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Payment For Order Flow And the Great Missed Opportunity

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PAYMENT FOR ORDER FLOW AND THE GREAT MISSED OPPORTUNITY

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I. INTRODUCTION

In late January and early February 2021, an astounding story of stock market price volatility captivated the nation. GameStop, a corporation that in recent years had prodigiously lost money – $492 million two years earlier, $296 million the last year for which it reported data – rose from a low of $2.57 to a high of $483. In January 2021 alone, GameStop had risen from a closing price of $17.25 on January 4 to a close of $347.61 on January 27 before falling 44 percent to a close of $193.60 on January 28, rising 68 percent to a close of $325 on January 29, then falling 31 percent to a close of $225 on February 1, 2021, followed by a painful collapse of 82 percent to a close of $40.59 on February 19, 2021, before rebounding to close at $300 by March 12, 2021.

The GameStop saga involved a dizzying cast of characters. The securities broker-dealer Robinhood had stopped entering buy orders for investors on January 27-28, 2021, prompting 30 private lawsuits by February 7, 2021, as well as Securities and Exchange Commission and Department of Justice investigations, two State Attorney General investigations and United States House of Representatives and Senate hearings, galvanized in part by calls from such polar opposite politicians as Representative Alexandra Ocasio-Cortez and Ted Cruz, who previously had agreed on virtually nothing.

Fingers were pointed in many directions starting with Robinhood for its trading halt, hedge funds such as Melvin Capital Management that had short sold GameStop, Citadel Securities through whom Robinhood directed orders, social media platforms such as Reddit and its subchannel or subreddit WallStreetBets which had amassed some 8.5 million users to swap investment ideas and trading stratagems; and Keith Gill, who for months had made recommendations through social media and YouTube broadcasts promoting purchases of GameStop and traded under the unforgettable moniker of Roaring Kitty. Press accounts reported that Gill had parlayed a $53,000 initial investment into a value on paper as high as $48 million before the stock price collapsed. There were multitudes of retail investors who bought GameStop, some as young as 18 or 19 with little or no experience in securities market trading who purchased GameStop for a variety of motives including some who sought to cause losses to hedge funds through a short squeeze by which those who sell short seeking to profit from price declines by selling first and buying back later are stuck with massive losses when a stock's price rises.[1] For these investors, "sticking it to Wall Street" was a

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1. *See Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide": Hearing Before the H. Comm. on Financial Services*, 117th Cong. 31 (2021) [hereinafter *Hearings*] (statements of Keith Gill; Kenneth Griffin, Chief Executive Officer, Citadel LLC; Steve Huffman, Chief Executive Officer, Co-Founder, Reddit; Gabriel Plotkin, Chief Executive Officer, Melvin Capital Management LP; Vladimir Tenev, Chief Executive Officer, Robinhood Markets, Inc.; Jennifer Schlup, Director of Financial Regulation Studies, Cato Institute); STAFF OF H. COMM. ON FINANCIAL SERVICES, 117TH CONG., COMM. MEMORANDUM for GAME STOPPED? WHO WINS AND LOSES WHEN SHORT SELLERS, SOCIAL MEDIA, AND RETAIL INVESTORS COLLIDE (Comm. Print 2021); "Public Statement, U.S. Sec. and Exch. Comm'n, Statement of Acting Chair Lee and Comm'rs Pierce, Roisman & Crenshaw Regarding Recent Market Volatility (Jan. 29, 2021) (on file with author); Matthew Goldstein, *A GameStop Evangelist's Videos Draw a State Regulator's Attention*, N.Y. TIMES, Feb. 3, 2021, at B6; Omar Faridi, *More than 30 Lawsuits Now Filed Against Stock Trading App Provider Robinhood Markets Inc., Suits Allege Company is Manipulating Markets*, CROWDFUNDER INSIDER (Feb. 7, 2021, 8:21 PM), https://www.crowdfundinsider.com/2021/02/171985-more-than-30-lawsuits-now-filed-against-stock-trading-app-provider-robinhood-markets-inc-suits-allege-company-is-manipulating-markets; Nathaniel Popper & Matt Phillips, *Robinhood Takes Heat In Congress*, N.Y. TIMES, (Feb. 18, 2021), at B1.

The lawsuits alleged a variety of claims. For example, in *Nelson v. Robinhood Financial LLC*, No. 1:21-cv-00777 (JMF) (S.D.N.Y. filed Feb. 24, 2021) (BL), the suit alleged that Robinhood's January 27-28, 2021 actions that restricted users from placing buy orders and cancelled completed buy orders for GameStop and a small number of other stocks and options was in violation of Financial Industry Regulatory Authority Rule 5310 which requires FINRA members to "make every effort to execute a marketable customer order that it receives promptly and fully." The plaintiffs sued Robinhood for breach of contract, breach of the implied covenant of Good Faith and Fair Dealing, negligence, breach of fiduciary duty, violations of the Deceptive Business Practice section of N.Y.C. Code §20-700; Deceptive Acts and Practices under N.Y. Gen. Bus. Law §§ 349 and 350, and unjust enrichment.

A quite different lawsuit was filed by *Iovan v. Gill*, No. 3:21-cv-10264 (MGM) (D. Mass. filed Feb. 16, 2021) (BL), alleging that Gill had falsely represented himself as an amateur investor while in fact being an experienced securities broker, investment adviser and chartered financial analyst who for nine years had been President of Debris Publishing Inc., which provided financial software to research and portfolio companies and persons. For the past two years, Gill had been Financial Wellness Director at MassMutual and was registered with MassMutual as a securities broker. By February 14, 2021, Gill had approximately 415,000 subscribers to his YouTube Channel and 158,300 Twitter followers. The suit alleged a series of violations of the Securities Exchange Act including stock price manipulation and violations of the basic fraud provision Rule 10b-5. MassMutual was alleged to have violated its duty to supervise Gill as a registered broker-dealer and was responsible as a control person of Gill.

way to assert the democratization of finance reminiscent of the 2011 occupation in New York City that triggered the populist opposition movement Occupy Wall Street, which used the slogan "We are the 99%" to signify opposition to wealth holdings by the Top 1 percent.[2]

Time will tell whether any of this activity was illegal, but it already is clear that on most issues that received media attention such as Robinhood's practices with respect to trading halts, alleged fraudulent recommendations to purchase GameStop stock or options, short selling, market manipulation through short squeezes, the Securities and Exchange Commission already has a full armament of enforcement tools, as does the Department of Justice and to a lesser degree State Attorneys General.[3]

Unlike the contagion that followed the initial period of mortgage broker and investment banker failures in the 2008-2009 financial meltdown and ultimately touched virtually every industry, more than doubling unemployment, there was virtually no contagion effect of the GameStop Tulipmania.[4] The Treasury Department recognized after a meeting with representatives of the Securities and Exchange Commission, the Commodity Futures Trading Commission, the Federal Reserve, and the Federal Reserve Bank of New York that the securities markets' "core infrastructure was resilient during high volatility and heavy trading volume."[5]

The saga of GameStop, Robinhood, Reddit and Roaring Kitty, however, does involve a profound area of long overdue securities regulation policy concern.[6] The business model of Robinhood aptly demonstrates why the structure of our securities markets urgently needs revision. On December 17, 2020, a mere six weeks before the calamitous events of January 27-28, 2021, Robinhood settled an SEC Administrative Cease-and-Desist

2. *See, e.g.*, Mark Engler, *Let's End Corruption – Starting with Wall Street*, NEW INTERNATIONALIST MAG. (Nov. 1, 2011), https://newint.org/features/2011/11/01/wall-street-corruption-protests; *Hundreds of Occupy Wall Street Protestors Arrested*, BBC NEWS (Oct. 2, 2011), https://www.bbc.com/news/world-us-canada-15140671.

3. Quite a separate question is presented as to whether the SEC or Department of Justice has effectively used its prosecutorial discretion to enforce these laws. In recent years, Columbia University Professor John C. Coffee, among several others, including Federal District Court Judge Jed Rakoff, has powerfully criticized the underenforcement of the Federal Securities Laws and laws directed at White Collar criminal and civil misconduct. *See* JOHN C. COFFEE, JR., CORPORATE CRIME AND PUNISHMENT: THE CRISIS OF UNDERENFORCEMENT (Berrett-Koehler Publishers, Inc. 2020).

4. *See* JOEL SELIGMAN, MISALIGNMENT: THE NEW FINANCIAL ORDER AND THE FAILURE OF FINANCIAL REGULATION 1, 1-141 (Wolters Kluwer 2020).

