Testimony of Dennis M. Kelleher
President and CEO Better Markets, Inc.
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 Chairwoman Waters, Ranking Member McHenry, and Members of the Committee on Financial Services. Thank you for the invitation to testify today.

Better Markets, Inc. ("Better Markets") is a non-profit, non-partisan, and independent organization founded in the wake of the 2008 financial crisis to promote the public interest in the financial markets, support financial reforms of Wall Street, and make the financial system work for all Americans again. Better Markets works with allies—including many in finance—to promote pro-market, pro-business, and pro-growth policies that help build a stronger, safer financial system, one that protects and promotes Americans' jobs, savings, retirements, and more.

To that end, Better Markets has filed over 300 comment letters with U.S. securities, banking, and derivatives regulators, many addressing the implementation of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act").[1] We have also published numerous letters, reports, fact sheets, and white papers on public policy issues pertinent to U.S. securities markets and had hundreds of meetings with U.S. regulators and others, including related to the specific issues of this hearing as set forth in Appendix D attached hereto. Much of our attention has focused on critical issues before this Committee, including ensuring that the financial system (1) supports the real economy, jobs, and economic growth; (2) is resilient and not prone to crashes; (3) protects workers, consumers, investors, and markets; (4) reduces wealth and income inequality; and (5) is designed to combat structural racism and the climate crisis. Our website, www.bettermarkets.com, includes information on these and our other public interest activities.

My name is Dennis Kelleher, and I am the Co-founder, President, and Chief Executive Officer of Better Markets. Prior to that, I had the privilege to work with a number of you while I was a senior staffer for three different U.S. Senators. Most recently, I served as Chief Counsel and Senior Leadership Advisor to the Chairman of the U.S. Senate Democratic Policy Committee. Before that, I served as Deputy Staff Director and General Counsel for what is now known as the U.S. Senate Health, Education, Labor & Pensions (HELP) Committee, and as Legislative Director and Leadership Advisor to the Secretary of the Democratic Caucus. Prior to my experience in the U.S. Senate, I was a partner at the global law firm of Skadden, Arps, Slate, Meagher & Flom, where I specialized in securities and financial markets in the U.S. and Europe. Prior to obtaining degrees at Brandeis University and Harvard Law School, I enlisted in the U.S. Air Force while in high school and served four years active duty as a crash-rescue firefighter. I grew up in central Massachusetts. Further information on my background and work can be found here.

[1] Public Law 111-203, 124 Stat. 1376 (2010).

Table of Contents

I. The many serious conflicts of interest, market frailties, and market design flaws that have too long plagued the U.S. securities markets and adversely affected investors need to be investigated and examined.

Let me first applaud you, Madame Chair, and all of the Members of the Committee for convening a second hearing of the U.S. House Committee on Financial Services ("Committee") to examine critical market structure and regulatory issues raised by the frenzied trading in GameStop and other equities. The Committee's consideration of these issues will bring much-needed public attention to the regulatory and industry reforms that are necessary to preserve and enhance the fairness, safety and soundness,

transparency, and efficiency of our preeminent securities markets. Given the number and complexity of the issues involved, I urge the Committee to continue its vital oversight and policy-setting function by convening additional hearings to continue examining our regulatory frameworks and the financial markets ecosystem that not only enabled these events but increased risks to investors and the financial system as a whole.

This hearing, of course, is not about the stock-market gyrations of a single company, GameStop, but rather, about the quality and resiliency of our markets, ending predatory (if not illegal) and other harmful practices, and stopping what too many in the financial industry continue to view as a get-rich-quick game. As this Committee well knows, because of their serious implications for working Americans, our financial markets must not be viewed as a game. Yet, almost two out of three of Americans believe that investing in the securities markets is indeed a "rigged"[2] game and nearly three out of five Americans rightly view the stock market as disconnected from the economic well-being of working families.[3]

This public sentiment is far from new. In our efforts to understand the views of the American people, Better Markets itself commissioned independent polling seven years ago and found that almost two out of three voters agreed that "[t]he stock market is rigged for insiders and people who know how to manipulate the system."[4] The GameStop saga not only provides new context for these perceptions and beliefs but confirms that longstanding structural advantages and market practices have harmed our markets, adversely affected investors, and given rise to a loss of public confidence in our financial markets.

That cannot be allowed to continue. Our markets may be the envy of the world, but that is not pre-ordained, guaranteed, or destined to always be the case. Indeed, they are the envy of the world only because they are, in a number of critical respects, transparent, well-regulated, and policed, which is why investors and the public historically have had faith and confidence that our markets are fair and relatively free of fraud. That confidence underpins our markets; lose that, and our markets risk taking on characteristics of the many backwater markets around the world that are viewed as cesspools in which predators and criminals can exploit everyone else.

My colleagues and I at Better Markets commend the Chairwoman and the Members of this Committee who have been courageously shining a light on the need for new and strengthened rules to govern our evolving securities markets. We well know the power and influence of the large, incumbent financial firms that enrich themselves under the current market structure and practices prevailing in today's markets, even if that does not serve the purposes of capital formation, price discovery, financial stability, and investor protection.

---

2 *See* C. Williams, *Amid GameStop Frenzy, People Believe the Stock Market is Stacked Against the Little Guy*, Morning Consult (Feb. 3, 2021), *available* at https://morningconsult.com/2021/02/03/amid-gamestop-frenzy-peoples-pitchforks-are-out-for-wall-street/.

3 *See* J. Burke, *Americans increasingly see the stock market as a barometer just for the rich, not the whole economy*, CNBC (Dec. 11, 2020), *available* at https://www.cnbc.com/2020/12/11/americans-increasingly-feel-the-stock-market-isnt-barometer-for-economy-but-instead-the-wealdoesnt-indicate-overall-economy-health-but-that-of-the-wealthy-and-coporations.html. According to one estimate, "only 10% of those in the bottom half of the wealth distribution own [any] stocks [at all], [with] less than a third of the middle class" owning the same. *See* T. Ghilarducci, *Where Typical Americans Have Their Wealth*, U.S. Committee on Banking, Housing, and Urban Development, "Does Wall Street Always Win? GameStop, Robinhood, and Retail Investors" (Mar. 9, 2021), *available* at https://www.banking.senate.gov/imo/media/doc/Ghilarducci%20Testimony%203-9-211.pdf. It goes without saying that reforming the securities markets will not, in itself, adequately address economic inequalities, racial disparities in wealth, climate concerns, and many other injustices created by or that are a byproduct of our economic system. However, it is one of the places that we must start.

4 *See* J. Puzzanghera, *Poll finds 64% of voters believe stock market is rigged against them*, L.A. Times (July 17, 2014), *available* at https://www.latimes.com/business/la-fi-wall-street-regulation-dodd-frank-poll-20140717-story.html.

I would like to emphasize three points before discussing a number of substantive issues in more detail.

- First, as we delve into the details of equity market structure and discuss the concealed practices within our securities markets that are unfamiliar, if not entirely unknown, it must be remembered that most of the policy responses to address the identified complexities and practices can be relatively simple—if there is the political will to examine issues impartially and thoroughly and to regulate practices and markets appropriately.

- Second, and undeniably, it must be acknowledged that most of the regulatory issues and market practices we will discuss in this hearing have been intentionally complexified and overengineered by the financial industry and U.S. regulators—sometimes, inadvertently but often deliberately—to the advantage of a very small number of Wall Street firms, which seek to extract profits from investors by "getting between the wall and the wallpaper."[5] ***The consequence, and too often the goal, of this created complexity has been the transformation of our financial markets from a wealth creation system for the many into a wealth extraction system for the few.***

- Third, and finally, it must be conceded that the Securities and Exchange Commission ("SEC") already has sweeping authority to do much of what needs to be done in connection with the issues in this hearing. The failure of the agency to appropriately respond to the most apparent deficiencies is not due to a lack of legal authority but a multi-decade lack of courage and imagination to take meaningful actions based on existing authorities. Furthermore, in material respects, the market fragmentation exploited by predatory firms, which also increase risk and opacity in our securities markets, is a function of the law itself—not necessarily lawbreaking. It is therefore critical that the SEC re-examine actions that already have been taken and especially, the distortive and harmful practices that have been directly or indirectly, implicitly or explicitly, or *de facto* declared or assumed to be *legal*, like payment for order flow, in addition to those that remain unaddressed, ambiguous, or illegal.

  That's why in the course of examining these issues, the Committee must searchingly evaluate the actions and positions of the SEC and the Financial Industry Regulatory Authority ("FINRA"). Although certain legislative solutions may be necessary, the SEC and FINRA already have broad authorities to establish guardrails and punish and deter misconduct, manipulation, and distortive trading practices in our securities markets, each of which is essential to bolstering and restoring capital formation, sound market mechanisms for capital allocation, market integrity and stability, and investor confidence and trust.

A. Harms to Investors: The GameStop trading frenzy likely imposed hundreds of millions, if not billions, of dollars of losses on everyday investors.

Just a little more than two months ago, on December 31, 2020, GameStop closed at a mere $18.84 per share. By January 27, 2021—one month later—GameStop closed at an astonishing $347.51 per share, representing an 1,844 percent increase in share price. During those four weeks, there was no discernable change in the fundamental outlook of GameStop's business prospects that could explain or rationalize this kind of precipitous climb in the company's share price. However, had investors purchased the stock near the end of 2020, rode the so-called "Reddit Rebellion" to these heights, and closed out all GameStop positions on January 27, 2021, they would have made a substantial amount of money trading a stock that

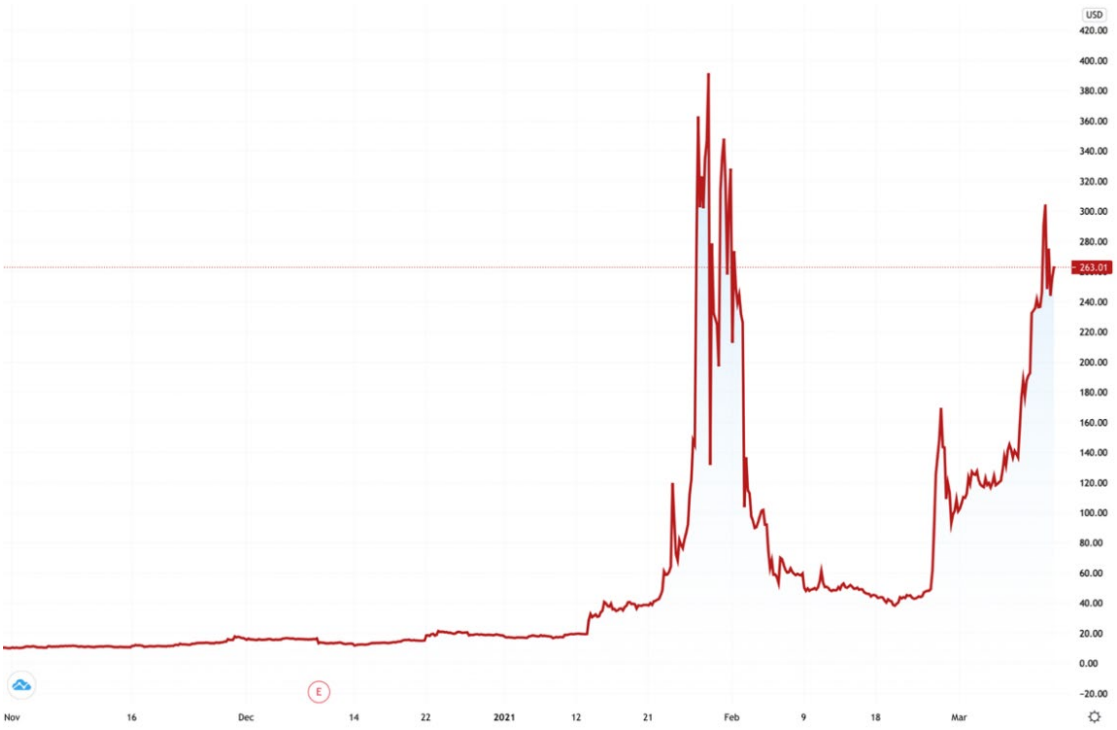
[5] To our knowledge, this phrase was first employed to describe the wholesale brokerage model in the U.S. treasury markets. *See* Thomas Jaffe, *Getting between the wall and the wallpaper* (Oct. 20, 1997), *available* at https://www.forbes.com/forbes/1997/1020/6009066a.html#7d354a61363d.

some analysts viewed as sliding slowly but surely towards the fate of Blockbuster Entertainment, Inc.—bankruptcy and liquidation.[6]

However, it must be remembered that for each person that did buy low and sell high, someone else was buying high—and often very, very high—before an ensuing and breathtaking price plummet. Many (possibly most) investors (some living by the investment philosophy that "you only live once" ("YOLO")) found themselves late to the revelry, buying at an inflated price, and thus adversely affected by a precipitous decline in the GameStop share price (as they frequently indicated on Reddit and elsewhere). Only six trading days after the late January peak, on February 4, 2021, GameStop closed at a mere $53.50 per share, representing a staggering $429.50 per share retreat from its intraday peak of $483.00 on January 28, 2021. Any investor that purchased GameStop in late January 2021 for fear of missing out ("FOMO") on the speculative fervor and held that position for a single week would have experienced massive, potentially ruinous losses.

Figure 1.

GameStop Price November 2019 to Present
(Closing Prices)



Source: Trading View, As of Wednesday, March 10, 2021

[6] I am not a stock analyst. However, as our February 16, 2021 letter to the Committee points out, even a rudimentary review of GameStop's financial and business prospects before the meteoric rise of its stock price would have yielded the following conclusions: GameStop was bleeding revenue in 2019 and 2020; it was closing stores with little to no prospects of re-opening them, and that was before the COVID-19 pandemic kept most people away from the types of public places where many of GameStop's stores are located; and its basic business—that of renting and selling hard-disk video games—was under threat from the new generation video game consoles that were no longer equipped with hard-disk readers and instead required gamers to digitally download or stream the games. *See* Better Markets' Letter to M. Waters, Chairwoman of the House Financial Services Committee, et al., *Re: Critical Issues to Address in the February 18, 2021 Hearing: "Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide"* (Feb. 16, 2021), *available* at https://bettermarkets.com/sites/default/files/Critical%20Issues%20to%20Adress%20in%20the%20Game%20Stop%20Hearing.pdf.

Yet, had the same FOMO investor simply held GameStop for one more month, his or her position would have been resurrected by GameStop's subsequent and inexplicable increase to an intraday high of $348.50 as of Wednesday of last week, the very same trading day that the stock then dropped 40 percent in just 25 minutes.[7]

It is difficult to determine precisely how YOLO, FOMO, and everyday investors fared throughout this unprecedented GameStop volatility,[8] but countless investors undoubtedly lost hundreds of millions, if not billions, of dollars in aggregate.[9]

B. Harms to Markets: GameStop-like trading frenzies damage investor confidence and undermine the fundamental purposes of the securities markets.

The detrimental effects of the extraordinary GameStop volatility over the last two months are not limited to losses experienced by day traders and longer-term investors in the company (and it is important to distinguish the effects on these and other categories of market participants). Such dramatic and unfounded volatility also damages investor confidence broadly and undermines the critically important purposes of the securities markets.

Working families most often build their wealth through home ownership and indirect and direct securities investments,[10] so the policy discussion concerning the integrity of the securities markets is nothing less than a discussion about wealth creation, standards of living, social mobility, economic opportunity and security, retirement dignity, the pursuit of happiness, and ultimately, the ability to achieve the American Dream.

1. GameStop-like trading frenzies must be analyzed for their effects on the financing and signaling purposes of the securities markets.

---

7 *See* J. Pound, *GameStop drops by 40% in 25 minutes*, CNBC (Mar. 10, 2021), *available* at https://www.cnbc.com/2021/03/10/gamestop-surges-40percent-then-wipes-out-gain-completely-and-is-halted-again.html.

8 The performance across Robinhood's accounts likely would be a fairly good proxy for retail investor performance in GameStop over the described time period. Robinhood should be able to determine—and report to the Committee on—the median and average losses in investor accounts that found themselves on the wrong side of the GameStop trading. That statistic must be isolated to individual accounts with negative performance, as the gains experienced by certain investors could obscure the detrimental effects of the GameStop frenzy on other investors. In his testimony before this Committee, Robinhood's Chief Executive Officer instead cited the misleading statistic that "[t]he total value of our customers assets on Robinhood exceeds the net amount of money they have deposited with us by over $35 billion," which says nothing about risk-adjusted returns, time horizons, or the percentage of assets obtained through credit arrangements rather than deposits.

