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SOCIAL DISRUPTIONS IN SECURITIES MARKETS – WHAT REGULATORY RESPONSE DO WE NEED?

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ABSTRACT

Direct retail trading of securities, now mobilized by emerging technology and social media, has recently experienced new popularity. Trading in certain stocks favored by retail investors using these new technologies can result in extraordinary price volatility. In late January 2021, a spectacular price hike in the GameStop stock took place in the US, resulting in a short squeeze for a number of hedge funds. In the wake of this trading event, questions remain as to whether new patterns in direct retail trading should be subject to regulatory control. In light of the concerns surrounding market manipulation, this Article examines market instability and irrational trading, and whether these concerns have the potential to elicit regulatory reform. We argue that although the EU's and UK's market abuse regimes would, when compared to the US regime, pose theoretically greater legal risk to the retail traders who were involved in the GameStop short squeeze episode, it would likely be challenging to establish a clear case of actionable anti-social market behavior against retail traders. Further, the narrow lens of anti-social market behavior obscures whether these new retail trading patterns should be viewed as social challenges to financial markets, allowing new forms of social information to shape and influence price discovery. This article argues that social-based trading should not be overly obstructed, and the gaps in retail investor protection that have been fleshed out in the aftermath of the GameStop short squeeze can be addressed without undue restraints on retail trading. This article also makes proposals regarding the proportionate application of brokers' gatekeeping duties to retail investors, but does not definitively support the termination of the payment for order flow.

I. INTRODUCTION

[1] In early 2021, the financial world witnessed an unusual episode of sharp rises in the stock price of GameStop Corp., an American video games retailer listed on the Nasdaq stock exchange. This episode resulted in huge losses for short sellers in GameStop stock during a crucial window period,[1] and was attributed to surges in retail trading fueled by social media posts,[2] now called *meme stock trading*.[3] Nothing is novel about retail direct trading in stock markets (which has been on the rise since the 1990s with the arrival of online discount brokerages),[4] the influence of social media in retail trading,[5] stock market volatility,[6] or short squeezes experienced by

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[1] Oliver Wade, *Short Sellers Lose More Than $5 Billion On GameStop*, GLOB. INV. GRP. (Jan. 27, 2021, 12:26 PM), https://www.globalinvestorgroup.com/articles/3696118/short-sellers-lose-more-than-5-billion-on-gamestop [https://perma.cc/9XCX-3SHN].

[2] André Betzer & Jan Philipp Harries, If He's Still in, I'm Still in! How Reddit Posts Affect GameStop Retail Trading 2 (May 10, 2021) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3844378 [https://perma.cc/3L7F-FDRD]; U.S. SEC. & EXCH. COMM'N, STAFF REPORT ON EQUITY AND OPTIONS MARKET STRUCTURE CONDITIONS IN EARLY 2021 20-22 (2021), https://www.sec.gov/files/staff-report-equity-options-market-struction-conditions-early-2021.pdf [https://perma.cc/XXU2-GPUJ] (confirming the surge in retail trading accounting for the price swing in GameStop stock).

[3] Natasha Dailey, *Meme Stocks Are Transforming the Markets Thanks to Reddit Traders.*, MKTS. INSIDER (June 11, 2021, 8:33 AM), https://markets.businessinsider.com/news/stocks/what-is-a-meme-stock-reddit-wallstreetbets-gamestop-amc-2021-6 [https://perma.cc/78G4-RHUV].

[4] Andy Serwer et al., *A Nation of Traders*, FORTUNE MAG., Oct. 11, 1999, at 116–20.

[5] Daniel Huang, *Retail Traders Wield Social Media for Investing Fame*, WALL ST. J. (Apr. 21, 2015, 6:30 AM), https://www.wsj.com/articles/retail-traders-wield-social-media-for-investing-fame-1429608604 [https://perma.cc/7LKS-CU8S].

[6] Lynn A. Stout, *Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation*, 81 VA. L. REV. 611, 617 (1995) (explaining why markets are inherently volatile).

short-sellers, an inherent risk of such investment strategies.[7] Nevertheless, there may be new concerns regarding the first successful short squeeze inflicted on an institutional investor by retail investors, as well as the dramatic levels of stock market volatility caused by direct retail trading and possible implications for systemic market effects.[8] By making certain social media posts specifically aimed at short-sellers in GameStop stock, it is possible that individual retail traders have formed a concerted and collective force to engage in predatory trading against these short-sellers.[9] Should regulators monitor, or even control these new patterns in direct retail trading? A staff report published by the Securities and Exchange Commission (SEC) explains the causes of the price volatility in GameStop stock observed in January 2021.[10] The report identifies certain areas of further research but does not offer any definitive trajectory in terms of regulatory actions.[11]

[2] Technological transformations, such as the *appification* of online discount brokerage services, have attracted a younger generation of investors through improved access to retail trading, bringing about a new

[7] Markus K. Brunnermeier & Lasse Heje Pedersen, *Predatory Trading*, 60 J. FIN. 1825, 1825 (2005).

[8] *E.g.*, Evangelos Vasileiou, Does the Short Squeeze Lead to Market Abnormality and Anti-Leverage Effect? Evidence from the Gamestop Case (Apr. 22, 2021) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3831619 [https://perma.cc/98N3-ZR7Z] (examining the increase of return volatility in the Gamestop short squeeze contrary to traditional leverage ratio outcomes).

[9] Jennifer La'O, Predatory Trading and Credit Freeze 9–13 (November 14, 2013) (unpublished manuscript) (on file with Columbia University and NBER), https://www.stern.nyu.edu/sites/default/files/assets/documents/con_045216.pdf [https://perma.cc/466W-C6LN] (defining predatory training and proposing an equation to identity stocks susceptible to predatory training).

[10] *See* U.S. SEC. & EXCH. COMM'N, *supra* note 2.

[11] *Id.* at 43–44.

wave of democratization in finance.[12] Previously dominated by institutional investors, the GameStop episode, along with other meme stock events, reflects trading preferences and expressions that indicate a new form of social intrusion upon financial markets.[13] The dominance of financial institutions has come to shape the character of these markets with respect to what is important for price discovery,[14] and in determining what market conditions are deemed to be acceptable.[15] Institutional domination of financial markets can marginalize retail investor participants who do not buy into the rational calculative framing of financial markets,[16] the perspectives and lingo of financial elite,[17] and institutional domination.[18]

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[12] James J. Angel, GameStonk: What Happened and What to Do About It 32 (May 24, 2021) (unpublished manuscript) (on file with Georgetown University McDonough School of Business), https://ssrn.com/abstract=3782195 [https://perma.cc/5WQ2-4FVS]; Tony Klein, *A Note on GameStop, Short Squeezes, and Autodidactic Herding: An Evolution in Financial Literacy?* 10 (Queen's Mgmt. Sch., Queen's Univ. Belfast, Working Paper, Paper No. 102229, 2021), https://ssrn.com/abstract=3845722 [https://perma.cc/24T5-3YQQ].

[13] Sergio Alberto Gramitto Ricci & Christina M. Sautter, *Corporate Governance Gaming: The Power of Retail Investors*, 22 NEV. L.J. (forthcoming 2021) (manuscript at 18–19) (on file with SSRN), https://ssrn.com/abstract=3815088 [https://perma.cc/KA4Z-KARE] (describing the various ways retail traders enter the market).

[14] *Id.* (manuscript at 27).

[15] Caroline Bradley, *Disorderly Conduct: Day Traders and the Ideology of Fair and Orderly Markets*, 26 J. CORP. L. 63, 73–74 (2000).

[16] Ricci & Sautter, *supra* note 13 (manuscript at 4–5); John P. Anderson et al., *Social Media, Securities Markets and the Phenomenon of Expressive Trading*, 25 LEWIS & CLARK L. REV. (forthcoming 2021) (manuscript at 14–15, 18) (on file with SSRN), https://ssrn.com/abstract=3834801 [https://perma.cc/4WE9-E8QQ].

[17] Klein, *supra* note 12, at 9–10.

[18] Usman W. Chohan, Too Big to Fail, Too Small to Win: The Counter-Hegemony of Wallstreetbets (2021) (unpublished manuscript) (on file with SSRN), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3849770 [https://perma.cc/8U4B-NHXV]; Ricci & Sautter, *supra* note 13 (manuscript at 5, 27); Anderson et al., *supra* note 16 (manuscript at 14).

The GameStop episode can be viewed as an episode of conflict played out on financial markets, underpinned by the different characters and purposes of retail trading against certain institutional players. The social perspective of this conflict compels us to reconsider how we frame the concerns brought about by the GameStop episode and the rise of new retail trading patterns. Are our concerns framed in a manner that implicitly sympathizes with incumbents' expectations of market conditions? Might there be a case for integrating new and emerging insights on direct retail trading within the framing of a securities marketplace?

[3] In Section II, this article discusses the recent rise in direct retail trading, contextualizing this type of trading within the familiar trend of direct access to trading and day-trading that has existed since the 1990s, but highlighting new phenomena and their significance. In Section II, this article discusses whether the GameStop price hike/short squeeze episode in January 2021 can be characterized as illegal market manipulation in either the United States (US) or the European Union (EU). EU regulations are relevant for comparative purposes, as the EU's market abuse regulation introduced a comprehensive regime for weeding out abusive practices defined according to substantive effects,[19] giving these regulations the potential to outlast certain practices or technology. The case against the retail traders who were involved in the period of short squeeze is dubious, and I suggest moving away from this discussion to engage in broader reflections on the nature of contemporary retail trading.

[4] In Section III, I highlight the difficulty in simply viewing new retail trading phenomena as manipulative, and argue that such phenomena bring to securities markets a new and important type of social information. This perspective would crucially reorient policy responses away from defending a form of market framing that is preferred by incumbent financial

[19] Regulation 596/2014, of the European Parliament and of the Council of 16 April 2014 on Market Abuse (Market Abuse Regulation) and Repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC, 2014 O.J. (L 173) 1, 8–9 [hereinafter Market Abuse Regulation].

institutions. This Section supports retail direct trading and argues that regulatory measures should be targeted at market failures, rather than insulating markets from these changing impacts that may disfavor incumbent financial institutions.

