading. The first part of my testimony focuses on achieving more equitable access to investing in private companies. The second part focuses on improving three specific areas of market structure and market infrastructure<sup>5</sup> policy.

## **Achieving More Equitable Access to Investing in Private Companies**

### ***The State of Retail Investing***

Retail investors enjoy more choices and face lower costs and barriers when investing their hard-earned savings in public companies than ever before.

Retail investors can invest directly in securities through brokerage accounts. Competition among brokers has led to commission-free trading. Competition among exchanges, alternative trading systems (ATSs), and market makers has led to the best market quality environment – transaction costs are low, market depth is high, and execution speeds are fast – for publicly traded securities in history.<sup>6</sup> Retail investors can make their own investment decisions or seek the advice of a regulated investment professional through a broker-dealer or investment adviser.

Retail investors can achieve low-cost diversification and professional management by indirectly investing in the stock market through passively- and actively-managed mutual funds and exchange-traded funds (ETFs). Competition among funds has brought fees

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<sup>3</sup> U.S. Securities and Exchange Commission 2021 National Examination Priorities, Division of Examinations, available at <https://www.sec.gov/files/2021-exam-priorities.pdf>.

<sup>4</sup> Statement of Acting Chair Lee and Commissioners Peirce, Roisman, and Crenshaw Regarding Recent Market Volatility (Jan. 29, 2021), available at <https://www.sec.gov/news/public-statement/joint-statement-market-volatility-2021-01-29>.

<sup>5</sup> The term “market structure” (or “market microstructure”) generally refers to the operation and regulation of financial markets. The term “market infrastructure” (or “market plumbing”) generally refers to the network of systems that facilitate financial market transactions, such as payment systems, clearance, and settlement.

<sup>6</sup> See, e.g., A Century of Stock Market Liquidity and Trading Costs, Charles M. Jones (May 23, 2002), available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=313681](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=313681); Equity Trading in the 21st Century, James J. Angel, Lawrence E. Harris and Chester S. Spatt, Quarterly Journal of Finance, Vol. 1, No. 1 (2011); and Equity Trading in the 21st Century: An Update, James J. Angel, Lawrence E. Harris and Chester S. Spatt (May 23, 2013), available at <https://www.g-group.org/wp-content/uploads/2014/01/Equity-Trading-in-the-21st-Century-An-Update-FINAL.pdf>.

and expenses down to their lowest levels in history.<sup>7</sup> The widespread availability of retirement savings accounts such as 401(k) plans and individual retirement accounts (IRAs) also allows low-cost access to the stock market.

Retail investors have taken advantage of these beneficial trends over the past few decades. The percentage of U.S. households that own stocks – directly or indirectly through funds and retirement savings accounts – increased from 32% in 1989 to 53% in 2019.<sup>8</sup>

Low-income households saw the biggest gains over this period, but low-income households still lag high-income households in ownership rates of public companies.<sup>9</sup><sup>10</sup> In 2019, 15% of households in the lowest income quintile held stocks in public companies – directly or indirectly through funds and retirement savings accounts – compared to 88% of households in the highest income quintile.<sup>11</sup> While I am not aware of any statistics on ownership rates by household income level for private companies, the gap is undoubtedly worse. SEC rules effectively prohibit low-income investors from investing in this high-growth sector of the economy.

### ***Accredited Investor Definition***

The SEC’s accredited investor definition essentially divides the world of private company investors into two arbitrary categories of individuals – those persons who are accorded the privileged status of being an accredited investor and those who are not.<sup>12</sup> In short, if you make \$200,000 or more in annual income or have \$1 million or more in net worth, then you are in the privileged class and could choose to invest in the full panoply of investments, whether public or private.<sup>13</sup> If not, the SEC has decided that, for your protection, you are restricted access to invest in private companies.

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<sup>7</sup> See, e.g., 2020 Investment Company Fact Book: A Review of Trends and Activities in the Investment Company Industry, available at <https://www.ici.org/research/stats/factbook>.