9 Notwithstanding a current lack of reliable data on the full extent of GameStop trading losses, media reports and Reddit posts have provided numerous anecdotes about everyday investors who were caught up in the frenzy and lost sums that were significant to their families. *See, e.g.,* D. Harwell, *As GameStop stock crumbles, newbie traders reckon with heavy losses*, Washington Post (Feb. 2, 2021), *available* at *https://www.washingtonpost.com/technology/2021/02/02/gamestop-stock-plunge-losers/; see also* R. Ensign, *GameStop Investors Who Bet Big—and Lost Big*, Wall Street Journal (Feb. 15, 2021), *available* at https://www.wsj.com/articles/gamestop-investors-who-bet-bigand-lost-big-11613385002; s*ee also* M. Phillips et al., *The Hopes That Rose and Fell With GameStop*, New York Times (Feb. 7, 2021), *available* at https://www.nytimes.com/2021/02/07/business/gamestop-stock-losses.html.

10 Private-sector defined contribution retirement plans alone, like company-sponsored 401(k)s, cover more than 100 million Americans and hold securities with a value of at least $8.8 trillion. *See, e.g.,* Vanguard, *How America Saves* (2020), at 7, *available* at https://institutional.vanguard.com/ngiam/assets/pdf/has/how-america-saves-report-2020.pdf. In addition, defined benefit (pension) plans, mutual funds and securities held in private brokerage accounts, and government savings programs, like the federal thrift savings plan, provide tens of millions of individual workers exposure to the U.S. securities markets as well.

The securities markets—the markets for stocks (business ownership) and bonds (credit)—serve as the cornerstones of the U.S. financial system. In essence, the securities markets are both financing and signaling markets.[11] They are ***financing*** markets because they allocate the hard-earned savings of working families to businesses in need of capital to fund expansions, create jobs, invest in research and development, and ultimately produce goods and services for consumers and, ideally, serve as the engines of useful innovation. The phrase, "primary markets," is often used as shorthand to describe securities activities that serve this fundamental financing function—providing an avenue for people and businesses to get the capital they need to turn their ideas into a reality.

The securities markets are also ***signaling*** markets because they facilitate a price discovery process for ownership and debt interests in companies through competitive trading. This process provides vital information on investor sentiment with respect to the commercial prospects of specific firms, ideas, and business sectors. Through that informational mechanism, trading in securities markets affects not only the allocation of investments across our economy but also the cost of capital to businesses in need of it. The phrase, "secondary markets," is often used as shorthand to describe trading activities involving securities that already have been issued to raise funds.

If secondary markets are liquid, efficient, fair, orderly, and stable (*i.e.*, equitably and reliably facilitate the purchase or sale of securities with minimal effort and transaction costs), investors are more likely to participate in them, increasing the informational value of trading and encouraging the allocation of capital to useful purposes. In such conditions, the securities markets also are less costly for investors who can easily exit investments and reallocate savings, which increases the willingness of such investors to enter the securities markets in the first place. Illiquid, inefficient, unfair, disorderly, or unstable markets undermine the public confidence necessary to attract and maintain investor participation, thereby limiting the value of information derived from secondary trading, distorting capital allocation and costs across the U.S. economy, and ultimately, constraining the capital formation critical to job creation and U.S. economic growth.

2. <u>Public confidence is damaged and the core purposes of the securities markets cannot be achieved when securities, like "meme" stocks, routinely experience inexplicably dramatic swings in prices.</u>

Congress must keep in mind the financing and signaling purposes of the securities markets as it scrutinizes GameStop-like trading frenzies. Nothing in modern markets occurs in a vacuum. If securities, like "meme" stocks, have inflated prices that deviate substantially from any semblance of the fundamental values of the underlying companies, investors may re-allocate and misallocate their investments and savings. This, of course, adversely affects companies that investors do not invest in as well as the companies from which investors divest. But it also affects companies that experience dramatic inflows, and equally dramatic outflows, of gambling-like speculative investments. Rampant gambling-like speculation in the nature of recent GameStop events skews capital allocation and costs across the markets, distorts future capital raising by the affected companies, and influences corporate decisions relating to everything from the size of the company's workforce to the location of business operations to the choice of corporate leadership.

The longer-term consequences arising from a lack of confidence in the markets, however, could be that investors simply forgo investing in securities. That result would simultaneously diminish an already too-limited avenue for wealth creation and a critical source of business funding. In all likelihood, that result

[11] A considerable academic literature discusses secondary and tertiary purposes of the securities markets. In addition, many academics describe these functions with different terminology. Nevertheless, the purposes of the securities markets are, in essence, those described.

also would make businesses even more reliant on the small number of too-big-to-fail banks already too interconnected with the financial system, already too dominant in numerous aspects of the financial markets infrastructure, and already too economically and politically powerful. On the other hand, working families may find themselves with the unfortunate, unfair, and unenviable choice of investing in what they perceive as a rigged "game" (with rules that are not well understood and advantage other participants) or not investing at all and thereby jeopardizing their families' opportunity to secure an already too concentrated share of U.S. economic growth.

These concerns are about the preservation of market integrity and are therefore largely neutral as to the directional exposures assumed in frenzied trading. Feverish short-selling and a collapse in share prices after chaotic purchasing each can lead to seriously adverse consequences. In either case, the effects may harm not only employees and existing investors but the families of those employees and investors, the businesses they frequent, suppliers of those businesses, and indeed, the entirety of the communities in which they live.

II. The conflicts of interest, market frailties, and market design flaws that encourage, facilitate, and increase harmful and dangerous gambling-like speculative trading must be eliminated.

The market structure and other issues highlighted by the recent trading in GameStop and other securities must be investigated and examined.[12] As discussed below, although unlawful practices must be addressed and the regrettably lax supervision of certain market practices, firms, and, intermediaries must be improved, the law may also need to be clarified and strengthened in certain respects to address longstanding and significant deficiencies in the structure of the financial markets and the regulatory framework that governs them.

A. Payment for Order Flow: The practice of payment for order flow costs investors billions of dollars, siphons trading away from transparent exchanges, and presents significant risks to markets.

The frenzied trading in GameStop and other so-called "Reddit Rebellion" equities has brought attention to longstanding equity market structure issues. In particular, retail broker-dealer order routing practices have—again—come under regulatory and public scrutiny. In 2020, Robinhood reportedly received $687 million dollars[13] in so-called "rebates" for essentially selling its customer orders to seven high frequency trading firms ("HFTs") that serve as its executing broker-dealers *(i.e.*, the HFTs that execute or facilitate execution of Robinhood's customer orders).[14] These "rebates" or kickbacks, called "payment for order flow" ("PFOF"), are used by nearly all of the supposedly "commission-free" retail broker-dealers (*e.g.*, Robinhood, E-Trade, Schwab/TD Ameritrade) who receive a significant volume of securities orders

---

[12] As this Committee knows, we discussed a number of issues in our February 16, 2021 letter to the Committee prior to the first hearing on these events. *See* fn. 6 *above*. Better Markets also prepared a number of other documents analyzing issues related to the GameStop events. *See, e.g.,* Better Markets, *Everything You Need to Know about the House Financial Services Committee Hearing on GameStop, Robinhood, Citadel, Reddit, Roaring Kitty & Rigged Markets* (Feb. 16, 2021), *available* at https://bettermarkets.com/blog/everything-you-need-know-about-house-financial-services-committee-hearing-gamestop-robinhood.

[13] *See* P. Rudegeair et al., *Robinhood's Reckoning: Facing Life After GameStop*, Wall Street Journal (Feb. 5, 2021), *available* at https://www.wsj.com/articles/robinhoods-reckoning-can-it-survive-the-gamestop-bubble-11612547759.

[14] According to Robinhood's order routing filings, these seven HFTs are Citadel Execution Services; Virtu Americas, LLC; Two Sigma Securities, LLC; G1X Execution Services, LLC; Wolverine Securities, LLC; Wolverine Execution Services, LLC; and Morgan Stanley & Co. LLC.

from Main Street investors.[15] PFOF across all retail broker-dealers in 2020 was reportedly at least $2.6 billion.[16]

Logically, HFTs were willing to rebate $2.6 billion to retail broker-dealers because the execution of customer orders from firms like Robinhood generated significant net trading profits to those HFTs. ***The most pertinent question, however, is not whether the HFTs make money from customer order flow or share profits with the routing retail brokers but whether everyday investors end up worse off in a material number of securities transactions routed to specific HFTs because of PFOF***. As the SEC has found, and despite often inaccurate or incomplete HFT-industry claims to the contrary, the only valid answer to this question is "yes."

Better Markets published both a short fact sheet and a long primer that explain the nuances and complexities with respect to PFOF. Rather than re-addressing the full scope of PFOF issues in this testimony, I have attached those documents as **Appendix A** and **Appendix B**. In addition, I have created a series of slides to show how PFOF works and why it does not and cannot result in ***actual best execution*** for retail investors. In fact, PFOF virtually guarantees that retail investors will not get best execution if that is understood to be the best available price in the markets at the time of a trade. Those slides are attached as **Appendix C**.

However, the Members of this Committee should know the following essential facts about PFOF.

1. **PFOF presents clear conflicts of interest that cannot be adequately mitigated by disclosure and best-execution requirements.**

First, PFOF creates clear conflicts of interest between the following:

(1) A retail broker-dealer's duty to seek the actual "best execution" available for customer orders; and

(2) A retail broker-dealer's duty and desire to maximize its own profits for shareholders and/or owners through PFOF revenues generated by preferentially routing transactions to select HFTs.

These conflicts of interest, in practice, have been found to affect order routing decisions and harm Main Street investors. This is evidenced, for example, by a recent SEC enforcement action in which the SEC found that Robinhood executives internally reviewed the firm's order routing practices, determined that limiting order routing to the PFOF executing dealers (HFTs) was harming its customers, and yet, continued to preferentially route orders.[17] ***Robinhood paid a $65 million civil monetary penalty for failing to disclose***

[15] As noted in our February 16, 2021 letter to the Committee, legislators and regulators should analyze the impact of broker claims of "commission-free trading," which are too often heard and understood by reasonable investors as "free trading." Put differently, claims of "commission-free trading," without more, may be materially misleading to reasonable investors and, if they are, the SEC should put an end to such misleading marketing.

[16] *See* A. Osipovich, *GameStop Mania Drives Scrutiny of Payments for Online Brokers*, Wall Street Journal (Feb. 4, 2021), *available* at https://www.wsj.com/articles/gamestop-mania-drives-scrutiny-of-payments-to-online-brokers-11612434601.

[17] *See* SEC, *In Re Robinhood Financial*, Order Instituting Administrative and Cease and Desist Proceedings (Dec. 17, 2020) *available* at https://www.sec.gov/litigation/admin/2020/33-10906.pdf (finding that "Robinhood had conducted a[n] . . . extensive internal analysis that found Robinhood's execution quality and price improvement metrics were substantially worse than other retail broker-dealers' in many respects, and [that] senior Robinhood personnel were aware of this analysis" and further finding that Robinhood executives knew that "the percentage of orders that received price improvement and the amount

these PFOF and order routing practices to its customers. The facts are damning and seem to indicate that the firm intentionally concealed the adverse effects of PFOF from its customers.[18]

The SEC and its professional staff have long recognized the inherent the conflicts of interest associated with PFOF. In a recent Memorandum to the SEC's Equity Market Structure Advisory Committee, the SEC's Division of Trading and Markets bluntly summarized the SEC's view, in part, as follows:

> The Commission has stated that the existence of payment for order flow raises the potential for conflicts of interest for broker-dealers handling orders.[19]

In the same Memorandum, the Division noted the reason that HFTs are willing to pay so much for retail order flow:

> Market makers [Executing Dealers/HFTs] are interested in retail customer order flow because ***retail investors are, on balance, less informed than other traders about short-term price movements***.[20]

The Division also emphasized that the "economic incentives" associated with PFOF "create potential conflicts of interest with a broker's duty of best execution and may cause observers to question the rigor with which a broker seeks to obtain the best execution for its customer orders."[21] The Division went even further, however, in suggesting the following:

> ***[I]n the absence of payment for order flow, market makers [Executing Dealers/HFTs] could have incentives to quote more competitively, in which case customers could receive even better prices for their orders***.[22]

Furthermore, after studying the issue for years, the SEC's Division of Trading and Markets expressly stated the following:

> One option to address concerns with [PFOF] would be to prohibit this practice on the grounds that it presents a conflict of interest too significant to be adequately addressed by disclosure and best-execution obligations.

Nevertheless, the SEC has not since that time changed its longstanding policy views that (1) disclosure alone can adequately address the clear conflicts of interest presented by PFOF; and (2) "a broker-dealer does not necessarily violate its best-execution obligation merely because it receives payment for order

---

of price improvement, measured on a per order, per share, and per dollar traded basis" were "substantially worse than other broker-dealers").

18 Robinhood did not admit or deny the SEC's findings in connection with that enforcement action. *Id* at 1.

19 *See* Memorandum to the Equity Market Structure Advisory Committee ("EMSAC") from the SEC Division of Trading and Markets, *Certain Issues Affecting Customers in the Current Equity Market Structure* ("EMSAC Memo") (Jan. 26, 2016), at 7-10, *available* at https://www.sec.gov/spotlight/equity-market-structure/issues-affecting-customers-emsac-012616.pdf.

20 *Id* at 6 (emphasis added).

21 *Id.*

22 *Id.* (emphasis added).

flow."[23] The current Acting Chair appears open to continuing these PFOF policies, though she rightly has not committed to that course of action.[24]

The implicit faith in disclosure and best-execution requirements is misplaced, harmful, and plainly inconsistent with the realities of the marketplace. There is broad consensus that disclosures relating to PFOF are not sufficient, and I would add that the inevitable cleverly written legalese and carefully presented statistical information can never be sufficient, to mitigate harmful order-routing conflicts of interest. Furthermore, given the complexity of order routing (*see* **Appendix C**) and the information overload associated with click-through disclosures and financial and online activities in general, one could reasonably doubt whether retail investor disclosures would be read, much less capture in a meaningful way the fundamental risks and costs associated with PFOF.

On the other hand, as I discuss below, the regulatory standards governing "best execution" are multi-factor, malleable, and difficult for regulators to monitor, much less enforce, making them an inadequate mitigant for the conflicts of interest presented by PFOF. Indeed, as visually set forth in our Appendix C, PFOF virtually guarantees that retail investors will not get "best execution" if that is—as it should be—based on the best available price in the markets.

2. PFOF is both a *cause* and a *consequence* of the needlessly fragmented system of created complexity that has become the hallmark of the U.S. equity market structure. It entrenches HFTs that internalize the vast majority of U.S. retail order flow and that may pose a systemic risk as well.

In addition to the harms inflicted directly on retail broker-dealer customers, PFOF takes retail trading activity (referred to as "liquidity") away from public securities exchanges and redirects that order flow to a very small number of HFTs that execute an alarming percentage of overall trading. In fact, PFOF entrenches approximately seven dominant HFTs that now "internalize" (*i.e.,* execute trades against their own securities inventory and incoming orders) the vast majority, if not ***almost all***, of the retail order flow in the United States. Citadel Securities alone advertises that it trades approximately 26% of U.S. equities volume across 8,900 U.S.-listed equities, executes approximately 47% of all U.S.-listed retail volume, and acts as a specialist or market-maker with respect to 99% of traded volume in 3,000 U.S.-listed options names.[25] ***The two largest HFTs involved in PFOF across the markets, Citadel Securities and Virtu Financial, together account for more of the U.S. equities trading market share than the New York Stock Exchange.***

Obviously, one implication of these facts is that any significant disruption to an HFT like Citadel Securities or Virtu Financial would shake markets and could quite possibly cause significant, widespread dislocations in many securities, if not ignite a catastrophe. For this reason, Better Markets believes that the Financial Stability Oversight Council ("FSOC") should consider designating HFTs serving as executing dealers and market-makers as systemically significant once they have a sufficiently critical market presence.

---

[23] *Id* at 7.