[5] In Section IV, I discuss the balance needed in retail investor protection. I also warn against the hazards of investor protection, or paternalism, that can be over-inclusive and could dampen the legitimate social disruptions to securities markets discussed above. It is important to ensure that any reforms do not serve veiled agendas that push back against the new social empowerment in market participation. Finally, I conclude in Section V.

II. The Rise of Retail Direct Trading in Securities Markets

[6] Securities markets have always been regulated with public participation in mind, as envisaged in the New Deal that introduced securities regulation in the US in the 1930s.[20] However, from the 1960s, institutional investors have increasingly dominated securities market participation in the largest global capital markets of the US and United Kingdom (UK).[21] Financial institutional ownership of equities in the UK is about 80%,[22] while individual registered shareholders stand at about 10%.[23] Declining retail direct holding of corporate equity is the observed

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[20] *See* Larry Bumardner, *A Brief History of the 1930s Securities Laws in the United States – And the Potential Lesson for Today*, 4 J. GLOB. BUS. MGMT. 1, 1 (2008) http://www.jgbm.org/page/5%20Larry%20Bumgardner.pdf [https://perma.cc/WRX9-XGK2].

[21] Janette Rutterford & Leslie Hannah, *The Rise of Institutional Investors*, *in* FINANCIAL MARKET HISTORY: REFLECTIONS ON THE PAST FOR INVESTORS TODAY 242, 242 (2017).

[22] *Ownership of UK quoted shares: 2018*, OFF. FOR NAT'L STAT. 8 (Jan. 14, 2020), https://www.ons.gov.uk/economy/investmentspensionsandtrusts/bulletins/ownershipofukquotedshares/2018 [https://perma.cc/D8B9-ZTN2] (including domestic pension funds (2.4%), insurance companies (4%), unit trusts (9.6%), investment trusts (1.4%), banks (2.1%), other financial institutions (8.1%), foreign institutions (54.9%)).

[23] *Id*. at 8.

trend,[24] although this may not have affected private wealth significantly.[25] Instead, this trend may only reflect the exit of ordinary retail investors. Various events may have contributed to this decline, including loss in confidence since the 1990s corporate scandals in the UK,[26] the *dot com* booms and busts in the 2000s,[27] the rise of collective intermediated investing for retail investors,[28] and the impact of the global financial crisis of 2007-2009.[29] With the end of fixed brokerage commissions following the Big Bang in the UK in 1986,[30] and the arrival of discount brokerages in the UK and US,[31] retail investors have been attracted to direct participation in securities markets. In the US, the retail day trading sector

[24] James Poterba et al., *Stock Ownership Patterns, Stock Market Fluctuations, and Consumption*, 1995 BROOKINGS PAPERS ON ECON. ACTIVITY 295, 326 (1995).

[25] Sebastian Segerstrom, *Institutional Ownership in the UK*, FACTSET (Jul. 22, 2020), https://insight.factset.com/institutional-ownership-in-the-uk [https://perma.cc/E43A-8RWS] (highlighting how as of 2020, institutional ownership in the Financial Times Stock Exchange 100 Index "currently accounts for 62% of total ownership with a significant portion being owned by large foreign owners").

[26] Ismail Erturk et al., *Corporate Governance and Disappointment*, 11 REV. INT'L POL. ECON. 677, 685 (2004).

[27] Carl T. Hagberg et. al., *The Death of Retail Investing: Should You Care?*, 18 S'HOLDER SERV. OPTIMIZER, no. 3, 2012, at 1.

[28] ROGER M. BARKER & IRIS H.-Y. CHIU, CORPORATE GOVERNANCE AND INVESTMENT MANAGEMENT 17–18 (Edward Elgar 2016) (noting that "growth in collective investment management has been remarkable since the early 1990s").

[29] Nathaniel Popper, *Stock Trading is Still Falling After '08 Crisis*, N.Y. TIMES (May 6, 2012), https://www.nytimes.com/2012/05/07/business/stock-trading-remains-in-a-slide-after-08-crisis.html [https://perma.cc/EW43-4VFT].

[30] Jamie Robertson, *How the Big Bang Changed the City of London for Ever*, BBC NEWS (Oct. 27, 2016), https://www.bbc.com/news/business-37751599 [https://perma.cc/9XKM-TUFR].

[31] Serwer et al., *supra* note 4, at 116–20.

grows,[32] as the retired, bored, unemployed, or those seeking side income dabble in day trading. However, day trading seems a temporary thrill for most.[33] Although criticized as contributing to *noise trading* in securities markets,[34] policy makers have not intrusively regulated such trading.[35] This may be because regulators prefer to uphold freedom of participation with a minimum set of brokers' gatekeeping duties.[36] Indeed, trading activity in general benefits market liquidity.[37] Further, even if retail trading is often uninformed and irrational,[38] retail investors' access to securities

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[32] *Id.*

[33] Lynnette Khalfani, *Life of a Day Trader*, BLACK ENTER. (July 1, 1999), https://www.thefreelibrary.com/Life+of+a+Day+Trader-a055100692 [https://perma.cc/RYJ8-KRUT]; *Day Trading: Your Dollars at Risk*, SEC: INV. PUBL'NS (Apr. 20, 2005), https://www.sec.gov/reportspubs/investor-publications/investorpubsdaytipshtm.html [https://perma.cc/8M4A-9BHS] (noting most investors cannot "sustain the devastating losses that day trading can bring"); Fernando Chague et al., Day Trading for a Living? 1–3 (Jun. 13, 2020) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3423101 [https://perma.cc/A94N-XTPV] (showing it is impossible to day-trade for a living).

[34] Paul G. Mahoney, *Is There a Cure for "Excessive" Trading?*, 81 VA. L. REV. 713, 713–14 (1995).

[35] *Id.* at 744–749; Bradley, *supra* note 15, at 88–90; *see, e.g.*, ROBERT J. SHILLER, IRRATIONAL EXUBERANCE 17–19 (Princeton University Press 2000) (finding there seems no particular impetus to re-order trading behavior).

[36] Mahoney, *supra* note 34, at 735.

[37] *Id.* at 728–29; *Transfer of Power*, ECONOMIST, Feb. 6, 2021, at 56–58.

[38] Stephen J. Choi & Adam C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1, 12–14 (2003); Chune Young Chung et al., *Are Individual Investors Uninformed? Evidence from Trading Behaviors by Heterogeneous Investors Around Unfaithful Corporate Disclosure*, 43 ASIA-PAC. J. FIN. STUD. 157, 162–64 (2014); Zheng Wu et al., *Who Moves First? Price Discovery by Institutional and Retail Investors.*, U. SYDNEY 1, 12 (2015).

markets is part of financial democratization and inclusion,[39] as well as a financialization agenda that serves the industry's business case.[40]

[7] Securities markets and regulators have accommodated relatively unsophisticated retail trading, so what new concerns arise from the January 2021 GameStop trading event? Some new features of today's retail trading include: (a) the appification of retail trading, such as discount brokerages adopting financial technology to renew their business models and appeal to a younger and more wired generation,[41] enabling a mobile retail trading experience with user-friendly interfaces that include game-like features;[42] and (b) social media support and mobilization for retail trading, such as on Twitter, Reddit and its sub-communities—like Reddit's

[39] Christine Hurt, *Regulating Public Morals and Private Markets: Online Securities Trading, Internet Gambling, and The Speculation Paradox*, 86 B.U. L. REV. 371, 411–13 (2006).

[40] *Id.*; Aeron Davis & Karel Williams, *Introduction: Elites and Power After Financialization*, 34 THEORY, CULTURE, & SOC'Y (SPECIAL ISSUE) 3, 15 (2017) (discussing political economy definition of financialization).

[41] Brad M. Barber et al., *Attention-Induced Trading and Returns: Evidence from Robinhood Users*, J. FIN. (forthcoming 2021) (manuscript at 1) (on file with SSRN), https://ssrn.com/abstract=3715077 [https://perma.cc/T4QQ-6MMU].

[42] Michael Wursthorn & Euirim Choi, *Does Robinhood Make It Too Easy to Trade? From Free Stocks to Confetti*, WALL ST. J. (Aug. 20, 2020, 2:53 PM), https://www.wsj.com/articles/confetti-free-stocks-does-robinhoods-design-make-trading-too-easy-11597915801 [https://perma.cc/CE3E-8CVL]; Arjen van der Heide & Dominik Želinský, '*Level Up Your Money Game': An Analysis of Gamification Discourse in Financial Services*, 14 J. CULTURAL ECON. 711, 712 (Feb. 23, 2021), https://www.tandfonline.com/doi/full/10.1080/17530350.2021.1882537?scroll=top&needAccess=true [https://perma.cc/H93H-A94M].

r/WallStreetBets.[43] Nevertheless, before the era of Twitter and Reddit, internet chatrooms have been utilized by day traders since the 1990s to share information, knowledge and experience.[44] Online connections supporting retail stock trading are not novel; however, new young retail traders arguably approach this cooperation with a different ethos and spirit.[45] Further, levels of retail participation have increased dramatically under COVID-19 pandemic lockdowns.[46]

[8] Already, the January 2021 GameStop trading event has been widely studied.[47] A number of influential posters on the r/WallStreetBets Reddit sub-community recommended the GameStop stock backed by their own

[43] Simon Behrendt & Alexander Schmidt, *The Twitter Myth Revisited: Intraday Investor Sentiment, Twitter Activity and Individual-Level Stock Return Volatility*, 96 J. BANKING & FIN. 355, 355–56 (2018); Cheng Long et al., "I Just Like the Stock" versus "Fear and Loathing on Main Street": The Role of Reddit Sentiment in the GameStop Short Squeeze 1–2 (Apr. 8, 2021) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3822315 [https://perma.cc/82VA-D5LE]; Alexander Pelaez et al., David and Goliath Revisited: How Small Investors Are Changing the Landscape of Financial Markets 1 (Feb. 7, 2021) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3821711 [https://perma.cc/G95C-EV3D].

