THE MEME STOCK PARADOX

Victoria Chiu & Moin A. Yahya

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Victoria Chiu & Moin A. Yahya[*]

Abstract

This article examines the recent meme-stock trading saga that took place in early 2021. Financially underperforming companies that became the target of short-sellers suddenly saw their stock price rapidly and permanently rise. Large amounts of small investors were able to raise the price by buying shares in these companies and holding onto them. The saga demonstrates that the traditional rational investor models underlying the 'fraud on the market' theories of securities regulation are misplaced both in terms of describing the market and in terms of protecting investors. Traditional information disclosure requirements did not seem to disclose the proper information to large or regular investors. Rather, the decisions by large disparate investors created new information that seems to have rescued many of these companies. We offer three possible approaches to understand what happened: 1) discovery through collective wisdom, 2) discovery of new tastes in stocks, 3) pride of ownership. Each of these may explain how financially underperforming companies were able to attract substantial interest from small investors, so much so that short-selling hedge-funds were ousted from the market.

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INTRODUCTION

The rise, fall, and resurgence of a set of stocks known as meme stocks—and, in particular, the stock of the popular videogame retailer GameStop—briefly captured headlines in late January 2021. This stock price roller coaster started around the impeachment of President Trump and culminated shortly after President Biden's inauguration, leading to the collapse of several investment funds that had bet on the market going one way only to see the market swing in the opposite direction. The turbulence in the market quickly transformed into an explosive blame game on both mainstream and social media. Some blamed the investment funds that regularly short-sell meme stocks, while others blamed the online chatrooms that created the buying mania of the stocks; still, others blamed the trading platform Robinhood, which had halted trading in the middle of the buying frenzy. Those entrusted with regulating the system precisely so that this type of market instability is avoided did not shy away from the debate, either. Lawmakers published accusatory tweets, and a Congressional hearing was convened to ensure that the mandatory heaping of Congressional opprobrium be carried out. Yet, as the dust settles on the GameStop saga, are we any wiser for it?

In this article, we challenge traditional theories of securities regulation by drawing lessons from the GameStop saga as well as similar events involving other meme stocks. Specifically, we question whether traditional information disclosure requirements that are meant to protect investors truly protect investors, when such requirements only seem to favor large investors and shut out ordinary investors. The GameStop saga, we argue, exposes the power of decisions by large disparate investors who can create new information that otherwise wouldn't have been created with traditional disclosure.

In Part I, we set out the background of the GameStop saga and explain what happened and why, as well as the broader consequences of the rise, fall, and resurgence of the GameStop stock. In Part II, we identify an inherent tension between, on the one hand, the central goal of securities laws—investor protection––and, on the other hand, the meme stocks phenomenon. We refer to this inherent tension as the "Meme Stock Paradox." In Parts III and IV, we review several traditional financial and economic theories about investor behavior and market information and demonstrate how recent experiences with meme stocks have undermined these theories, creating the Meme Stock Paradox. In Part V, we propose several ways to overcome this Paradox and to adjust securities laws to account for the meme stock experience. We offer conclusions in Part VI.

I. THE GAMESTOP SAGA

A. What Happened?

It all began when institutional Wall Street investors, such as hedge funds, began to short-sell[1] the stocks of brick-and-mortar video game retailer GameStop, betting on the retailer's demise.[2] This bet appeared to be a rather safe one, considering that in December 2020 GameStop hit a stock price low of $2.57.[3] In January 2021, however, GameStop saw its share price balloon to an all-time high closing price of $347.51—a 1700% increase from December 2020. Normally, this kind of growth might be the result of great product news, unexpected earnings, or positive changes in company fundamentals. Not so for GameStop. The phenomenal spike in the company's stock price was largely fueled by something far more unusual: spite. Hordes of small-time everyday investors took it upon themselves to squeeze[4] the large institutional investors that were short-selling GameStop's stock as much as possible in what can only be described as a bid to topple Wall Street. The stocks were 140% short, meaning some of the stocks that had been shorted were already resold by other short-sellers.[5] In other words, institutional investors bet, in a huge way, that GameStop's price would continue to crash, only to be outmaneuvered by individual inexperienced investors determined to launch financial anarchy.

In the beginning, only a few observant people took notice of the potential short squeeze. One of them was Keith Gill, a regular guy who had been bullish (*i.e.*, believed that a stock's price would go up) on GameStop as far back as 2019

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[1] "Short-selling" entails borrowing stock and selling it in the hope that its price will fall, and then buying it back for a profit.