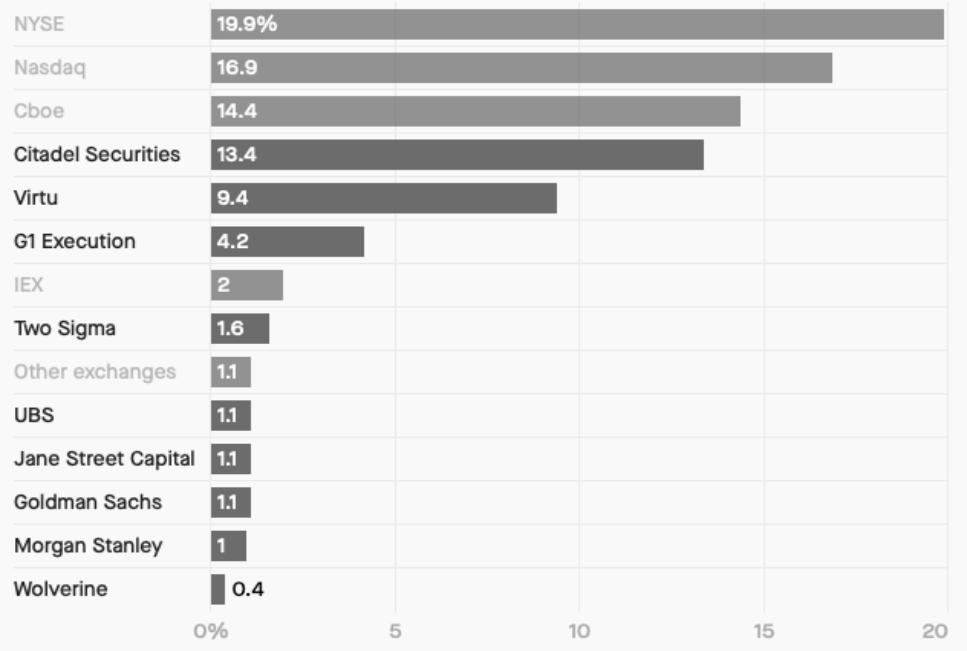
[24] *See* Letter from A. Herren Lee, SEC Chairwoman, to Senator E. Warren ("SEC Letter") (Feb. 25, 2021), at 4, *available* at https://www.warren.senate.gov/imo/media/doc/Warren%20-%20GameStop%20-%20ES159891%20Response.pdf ("I believe the Commission should examine the effects of certain firms receiving payment for access to their order flow to determine, among other things, whether these practices are properly and thoroughly disclosed and fully consistent with best execution obligations.").

[25] Citadel Securities, *Equities and Options*, Homepage (as of March 12, 2021), *available* at https://www.citadelsecurities.com/products/equities-and-options/.

The Knight Capital meltdown should be considered the canary in the coalmine in this regard. In 2012, Knight Capital Americas LLC ("KC") ***lost more than $460 million dollars in less than an hour*** from erroneously trading 397 million shares, resulting in $3.5 billion in accidental long positions in 80 stocks and $3.15 billion in accidental short positions in 74 stocks.[26] The episode was blamed on a "programming error." In the end, a mere 212 small retail orders resulted in the single largest trading loss arising from a so-called "glitch" in an order routing system.[27] There can be little doubt that a similar "glitch" in Virtu or Citadel Securities' order routing systems, for example, would significantly disrupt the equities markets, potentially causing a dangerous and costly systemic event.

Figure 2.

U.S. Stock Market Share by Trading Center
December 2020



Source: Quartz[28]

The second-order effects of PFOF are equally concerning. Because PFOF entrenches HFTs that primarily execute transactions through internalization and therefore has the effect of fragmenting liquidity and leaving exchanges largely outside of the retail order flow, the exchanges—for competitive reasons—are essentially forced into creating their own "rebate" programs (*e.g.*, maker-taker programs), order types, and trading protocols designed to benefit and attract the participation of the small number of dominant HFTs. These exchange inducements, in turn, further fragment, complexify, and distort order routing and the securities markets more generally.

---

[26] *See* SEC, *In the Matter of Knight Capital Americas LLC*, Securities Exchange Act of 1934 Release No. 70694, Administrative Proceeding File No. 3-15570, *available* at https://www.sec.gov/litigation/admin/2013/34-70694.pdf.

[27] *See* B. Eha, *Is Knight's $440 million glitch the costliest computer bug ever?*, CNN, *available* at https://money.cnn.com/2012/08/09/technology/knight-expensive-computer-bug/index.html.

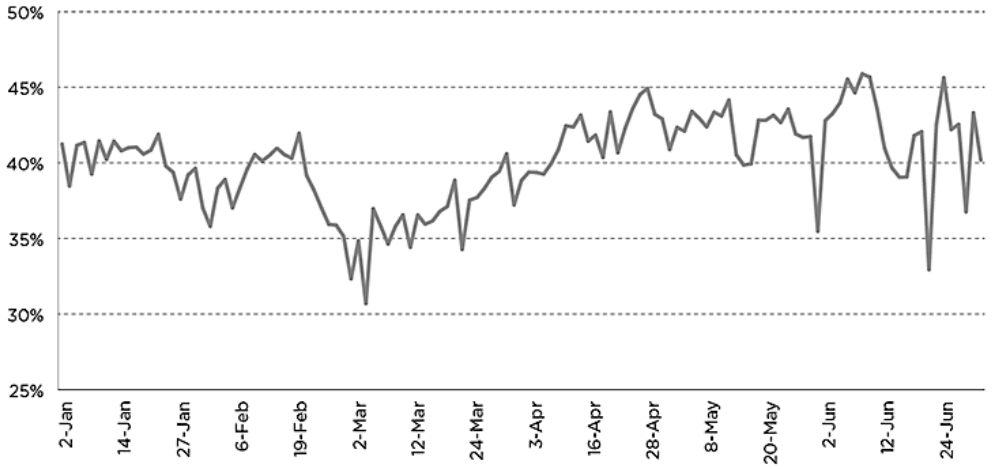
[28] *See* J. Detrixhe, *Citadel Securities gets almost as much trading volume as Nasdaq* (Feb. 5, 2021), *available* at https://qz.com/1969196/citadel-securities-gets-almost-as-much-trading-volume-as-nasdaq/.

Furthermore, such high levels of internalization structurally segment U.S. retail order flow in a manner that may increase market fragility, disincentivize resting orders on the exchanges, and widen quoted spreads, all of which adversely affect all investors in the securities markets. At any given time, approximately 47 percent of all U.S. stock market volume is traded away from transparent, regulated exchanges (*see* Figure 3 for figures during the first half of 2020) due to a combination of internalization, trading on alternative trading systems (dark pools), and trading through single-dealer platforms.[29] In certain securities, and at certain times, more than 50 percent of the trading in U.S. equities markets likely occurs in dark markets.

Retail trading volume through Robinhood and similar broker-dealers (like E-Trade and Schwab/TD Ameritrade) is internalized by HFTs at far higher rates than this, which means that retail trading representing as much as one-third of total U.S. equities trading volume (depending on the measurement period and securities in question[30]) essentially never interacts with orders on the securities exchanges.[31]

Figure 3.

Percentage of Average Daily Trading Volume in Equities Executed Away from Public Exchanges (January through June 2020)



Source: Greenwich Associates[32]

---

29 *See* Greenwich Associates, *U.S. Capital Markets Performance During COVID* (Q4 2020), at 11-12, *available* at https://www.greenwich.com/equities/us-capital-markets-performance-during-covid#simple-table-of-contents-2. *See also* CBOE, *U.S. Equities Market Volume Summary*, Five-Day Average (Mar. 15, 2021), *available* at https://www.cboe.com/us/equities/market_statistics/ (showing that the five-day average for on-exchange trading represented 53.15% of U.S. equities market volume, while off-exchange trading represented 46.75%).

30 *See* K. Martin et al., *Rise of the retail army: the amateur traders transforming markets* (Mar. 9, 2021), *available* at https://www.ft.com/content/7a91e3ea-b9ec-4611-9a03-a8dd3b8bddb5?accessToken=zwAAAXg4Zm0gkc96kePquexGEdOaA6jdO4vdtQ.MEQCIF3ZCaSkwhygMrMyyp35VAORqfs1e8FkiSmGGxAWHn-EAiBn6ElkZGEPwbEDEiVAvoBCJRyZM3C0LiSKbztTIpww_w&sharetype=gift?token=76b0447a-54cd-4601-89ee-34e358b17d47 (citing an estimate that retail investors constituted 23 percent of all U.S. equity trading in 2021 but noting that retail trading accounted for more than half of certain technology stocks in certain 2020 weeks).

31 *See* J. McCrank, *Factbox: The U.S. retail trading frenzy in numbers* (Jan. 29, 2021), *available* at https://www.reuters.com/article/us-retail-trading-numbers/factbox-the-u-s-retail-trading-frenzy-in-numbers-idUSKBN29Y2PW.

32 *See* fn. 29 *above*, Greenwich Associates, *U.S. Capital Markets Performance During COVID* (Q4 2020), at 11-12.

None of this accounts for the *on-exchange* trading that occurs through ***hidden*** order types and other trading protocols advantageous to the HFTs, which increasingly affect the reliability and permanence of "lit" trading interest. Those measures are a consequence, in part, of the structural segmentation of order flow and markets. The hidden volume rate alone—the total trade volume against hidden orders divided by the total trade volume—generally ranges from ten to thirty percent, depending on the exchange and measurement period. Some exchanges had a hidden volume rate that reached as high as 40 percent in January 2021.[33]

Thus, in today's markets, anyone leaving resting orders on the exchanges is denied the opportunity to interact with almost all of the retail order flow and is denied the opportunity to interact with about half of the market as whole. In addition to denying investors best execution and fragmenting liquidity, that makes both the internalized and public markets more vulnerable to frenzies, anomalous events, and disruptions.

Far from an ideal market structure in which the maximum number of buyers and sellers can find and interact with each other, ***this fragmentation serves only the interests of a handful of HFTs that have mastered gaming the market imperfections*** they not only created but also appear to exploit and perpetuate. As such, one can fairly characterize our securities markets as "rigged" to the advantage of a small number of dominant market participants and decidedly against retail investors and the buy side of the markets more generally.

In other words, PFOF is, in many ways, both a cause and a consequence of the needlessly fragmented system of created complexity that has become the hallmark of the U.S. equity market structure. Ultimately, PFOF and a series of other insidious market structure features and practices beyond the scope of my current testimony interfere with the fundamental purposes of the securities markets, including the promotion of capital formation, price discovery, and useful capital allocation across the markets.

PFOF's entrenchment of executing dealers/HFTs also contravenes a statutorily specified purpose of the national market system. In its 1975 amendments to the Securities Exchange Act of 1934, Congress explicitly stated that the national market system was intended to ensure "an opportunity . . . for investors' orders to be executed without the participation of a dealer."[34] Yet, for the reasons discussed, PFOF all but ensures the exact opposite.

3. <u>The industry-claimed "price improvements" from PFOF and internalization are at best misleading, and at worst outright false, because they are measured against the wrong benchmark, which understates the true costs to investors while significantly overstating the supposed benefits.</u>

The retail broker-dealers and HFTs claim that PFOF and preferential routing of retail order flow result in significant "price improvements" for customers. However, price improvement, by definition, must be defined relative to a benchmark—that is, the price must be *improved* relative to some other price. To put it simply, in the equities markets, price improvement is measured against the wrong benchmark—the so-called "national best bid or offer," or the "NBBO."

Despite its name, the NBBO frequently does not even represent the "best" bid or offer available on the public U.S. stock exchanges (never mind the best available price away from the exchanges or that

---

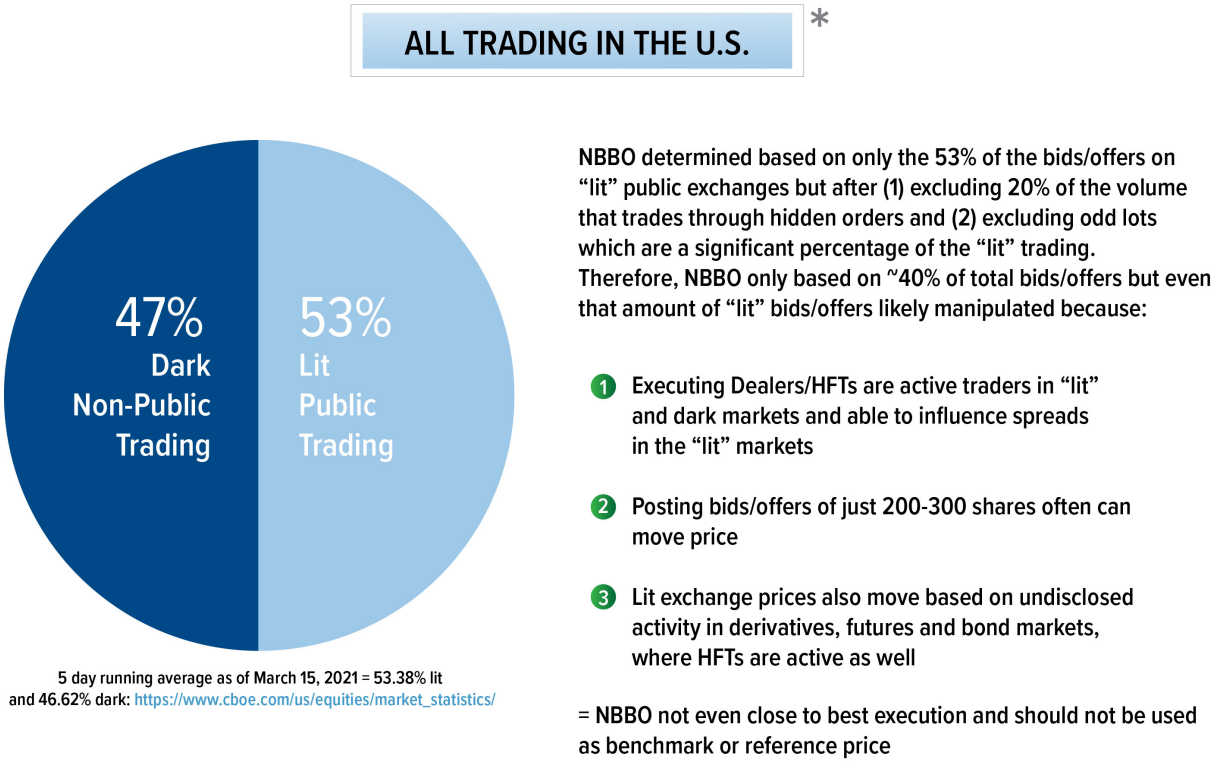
[33] SEC, *Select Metrics: U.S. Exchanges Hidden Rate (%)*, Market Structure, Data Visualizations (last accessed March 13, 2021), *available* at https://www.sec.gov/marketstructure/datavis/ma_exchange_hiddenrate.html#.YFAJBy1h2-w.

[34] *See* Sec. 11A, Pub. Law 94-29, 89 Stat. 112 (1975).

would be readily available on the exchanges in a market structure that prohibited PFOF and limited internalization). The NBBO is disseminated through a public data feed that consolidates executable orders across the U.S. stock exchanges. However, these exchanges facilitate only about 53 percent of the trading volume across the markets, which means that the trading interest leading to transactions in 47 percent of the market is excluded from the NBBO. For the remaining trading that does occur on-exchange, an estimated 20 percent is executed against hidden orders, which are also excluded from the NBBO.[35] And trading interest in the form of "odd-lot" orders (*i.e.*, in general, orders for less than 100 shares) is ***excluded*** from the NBBO as well, despite being ***regularly*** displayed at ***better prices than the NBBO*** in certain categories of securities.

Figure 4.

Breakdown of Dark Non-Public Trading and "Lit" Public Trading, Impacts on the NBBO



Source: CBOE[36] (*See* **Appendix C**, Slide 6)

[35] The hidden volume rate, as we mentioned above, generally ranges from ten to thirty percent, depending on the exchange and measurement period. *See* fn. 33 *above*.

[36] *See* CBOE, *U.S. Equities Market Volume Summary* (accessed March 15, 2021), *available* at https://www.cboe.com/us/equities/market_statistics/.

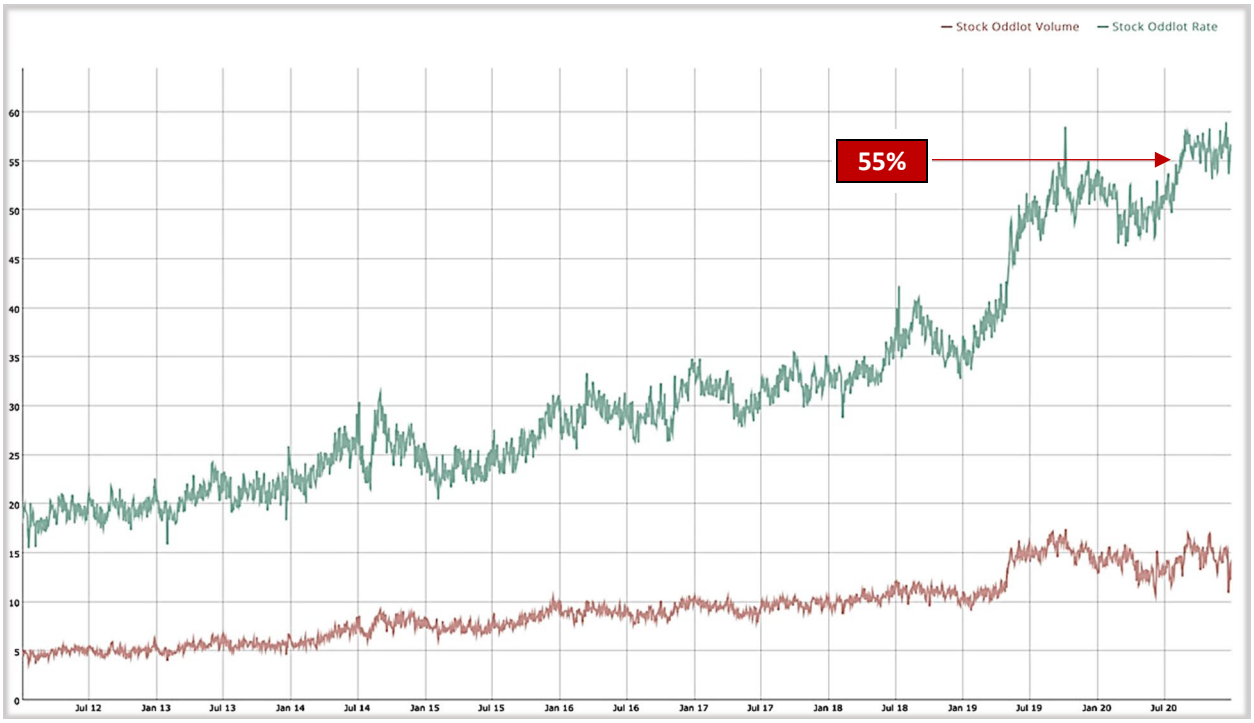
Better Markets explains some of the technical issues associated with the NBBO in its fact sheet and primer on PFOF (attached as Appendix A and Appendix B) and I will not, therefore, repeat that here.

