Social Disruptions in Securities Markets- What Regulatory Response Do We Need?
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Introduction

In early 2021, we witnessed an unusual episode of sharp rises in the stock price of Gamestop Corp., an American video games retailer listed on NasDaq. 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 fuelled by social media posts,[2] now called 'meme stock trading'.[3] Of this mix of elements, 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 short-sellers (being an inherent risk with the strategy of short sales).[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] With explicit social media posts against short-sellers in Gamestop stock, it can be queried if disparate individual retail traders have indeed formed a concerted and collective force to engage in predatory trading[9] against them. Should these new patterns in direct retail trading be watched carefully and is a regulatory response needed?

Technological transformations such as the 'appification' of online discount brokerage services has improved access to retail trading especially for the younger generation, bringing about a new wave of democratisation in finance.[10] The Gamestop episode and other observations in relation to meme stocks reflect trading preferences and expressions that are a new form of social intrusion upon financial markets,[11] which had become places for institutional domination. The dominance of financial institution market participants has come to shape the character of these markets in relation to what is salient for price

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[1] 'Short sellers lose more than $5 billion on GameStop' (Global Investor, 27 Jan 2021).

[2] André Betzer and Jan Philipp Harries, 'If He's Still In, I'm Still In! How Reddit Posts Affect Gamestop Retail Trading' (2021), https://ssrn.com/abstract=3844378.

[3] Stocks promoted on social media, 'Meme stocks are transforming the market thanks to Reddit traders' (11 June 2021), https://markets.businessinsider.com/news/stocks/what-is-a-meme-stock-reddit-wallstreetbets-gamestop-amc-2021-6.

[4] 'A Nation of Traders' (Fortune, 11 October 1999), Vol. 140 Issue 7, p116-120.

[5] Sect. A and n2.

[6] Lynn A. Stout, 'Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation' on why markets are inherently volatile, (1995) 81 Va. L. Rev. 611.

[7] Markus K Brunnermeier and Lasse Heje Pedersen, 'Predatory Trading' (2005) 110 (4) Journal of Finance 1825.

[8] Evangelos Vasileiou, 'Does the Short Squeeze Lead to Market Abnormality and Anti-Leverage Effect? Evidence from the Gamestop Case' (2021), https://ssrn.com/abstract=3831619.

[9] Jennifer La'O, 'Predatory Trading and Credit Freeze' (2010), http://econ-www.mit.edu/files/5529.

[10] James J Angel, 'GameStonk: What Happened and What to Do About it' (2021), https://ssrn.com/abstract=3782195; Tony Klein, 'A Note on GameStop, Short Squeezes, and Autodidactic Herding: An Evolution in Financial Literacy?' (2021), https://ssrn.com/abstract=3845722.

[11] Sect C.

discovery[12] and what market conditions are 'acceptable'.[13] Institutional domination of financial markets can be marginalising for retail investor participants who do not buy into the rational calculative framing of financial markets,[14] the perspectives and lingo of financial elite[15] and institutional domination.[16] Hence the Gamestop episode can be understood to be an episode of conflict played out on financial markets, underpinned by the different characters and purposes of retail trading as against (certain) institutional players. The socialised perspective of such 'conflict' would compel us to reconsider how we frame the concerns relating to the Gamestop episode and the rise of new retail trading patterns. Are our concerns framed in a manner that implicitly sympathise with incumbents' expectations of market conditions? Is there a case for integrating new insights regarding direct retail trading within the framing of a securities marketplace?

Section A discusses the recent rise in direct retail trading, contextualising this within the familiar trend of direct access to trading and day-trading since the 1990s, but highlighting new observed phenomena and their significance. Section B discusses whether the Gamestop price hike/short squeeze episode in January 2021 can be characterised as illegal market manipulation in US as well as EU regulation. The relevance of EU regulation is for comparative purpose, as the EU's market abuse regulation[17] introduced a comprehensive regime for weeding out abusive practices defined according to substantive effects, therefore having the potential to outlast particular practices or technology. The case against the retail traders who were involved in the period of short squeeze is borderline, and we suggest moving away from this discussion in order to engage in broader reflections about the nature of contemporary retail trading.

Section C takes from the departure point that it would be difficult to simply pigeonhole new retail trading phenomena as manipulative and argues that such phenomena bring to securities markets a new salient type of social information. This perspective would crucially re-orient policy responses away from defending a form of market framing preferred by incumbent financial institution dominants. This Section supports retail direct trading but argues that regulatory measures should be targeted at market failures as opposed to insulating markets from changing impacts that incumbents do not prefer.

Section D discusses the balance needed to be achieved in retail investor protection and warns against the hazards of investor protection paternalism that can be over-inclusive and could dampen the legitimate social disruptions to securities markets discussed above. It is important to ensure that reforms if any do not serve veiled agendas that push back against

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[12] ibid.

[13] Caroline Bradley, 'Disorderly Conduct: Day Traders and the Ideology of Fair and Orderly Markets' (2000) 26 J Corp L 63.

[14] Sect C; John P Anderson, Jeremy Kidd and George A Mocsary, 'Social Media, Securities Markets and the Phenomenon of Expressive Trading' (2021), https://ssrn.com/abstract=3834801.

[15] Klein (2021).

[16] Usman W Chohan, 'Too Big to Fail, Too Small to Win: The Counter- Hegemony of Wallstreetbets' (2021), https://ssrn.com/abstract=3849770; Sergio Alberto Gramitto Ricci and Christina M Sauter, 'Corporate Governance Gaming' (2021) 22 Nevada Law Journal forthcoming, https://ssrn.com/abstract=3815088; Anderson et al (2021).

[17] Market Abuse Regulation 596/2014.

the new social empowerment in market participation. This Section includes concluding remarks.

A. The Rise of Retail Direct Trading in Securities Markets

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. However, from the 1960s, institutional investors have increasingly dominated securities market participation in the largest global capital markets of the US and UK. In the UK, financial institutional ownership of UK equities is about 80%,[18] and individual registered shareholders stand at just under 15%.[19] Declining retail direct holding of corporate equity is the observed trend,[20] although this may not have affected private wealth significantly,[21] reflecting mainly the exit of ordinary retail investors. The cumulative episodes of: loss in confidence since the 1990s corporate scandals in the UK;[22] the dot.com booms and busts in the 2000s;[23] the rise of collective intermediated investing for retail investors;[24] and the impact of the global financial crisis 2007-9[25] have perhaps all contributed to this decline. In the 1980s and 1990s, with the end to fixed brokerage commissions following the Big Bang in the UK,[26] and the arrival of discount brokerages in the UK and US,[27] an extent of retail investors have been attracted towards direct participation in securities markets. In the US, the growth of the retail day trading sector is observed,[28] as the retired, bored, unemployed or those seeking side income dabble in day trading. Day trading however seems a temporary thrill for most,[29] and although criticised to contribute to 'noise trading' in securities

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[18] Includes domestic pension funds, insurance companies, unit trusts and investment trusts and foreign institutions, 'Ownership of UK Quoted Shares 2018' (2020), https://www.ons.gov.uk/economy/investmentspensionsandtrusts/bulletins/ownershipofukquotedshares/2018.

[19] Ibid.

[20] James Poterba and Andrew A Samwick, 'Stock Ownership Patterns, Stock Market Fluctuations, and Consumption' (1995) 2 Brookings Papers on Economic Activity 295, 297.

[21] 'How America's 1% came to dominate equity ownership' (Financial Times, 11 Feb 2020), https://www.ft.com/content/2501e154-4789-11ea-aeb3-955839e06441. The UK equities sector features over 50% foreign ownership, including foreign private and institutional wealth.

[22] Ismail Erturk et al, 'Corporate Governance and Disappointment' (2004) 11 Global Regulation 677.

[23] 'The Death of Retail Investing: Should You Care?' (2012), https://optimizeronline.com/the-death-of-retail-investing-should-you-care/.