<sup>8</sup> See Federal Reserve Board 2019 Survey of Consumer Finances (Nov. 17, 2020), available at <https://www.federalreserve.gov/econres/scfindex.htm>.

<sup>9</sup> See Main Street Owns Wall Street, ICI Viewpoints, Sarah Holden and Michael Bogdan (Feb. 10, 2021), available at [https://www.ici.org/viewpoints/21\\_view\\_equityownership](https://www.ici.org/viewpoints/21_view_equityownership).

<sup>10</sup> The Milken Institute Center for Financial Markets is actively engaged in research, programs, and events to provide for more equitable access to capital for job-creating businesses and more equitable access to investments by retail investors.

<sup>11</sup> See Main Street Owns Wall Street, ICI Viewpoints, Sarah Holden and Michael Bogdan (Feb. 10, 2021), available at [https://www.ici.org/viewpoints/21\\_view\\_equityownership](https://www.ici.org/viewpoints/21_view_equityownership).

<sup>12</sup> See, e.g., Remarks at the Meeting of the SEC Advisory Committee on Small and Emerging Companies, Public Statement by Commissioner Michael S. Piowar (May 18, 2016), available at <https://www.sec.gov/news/statement/piowar-opening-remarks-acsec-051816html.html>; Remarks at the “SEC Speaks” Conference 2017: Remembering the Forgotten Investor, Speech by Acting Chairman Michael S. Piowar (Feb. 24, 2017), available at <https://www.sec.gov/news/speech/piowar-remembering-the-forgotten-investor.html>.

<sup>13</sup> The SEC recently expanded the definition of accredited investor to include, among other things, individuals “holding in good standing one or more professional certifications or designations or other credentials from an accredited educational institution that the Commission has designated as qualifying an

As an SEC commissioner, I took my investor protection mandate extremely seriously. However, I challenge the SEC's investor protection rationale for prohibiting non-accredited investors from investing in high-risk companies. Here, I appeal to two well-known concepts from the field of financial economics. The first is the risk-return tradeoff. Because most investors are risk averse, riskier securities must offer investors higher expected returns. As a result, prohibiting non-accredited investors from investing in high-risk securities is the same thing as prohibiting them from investing in high-expected-return securities.

The second economic concept is modern portfolio theory. By holding a diversified portfolio of securities, investors reap the benefits of diversification; that is, the risk of the portfolio as a whole is lower than the risk of any individual securities. The statistical correlation of returns is key. When adding higher-risk, higher-return securities to an existing portfolio, as long as the new securities' returns are not perfectly positively correlated with (move in exactly the same direction as) the existing portfolio, investors can reap higher portfolio returns with little or no change in overall portfolio risk. In fact, if the correlations are low enough, the overall portfolio risk could actually decrease.

These two concepts show how even a well-intentioned investor protection policy can ultimately harm the very investors the policy is intended to protect. Moreover, restricting the number of accredited investors in the privileged class can have additional adverse impacts. The accredited investors may enjoy even higher returns because the non-accredited investors are prohibited from buying and bidding up the price of high-risk, high-expected-return securities. Remarkably, by allowing only high-income and high-net-worth individuals to reap the risk and return benefits from investing in certain securities, the SEC is actually exacerbating wealth inequality.<sup>14,15</sup>

### *Recommendation for the Accredited Investor Definition*

The SEC should revisit the accredited investor definition and solicit public feedback on achieving more equitable access to investing in private companies across all income levels. Based on that feedback, the SEC should engage in rulemaking to open up these investment opportunities to all Americans.

## **Market Structure and Market Infrastructure Policy**

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individual for accredited investor status[.]” See Accredited Investor Definition, Final Rule, SEC Release Nos. 33-10824; 34-89669 (Aug. 26, 2021), 85 Fed. Reg. 64234 (Oct. 9, 2020), available at <https://www.sec.gov/rules/final/2020/33-10824.pdf>. However, the expanded definition is not likely to substantially increase the number of low-income individuals who qualify under the new definition.