However, there are two critical takeaways worth mentioning:

(1) The ***exclusion*** of odd-lot pricing information from the NBBO makes the NBBO inaccurate and misleading in light of the multi-year trend towards increased odd-lot trading across the markets.[37] In recent months, the odd-lot rate—which is the total number of odd-lot equity trades relative to the total number of equity trades—has exceeded 55%, which strongly suggests that a material percentage of trading interest is quoted in odd lots across the markets. For stocks priced above $500 per share, odd-lot orders have been superior to the NBBO as often as 75% of trading days.[38]

Figure 5.

Stock Odd Lot Volume and Stock Odd Lot Rate
(July 2012 through January 2021)



Source: U.S. Securities and Exchange Commission[39]

---

37 A combination of factors, including technological developments and the related expansion of retail trading, likely has led to the increase in the use of odd lots to trade securities. The term "odd-lot" means any order for a number of shares that does not constitute a "round lot." Until recently, the term "round lot" usually meant an order for 100 shares, but the SEC recently set forth smaller round lots in certain equity categories.

38 *See* B. Redfearn, Former Director of the Securities and Exchange Commission's Division of Trading and Markets, *Equity Market Structure 2019: Looking Back & Moving Forward* (Mar. 8, 2019), *available* at https://www.sec.gov/news/speech/clayton-redfearn-equity-market-structure-2019#_ftnref31.

39 SEC, *Select Metrics: Odd Lot Rate (%) and Old Lot Volume*, Market Structure, Data Visualizations (last accessed March 13, 2021), *available* at https://www.sec.gov/marketstructure/datavis/ma_overview.html#.YEwtfC1h2-y.

(2) The most active market-makers on the exchanges also are the most active HFTs (executing dealers and internalizers) capturing retail order flow. This means that the claimed price improvement achieved through internalization is measured against a benchmark that is materially influenced by firms that are simultaneously internalizing against the spreads on the exchanges and engaging in market-making and other trading activities that influence the spreads. This may incentivize HFTs to quote wider spreads in the public securities markets from time to time (in their market-making capacity) that can be exploited to capture as much of that spread as possible in the private, internalized securities markets (in their executing dealer capacity).[40] This is yet another blatant conflict of interest in a critical part of today's equity market structure.

The lack of odd-lot and other data in the NBBO also enables the HFTs and others to inflate and protect their profits by purchasing proprietary data from the exchanges and taking advantage of various forms of privileged access to the securities markets, both of which enable the seven dominant HFT firms to ***simultaneously, profitably, and regularly trade inside the NBBO*** in a manner that few others can. PFOF is profitable only because the HFTs are able to share some of the billions of dollars they pocket by claiming price improvement against the NBBO, while trading at prices "inside" of the NBBO and engaging in other inefficient and under-the-radar wealth extraction activities that are beyond the scope of my current testimony.

4. <u>The SEC and the Office of Financial Research ("OFR") should undertake a robust, comprehensive, and data driven study of PFOF and submit a public report to the Committee.</u>

All of this opaque, needless created complexity enables systematic, secret wealth extraction from the buy side by the sell side. Indeed, this is little more than a destructive multi-billion dollar "hidden tax" (likely significantly exceeding $10 billion) on the execution of retail customer orders.[41] The actual retail execution costs and detrimental spillover effects on the markets as a whole far outweigh any of the claimed benefits to investors associated with so-called "commission-free trading" (which would likely remain for competitive reasons even in the absence of PFOF and in fact, exists today for a number of retail broker-dealers, like Fidelity, that do not avail themselves of PFOF for equity orders).[42]

Furthermore, Congress must remain deeply skeptical of the disingenuous argument that retail investors have "never had it better," which has essentially nothing to do with PFOF and ignores the genuine causes of increased market access and narrowing spreads over the last 25 years, namely technological innovations and cost reductions, the introduction of electronic trading, and implementation of decimalization and other elements of the Regulation NMS framework.

---

[40] There is some empirical evidence that this is exactly what is occurring. *See* G. Eaton et al., *Zero-Commission Individual Investors, High Frequency Traders, and Stock Market Quality*, SSRN (Feb. 1, 2021), *available* at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3776874.

[41] The SEC is in a unique position to do a data-driven study on the extent of this "hidden tax" and Congressional oversight committees should demand that they do so immediately and publicly release a report.

[42] According to Fidelity's review of order routing filings in 2020, the dollar value of price improvement on its customer ***trades***—a measure that reveals the overall monetary improvement on executed orders—beat the industry average by more than $14 for order sizes of at least 1,000 shares. In 2021, a $14 *implicit* commission for an order of that size is much greater than the explicit commission that would have been assessed before the advent of so-called "no-commission" trading. *See* Fidelity, *Dollar Value of Price Improvement: Fidelity Price Improvement vs. industry average for period between January 1, 2020, and December 31, 2020* (last accessed March 13, 2021), *available* at https://www.fidelity.com/trading/execution-quality/overview. It is in Fidelity's commercial interest to make such findings, of course, which is why Better Markets is asking the Committee to call on U.S. regulators, including the SEC, to conduct an independent, impartial, and comprehensive review of PFOF's influence on execution quality, market structure, and related issues.

Given that the conflicts of interest and misaligned incentives that fuel PFOF cannot be mitigated to adequately protect investors and given the SEC's inexplicable reluctance to ban practices that result in retail investors not receiving best execution, the Committee should explore legislative solutions that would prohibit the PFOF and address related equity market structure concerns necessary to make such a prohibition effective.[43] In connection with that legislative process, the Committee should ask the SEC and OFR to undertake a study of the following and to submit a public report to this Committee detailing all findings, data, and recommendations with sufficient granularity that independent professionals could validate the findings:

- Whether PFOF provides demonstrable, material benefits to retail investors, individually and in the aggregate, that sufficiently outweigh the known execution costs associated with the practice;

- Whether retail broker-dealers choosing not to route customer orders to executing dealers and therefore choosing to forego PFOF revenue obtain superior execution on customer orders and yet have a sustainable retail business model;

- Whether execution quality increased subsequent to prohibitions on PFOF in other jurisdictions;

- Whether order routing incentives at exchanges and other trading venues further incentivize inferior executions through rebate schemes and/or order execution practices intended to benefit market-makers;

- Whether retail broker-dealers receive higher PFOF "rebates" for certain types of orders and financial instruments, and whether broker-dealers promote more profitable order types and financial instruments to a greater degree than other types of orders and financial instruments, all to the detriment of retail investors;

- Whether smart order routers of retail broker-dealers should be permitted to discriminate against market centers that do not provide PFOF;

- Whether executing dealers providing PFOF to retail broker-dealers should be (1) prohibited from internalizing trades at the NBBO and (2) required to internalize only at a material price improvement to the NBBO; and

- Whether in addition to a prohibition on PFOF, retail order flow should be required to be routed to the exchanges in lieu of internalization and if so, whether other regulatory changes would need to accompany such a rule to protect investors and avoid adverse consequences (*e.g.*, revisions to regulatory standards for exchange fees, rebate programs, and order execution protocols).

B. Best Execution: The "best execution" standard and the "best available" price for securities are far more subjective than the industry claims. In addition, best-execution requirements do not sufficiently address the conflicts of interest associated with PFOF.

The SEC and FINRA have adopted "best execution" regulatory frameworks ostensibly to protect retail customers by limiting broker-dealer discretion with respect to the routing of customer orders. These

[43] *See* Better Markets, *"Payment for Order Flow: How Wall Street Costs Main Street Investors Billions of Dollars through Kickbacks and Preferential Routing of Customer Orders"* (Feb. 16, 2021), *available* at https://bettermarkets.com/sites/default/files/documents/Better_Markets_Payment_for_Order_Flow_Long_02-21-2021.pdf.

frameworks are a recognition of the fact that many broker-dealers face significant conflicts of interest in their order routing practices, including conflicts presented by PFOF arrangements.

The duty of best execution, in essence, requires that broker-dealers route customer orders in a manner that will result in the best execution reasonably available under prevailing market conditions. In practice, however, the duty of best execution has been reduced to a ***general*** requirement—applicable to all of a broker-dealer's customer orders ***in the aggregate***—to periodically assess which order routing practices offer the most favorable terms of execution under the circumstances. This once practical standard does not reflect the reality that, today, retail order routing decisions can be assessed on an automated trade-by-trade basis for much, if not all, of the market.

In assessing best-execution requirements and practices, broker-dealers are permitted to consider multiple factors in their periodic assessments of execution quality, and among those many factors are whether order routing practices:

a. Present an ***opportunity*** for price improvement—even if order routing practices do not actually improve prices in a material number of transactions;

b. Increase execution certainty; or

c. Increase the speed of execution.

Under this subjective multi-factor test, the best execution standard is exceedingly difficult to monitor, much less enforce, in part because the SEC, FINRA, and the courts historically have been reluctant to impose best-execution requirements that would require broker-dealers to affirmatively connect to as many market centers as is necessary to provide retail customers a "best" available price. These deficiencies are significantly compounded by the explicit acknowledgement of (the equally conflict-ridden) FINRA that broker-dealers can and indeed should consider PFOF as part of their analysis of execution quality, though not "unduly."[44] These facts also highlight yet additional drawbacks arising from the fragmentation of our markets.

In short, the SEC and FINRA's best-execution requirements, while critical, have not kept pace with order-routing technology or practices and are too malleable to mitigate the conflicts of interest presented by PFOF arrangements. At a minimum, PFOF presents material conflicts of interest that the best execution standard—as currently drafted, interpreted, and applied—does almost nothing to mitigate. Worse, because the SEC and FINRA best-execution framework is used to justify reliance on the NBBO as the benchmark for price-improvement statistics, it provides broker-dealers with regulatory cover to mislead investors (as detailed above and in Appendix C).

Perhaps not surprisingly, Robinhood is one of the relatively few broker-dealers that have been found by the SEC and FINRA to have engaged in order-routing practices so egregious that they failed a

[44] Consider the FINRA's supplementary material explaining requirements relating to the "regular and rigorous review of execution quality" under FINRA Rule 5310: "In reviewing and comparing the execution quality of its current order routing and execution arrangements to the execution quality of other markets, a [broker-dealer] member should consider . . . the existence of internalization or payment for order flow arrangements." FINRA's guidance should state, of course, that broker-dealers ***should not consider*** PFOF when conducting regular and rigorous execution quality reviews. Yet, compounding the inexplicable directive to consider PFOF, FINRA Regulatory Notice 15-46 also provides that order routing should not be "unduly influenced" by access fees and rebates," meaning it ***can*** be influenced by PFOF as long as it is not "unduly" influenced—whatever that means. *See* FINRA Regulatory Notice 15-46, *Guidance on Best Execution Obligations in Equity, Options, and Fixed Income Markets* (Nov. 2015), *available* at https://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_15-46.pdf.

best-execution standard that is almost by design exceedingly difficult to fail.[45] Even then, the SEC (1) only charged Robinhood with disclosure violations and not substantive fraud violations, which appear to have been amply supported based on the facts in the SEC's order; and (2) did not charge any individuals, even though facts concerning the conduct of individuals at Robinhood (as identified in the order) would appear to merit consideration of individual charges.

In connection with the PFOF study mentioned above, the Committee should direct the SEC and OFR to re-examine best-execution obligations and the enforcement of existing rules and provide findings, data, and recommendations relating to the following:

- Whether the SEC and the FINRA have sufficient order routing and execution visibility to permit comparisons of execution quality and ensure compliance with the best-execution standard;

- Whether SEC and FINRA regulations and guidance requiring regular and rigorous execution quality reviews by retail and executing broker-dealers sufficiently protect investors, and whether trade-by-trade analyses and testing programs should be required for many, if not all, orders routed and executed on an automated basis;

- Whether the multi-factor best execution standard should apply to the most active retail broker-dealers in lieu of a standard more strictly focused on pricing;

- Whether the multi-factor best execution standard is appropriately enforceable; and

- Whether so-called "price improvement" metrics should benchmark against the NBBO, given the prevalence of internalization and the exclusion of significant order flow (*e.g.*, hidden and "odd-lot" order flow) from the NBBO at this time.

C. Gamification: Trading is being gamified to increase trading and maximize profits for executing dealers/HFTs, like Citadel Securities, and retail brokers, like Robinhood, not to "democratize" financial markets or provide retail traders with the same opportunities as professional traders.

Two congressional hearings have now discussed the issue of so-called "gamification." What is fairly well understood at this point is that Robinhood almost perfected the "gamification" of trading by incorporating addictive, endorphin-engendering game features of more benign apps into its trading app for the purpose of triggering more trading, more often, and more thoughtlessly.[46] Thus, Robinhood has taken

[45] *See* SEC, *In Re Robinhood Financial*, Order Instituting Administrative and Cease and Desist Proceedings (Dec. 17, 2020) *available* at https://www.sec.gov/litigation/admin/2020/33-10906.pdf (finding that "Robinhood had conducted a[n] . . . extensive internal analysis that found Robinhood's execution quality and price improvement metrics were substantially worse than other retail broker-dealers' in many respects, and [that] senior Robinhood personnel were aware of this analysis" and further finding that Robinhood executives knew that "the percentage of orders that received price improvement and the amount of price improvement, measured on a per order, per share, and per dollar traded basis" were "substantially worse than other broker-dealers").

[46] *See* Letter from R. Cook, FINRA, to Senator E. Warren ("FINRA Letter"), at 4-6 (Feb. 23, 2021), *available* at https://www.warren.senate.gov/imo/media/doc/FINRA%20Response.pdf (emphasizing that "[w]hile some of these [game-like] offerings may be designed to better enable the delivery of information to investors or to improve investor access to firm systems and investment products and services, they may also result in increased risks to customers if not designed with appropriate compliance considerations in mind, raising important regulatory questions, such as:

- *Advertising and marketing*. Are a member broker-dealer's communications to investors – regardless of format and technology – in compliance with FINRA's rules regarding communications with the public?

an activity—investing and risking money—that ideally requires thought, diligence, analysis, and financial wherewithal and imbued it with rapid, seemingly low-consequence, and fundamentally recreational game-playing attributes. Needless to say, investing in markets is not a game but involves the gain and loss of potentially life-changing sums of money, often in a very short period of time.[47]

However, what is not as well understood is that Robinhood's gamification of trading is part of a business model dependent on revenues derived from PFOF and margin accounts, and these revenues, in turn, depend on customers engaging in as much trading as possible. Despite the detrimental effects on individual investors using the trading platform, exchanges, and the investing public as a whole, Robinhood has figured out that providing "commission-free" and game-like trading facilitates the extraction of revenue from its customers because of the well-known economic reality that consumers will use more of a good or service believed to be "free." That is even more the case when the ostensibly free product is packaged to induce addiction.

In other words, providing "commission-free" and game-like trading is not an altruistic endeavor designed to "democratize access to the financial markets" and make trading more "delightful" to app users. It is a profit-maximizing business strategy that, in essence, is designed to induce customers to trade repeatedly and thoughtlessly, which, of course, presents more opportunities for a handful of HFTs to internalize those trades at a profit and share those profits with Robinhood via PFOF.