[2] Ortenca Aliaj, Michael Mackenzie and Laurence Fletcher, *Melvin Capital, GameStop and the road to disaster*, FIN. TIMES (Feb. 6, 2021), https://www.ft.com/content/3f6b47f9-70c7-4839-8bb4-6a62f1bd39e0; Sam Thielman, *Redditors took on hedge funds over GameStop and AMC Theatres stock and won. So what now?*, NBC NEWS (Jan. 28 2021), https://www.nbcnews.com/think/opinion/redditors-took-hedge-funds-over-gamestop-amc-theatres-stock-won-ncna1255919.

[3] Nasdaq, *GME Historical Data*, NASDAQ, INC. (retrieved May 14, 2021), https://www.nasdaq.com/market-activity/stocks/gme/historical.

[4] "Squeezing" refers to the pressure placed on those who short-sold the stock by attempting to raise its market price.

[5] John McCrank, *Explainer: How were more than 100% of GameStop's shares shorted?,* REUTERS (Feb. 18, 2021), https://www.reuters.com/article/us-retail-trading-shortselling-explainer-idUSKBN2AI2DD; Dan Caplinger, *Yes, a Stock Can Have Short Interest Over 100% -- Here's How,* THE MOTLEY FOOL (Jan. 28, 2021), https://www.fool.com/investing/2021/01/28/yes-a-stock-can-have-short-interest-over-100-heres.

and happened to frequent a Reddit forum known as WallStreetBets (WSB).[6] WSB touts itself as a kind of wild west casino: users post about their gains and losses on the stock market, hyping each other up and leaving wry comments in turn. WSB is made up of ordinary people, some of whom have invested tens of thousands into stocks and others who only play with a few hundred. The point is that the participants are *not* Wall Street shills—it is a place squarely for regular people who want to invest, also known as retail investors.[7] Gill, who goes by the online aliases RoaringKitty and DeepF*ckingValue, had already been posting regularly about GameStop shares and sunk around $53,000 of his own money into its stocks.[8] GameStop, he believed, was simply undervalued by the hedge funds. Originally, he was derided by other WSB participants for his position.[9] However, as GameStop's price began to rise in mid-January, Gill's continued analysis gained popularity[10]—his posts about increasing gains combined with added observations about the rising chances of a short-squeeze occurring drew significant attention. Gradually more and more people began to join him in purchasing and holding GameStop stock. First other in-the-know WSB participants began buying; Gill's

[6] Julia-Ambra Verlaine and Gunjan Banerji, *Keith Gill Drove the GameStop Reddit Mania. He Talked to the Journal.* WALL ST. J. (Jan. 29, 2021), https://www.wsj.com/articles/keith-gill-drove-the-gamestop-reddit-mania-he-talked-to-the-journal-11611931696; Nathaniel Popper and Kellen Browning, *The 'Roaring Kitty' Rally: How a Reddit User and His Friends Roiled the Markets*, N.Y. TIMES (Jan. 29 2021), https://www.nytimes.com/2021/01/29/technology/roaring-kitty-reddit-gamestop-markets.html; Catherine Thorbecke, *GameStop timeline: A closer look at the saga that upended Wall Street*, ABC NEWS (Feb. 13, 2021), https://abcnews.go.com/Business/gamestop-timeline-closer-saga-upended-wall-street/story?id=75617315.

[7] Pierre-Yann Dolbec, Concordia University, *WallStreetBets is disrupting financial markets -- possibly permanently*, NAT'L POST (Feb. 6, 2021), https://nationalpost.com/pmn/news-pmn/wallstreetbets-is-disrupting-financial-markets-possibly-permanently; John McDermott, *The Fortunes Won—and Lost—in the Mind-Boggling Rise of r/WallStreetBets*, ESQUIRE (May 13, 2021), https://www.esquire.com/lifestyle/money/a36395893/wallstreetbets-investment-fortunes-gamestop-inside-story.

[8] Julia-Ambra Verlaine and Gunjan Banerji, *Keith Gill Drove the GameStop Reddit Mania. He Talked to the Journal.*, WALL ST. J. (Jan. 29, 2021), https://www.wsj.com/articles/keith-gill-drove-the-gamestop-reddit-mania-he-talked-to-the-journal-11611931696; Nathaniel Popper and Kellen Browning, *The 'Roaring Kitty' Rally: How a Reddit User and His Friends Roiled the Markets*, N.Y. TIMES (Jan. 29 2021), https://www.nytimes.com/2021/01/29/technology/roaring-kitty-reddit-gamestop-markets.html.

[9] *Cat lover, mullet wearer, chart fan: The dude who drove up GameStock and broke the stock market*, FIN. POST (Jan. 29, 2021), https://financialpost.com/investing/cat-lover-mullet-wearer-chart-fan-the-dude-who-drove-up-gamestock-and-broke-the-stock-market; Popper, *supra* note 8.