5. *Hearings*, *supra* note 1, at 5 (statement by Jennifer Schlup) (noting further that GameStop's market capitalization, even at its peak, was around $24 billion in an approximately $50 trillion market).

6. The use or abuse of social media by virtually every actor in the GameStop saga involves a separate fundamental policy issue beyond the scope of this article. Other securities law topics such as short selling have been frequently addressed by the Federal Securities Laws and most recently are subject to a detailed Regulation SHO. *See* 7 LOUIS LOSS, JOEL SELIGMAN & TROY PAREDES, SECURITIES REGULATION 127, 127-97 (Wolters Kluwer 5th ed. 2017).

Proceeding without admitting or denying the findings of the Commission.[7] The Commission's Order stated in part:

> Robinhood launched its retail brokerage business in 2015. By mid-2018, it was one of the largest retail broker-dealers in the United States. One of Robinhood's primary selling points was that it did not charge its customers trading commissions. In reality, however, "commission free" trading at Robinhood came with a catch: Robinhood's customers received inferior execution prices compared to what they would have received from Robinhood's competitors. For larger value orders, this price difference at Robinhood exceeded the commission its competitors would have charged. These inferior prices were caused in large part by the unusually high amounts Robinhood charged the principal trading firms for the opportunity to obtain Robinhood's customer order flow. These payments are generally referred to as "payment for order flow . . ."

As a broker-dealer that routed customer orders for execution, Robinhood had a duty to seek to obtain the best reasonably available terms for customers' orders. This duty is referred to as the duty of "best execution." From September 2016 through June 2019, while Robinhood was on notice that its high payment for order flow rates from principal trading firms could result in inferior execution prices for its customers, Robinhood violated its duty of best execution by failing to conduct adequate regular and rigorous reviews of the execution quality it was providing on customer orders. Robinhood did not begin comparing its execution quality to that of its competitors until October 2018, and did not take appropriate steps during the entire period to assess whether its higher payment for order flow rates were adversely affecting customer execution prices.[8]

The Commission's Order highlights a fundamental weakness of securities markets today. The original vision of the Securities Acts Amendments of 1975[9] and the May 1, 1975 unfixing of brokerage commission rates[10] was securities markets and broker dealers that would compete on the basis of best price and best execution. That vision has been subverted by the practice of payment for order flow and associated practices by which securities markets and marketmakers compete to pay for orders.[11]

This Article in Part II describes the original vision and early actions of the Commission. Part III describes the Commission's 1994 Payment for

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7. Robinhood Financial LLC, Securities Act Release No. 10906, Exchange Act Release No. 90694, Fed. Sec. L. Rep. (CCH) ¶ 82,764 (Dec. 17, 2020) [hereinafter Robinhood Order].

8. *Id.* at ¶¶ 2–3, 5.

9. Securities Act Amendments of 1975, Pub. L. No. 94-29, 89 Stat. 97 (1975).

10. 6 LOSS ET AL., *supra* note 6, at 231-335 (5th ed. 2016).

11. *See, e.g.*, *Newton v. Merrill, Lynch, Pierce, Fenner & Smith, Inc.*, 135 F.3d 266, 270 (3d Cir. 1998). As the Commission explained in the Robinhood Order "[t]he duty of best execution derives from, among other sources, the common law agency duty of loyalty, which obligates an agent to act exclusively in the principal's best interest." Robinhood Order, *supra* note 7, at ¶ 14.

Order Flow Release and associated practices.[12] Part IV concludes with a better way forward.

II. THE ORIGINAL VISION

In 1975, the Commission and Congress took two dramatic steps to transform United States securities trading.

On May 1, 1975. popularly soon known as May Day, the SEC adopted then Rule 19b-3 to prohibit any exchange from adopting or retaining any rule or practice that required its members to charge fixed commission rates for transactions executed on or by use of the facilities of the exchange.[13]

Shortly thereafter, as part of the 1975 Securities Acts Amendments, Congress enacted §6(e), with limited fail safe exceptions, to prohibit any exchange from imposing any schedule or fixing commission rates, allowances, discounts, or other fees charged by its members.[14]

The ending of fixed commission rates, a hallmark of NYSE trading since its proverbial founding under a Buttonwood tree in 1792, precipitated a revolution in how securities were traded. Because broker-dealers competed on price, commission rate levels precipitously declined. Between May 1, 1975 and the end of 1980, a study conducted by the Commission's Directorate of Economic and Policy Analysis calculated that commission charges computed as a percentage of the principal value of securities transactions had declined 57 percent for institutional investors and 20 percent for individual investors. Even commission rates paid by individuals on orders of less than 200 shares declined 6 percent during this period when computed on a percentage of principal basis.[15]

The Commission estimated that, in dollars and cents terms, investor savings for the year 1976 alone had amounted to $485.3 million.[16]

With the emergence of discount brokers, further commission rate savings soon occurred. Between 1976 and the fourth quarter of 1980, the market share of discount brokers grew from less than 0.4 percent to 6.0 percent, with newspaper advertisements for discount brokers regularly

12. Exchange Act Release No. 34,902, [1994-1995 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 85,444, 1994 WL 587790 (Oct. 27, 1994).

13. Adoption of Securities Exchange Act Rule 19b-3, Exchange Act Release No. 11,203, 6 SEC Docket 147, 1975 WL 161946 (Jan. 23, 1975). *See* JOEL SELIGMAN, THE TRANSFORMATION OF WALL STREET, at 466–86 (3d ed. 2003) for a detailed history of the six year effort by the SEC, Department of Justice and Congress to unfix commissions.

14. Section 6(e)(1)(B) was expressly characterized as a failsafe provision with respect to fully competitive commission rates in the S. COMM. ON BANKING, HOUS. & URB. AFFAIRS, S. Rep. No. 94-75, at 72–73 (1975) (Conf. Rep.), *as reprinted in* 1975 U.S.C.C.A.N 179, 250–51.

15. DIRECTORATE OF ECON. & POL'Y ANALYSIS, SEC, STAFF REPORT ON THE SECURITIES INDUSTRY IN 1980, 83–85, 92–94, apps. F1-F2 (1981).

16. HAROLD M. WILLIAMS, SEC, 5TH REP. TO CONGRESS ON THE EFFECT OF THE ABSENCE OF FIXED RATES OF COMMISSIONS, at iii (May 26, 1977).

appearing in the financial press promising rates 50 to 90 percent less than full-service brokerage houses.[17]

A pivotal reason why discount brokers such as Charles Schwab could offer lower commission rates was that they did not need to "bundle" trade execution with the provision of research. Congress in 1975 enacted §28(e) in the 1975 Securities Acts Amendments, which created a safe harbor for institutional investors that purchased brokerage and research for a higher commission than they could have expended if only purchasing brokerage. Often this is called a *soft dollar* arrangement. Congress acted in response to the view of some institutional money managers "that, with the advent of competitive rates, they must direct a payment of no more than the lowest commission obtainable for a transaction, or else they will be subject to suit for violation of their fiduciary obligations. This result will occur, they conten[d], without regard for the quality of the broker's execution and settlement service or the research information which he may provide."[18] But §28(e) critically does not inhibit brokers who prefer unbundling services to reduce investor expense.

In 2000, the Commission further enhanced investors' capacity to receive the benefits of price competition in trading by requiring the stock exchanges and NASDAQ to supplant their pricing of securities in minimal increments of 1/8th or beginning in 1997 1/16th of a dollar with decimal to trading price increments of 5 cents or fewer. Decimalization reduced the price differentials between bid and ask quotations and made more favorable execution prices.[19]

Beginning in the late 1960s, the SEC undertook steps towards creation of a central market in which all transactions in a given security, whether listed on the dominant New York Stock Exchange, or on a regional stock market permitted to multiply trade stocks listed on the NYSE during the period, would be centralized into a single order execution system in which investors would receive the best execution of their orders by continuous matching of the highest priced buy orders against the lowest priced sell orders.

The heart of the New York Stock Exchange's stock market was its specialist system. Buy and sell orders, regardless of where in the country they originated, usually were communicated to the Exchange floor, where floor brokers would carry them to the post of the specialist who made a market in that security. If volume in a security was sufficiently active, the floor broker could execute the order by matching it against a reciprocal order

17. *Id.* at 48; SEC, *supra* note 15, at 85-86, 102.

18. HARLEY ORRIN STAGGERS, SECURITIES REFORM ACT OF 1975, H.R. DOC. NO. 94-123 (1975). *See* LOSS ET AL., *supra* note 10, 294-332 for the subsequent history of §28(e).