<sup>14</sup> See Thomas Piketty, *Capital in the Twenty-First Century*, translated by Arthur Goldhammer (Cambridge MA: The Belknap Press of Harvard University Press, 2014).

<sup>15</sup> Another unfortunate consequence of the accredited investor definition is that small businesses face higher costs of capital.

Before addressing specific market structure and market infrastructure policy issues, I summarize some guiding principles that I find useful in thinking through them.

### ***Guiding Principles***

#### ***There Are No Solutions; There Are Only Trade-offs***<sup>16</sup>

The regulatory framework of the U.S. equity markets is complicated; it reflects a complex system of legal and regulatory decisions that have been made over decades. The markets have evolved within this framework into a highly interconnected system.

As a result, any change to market structure policy in one area will likely affect other areas. For example, if payment for order flow were restricted or banned, zero-commission trades would likely disappear. This is one tradeoff that the Commission will have to weigh when deciding whether and, if so, how to make any changes in existing regulation of payment for order flow arrangements. Changes to existing market structure and market infrastructure policy always involve tradeoffs.

#### ***Economic Analysis is a Particularly Useful Tool***

The lens of economic analysis is well-suited for evaluating tradeoffs. While serving as an SEC commissioner, I found my economics training was a valuable tool on virtually every regulatory and enforcement decision I had to make.

In 2012, the Commission recognized the importance of going beyond statutory obligations mere quantitative exercises to incorporate comprehensive economic analysis in the rulemaking process by adopting “Current Guidance on Economic Analysis in SEC Rulemaking” (“Current Guidance”).<sup>17</sup> The Guidance was adopted under SEC Chairman Mary Schapiro. It has been followed on a bipartisan basis by Chair Mary Jo White, myself as Acting Chairman, and Chairman Jay Clayton.<sup>18</sup> I was glad to see that SEC-nominee Gary Gensler committed to following the Current Guidance in response to a question during last week’s nomination hearing.

The SEC’s Current Guidance requires the Commission to evaluate a rule’s likely economic consequences, including potential negative unintended consequences. It requires the Commission to compare a proposed regulatory action with reasonable alternatives, including the alternative of not adopting a rule.

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<sup>16</sup> This phrase is often attributed to Thomas Sowell.

<sup>17</sup> Current Guidance on Economic Analysis in SEC Rulemaking, (Mar. 16, 2012), available at [http://www.sec.gov/divisions/riskfin/rsfi\\_guidance\\_econ\\_analy\\_secrulemaking.pdf](http://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf).

<sup>18</sup> The Commission has not proposed or adopted any new rules under current Acting Chair Allison Herren Lee.

Because U.S. equity markets and their regulatory framework are so complex, the SEC's Current Guidance is a particularly useful tool when evaluating any potential changes to market structure and market infrastructure policy.

### *Frequent Retrospective Reviews of Existing Rules are Necessary*

The only constant in financial markets is change. Markets and technologies are continually evolving. If we want our capital markets to remain the envy of the world, our regulatory framework needs to evolve with them.

Throughout my tenure as an SEC commissioner, I was an outspoken advocate of retrospective reviews of Commission rules.<sup>19</sup> I believe it is a fundamental best practice of good government to observe how the Commission's regulations work in the real world. Armed with this information, the Commission can propose thoughtful improvements to its rules to advance the Commission's essential work to protect investors, maintain fair, orderly, and efficient markets, and promote capital formation.