[44] Bruce Mizrach & Susan Weerts, *Experts Online: An Analysis of Trading Activity in a Public Internet Chat Room*, 70 J. ECON. BEHAV. & ORG. 266, 278 (2009) (finding that users have a positive learning and returns experience).

[45] Chohan, *supra* note 18 (describing "you only live once" and social expressions in trading).

[46] *Id.*; Michael Wursthorn et al., *Everyone's a Day Trader Now*, WALL ST. J. (July 25, 2020, 12:01 AM), https://www.wsj.com/articles/everyones-a-day-trader-now-11595649609 [https://perma.cc/D2HG-QYGS]; Alexander Osipovich, *Individual-Investor Boom Reshapes U.S. Stock Market*, WALL ST. J. (Aug 31, 2020, 5:30 AM), https://www.wsj.com/articles/individual-investor-boom-reshapes-u-s-stock-market-11598866200 [https://perma.cc/F458-D8Q5].

[47] Chohan, *supra* note 18; Ricci & Sautter, *supra* note 13 (manuscript at 4); Jonathan R. Macey, *Securities Regulation and Class Warfare*, COLUM. BUS. L. REV. (forthcoming 2021) (manuscript at 29) (on file with SSRN), https://ssrn.com/abstract=3789706 [https://perma.cc/2ECZ-489N].

purchases, and increasingly rallied to support the stock after news of hedge fund short-sellers' positions in the stock came to light.[48] Although largely uncoordinated,[49] retail trading spiked in the GameStop stock, raising its share price 1,625% by January 27, 2021.[50] Some criticized this as an acute episode of irrational trading deviating from company fundamentals, causing unnecessary volatility and waste.[51] However, others were less critical and perceived this event as an expression of new, younger retail traders' social opinions on securities markets.[52] They arguably provided a countervailing correction to GameStop's low stock price depressed by short-sellers' predictions.[53] Melvin Capital, a hedge fund with large short positions in GameStop, suffered the most spectacular defeat. The fund lost

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[48] Anderson et al., *supra* note 16 (manuscript at 6); Lasse Heje Pedersen, *Game On: Social Networks and Markets*, N.Y.U. STERN SCH. BUS. (forthcoming) (manuscript at 29) (on file with SSRN), https://ssrn.com/abstract=3794616 [https://perma.cc/6EYA-XJ9M].

[49] Katherine Burton & Hema Parmar, *Reddit Crowd Bludgeons Melvin Capital in Warning to Industry*, BLOOMBERG (Jan. 27, 2021, 12:54 PM), https://www.bloomberg.com/news/articles/2021-01-27/bros-on-reddit-bludgeon-melvin-capital-in-warning-to-wall-street [https://perma.cc/5LHP-HJVK].

[50] *See* David Randall, *Analysis: A Tulip by Another Name? 'Gamestonk' and the Case for Investor Caution*, REUTERS (Jan. 30, 2021, 7:16 AM), https://www.reuters.com/article/us-retail-trading-bubbles-analysis/analysis-a-tulip-by-another-name-gamestonk-and-the-case-for-investor-caution-idUSKBN29Z0HG [https://perma.cc/K6RL-K38M].

[51] George Calhoun, *'GameStop/Gamestonk' Has Nothing to Do with the Madness of Crowds*, FORBES (Mar. 5, 2021, 7:30 PM), https://www.forbes.com/sites/georgecalhoun/2021/03/05/gamestopgamestonk-has-nothing-to-do-with-the-madness-of-crowds/?sh=77bc0ef725d0 [https://perma.cc/69RK-PWNS]; Tim Hasso et al., *Who Participated in the GameStop Frenzy? Evidence from Brokerage Accounts* (Fin. Rsch. Letters, Working Paper No. 58, 2021), https://ssrn.com/abstract=3792095 [https://perma.cc/77F3-73XU].

[52] Anderson et al., *supra* note 16 (manuscript at 10–11); Chohan, *supra* note 18; Macey, *supra* note 47 (manuscript at 13).

[53] *See* Robert Jarrow & Siguang Li, Media Trading Groups and Short Selling Manipulation (June 30, 2021) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3804130 [https://perma.cc/4WUX-XM5H].

over 53% of its value of assets under management[54] due to the need to cover short positions within the crucial window period of "Gamestonk."[55] As of this writing, GameStop's stock price continues to be volatile, but its value remains higher than in late 2020.[56] Many retail traders have not behaved like day traders, and instead are holding long positions.[57] Although a handful of other stocks favored by retail traders on social media have not experienced as spectacular a trajectory as GameStop, retail interest in them has significantly changed their price discovery, leading many to call these "meme stocks."[58]

[9] As this article will go on to discuss, one issue of concern for meme stocks is whether their prices are subject to manipulation by retail traders.[59]

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[54] Shalini Nagarajan, *The hedge fund badly bruised by betting against GameStop is still struggling after ending the first half with a 46% loss, report says*, MKTS. INSIDER (July 9, 2021, 7:54 AM), https://markets.businessinsider.com/news/stocks/melvin-capital-gabe-plotkin-gamestop-short-squeeze-1h-46-loss-2021-7 [https://perma.cc/UZ82-XWP7]; *see* David Y. Aharon et al., Did David Win a Battle or the War Against Goliath? Dynamic Return and Volatility Connectedness Between the GameStop Stock and the High Short Interest Indices (Mar. 18, 2021) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3788155 [https://perma.cc/R8DT-DBGN].

[55] *See generally* Burton & Parmar, *supra* note 49 (explaining how the "Gamestonk" tweet caused the Gamestop stock to double and further increase Melvin Capital's losses due to their short position).

[56] *GameStop Corp. (GME : NYSE) Stock Price & News*, GOOGLE FIN. (Sep. 25, 2021, 1:43 PM), https://www.google.com/finance/quote/GME:NYSE?sa=X&ved=2ahUKEwjln4_71ZrzAhV5MVkFHSrRCZEQ3ecFegQIJhAU&window=1Y [https://perma.cc/EY7C-U4H9] (showing graph of GameStop stock prices over the past year).

[57] *See id.*; Taylor Lorenz & Mike Isaac, *The Misfits Shaking Wall Street*, N.Y. TIMES (Jan. 29, 2021), https://www.nytimes.com/2021/01/29/technology/stock-traders-reddit-tiktok-youtube.html [https://perma.cc/LB99-9827].

[58] *See generally* Arash Aloosh et al., On the Efficiency of Meme Stocks (July 7, 2021) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=3839832 [https://perma.cc/C4NE-D6FB] (discussing improved efficiency in these markets).

[59] *See infra* Section II.

Securities prices have been shown to be both semi-strong efficient,[60] as well as a reflection of random patterns,[61] indicating some inherent volatility.[62] Increase in retail demand cannot *per se* be *manipulative* within the regulatory definition of prohibited anti-social behavior on securities markets.[63] However, market abuse—such as insider trading or market manipulation—is viewed as offensive to securities markets as such abuse may precipitate loss of confidence in market participation and the withdrawal of network effects and liquidity.[64] Thus, it is important to identify if there are any characteristics of the new retail trading phenomena that may be considered market abuse.

[10] Next, the price volatility in meme stocks could be systemically contagious, in that it affects price volatility in other sectoral stocks.[65] Price volatility could be harmful for investors, such as pension funds, who need to regularly account for prudent valuations of assets. Significant price volatility in investment portfolios exacerbates compliance efforts for institutions and puts stress on risk management teams. I now turn to the issues of market manipulation and potentially adverse market conditions and assess whether there is a need for regulatory intervention.

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[60] Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383, 404, 409 (1970) ("In general semi-strong form tests of efficient markets models are concerned with whether current prices 'fully reflect' all obviously publicly available information."); Merritt B. Fox et al., *Law, Share Price Accuracy, and Economic Performance: The New Evidence*, 102 MICH. L. REV. 331, 335 (2003).

[61] SHILLER, *supra* note 35, at 171.

[62] *See* Stout, *supra* note 6, at 645.

[63] *See infra* Section II.

[64] *See* Harry McVea, *What's Wrong with Insider Dealing?*, 15 LEGAL STUD. 390, 413 (1995).

[65] Umar et al., *Comovements Between Heavily Shorted Stocks During a Market Squeeze: Lessons from the GameStop Trading Frenzy*, 58 RSCH. INT'L BUS. & FIN., no. 101453, 2021, at 2.

III. Retail Trading and Anti-Social Behavior

[11] Whether direct retail trading behavior could be manipulative is relevant to the short squeeze experienced by several GameStop short sellers in January 2021.[66] Commentators found posts on r/WallStreetBets explicitly rallying retail traders against hedge funds that short selling.[67] It is critical, then, to consider whether retail trading influenced through social media could amount to market manipulation.[68]

[12] Deliberate trading to effect a short squeeze can be considered *predatory trading*, defined as a trading strategy carried out in order to exert stress upon other traders based on knowledge of their vulnerable exposures, forcing them into liquidation.[69] Predatory trading has been observed amongst sophisticated financial institution participants who have knowledge of other participants' vulnerabilities.[70] Likewise, social media posts regarding exact knowledge of Melvin Capital's large put options on

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[66] *See* Vasileiou Evanelos et al., Explaining Gamestop Short Squeeze Using Intraday Data and Google Searches (Mar. 18, 2021) (unpublished manuscript) (available at SSRN), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3805630 [https://perma.cc/GH5C-F4SJ].

[67] Angel, *supra* note 12, at 8, 29; Macey, *supra* note 47 (manuscript at 3); *see* Chohan, *supra* note 18.

[68] Caitlin Reilly, *Wall Street 'Hate' Seen Driving GameStop Trades*, ROLL CALL (Jan. 29, 2021, 3:24 PM), https://www.rollcall.com/2021/01/29/wall-street-hate-seen-driving-gamestop-trades/ [https://perma.cc/NVB8-RLMP] (suggesting that the GameStop incident was largely driven by individual investors, not regulated entities, and therefore it was not a traditional case of market manipulation).

[69] La'O, *supra* note 9, at 1.

[70] Brunnermeier & Pedersen, *supra* note 7, at 1825.