If Robinhood were interested in democratizing access to the financial markets and creating a level playing field for everyday investors, it would have, at a minimum, explained these irrefutable facts plainly and clearly to its customers, disclosed the true costs of preferential order routing, and shared the derived revenues with its "customer" base. Instead, it has for years used its customers as a product to be sold to its real economic customers—the executing dealers/HFTs that make billions of dollars off of Robinhood's users and who not only share that money with Robinhood but are incentivized to maximize the amount extracted. Presumably, that is why Robinhood not only failed to disclose its practices but apparently engaged in a knowing illegal conspiracy to mislead investors about PFOF, as detailed in the SEC order fining Robinhood $65 million just last December.[48]

Having noted the means by which Robinhood monetizes so-called "gamification" at the expense of its retail customers, it is important to remember that manic, panicky, frenzied, and, at times, irrational investing, particularly on a large scale, has effects that reach far beyond the harms to individual investors

---

- *Recommendations to customers*. Depending on the facts and circumstances, do some of these interactions constitute "recommendations" that would be covered by the SEC's Reg BI, which requires a broker-dealer making recommendations of securities to act in a retail customer's "best interest"? If not, should they?

- *Other influences on customers*. Are there other game-like aspects of platform design that are intended to influence customers where the potential risks to investors and markets warrant attention beyond the application of existing rules?).

Interestingly, some recent research indicates that the mere use of a smartphone may increase trading activity generally and trading in so-called "lottery stocks" in particular. *See* S. Goldstein, *Why are markets. going crazy? Smartphones, one study suggests*, MarketWatch (Jan. 29, 2021), *available* at https://www.marketwatch.com/story/heres-another-explanation-for-the-surge-in-speculative-activity-smartphones-11611579511; *see also* A. Kalda et al., National Bureau of Economic Research, *Smart(Phone) Investing? A Within Investor-Time Analysis of New Technologies and Trading Behavior*, NBER Working Paper, *available* at https://www.nber.org/system/files/working_papers/w28363/w28363.pdf.

47 In this Committee's prior hearing on the GameStop events, Robinhood's Chief Executive Officer asserted, without evidence and contrary to its business model that depends on maximizing profits through frequent trading, that "most of [its] customers are investing for the long-term." That statement must be further examined, but we have doubts about its accuracy.

48 *See* fn. 17, 18, and 45 *above*.

involved. It can adversely impact company valuations, capital allocation and costs, capital formation, and perhaps market and systemic stability.

In connection with the PFOF study mentioned above, the Committee should therefore direct the SEC and OFR to consider the following:

- Whether retail broker-dealers, in practice, are balancing the communications and interfaces emphasizing the profitability and ease of trading with equally compelling and conspicuous information concerning the costs and risks of trading;

- Whether retail broker-dealers, in particular, have been satisfying existing legal duties before enabling extensive, leveraged trading and options trading and whether the standards for enabling high-risk trading strategies should be revised and strengthened;[49]

- Whether the application of regulations and legal duties is sufficiently clear (*e.g.,* whether trading app features can bring self-directed trading into scope for Regulation Best Interest on account of design elements that are tantamount to providing "recommendations"[50]);

- Whether the trading app design features present customer-communication risks that should be regulated differently than other types of customer communications; and

- Whether the placement and prominence of particular order types and financial instruments is sufficiently addressed by existing customer communications requirements.

D. <u>Capital and Liquidity Risk Management: The Robinhood trading halt was apparently motivated by a $3 billion margin call, which itself was necessitated by the fact that the firm's daily risk margin call amount exceeded the entirety of its excess capital. If Robinhood were subject to adequate capital and liquidity risk management requirements, no such trading halt would have been necessary.</u>

In the course of intense public scrutiny of events surrounding GameStop and other equities, Robinhood (and other retail-focused brokers) enacted abrupt *ad hoc* trading halts on the purchase of a number of volatile securities (with certain exceptions), including GameStop.[51] This had the effect of limiting demand for the securities subject to the trading halts and thereby advantaging short positions in those securities. In discussing the motivations for these trading halts, Robinhood reportedly gave different explanations at different times, and sometimes gave conflicting explanations at the same time. The company's most plausible explanation, since confirmed by the National Securities Clearing Corporation ("NSCC"), was that its trading halts, in essence, were defensive measures intended to reduce unspecified

---

[49] *See* Letter from A. Herren Lee, SEC Chairwoman, to Senator E. Warren ("SEC Letter") (Feb. 25, 2021), at 4, *available* at https://www.warren.senate.gov/imo/media/doc/Warren%20-%20GameStop%20-%20ES159891%20Response.pdf ("I believe the Commission should consider crafting regulations that require firms providing options trading to retail customers to disclose more information to those customers and more closely examine whether retail customers understand such products").

[50] *See, e.g.,* FINRA Letter, *above* in fn. 46, at 5.

[51] *See* M. Fitzgerald, *Robinhood Restricts Trading in GameStop, Other Names Involved In Frenzy*, CNBC (Jan 28, 2021), *available* at https://www.cnbc.com/2021/01/28/robinhood-interactive-brokers-restrict-trading-in-gamestop-s.html.

financial requirements arising from the volatility in certain securities and its clearing agencies' own protective measures.[52]

The apparent inconsistencies in the statements of Robinhood's chief executive officer in the initial aftermath of its trading halt raise serious questions about the adequacy of the firm's capital and liquidity risk management requirements and indeed, the capital and liquidity risk management requirements applicable to all of the largest retail broker-dealers. For example, apparently as or shortly before it sought a $3.4 billion capital infusion, Robinhood's CEO claimed on CNBC that "[t]here was no liquidity problem" on account of clearinghouse margin calls, that Robinhood draws down its credit lines "all the time," and that the firm's trading halts were being done "preemptively" and "proactively."[53] Yet, Robinhood's CEO suggested during the same interview that its trading halts were motivated by the "deposits" due to its clearinghouse on account of market volatility and its customers' concentrated positions, as well as unspecified impacts on its net capital position.[54]

In other words, Robinhood's CEO appeared to claim that the firm's trading halt was at the same time a consequence of it being proactive and it being compelled. One could reasonably interpret these inconsistencies as arising from a fear that full and fair disclosure of Robinhood's financial condition would encourage customers to close accounts and/or move funds and trading activities to competitors.

The consequences of Robinhood's equivocation and apparent efforts to protect its commercial interests reach beyond the firm itself. A number of facts would be highly relevant to the Committee's consideration of the general adequacy—or inadequacy—of retail broker-dealer capital and liquidity risk management requirements: the extent to which Robinhood was in financial distress or came perilously close to defaulting on its NSCC margin calls; the circumstances and timelines surrounding its $3 billion margin call; the communicated rationale for the $3.4 billion in emergency funding it received;[55] the content of internal discussions relating to the imposition of the trading halt; and related events. Of course, this would be separate and apart from regulatory and prosecutorial interest in whether certain statements may have been fraudulent or misleading and whether the CEO's alleged lack of certain registrations were appropriate.

However, at least the current appearance that Robinhood remained in compliance with capital and liquidity risk management requirements, and had *excess* capital, suggests that those requirements collectively were insufficient to maintain the extent and nature of trading facilitated by the broker-dealer. Surely, maintaining sufficient capital and liquidity to remain in business and compliance with regulatory requirements, while posting margin calls, must be the minimum expectation for the SEC's broker-dealer framework.

In this regard, the Committee should explore the following areas of concern:

---

52 *See* M. Bodson, DTCC, Letter to the House Financial Services Committee (Feb 18, 2021), *available* at https://www.dtcc.com/dtcc-connection/articles/2021/february/18/dtcc-statement-to-house-financial-services-cmte.

53 K. Stankiewicz, *Robinhood CEO: Tapping credit lines is proactive, not a sign of cash crunch in GameStop frenzy*, CNBC (Jan. 29, 2021), *available* at https://www.cnbc.com/2021/01/29/robinhood-ceo-vlad-tenev-tapping-credit-lines-proactive-to-help-lift-gamestop-trading-limits.html.

54 *Id.*

55 Note that investors in the Robinhood funding round four days after the initial emergency $1 billion capital infusion reportedly accepted terms that were "less favourable" than the first round, suggesting that Robinhood had an immediate need to close on the initial round of investment following the initial NSCC margin call. *See* M. Kruppa, *Robinhood's bid to 'democratise finance' collides with Wall St reality*, Financial Times (Feb. 1, 2021), *available* at https://www.ft.com/content/9e69faf0-09c4-42ca-8c5f-78dc9568c18f.

- Whether broker-dealer capital and liquidity risk management requirements sufficiently protect retail investors against risks in extreme but plausible market conditions and sufficiently contemplate the effects of procyclical, defensive measures likely to be taken by clearing agencies and counterparties;

- Whether Robinhood, specifically, experienced liquidity shortfalls or other financial distresses, and the nature of the exact causes or drivers of such shortfalls and/or distresses;

- Whether Robinhood, specifically, and broker-dealers in general have written policies, procedures, and controls to govern determinations to impose trading halts and whether trading halts are required to be integrated into risk management programs;

- Whether any trading halts by retail broker-dealers should be effected only after a public notice period has expired; and

- Whether exchange trading-halt or circuit-breaker standards sufficiently permit cessation of trading in equities experiencing frenzied or mania-driven trading that is obviously divorced from fundamentals.

Before turning to the next issue, I would like to make three additional, cautionary points relating to the U.S. securities clearing system.

- First, in its examination of the issues raised by GameStop, the Committee should not overemphasize the apparent resiliency of our financial markets' infrastructure. A few weeks ago, Treasury Secretary Yellen and the chairs or heads of several U.S. financial regulators, including the SEC, assembled to discuss GameStop trading and related events. The Treasury Department subsequently released a statement that U.S. regulators "believe the core infrastructure was resilient during high volatility and heavy trading volume,"[56] mirroring comments made by some participants in the lead-up to the meeting and since that time. Although clearinghouses, like the NSCC, have performed well and apparently responsibly, the Committee should not let that fact distract from the many areas of our financial markets that either did not perform well or should have performed better. Furthermore, regulatory shortcomings that gave rise to troubling practices at the center of the GameStop events must be remedied by long understood—and equally long overdue—reforms, even if those reforms relate to activities ***within*** a financial markets infrastructure that is not impaired.

- Second, undue attention to the lack of an infrastructure meltdown would seem to underemphasize how perilously close Robinhood came to instigating a seriously adverse market event. After drawing on six bank credit lines reportedly totaling as much as $600 million, Robinhood reportedly sought an emergency infusion of more than $3.4 billion over four days to prevent further disruptions to trading on the platform.[57] In more extreme (but plausible) market conditions, Robinhood may have had more difficulty drawing on its credit lines and/or raising such a significant

---

[56] *See* J. Smialek et al., *Yellen and Regulators Met Amid GameStop Frenzy to Discuss Market Volatility*, The New York Times (Feb. 24, 2021), *available* at https://www.nytimes.com/2021/02/04/business/economy/yellen-gamestop.html.

[57] *See* M. Kruppa et al., *Robinhood raises $2.4bn in second cash injection in four days*, Financial Times (Feb. 1, 2021), *available* at https://www.ft.com/content/790324e0-8526-4d9e-9717-a4430e1be034; *see also* K. Kelly, E. Griffith et al., *Robinhood, in Need of Cash, Raises $1 Billion From Its Investors*, The New York Times (Jan. 29, 2021), *available* at https://www.nytimes.com/2021/01/29/technology/robinhood-fundraising.html.

amount of capital on an emergency basis,[58] particularly at a time when other large market participants would be in dire need of substantial additional capital.[59] If Robinhood defaulted on its margin calls, it could have been forced to more broadly halt trading and/or unexpectedly close out the most volatile positions across as many as 13 million retail accounts, thereby exposing every holder of securities affected by these actions to potentially dramatic changes in prices, liquidity, and order flow.

Consider the systemic consequences, for example, if the hedge fund Melvin Capital Management ("MCM") were unable to obtain emergency funds and/or had to close out and/or cover all its GameStop and other short positions—or had to simply default on some of those positions. In all likelihood, the resulting redemptions, fire sales, and knock-on liquidity demands might have amplified the Robinhood disruptions and financial constraints, encouraged NSCC to take more drastic actions or hold the line on the initial $3 billion margin call (later reduced on a discretionary basis), changed the risk tolerance of investors that injected billions into Robinhood and MCM, and perhaps ignited or failed to limit a broader systemic panic. This extreme but plausible scenario brings to mind the apparently forgotten lessons of Long-Term Capital Management.

Thus, the Committee should focus on and emphasize the fact that the GameStop trading events were an apparent ***near miss***, not necessarily a demonstration that our infrastructure ***would have*** remained resilient under highly plausible, slightly more adverse circumstances.

- Third, and finally, Robinhood and others have drawn attention to the necessity of implementing risk-reducing changes to the securities settlement period, currently operating on a T+2 (*i.e.,* trade-date-plus-two-days) time horizon. Because margin models at the NSCC and other clearinghouses account for risks during the period of time that elapses between trading activities and actual settlement of transactions, a shorter time horizon for settlement—like T+1—would not only reduce risk to the clearing system but also generally reduce liquidity demands and risks to clearing firms, like Robinhood, that must meet margin calls calibrated to the risks and volatilities expected for the firm's overall portfolio during the unsettled risk period.

  A reduction in the securities settlement period to T+1 is appropriate, feasible, and long overdue. However, in our view, moving to ***less than*** T+1 raises a number of issues relating to operational risk, the pre-funding of market activities, and credit risk management that need to be carefully studied before being implemented. Regardless of any changes to the settlement period, Robinhood's attention to securities settlement and the risk margin call amount required by its trading activities cannot and must not distract from the reality that all broker-dealers are required to have the capital and liquidity to support customer trading. It is not a defense for a liquidity crisis that in a different world, under different rules and processes, no such liquidity event would have occurred.

---

[58] There are also a number of questions regarding the investors in Robinhood. *See* G. Tett, *The money behind Robinhood is pure Sheriff of Nottingham*, Financial Times, Opinion (Feb. 4, 2021), *available* at https://www.ft.com/content/72aa45ee-4591-4819-a104-9d445d3f4daf.

[59] Imagine the potential challenges of Robinhood trying to raise $4 billion if, rather than just Melvin Capital, multiple hedge funds and other market participants had experienced correlated losses and each sought a $2.75 billion emergency bailout. That scenario is plausible given that Melvin Capital Management alone reportedly declined more than 50% in the month of January due to losses on its GameStop short positions. *See* Juliet Chung, Citadel, *Point72 to Invest $2.75 Billion Into Melvin Capital Management*, Wall Street Journal (Jan. 25, 2021), *available* at https://www.wsj.com/articles/citadel-point72-to-invest-2-75-billion-into-melvin-capital-management-11611604340.

E. Forced Arbitration: The GameStop frenzy represents yet another occasion for examining the pressing need to ban or at least limit mandatory pre-dispute arbitration clauses in financial services agreements.

By our count, at least 70 lawsuits have been filed in connection with the recent market turmoil and related trading losses. For example, claimants have alleged that Robinhood's decision to shut down purchases of GameStop shares during a critical period of time violated its contracts with clients, its duties to customers as a broker-dealer, and/or applicable laws and rules. Presumably, Robinhood and other defendants will invoke their lengthy, fine-print customer agreements and insist that all individual lawsuits against them must be dismissed and heard not in open court but before a private, nonpublic arbitration forum such as the one operated by the brokerage industry under FINRA's auspices.[60] As of February 11, 2021, Robinhood disclosed that it had 24 arbitrations pending.[61]

Robinhood has noted that it remains "open to reviewing its use of arbitration and will continue to be guided by what is in its customers' best interests with respect to resolving customer complaints."[62] Given that forced arbitration (1) is highly secretive, (2) is a biased forum that generally favors industry respondents and affords wronged investors very little meaningful relief, (3) provides neither the public nor regulators any insight into the nature of the claims being lodged or the manner in which they are resolved, and (4) lacks the procedural protections provided in court proceedings, including the right to appeal an erroneous decision or to even have a written decision stating the facts found and the basis for the decision,[63] Robinhood's "review," if undertaken and fairly and genuinely conducted, should have no trouble concluding that such proceedings are not "in its customers' best interests with respect to resolving customer complaints."

Regardless of Robinhood's decision in this regard, the GameStop events present yet another occasion for examining the pressing need to ban or limit mandatory pre-dispute arbitration clauses in financial services agreements. In this and other appropriate hearings, the Committee should address these questions:

- In general, whether and to what extent market participants should be permitted to use and rely upon mandatory pre-dispute arbitration clauses in their client agreements;

- Whether and to what extent forced arbitration proceedings result in (1) injured investors receiving compensation and in what amounts, (2) financial firms pocketing ill-gotten gains because investors are not able to fully recover their losses from illegal conduct, and (3) regulators and legislators being deprived of information regarding the illegal conduct of financial firms due to the non-public, secret nature of the proceedings and the complete lack of procedural protections, including but not limited to written decisions with factual findings from the record that support an articulated basis for the outcome;

---

60 *See* Robinhood Financial LLC & Robinhood Securities, *LLC Customer Agreement*, Section 38 Arbitration (Revised June 22, 2020), *available* at https://cdn.robinhood.com/assets/robinhood/legal/Customer%20Agreement.pdf.