I am not alone in this view. For example, the Regulatory Flexibility Act of 1980 requires agencies such as the Commission to perform a periodic review of rules that have or will have a significant economic impact upon a substantial number of small entities within ten years of the publication of such rules as final rules "to determine whether such rules should be continued without change, or should be amended or rescinded."<sup>20</sup> The Regulatory Flexibility Act identifies the following factors for analysis: (1) the continued need for the rule; (2) the nature of complaints or comments received concerning the rule from the public; (3) the complexity of the rule; (4) the extent to which the rule overlaps, duplicates, or conflicts with other Federal rules, and, to the extent feasible, with State and local governmental rules; and (5) the length of time since the rule has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the rule.<sup>21</sup>

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<sup>19</sup> See, e.g., Advancing and Defending the SEC's Core Mission, Speech by Commissioner Michael S. Piowar at the U.S. Chamber of Commerce (Jan. 27, 2014), available at <https://www.sec.gov/news/speech/2014-spch012714msp>; Remarks to the Securities Enforcement Forum 2014, Speech by Commissioner Michael S. Piowar (Oct. 14, 2014), available at <https://www.sec.gov/News/Speech/Detail/Speech/1370543156675>; Statement Regarding Publication of List of Rules to be Reviewed Pursuant to the Regulatory Flexibility Act, Public Statement by Commissioner Michael S. Piowar (Sept. 15, 2016), available at <https://www.sec.gov/news/statement/piowar-statement-list-of-rules-regulatory-flexibility-act.html>; Remarks at FINRA and Columbia University Market Structure Conference, Speech by Commissioner Michael S. Piowar (Oct. 26, 2017), available at <https://www.sec.gov/news/speech/speech-piowar-2017-10-26>; and Statement of Commissioner Piowar at Open Meeting Regarding Amendments to the Commission's Whistleblower Program Rules, Commissioner Michael S. Piowar (June 28, 2018), available at <https://www.sec.gov/news/public-statement/statement-piowar-whistleblower-062818>.

<sup>20</sup> 5 U.S.C. 610.

<sup>21</sup> 5 U.S.C. 610(b).

In 2011, President Obama signed an Executive Order to enhance the Regulatory Flexibility Act's goals by directing independent agencies such as the SEC to develop and implement a plan to conduct ongoing retrospective analyses of existing rules.<sup>22</sup> The stated goal is "to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives."<sup>23</sup>

Because markets and technologies are continually evolving, frequent retrospective reviews of market structure and market infrastructure rules by the Commission are necessary to ensure that they are not outdated, obsolete, or overly burdensome.

### ***The Trade Settlement Cycle***

When a retail (or institutional) customer buys or sells a security through a broker, the broker routes the order to a trading venue for execution and then submits the resulting trade to the Depository Trust and Clearing Corporation (DTCC) for clearance and settlement. In the United States, most securities transactions take two days (T+2) to settle. To mitigate the market, liquidity, counterparty, and systemic risks associated with the delay in settlement, DTCC requires brokers to post margin using their own funds.

On January 28, 2021, Robinhood received a notice from DTCC that Robinhood owed a net deposit of approximately \$3 billion.<sup>24</sup> After discussions with Robinhood staff in which Robinhood notified DTCC that it would impose trading restrictions in GameStop and other securities, DTCC reduced the net deposit to approximately \$1.4 billion.<sup>25</sup> To put that number in context, it represented nearly ten times the amount required just three days earlier.<sup>26</sup>

This incident has caused many investors to ask important questions. Why does the transfer of ownership for most securities transactions in the U.S. occur two business days after the trade date? Why haven't we already moved to T+1 or T+0? I believe I am

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<sup>22</sup> See Executive Order 13579 – Regulation and Independent Regulatory Agencies (July 11, 2011), available at <https://obamawhitehouse.archives.gov/the-press-office/2011/07/11/executive-order-13579-regulation-and-independent-regulatory-agencies>. See also M-11-28 – Memorandum for the Heads of Independent Regulatory Agencies (July 22, 2011), available at <https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2011/m11-28.pdf>.

<sup>23</sup> Id.

<sup>24</sup> See Testimony of Vladimir Tenev Robinhood Markets, Inc., "Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide," Hearing before the U.S. House Financial Services Committee (Feb. 18, 2021), available at <https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=407107>.