GameStop reflect predatory trading motivations.[71] On the other hand, retail trading influenced by social media is not coordinated *ex ante*; so, has predatory trading really occurred, or is this merely a confluence of trading that happened to achieve such a result? Predatory trading is only actionable if relevant actions fall within regulatory definitions of market manipulation.[72]

[13] Section 9(a) of the U.S. Securities Exchange Act of 1934 is unlikely to capture the Redditors involved in the short squeeze. Section 9(a)(1) deals narrowly with certain types of trades, such as wash trades and arranged trades, that are likely inapplicable to the Redditors who encouraged—but did not privately coordinate— the January 2021 trading event.[73] Section 9(a)(2) deals with transactional activity for the *purpose* of inducing others to trade.[74] Some argue that such purpose seems widely framed but has not been clearly judicially articulated.[75] Actionable purpose is arguably self-serving in nature, inflicting disadvantages upon the other investors induced to trade.[76] Examples of actionable conduct include: (i) engaging in "naked open market manipulation," or increasing a stock's value through artificial short-term demand and selling at that increased value; (ii) serving some external economic interest; or (iii) making

[71] Michelle Celarier, *Buried in Reddit, the Seeds of Melvin Capital's Crisis*, INST. INV. (Jan. 25, 2021), https://www.institutionalinvestor.com/article/b1q8swwwtgr7nt/Buried-in-Reddit-the-Seeds-of-Melvin-Capital-s-Crisis [https://perma.cc/Y3MZ-467T]; *see generally Put Options Explained: Buying or Selling Puts (With Examples)*, ALLY (Aug. 6, 2021), https://www.ally.com/do-it-right/investing/put-options/ [https://perma.cc/X2YB-3FKD] (defining put options).

[72] *See* Gina-Gail S. Fletcher, *Legitimate Yet Manipulative: The Conundrum of Open-Market Manipulation*, 68 DUKE L.J. 479, 494 (2018).

[73] Securities Exchange Act of 1934, 15 U.S.C.S. § 78i(a)(1).

[74] *Id.* at § 78i(a)(2).

[75] Merritt B. Fox et al., *Stock Market Manipulation and its Regulation*, 35 YALE J. REGUL. 67, 116 (2018).

[76] *Id.* at 114–15.

misstatements.[77] Many Redditors involved in the short squeeze encouraged others to trade, but they shared a common motivation to challenge short-sellers, rather than improve their own profit. Whether the purpose specified in Section 9(a)(2) exists in this case turns on whether the investors intended the inducement of third-party trades.

[14] According to commentators, Section 9(a)(2) focuses on the *artificiality* of trading activity, resulting in an artificial market.[78] Because of the need to establish artificiality, Redditors' market activity is arguably unlikely to be manipulative as it reflects genuine demand—especially since Redditors are encouraged to have "diamond hands" (to hold long).[79] Section 9(a)(2) does not capture situations where mechanisms for trade are facially legitimate, even though the activity results in dramatic price changes.[80] This is because artificiality in price *must* result from artificiality in trading activity.[81] Even if dramatic price changes serve as proxies for artificiality in the price discovery process, it would be difficult for courts to establish whether price changes are actually artificial, as price movements are an inherent feature of a free and liquid market.[82] Why should traders, who genuinely believe that a stock is underpriced, be alleged of market manipulation for moving stock price in the direction aligned with their evaluation? By comparison, might regulators also treat

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[77] *See id.* at 73.

[78] Stanislav Dolgopolov, *The Doctrinal Quandary of Manipulative Practices in Securities Markets: Artificial Pricing, Price Discovery, and Liquidity Provision*, 45 IOWA J. CORP. L. 1, 21–22 (2019).

[79] *Id.* at 40; Eric Platt et. al., *'This is the way': the Reddit traders who took on Wall Street's elite*, FIN. TIMES (Jan. 29, 2021), https://www.ft.com/content/4916c465-99ec-46f4-a889-df845ad1bcd2 [https://perma.cc/4QWB-XU9A]; Fox et al., *supra* note 75, at 116.

[80] Fletcher, *supra* note 72, at 500–02 (2018).

[81] *Id.*

[82] *See* Dolgopolov, *supra* note 78, at 17.

short-sellers who publish their intentions as manipulators for trying to move the price down from what they genuinely perceive to be excessive? Nevertheless, commentators defend short-selling, though socially controversial, as an important contribution toward market price discovery and efficiency.[83]

[15] The Redditors' communications and actions may also constitute fraud-on-the-market, depending upon whether fraud has occurred or whether the actors disseminated untrue information.[84] As of this writing, however, the relevant facts are not yet available, as reams of communications would require forensic examination. Commentators agree that fraud is intent-based,[85] not applicable to honest traders who have not engaged in deception or dishonesty.[86] Also as of this writing, there has not been any finding of deceptive or untrue information dissemination on r/WallStreetBets connected to the short squeeze.[87] Many Redditors who contributed to the short squeeze post their holdings publicly, and as it turns

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[83] Emilios Avgouleas, *A New Framework for the Global Regulation of Short Sales: Why Prohibition is Inefficient and Disclosure Insufficient*, 15 STAN. J.L., BUS., & FIN. 376, 398, 400 (2010).

[84] Basic, Inc. v. Levinson, 485 U.S. 224 (1988); 17 C.F.R. § 240.10b-5 (2021).

[85] Fletcher, *supra* note 72, at 515–16.

[86] John Crabb, *GameStop Drama Leaves SEC in Tricky Situation*, INT'L FIN. L. REV. (Jan. 29, 2021), https://www.iflr.com/article/b1qb6gvw8x6jty/gamestop-drama-leaves-sec-in-tricky-situation [https://perma.cc/8A9C-Y5JE].

[87] Melanie Waddell, *SEC Likely to Probe GameStop Trading, but What Will It Find*?, THINKADVISOR (Jan. 27, 2021), https://www.thinkadvisor.com/2021/01/27/sec-likely-to-probe-gamestop-trading-surge-but-what-will-it-find/?printer-friendly [https://perma.cc/4F5Q-GYNE].

out, these Redditors were holding long.[88]

[16] How would conditions differ with application of the EU market abuse regime?[89] The EU regime was developed and modernized to be a comprehensive framework for capturing abusive activity on markets.[90] This body of law defines abusive activity in relation to market effects rather than perpetrator intent.[91] In shifting the focus, the EU requires more responsibility from market participants than in the US. Indeed, Articles 12(1)(a)(i) and (ii) capture any market activity that gives "false or misleading" signals regarding supply or demand of securities and/or securing price of securities at "an artificial or abnormal" level.[92]

[17] The scope of bad market effects is potentially wider under the EU regime, extending beyond dishonesty/falsehood and artificiality, to "misleading" signals and "abnormal" effects.[93] In this manner, even if many Redditors genuinely held long, not producing a misleading signal affecting demand, the effects they created on the market could still be regarded as abnormal. Further, there is empirical evidence showing that some of the involved retail traders were less focused on the long-term and

[88] Long, *supra* note 43, at 5–6; Anderson et al., *supra* note 16 (manuscript at 8–10); *see generally* Bradley et al., Place Your Bets? The Market Consequences of Investment Advice on Reddit's Wallstreetbets 8–10 (Sept. 2021) (unpublished manuscript) (available at SSRN), https://ssrn.com/abstract=3806065 [https://perma.cc/QU56-EA6C] (explaining that Reddit posts should not be made in the spirit of deception and self-promotion, but posts are moderated).

[89] *See generally* Market Abuse Regulation, *supra* note 19, at 9–10 (highlighting the dangers of market abuse, such as muddying the waters of market transparency).

[90] *Id.* at 7.

[91] *Id.*

[92] *See id.* at 9, 30.

[93] *Id.* at 9, 30–31, 55.

might have been herded into short-term trading during the short squeeze.[94] There is no requirement, within the framework of market abuse regulation in the EU, to prove intent or fraud as long as the effects of misleading demand *or* abnormal price are secured. The spectacular rise in GameStop's price could be regarded as abnormal even if a judge cannot adequately clarify the meaning of artificial for price changes. The application of the EU's market manipulation regime in the UK shows that courts accept the effects achieved by the relevant trading activities/behavior as a basis for liability.[95]

[18] Further, a market manipulation liability could fall on Redditors not only for their trading activity, but for their roles in information dissemination. Although many Redditors disseminate their own diligence and information in the public domain, where they are prohibited by forum rules from spreading lies or self-serving statements,[96] the re-tweeting or re-communication of information in the public domain can pose liability risk.[97] In fact, re-communication of old news in the public domain that implies that the information is new has attracted market manipulation liability in the UK.[98] The effects-based liability regime captures a wider range of information-sharing behavior that is not necessarily dishonest or fraudulent.

[94] Hasso et al., *supra* note 51.

[95] *See, e.g.*, Winterflood Sec. Ltd. v. Financial Servs. Auth. [2010] EWCA (Civ) 423 (UK).

[96] *r/WallStreetBets/Rules*, REDDIT, https://www.reddit.com/r/wallstreetbets/about/rules/ [https://perma.cc/SS5G-GJFE].

[97] *See* Nitesh Chawla et al., Information Diffusion on Social Media: Does It Affect Trading, Return, and Liquidity 2–3 (Nov. 5, 2016) (unpublished manuscript) (on file with SSRN), https://ssrn.com/abstract=2935138 [https://perma.cc/CNK8-WHHA].

[98] *See, e.g.*, *Final Notice against Christopher William Gower*, FSA (Jan. 12, 2011), https://www.fca.org.uk/publication/final-notices/christopher_gower.pdf [https://perma.cc/7RM5-EDRQ].

[19] However, in price pump cases, regulatory enforcement has arguably always been directed at *pump and dump* cases (where demand prices are artificially increased) related to securing a private benefit. If Redditors contributing to the short squeeze were not targeting a quick dump and profit from arbitrage, then should regulators enforce against the *crowd pump*,[99] as opposed to the type of anti-social and self-serving behavior they wish to deter?[100] The effects-based market abuse regime contains only narrow exceptions for legitimate actions.[101] Under the EU regime, Redditors who contributed to the short squeeze would not clearly be immune from legal risk.