61 *See* Letter from L. Moskowitz, Robinhood Markets, Inc., to Senator E. Warren ("Robinhood Letter") (Feb. 12, 2021), *available* at https://www.warren.senate.gov/imo/media/doc/Robinhood%20Response%20to%20Feb%202%20Letter.pdf.

62 *Id.*

63 *See also* Better Markets, *Forced Arbitration: Taking Away Your Rights and Your Money* (June 11, 2019), *available* at https://bettermarkets.com/blog/forced-arbitration-taking-away-your-rights-and-your-money.

- Whether carve-outs under applicable rules for class action lawsuits really provide injured investors with an adequate and practical means of obtaining relief; and

- Whether, and if so why, the SEC failed to use the explicit authority it received in section 921 of the Dodd- Frank Act to prohibit or limit the use of mandatory arbitration clauses in agreements between brokers and their clients.

F. Transparency of Short Interest: The SEC is examining ways to increase the transparency of short interest in the securities markets and must promptly move to a comprehensive rulemaking to increase the scope and frequency of short-interest reporting.

Some trading in GameStop and other so-called "Reddit Rebellion" equities was apparently motivated by objections to the short selling activities of institutional traders. There is some transparency with respect to short interests acquired through traditional short selling activities. Market participants frequently rely on put-call, short-interest, and days-to-cover ratios, for example, to gauge market sentiment on valuations, and some of these short-interest measures are informed by bi-monthly reporting by broker-dealers. However, these metrics do not adequately capture the levels of short interest across financial firms or in a sufficiently timely manner. Moreover, these measures do not include the short interests acquired through derivatives that provide leveraged exposures to securities, or baskets of securities, without any purchase or sale of the underlying securities.

The Committee must exercise its full oversight and legislative functions to investigate and explore reforms in the following areas of concern:

- Whether the SEC should increase the frequency and expand the scope of short interest reporting by broker-dealers and impose additional or expanded reporting obligations on other market participants;

- Whether the SEC should revise securities filings to provide greater transparency of short positions, and whether revisions to section 13(f) of the Securities and Exchange Act of 1934 and Rule 13(f) thereunder may be necessary;

- Whether regulators and market participants have access to timely and complete information on short interest, including short interest acquired through equity derivatives;

- Whether short-selling restrictions should be effected on an investor-by-investor, broker-dealer-by-broker dealer, or other basis beyond a certain ratio of the number of shorted securities to the total float in that security;

- Whether repeated fails-to-deliver in connection short-selling is presently subject to sufficient enforcement and sanction and if not, whether and how enforcement and sanctions must be strengthened; and

- Whether changes to Regulation SHO or related short-selling restrictions, for example disclosure requirements under section 929X(a) of the Dodd-Frank Act and/or reinstatement of the Uptick Rule, would have ameliorated the precipitous declines in GameStop and other "meme" stocks and better protected investors and markets than the current short-interest regulatory framework.

G. Manipulation: The SEC and FINRA have extensive authority and resources and a duty to address any violations of law, including manipulation and fraud related to frenzied trading in GameStop and beyond.

The recent trading patterns in GameStop and other equities raise questions about whether certain traders may have engaged in unlawful manipulation and/or disruptive trading. Media reports indicate that retail traders may have coordinated to purchase GameStop shares, perhaps to put upward pressure on its share price and force institutional short sellers to cover their positions and put even more upward pressure on share prices (*i.e.*, to effect a "short squeeze"). There are also reports that hedge funds and other sophisticated participants took advantage, or sought to take advantage, of the retail momentum and pushed up prices as well. In addition, there have numerous reports suggesting that bots and imposter activities were active and frequent in the subreddit forum r/wallstreetbets, which, if true, suggests that intentional manipulation may well have occurred.[64]

On the other side of the market, the GameStop short interest held by hedge funds and others that reportedly served as motivation for the so-called "Reddit Rebellion's" trading rose as high as 100% of the free float (*i.e.*, total stock available to trade) in 2019 and 2020 and exploded as GameStop's price continued to increase in 2021. The short interest, at its peak, reportedly exceeded the total stock available to trade by a fairly significant amount and may have reached as high as 140% of the total float, although it is remarkably—and tellingly—challenging to find the precise figures.

The SEC and CFTC manipulation standards most clearly apply to trading activities intended to influence prices of financial instruments by disseminating false information or engaging in deceptive trading practices that create a false impression about the level of interest in the stock, its value, or its price direction. Some of the critical open questions with respect to manipulation under the presently known facts include the following:

- Whether some class of retail investors demonstrably intended to engage in manipulative trading practices to effect a short squeeze;

- Whether retail investors actually caused the short squeeze in GameStop, as frequently reported, or whether other trading interests took advantage of retail trading momentum and/or withdrew liquidity to exacerbate or cause the upward price pressures;

- Whether institutional investors or others were engaged in manipulative practices, including through automated trading on incoming retail customer orders or their extensive short selling in equities;

- Whether certain traders or persons who were publicly encouraging the purchase or retention of GameStop and other equities were simultaneously selling to secure profits or limit losses; and

- Whether definitions and prohibitions on market manipulation and manipulative trading practices in statutes as well as SEC and CFTC regulations and interpretations fully cover the range of practices and activities that were detrimental to retail traders and investors.

---

64 *See, e.g.,* S. Murray, *GameStop Stock Price Falls As Bots Invade WallStreetBets*, The Gamer (Feb. 2, 2021), *available* at https://www.thegamer.com/gamestop-stock-bots-wallstreetbets/; *see also* S. Gandel, *WallStreetBets says Reddit group hit by 'large amount' of bot activity*, CBS News (Feb. 2, 2021) *available* at https://www.cbsnews.com/news/wallstreetbets-reddit-bot-activity/; C. McCabe, *A Week Inside the WallStreetBets Forum That Launched the GameStop Frenzy*, Wall Street Journal (Feb. 13, 2021), *available* at https://www.wsj.com/articles/a-week-inside-the-wallstreetbets-forum-that-launched-the-gamestop-frenzy-11613212202?mod=series_gamestopstockmarket.

The vehicles, methods, and means for violating the law change, but our financial regulators' duties to protect investors and market integrity remain timeless and paramount. Today's laws must be evaluated for the appropriateness of their scope and application, but the Committee also should remind the SEC and FINRA, if necessary, that they have extensive authority and resources and a duty to address any violations of law, including manipulation and fraud in connection with or related to the recent frenzied trading in GameStop and beyond.

Fraud, market manipulation, and other illegal practices are punishable regardless of forum or form and should be charged as such regardless of whether they occur at an open-outcry tulip auction or via a cool app or subreddit channel.

H. Consolidated Audit Trail: The SEC has been derelict in its duties to protect investors and markets by failing to implement a fully functional and real-time consolidated audit trail for securities transactions. If it had a CAT, the SEC already would have a data-driven, informed basis to evaluate the 2021 trading events, take appropriate enforcement, rulemaking, or other actions, and fully inform the Congress about the material facts of such events.

The SEC must have access to timely, accurate, and complete information on trading activities across the securities markets to effectively supervise and police them and consider policy improvements. This common-sense proposition has been understood since at least the "Flash Crash" in May 2010, after which the SEC commenced plans to create a consolidated audit trail ("CAT") of all trading-related activities in the securities markets. Once fully operationalized—with needed upgrades and appropriate oversight—the CAT will collect granular order, cancellation, modification, and trade execution information and enable the SEC and other regulators to reduce, manage, and better understand market disruptions, distortions, and crashes—including trading events like the GameStop frenzy—and identify, deter, and punish illegal conduct.[65]

The Committee should hold the SEC and the industry-led consortium, CAT NMS, accountable for its years-long failure to construct, implement and operationalize the CAT. In this regard, the Committee should hold an additional oversight hearing specifically on this topic and explore the following areas of concern:

- Whether conflicts-of-interest embedded in the CAT's governance structure have impeded implementation and thereby denied the SEC a valuable tool needed to assess recent GameStop trading and related market activities, and whether those conflicts of interest will continue to plague the CAT once it is operational;

- Whether the SEC should continue to outsource construction and operation of the CAT to the industry or the industry's representatives in light of the many crippling conflicts of interest and repeated failures to meet deadlines and operationalize the long-overdue project;

- Whether transparent CAT-planning milestones and significant penalties can be adopted near-term to increase accountability and the rapid construction, deployment, and operation of the CAT;

- Whether recent changes to the CAT NMS Rule would make it more difficult for regulators to detect manipulative trading activities and identify manipulators—and make CAT less user-

[65] *See* Better Markets, *The Consolidated Audit Trail is a long overdue transparency and accountability measure to protect investors and the integrity of the U.S. securities markets* (Feb. 16, 2021), *available* at https://bettermarkets.com/sites/default/files/documents/Better_Markets_CAT_Fact_Sheet_02-16-2021.pdf.

friendly—by (1) reducing or eliminating key information to be reported into CAT; and (2) increasing hurdles (such as download and access limits) for users;

- Whether accelerated phased implementation of certain order and trade execution information would better facilitate near-term completion of the CAT; and

- Whether the SEC should upgrade CAT with an eye towards real-time reporting as originally envisioned by the SEC in 2010.

III. Conclusion

There is still much that we do not know about the GameStop frenzy. Indeed, the publicly available ***facts*** are remarkably quite limited. That is why the first and most important task is for there to be comprehensive, thorough, granular, and data-driven investigations and examinations by prosecutors, policymakers, regulators, and legislators. This Committee's commitment to holding a series of public hearings to obtain those facts and examine market practices is essential not just for public understanding and possible legislation but also for public and investor confidence in our markets and in Congressional oversight. We appreciate the opportunity to participate in this hearing and would welcome continuing the discussion as the Committee continues its examination.

In closing, it is important to remember that, while the particular context for this hearing is new, most of the issues, trading practices, and obvious vulnerabilities of the U.S. financial system are not. There is little new about irrational exuberance and speculative fervor for questionable securities, and frankly, there little new about most of the other issues raised by the GameStop trading events, including the widespread predatory practices. Market participants at the center of these events have for years taken advantage of the complexity they created, the resulting market fragmentation, their order routing schemes, the questionable execution and trading practices, the lack of transparency, and the many uses of seen and unseen leverage. That is why Better Markets has repeatedly advocated for critical reforms to our equity market structure (*see* **Appendix D**).

Furthermore, for years, a handful of dominant market participants—including the executing dealers/HFTs at the center of the GameStop controversy and Wall Street's too-big-to-fail banks—have responded to economic incentives and regulatory opportunities by "danc[ing] while the music was playing"[66] (*i.e.*, maximizing profits regardless of risks) rather than taking necessary actions to protect their firms and the integrity of the U.S. financial system. These market participants often claim merely to operate within the rules they have been given and to be a victim of unforeseeable circumstances when markets malfunction or catastrophe strikes, even though they "strike up the band" in the face of risks they know, or should know, are building and materializing.

As the predatory, and in some cases illegal, practices just discussed illustrate, much of the current market structure has been intentionally created to be as non-transparent and complex as possible to enable and conceal as much wealth extraction as possible. That complexity is also wielded as a cudgel to intimidate policymakers, regulators, and legislators from looking at those activities too closely or asking too many

---

[66] *See* Reuters Staff, *Ex-Citi CEO defends "dancing" to U.S. panel*, Reuters (Apr. 8, 2010), *available* at https://www.reuters.com/article/financial-crisis-dancing/ex-citi-ceo-defends-dancing-quote-to-u-s-panel-idUSN0819810820100408. *See also* D. Kelleher, *Remarks on Stress Tests as a Policy Tool: No Evil Required*, Conference on "Stress Testing: A Discussion and Review," pp. 10-11(July 9, 2019), *available* at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj_zMPO593uAhUtuVkKHQI2AR oQFjABegQIBhAC&url=https%3A%2F%2Fwww.bostonfed.org%2F-%2Fmedia%2FDocuments%2Fevents%2F2019%2Fstress-testing%2Fstress-tests-and-policy-paper-kelleher.pdf%3Fla%3Den&usg=AOvVaw05n777Voi9q9tdcp7B3ggl.

questions. More than 100 years ago, Supreme Court Justice Louis Brandeis said, "sunlight is the best disinfectant" and that is as true today as it was then. These hearings are shining a spotlight on nefarious, lucrative practices, and the Committee must continue to look closely and ask the hard questions to unearth the facts, bring them into the open, demystify them, strip away the created complexity, and determine if the current market structure and the current practices within it can survive in the light of day.

I look forward to addressing any questions you may have on the recent frenzied trading in GameStop and other equities.

Dennis M. Kelleher
President and Chief Executive Officer

Better Markets, Inc.
1825 K Street, NW
Suite 1080
Washington, DC 20006
(202) 618-6464

dkelleher@bettermarkets.com
www.bettermarkets.com

Appendices:

A: See Better Markets, *"Payment for Order Flow: How Wall Street Costs Main Street Investors Billions of Dollars through Kickbacks and Preferential Routing of Customer Orders"* (Feb. 16, 2021) (Long Primer), *available* at https://bettermarkets.com/sites/default/files/documents/Better_Markets_Payment_for_Order_Flow_Long_02-21-2021.pdf.

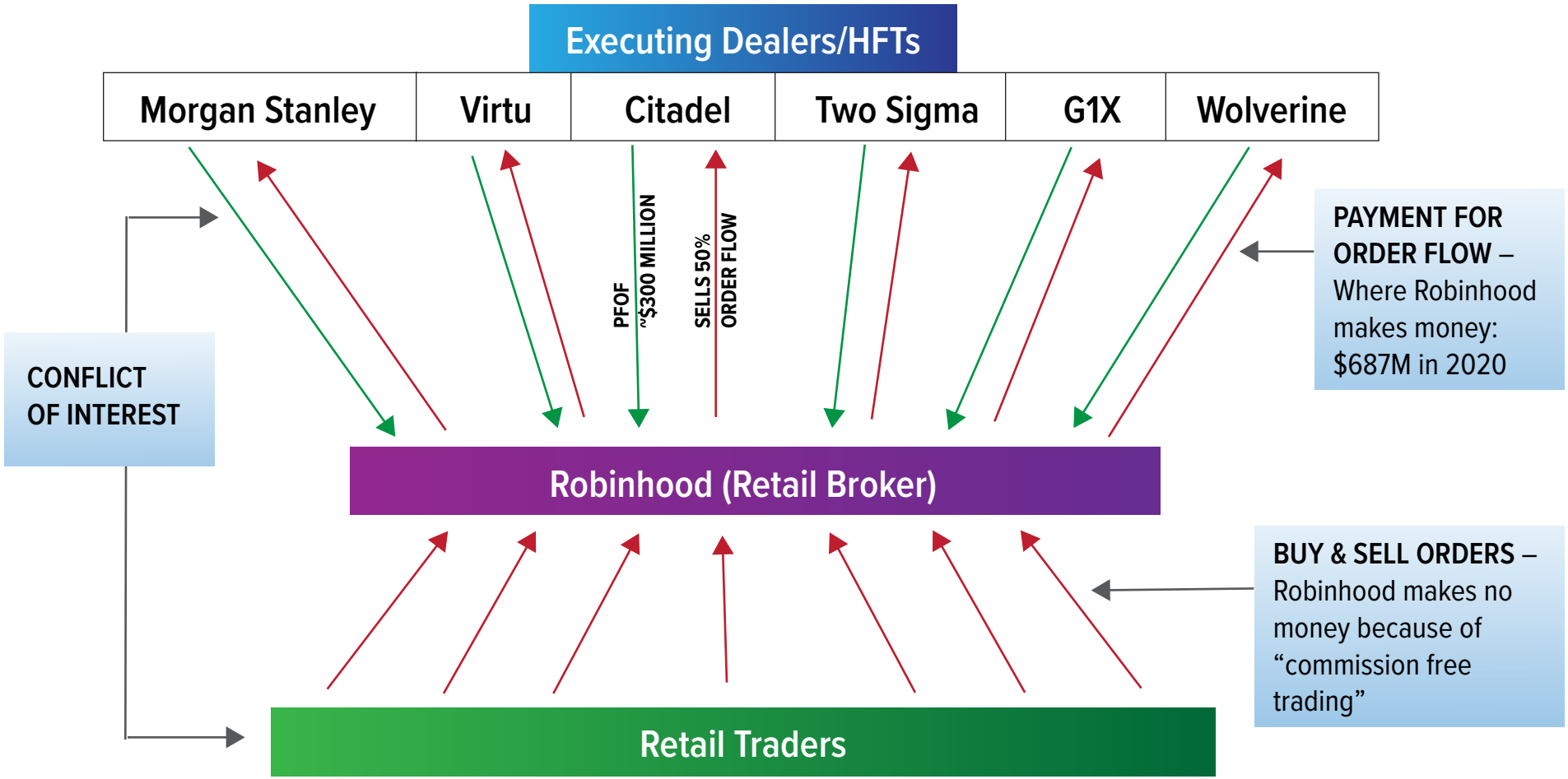
B: See Better Markets, *"Payment for Order Flow: How Wall Street Costs Main Street Investors Billions of Dollars through Kickbacks and Preferential Routing of Customer Orders"* (Feb. 16, 2021) (Short Fact Sheet), *available* at https://bettermarkets.com/sites/default/files/documents/Better_Markets_Payment_for_Order_Flow_Short_02-21-2021.pdf.