[24] Ch1, Roger M Barker and Iris H-Y Chiu, *Corporate Governance and Investment Management* (Edward Elgar 2015). The European UCITs, regulated by harmonised legislation since 1985, shows successful appeal in regulated collective investing.

[25] 'Stock Trading Is Still Falling After '08 Crisis' (NY Times, 6 May 2012), https://www.nytimes.com/2012/05/07/business/stock-trading-remains-in-a-slide-after-08-crisis.html.

[26] 'How the Big Bang changed the City of London for ever' (BBCNews, 27 Oct 2016), https://www.bbc.co.uk/news/business-37751599.

[27] n4.

[28] Ibid.

[29] 'Life of a Day Trader: Vanita Jones Reveals the Promise and Peril of Online Investing' (Black Enterprise, July 1999); Josh DiPietro, *The Truth about Day Trading Stocks* (Wiley, 2009). Fernando Chague, Rodrigo De-Losso, Bruno Giovannetti, 'Day Trading for a Living?' (2020), https://ssrn.com/abstract=3423101 show it is impossible to day-trade for a living.

markets,[30] policy makers have not intrusively regulated such trading,[31] perhaps preferring to uphold the freedom of participation with a minimum set of brokers' gatekeeping duties.[32] Indeed trading activity also benefits market liquidity.[33] Further, even if retail trading is often surveyed to be uninformed and irrational,[34] access by retail investors to securities markets is part of financial democratisation and inclusion,[35] as well as a financialisation agenda that serves the industry's business case.[36]

In this light, securities markets and regulators have accommodated relatively unsophisticated retail trading, so what new concerns would the Gamestop episode in January 2021 give rise to? Some new features of today's retail trading include: (a) the 'appification' of retail trading, i.e. discount brokerages adopting financial technology to renew their business models and appeal to a younger, wired generation,[37] transforming the retail trading experience into one that is readily accessible on a mobile phone, and with user-friendly interfaces that include game-like features;[38] and (b) social media support and mobilisation for retail trading such as on Twitter, Reddit and its sub-communities, like r/WallStreetBets.[39] Nevertheless, before the era of Twitter and Reddit, internet chatrooms have been utilised by day traders since the 1990s to share information, knowledge and experience,[40] so online forms of connections supporting retail stock trading are not novel. It can however be argued that new young retail traders approach this with a different ethos

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[30] Paul G Mahoney, 'Is There a Cure for Excessive Trading' (1995) 81 Va L Rev 713.

[31] Bradley (2000). Mahoney, ibid and Stout (1995) writing in the 1990s emphasised the importance of maintaining an efficient securities market where trading is informed and rational, but with economists' publications raising scepticism against rationally efficient trading, eg Robert Shiller, *Irrational Exuberance* (1st ed, Princeton University Press, 2000), there seems no particular impetus to 're-order' trading behaviour.

[32] Mahoney (1995).

[33] Ibid; 'Transfer of Power: Retail Investing' (The Economist, 6 Feb 2021).

[34] Stephen J Choi and AC Pritchard, 'Behavior Economics and the SEC' (2003) 56 Stanford Law Review 1; Chune Young Chung, Jonghyeon Lee and Jinwoo Park, 'Are Individual Investors Uninformed? Evidence from Trading Behaviors by Heterogeneous Investors around Unfaithful Corporate Disclosure' (2014) 43 Asia-Pacific Journal of Financial Studies 157; Zheng Wu, P Joakim Westerholm and Shumi Akhtar, 'Who Moves First? Price Discovery by Institutional and Retail Investors' (2015), http://ssrn.com/abstract=2667430.

[35] Christine Hurt, 'Regulating Public Morals and Private Markets: Online Securities Trading, Internet Gambling, and the Speculation Paradox' (2006) 86 BU L Rev 371.

[36] Ibid; Aeron Davis and Karel Williams, 'Introduction: Elites and Power after Financialisation' (2017) 34 Theory, Culture and Society 3 on political support underpinning financialisation.

[37] Brad M Barber, Xing Huang, Terrence Odean and Chris Schwarz, 'Attention-Induced Trading and Returns: Evidence from Robin Hood Users' (2021), https://ssrn.com/abstract=3715077.

[38] 'Stock-Trading App Makes Risk a Game' (Wall Street Journal NY Edition, 21 August 2020); Arjen van der Heide & Dominik Želinský, ''Level Up Your Money Game': An Analysis of Gamification Discourse in Financial Services' (2021) Journal of Cultural Economy, https://doi.org/10.1080/17530350.2021.1882537.

[39] S Behrendt and A Schmidt, ' The Twitter Myth Revisited: Intraday Investor Sentiment, Twitter Activity and Individual-Level Stock Return Volatility' (2018) 96 Journal of Banking & Finance 355; Cheng Long, Brian Lucey, Larisa Yarovaya, '"I Just Like the Stock" versus "Fear and Loathing on Main Street" : The Role of Reddit Sentiment in the GameStop Short Squeeze' (2021), https://ssrn.com/abstract=3822315; Alexander Pelaez, Elaine R Winston and Jim Samuel, 'David and Goliath Revisited: How Small Investors are Changing the Landscape of Financial Markets' (2021), https://ssrn.com/abstract=3821711.

[40] Bruce Mizrach and Susan Weerts, 'Experts Online: An Analysis of Trading Activity in a Public Internet Chat Room' (2009) Journal of Economic Behaviour and Organisation, http://ssrn.com/abstract=1118022 finds positive learning and returns experience for users.

and spirit.[41] Further, levels of retail participation have hiked dramatically due to pandemic lockdowns.[42]

The Gamestop trading episode in January 2021 has been recounted by many.[43] Essentially, a number of influential posters on the r/WallStreetBets community recommended the stock backed by their own purchases, and increased rallying for supporting the stock after news of hedge fund short-sellers' positions in the stock were disseminated.[44] Although largely uncoordinated,[45] retail trading spiked in the Gamestop stock and share price rose 1,625% up to 27 January 2021. Some criticised this as an acute episode of irrational trading deviating from company fundamentals, causing unnecessary volatility and waste.[46] However others were less critical and perceived this episode as an expression of new, younger retail traders' social opinions on securities markets.[47] They arguably provided a countervailing correction to Gamestop's low stock price depressed by short-sellers' predictions.[48] The most spectacular defeat was suffered by Melvin Capital, a hedge fund with large short positions in Gamestop. It lost over 53% of its value of assets under management[49] due to the need to cover short positions within the crucial window period of 'Gamestonk'.[50] The stock price of Gamestop continues to be rather volatile but remains higher than in late 2020. Many retail traders have not behaved like day traders and have been holding long.[51] Although a few other stocks favoured by retail traders on social media have not had as spectacular a