19. SEC Release Notice, Exchange Act Release No. 42,914, 2000 WL 816861 (June 8, 2000); *Decimal Trading in Subpennies*, Exchange Act Release No. 44,568, 2001 WL 811111 at *1 n.3 (July 18, 2001) (NASDAQ Decimalization Study reported on average that quotes and spreads had fallen by 50 percent after decimalization). *See* 5 LOUIS LOSS, JOEL SELIGMAN & TROY PAREDES, SECURITIES REGULATION 518, 518-22 (6th ed. 2021) for other studies.

of another floor broker standing in front of the specialist's post or against an agency order on the specialist's book. When buy and sell orders could not be matched, the Exchange specialist would function as a dealer, trading for his own account to ensure an orderly and continuous market. Alternatively, the floor broker could enter a limit order in the specialist's book to be executed at a specified price above or below the current market.

The NYSE then was an auction market, which by transmitting most orders to a central point could keep offers and bids tighter and best protect investors. This narrowing of spread in theory worked best when the proportion of trades was greatest on the floor of a single Central Market, as was the case for the NYSE. The risk with a central auction market was that if the NYSE was the only Central Market, the incentive for the specialist to narrow spreads was reduced. Because of this risk, the SEC had long supported regional markets to provide some competition to the NYSE and limit potential abuse of the NYSE's historic monopoly power.[20]

The floor monopoly of the NYSE also was challenged by the growth of block trades, typically of 10,000 or more shares which by 1999 comprised 50.2 percent of NYSE trading. NYSE block trading overwhelmed the ability of the NYSE specialist and floor traders to handle large buy or sell orders without major disruptions. Block trades were assembled off the exchange floor to improve the prices received by institutional investors and other large investors.[21]

The alternative form of stock market trading was through the over-the-counter (OTC) market which involved hundreds of OTC marketmakers in securities broker-dealer firm trading rooms long informed by stock market prices in the daily Pink Sheets published by the National Quotation Bureau, providing buy and sell (bid and asked) prices of each stock for the previous day. Beginning in 1971, a revolution occurred in the OTC market when the NASDAQ electronic market began providing electronically continuous quotations for each security allowing broker-dealers to route orders to the OTC marketmakers with the best buy or sell quotation. Predictably, an effective system of competitive quotations improved prices for securities customers. One study calculated that between 1970 and 1972, the mean market spread of a sample of OTC stocks fell from 0.4871 to 0.4028 or 17 percent mean price improvement.[22] As an increased number of newspapers began publishing OTC quotations, NASDAQ volume as a percentage of NYSE volume grew from 32 to 44 percent between 1974 and 1979. The NASDAQ approach was the near opposite of the NYSE central auction

20. This insistence on competition dates back at least to 1936, when the SEC, reversing the intention of §12(f) of the 1934 Securities Exchange Act, persuaded Congress to permit the continuation of unlisted trading on the regional exchanges. Such *multiple trading* of securities limited the ability of the NYSE to monopolize trading in its listed securities. SELIGMAN, *supra* note 13, at 138-40.

21. 6 LOSS ET AL., *supra* note 19, at 458-62.

22. James L. Hamilton, *Marketplace Organization and Marketability: NASDAQ, the Stock Exchange and the National Market System*, 33 J. FIN. 487, 495 (1978).

market. NASDAQ was based on competitive dealers as the means to narrow price spreads. This, too, was an imperfect system. If each dealer operated independently, buy and sell order spreads would widen when the independent dealers received too few orders to create an effective market. The NASDAQ quotation system helped counteract this potential fragmentation of the market by identifying other dealers to offset buy and sell orders.[23]

The NASDAQ market could trade NYSE and other exchange listed stocks with comparable savings. An April 1972 NASD test of 84 stocks traded in the "third market," that is OTC trading of exchange listed stocks, found that one third of the time, OTC quotations were better for investors than those offered on the NYSE. The New York Stock Exchange Rule 394, later denominated Rule 390, then prohibited NYSE members from buying or selling securities on the third market. As former SEC attorney Thomas Russo and Assistant Professor William Wang wrote, in a 1972 law review article: "If Rule 394 were eliminated, NASDAQ might gradually supplant the New York Stock Exchange. If it were to survive, the Exchange would certainly be forced to adopt technological innovations it should have implemented long ago."[24]

By the early 1970s, it was possible to envision the contours of a new National Securities Market System. Employing computer technology, all securities marketmakers – the Exchange specialists, the OTC dealers, the Exchange block positioners who traded large blocks typically of 10,000 or more shares off the Exchange floor – could be linked by a composite last sale and quotation reporting system. Removal of Rule 394 and other barriers to market-maker competition would give the market greater "depth," since the capital of more marketmakers would be available to handle temporary imbalances in supply and demand. If each Exchange specialist's limit order book was replaced with a systemwide limit order book, investors would have a more effective guarantee of best order execution. The fragmentation of the securities market into numerous unconnected market centers could be prevented either by technology that automatically matched and executed best bids and offers or by a best execution rule that prevented any broker from executing a transaction when a better price was available elsewhere in the system. Price spreads would be kept close by competing marketmakers and by centralizing volume within the electronic market. Market orders would be executed by brokers or dealers through NASDAQ desk consoles. The brokers or dealers would match buy or sell orders against the systemwide limit order book or against the entries of other brokers and dealers. Simultaneously, the central computer facility could record the transaction on

23. NASD FACT BOOK 29, 32 (1979); NYSE FACT BOOK 63 (1980).

24. William K.S. Wang & Thomas A. Russo, *The Structure of the Securities Markets*, 41 FORDHAM L. REV. 1, 39 (1972).

a systemwide transaction tape and arrange securities clearance and settlement.[25]

In 1972, the SEC published its Statement on the Future Structure of the Securities Markets, which stated in part:

> The central market system we look toward . . . would entail, among other things, the following elements: 1. Implementation of a nationwide disclosure or market information system to make universally available price and volume in all markets and quotations from all marketmakers. 2. Elimination of artificial impediments, created by exchange rules or otherwise, to dealing in the best available market. 3. Establishment of terms and conditions upon which any qualified broker-dealer can attain access to all exchange. . . . [and] 4. Integration of third-market firms into the central market system.

The SEC intended to enhance:

> the competition which now takes place among the separate exchange markets and between all of them and the third market [while] centralizing all buying and selling interest and maximizing market-maker capability . . . so that securities can be bought and sold at reasonably continuous and stable prices, and to ensure that each investor will receive the best possible execution of his order, regardless of where it originates.[26]

In March 1973, the SEC issued a Policy Statement on the Structure of a Central Market System, articulating how such a National Market System could be achieved. Three broad projects were envisioned: First, creation of a systemwide communications system. Second, since "the most important objective of the system is to foster the development of strong competition among its participants," the statement called for the elimination of unjustifiable impediments to marketmaker competition. Specifically, the Statement noted that "restrictions such as Rule 394, regardless of their past appropriateness, are incompatible with a central market system and will have to be rescinded by the time the quotation system is in operation." Finally, the Statement anticipated creation of a systemwide specialist limit order book.[27]

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25. *Institutional Membership on National Securities Exchanges: Hearing on S. 1164 and S. 3347 Before the Subcomm. on Sec. of the S. Comm. On Banking, Hous., and Urb. Affairs*, 92nd Cong. 33-51 (1972). H.R. Rep. No. 92-1519, at 117-30 (1972). Morris Mendelson, *Nostalgic vs. the Computer*, 4 SEC. L. REV. 503 (1972).

26. SEC, STATEMENT OF THE SECURITIES AND EXCHANGE COMMISSION ON THE FUTURE STRUCTURE OF THE SECURITIES MARKETS 1, 7-9 (1972).

27. SEC, SEC POLICY STATEMENT OF THE STRUCTURE OF A CENTRAL MARKET SYSTEM. (1973). The statement was vague about details of the systemwide limit order book and execution system, providing little or no discussion of such questions as the technology to be employed, how the systemwide limit order book and execution system would be linked to the systemwide communications network, and whether NASDAQ's facilities could or should be employed to bring the National Securities Market on line most rapidly. To ensure that public orders would receive preferential treatment, the SEC's 1973

The 1975 Securities Acts Amendments imperfectly provided a basis for the SEC to create a National Market System. The SEC was granted enabling powers to "facilitate the establishment of a national market system for securities" in accordance with the fact findings and objectives of Subsection 11A(a)(1) of the amendments. That Subsection implicitly endorsed granting the SEC discretion to supervise creation of a central market consistent with the SEC's 1972 and 1973 Statements concerning a future central market.[28]

Over time, the Commission achieved much of the original vision of a National Market System.