[20] The broader question may be whether regulators ought to enforce technicalities in the regulatory regime against retail traders who were trying to make a point with their trading.[102] Indeed, regulators should mind the social context, which, aptly described by commentators, is characterized by anger at financial institutions since the global financial crisis occurring between 2007-2009, and which is marked by intergenerational expressions of discontent by younger retail traders.[103] If regulators prosecute Redditors connected to the short squeeze, they are likely to sow more distrust of existing financial regulatory institutions. Many may raise questions as to why regulators choose to pursue retail traders when institutional market participants continue to push the boundaries of legitimate and fair trading, for example by way of high

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[99] *See* Massimo La Morgia et al., *The Doge of Wall Street: Analysis and Detection of Pump and Dump Cryptocurrency Manipulations* 1, 18, 21–22 (May 3, 2021) (unpublished manuscript) (on file with Cornell University), https://arxiv.org/pdf/2105.00733.pdf [https://perma.cc/CJC5-CBBS].

[100] *See* Market Abuse Regulation, *supra* note 19, at 5.

[101] *See id.* at 31–32 (requiring accepted market practices to be set out *ex ante* by regulators).

[102] *See* Anderson et al., *supra* note 16 (manuscript at 2, 21).

[103] Chohan, *supra* note 18.

frequency algorithmic trading.[104] Commentators question the legitimacy of implicit regulatory permission for high frequency trading practices despite the risks of manipulation to which they give rise. In the EU, where algorithmic and high frequency trading are permitted, regulators prefer to impose market-making duties on high frequency traders who provide liquidity in markets.[105] The perception that regulators are excessively sympathetic to the industry they regulate, treating the retail users that they are mandated to protect differently, could become toxic to the regulatory institutions themselves. Further, an effects-based regime for market abuse liability arguably entrenches the market conditions established by dominant participants, potentially resulting in legal endogeneity.[106] Moreover, the arbitrary halt on retail trading imposed by Robinhood and other platform brokerages in response to what they perceived as coordinated retail trading could have exerted a more manipulative effect on stock prices, causing customer losses.[107] Might society benefit from better accountability by regulators?[108]

[21] Attacking market manipulation may serve the greater good of protecting market integrity so that markets can serve the socially beneficial

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[104] *See* Steven McNamara, *The Law and Ethics of High-Frequency Trading*, 17 MINN. J.L. SCI. & TECH. 71, 98–99 (2016); Tom C. W. Lin, *The New Market Manipulation*, 66 EMORY L.J. 1253, 1260–63 (2017).

[105] Directive 2014/65, of the European Parliament and of the Council of 15 May 2014 on Markets in Financial Instruments and Amending Directive 2002/92/EC and Directive 2011/61/EU, art. 48, 2014 O.J. (L 173) 349.

[106] *See* Lauren B. Edelman et al., *The Endogeneity of Legal Regulation: Grievance Procedures as Rational Myth*, 105 AM. J. SOC. 406, 442, 445 (1999).

[107] Peter Lee, *Robinhood and GameStop Route Popular Fury Against Wall Street*, EUROMONEY (Jan. 29, 2021), https://www.euromoney.com/article/282tvodleh6c1jbevv1fk/opinion/robinhood-and-gamestop-route-popular-fury-against-wall-street [https://perma.cc/G87C-S6Y4]; Charles M. Jones et al., *When Brokerages Restrict Retail Investors, Does the Game Stop?*, (forthcoming 2021) (manuscript at 3–4) (on file with SSRN), https://ssrn.com/abstract=3804446 [https://perma.cc/HJA9-LMCZ].

[108] *See* Macey, *supra* note 47 (manuscript at 20–22).

purposes of accurate price discovery and liquidity.[109] However, empirical research uncovered little or no damage to markets during the GameStop short squeeze.[110] As a result, the lack of any systemic implications cautions against enforcement actions or legal reform aimed at gatekeeping retail trading. Further, a narrow focus on the abnormal stock price of GameStop is questionable on the basis that normality in stock price is itself a rigged concept—one that is framed by dominant market participants and endogenously accepted in law. Normality in stock price is a concept that embeds financial elitism in terms of what *should* influence price, as dominant market participants are financial institutions.[111] The powerful retail trading in January 2021 can be seen as a countervailing dialectic to a financial elitist definition of price normality, instead of anti-social behavior against it. With this in mind, I turn to broadly examine how regulators should consider integrating this dialectic into the framing of secondary securities markets, critically considering the current market regulation doctrines. In this Section, instead of asking whether existing regulatory institutions should control or suppress episodes like the January 2021 short squeeze, I ask, what lessons for change may be drawn from this social challenging of financial markets?

III. Retail Trading as New Social Disruption That Changes Market Framing?

[22] Anderson and colleagues describe Redditors' trading during the January 2021 short squeeze as a form of *expressive trading*,[112] channeling to markets the signals of traders who have done their own due diligence and disagree with conventional financial analysis.[113] There is also an element of

[109] Fox et al., *supra* note 75, at 69–73; Fletcher, *supra* note 72, at 490–92.

[110] Aharon et al., *supra* note 54; Aloosh et al., *supra* note 58.

[111] *See infra* Section III.

[112] Anderson et al., *supra* note 16 (manuscript at 13–14).

[113] Ricci & Sautter, *supra* note 13 (manuscript at 19).

social affinity expressed through trading, as retail traders express their approval of the company, its services, and its products, integrating the desire for the company to perform well.[114] Chohan and Macey further describe the Redditors' trading during the January 2021 short squeeze as concurrently sending signals to counter financial elite domination, hegemony, and privilege with respect to financial markets. [115] Macey opines that retail traders have finally risen up against structural unfairness.[116] Financial markets privilege those able to access information and price discovery ahead of retail investors, creating structural conditions that make it difficult for retail traders to achieve the kind of abnormal returns attainable by financial institution participants.[117] In sum, retail trading signals include protest behavior, disagreement, and conflict with financial institution domination. After the GameStop short squeeze, institutional traders now treat retail trading signals seriously, as areas of threat for risk management.[118]

[23] This Section argues that new retail trading signals are a form of social information channeled to securities markets which should be regarded as transformative salient information for price discovery purposes. Social-based trading should constitute legitimate information for markets, as it is contemporarily unavoidable. This change in framing would serve to counter the disparagement of such trading. In this manner, social-based trading can be supported through laws and regulations that encourage efficient financial markets and price discovery.

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[114] Long et al., *supra* note 43, at 5.

[115] Chohan, *supra* note 18; Macey, *supra* note 47 (manuscript at 3-5).

[116] Macey, *supra* note 47 (manuscript at 7–10).

[117] *Id.* at 823–24.

[118] Justina Lee, *Robots on Wall Street Wrestle With Confusing World of Reddit*, BLOOMBERG (Feb. 22, 2021, 11:00 AM), https://www.bloomberg.com/news/articles/2021-02-22/wall-street-s-robots-are-taking-on-the-confusing-world-of-reddit [https://perma.cc/95YT-2529].

[24] Although the efficient capital markets hypothesis does not provide guidance on the types of information salient to price discovery, and that which should be reflected in market price,[119] securities regulation in the US, EU, and UK have drawn the line at *material information*.[120] Indeed, a legal threshold is needed for issuers' mandatory disclosure obligations to supply information to markets.[121] The legal fabrication of materiality entails implications beyond just compliance, as it also gives rise to a market selection process of information regarded as salient and valuable, as opposed to *immaterial* information or *noise*.[122] In reality, noise may merely be an unnecessary distraction, disturbing price movements while adding no value.[123] It is easy to regard the significant price hikes for meme stocks as being caused by herding and noise. But it is also possible that retail trading signals are attempts to correct unnaturally low prices fed into conventional financial analysis with which retail traders simply disagree.[124]

[25] The law has played a substantial role in shaping the economic meaning of materiality with respect to issuers' financial performance, but it is important to consider both legal and economic materiality when creating a definition for that which is salient information for securities markets.

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[119] *See generally* Fama, *supra* note 60, at 384–88 (discussing the theory of efficient markets).

[120] TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 448 (1976); *Basic*, 485 U.S. at 231–32 (explaining the judicial articulation for "materiality" in the US); HM TREASURY, UK PROSPECTUS REGIME REVIEW: A CONSULTATION 15–16 (2021) (explaining that in the EU and UK, "material" information is, like the US "reasonable investor" test, defined as what an investor needs to make an informed assessment on securities).

[121] Richard C. Sauer, *The Erosion of the Materiality Standard in the Enforcement of the Federal Securities Laws*, 62 BUS. LAW. 317, 318 (2007) (explaining the delineation of "materiality" for regulatory compliance).

[122] *Id.* at 322; *see generally* Fischer Black, *Noise*, 41 J. FIN. 529, 529–30 (1986) (discussing "noise" in different financial market contexts).

[123] Black, *supra* note 122.

[124] Anderson et al., *supra* note 16 (manuscript at 21); Jarrow & Li, *supra* note 53, at 5.

Although the legal definition of materiality is somewhat elastic,[125] financial and quantitative experts form an elite that have come to dominate the interpretation and understanding of information materiality.[126] Quantitative accounting information[127] coupled with the information of value to institutional market participants[128] dominate the sphere of legal and economic materiality. In this manner, price discovery is controlled by elite framers whose epistemic authority is established in the legal, accounting, and financial professions' sense-making (purportedly an objective practice) of what information ought to matter.[129] Price discovery on securities markets is not merely an objective process operating at different strengths in the efficient capital markets hypothesis, but is heavily shaped by the social domination of the financial elite, bringing their framing of information materiality to bear.[130]

[26] Viewing the development of price discovery on securities markets as subject to a form of social domination by the financial elite helps to explain why certain types of information have been marginalized on

[125] Kurt S. Schulzke & Gerlinde Berger-Walliser, *Toward a Unified Theory of Materiality in Securities Law*, 56 COLUM. J. TRANSNAT'L L. 6, 68 (2017).

[126] William Davies, *Elite Power Under Advanced Neoliberalism*, 34 THEORY, CULTURE & SOC'Y 227, 240 (2017).