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[41] Chohan (2021) on 'YOLO' (You Only Live Once' and social expressions in trading).
[42] Ibid; 'Everyone's a Day Trader Now' (Wall Street Journal Online, 25 July 2020); Alexander Osipovich, 'Individual-Investor Boom Reshapes U.S. Stock Market; Free trading apps, a bull market and Covid-19 lockdowns fuel a surge in mom-and pop trading' (Wall Street Journal Online, 31 Aug 2020); 'The Misfits Shaking Wall Street' (NY Times, 29 Jan 2021).
[43] Chohan (2021); Ricci and Sauter (2021); Jonathan R Macey, 'Securities Regulation and Class Warfare' (2021), https://ssrn.com/abstract=3789706.
[44] Anderson et al (2021); Lasse Heje Pedersen, 'Game On: Social Networks and Markets' (2021), https://ssrn.com/abstract=3794616.
[45] Actions are not ordered but influenced, by disparate posters and posts, Betzer et al (2021).
[46] Zaghum Umar, Imran Yousaf, Adam Zaremba, 'Comovements between Heavily Shorted Stocks During a Market Squeeze: Lessons from the Gamestop Trading Frenzy' (2021) 58 Research in International Business and Finance 101453; Vasileiou Evangelos, 'Does the Short Squeeze Lead to Market Abnormality and Anti-Leverage Effect? Evidence from the Gamestop Case' (2021), https://ssrn.com/abstract=3831619; Tim Hasso, Daniel Müller, Matthias Pelster and Sonja Warkulat, 'Who Participated in the GameStop Frenzy? Evidence from Brokerage Accounts' (2021), https://ssrn.com/abstract=3792095; Sirio Aramonte and Fernando Avalos, 'The Rising Influence of Retail Investors' (BIS Quarterly Review, March 2021), https://www.bis.org/publ/qtrpdf/r_qt2103v.htm.
[47] Anderson et al (2021); Chohan (2021); Macey (2021).
[48] Robert Jarrow and Siguang Li, 'Media Trading Groups and Short Selling Manipulation: Are Media Groups Efficiency Enhancing or Reducing?' (2021), https://ssrn.com/abstract=3804130.
[49] Oliver Wade, 'Short sellers lose more than $5 billion on GameStop' (Global Investor, 27 Jan 2021); David Y. Aharon, Renatas Kizys, Zaghum Umar, Adam Zaremba, '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' (2021), https://ssrn.com/abstract=3788155.
[50] Tweet by Elon Musk, 'GameStop jumps after hours as Elon Musk tweets out Reddit board that's hyping stock' (CNBCNews, 26 Jan 2021), https://www.cnbc.com/2021/01/26/gamestop-jumps-as-elon-musk-tweets-out-reddit-board-thats-hyping-stock.html.
[51] 'The Misfits Shaking Wall Street' (NY Times, 29 Jan 2021); Yigit Alparslan and Edward Kim, 'Extreme Volatility Prediction in Stock Market: When GameStop meets Long Short-Term Memory Networks' (2021), https://arxiv.org/abs/2103.01121.

trajectory like Gamestop, retail interest in them has significantly changed their price discovery,[52] leading many to call these 'meme stocks'.

One issue of concern would be whether meme stock prices are subject to 'manipulation' by retail traders.[53] Securities prices have been shown to be both semi-strong efficient,[54] as well as reflecting random patterns,[55] hence inherently volatile to an extent.[56] Increase in retail demand cannot *per se* be 'manipulative' within the regulatory definition of anti-social, hence prohibited, behaviour on securities markets.[57] However, market abuse, such as insider trading or market manipulation, is seen as anathema to securities markets as they can precipitate loss of confidence in market participation and the withdrawal of network effects and liquidity.[58] Hence, it is necessary to ascertain if there are any characteristics of the new retail trading phenomena that may be captured within 'market abuse'.

Next, the price volatility in meme stocks could be 'systemically contagious', i.e. affecting price volatility in other sectoral stocks.[59] Such price volatility could be harmful for investors such as pension funds which need to regularly account for prudent valuations of assets. Significant price volatility in investment portfolios exacerbate prudential compliance for institutions and puts stress on their risk management. Sections B and C address the issues of market manipulation and potentially adverse market conditions, critically discussing if there is a need for regulatory intervention.

B. Retail Trading and Anti-social Behaviour

The analysis of whether direct retail trading behaviour could be 'manipulative' is relevant to the short squeeze experienced by a number of Gamestop short sellers in January 2021.[60] Commentators found explicit posts on r/WallStreetBets rallying retail traders against short-selling hedge funds.[61] It is queried whether retail trading influenced in such a manner could amount to a case of market manipulation.[62]

Deliberate trading to effect a short squeeze can be regarded as 'predatory trading', defined as a trading strategy carried out in order to exert stress upon other traders based on

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52 Arash Aloosh, Hyung-Eun Choi and Samuel Ouzan, 'On the Efficiency of Meme Stocks' (2021), https://ssrn.com/abstract=3839832 on improved efficiency in these markets.
53 Sect B.
54 Eugene Fama, "Efficient Capital Markets: A Review of Theory and Empirical Work"(1970) 25 Journal of Finance 383; Art Durnev, Merritt Fox, Randall Morck, and Bernard Yeung, "Law, Share Price Accuracy, and Economic Performance: The New Evidence" (2003) 102 Michigan Law Review 331.
55 Shiller (2000); Lynn A Stout, 'Technology, Transactions Costs, and Investor Welfare: Is a Motley Fool Born Every Minute' (1997) 75 Wash U L Q 791.
56 Stout (1995); Ezra W Zuckerman, 'Structural Incoherence and Stock Market Activity' (2004) 69 American Sociological Review 405.
57 Sect B.
58 Harry McVea, 'What's Wrong with Insider Dealing?' (1995) 15 Legal Studies 390.
59 Umar et al (2021).
60 E Vasileiou, E Bartzou, and P Tzanakis, 'Explaining Gamestop Short Squeeze using Intraday Data and Google Searches' (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3805630.
61 Angel (2021); Chohan (2021); Macey (2021).
62 Caitlin Reilly, 'Wall Street 'hate' seen driving GameStop trades' (Washington Roll Call, 29 Jan 2021).

knowledge of their vulnerable exposures, forcing them into liquidation.[63] Predatory trading has been observed amongst sophisticated financial institution participants who have good knowledge of other participants' vulnerabilities,[64] hence, social posts regarding exact knowledge of Melvin Capital's large put options on Gamestop[65] reflect motivations towards predatory trading. However, as retail trading influenced by social media is not coordinated *ex ante*, has an episode of 'predatory trading' really occurred? Or is this merely a confluence of trading that happened to achieve such result? Further, predatory trading is only actionable if relevant actions fall within regulatory definitions of market manipulation.

Section 9(a) of the US Securities Exchange Act 1934 is arguably unlikely to capture the redditors involved in the short squeeze. Section 9(a)(1) deals rather narrowly with wash and arranged trades, likely inapplicable to the redditors who encouraged but did not privately coordinate trading. Section 9(a)(2) deals with transactional activity *for the purpose* of inducing others to trade. Fox et al argue such 'purpose' seems widely framed but has not been clearly judicially articulated.[66] It may be argued that actionable 'purpose' should be self-serving in nature, inflicting disadvantage upon the 'others' induced to trade. Hence, relevant cases include: (i) a purpose towards 'pump and dump', to secure a self-serving profitable purpose; (ii) serving an external economic interest or (iii) involving misstatements.[67] Many redditors involved in the short squeeze encouraged others to trade, but were sharing a common motivation to challenge short-sellers, rather than attempting to secure their own profit. It is highly arguable if the 'purpose' specified in section 9(a)(2) can be established.

Next, in several commentators' view, section 9(a)(2) focuses on the artificiality of trading activity resulting in an artificial market.[68] The need to establish 'artificiality'[69] may unlikely capture the redditors' market activity that reflects genuine demand, especially since redditors are encouraged to have 'diamond hands', i.e. to hold long. Section 9(a)(2) arguably does not capture situations where mechanisms for trade are facially legitimate although dramatic price changes result.[70] This is because 'artificiality' in price *must* result from artificiality in trading activity. Even if dramatic price changes are regarded as proxies for 'artificiality' in the processes for price discovery, it could be difficult for courts to establish what is artificial or otherwise with regard to price changes, as price movements are an inherent feature of a free and liquid market.[71] Why should traders trading in the *genuine* belief that a stock is underpriced be done for market manipulation by moving stock price in