<sup>25</sup> Id.

<sup>26</sup> Id.

in a unique position to answer those questions. That is why I published an op-ed in *The Wall Street Journal* last month.<sup>27</sup>

As Acting Chairman of the SEC, I led the effort in 2017 to move officially from T+3 to T+2.<sup>28</sup> At that time, T+2 was the best option based on economic analysis. The financial system was not yet prepared in 2017 to move to T+1, but it was ready to take a good first step toward greater efficiency and timeliness.

The change to T+2 was a success. Retail investors benefitted from quicker access to cash and securities when their trades were executed. The change reduced the dangers from market, liquidity, counterparty, and systemic risks across the financial system.

Recognizing that eventually moving to T+1 could have similar benefits, the Commission directed the staff in the final rule to undertake to submit a report to the Commission by September 2020.<sup>29</sup> The specific language in the final rule stated:

“This report will include, but not be limited to an examination of:

- (i) the impact of today’s amendment to Rule 15c6-1(a) to establish a T+2 standard settlement cycle on market participants, including investors;
- (ii) the potential impacts associated with movement to a shorter settlement cycle beyond T+2;
- (iii) the identification of technological and operational improvements that can be used to facilitate a movement to a shorter settlement cycle; and
- (iv) cross-market impacts (including international developments) related to the shortening of the settlement cycle to T+2.”<sup>30</sup>

### Recommendations for the Trade Settlement Cycle

As I recommend in my op-ed, the SEC should release the staff report and open a comment file on its website for public feedback. The SEC should hold a public forum to discuss lessons learned from the recent events so that we all have the benefit of the most up-to-date information.

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<sup>27</sup> See *It’s T-0 to Go Faster Than T+2*, *The Wall Street Journal*, Opinion/Commentary, Michael S. Piwowar (Online Version - Feb. 24, 2021, Print Version - Feb. 25, 2021), available at <https://www.wsj.com/articles/its-t-0-to-go-faster-than-t-2-11614207705>.

<sup>28</sup> See SEC Adopts T+2 Settlement Cycle for Securities Transactions, Press Release (Mar. 22, 2017), available at <https://www.sec.gov/news/press-release/2017-68-0>. See also Statement at Open Meeting Regarding Amendment to Shorten the Trade Settlement Cycle, Public Statement, Acting Chairman Michael S. Piwowar (Mar. 22, 2017), available at <https://www.sec.gov/news/public-statement/piwowar-open-meeting-032217>.

<sup>29</sup> See Securities Transaction Settlement Cycle, Final Rule, SEC Release No. 34-80295 (Mar. 22, 2017), 82 Fed. Reg. 15564 Mar. 29, 2017), available at <https://www.sec.gov/rules/final/2017/34-80295.pdf>.

<sup>30</sup> *Id.*



But, the SEC cannot move beyond T+2 on its own. Bank regulators will need to be involved because shortening the length of time between when a trade is executed and when securities and cash are delivered to the buyer and seller, respectively, will require improvements in the speed of bank payment systems.<sup>3132</sup>

Accordingly, the Treasury Secretary should convene a principals meeting of the Financial Stability Oversight Council, the federal financial regulators' coordinating body, and initiate a securities settlement workstream. The purpose of the workstream is to coordinate regulatory efforts related to whether and how to shorten the settlement cycle.

### ***Payment for Order Flow***

The SEC allows brokers to have a choice of which trading venue to direct their customers' orders. The broker may direct the order to the exchange where the stock is listed, a different exchange or alternative trading system, or a market maker.