First, after several intermediate steps in 2000, the Commission approved the rescission of Rule 390, the principal restraint on New York Stock Exchange members trading OTC securities and allowing retail firms that were not specialists on regional exchanges to trade the full NYSE list of securities.[29]

Second, the Commission adopted a Consolidated Reporting System to include continuous quotations and sales prices in every National Securities Exchange and every National Securities Association (meaning NASDAQ) security covered by required transaction plans. The plans covered all National Market System or NMS stocks, which meant all exchange-traded securities and Nasdaq stocks unless trading during the most recent calendar quarter was *de minimis* ("one percent or less of the aggregate trading volume

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Statement did underline the Commission's "commitment to the preservation of an auction-agency market rather than a purely 'dealer market' for listed securities."

28. S. 249, 94th Cong. (1975) (enacted). Subsection 11A(a)(1) stated in its entirety:

> The Congress finds that –
>
> (A)The securities markets are an important national asset which must be preserved and strengthened.
>
> (B)New data processing and communications techniques create the opportunity for more efficient and effective market operations.
>
> (C)It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure –
>
> (i) economically efficient execution of securities transactions;
>
> (ii) fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;
>
> (iii) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities;
>
> (iv) the practicability of brokers executing investors' orders in the best market; and
>
> (v) an opportunity, consistent with the provisions of clauses (i) and (iv) of this subparagraph, for investors' orders to be executed without the participation of a dealer.
>
> (D)The linking of all markets for qualified securities through communication and data processing facilities will foster efficiency, enhance competition, increase the information available to brokers, dealers, and investors, facilitate the offsetting of investors' orders, and contribute to best execution of such orders.

29. *See* LOSS ET AL., *supra* note 19, at 660-72. The SEC 2000 rescission of Rule 390 is in Sec. Ex. Act Rel. 42,758, 72 SEC Dock. 889 (2000); SELIGMAN, *supra* note 13, at 514-34. In 1980, the Commission had adopted Rule 19c-3 prohibiting Rule 390 and other restrictions on trading stock listed after April 26, 1979.

for such securities as reported pursuant to an effective transaction reporting plan or effective National Market System plan").[30]

Third, the Commission came up conspicuously short in its approach to order execution. This was the pivotal issue in creating a National Market System and the issue on which the Commission's great opportunity was decisively missed.

By the mid 1970s, the SEC had a clear choice. The Commission could facilitate development of an electronic securities market in which brokers and dealers could view all available quotations including limit orders in a given security on a desktop screen and directly execute orders or make offers and bids by pressing keys on the computer console. This model of National Market System popularly was known as a "hard CLOB" (or Composite Limit Order Book), which could automatically execute orders and throughout the late 1970s was most nearly approximated by the Cincinnati Stock Exchange.

The Cincinnati hard CLOB system allowed brokers or dealers in their offices throughout the country or marketmakers on an exchange floor to enter bids and offers through computer terminals. The system was updated instantly as each bid or offer was made. When like priced bids and offers were entered into the system, an execution automatically occurred, based on a strict first come, first serve basis (that is the bidder or offeror making the first order at the appropriate price received the business – so-called price and time priority), with the significant exception that public investors' orders were given priority over marketmakers' orders. The system itself made no pricing decisions, but it did allow a broker or dealer the opportunity either to accept an outstanding bid or offer by making a reciprocal offer or bid or to try for a better price by entering a new offer or bid. When a transaction was executed, the execution was instantly displayed to the buyer and the seller on their respective terminals.

The advantages of a Cincinnati-type hard CLOB system were significant.

The system provided an efficient composite quotations system that was integrated with the equipment necessary to make bids and offers or execute transactions.

The system could eliminate the problems associated with lack of firmness of quotes, ensure best execution of customers' orders, and route orders to the best market.

The system provided strict price and time priority, which was essential if public investors' orders were to be executed at the most favorable price existing at the time. Strict price and time priority eliminated the advantages of being on the floor of the exchange and effectively placed stock market specialists, floor traders, and all other brokers and dealers, wherever physically located, on an equal competitive footing.

30. *See generally* Regulation NMS, 17 CFR §242.600-613; LOSS ET AL., *supra* note 19, at 678-746. Covered *NMS securities* are defined in Regulation NMS Rule 600(b)(77).

In addition, during the late 1970s, a Cincinnati Hard CLOB system possessed the potential of being less costly to operate than existing securities markets because the existing markets were more reliant on manual operations and more complicated communications systems. In 1978, Donald Weeden, who had invested in the Cincinnati experiment, estimated that the annual cost of handling limit orders alone could be cut from $50 million to $500,000.

Finally, if all bids and offers were entered into the system, the problems associated with SEC or self-regulatory organization market surveillance would have been eased, since the system would preserve a complete record of all bids, offers, and transactions.

The Cincinnati hard CLOB approach, if it were used for all securities trading, could create the near equivalent in the securities industry to what economists call "perfect competition." All brokers and dealers would have an equal opportunity to vie for profit, with equal access to a nationwide computer system and equal information. For investors this would mean that all bids and offers in the computer system could interact, with best bid always able to meet best offer, and with the greatest possible competition among marketmakers. Ultimately, a hard CLOB would have made it possible for institutional investors, or all investors, to enter bids or offers directly, without a broker.

Politically, however, achieving acceptance of a Cincinnati-type hard CLOB then proved impossible. A hard CLOB system inevitably would lead to more effective marketmaker competition at the expense of the existing securities exchanges. At the very least, a hard CLOB system would make floor brokers and physical exchange floors unnecessary. In place of floor brokers congregating at specialists' posts to shout orders in an "auditory crowd," there would be brokers and dealers in their offices throughout the country, creating the equivalent of a "visual crowd," as they communicated bids and offers via computer consoles and visual displays. Although the Cincinnati system did not preclude the existence of specialists, it would reduce their commission income by withdrawing from them the exclusive franchise to run a specialist book.

Because of the threat to their existence, other securities exchanges vehemently opposed the Cincinnati hard CLOB system. The exchanges complained that the Cincinnati system would permit a sizable share of orders to be executed by broker-dealers in-house and would end the use of floor brokers to negotiate market prices. The exchanges urged that a best execution rule could prohibit broker-dealer firms from internalizing order flow unless they gave investors prices at least equal to the best prices available elsewhere in the market system. The exchanges emphatically agreed with the Pacific Coast Exchange that "the Cincinnati system is not an appropriate design for the national system.[31]

The failure of the SEC to require exchanges and broker-dealer communities to implement a hard CLOB system reduced the National Market System to a series of second best choices.

As an alternative to a hard CLOB system, the stock exchanges favored a National Market System that preserved the exchange floors' central role. Beginning in April 1978, the American, Boston, Midwest, New York, Pacific, and Philadelphia stock exchanges began operating the Intermarket Trading System (*ITS*). ITS was a communications system allowing specialists and floor brokers on one exchange floor to transmit buy or sell orders to marketmakers on another exchange floor. If a specialist or floor broker saw a better price on the composite quotations system available on another exchange, the ITS system allowed him to transmit a "commitment to trade" to the appropriate marketmaker on that exchange. The marketmaker there would either accept the commitment or could decline. If there was no response to the initial commitment to trade, the commitment would automatically expire after a designated time period.

There were important differences between a hard CLOB system and ITS. Brokers and dealers could utilize a Cincinnati-type system from their offices. The ITS system required orders first to be routed to an exchange and then allowed only specialists and floor brokers to have access to the ITS computer consoles. A hard CLOB system permitted automatic execution of orders. ITS allowed marketmakers to reject orders even when they earlier had published quotations indicating that they would transact business at the order price. Alternatively, specialists could increase their bid to match better offers in the system. This discouraged competitive quotations, because the New York Stock Exchange specialist could discourage an NYSE member from trading elsewhere by matching an off-the-floor quotation. A hard CLOB system automatically matched highest bids and lowest offers. As originally designed, ITS was a discretionary system, and could not guarantee that investors would receive best order execution. A Cincinnati-type system would have one systemwide limit order book against which all brokers and dealers could execute orders. The ITS system continued separate specialists' limit order books on each exchange.[32]

31. The Cincinnati hard CLOB system was described in *Progress Toward the Development of a National Market System: Hearing on The Functioning and Administration of Securities Acts Amendments of 1975 Before the Subcomm. On Consumer Protection and Fin. of the Comm. on Interstate and Foreign Com. House of* Representatives, 96th Cong. at 6-7, 85, 93, 132-50, 250-51, 277-85, 475; S. Rep. No. 96-IFC 56, at 28. SEC, A MONITORING REPORT ON THE OPERATION OF THE CINCINNATI STOCK EXCHANGE NATIONAL SECURITIES TRADING SYSTEM (1981); BNA *Sec. Reg. & L. Rep. (BL)* No. 458, (June 21, 1978), at A10-A14, No. 461, (July 12, 1978), at A2-A3, No. 472, (Oct. 4, 1978), at A4.