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[63] La'O (2010).
[64] Brunnermeier and Pedersen (2005).
[65] 'Buried in Reddit, the Seeds of Melvin Capital's Crisis' (25 Jan 2021), https://www.institutionalinvestor.com/article/b1q8swwwtgr7nt/Buried-in-Reddit-the-Seeds-of-Melvin-Capital-s-Crisis.
[66] Merritt B. Fox, Lawrence R. Glosten and Gabriel V. Rauterberg, *The New Stock Market: Law, Economics and Policy* (Columbia University Press 2018), ch7, 201.
[67] Ibid, 203-5.
[68] Stanislav Dolgopolov, 'The Doctrinal Quandary of Manipulative Practices in Securities Markets: Artificial Pricing, Price Discovery, and Liquidity Provision' (2019) 45 J Corp L 1.
[69] Ibid, Merritt B Fox and Lawrence R Glosten and Gabriel V Rauterberg, 'Stock Market Manipulation and Its Regulation' (2018) 35 Yale J on Reg 67.
[70] Gina-Gail S Fletcher, 'Legitimate Yet Manipulative: The Conundrum of Open-Market Manipulation' (2018) 68 Duke LJ 479.
[71] Dolgopolov (2019), 18.

the direction aligned with their evaluation*?* Would not short-sellers who publish their intentions be also treated as manipulators who are trying to move price down from what they genuinely perceive to be excessive? Short-selling, though socially controversial, has been defended as contributing towards market price discovery and efficiency.[72]

The communications and actions of the redditors contributing to the short squeeze would have also to be examined for 'fraud-on-the-market',[73] in relation to whether fraud has occurred or dissemination of false or inaccurate information has taken place. The facts are not completely pieced as reams of communications would have to be forensically examined. Commentators are of the view that fraud is intent-based,[74] and would not capture honest traders who have not engaged in deception or dishonesty.[75] There has not been any finding to date of deceptive or untrue dissemination of information on r/WallStreetBets connected to the short squeeze.[76] Many redditors who contributed to the short squeeze post their holdings publicly and were holding long.[77]

What would the position be if the EU market abuse regime were applied?[78] The EU regime is introduced here as a comparator as it has been developed and modernised to be a comprehensive framework for capturing abusive activity on markets. Abusive activity[79] is also defined in relation to market effects and not perpetrator intent, arguably entailing more responsibility from market participants than compared to the US. Article 12(1)(a) potentially captures any market activity that gives 'false or misleading' signals regarding supply or demand of securities and/or secures price of securities at 'an artificial or abnormal' level.

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. In this manner, even if many redditors were genuinely holding long and not giving a 'misleading' signal as to demand, the effects they created on the market could still be regarded as 'abnormal'. Further, there is empirical evidence showing that some retail traders involved were less long-termist and could have herded into short-term trading[80] during the short squeeze. There is no need, within the framework of market abuse regulation in the EU, to prove intent or fraud as long as the effects of 'misleading demand'

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[72] Emilios Avgouleas, 'A New Framework for the Global Regulation of Short Sales: Why Prohibition is Inefficient and Disclosure Insufficient' (2009), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1411615.
[73]Rule 10-b(5), https://ecfr.federalregister.gov/current/title-17/chapter-II/part-240/subpart-A/subject-group-ECFR71e2d22647918b0/section-240.10b-5.
[74] Fletcher (2018).
[75] John Crabb, 'GameStop drama leaves SEC in tricky situation' (International Financial Law Review, 29 Jan 2021).
[76] Melanie Waddell, 'SEC Likely to Probe GameStop Trading, but What Will It Find?' (Treasury & Risk, 28 Jan 2021).
[77] Reddit posts should be made in the spirit of no deception and self-promotion, and are also moderated, Daniel Bradley, Jan Hanousek, Russell Jame, and Zicheng Xiao, 'Ace your Bets? The Market Consequences of Investment Advice on Reddit's Wallstreetbets' (2021), https://ssrn.com/abstract=3806065; Long et al (2021); Anderson et al (2021).
[78] Market Abuse Regulation 596/2014, implemented in the UK, The Market Abuse (Amendment) (EU Exit) Regulations 2019.
[79] Art 1, ibid, including insider dealing and market manipulation.
[80] Hasso et al (2021).

or 'abnormal price' are secured. The spectacular rise in Gamestop's price could be regarded as 'abnormal' even judicial clarity cannot be complete about what 'artificial' means for price changes. The application of the EU's market manipulation regime in the UK shows that courts clearly accept the basis for liability as being the 'effects' achieved by the relevant trading activities/behaviour indicted.[81]

Further, market manipulation can be directed at redditors not only because of their trading activity but their information dissemination roles. Although many redditors disseminate their own diligence and information in the public domain, and are prohibited by forum rules from spreading lies or self-serving statements, the 're-tweeting' or re-communication of information in the public domain[82] can pose liability risk. Re-communication of 'old' news in the public domain giving the impression that the information is 'new' has attracted market manipulation liability in the UK.[83] The effects-based liability regime captures a wider range of information behaviour not necessarily dishonest or fraudulent.

However, it may be argued that in price 'pump' cases, regulatory enforcement has always been directed at 'pump and dump' or price 'pump' related to securing a private benefit, such as where overpriced securities were used for acquisition. If redditors contributing to the short squeeze were not targeting quick dumping and profit from arbitrage, then should regulators enforce against the 'crowd pump'[84] which is different from the type of anti-social and self-serving behaviour they wish to deter?[85] Nevertheless, the effects-based market abuse regime contains only narrow exceptions for legitimate actions.[86] Under the EU regime, redditors contributing to the short squeeze would not clearly be immune from legal risk.

The broader question is whether regulators ought to press arguable technicalities in the regulatory regime against retail traders who were 'trying to make a point'[87] with their trading. Regulators should mind the social context, which, aptly described by commentators, is filled with anger at financial institutions since the global financial crisis 2007-9 and intergenerational expressions of discontent by younger retail traders.[88] If redditors connected with the short squeeze episode were persecuted by law, more distrust of current financial regulatory institutions is likely to ensue. Questions would be raised as to why regulators choose to pursue retail traders, when financial institution market participants have produced even more innovation that push the boundaries of legitimate

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[81] *FSA v Winterflood Securities* [2010] EWCA Civ 423.

[82] Nitesh Chawla, Zhi Da, Jian Xu, and Mao Ye, 'Information Diffusion on Social Media: Does It Affect Trading, Return, and Liquidity?' (2016), https://ssrn.com/abstract=2935138.

[83] FSA, *Final Notice against Christopher Gower* (12 Jan 2011), https://www.fca.org.uk/publication/final-notices/christopher_gower.pdf.

[84] Massimo La Morgia, Alessandro Mei, Francesco Sassi and Julinda Steffa, 'The Doge of Wall Street: Analysis and Detection of Pump and Dump Cryptocurrency Manipulations' (2021), https://www.researchgate.net/publication/351298389_The_Doge_of_Wall_Street_Analysis_and_Detection_of_Pump_and_Dump_Cryptocurrency_Manipulations.

[85] Preamble 23 on the objectionability of 'unfair advantage' in market abuse.

[86] Art 13, Market Abuse Regulation 2014 requires accepted market practices to be set out *ex ante* by regulators. This may provide little scope for *ex post* issues that arise.

[87] Anderson et al (2021).

[88] Chohan (2021).

and fair trading, such as high frequency algorithmic trading.[89] Commentators have critically queried the legitimacy of implicit regulatory permission for high frequency trading practices despite the risks of manipulation they give rise to. In the EU, algorithmic and high frequency trading are not outlawed, regulators preferring instead to impose market-making duties on high frequency traders whose liquidity provision in marketplaces have become established.[90] The perception of double standards[91] and of regulators being excessively sympathetic to the industry they regulate, instead of the retail users they are mandated to protect, could be somewhat toxic to regulatory institutions themselves. Further, an 'effects-based' regime for market abuse liability arguably entrenches the market conditions that dominant participants have established, and can be criticised for legal endogeneity.[92] Moreover, the arbitrary halt on retail trading imposed by Robinhood and other platform brokerages could have exerted a more manipulative effect on stock prices and caused customer losses.[93] Should these actions not be more actionable by regulators?[94]

It may be counter-argued that the market manipulation question is cogent as there is a greater good of protecting market integrity so that markets can serve the socially beneficial purposes of accurate price discovery and providing liquidity.[95] Empirical research has however found little or no damage to markets during the short squeeze episode.[96] Hence, the lack of systemic implications should persuade against enforcement actions or indeed law reform in order to gatekeep retail trading. Further, a narrow focus on the 'abnormal' stock price of Gamestop can be criticised on the basis that 'normality' in stock price is itself a 'rigged' concept- framed largely 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,[97] as dominant market participants are financial institutions. 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 behaviour against it. Section C discusses how, as a broader move, regulators should consider integrating this dialectic into framing the nature and purpose of secondary securities markets, critically considering the current doctrines of market regulation. Instead of asking whether existing regulatory institutions should control or suppress episodes like the January 2021 short squeeze, what lessons for change may be drawn from the social challenge to markets?