[127] David Hatherly et al., *The Finitist Accountant*, *in* LIVING IN A MATERIAL WORLD: ECONOMIC SOCIOLOGY MEETS SCIENCE AND TECHNOLOGY STUDIES 132 (Trevor Pinch & Richard Swedberg eds., 2008).

[128] William F. Messier et al., *A Review and Integration of Empirical Research on Materiality: Two Decades Later*, 24 AUDITING: J. PRAC. & THEORY 153, 8, 27 (2005); David A. Katz & Laura A. McIntosh, '*Materiality' in America and Abroad*, N.Y.L.J. (Apr. 28, 2021, 12:30 PM), https://www.law.com/newyorklawjournal/2021/04/28/materiality-in-america-and-abroad/?slreturn=20210814154228 [https://perma.cc/9ATA-XH52].

[129] ALEX PREDA, FRAMING FINANCE: THE BOUNDARIES OF MARKETS AND MODERN CAPITALISM 110–12 (University of Chicago Press 2009).

[130] *Id.* at 110–12.

securities markets, causing mispricing of securities. As an example, financial institutions have undervalued the financial impact of climate change[131] and other environmental, social and governance (ESG) issues.[132] Markets and regulators are newly starting to acknowledge that ESG issues could be material to issuer performance,[133] although a considerable amount of time has elapsed since the development of voluntary corporate reporting for ESG issues.[134] Indeed, mandatory ESG reporting remains in early stages, and there is not yet international consensus on how to approach its use.[135] The slow trajectory toward recognizing the materiality of new

[131] John Byrd & Elizabeth S. Cooperman, *Investors and Stranded Asset Risk: Evidence from Shareholder Responses to Carbon Capture and Sequestration (CCS) Events*, 8 J. SUSTAINABLE FIN. & INV. 185, 186–87 (2018).

[132] Harald Sverdrup et al., *Defining a Free Market: Drivers of Unsustainability as Illustrated with an Example of Shrimp Farming in the Mangrove Forest in South East Asia*, 140 J. CLEANER PROD. 299, 300–01 (2017); Andrea Hafenstein & Alexander Bassen, *Influences for Using Sustainability Information in the Investment Decision-Making of Non-Professional Investors*, 6 J. SUSTAINABILITY FIN. & INV. 186, 1–2, 11(2016); Willem Schramade, *Integrating ESG into Valuation Models and Investment Decisions: The Value Driver Adjustment Approach*, 6 J. SUSTAINABILITY FIN. & INV. 95, 95 (2016).

[133] Gunnar Friede et al., *ESG and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies*, 5 J. SUSTAINABILITY FIN. & INV. 210, 210, 222 (2015).

[134] *See generally GRI Standards English Language*, GRI, https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/ [https://perma.cc/U87C-ZFDB] (referencing the GRI standards on reporting).

[135] *See* FIN. CONDUCT AUTH., PROPOSALS TO ENHANCE CLIMATE-RELATED DISCLOSURES BY LISTED ISSUERS AND CLARIFICATION OF EXISTING DISCLOSURE OBLIGATIONS, 2020, PS20/17, at 7 (UK) (explaining the UK's mandatory reporting for premium-listed companies according to the Task Force for Climate-Related Financial Disclosure standards, and will extend to large private companies and partnerships); DEP'T FOR BUS., ENERGY & INDUS. STRATEGY, CONSULTATION ON REQUIRING MANDATORY CLIMATE-RELATED FINANCIAL DISCLOSURES BY PUBLICLY QUOTED COMPANIES, LARGE PRIVATE COMPANIES AND LIMITED LIABILITY PARTNERSHIPS (LLPS), 2021, at 7–8 (UK).

qualitative and quantitative information regarding ESG topics reflects the unwillingness amongst the financial and quantitative elite to consider such topics.[136] Incremental developments, such as clarification of the fiduciary duties of investment managers,[137] and competitive industry developments such as the production of ESG material accounting standards by the Sustainability Accounting Standards Board,[138] have taken time to mature, but eventually may pose a challenge to the institutional stranglehold supporting a narrow and quantitative-minded framing of information materiality.

[27] Similarly, social-based trading information is a type of information that has not yet attained recognition for its market salience. Social-based trading embeds the many perceptions of certain companies into their valuation, creating shared opinions. Commentators argue that social-based trading embeds signals of social activism, and that this activism is salient as an indicator how society wishes to shape economic activity. It is arguably timely for such social information to intrude upon financial markets: market framing, as applied to the legal and economic framing of materiality, has been too insular and unreflective of the holistic human and societal condition. The trading carried out by the Redditors in January 2021 is an example of individual investors joining hands to confront markets with the power, and in turn, the salience of social information. These signals should not be dismissed as sui generis, or simply as noise.

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136 *See* Alan Lewis & Carmen Juravle, *Morals, Markets and Sustainable Investments: A Qualitative Study of 'Champions'*, 93 J. BUS. ETHICS 483, 492–93 (2010).

137 *A Legal Framework for the Integration of Environmental, Social and Governance Issues into Institutional Investment*, UNEP FIN. INITIATIVE 1, 117 (Oct. 2005), https://www.unepfi.org/fileadmin/documents/freshfields_legal_resp_20051123.pdf [https://perma.cc/PBT6-EW5A]; *see generally Fiduciary Duty in the 21st Century*, UNEP FIN. INITIATIVE 1, 51 (2019), https://www.unepfi.org/wordpress/wp-content/uploads/2019/10/Fiduciary-duty-21st-century-final-report.pdf [https://perma.cc/DM7J-5CS3] (explaining the "significant barriers to enacting policies that support the growth of ESG integration and clarity around fiduciary duty" in the United States).

138 *Standards Overview*, SUSTAINABILITY ACCT. STANDARDS BD., https://www.sasb.org/standards/ [https://perma.cc/4LJA-A8DX].

Observe also the pejorative language used in the framing of meme stock trading and the affinity of young retail traders for a gamified interface in their trading apps, with users characterized as uninformed or irrational. This framing reflects prejudices that serve to protect the dominant framing of markets preferred by the financial elite.

[28] On the other hand, the integration of social-based trading within the framing of material and salient information for securities markets may not achieve significant change. Considering social-based trading within the frame of price discovery means that social-based trading would be evaluated under the benchmark of materiality. Legal and economic framing of materiality would in turn drive non-acceptance of social-based trading. This is observed in the evolution of material ESG issues in financial markets, which are those issues that raise financial risks or opportunities for issuers. Material ESG issues are not always aligned with those ESG issues valued by society outside of the financial realm.

[29] Nevertheless, ESG materiality is an emerging development that has stretched the economic and legal framing of materiality. The development of ESG materiality has changed perceptions of risk salience and financial impact.[139] This stretching incrementally changes the perception of value, eventually adjusting types of information that reach securities markets.[140] Perceiving that social-based trading can be material to securities markets is the beginning of a dialectical process that can challenge and change market framing over time.

[30] Regulators would play an important role in allowing the value of social-based trading to be recognized in securities markets. First, regulators

[139] George Serafeim, *Social Impact Efforts That Create Real Value*, HARV. BUS. REV. (Sept.–Oct. 2020), https://hbr.org/2020/09/social-impact-efforts-that-create-real-value [https://perma.cc/PD9X-PU9K].

[140] *See* Ruth Jebe, *The Convergence of Financial and ESG Materiality: Taking Sustainability Mainstream*, 56 AM. BUS. L.J. 645, 647 (2019).

should not carry out over-inclusive regulatory actions that impede retail trading of securities. Second, unless there are clear elements of anti-sociality that can be established within the frameworks of market abuse, regulators should refrain from prosecuting retail traders who participate in meme stock trading that contributes to price volatility. However, that is not to say that retail trading is currently sufficiently governed. In the next Section, I discuss reforms that balance investor protection with efforts to secure more accurate securities price discovery. Meanwhile, financial institutions should realize that market conditions would be shaped by their preferences, such as conditions for price discovery that enable them to engage in familiar exploits for price arbitrage. Although it is beyond the scope of this Article, future research might consider whether regulators and central bankers have pandered to elite financial institutions' preferences, bringing about complacent expectations of the maintenance of certain financial market conditions. For example, central bank asset purchase programs to ease liquidity conditions for securities markets can lead market participants into a false sense of security in the sustainability of those conditions.[141] Regulators' mandates for market regulation, such as market confidence or market stability, should not simply match the expectations of the financial elite with respect to structural market conditions.

IV. What Reforms are Really Needed

[31] Social-based trading is incentivized, and even made possible by certain brokerage business models that could harm investors. Zero-commission trading offered by brokers such as Robinhood attracts retail investors, and it has greatly facilitated access to direct retail trading.[142] Many retail investors who contributed to the short squeeze in January 2021

[141] *Asset Purchase Programmes*, EUROPEAN CENTRAL BANK: EUROSYSTEM, https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html [https://perma.cc/V84E-BV2N] (supporting that the maintenance of market liquidity conditions is a policy cornerstone, especially after the global financial crisis of 2007–09).

[142] Sheelah Kolhatkar, *Robinhood's Big Gamble*, NEW YORKER (May 10, 2021), https://www.newyorker.com/magazine/2021/05/17/robinhoods-big-gamble [https://perma.cc/3CYA-CVV4].

were trading from accounts with Robinhood, E*toro, and Webull.[143] There are, however, some concerns regarding investor protection by these discount brokers, especially regarding the payment for order flow (PFOF) business model[144] and high levels of leverage that investors may employ.[145] Many call on regulators for reform targeting the improvement of retail investor protection, but regulatory control of PFOF and investor leverage would also affect retail trading empowerment.[146] Potential reforms should refrain from obstructing retail trading, even as a secondary effect. For example, one acute issue—the freezing of retail investor accounts by Robinhood and a number of online brokers on 28 January 2021—raised immense anger.[147] This illustrates the need to reconsider broker discretion and the duties owed to customers. In general, paternalism in any regulatory

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[143] *See* Harry Robertson, Robinhood, *Webull, M1 and these other platforms have resumed trading of GameStop and AMC shares*, MKTS. INSIDER (Jan. 29, 2021, 8:39 AM) https://markets.businessinsider.com/news/stocks/robinhood-webull-m1-reopen-gamestop-stock-trading-2021-1 [https://perma.cc/A88M-W96W].