The SEC also allows brokers to enter into payment for order flow arrangements. Market makers may pay brokers for routing orders to them so long as they fulfill their best execution obligations. A broker must consider multiple factors when seeking best execution of customers' orders, including the opportunity to get a better price than what is currently quoted (price improvement), the speed of execution, and the likelihood that the trade will be executed.<sup>33</sup>

Payment for order flow arrangements could represent a conflict of interest between their broker and their customer. Brokers may choose to route customer orders to the market maker that offers the highest payment to the broker rather than to the trading venue that offers the best execution for the customer. However, the SEC's best execution requirements mitigate this conflict of interest. The SEC and FINRA regularly conduct examinations of broker-dealers for compliance with best execution obligations and bring enforcement actions when they find violations.<sup>34</sup>

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<sup>31</sup> See, e.g., We Shouldn't Have to Wait for FedNow to Have Faster Payments, American Banker – BankThink, George Selgin and Aaron Klein (Feb. 28, 2020), available at <https://www.americanbanker.com/opinion/we-shouldnt-have-to-wait-for-fednow-to-have-faster-payments>.

<sup>32</sup> In addition, regulators will need to carefully coordinate the foreign exchange (“FX”) settlement cycle for market participants who rely on FX settlements to fund cross-border securities transactions.

<sup>33</sup> See Fast Answers – Best Execution, (May 9, 2011), available at <https://www.sec.gov/fast-answers/answersbestexhtm.html>

<sup>34</sup> See, e.g., FINRA Fines Robinhood Financial, LLC \$1.25 Million for Best Execution Violations, News Release (December 19, 2019), available at <https://www.finra.org/media-center/newsreleases/2019/finra-fines-robinhood-financial-llc-125-million-best-execution>, and SEC Charges Robinhood Financial With Misleading Customers About Revenue Sources and Failing to Satisfy Duty of Best Execution, Press Release (Dec. 17, 2020), available at <https://www.sec.gov/news/press-release/2020-321>.

Were Robinhood customers who traded GameStop stock in January 2021 advantaged or disadvantaged by Robinhood's payment for order flow arrangements?

Currently available public information does not allow for a direct analysis of the execution quality that specific Robinhood customers received on their GameStop orders in January 2021. However, analysis of two SEC-required disclosures can shed some light on the issue of whether retail investors, on average, across all brokers, received price improvement on their GameStop orders in January 2021.

SEC Rule 606 under Regulation NMS requires broker-dealers to provide quarterly disclosures of information regarding the handling of their customers' orders.<sup>35</sup> Using Robinhood's Rule 606 report for the fourth quarter of 2020, I determined that the three venues where Robinhood routed most of its orders were Citadel Execution Services, G1 Execution Services, and Two Sigma Securities. Robinhood discloses on its Rule 606 report that it receives payment from these venues to direct equity order flow.

SEC Rule 605 under Regulation NMS requires market centers that trade NMS stocks to make available to the public monthly electronic execution reports that include uniform execution quality measures.<sup>36</sup> Market centers report these measures separately for each stock, but those measures are aggregated across all broker-dealers who route to them. Using the Rule 605 reports for January 2021 of each of the three venues above, I calculated their execution quality statistics for their order executions of GameStop stock. See Table 1 below.

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<sup>35</sup> Securities Exchange Act Release No. [51808](#) (June 9, 2005), 70 FR 37496 (June 29, 2005).

<sup>36</sup> *Id.*

**Table 1: Execution Quality Statistics for GameStop (GME) January 2021**

	Total GME Shares Executed	Amount Executed		Net Price Improvement	
		Inside The Quote	Outside The Quote	Total	Per Share
<b>Citadel Execution Services</b>	248,741,403	\$19,218,700.09	\$4,706,576.58	\$14,512,123.50	\$0.06
<b>G1 Execution Service</b>	68,095,050	\$5,800,811.29	\$1,526,514.42	\$4,274,296.86	\$0.06
<b>Two Sigma Securities</b>	21,702,917	\$1,127,760.70	\$571,006.15	\$556,754.55	\$0.03

I calculated the total dollar amount of orders in GameStop stock executed inside the quote and outside the quote for each venue. For all three venues, the dollar amount of orders executed inside the quote (receiving price improvement) exceeded the dollar amount of orders executed outside the quote (receiving price disimprovement), resulting in net price improvement, in aggregate, for GameStop stock orders routed to them in January 2021. The average price improvement ranged from \$0.03 to \$0.06 per share.