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

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[89] Steven McNamara, 'The Law and Ethics of High-Frequency Trading' (2016) 17 Minn JL Sci & Tech 71; Tom C W Lin, 'The New Market Manipulation' (2017) 66 Emory LJ 1253.
[90] Art 17, Markets in Financial Instruments Directive 2014/65/EU.
[91] Macey (2021).
[92] Lauren B Edelman, Christopher Uggen and Howard S Erlanger, "The Endogeneity of Legal Regulation: Grievance Procedures as Rational Myth" (1999) 105 American Journal of Sociology 406.
[93] 'Robinhood and GameStop route popular fury against Wall Street' (Euromoney, 29 Jan 2021); Charles M Jones, Adam V Reed and William Waller, 'When Brokerages Restrict Retail Investors, Does the Game Stop?' (2021), https://ssrn.com/abstract=3804446.
[94] Macey (2021).
[95] Fox et al (2018); Fletcher (2018).
[96] Aharon et al (2021); Aloosh et al (2021).
[97] Sect C.

Anderson et al[98] describe redditors' trading during the January 2021 short squeeze as a form of 'expressive trading', which channels to markets the signals of traders who have done their own due diligence and disagree with conventional financial analysis.[99] There is also an element of social affinity expressed through trading, as retail traders express their liking for the company and its services/products, and integrate within their trading the desire for their investee company to do well.[100] Chohan[101] and Macey[102] further describe the redditors' trading during the January 2021 short squeeze as concurrently sending signals to counter financial elite domination, hegemony and privilege on financial markets. Macey opines that retail traders have finally risen up against structural unfairness against them. Financial markets have privileged those who are able to access information and price discovery ahead of retail investors, and created structural conditions that make it ever more difficult for retail traders to achieve abnormal returns like financial institution participants.[103] Retail trading signals in sum encompass protest, disagreement and conflict with financial institution domination. After the Gamestop short squeeze, institutional traders are treating retail trading signals seriously,[104] as areas of 'threat' for 'risk management'.

This Section argues that new retail trading signals are a form of social information channelled to securities markets and should be regarded as potentially transformative in relation to their integration as 'salient information' for price discovery. This argument is intended to frame socially-based trading as a form of legitimate information for markets, as the information basis is foundational to what constitutes markets. We argue that signals of socially-based trading are salient and material to markets, and such framing should go some way towards countering the derogatory framing and marginalisation of such trading. In this manner, 'socially-based trading' can be supported and not marginalised by law and regulation that support efficient financial markets and price discovery.

Although the efficient capital markets hypothesis[105] does not provide guidance as to what types of information are salient to price discovery and should be reflected in market price, securities regulation in the US, EU and UK have drawn the line at 'material information'.[106] This is because a legal threshold is needed for issuers' mandatory disclosure obligations to

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[98] (2021).
[99] Ricci and Sauter (2021).
[100] Long et al (2021).
[101] (2021).
[102] (2021).
[103] Ibid.
[104] 'Robots on Wall Street Wrestle With Confusing World of Reddit' (22 Feb 2021), https://www.bloomberg.com/news/articles/2021-02-22/wall-street-s-robots-are-taking-on-the-confusing-world-of-reddit on financial institutions using machine learning systems to trawl social media posts for securities information.
[105] Fama (1970).
[106] *TSC Industries, Inc. v. Northway, Inc*., 426 U.S. 438 (1976); *Basic Inc. v. Levinson*, 485 U.S. 224 (1988), on the judicial articulation for 'materiality' in the US. 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', Art 6, Prospectus Regulation 2017/1129. Adopted in the UK, Prospectus (Amendment etc.) (EU Exit) Regulations 2019, and will be preserved although the UK is reviewing its prospectus regime, HM Treasury: UK Prospectus Regime Review: A Consultation (July 2021), p15, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/999771/Consultation_on_the_UK_prospectus_regime.pdf.

supply information to markets.[107] The legal fabrication of 'materiality' entails implications beyond compliance as it also gives rise to a market selection process of information that is regarded as salient and valuable, as opposed to 'immaterial' information or 'noise'. Indeed, 'noise' can be treated as being unnecessarily distracting, adding no value but unwarrantedly disturbs price movements.[108] It is easy to regard the significant price hikes for meme stocks as being caused by herding and noise. However, there is also scope to consider retail trading signals as attempts to correct low prices fed into the market by conventional financial analysis that retail traders disagree with.[109]

The law has played a not-insignificant part in shaping the economic meaning of 'materiality' towards issuers' financial performance. Thus, what is salient information for securities markets is arguably a convergence between legal and economic materiality. Although the legal definition of materiality is somewhat elastic,[110] financial and quantitative experts form an elite[111] that have come to dominate the interpretation and understanding of information materiality. Quantitative information in accounting[112] terms and information valued by financial institution market participants[113] dominate the sphere of legal and economic materiality. In this manner, price discovery on markets is dominated by elite framing, whose epistemic authority is established in the legal, accounting and financial professions' 'sense-making'(purportedly according to objective criteria) of 'what information ought to matter'. 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[114] of the financial elite bringing their framing of information materiality to bear.

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 marginalised on securities markets, causing under or mis-pricing of securities. For example, the financial impact of climate change,[115] or other 'environmental, social and

[107] 'Materiality' delineated for regulatory compliance, Richard C Sauer, 'The Erosion of the Materiality Standard in the Enforcement of the Federal Securities Laws' (2007) 62 Business Lawyer chk.
[108] Fischer Black, 'Noise' (1986) 41 Journal of Finance 528.
[109] Anderson et al (2021); Jarrow and Li (2021).
[110] Kurt S Schulzke and Gerlinde Berger-Walliser, 'Toward a Unified Theory of Materiality in Securities Law' (2017) 56 Columbia Journal of Transnational Law 6.
[111] William Davies, 'Elite Power under Advanced Neoliberalism' (2017) 34 Theory, Culture and Society 227.
[112] David Hatherly, David Leung and Donald MacKenzie, 'The Finitist Accountant' in Trevor Pinch and Richard Swedberg (eds), *Living in a Material World* (Cambridge: MIT Press 2008), ch4.
[113] William F Messier, Nonna Martinov-Bennie and Aasmund Eilifsen, 'A Review and Integration of Empirical Research on Materiality: Two Decades Later' (2005) 24 Auditing: A Journal of Practice and Theory 153, David A Katz and Laura A MacIntosh, 'Materiality in America and Abroad' New York Law Journal (29 April 2021) on the convergence upon 'economic' materiality.
[114] Social embeddedness in financial markets and their sense-making discussed in Alex Preda, *Framing Finance: The Boundaries of Markets and Modern Capitalism* (University of Chicago Press 2009), chs 3, 4, 5.
[115] Jakob Thomä & Hugues Chenet, 'Transition Risks and Market Failure: A Theoretical Discourse on Why Financial Models And Economic Agents May Misprice Risk Related to the Transition to a Low-Carbon Economy' (2017) 7 Journal of Sustainable Finance & Investment 82; John Byrd & Elizabeth S. Cooperman, 'Investors and Stranded Asset Risk: Evidence from Shareholder Responses to Carbon Capture and Sequestration (CCS) Events' (2018) 8 Journal of Sustainable Finance & Investment 185.

governance' (ESG) issues.[116] Markets[117] and regulators are only starting to acknowledge that ESG issues could be material to issuer performance, although a considerable amount of time has elapsed since the development of voluntary corporate reporting for ESG issues.[118] Mandatory ESG reporting remains in early stages and not internationally convergent.[119] The slow trajectory for recognising the materiality of new qualitative and quantitative information in ESG issues reflects the lesser comfort that financial and quantitative elite have in working with these.[120] Incremental developments, such as clarification in the fiduciary duty for investment managers,[121] and competitive industry developments such as the production of ESG 'material' accounting standards by the Sustainability Accounting Standards Board,[122] have taken time to mature, in order to pose a challenge to the institutional stranglehold held by a narrow and quantitative-focused framing of information materiality.