C: *Payment for Order Flow Charts* attached below (Mar. 16, 2021).

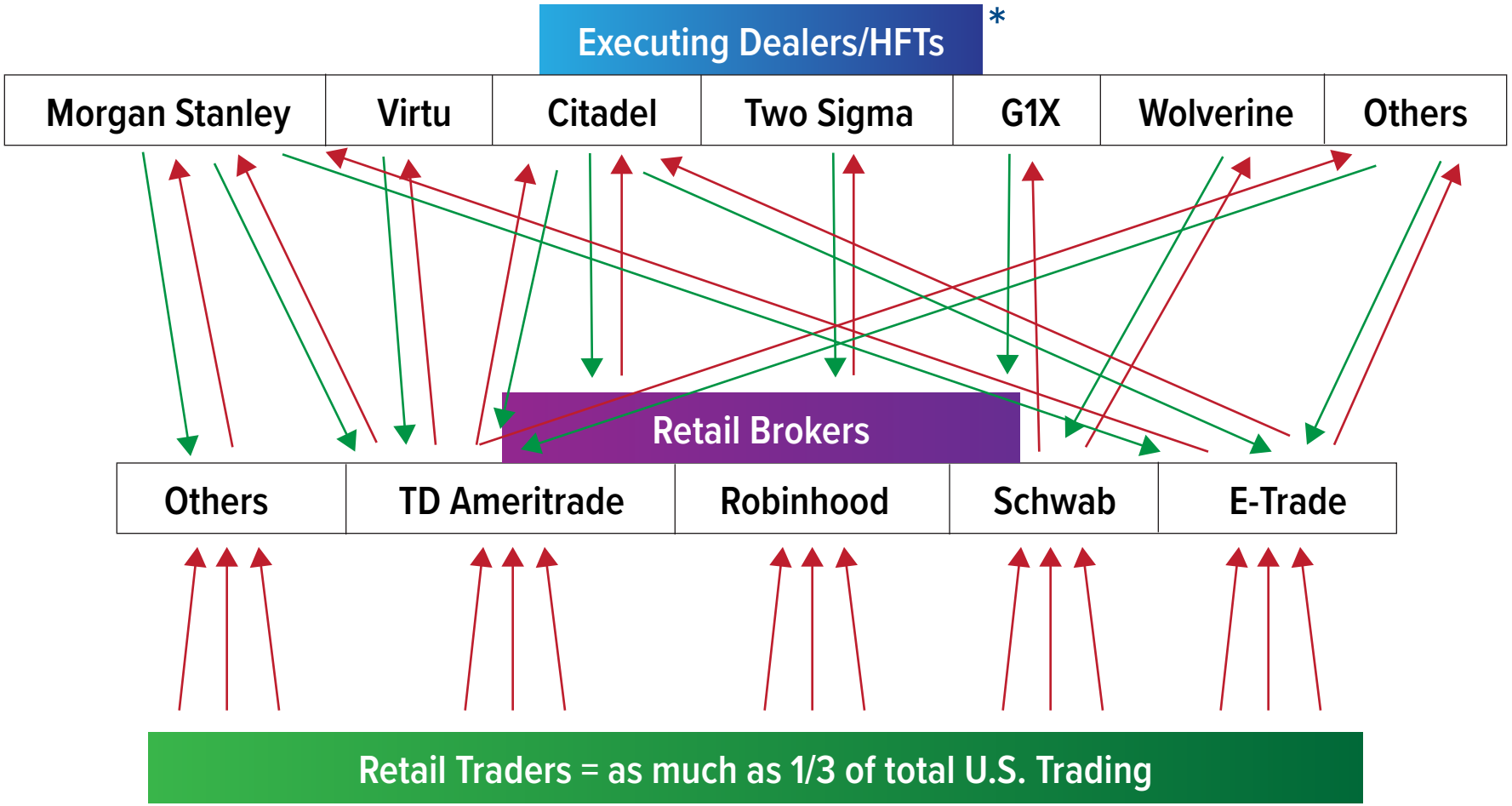
D: *Better Markets' Market Structure Advocacy Through the Years* attached below (Mar. 16, 2021) and *available* at https://bettermarkets.com/blog/better-markets-market-structure-advocacy-through-years.

APPENDIX C

ROBINHOOD'S BUSINESS



THE RETAIL MARKET



*Order Flow = Huge information advantage which enables positioning book advantageously

POSSIBLE TRADING VENUES FOR EXECUTING DEALERS/HFTs

Internalizers/ HFTs (7+)
(LEAST REGULATED AND TRANSPARENT)

1. Citadel
2. Virtu
3. Susquehanna
4. Morgan Stanley
5. Two Sigma
6. G1X
7. Wolverine

ATS*/Dark Pools (30+)

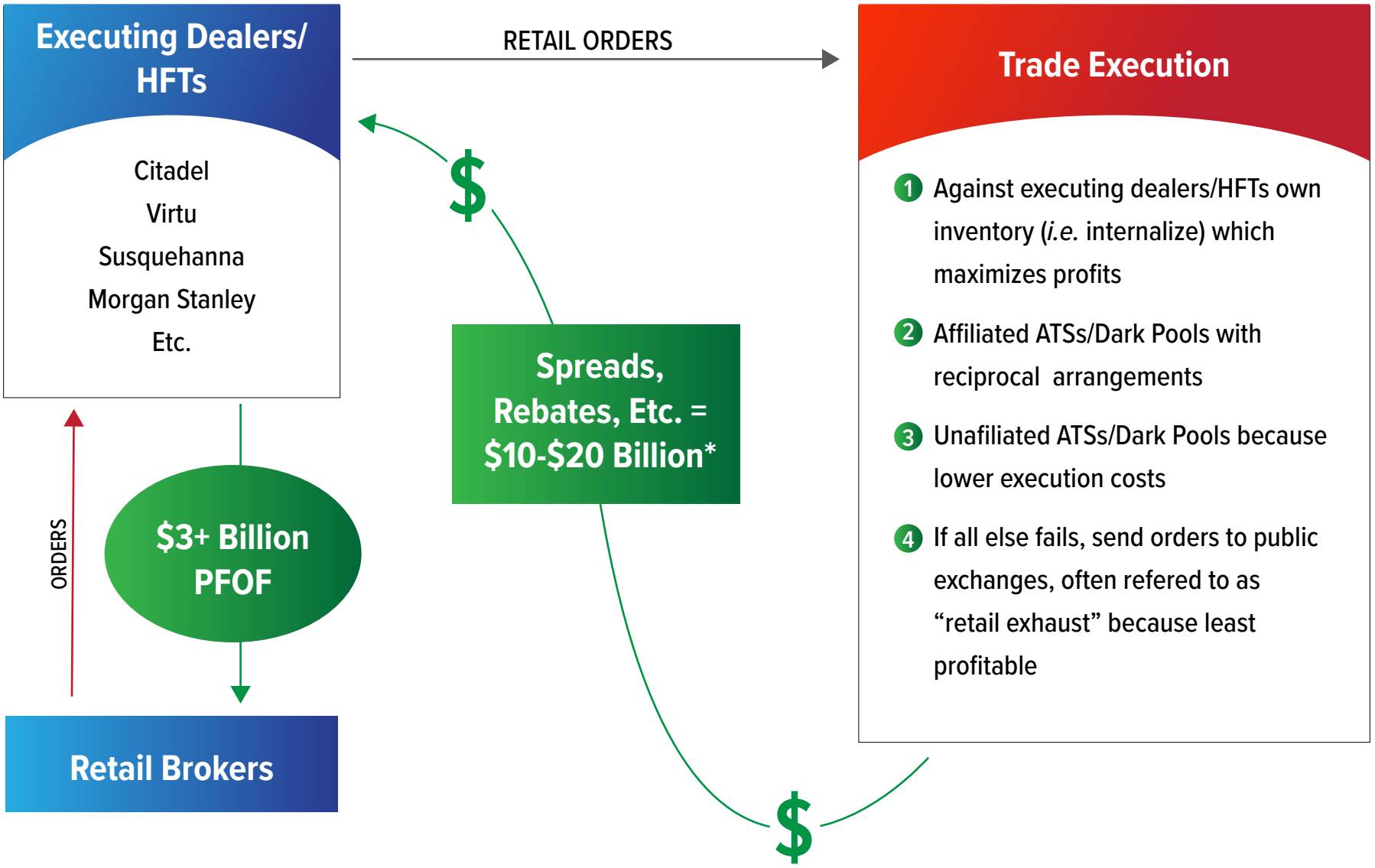
1. UBS ATS
2. Sigma X2
3. CROSSFINDER
4. JPM-X
5. LEVEL ATS
6. THE BARCLAYS ATS
7. IBKR ATS
8. MS POOL (AT-4)
9. BIDS ATS
10. INTELLIGENT CROSS LLC

*Alternative Trading Systems

Public "lit" Stock Exchanges (16+)
(MOST REGULATED AND TRANSPARENT)

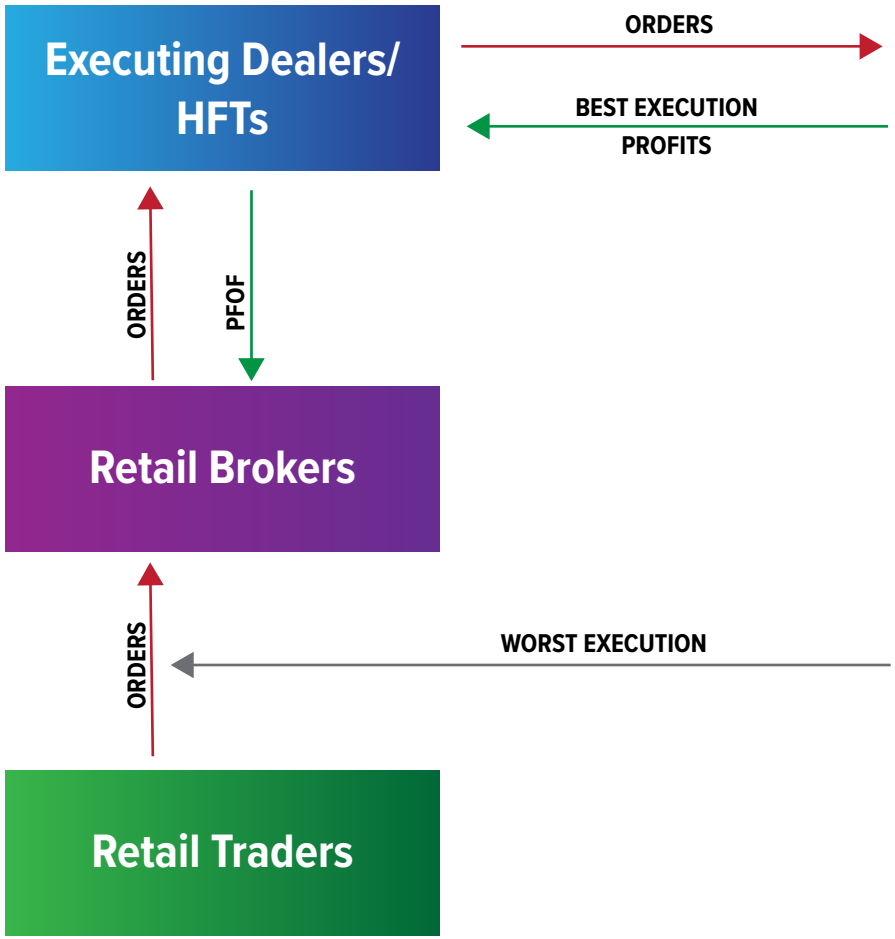
1. NYSE
2. NYSE Arca
3. NYSE American
4. NYSE National
5. NYSE Chicago
6. NASDAQ
7. NASDAQ BX
8. NASDAQ PSX
9. Cboe BATS
10. Cboe BATY
11. Cboe EDGX
12. Cboe EDGA
13. IEX
14. MEMX
15. MIAX
16. LTSE

EXECUTION



*Citadel alone had $6.7 Billion in net trading revenue in 2020

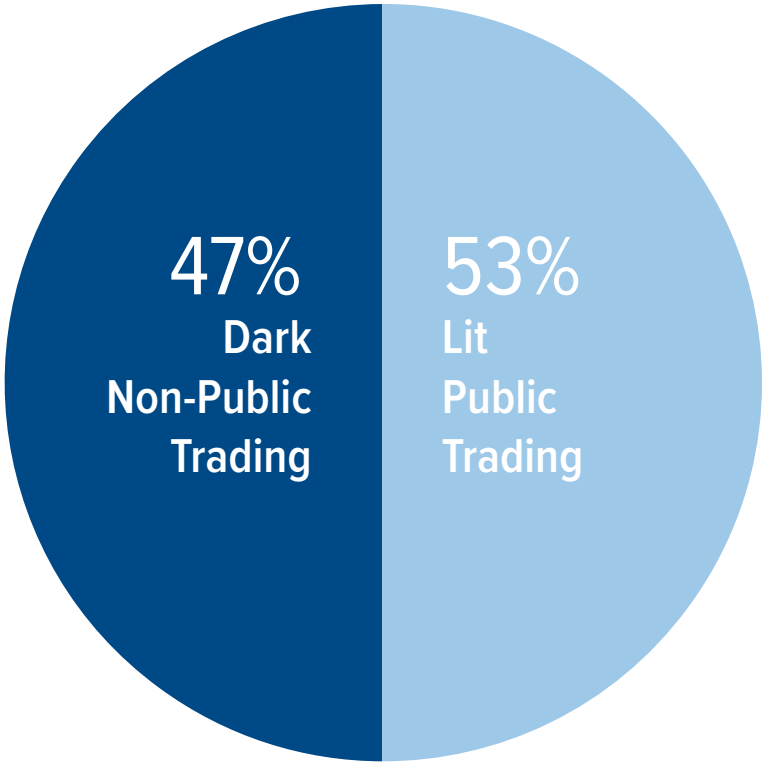
BEST EXECUTION = HFTs
WORST EXECUTION = RETAIL TRADERS



Trade Execution 1 to 4 = actual best execution for executing dealers/HFTs, *i.e.* best available price

"Best Execution" claims measured by "Price Improvement" based off of NBBO sampling on ~40% of total "lit" trading, *i.e.* least liquid, widest margins = **Worst Execution**

ALL TRADING IN THE U.S. *



5 day running average as of March 15, 2021 = 53.38% lit and 46.62% dark: https://www.cboe.com/us/equities/market_statistics/

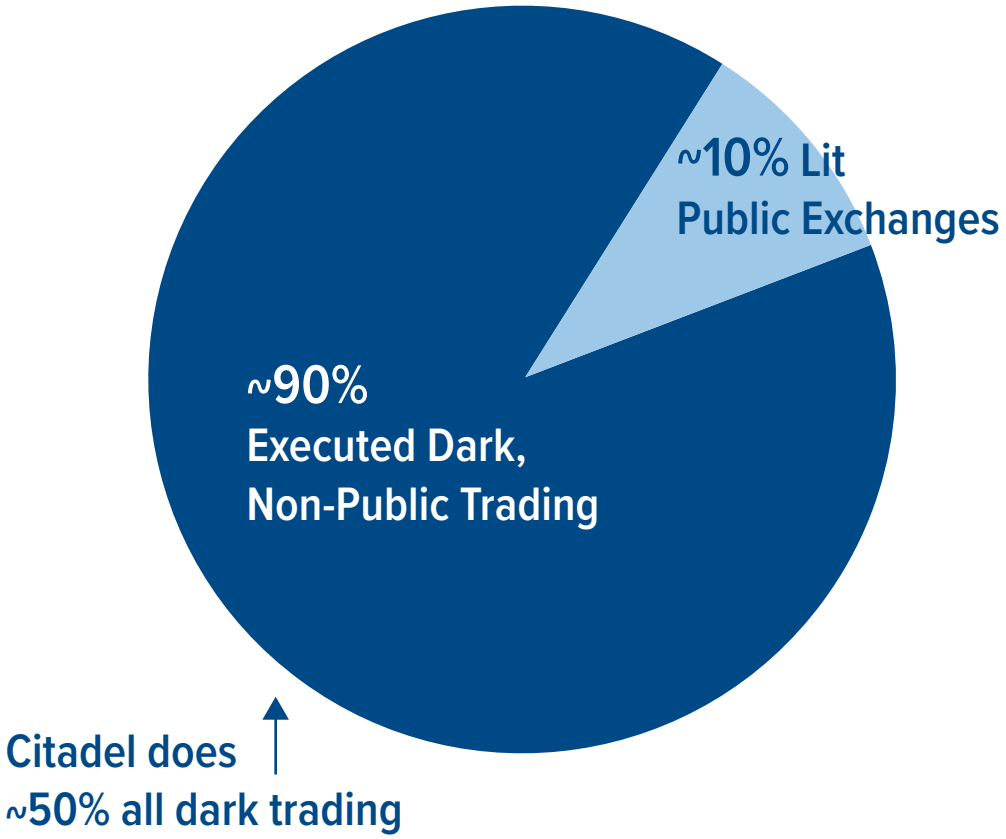
NBBO determined based on only the 53% of the bids/offers on "lit" public exchanges but after (1) excluding 20% of the volume that trades through hidden orders and (2) excluding odd lots which are a significant percentage of the "lit" trading. Therefore, NBBO only based on ~40% of total bids/offers but even that amount of "lit" bids/offers likely manipulated because:

1. Executing Dealers/HFTs are active traders in "lit" and dark markets and able to influence spreads in the "lit" markets
2. Posting bids/offers of just 200-300 shares often can move price
3. Lit exchange prices also move based on undisclosed activity in derivatives, futures and bond markets, where HFTs are active as well

= NBBO not even close to best execution and should not be used as benchmark or reference price

* Approx. 12 billion shares traded per day in U.S. with average trade size ~100 shares; executed within milliseconds

Retail Trading in US =
as much as 1/3rd all Trading



APPENDIX D

Better Markets Market Structure Advocacy

March 16, 2021

Better Markets has long recognized the myriad problems with the securities market structure,[1] and has repeatedly advocated for critical market reforms, at the Securities and Exchange Commission ("SEC"), including testimony before the Equity Market Structure Advisory Committee,[2] in the courts, and before Congress. This advocacy has spanned a number of market structure issues. Better Markets has called for more robust oversight and regulation of critical parts of the current securities trading infrastructure, including comment letters to the SEC in support of Reg. SCI, which enhanced cybersecurity and systems' security at stock exchanges and self-regulatory organizations such as Financial Industry Regulatory Authority and Municipal Securities Rulemaking Board,[3] and enhancements to Reg. ATS that strengthened the SEC's oversight of Alternative Trading Systems.[4] We also supported the SEC when it rescinded a rule that allowed exchanges to increase access and data fees essentially without SEC's involvement.[5]

Better Markets has also addressed the ways that current market structure, and in particular market fragmentation, has created opportunities for predatory market participants, including brokers, high-frequency trading firms, and others, to take advantage of retail traders, through "payment for order flow" ("PFOF"), maker-taker fee structures at exchanges, and other issues that create conflicts of interest between brokers and their clients, lead to inferior execution and, relatedly, enable certain privileged market participants to take advantage of retail investors. Better Markets has supported SEC efforts to address these issues (and urged it to do more). For example, Better Markets issued comment letter in support of an SEC that mandated important disclosures brokers, exchanges, and ATS must make with regards to their order routing decision.[6] Better Markets also advocated in favor of the SEC's Transaction Fee Pilot for NMS Stocks that sought to assess the potential impact of reforming the maker-taker

---

[1] *See* Better Markets, *Comment Letter to SEC on Roundtable on Market Data and Access* (Feb. 4, 2019), https://bettermarkets.com/sites/default/files/Ltr%20SEC%20Market%20Data%20Fees%202-4-2019%20-%20Final.pdf; *see also* Better Markets Blog, *The SEC at a Technical Crossroads* (June 13, 2016), https://bettermarkets.com/blog/sec-technological-crossroads.

[2] Lev Bagramian, Better Markets, *Testimony Before the EMSAC* (Apr. 5, 2017), https://bettermarkets.com/sites/default/files/EMSAC%20Bagramian%20Remarks%2004-05-2017%20FINAL.pdf.

[3] Better Markets, *Comment Letter on Regulation Systems Compliance and Integrity* (Jul. 8, 2013), https://bettermarkets.com/sites/default/files/documents/SEC-%20CL-%20Systems%20Compliance%20and%20Integrity-%207-8-13.pdf.

[4] Better Markets, *Comment Letter on Regulation of NMS Stock Alternative Trading Systems* (Feb. 26, 2015), https://bettermarkets.com/sites/default/files/SEC%20-%20CL%20-%20Regulation%20of%20NMS%20Stock%20ATS%20-%202-26-2016.pdf.

[5] Better Markets, *Comment Letter on Rescission of Effective-Upon-Filing Procedure for NMS Plans Fee Amendments* (Dec. 10, 2019), https://bettermarkets.com/sites/default/files/Better_Markets_Rescission_of_Effective-Upon-Filing_Procedure_for_NMS_Plans_Fee_Amendments_S7-15-19.pdf.

[6] Better Markets, *Comment Letter to SEC on Disclosure of Order Handling Information* (Sept. 26, 2016), https://bettermarkets.com/sites/default/files/SEC%20-%20CL%20-%20Disclosure%20of%20Order%20Handling%20-%209-26-16_0.pdf.

exchange fee model, filing a comment letter in support of the Pilot[7] and an amicus brief with the D.C. Circuit in defense of the Pilot against the industry's (unfortunately, ultimately successful) attack.[8] Better Markets also filed an amicus brief in the 8th Circuit, in support of the plaintiffs in a class action lawsuit alleging that TD Ameritrade routed orders in order to maximize profits from order routing revenue rather than fulfilling its fiduciary duty to its clients to seek best execution.[9] Where appropriate, we have also supported efforts by the industry to ameliorate the effects of market fragmentation, including supporting IEX's "D-Limit" order type that seeks to enable a more level playing field by preventing privileged traders from using latency built into the system to take advantage of other investors.[10]

Better Markets has also urged the SEC to improve the trading data available to the public and regulators. For example, Better Markets filed a comment letter in support of a rule that upgraded the market data infrastructure (the so-called Securities Information Processors or SIPs), highlighting the significant deficiencies in the current state of market data, and urged the approval of the proposal.[11] Most prominently, Better Markets has been a tireless advocate of efforts to implement the Consolidated Audit Trail ("CAT"), which, as Better Markets pointed out in an op-ed in American Banker, is a critical tool for the SEC to monitor trading.[12] Better Markets has filed at least two comment letters addressing CAT-related rules proposed by the SEC[13] and also supported the implementation of CAT by sending the SEC a letter pushing back on the false narrative that the CAT would jeopardize fundamental privacy rights.[14] More urgently, Better Markets, through a letter to former Chair Clayton, pressed the SEC not to delay implementation of the CAT,[15] and as it became clear that implementation of the CAT was facing unreasonable delays, sent at least 3 letters critical of various aspects of the SEC's implementation (or lack thereof) of the CAT, highlighting the unreasonable delay in implementing the CAT and how the process of implementation to become riddled with industry conflicts of interest.[16] In light of the SEC's failure to timely

---

[7] Better Markets, *Comment Letter on Transaction Fee Pilot for NMS Stocks* (May 24, 2018), https://bettermarkets.com/sites/default/files/CL%20SEC%20Transaction%20Fee%20Pilot%205-24-18%20-%20Final.pdf.

[8] Amicus Brief of Better Markets in Support of SEC in *NYSE v. SEC* (D.C. Cir. No. 19-1042) (filed Aug. 1, 2019), https://bettermarkets.com/sites/default/files/NYSE%20v.%20SEC%2C%2019-1042%20%28Final%20for%20Filing%29.pdf.

[9] Amicus Brief of Better Markets in Support of Plaintiffs in *Ford v. TD Ameritrade* (8th Cir. No. 18-3689) (filed May 8, 2019), https://bettermarkets.com/sites/default/files/Better%20Markets%20Amicus%20Brief%20Ford%20v.%20TD%20Ameritrade.pdf.

[10] Better Markets, *Comment Letter on IEX Proposed D-Limit Order Type* (May 15, 2020), https://bettermarkets.com/sites/default/files/Better_Markets_Comment_Letter_on_IEX_Proposed_D-Limit_Order_Type.pdf.

[11] Better Markets, *Comment Letter on The SEC's Market Data Infrastructure Proposal* (May 26, 2020), https://bettermarkets.com/sites/default/files/Better_Markets_Comment_Letter_on_Market_Data_Infrastructure-5-26-2020.pdf.

[12] Lev Bagramian, Better Markets, *BankThink: Regulators Shouldn't Bail on Plan to Prevent the Next Flash Crash*, American Banker (Nov. 8, 2017), https://www.americanbanker.com/opinion/policymakers-shouldnt-bail-on-plan-to-prevent-next-flash-crash; *see also* Better Markets Blog, *SEC Should Stay the Course on CAT* (Jan. 18, 2018), https://bettermarkets.com/spotlight-series-investors-and-markets/sec-should-stay-course-cat,; Better Markets Blog, *Flash Crash Anniversary a Reminder of Why We Need CAT and Why the SEC Should Flex Its Muscle to End Industry Procrastination* (May 4, 2018), https://bettermarkets.com/spotlight-series-investors-and-markets/flash-crash-anniversary-reminder-why-we-need-cat-and-why-sec.

[13] Better Markets, *Comment Letter on Proposed Amendments to the National Market System Plan Governing the Consolidated Audit Trail* (Nov. 30, 2020), https://bettermarkets.com/sites/default/files/Better%20Markets%20Comment%20Letter%20on%20Proposed%20Amendments%20to%20the%20National%20Market%20System%20Plan.pdf; Better Markets, *Comment Letter Proposed Amendments to the National Market System Plan Governing the Consolidated Audit Trail* (Oct. 28, 2019), https://bettermarkets.com/sites/default/files/CL_SEC_CAT_Amendments_10-28-19FINAL.pdf.

[14] Better Markets, *Letter to Chairman Clayton Addressing ACLU Concerns about the CAT* (Jan. 24, 2020), https://bettermarkets.com/sites/default/files/Ltr%20Clayton%20Re%20ACLU%20on%20CAT%201-24-2020.pdf.

[15] Better Markets, *Letter to Chairman Clayton Supporting Decision Not to Delay the CAT* (Nov. 15, 2017), https://bettermarkets.com/sites/default/files/Ltr%20SEC%20Chair%20Clayton%20re%20CAT%2011-15-17.pdf.

[16] Better Markets, *Letter to SEC on the National Market System Plan Governing the Consolidated Audit Trail* (Jul. 18, 2016), https://bettermarkets.com/sites/default/files/CL%20-%20SEC%20-%20Consolidated%20Audit%20Trial%207-18-2016.pdf; Better Markets, *Letter to Chairman Clayton Expressing Disappointment with CAT Implementation* (Sept. 24, 2018),

implement the CAT, Better Markets has sent at least two letters to the Senate Banking Committee urging it to conduct oversight of the SEC's implementation of the CAT.[17]

Finally, many of the market structure issues Better Markets has highlighted over the years, and sought to reform, came to a head in the GameStop saga, and Better Markets has produced a plethora of materials related to that ongoing fiasco, including: (1) a letter to the House Financial Services Committee explaining the various market structure issues at play;[18] (2) a memorandum[19] and fact sheet[20] detailing the issues raised by the GameStop Saga; (3) a fact sheet on Citadel, one of the key players in the GameStop saga (and in market structure issues more generally);[21] (4) fact sheets on PFOF and how it relates to GameStop;[22] (5) a fact sheet on CAT and how it relates to GameStop;[23] and (6) a letter to the Financial Stability Oversight Council, urging it to address the various market structure issues implicated by the GameStop saga.[24]

---

https://bettermarkets.com/sites/default/files/BM%20Ltr%20to%20SEC%20Chair%20Clayton%20On%20CAT.pdf. Better Markets' criticism of the SEC for excessive deference to industry has not been limited to implementation of the CAT. In 2015, Better Markets sent a letter to the SEC and separately published an op-ed, pointing out that several industry members of the EMSAC had a lengthy history of violating SEC rules. Better Markets, *Letter to Chair White on Serious Market Structure-related Civil and Criminal Illegal Conduct by a Number of Firms Represented on the SEC's Equity Market Structure Advisory Committee* (Oct. 22, 2015), https://bettermarkets.com/sites/default/files/Illegal%20Conduct%20by%20Firms%20on%20SEC%27s%20EMSAC_0.pdf; Dennis Kelleher, Better Markets, *BankThink: Special Interests Dominate SEC Trading Advisory Panel* (Nov. 13, 2015), https://www.americanbanker.com/opinion/special-interests-dominate-sec-trading-advisory-panel.

[17] Better Markets, *Letter to Senate Banking Committe Regarding Oversight of the CAT Implementation* (Oct. 21, 2018), https://bettermarkets.com/sites/default/files/Ltr_Senate_Banking_Committee_Hearing_re_CAT_10-19-19_-_Final_%28002%29.pdf; Better Markets, *Letter to U.S. Senate Banking Committee Calling on Oversight for The SEC's to CAT Implementation* (Apr. 14, 2017), https://bettermarkets.com/sites/default/files/Senate%20Banking%20Committee%20Economic%20Growth%20Proposals.pdf.

[18] Better Markets, *Letter to House Financial Services Committee on GameStop* (Feb. 16, 2021), https://bettermarkets.com/sites/default/files/Critical%20Issues%20to%20Adress%20in%20the%20Game%20Stop%20Hearing.pdf.

[19] Better Markets, *Key Topics for GameStop, Robinhood, Citadel, Reddit, Roaring Kitty Hearing at the House Financial Services Committee* (Feb. 18, 2021), https://bettermarkets.com/sites/default/files/Memo%20GameStop%20Hearing%20Interested%20Parties%202-17-2020.pdf.

[20] Better Markets, *Fact Sheet: Reddit, Robinhood, GameStop & Rigged Markets: The Key Issues for Investigation* (Feb. 1, 2021).

[21] Better Markets, *Fact Sheet: What You Need to Know About Citadel's Role in the Robinhood and the GameStop Saga* (Feb. 16, 2021), https://bettermarkets.com/sites/default/files/documents/Better_Markets_Citadel_Role_in_GameStop_02-16-2021.pdf.

[22] Better Markets, *Fact Sheet: Payment for Order Flow—How Wall Street Costs Main Street Investors Billions of Dollars through Kickbacks and Preferential Routing of Customer Orders (Short Version)* (Feb. 16, 2021), https://bettermarkets.com/sites/default/files/documents/Better_Markets_Payment_for_Order_Flow_Short_02-21-2021.pdf; Better Markets, *Fact Sheet: Payment for Order Flow—How Wall Street Costs Main Street Investors Billions of Dollars through Kickbacks and Preferential Routing of Customer Orders (Long Version)* (Feb. 16, 2021), https://bettermarkets.com/sites/default/files/documents/Better_Markets_Payment_for_Order_Flow_Long_02-21-2021.pdf.

[23] Better Markets, *Fact Sheet: The Consolidated Audit Trail is a Long Overdue Transparency and Accountability Measure to Protect Investors and the Integrity of the U.S. Securities Markets* (Feb. 16, 2021), https://bettermarkets.com/sites/default/files/documents/Better_Markets_CAT_Fact_Sheet_02-16-2021.pdf.

[24] Better Markets, *Letter to FSOC Regarding GameStop* (Feb. 3, 2021), https://bettermarkets.com/sites/default/files/Better%20Markets%20Letter%20to%20FSOC%20Regarding%20Gamestop%202-3-2021.pdf.

BETTER MARKETS

Better Banks | Better Businesses
Better Jobs | Better Economic Growth
Better Lives | Better Communities

Better Markets is a public interest 501(c)(3) non-profit based in Washington, DC that advocates for greater transparency, accountability, and oversight in the domestic and global capital and commodity markets, to protect the American Dream of homes, jobs, savings, education, a secure retirement, and a rising standard of living.

Better Markets fights for the economic security, opportunity and prosperity of the American people by working to enact financial reform, to prevent another financial crash and the diversion of trillions of taxpayer dollars to bailing out the financial system.

By being a counterweight to Wall Street's biggest financial firms through the policymaking and rulemaking process, Better Markets is supporting pragmatic rules and a strong banking and financial system that enables stability, growth and broad-based prosperity. Better Markets also fights to refocus finance on the real economy, empower the buyside and protect investors and consumers.

For press inquiries, please contact us at press@bettermarkets.com or (202) 618-6430.

1825 K Street, NW | Suite 1080 | Washington, DC 20006 | 202-618-6464 | www.bettermarkets.com