[144] *See, e.g.*, Eva Szalay, *Retail Trading Frenzy Reflects 'Broken' US Equity Markets, Says XTX's Gerko*, FIN. TIMES (June 8, 2021), https://www.ft.com/content/d813fe90-29ba-4c98-ac57-c2919a7970b1 [https://perma.cc/6SMB-GTHU]; Avi Salzman, *How Robinhood Seized the Moment in Stock Trading*, 100 BARRON'S 17, 18, 20–21 (Aug. 17, 2020); U.S. SEC. & EXCH. COMM'N, *supra* note 2, at 44 (highlighting the PFOF business model as an issue deserving of further research).

[145] *See, e.g.*, Maggie Fitzgerald, *Robinhood to Pay $70 Million for Outages and Misleading Customers, the Largest-Ever FINRA Penalty*, CNBC (June 30, 2021, 11:11 AM), https://www.cnbc.com/2021 /06/30/robinhood-to-pay-70-million-for-misleading-customers-and-outages-the-largest-finra-penalty-ever.html [https://perma.cc/J9RH-HN9N] (discussing Robinhood's punishment for allowing unsuitable customers to trade in options and employ excessive leverage).

[146] *See* Rawley Z. Heimer & Alp Simsek, *Should Retail Investors' Leverage Be Limited?*, J. FIN. ECON. (forthcoming) (manuscript at 22) (on file with SSRN) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2150980 [https://perma.cc/2AHD-FQD9].

[147] Amanda Bronstad, *Lawsuits Over GameStop Trading Expand Beyond Robinhood, Alleging an Antitrust Conspiracy*, NAT'L L.J. (Feb. 9, 2021, 10:56 AM), https://www.law.com/nationallawjournal/2021/02/09/lawsuits-over-gamestop-trading-expand-beyond-robinhood-alleging-an-antitrust-conspiracy/ [https://perma.cc/C5LN-B66D].

reform, based on the need to "protect investors from their own folly,"[148] should be balanced against the benefits of trading freedoms, including investors' enfranchisement to the markets.[149] Wide enfranchisement is critical to balance the elitist framing of financial markets that has grown for decades.[150] The potential for disenfranchisement from securities trading must be weighed against the benefits of increased paternalism in investor protection reforms.

[32] The PFOF business model adopted by many retail investors' favorite online discount brokers should be subject to regulatory governance. In the US, where regulation appears to be more permissive than in the EU (discussed shortly), the key issue is that PFOF business models can obscurely scalp investors.[151] App-based trading platforms attract retail investors through their gamified, user-friendly interfaces, as well as through the no-commissions trading model.[152] Revenue is generated by routing order flow to other intermediaries to execute investors' orders.[153] The relationship between these brokers and the financial institutions that purchase order flow can create agency problems for investors, causing investors to lose out on the price for which their trades are executed in excess of what they may have saved in

[148] Susanna Kim Ripken, *Paternalism and Securities Regulation*, 21 STAN. J.L. BUS. & FIN. 1, 14 (2015).

[149] Matthew Thomas & Luke Buckmaster, *Paternalism in Social Policy When is it Justifiable?*, PARLIAMENT OF AUSTL. 1, 8 (Dec. 15, 2010).

[150] Robert J. Shiller, *Democratizing and Humanizing Finance*, *in* REFORMING U.S. FINANCIAL MARKETS 1, 4 (Benjamin M. Friedman ed., 2011).

[151] *See* Christine Parlour & Uday Rajan, *Payment for Order Flow*, 68 J. FIN. ECON. 379, 381–82 (2003).

[152] *How Robinhood Makes Money*, CBINSIGHTS (July 8, 2021), https://www.cbinsights.com/research/report/how-robinhood-makes-money/ [https://perma.cc/NS38-CS47].

[153] *See id.*

commissions.[154] Although brokers owe investors a duty of best execution,[155] Macey and O'Hara have argued that this duty is theoretical at best.[156] Brokers provide transparency on routing venues as a matter of regulatory reporting,[157] but these reports may not shed much light on the quality of execution achieved. In other words, the duty does not adequately safeguard investors against unfair practices in execution, such as the discretion that buyers of order flow (i.e. institutions and hedge funds) have in cherry-picking which orders to internalize versus those that they send to the auction markets of open exchanges.[158] The buyers of order flow are incentivized to send the worst price orders to open exchanges to widen the buy-sell spread, maximizing the difference they can pocket.[159] Buyers of order flow only need to achieve a small price improvement for retail investors above the national best bid or offer based on the consolidated quotation or tape.[160] However, such manipulation of the price spread on open exchanges is only a real problem if the market for order flow is monopsonist, or controlled by a dominating buyer.[161] A highly competitive

154 Allen Ferrell, *A Proposal for Solving the "Payment for Order Flow" Problem*, 74 S. CAL. L. REV. 1027, 1032–34 (2001).

155 FINRA, RULE 5310 (2014).

156 Johnathan R. Macey & Maureen O'Hara, *The Law and Economics of Best Execution*, 6 J. FIN. INTERMEDIATION 188, 189–91, 198 (1997).

157 17 C.F.R. § 242.606 (2019).

158 *See* Matt Levine, *Money Stuff: People Are Worried About Payment for Order Flow*, BLOOMBERG (Feb. 5, 2021, 12:11 PM), https://www.bloomberg.com/news/newsletters/2021-02-05/robinhood-gamestop-saga-pressures-payment-for-order-flow-kksjpbpt [https://perma.cc/YEJ3-8D76].

159 *See* Parlour & Rajan, *supra* note 158, at 384, 389–90; Ferrell, *supra* note 161, at 1042, 1060, 1078–79.

160 *See* Levine, *supra* note 165.

161 Fox et al., *supra* note 75, at 290–91.

market curtails the hazards of spread maximization, helping retail investors to realize benefits exceeding their savings in trading commissions.[162]

[33] Nevertheless, even if the market for order flow is competitive, the best-execution duty does not prevent brokers from routing order flow to the institutions that offer the highest rebates, even if those institutions do not provide the best execution for investors.[163] In other words, brokers' conflicts of interest undermine the likelihood that best execution compliance is properly sought on behalf of investors. In the US, any reform to the controversial PFOF business model would be met with intense debate.[164] Perhaps, though, regulators are already being mindful to support retail investors' access to an attractive and accessible trading model, especially if the results for investors are not obviously egregious.

[34] In the EU and UK however, PFOF is usually regarded as an unacceptable inducement that causes brokers to fail to optimally manage conflicts of interest.[165] This does not necessarily make the EU position better than the US model. The US has always benefited from a depth of direct retail trading exceeding that in Europe and the UK. This is because investors' savings are channeled largely to banks in the UK and EU, while investors in the US do not shy from participating in capital markets

[162] *See* Robert H. Battalio & Tim Loughran, *Does Payment for Order Flow to Your Broker Help or Hurt You*? 80 J. BUS. ETHICS 37, 42 (2008).

[163] *See* Ferrell, *supra* note 161, at 1066–70; Fox et al., *supra* note 75, at 290.

[164] Hester M. Peirce, U.S. Sec. & Exch. Comm'n, Remarks at the George Washington University Law School Regulating the Digital Economy Conference (Feb. 22, 2021) (transcript available on the SEC website), https://www.sec.gov/news/speech/peirce-atomic-trading-2021-02-22 [https://perma.cc/92WP-JGCL]. *But see* U.S. SEC. & EXCH. COMM'N, *supra* note 2, at 44.

[165] *Public Statement: ESMA Warns Firms and Investors About Risks Arising from Payment for Order Flow and From Certain Practices by "Zero-Commission Brokers,"* at 2, 4 (July 13, 2021), https://www.esma.europa.eu/sites/default/files/library/esma35-43-2749_esma_public_statement_pfof_and_zero-commission_brokers.pdf [https://perma.cc/2T63-8Q8N].

whether directly or through collective investment schemes.[166] The depth of the market for retail brokerage in the US brings about a highly competitive environment,[167] and it is arguable that such competition mitigates the need for top-down regulatory solutions, such as a prohibition of PFOF. Mandatory membership in occupational pension schemes, introduced in the UK in 2018, may however grow intermediated investing in due course.[168]

[35] Regulators should be mindful of the social cost of banning PFOF, depending upon whether the change in brokers' business models negatively affects access to trading. In considering the GameStop short squeeze episode, a ban might also be seen as pro-elite warfare against the new retail investors. I argue that there are other areas in more immediate need of attention for investor protection, although regulators should remain watchful for abuses of PFOF business models.

[36] Regulators need to focus on two issues critical to retail investor protection: (1) investors' use of leverage, and (2) brokers' gatekeeping discretion. Leverage risks exposure to catastrophic losses, hurting individual investors and impacting the market.[169] Gatekeeping discretion can be used against investors, such as the freezing of investors' accounts

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[166] *See* Joshua Oliver, *Inside the battle to be Europe's Robinhood*, FINANCIAL TIMES (Oct. 1, 2021), https://www.ft.com/content/d3cbfa1f-d712-46b6-8595-ebe36b6c7162 [https://perma.cc/2HNL-6YXF].

[167] Madison Darbyshire & Colby Smith, *US brokers' race to attract investors stokes concerns over risks*, FIN. TIMES (Feb. 11, 2021), https://www.ft.com/content/3c457515-812a-4a8f-a59b-3bc533f867ac [https://perma.cc/SNL3-PAUQ].

[168] Pensions Act 2014, c. 19 (UK).