It is arguable that, in the same manner, socially-based trading is a type of social information that has not yet attained recognition for its market salience. Socially-based trading embeds social perspectives of how certain companies are viewed and valued,[123] how these perspectives are mobilised in community contexts, creating shared opinions.[124] Commentators also argue that socially-based trading embeds signals of social activism,[125]

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[116] Harald Sverdrup, Deniz Koca, Kristin Vala Ragnarsdottir, 'Defining a Free Market: Drivers of Unsustainability As Illustrated With an Example of Shrimp Farming in the Mangrove Forest in South East Asia' (2017) 140 Journal of Cleaner Production 299; Andrea Hafenstein & Alexander Bassen, 'Influences for Using Sustainability Information in the Investment Decision-Making of Nonprofessional Investors' (2016) 6 Journal of Sustainable Finance & Investment 186; William Shramade, 'Integrating ESG into Valuation Models and Investment Decisions: The Value-Driver Adjustment Approach' (2016) 6 Journal of Sustainable Finance & Investment 95.

[117] Gunnar Friede, Timo Busch & Alexander Bassen, 'ESG and Financial Performance: Aggregated Evidence from More Than 2000 Empirical Studies' (2015) 5 Journal of Sustainable Finance & Investment 210.

[118] E.g. GRI standards, Global Reporting Initiative, https://www.globalreporting.org/.

[119] The UK has introduced 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, FCA, *Proposals to Enhance Climate-Related Disclosures by Listed Issuers and Clarification of Existing Disclosure Obligations- Policy Statement* (Dec 2020); Department of Business, Energy and Industrial Strategy, *Mandatory Climate-Related Financial Disclosures by Publicly Quoted Companies, Large Private Companies and LLPs* (March 2021), https://www.gov.uk/government/consultations/mandatory-climate-related-financial-disclosures-by-publicly-quoted-companies-large-private-companies-and-llps. The US SEC is reviewing mandating climate-related disclosure, 'Statement on the Review of Climate-Related Disclosure' (24 Feb 2021), https://www.sec.gov/news/public-statement/lee-statement-review-climate-related-disclosure. Academic support: Jill Fisch, 'Making Sustainability Disclosure Sustainable' (2019) 107 Georgetown Law Journal 923; Virginia Harper Ho, 'Nonfinancial Disclosure & The Costs of Private Ordering' (2018) 55 American Business Law Journal 407; Virginia Harper Ho, 'Modernizing ESG Disclosure' (2021), https://ssrn.com/abstract=3845145.

[120] Alan Lewis and Carmen Juravale, 'Morals, Markets and Sustainable Investments: A Qualitative Study of 'Champions'' (2010) 93 Journal of Business Ethics 483.

[121] Freshfields Bruckhaus Deringer, 'A Legal Framework for the Integration of Environmental, Social and Governance Issues into Institutional Investment' (Report for the UNEP Finance Initiative, 2005), https://www.unepfi.org/fileadmin/documents/freshfields_legal_resp_20051123.pdf, UNEPFI, *Fiduciary Duty in the 21st Century* (2019), https://www.unepfi.org/wordpress/wp-content/uploads/2019/10/Fiduciary-duty-21st-century-final-report.pdf.

[122] https://www.sasb.org/.

[123] Zuckerman (2004).

[124] Philip Roscoe, 'Economic Embeddedness and Materiality in a Financial Market Setting' (2013) 61 Sociological Review 41.

[125] Detlev Zwick, Janice Denegri-Knott and Jonathan E. Schroeder, 'The Social Pedagogy of Wall Street: Stock Trading as Political Activism?' (2007) 30 Journal of Consumer Policy 177.

and these are salient to markets in terms of how society wishes to shape economic activity. It is arguably timely for such social information to intrude upon financial markets as market framing of what is salient and valuable, in the legal and economic framing of materiality, has been too insular and unreflective of the holistic human and societal condition.[126] The powerful trading carried out by the redditors in January 2021 is a manner of confronting markets with the salience of such social information. These signals should not be dismissed as 'freakish' occurrences or just noise. It is also concerting that the language used around the framing of meme stock trading and the affinity that young retail traders have for a gamified interface in their trading apps are being characterised in a pejorative manner, caricatured as 'uninformed' or 'irrational' trading.[127] Such framing reflects loaded prejudices that potentially serve to protect the dominant framing for markets preferred by the financial elite.

It may however be argued that our endeavour to integrate socially-based trading within the framing of material and salient information for securities markets would not go very far. This is because by aiming to fit socially-based trading within the frames for price discovery, the phenomenon of socially-based trading would have to judged by the benchmark of materiality. Socially-based trading would therefore not be 'accepted as it is' but rather needs to succumb to the legal and economic framing of materiality. This is also observed in relation to the evolution of 'material ESG' issues accepted in financial markets, which are those that raise financial risks or opportunities for issuers.[128] Material ESG issues are not always aligned with ESG issues valued by society as such.[129] Nevertheless, it can be counter-argued that ESG materiality is an emerging development that has stretched the economic and increasingly, legal, framing of materiality. The development of ESG materiality has changed perceptions in terms of risk salience and financial impact. Such a stretching exercise incrementally changes the perception of value salience in the types of information that reach securities markets.[130] Hence, taking the perception that socially-based trading can be material to securities markets is the beginning of a dialectical process that can challenge and change market framing in due course.

We argue that regulators would play an important part in allowing the salience and value of socially-based trading to be recognised on securities markets. First, regulators should not carry out crude or 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

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126 Tim Jackson, *Post-Growth: Life After Capitalism* (Polity 2021).

127 Umar et al (2021); 'The Rise of Meme Stocks: How Viral Trading Hit High Gear in Early 2021' (21 April 2021), https://finmasters.com/the-rise-of-meme-stocks/.

128 Maria Cleofe Giorgino, Enrico Supino and Federico Barnabè, 'Corporate Disclosure, Materiality, and Integrated Report: An Event Study Analysis' (2017) 9 Sustainability 2182; Costanza Consolandi, Robert G. Eccles & Giampaolo Gabbi, 'How Material Is a Material Issue? Stock Returns and the Financial Relevance and Financial Intensity of ESG Materiality' (2020) Journal of Sustainable Finance and Investment, https://doi.org/10.1080/20430795.2020.1824889.

129 Brett G Olsen, Kwame Awuah-Offei and Daniel Bumblauskas, 'Setting Materiality Thresholds for ESG Disclosures: A Case Study of U. S. Mine Safety Disclosures' (2021) 70 Resources Policy 101914 on investors' neglect of mine safety and incidents reports, as stock prices do not reflect such information.