32. *See* SELIGMAN, *supra* note 19, at 522-34; The Intermarket Trading System (ITS) described in *Progress Toward the Development of a National Market System*, *supra* note 31, at 6-7, 70-88, 132-50, 250-51; S. Rep. No., *supra* note 31, at 21; SEC, A MONITORING REPORT ON THE OPERATION OF THE

Separately, the Commission approved a separate second-best system to automate routing of orders from brokers directly to specialists' posts. In 1976, the New York Stock Exchange had begun operating its Designated Order Turnabout (*DOT*) system to permit member firms to reduce their costs (by avoiding the expense of floor brokerage) and improve their efficiency in handling small orders (initially market orders up to 299 shares; limit orders up to 500 shares). By 1979, DOT orders accounted for some 10 percent of all reported NYSE share volume. DOT never fully caught on. By 1999, its trading volume was only 2 percent of aggregate consolidated tape volume. It was likened to "two tin cans and a string" or a "tom-tom in the space age."[33]

"Some regional exchanges," a 1980 House Commerce Subcommittee Report explained, "compete with the New York system by offering even more streamlined alternative systems. For example, the computerized system of the Philadelphia Stock Exchange automatically executes small orders and guarantees that they are executed at the better price on the Philadelphia or the New York Stock Exchange. Similarly, the Pacific Stock Exchange recently installed a system which provides automatic execution for small orders at the highest bid or lowest offer of any markets that participate in the Intermarket Trading System."[34] In 1981, the NASD commenced pilot operations of an enhanced NASDAQ system, known as the Computer Assisted Execution System (*CAES*). CAES enabled broker-dealer firms to route, buy and sell orders for automatic execution by any authorized OTC market-maker disseminating quotations through the NASDAQ system. Broker-dealer firms could route market orders or limit orders and could designate a particular market-maker with the best quotation, to whom the order would be routed, as , determined by price and time priorities.[35]

In 1981, the SEC issued an order requiring the securities exchanges participating in the ITS system and the NASD to implement, by March 1, 1982, an "automated interface" between the ITS and NASDAQ systems, including a broker to market-maker order routing system and automatic

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INTERMARKET TRADING SYSTEM 5-9 (1981); BNA *Sec. Reg. & L. Rep. (BL)* 432, (Dec. 14, 1977), at A6-A7, No. 449, (Apr. 9, 1978), at A7-A8, No. 478, (Nov. 15, 1978), at A1 and A5.

By 1999, there were 207.6 billion shares traded with capabilities to handle 1000 messages per second including market orders up to 30,099 shares and limit orders up to 99,999 shares. NYSE FACT BOOK 23-25 (1999). Beginning in 1983, to deal with the slowness of DOT, the NYSE secured approval of an enhancement under which a report of an automatic execution by a specialist if the specialist did not respond within five, later three, minutes. Sec. Ex. Act Rel. 19,896, 28 SEC Dock. 190 (1983); LOSS ET AL., *supra* note 19, at 637.

33. *Progress Toward the Development of a National Market System*, *supra* note 31, at 143, 191-93; NYSE FACT BOOK 26, 28 (1999); Richard E. Rustin, *Driving Force: As Big Board President, John J. Phelan Pushes Changes in Wall Street*, WALL ST. J., 16 (Sept. 2, 1980).

34. S. Rep., *supra* note 31, at 9. *See also* discussion in Milton Cohen, *A National Market System: A Modest Proposal*, 46 GEORGE WASH. L. REV. 743, 766-68 (1978); *Progress Toward the Development of a National Market System*, *supra* note 31, at 70.

35. SEC, MONITORING REPORT ON THE OPERATIONS AND EFFECTS OF RULE 19C-3 UNDER THE SECURITIES EXCHANGE ACT 38-41 (1981).

execution capability.[36] The initial significance of the ITS-NASDAQ linkage and order routing system was to enable brokers or dealers to route orders automatically to the exchange specialist or OTC market-maker with the best price in a Rule 19c-3 third market security. An August 1981 SEC Monitoring Report found that without an automated interface, it was rarely economical for a broker manually to route a small order to an OTC market-maker in a 19c-3 security,even when the OTC market-maker had a superior price. For this reason, relatively few OTC firms had attempted to provide competitive market-making in 19c-3 securities.[37]

The most difficult issue today in the New Stock Market involves market fragmentation. In 2015, as Merritt Fox, Lawrence Glosten and Gabriel Rauterberg generalized:

> How stocks are traded in the United States has been totally transformed. Gone are the dealers on NASDAQ and the specialists at the NYSE. Instead a company's stock can now be traded on up to sixty competing venues where a computer matches incoming orders. High frequency traders post the majority of quotes and are the preponderant source of liquidity in the new market.[38]

In 1998, the Commission adopted Regulation ATS for Alternative Trading Systems to allow order execution systems the choice of whether to register as a National Securities Exchange or to register as a broker-dealer and comply with additional requirements depending on activity and trading volume. The ATS broker-dealers are exempted from the definition of *exchange* under Securities Exchange Act Rule 3a1-1(a) and provide operation reports to the SEC under Rules 300-303 of Regulation ATS. As of March 2021, there were 60 ATS systems reporting to the SEC and 24 stock and option exchanges. The ATS systems included dealers trading as dark pools: dealers who trade anonymously without publicly disclosing their limit order books and restrict access to their limit order books. Dark pools have had a profound impact on stock market structure. Between when the SEC adopted Regulation NMS (for National Market System) until 2014, the NYSE share of trading stock in the NYSE list shrank from 78.9 to 20.1 percent.[39]

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36. SEC, A MONITORING REPORT ON THE OPERATION OF THE INTERNET MARKET TRADING SYSTEM 4 (1981).

37. Securities Exchange Act Release No. 17744 (Apr. 21, 1981); For the background of this Order, *See* Securities Exchange Act Release No. 14416 (1978); Securities Exchange Act Release No. 17516 (1981); S. Rep., *supra* note 31, at 31-32, 42-43.

38. Merritt B. Fox, Lawrence R. Glosten & Gabriel V. Rauterberg, *The New Stock Market: Sense and Nonsense*, 65 DUKE L. J. 191, 191 (2015). *See also* MERRITT FOX, LAWRENCE GLOSTEN & GABRIEL RAUTERBERG, THE NEW STOCK MARKET: LAW, ECONOMICS AND POLICY (2019).

39. LOSS ET AL., *supra* note 19, at 450-62; Fox et al., *supra* note 38, at 271-77. SEC DIV. OF TRADING & MARKETS, RULE 611 OF REGULATION NMS 10 (Apr. 30, 2015); Securities Exchange Act Release No. 83663 (2019) (amendments to Reg. ATS); MERRITT B. FOX, LAWRENCE R. GLOSTEN, EDWARD F. GREENE & MENESH S. PATEL, SECURITIES MARKET ISSUES FOR THE 21ST CENTURY 21-22, 166-171

Underlying much of the change in market structure was the rise of High Frequency Trading (*HFT*), which by 2014 accounted for over 50 percent of total volume in the United States. There is no widely accepted definition of High Frequency Trading, but HFT typically employs high speed communications, private data feeds and algorithmic trading strategies to rapidly enter, cancel and update quotations. HFT came to dominate market-making because of its superior speed.[40]

During the first six months of 2009, with the increased use of dark pools and HFT that could rapidly execute multiple small orders without the risk of price swings, only 6.8 percent of NYSE Group Volume in consolidated NYSE volume occurred through block trades.[41]

HFT became notorious in 2014 when Michael Lewis harshly criticized dark pools, payment for order flow and the growing incomprehensibility of United States stock markets in his book, *Flash Boys.* Lewis claimed that the stock markets were "rigged" and singled out for particular criticism "electronic front running," by which High Frequency Traders submit buy or sell orders to market-makers or markets for periods as brief as 30 milliseconds – 0.03 seconds – before they are routed to another market-maker. A flash order could gain valuable information regarding growing or declining demand for a security and trade ahead of other market participants profiting from superior knowledge of market trends.[42]

In 2008, the NYSE ended its specialist system. "The rise of the electronic hybrid market has fundamentally adhered to NYSE's trading environment." In adopting the New Stock Market Model in favor of a system of designated market-makers with the ability to maintain hidden interests (that is, reserve interest without a minimum display required. Among other high frequency traders) soon Virtel, Citadel and GTS became designated market-makers in the NYSE. [43]

In 2008, supplemental liquidity providers were created initially under a six-month pilot program, and could enter orders from off the exchange floor directly into exchange facilities.[44] The Supplementary Liquidity Provider

(2018). There are reporting requirements for Exchanges, OTC market-makers and ATS systems under Rules 605-606 of Reg. NMS.