[169] *See, e.g.*, Kelly Shue, *How Leverage Turns Market Corrections into Crashes*, YALE INSIGHTS (Apr. 24, 2019), https://insights.som.yale.edu/insights/how-leverage-turns-market-corrections-into-crashes [https://perma.cc/A5BP-C7HW].

by Robinhood January 28, 2021, raising reliability concerns for individual investors.[170]

[37] Online brokers exercise very loose control of retail investors' leverage levels,[171] raising concerns over whether they should exercise responsibility, or even gatekeep retail investors' risk of exposure to catastrophic losses. A college student named Alex Kearns tragically committed suicide after seeing that his Robinhood account recorded a loss of over $750,000, even though the structure of his options likely incurred no debt.[172] Margin trading, as well as the purchase of puts and calls, is empowering for retail investors, bringing their voice of demand to the market. Indeed, institutional investors are often able to maximize returns using leverage.[173] If retail exposure to leverage is regulated, this measure may be over-inclusive and paternalistic, allowing institutional investors not subject to such limits to gain a substantial market advantage.[174] Empirical research shows that only a small minority of retail investors are addicted gamblers who take on excessive leverage and bring about ruinous

[170] Oscar Gonzalez & David Priest, *Robinhood backlash: What you should know about the GameStop stock controversy*, CNET (Mar. 17, 2021, 3:42 PM), https://www.cnet.com/personal-finance/investing/robinhood-backlash-what-you-should-know-about-the-gamestop-stock-controversy/ [https://perma.cc/P3PN-PHY7].

[171] Rawley Z. Heimer & Alp Simsek, *Should Retail Investors' Leverage Be Limited?* 1, 8 (Nat'l Bureau of Econ. Rsch., Working Paper No. 24176, 2017).

[172] Tony Dokoupil et al., *Alex Kearns Died Thinking He Owed Hundreds of Thousands for Stock Market Losses on Robinhood. His Parents Have Sued Over His Suicide.*, CBS NEWS (Feb. 8, 2021, 2:03 PM), https://www.cbsnews.com/news/alex-kearns-robinhood-trader-suicide-wrongful-death-suit/ [https://perma.cc/278P-572B].

[173] *See What is Leveraged Finance?*, CORP. FIN. INST., https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-leveraged-finance/ [https://perma.cc/K382-7BDT].

[174] *See* TAMARA LOTHIAN, LAW AND THE WEALTH OF NATIONS 101 (2017) (discussing how regulatory laxity for institutions as opposed to retain investors is critically referred to as "regulatory dualism").

effects on themselves.[175] As a result, regulatory controls may consider targeting the minority addicted group to help mitigate the risk encountered by their lack of self-control.[176] Indeed, regulatory interventions can be designed along a spectrum, with increased paternalism for the least able investors.

[38] Regulators should consider imposing gatekeeping duties on brokers, targeted at compulsive gambler-investors, perhaps under the framing of *vulnerable customers*, adopted in the UK. Vulnerable customers are defined as those particularly susceptible to harm due to their personal circumstances, which include infirmities, disabilities, and changing life circumstances.[177] Financial intermediaries in the UK are strongly encouraged to undertake an assessment of all retail customers to identify vulnerabilities.[178] Similarly, online brokers should assess for vulnerability, even if retail investors are expressly in an *execution-only* account arrangement, where investment advice is not provided. Although the execution-only arrangement is exempt from advisory duties and care,[179]

[175] *See, e.g.*, Ruben Cox et al., *Compulsive Gambling in the Financial Markets: Evidence from Two Investor Surveys*, 111 J. BANKING & FIN. 1, 14 (2019) (finding "4.4% of the investors in the combined sample . . . is classified as a potential trading addict.").

[176] *See, e.g.*, Mark D. Griffiths, *Crypto-Trading Addiction*, PSYCHOL. TODAY (Oct. 29, 2018), https://www.psychologytoday.com/us/blog/in-excess/201810/crypto-trading-addiction [https://perma.cc/6QGV-KCRX] (discussing the potential addictiveness of crypto-currency and how regulatory controls to inhibit speculation may help limit the potential consequences); Moritz Mosenhauer et al., *The Stock Market as a Casino: Associations Between Costly Excessive Stock Market Trading and Problem Gambling*, PSYARXIV (Jan. 8, 2021), https://psyarxiv.com/zqe9s/ [https://perma.cc/9QWW-2Z27] (discussing potential links between gambling and high-risk investments as well as the link between excessive trading in the stock market and problem gambling).

[177] *FG21/1 Guidance for Firms on the Fair Treatment of Vulnerable Customers*, FIN. CONDUCT AUTH. 9 (Feb. 2021), https://www.fca.org.uk/publication/finalised-guidance/fg21-1.pdf [https://perma.cc/X6VT-JHQH].

[178] *Id.* at 28.

[179] *See* Council Directive 2014/65, *supra* note 105, at 349, 409.

providing a low-cost departure point for retail investors, this flexibility should not become an excuse for brokers to completely neglect customers' risks. Vulnerability assessments should be a baseline obligation for all financial intermediaries, exceeding that employed by the UK's Financial Conduct Authority (FCA), bearing in mind lessons from Kearns' heartbreaking suicide.[180] For example, personality issues such as anxiety, family difficulties, and very low levels of education or literacy should all be considered as proxy indicators.[181] Online questionnaires can be designed to elicit these indicators from retail customers to identify vulnerabilities for compliance purposes. Brokers can be subject to gatekeeping duties to monitor vulnerable customers more intensely, all while prohibited from carrying out discretionary, across-the-board intrusions like account freezes. Brokers can benefit from a range of safe harbor conduct that protects vulnerable retail traders, and the classifications of vulnerabilities should be communicated *ex ante* to customers so that they may challenge and review the broker's process. This proposal strikes a balance between paternalism that protects investors and veiled forms of paternalism that could be used against retail investors.[182]

[39] However, more general concerns over retail investors' behavioral weaknesses may benefit from certain minimum, but proportionate regulatory solutions.[183] The US Securities and Exchange Commission (SEC) is looking into whether gamified interactions in online trading apps may be misleading for investors, which could lead to regulatory reform of

[180] *See FG21/1 Guidance for Firms on the Fair Treatment of Vulnerable Customers*, *supra* note 184; Dokoupil et al., *supra* note 179.

[181] Peter Cartwright, *Understanding and Protecting Vulnerable Financial Consumers*, 38 J. CONSUMER POL'Y 119, 120 (Dec. 14, 2015).

[182] *See* Jones et al., *supra* note 107 (manuscript at 39–40).

[183] *See* Lars Klöhn, *Preventing Excessive Retail Investor Trading Under MiFID: A Behavioural Law & Economics Perspective*, 10 EUR. BUS. L. REV. 437, 450–51 (2009); Geneviève Helleringer, *A Behavioural Perspective on Consumer Finance*, *in* RESEARCH METHODS IN CONSUMER LAW: A HANDBOOK 334, 336–37 (Hans-W. Micklitz et al. eds., 2018).

communications or, even for advice.[184] As gamified interactions in trading apps can encourage herding in trading behavior,[185] *just-in-time* communications, such as automatic warning messages from brokers, could help to mitigate herding fever.[186] Just-in-time messages, such as one that reads "you must be able to afford to lose this investment," may guide some investors to reconsider their actions.[187]

[40] Gatekeeping roles are a common feature in regulatory regimes in the US, EU, and UK, as they can be well-placed to protect retail customers.[188] However, as brokers manage conflicts of interest that may undermine customer protection, there is an inherent risk that their gatekeeping would not benefit customers.[189] Regulators should supervise discretionary gatekeeping practices, and retail customers should monitor their brokers' activities, reporting to regulators when necessary. Social media groups, who have proven adept at sharing information about investible opportunities might also share opinions about brokers that they have used in order to stimulate user-based discipline and competitive incentives for brokers. Angel recommends that regulators promote fair treatment of retail

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[184] Thomas Franck & Maggie Fitzgerald, *SEC Steps Up Research into Brokers' 'Gamification' of Trades, Chair Gary Gensler Says*, CNBC (Aug. 27, 2021, 12:30 PM), https://www.cnbc.com/2021/08/27/sec-steps-up-research-into-gamification-of-trading-with-online-brokers-gary-gensler-says.html [https://perma.cc/AAL5-2BJT]; *See also* U.S. SEC. & EXCH. COMM'N, *supra* note 2 at 44.

[185] *See* Umar et al., *supra* note 65, at 2 (finding certain features "may induce herding behavior").

[186] *See* Daniel Fernandes et al., *Financial Literacy, Financial Education, and Downstream Financial Behaviors,* 60 MGMT. SCI. 1861, 1861 (2014).

[187] *See id.* at 1873.

[188] Klöhn, *supra* note 190, at 453.

[189] John C. Coffee, Jr., *Gatekeeper Failure and Reform: The Challenge of Fashioning Relevant Reforms* 36, 46–50, 83–84 (Berkley Program L. & Econ., Working Paper 2004) https://escholarship.org/content/qt13d8s2qs/qt13d8s2qs.pdf?t=lnqc0o [https://perma.cc/Y42Y-9QGT].

investors alongside institutional investors, and encourages affording more financial enfranchisement to retail investors, including allowing them to participate in stock lending.[190] Perhaps regulation in the form of *stock-take* may give rise to more beneficial reform, enfranchising the retail investor.

V. Conclusion

[41] Direct retail trading of securities, mobilized by new technological interfaces and social media support, has recently experienced a new high, driving price volatility in certain meme stocks favored by retail investors. In particular, a remarkable price hike of the GameStop stock took place in the US in late January 2021, resulting in a short squeeze for a number of hedge funds. New patterns in direct retail trading may benefit from careful, proportionate regulatory control. In considering market manipulation, market instability, and irrational trading concerns, there are many areas for potential regulatory reform. Although the EU's and UK's market abuse regimes would, in comparison with the US regime, pose greater legal risk to the retail traders who were involved in the GameStop short squeeze episode, it would be challenging to establish a clear case of actionable anti-social market behavior against retail traders. Further, the narrow lens of anti-social market behavior obscures the potential for us to view new retail trading patterns as social challenges to financial markets, bringing new forms of social information to shape and influence price discovery. Social-based trading should not be overly obstructed, and the gaps in retail investor protection that have been fleshed out in the aftermath of the GameStop short squeeze can be addressed without undue curbs on retail trading. Depending on the market and the use of payment for order flow business model, brokers may apply effective gatekeeping for retail accounts to help balance the playing field with institutional investors and protect the interests of high-risk investors.

[190] Angel, *supra* note 12, at 17–18.