130 Ruth Jebe, 'The Convergence of Financial and ESG Materiality: Taking Sustainability Mainstream' (2019) 56 American Business Law Journal 645 recognising that ESG materiality may be selective but it is at least a starting point.

frameworks of market abuse, regulators should refrain from persecuting retail traders participating in meme stock trading that contribute to price volatility. That is not to say that retail trading is optimally governed at the moment. Section D deals with more relevant reforms that are proportionate for investor protection, while securing a more accurate impact on securities price discovery. Finally, it is perhaps for financial institution elites to realise that it cannot be taken for granted 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. It is beyond the scope of this paper, but we query whether regulators and central bankers have pandered to financial institution elite preferences and have brought about complacent expectations as to the maintenance of certain financial markets conditions. For example, central bank asset purchase programmes to ease liquidity conditions for securities markets[131] can lead market participants into a false sense of assumption that a certain state of market conditions would be supported. Regulators' mandates for market regulation, such as 'market confidence' or 'market stability' should not be equivalent to maintaining financial elites' expectations of structural market conditions.

D. What Reforms are Really Needed

It may be argued that socially-based trading is only made possible because of certain brokerage business models that in fact harm investors. Zero-commission trading offered by brokers such as Robinhood attracts retail investors, and have greatly facilitated access to direct retail trading. Many retail investors who contributed to the short squeeze in January 2021 were trading from accounts such as with Robinhood, E*toro or Webull. There are however concerns regarding investor protection by their discount brokers, in relation to the payment for order flow (PFOF) business model[132] and high levels of investor leverage that can be employed.[133] Calls are made for regulatory reform to be targeted at improving retail investor protection, but regulatory controls of PFOF or investor leverage would also affect retail trading empowerment. Potential reforms should not contain a veiled agenda for obstructing retail trading. Further, one acute issue, i.e. the freezing of retail investor accounts by Robinhood and a number of online brokers on 28 January 2021, raised immense anger.[134] Hence, there is some scope for reconsidering brokers' discretions and duties to customers. In general, paternalism in any regulatory reform, based on the need to 'protect investors from themselves'[135] should be balanced against the benefits of trading

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[131] Especially after the global financial crisis 2007-9, the maintenance of market liquidity conditions is a policy cornerstone, e.g. 'Asset Purchase Programmes', (European Central Bank), https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html, also Steven L Schwarcz, 'The Case for a Market Liquidity Provider of Last Resort' (2009), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1346542.

[132] 'Retail frenzy reflects 'broken' US equity markets, says XTX's Gerko' (Financial Times, 8 June 2021), https://www.ft.com/content/d813fe90-29ba-4c98-ac57-c2919a7970b1; Avi Salzman, 'How Robinhood seized the Moment in Stock Trading' (Barron's, 17 August 2020); Barber and Huang (2021); Macey (2021).

[133] 'Robinhood to pay $70 million for outages and misleading customers, the largest-ever FINRA penalty' (CNBC News, 30 June 2021) for allowing unsuitable customers to trade in options and employ excessive leverage.

[134] Amanda Bronstad, 'Lawsuits over GameStop trading expand beyond Robinhood, alleging an antitrust conspiracy' (Benefits Pro, 10 Feb 2021).

[135] Retail investors' behavioural weaknesses, Susanna Kim Ripken, 'Paternalism and Securities Regulation' (2015) 21 Stanford Journal of Law, Business and Finance 1.

freedoms,[136] in particular, enfranchisement on securities markets which is the concern in this article. Such enfranchisement is socially important[137] given the elitist framing of financial markets that have taken place over the decades. The potential for disenfranchisement from securities trading must be weighed against the benefits of increased paternalism in investor protection reforms.

We first turn to the issue whether the PFOF business model adopted by many retail investors' favourite online discount brokers should be subject to regulatory governance. In this respect, the US seems more permissive than the EU, which is discussed shortly for comparison. The key issue is that PFOF business models can obscurely scalp investors.[138] App-based trading platforms attract retail investors by their gamified user-friendly interfaces as well as their no-commissions model for trading. Their revenues are generated by routing order flow to other intermediaries to execute investors' orders. The relationships between these brokers and the financial institutions that purchase order flow can potentially create agency problems for investors, so that investors lose out on the price their trades are executed, in excess of what they may have saved in trading commissions.[139] Although brokers owe investors a duty of best execution,[140] Macey and O'Hara have argued that this is theoretical at best.[141] Brokers produce transparency on routing venues as a matter of regulatory reporting,[142] but these do not shed much light on the quality of execution achieved. In other words, the duty does not adequately safeguard investors against potentially 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 internalise and to send to the auction markets of open exchanges. The buyers of order flow are incentivised to send to open exchanges the worst price orders in order to widen the buy-sell spread so that the difference they can pocket from the spread would be maximised.[143] 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. However, such manipulation of the price spread on open exchanges is only a *real problem* if the market for order flow is monopsonistic.[144] If it is highly competitive, the hazards of spread maximisation would be curtailed and retail investors may not lose out compared to savings in trading commissions.[145]

Nevertheless, even if the market for order flow is competitive, another unaddressed issue is that brokers are not prevented by their best execution duty from routing order flow to the

[136] Daniel Groll, 'Paternalism and Rights' and in Kalle Grill and Jason Hanna, 'Hard and Soft Paternalism' in Jason Hanna (eds), T*he Routledge Handbook of the Philosophy of Paternalism* (Oxford: Routledge 2018), chs 10, 2.
[137] Randall S Kroszner and Robert J Shiller, *Democratizing and Humanizing Finance* (MIT Press 2011); Robert J Shiller, *Finance and the Good Society* (Princeton University Press, 2013).
[138] Christine Parlour and Uday Rajan, 'Payment for Order Flow' (2003) 68 Journal of Financial Economics 379.
[139] Allen Ferrell, 'A Proposal for Solving the Payment for Order Flow Problem' (2001) 74 S Cal L Rev 1027.
[140] FINRA rule 5310, https://www.finra.org/rules-guidance/rulebooks/finra-rules/5310.
[141] Jonathan R Macey and Maureen O'Hara, "The Law and Economics of Best Execution" (1997) 6 Journal of Financial Intermediation 188.
[142] SEC Rules 605, 606.
[143] Parlour and Rajan (2003); Ferrell (2001).
[144] Fox et al, *The New Stock Market* (2018), ch 12.
[145] Robert H. Battalio and Tim Loughran, 'Does Payment For Order Flow To Your Broker Help Or Hurt You?' (2008) 80 Journal of Business Ethics 37.

institutions that offer the highest rebates, instead of necessarily the 'best execution' for investors.[146] In other words, brokers' conflicts of interest undermine the likelihood that best execution compliance is sought with dedication. In the US, the controversial PFOF business model has been debated upon but there seems no intention to reform it.[147] Perhaps regulators are mindful of the objectives in balance that need to be achieved, in terms of not impeding retail investors' access to an attractive and accessible trading model, especially if the results for investors are not obviously egregious.

In the EU and UK however, PFOF is usually regarded as an unacceptable inducement that causes brokers not to be able to manage conflicts of interest optimally.[148] This is not to say that the regulatory position is clearly more optimal than in the US. The US has always benefited from a depth of direct retail trading in excess of Europe and the UK where savings are channelled largely to banks in the former, and collective investment schemes in the latter. Mandatory membership in occupational pension schemes introduced in the UK since 2018[149] has also helped in growing intermediated investing. It is arguable that the US benefits from a more competitive brokerage sector than in the EU and UK. This may mitigate the need for top-down regulatory solutions such as banning PFOF.

Regulators should be mindful that banning PFOF may result in social cost if the change in brokers' business models means that ease of access to trading is markedly affected. In light of the Gamestop short squeeze episode, such reform can also be seen as pro-elite warfare against the new retail investors. We argue that there are other more immediate areas of attention for investor protection, and these should be addressed, although regulators should remain watchful for abuses regarding PFOF business models.

Two investor protection issues for retail investors are arguably more pressing. The first relates to investors' employment of leverage and risk of exposure to catastrophic losses. The second is brokers' 'gatekeeping' discretions that can be used against investors, such as the account freezing episode carried out by Robinhood and others on 28 January 2021.