Recommendations for Payment for Order Flow

The SEC Division of Examinations should expand its ongoing initiative in the area of payment for order flow.<sup>37</sup> The Division should focus its efforts on order routing and best execution obligations in a zero-commission environment.

The Commission should hold a roundtable to discuss payment for order flow. The event would provide a public forum for in-depth discussions of how payment for order flow is working in a zero-commission environment.

The Commission should consider amending Rule 605 and Rule 606 of Regulation NMS to provide better public transparency of execution quality measures. For example, the

<sup>37</sup> U.S. Securities and Exchange Commission 2021 National Examination Priorities, Division of Examinations, available at <https://www.sec.gov/files/2021-exam-priorities.pdf>.

Commission should consider requiring each broker to report execution quality measures for every stock they route to every market center quarterly (or monthly).

### ***Short-Selling and Securities Lending***

Some have attributed at least part of the large influx of buy orders that pushed up the stock price to a short squeeze, causing short-sellers to buy additional shares to cover their short positions. The episode has created a lot of interest in the effects that short-sellers have on the market.

It is important to remember that abusive short-selling – sales to manipulate a stock price – is already illegal. The SEC has promulgated rules to prohibit abusive short-selling practices and regularly enforces those rules.<sup>38</sup> As a result, the vast majority of short sales that occur in the United States are legal.<sup>39</sup>

Academic research shows that short-selling generally has a positive effect on market quality. According to a recent study, “most empirical papers report that during periods of regular trading activity, short-selling has a positive influence on liquidity, price discovery and price efficiency, thus supporting the idea that short-selling is crucial to maintain the orderly functioning of markets.”<sup>40,41</sup> Also, “the existing evidence short-selling cannot be blamed for having triggered downward price reversal during the 2008 financial crisis.”<sup>42</sup> Short-sellers also protect other investors by detecting and publicizing fraud.<sup>43</sup>

Regulation SHO requires a broker-dealer to have reasonable grounds to believe that the security can be borrowed so that it can be delivered on the date delivery is due before effecting a short sale order in any equity security.<sup>44</sup> However, it has been widely reported that approximately 140 percent of GameStop’s stock had been sold short. At least part of this disparity can be attributed to a lack of transparency in securities lending.

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<sup>38</sup> See Short Sales (Regulation SHO), Final Rule, SEC Release No. 34-50103 (Jul 28, 2004), 69 Fed. Reg. 48008 (Aug. 6, 2004), available at <https://www.sec.gov/rules/final/34-50103.htm>.

<sup>39</sup> See, e.g., Key Points About Regulation SHO, SEC Office of Investor Education and Advocacy publication (Apr. 8, 2015), available at <https://www.sec.gov/investor/pubs/regsho.htm>.

<sup>40</sup> Stefano Alderighi and Pedro Gurrola Perez, What Does Academic Research Say about Short-Selling Bans?, WFE Research Working Paper (Apr. 29, 2020), available at <https://ssrn.com/abstract=3775704>.

<sup>41</sup> The same study shows that academic research finds that short-selling bans disrupt the orderly functioning of markets. Their negative effects include reducing liquidity, increasing price inefficiency, and hampering price discovery.

<sup>42</sup> *Id.*

<sup>43</sup> See, e.g., Testimony of Owen A. Lamont, “Hedge Funds and Independent Analysts: How Independent Are Their Relationships?,” Hearing before the U.S. Senate Committee on the Judiciary (Jun. 28, 2006), available at <https://www.govinfo.gov/content/pkg/CHRG-109shrg31059/html/CHRG-109shrg31059.htm>. Regulation SHO provides limited exceptions for market makers when fulfilling their market maker obligations.