40. Fox et al., *supra* note 38, at 95-128; SEC DIV. OF TRADING & MARKETS, EQUITY MARKET LITERATURE REVIEW PART II: HIGH FREQUENCY TRADING (Mar. 18, 2014).

41. See www.nyxdata.com/factbook (52,514.8 of 771,916.4 million in share volume." Cf. Ortega, Block Trades Disappear as Volatility, Losses Increase, BLOOMBERG.COM (Nov. 24, 2008).

42. LOSS ET AL., *supra* note 19, at 523–27, 595-98 (6th ed. 2021).; FOX ET AL., *supra* note 39, at 263-69.

43. Self-Regulatory Organizations, SEC Release No. 34,58,845, 94 SEC Docket 1321, 1322-29 (Oct. 24, 2008).

44. Supplemental Liquidity Providers, SEC Release No. 34,58,877, 94 SEC Docket 1407, 2008 WL 4825954, (Oct. 29, 2008); Extending the Operation of its Supplemental Liquidity Providers, SEC Release No. 34,61,075, 97 SEC Docket 1035, 2009 WL 4362864 (Nov. 30, 2009).

Pilot was made permanent with the providers now registered as NYSE Market Makers.[45]

The NASDAQ also profoundly changed under the pressure of dark pools and HFTs. In 2001, the SEC approved NASDAQ's SuperMontage system combining quote collection, quote display and order execution.[46]

Tying together the new, highly fragmented securities markets is the SEC's Order Protection Rule: Rule 611 of Regulation NMS. The purpose of Rule 611 is to prevent trade throughs; automated trading that is outside the best bid or offer of a National Securities Exchange or NASDAQ. When a market-maker receives an order and its quotations are outside the National Best Bid-Best Offer (*NBBO*), it is required to forward the order to other markets or market-makers quoting within the NBBO. Rule 611 is controversial, and has been criticized for not protecting orders that are visible for at least one second. Although Rule 611 requires price priority, it does not recognize time priority across markets.[47] Questions can also be posed as to whether Rule 611 is consistent with the duty of best execution recognized in cases such as *Newton v. Merrill Lynch, Pierce, Fenner & Smith*.[48] Under this duty, a broker-dealer is obligated to execute customer trading at the best reasonable available price, including prices superior to the NBBO.

III. PAYMENT FOR ORDER FLOW AND ASSOCIATED PRACTICES

Much of what was achieved after 1975 improved markets for investors by providing narrower spreads and more advantageous buy and sell prices to investors as a result of unfixing commission rates, unbundling brokerage services, decimalization of stock prices, facilitation of new discount brokers, consolidating quotations and sales data, and ending anti-competitive rules such as NYSE Rule 390.

The rejection of the hard CLOB system, in contrast, was the great opportunity lost. Enough time and experience has transpired that we know that second best solutions such as DOT, ITS and the Order Protection Rule, have been unable to equal the potential of best execution by a hard CLOB.

The widespread adoption of payment for order flow and broker-dealer internalization amplified the defects of the structural inadequacies of the

45. Supplement Liquidity Providers Final Approval, SEC Release No. 34,67,154, 103 SEC Docket 2968, 2012 WL 2061575, (June 7, 2012).

46. SEC Approves SuperMontage, SEC Release No. 34,43,863, 74 SEC Docket 384, 2001 WL 51588 (Jan. 23, 2001); Loss et al., *supra* note 34, at 654-59.

47. FOX ET AL., *supra* note 39, at 22-24, 157-63, 243-46.

48. *Newton v. Merrill*, 135 F.3d 266, 269-70 (3d Cir. 1996) (where the defendant was found to have violated its duty of best execution by executing retail customer orders at the NBBO while obtaining superior offsetting transactions for itself); *see also* In the Matter of Marc N. Geman, SEC Release No. 43,963, 2001 WL 34643611 (Feb. 14, 2001). Cf. FINRA Rule 5310, BEST EXECUTION AND INTERPOSING, https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310#the-rule (requiring a broker-dealer to use reasonable diligence to ascertain the best market for a security in any transaction or with a customer and to provide execution that is "as favorable as possible under prevailing market conditions.").

post-1975 securities market structure. As defined in Securities Exchange Act Rule 10b-10(d)(8), *payment for order flow*:

> shall mean any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration to a broker or dealer from any broker or dealer, national securities exchange, registered securities association, or exchange member in return for the routing of customer orders by such broker or dealer to any broker or dealer, national securities exchange, registered securities association, or exchange member for execution, including but not limited to: research, clearance, custody, products or services; reciprocal agreements for the provision of order flow; adjustment of a broker or dealer's unfavorable trading errors; offers to participate as underwriter in public offerings; stock loans or shared interest accrued thereon; discounts, rebates, or any other reductions of or credits against any fee to, or expense or other financial obligation of, the broker or dealer routing a customer order that exceeds that fee, expense or financial obligation.

Payment for order flow allows broker-dealers to direct orders to dealers who internalize execution of stocks or options and pay a fee to the original broker-dealer for the order flow. By 2016, the SEC would report that "internalization is believed to account for almost 100% of all marketable order flow."[49] Payment to large brokerage firms in 2014 ranged from $92 to $305 million.[50]

There are variations on payment for order flow. A market-taker fee, for example, is one in which exchanges or Alternative Trading Systems (*ATS*) "take" a fee by trading against a resting order and rebate to traders a "maker" fee for placing a nonmarketable limit order in the relevant limit order book. The SEC permits maker-taker fees under Rule 610, but regulates them with .3 cent per share limit under Regulation NMS Rule 610. Maker-taker fees have been criticized for incentivizing brokers to route orders to the market center that pay the highest rebates. Maker-taker fees can be rationalized as adding liquidity to the specific exchange or ATS. [51]

Payment for order flow was always controversial. It was justified when it first became widespread as contributing to competition with the

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49. CERTAIN ISSUES AFFECTING CUSTOMERS IN THE CURRENT EQUITY MARKET STRUCTURE, SEC Memorandum, https://www.sec.gov/spotlight/equity-market-structure/issues-affecting-customers-emsac-012616.pdf (Jan. 26, 2016).

50. FOX ET AL., *supra* note 39, at 269, *see generally* Fox et al., *supra* note 38, at 289-93.

51. FOX ET AL., *supra* note 39, at 187-89, 257-58; Fox et al., *supra* note 38, at 281-88. It should be noted that Rule 610's cap on the access fee effectively prevents a venue from undercutting the objective of the trade-through rule. Without the cap, a venue could offer a very high rebate, essentially attracting very favorably priced quotes that would be subsidized by the prospect of the rebate, and funding the rebate with a very high access fee. The trade-through rule would then dictate that a customer's marketable order, wherever it was originally sent, be directed to the venue that had used this tactic to attract these very favorably priced quotes.

Exchanges, lowering commission rates, and providing more expensive execution and enhanced services.[52]

But these theoretical advantages are outweighed by systematic evidence of disadvantages.[53] Levitt in his Memoir, for example, recounted:

> [P]ayment for order flow was problematic in that "your buy order flow may not be exposed to a large number of sell orders, and that may deprive you of a better price. . . . Under SEC rules, your broker is obligated to get the best execution available for your order. If your broker is funneling orders to the highest bidder and ignoring his best execution duty, you may be paying a lot more than shares than is necessary.[54]

Nonetheless in 1994, the Commission issued its Payments for Order Flow Release,[55] taking a disclosure approach to payment for order flow rather than an outright ban. Even the Adoption Release expressed concern about whether securities customers were being treated fairly:

Specifically, payment for order flow raises concerns about whether a firm is meeting its obligation of best execution to its customer. Not all market centers expose market orders to other order flow or attempt to improve the price at which market orders are executed. Thus, the decision to route an unpriced order to a market center offering immediate execution at the NBBO, could mean that the customer has lost an opportunity for execution at a superior price because of the lack of exposure to other order flow.[56]

The disclosure requirements in Rule 10b-10, the Order Confirmation Rule, and what is now Rules 605 and 606 of Regulation NMS, did little to

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52. DAVID S. RUDER & NATIONAL ASSOCIATION OF SECURITIES DEALERS, PAYMENT FOR ORDER FLOW COMMITTEE, INDUCEMENTS FOR ORDER FLOW: A REPORT TO THE BOARD OF GOVERNORS, 24-26 (1991).