Online brokers have been highly relaxed about retail investors' leverage levels[150] and it is questioned to what extent they should exercise responsibility or gatekeep retail investors' risk of exposure to catastrophic losses. A college student Kearns, customer of Robinhood, committed suicide after seeing that his account recorded a loss of over $750,000, possibly

[146] Ferrell (2001); Fox et al (2018).
[147] Hester M Peirce, 'Atomic Trading and Market Regulation' (The Corporate Board, May/June 2021).
[148] Art 27(2), Markets in Financial Instruments Directive 2014, unless intermediaries demonstrate the inducement improves quality of customer service and does not impair regulatory compliance. Firms tread a fine line, FCA, *Payment for Order Flow* (April 2019); ESMA, 'Public Statement: ESMA warns firms and investors about risks arising from payment for order flow and from certain practices by "zero-commission brokers"' (13 July 2021), https://www.esma.europa.eu/sites/default/files/library/esma35-43-2749_esma_public_statement_pfof_and_zero-commission_brokers.pdf.
[149] Pensions Act 2014 on automatic enrolment from July 2018.
[150] Stephen Meyer, Sebastian Schroff and Christof Weinhardt, '(Un)skilled Leveraged Trading of Retail Investors' (2014) 28 Financial Markets Portfolio Management 111.

due to options held.[151] However, margin trading, as well as purchasing puts and calls are empowering for retail investors too in bringing their voice of demand to the market. Indeed institutional investors are often able to maximise returns with leverage. If retail exposure to leverage is regulated, this measure may be over-inclusive and paternalistic, while institutional investors not subject to leverage curbs would gain a market advantage.[152] Empirical research shows that only a small minority of retail investors are addicted gamblers[153] who take on excessive leverage and bring upon themselves ruinous effects. In this light, it is arguable that regulatory controls if any, can be targeted at the minority addicted group as their lack of self-control places them at greater risk.[154] In this manner, regulatory interventions can be designed along a spectrum with increased paternalism for the least able investors.

We propose that regulators should consider imposing on brokers gatekeeping duties targeted at the minority of 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 and disabilities and change in life situations etc.[155] Financial intermediaries regulated in the UK need to undertake such an assessment of all retail customers. It is arguable that online brokers should assess for vulnerability, even if retail investors are expressly in an 'execution-only' account arrangement where investment advice is not provided for trading. Although the 'execution-only' arrangement is exempt from advisory duties and care,[156] and provides a low cost departure point for retail investor access, it should not become an excuse for brokers to neglect customers' risks completely. 'Vulnerability' assessments should be a baseline obligation for all financial intermediaries, and we propose a more expansive notion of vulnerability exceeding the FCA's, bearing in mind lessons from Kearns' suicide. For example, personality issues such as anxiety, family situations, very low levels of education or literacy can all be considered as proxy indicators.[157] We are of the view that compliance is unlikely too demanding as online questionnaires can be designed to elicit from retail customers key proxy indicators for vulnerability. Brokers can be subject to gatekeeping duties to monitor vulnerable customers more intensely, while conversely not be allowed to carry out discretionary, across-the-board intrusions such as account freezing which occurred on 28 January 2021. Brokers can benefit from a range of safe harbour conduct in relation to protecting vulnerable retail traders, and the classification of vulnerability should be communicated *ex ante* to customers concerned

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[151] 'Alex Kearns died thinking he owed hundreds of thousands for stock market losses on Robinhood' (CBSNews, 8 Feb 2021), https://www.cbsnews.com/news/alex-kearns-robinhood-trader-suicide-wrongful-death-suit/.
[152] Regulatory laxity for institutions as opposed to retail investors is critically discussed as 'regulatory dualism', Tamara Lothian, *Law and the Wealth of Nations* (NY: Columbia University Press 2016), 101.
[153] Ruben Cox, Atcha Kamolsareeratana and Roy Kouwenberg, 'Compulsive Gambling in the Financial Markets: Evidence from Two Investor Surveys' (2019) Journal of Banking and Finance, https://doi.org/10.1016/j.jbankfin.2019.105709.
[154] Lars Klöhn, 'Preventing Excessive Retail Investor Trading under MiFID: A Behavioural Law & Economics Perspective' (2009) 10 European Business Organisations Law Review 437.
[155] FCA, *Guidance for Firms on the Fair Treatment of Vulnerable Customers* (Feb 2021), https://www.fca.org.uk/publication/finalised-guidance/fg21-1.pdf.
[156] Art 25(4), Markets in Financial Instruments Directive 2014.
[157] Peter Cartwright, 'Understanding and Protecting Vulnerable Financial Consumers' (2015) 38 Journal of Consumer Policy 119.

so that there may be a process of challenge and review. This proposal strikes a balance between paternalism that protects investors and veiled forms of paternalism that could be used against retail investors.[158]

However, concerns generally for retail investors' behavioural weaknesses[159] have been raised and they may benefit from certain minimum regulatory solutions that are proportionate. As gamified interactions in trading apps and social media reliance can result in sheer herding,[160] we propose that 'just-in-time' communications[161] such as automatic warning messages from brokers could help to mitigate herding fever. Just-in-time messages such as warnings in the form that 'you must be able to afford to lose this investment' may help some investors reconsider their actions.[162]

The gatekeeping roles of brokers are a common feature in the regulatory regimes in the US, EU and UK as they can be well-placed to protect retail customers in such relationships of proximity.[163] However, as brokers manage conflicts of interest that may undermine customer protection, it cannot be assumed that their gatekeeping would benefit customers. Regulators should supervise discretionary gatekeeping practices, and retail customers should be more active in calling their brokers to account. Perhaps the social media groups diligent at sharing information about investible opportunities should also share opinions regarding brokers they have used, in order to stimulate user-based discipline and competitive incentives for brokers. Angel also recommends that regulators promote fair treatment by brokers of retail investors alongside institutional investors, and more financial enfranchisement can be opened up to retail investors- such as allowing them to participate in stock lending.[164] A stock-take of financial regulation with levelling the playing field in mind may give rise to more marked but truly beneficial reform in enfranchising the retail investor.

E. Conclusion

Direct retail trading of securities, mobilised by new technological interfaces and social media support, has recently experienced a new high, driving price volatility in certain stocks favoured by retail investors, now called 'meme stocks'. In particular, a spectacular 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. Questions are raised as to whether new patterns in direct retail trading should be subject to control, in particular regulatory control. We examine, in the light of concerns surrounding market manipulation, market instability and irrational trading, whether any of these concerns have substantive traction for potential regulatory reform. We argue that although the EU's and UK's market abuse regimes would, in comparison with the US regime, pose theoretically greater legal risk to the retail traders

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158 Jones et al (2021).
159 Klöhn (2009), Usha Rodrigues, 'Securities Law's Dirty Little Secret' (2013) 81 Fordham Law Review 3389; Geneviève Helleringer, 'A Behavioural Perspective on Consumer Finance' in Hans-W. Micklitz, Anne-Lise Sibony and Fabrizio Esposito (eds), *Research Methods in Consumer Law: A Handbook* (Edward Elgar, 2018), ch10.
160 Umar et al (2021).
161 Daniel Fernandes, John G. Lynch Jr. and Richard G. Netemeyer, 'Financial Literacy, Financial Education, and Downstream Financial Behaviors' (2014) 60 Management Science 1861.
162 Or 'salience shocks' drawing customers' attention, Natasha Sarin, 'Making Consumer Finance Work' (2019) 119 Columbia Law Review 1519.
163 Klöhn (2009).
164 Angel (2021).

who were involved in the Gamestop short squeeze episode, it would likely be challenging to establish a clear case of actionable anti-social market behaviour against retail traders. Further, the narrow lens of anti-social market behaviour 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. This article argues that socially-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. The article makes a few proposals in relation to proportionate application of brokers' gatekeeping duties in relation to retail accounts, but the pros and cons of the payment for order flow business model operated by many discount brokers may be inconclusive in different markets.