<sup>44</sup> See, e.g., Key Points About Regulation SHO, SEC Office of Investor Education and Advocacy publication (Apr. 8, 2015), available at <https://www.sec.gov/investor/pubs/regsho.htm>.

Recall the massive U.S. government bailout of the creditors of the insurance giant American International Group, Inc. (“AIG”). AIG’s failure was mainly due to its credit default swaps portfolio and its securities lending program, not its insurance business. AIG’s credit default swap and securities lending counterparties received much of the government bailout.<sup>45</sup> Title VII of the Dodd-Frank Act<sup>46</sup> established a regulatory framework for swaps (and securities-based swaps), and the SEC and CFTC have promulgated regulations under the statute. Section 984 of Dodd-Frank required the SEC to “promulgate rules that are designed to increase the transparency of information available to brokers, dealers, and investors, with respect to the loan or borrowing of securities.”<sup>47</sup>

To date, the SEC has finalized only one rule that could be characterized as being responsive to Dodd-Frank Section 984. To increase the comparability of securities lending fees between open-end funds, the Commission adopted amendments to fund registration statements. The amendments required disclosures relating to fund securities lending activities, including income and fees from securities lending and the fees paid to securities lending agents in the prior fiscal year.<sup>48</sup> These amendments were a good start, but the SEC should further improve the transparency of securities lending.

#### *Recommendations for Short-Selling and Securities Lending*

The SEC should hold a public forum and open a request for comment on the transparency of securities lending. In evaluating various transparency alternatives, the SEC should distinguish between “regulatory reporting” and “public transparency.” Regulatory reporting refers to the information available to the SEC to perform its regulatory functions. Public transparency refers to the information that the SEC makes available to market participants, investors, and academic researchers.

Then, the SEC should use economic analysis to determine whether and, if so, how to increase regulatory reporting in securities lending. The SEC should conduct a separate economic analysis to determine how much, if any, new information should be provided to the public.

### **The Role of the House Financial Services Committee**

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<sup>45</sup> See, e.g., Congressional Oversight Panel, June Oversight Report, The AIG Rescue and its Impact on Markets, and the Government Exit Strategy (June 10, 2010); Louise Story and Gretchen Morgenson, In U.S. Bailout of AIG, Forgiveness for Big Banks, The New York Times (June 29, 2010); William Greider, The AIG Bailout Scandal, The Nation (Aug. 6, 2010); Scott E. Harrington, The Financial Crisis, Systemic Risk, and the Future of Insurance Regulation (Sept. 2009).

<sup>46</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203 (2010).

<sup>47</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, § 984(b), Pub. L. No. 111-203 (2010).

<sup>48</sup> See, SEC Adopts Rules to Modernize Information Reported by Funds, Require Liquidity Risk Management Programs, and Permit Swing Pricing, Press Release (Oct. 13, 2016), available at <https://www.sec.gov/news/pressrelease/2016-215.html>.

Throughout my testimony, I have made several recommendations for the SEC. This Committee, through its oversight role, has the opportunity to influence the SEC's agenda toward improving the current state of retail investing.

If this Committee believes that retail investors should have more equitable access to investment opportunities, hearings on abolishing or greatly expanding the accredited investor definition would be helpful. Soliciting feedback on how to creatively and effectively protect retail investors when investing in private companies would be particularly helpful.

If this Committee believes that the SEC's market structure and market infrastructure rules should keep pace with changes in markets and technologies, "deep-dive" hearings on specific issues – both SEC oversight hearings and hearings with subject matter expertise – would be helpful. If this Committee believes legislation would be necessary to improve a particular market structure or market infrastructure policy, I urge caution in legislating prescriptive standards. For the reasons stated above, the SEC is in the best position to promulgate rules based on the current environment and update those rules as needed in response to changes in the markets and technologies.

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Thank you for bringing attention to these critical issues and for the opportunity to testify here today. I am happy to answer any questions you may have.