53. HARVARD LAW REVIEW, *The Perils of Payment for Order Flow*, 107 HARV. L. REV. J. 1675, 1678-1679 (1994). As explained in a 1994 Harvard Law Review Note:

> Despite the assertions of POF proponents that brokers who take part in payment for order flow arrangements do fulfill their duty of best execution by obtaining for customers the benefit of the quick, price guaranteed executions that characterize their market, structural incentives and the weight of the evidence both indicate otherwise. Moreover, the problem of skewed incentives is exacerbated because customers are handicapped by information deficiencies.
>
> POF causes brokers to conduct their business in ways that, were they known to the customers, might not meet with the customers' approval. For example, customers may prefer to wait fifteen seconds or even half an hour and have the opportunity to price improve on the primary exchange rather than execute quickly at the best posted price; but customers are not given the opportunity to choose, because the broker – who benefits from the payment – exercises virtually invisible and therefore unchecked discretion. Moreover, because the mechanics of order flow payment arrangements require execution in a predetermined market, the customer loses the benefit of trade by trade assessment of execution quality. Also problematic is the fact that the customer does not get the premium paid by the dealer and so does not obtain the true best inside market price.

54. ARTHUR LEVITT & PAULA DWYER, TAKE ON THE STREET: WHAT WALL STREET AND CORPORATE AMERICA DON'T WANT YOU TO KNOW, 29-30 (2002).

55. Payment for Order Flow, SEC Release No. 34,34,902, 57 SEC Docket 2315, 2012 WL 587790, (Oct. 27, 1994).

56. *Id*. at *3.

improve investor awareness of payment for order flow practices, investor involvement, or SEC oversight. Rule 605's execution quality data for market center and Rule 606's reports on broker routing "are produced," as one critic put it, "on a highly aggregated basis. Data are produced monthly and are binned relatively coarsely. If more detailed and precise execution quality reporting is produced, this may facilitate both better audits of executing brokers and enhance competition between internalizers. This was the original purpose of the predecessor execution quality reports, but given the changes in technology of trading, the Rule 605 and 606 reports no longer effectively serve this purpose."[57]

The Commission in the Payment for Order Flow Release shied away from an outright ban on the logic that better disclosure of payment for order flow might lead to a "meaningful opportunity for price improvement" and in any event "would represent a radical change to the industry where the payment of cash or its monetary equivalent has become widespread."[58]

The problems with payment for order flow have persisted and if anything become more acute.

In 2000, the Commission observed in the Release when the NYSE proposed rescinding Rule 390:

> From a broker's perspective, one of the primary motivations for internalization and payment for order flow arrangements is the opportunity to share in the profits that can be earned by a marketmaker trading as principal against a substantial flow of market- makers. Under internalization and payment for order flow arrangements, such orders are routed to a particular market-maker that will have an opportunity to execute the orders as principal without facing significant competition from investors or other dealers to interact with the directed order flow. Moreover, the linkages among market centers that are currently in place do not require that market orders be routed to the market center that is displaying the best prices, even if that price represents an investor limit order. As a result, a market-maker with access to directed order flow often may merely match the displayed prices of other market centers and leave the displayed trading interest unsatisfied. The profits that can be earned by a market-maker trading at favorable prices with directed order flow can then be shared with the brokers that routed the orders.[59]

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57. FOX ET AL., *supra* note 39, at 269.

58. SEC Release No. 34,34,902 noted the Commission observed:

> In addition, banning payment for order flow has associated workability problems. If the practice of cash payment for order flow were banned, because it is only one of many forms of inducement for order flow, the Commission has every reason to believe that an attendant increase in related "soft" inducements for order flow or internalization of order flow would follow. Moreover, it would be impractical to attempt to ban solely soft practices (everything except monetary payment for order flow); such practices are difficult to monitor and industry participants would find alternative avenues for accomplishing the same result.

Payment for Order Flow, SEC Release No. 34,34,902, at *8.

59. Joel Seligman, *Rethinking Securities Markets: The SEC Advisory Committee and Market Information and the Future of the National Market System*, 57 BUS. LAW. 637, 667 (2002).

Later in 2000, the Commission published a Report by the Commission Office of Compliance, Inspections and Examination and the Office of Economic Analysis, finding that many of the anticipated advantages of multiply listed options had been subverted by payment for order flow. The Report stated in part:

> As a result of increased competition for options orders, practices that are commonplace in the equities markets quickly developed in the options market. The most controversial of these practices is payment for order flow. Over the last year, specialists, using their own money or money collected through the assessment of a transaction fee by the options exchanges, began paying order routing firms to send their customer options order to the exchange post where the specialist trades the options class. Retail customer options orders are considered the most profitable because these orders are often *uninformed*, and specialists and market-makers can profit from the spread or gain valuable market trend information from aggregate customer options order flow.

The Staff found that the number of retail customers' options orders paid for pursuant to payment for order flow arrangements has steadily increased. In fact, . . . in August 2000, in the most heavily traded options classes reviewed by the Staff, specialists paid for over 75% of the retail options orders.[60]

A 2004 SEC Concept Release on Competitive Developments in the Options Markets[61] amplified this critique describing it as used by both dealers who internalized and specialists on the options exchanges. The Release described an additional inducement that exchanges use to attract order flow:

> [A] facilitation guarantee, whereby an upstairs firm that brings a large customer order to the exchange (typically at least 50 contracts) may trade as principal with a certain percentage (up to 40%) of the contracts in that order under certain circumstances. Exchanges use facilitation guarantees to induce upstairs firms to execute their customer orders on the exchange by limiting the degree to which the exchange crowd may interact with those orders. Like specialist guarantees, facilitation guarantees modify general exchange rules that assign executions based on priority, parity, and precedence, and like specialist guarantees and payment for order flow, exchange rules providing facilitation guarantees raise competitive and regulatory issues.[62]

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60. *See* LOSS ET AL., *supra* note 10, at n. 179, quoting Off. of Compliance Inspections and Examinations, SEC, Special Study: Payment for Order Flow and Internalization in the Options Markets (Dec. 2000).

61. Competitive Devs. in the Options Markets, 69 Fed. Reg. 26, 6129 (proposed Feb. 9, 2004).

62. *Id*.

The Commission considered but did not later adopt a rule requiring broker-dealers to rebate to customers any payments received in exchange for routing orders to a particular exchange as one means to "mitigate much of the conflict."[63]

Far from payment for order flow proving to be a mechanism for greater price and quality competition, it has precipitated a race to the bottom and a pattern of erratic compliance with the duty of best execution.

In 2008, the NYSE was authorized to pay rebates for order flow, an implicit concession that its traditional comparative advantages of price continuity, close spreads, and a near monopoly of trades were no longer effective.[64]

In 2017, an SEC consent settlement with Citadel Securities, then responsible for 35 percent of the average daily volume of stock trading in the United States, illustrated that the best execution and order routing rules could be abused by a leading broker-dealer executing orders at the NBBO and superior prices its internal algorithms could identify from the fully displayed limit order book of the Exchange. At that time:

> Exchanges sell various market data products, including "top of book" and "depth of book" data feeds. Top of book data feeds provide the best priced, round lot quotations at the relevant exchange. Depth of book feeds provide information about all displayed quotations, executions, and cancellations on the relevant exchange, and include information related to both round lot and odd lot orders. Some market participants, including some wholesale market makers, purchase depth of book feeds for some or all of the exchanges, develop algorithms to process this data, and use this data to inform order handling decisions. [Citadel] subscribed to a subset of exchanges' depth of book feeds during the relevant period.[65]

All of which brings us back to Robinhood in 2020. The Commission recognized that payments for order flow and internalization practices provided price improvement on the vast majority of customer orders that a broker-dealer such as Robinhood sends to a principal trading firm such as Citadel, but also recognized that price improvement over the NBBO is not

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63. *Id*. at 6135. In 2007, the SEC Office of Compliance, Inspection and Examinations, the Division of Market Regulation and the Office of Economic Analysis in a subsequent Report Concerning Examinations of Options, Order Routing and Execution 12 (Mar. 8, 2007), reported:

> The Staff found that while there has been improvement over the last six years in order routing firms' processes to seek and obtain best execution for their retail customers' options orders, factors such as payment for order flow and other inducements continue to play a substantial role in broker-dealers' order routing decisions.
>
> The Staff also found that because standardized execution quality statistics are not provided by each of the options exchanges, most firms analyze only the execution quality provided to their own customer orders. The lack of standardized, widely available execution quality data may affect thorough best execution reviews by firms.

64. Exchange Act Release No. 58877, 94 S.E.C. Docket 1407 (Oct. 29, 2008).

65. Citadel Sec. LLC, Securities Act Release No. 10280, Exchange Act Release No. 79790 at ¶ 20 (Jan. 13, 2017).

the same as best execution. As paragraphs 22-23 of the Consent Settlement delineated:

> 22. At least one principal trading firm communicated to Robinhood that large retail broker-dealers that receive payment for order flow typically receive four times as much price improvement for customers than they do payment for order flow for themselves – an 80/20 split of the value between price improvement and payment for order flow.
>
> 23. Robinhood negotiated a payment for order flow rate that was substantially higher than the rate the principal trading firms paid to other retail broker-dealers – which resulted in approximately a 20/80 split of the value between price improvement and payment for order flow. Robinhood explicitly offered to accept less price improvement for its customers than what the principal trading firms were offering, in exchange for receiving a higher rate of payment for order flow for itself.[66]

By October 2018, Robinhood was aware: "When certain Robinhood personnel began comparing the firm's order execution quality . . . they learned for most effective quality metrics, including the percentage of orders receiving price improvement, Robinhood's execution quality was worse."[67]

Matters deteriorated through June 2019:

> . . .By March 2019, Robinhood had conducted a more extensive internal analysis, which showed that its execution quality and price improvement metrics were substantially worse than other retail broker-dealers in many respects, including the percentage of orders that receive price improvement and the amount of price improvement, measured on a per order, per share, and per dollar traded basis. Senior Robinhood personnel were aware of this analysis. . . .

However, Robinhood's Best Execution Committee did not take appropriate steps to assess whether, in light of this information, Robinhood was complying with its duty to seek best execution of customer orders. Robinhood's failure from October 2016 through June 2019 to conduct adequate regular and rigorous reviews that involved benchmarking its execution quality against competitor broker-dealers to determine whether it was obtaining the best terms reasonably available for customer orders, violated the firm's duty of best execution.[68]

Some 18 months later, the Commission secured its Administrative Cease and Desist Order, recovering a civil money penalty of $65 million and

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66. Robinhood Financial, LLC, Securities Act Release No. 10906, Exchange Act Release No. 90694, at ¶¶ 22-23 (Dec. 17, 2020).
67. *Id*. at ¶ 28.
68. *Id*. at ¶¶ 29-30.

an undertaking by Robinhood to appoint an Independent Compliance Consultant acceptable to the Commission's Staff.[69]

For a firm of Robinhood's size that the SEC allegedly had willfully violated the Federal Securities Laws, these were wrist slaps.

More serious questions about securities and options market structure, the efficacy of voluntary compliance with standards as evanescent as the duty of best execution and when the SEC should seek a Consent Settlement of an Administrative Cease and Desist Order were not analyzed.

IV. CONCLUSION: A BETTER WAY FORWARD

The key to establishing a National Market System rather than today's highly fragmented patchwork of securities exchanges, alternate trading systems, and broker-dealers which internalize and buy order flow is a more effective systemwide order execution system.

The policy choice for the SEC and Congress can be stated simply. Does the United States seek one securities market system in which all trade is on an equal footing, whether they be individual retail investors, institutional investors or dark pools, or are we willing to tolerate a superior market for insiders and privileged traders and a second-best market for retail investors? If we seek one market, this best can be achieved through a systemwide automatic execution system and CLOB. Whether the expense of implementing this type of system to achieve further investor advantages can be costjustified is the fundamental practical question that requires study. If a systemwide order execution system and CLOB was implemented, there would need to be careful evaluation of *de minimis* exceptions for thinly traded securities[70] and how this new system could be harmonized with ongoing SEC initiatives such as that to create a Consolidated Audit Trail.[71]

Alternatively, a more effective system-wide execution system could be achieved through requirement of automatic refund of payment for order flow to customers or by a total ban of payouts for order flow. In either paradigm, a better-defined best execution rule would need to be implemented, backed

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69. *Id.* at ¶ 48, § IV.

70. Commission Statement on Market Structure Innovation for Thinly Traded Securities, Exchange Act Release No. 87327, 2019 WL 7565770 (Oct. 17, 2019), urged that Regulation NMS worked well for securities with high volume but was not optimal for thinly traded securities:

> The secondary market for thinly traded securities faces liquidity challenges that can have a negative effect on both investors and issuers. In particular, thinly traded securities, which are often also smaller capitalization securities, tend to have wider spreads and less displayed size relative to securities that trade in greater volume, often resulting in higher transaction costs for investors. Potential investors in such securities also may be concerned that they could encounter difficulties finding the necessary liquidity to establish or unwind positions in the stocks. A lack of readily available liquidity also may discourage potential market makers from electing to make markets in those securities.

71. Joint Industry Plan, Exchange Act Release No. 77724, 113 S.E.C. Docket 5971, 2016 WL 1665163 (Apr. 27, 2016) (proposing CAT system); Proposed Amendments to the National Market System Plan Governing the Consolidated Audit Trail, Exchange Act Release No. 86901, 2019 WL 8588819 (Sept. 9, 2019) (selecting FINRA to administer Consolidated Audit Trail).

up by more active SEC enforcement. These solutions could potentially end many, if not most, of the conflicts of interest associated with payment for order flow and internalization.[72]

Long experience with disclosure rules such as Regulation NMS Rules 605 and 606 and Securities Exchange Act Rule 10b-10(d)(8), and Rule 611, the Order Protection Rule, vividly illustrates that these approaches can be evaded by market centers and broker-dealers such as Robinhood, Citadel Securities and options exchanges. Often, this is not a determination to violate laws, but merely a determination to maximize market center and broker-dealer returns. SEC enforcement to identify violations of the letter or spirit of the best execution principle has been erratic, often delayed, often content with consent settlements with defendants neither admitting nor denying culpability, paying a fine, and accepting imposition of an independent consultant to improve practices. In essence, the SEC has relied on voluntary compliance of its rules under the complicated mechanics of its trade through and order protection rules. Voluntary compliance too often does not work.[73]

The wisest course for the Commission would be to address payment for order flow as part of a broader Special Study of Securities Markets. To best appreciate financial markets today, there should be a comprehensive study of financial markets including study of how they have been transformed by technology and international trading, how substitute products such as financial futures or swaps are regulated by two or sometimes more agencies, how the very nature of trading decreasingly today is centralized in securities or options markets, and how securities professionals ranging from stock brokers, options traders, financial planners, and investment advisers create confusion for investors which has only been addressed to a limited degree in recent decades.[74]

At Columbia Law School, Professor Merritt Fox and others have called for a new Special Study of Securities Markets. I share with Fox the belief that the SEC's 1961-1963 Special Study of Securities Markets[75] is long out of date. But as I stressed in my recent history of financial regulation, *Misalignment*, the new world of finance is one of product substitutes.[76] I am skeptical that you can effectively understand securities markets today without also taking into account financial futures and most swaps regulated by the Commodities Futures Trading Commission, housing finance largely subject to the financial policies of Fannie Mae and Freddie Mac, and bank

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72. *See, e.g.*, Alan Ferrell, *Payment for Order Flow*, 74 S. CAL. L. REV. 1027 (2001); Note, *supra* note 53, at 1699-1691; FOX ET AL., *supra* note 39, at 186; SELIGMAN, *supra* note 13, at 691.

73. *See generally*, Seligman, *supra* note 4; Seligman, *supra* note 13.

74. *See* Seligman, *Another Unspecial Study: The SEC's Market 2000 Report and Competitive Developments in the United States Capital Markets*, 50 BUS. LAW. 485 (1995); *see also* Seligman, *Rethinking Securities Markets: The SEC's Advisory Committee on Market Information and the Future of the National Market System*, 57 BUS. LAW. 637 (2002).

75. FOX ET AL., *supra* note 39.

76. SELIGMAN, *supra* note 4.

holding companies today regulated by the Federal Reserve System, among other topics, outside the SEC's jurisdiction.[77]

Whether the Biden Administration SEC undertakes a narrow review of payment on order flow or a broader review of financial markets, the larger point is that the Commission would be in a better position to regulate the securities markets or constituent parts of the market, once it has an informational basis similar to that of the New Deal and Cary SEC.

77. *Id*. at 1101-48.