[10] Verlaine, *supra* note 8; Popper, *supra* note 8.

increasing gains amazed other users and inspired them to believe in his predictions about GameStop's potential and the hedge funds' undervaluations.[11]

Once the GameStop frenzy gained media attention, reports of its stock being undervalued—and of large hedge funds' bets against the company—reached people who were removed from WSB and the regular investment scene entirely; people who were not sophisticated investors, but who had heard of the trend and wanted to get on board.[12] College students claimed on WSB that they were gambling their student loans.[13] Homeowners posted that they were using their mortgage payments.[14] The fervor was so widespread that even Elon Musk got in on the fun, tweeting excitedly about the GameStop mania's new name: Gamestonk.[15] People began buying GameStop stock purely for the memes,[16] for the trend, or for the thrill of being part of the chaos—there was no principled reasoning behind some investors' actions.[17] Many traders used relatively complex

[11] Verlaine, *supra* note 8; Popper, *supra* note 8; Maggie Fitzgerald, *'Roaring Kitty' Keith Gill defends GameStop posts, says he is as bullish on the stock as ever*, CNBC (Feb. 17, 2021), https://www.cnbc.com/amp/2021/02/17/roaring-kitty-keith-gill-defends-gamestop-posts-says-he-is-as-as-bullish-as-ever-on-the-stock.html.

[12] Kevin Stankiewicz, *Massachusetts regulator says GameStop speculation is a danger to the whole market, as TD Ameritrade restricts trading*, CNBC (Jan. 27, 2021), https://www.cnbc.com/2021/01/27/gamestop-speculation-is-danger-to-whole-market-massachusetts-regulator.html; John Detrixhe, *Good luck proving Reddit traders did anything illegal pumping by GameStop*, QUARTZ (Jan. 28, 2021), https://qz.com/1965494/are-wallstreetbets-reddit-traders-manipulating-gamestop-shares.

[13] u/SneakyCarpets, *YOLO all my student loan money into pltr and GME, to the moon baby. 2 562 in USD momeyz.* REDDIT (Jan. 17, 2021), https://www.reddit.com/r/wallstreetbets/comments/kzfuxn/yolo_all_my_student_loan_money_into_pltr_and_gme; u/rbasi02, *GME to 42069. YOLO'd my student loan.,* REDDIT (Jan. 31, 2021), https://www.reddit.com/r/wallstreetbets/comments/l9phrh/gme_to_42069_yolod_my_student_loan.

[14] u/Rhollow1, *YOLO/FOMO my second mortgage. 35k to 5mil to 300k. I WILL NOT SELL!*, REDDIT (Feb. 4, 2021), https://www.reddit.com/r/wallstreetbets/comments/lcqegz/gme_yolofomo_my_second_mortgage_35k_to_5mil_to.

[15] Elon Musk (@elonmusk), TWITTER (Jan. 26, 2021), https://twitter.com/elonmusk/status/1354174279894642703; David Randall, *Analysis: A tulip by another name? 'Gamestonk' and the case for investor caution*, REUTERS (Jan. 30, 2021), https://www.reuters.com/article/us-retail-trading-bubbles-analysis-idUSKBN29Z0HG.

[16] In this context, memes are ideas and behaviors that spread between and among people within a culture and spread widely online, especially through social media. *Meme*, MERRIAM-WEBSTER.COM, https://www.merriam-webster.com/dictionary/meme (Dec. 28, 2021); *Meme*, OXFORDLEARNERSDICTIONARIES.COM, *https*://www.oxfordlearnersdictionaries.com/definition/english/meme (Dec. 28, 2021).

[17] Brett Molina & Mike Snider, *Reddit group founded on 'high risk' returns hits Wall Street with GameStop effort*, USA TODAY (Jan. 28, 2021), https://www.usatoday.com/story/tech/2021/01/28/gamestop-stock-caught-up-reddit-groups-effort-hit-hedge-

financial instruments such as options in their trading strategies, some influenced by social media into buying the stock or options to buy the stock at a later time, without fully understanding what investing in GameStop really entailed.[18]

As amateur investors kept buying, GameStop's price kept climbing,[19] and the pressure (squeeze) put on hedge funds that had shorted the stock mounted.[20] Since the price of GameStop kept skyrocketing, some short sellers had no choice but to buy the stock back at inflated prices to cover their short positions and halt their losses. Short positions require borrowing stock from a broker, selling it, and then hoping the price of the stock will come down by the time it must be bought back and returned to the broker. The seller pockets the difference between the initial price and the lower price of the stock.[21] Since short sellers had sold borrowed GameStop stock, their potential losses if they did not buy the stock back were limitless. Indeed, notable hedge fund Melvin Capital was forced to bail on its GameStop short position due to this squeeze, reportedly sustaining enormous losses as a result.[22] Retail holders of GameStop egged each other on to keep

funds/4292051001; Rachel Louise Ensign, *GameStop Investors Who Bet Big — And Lost Big*, WALL ST. J. (Feb. 15, 2021), https://www.wsj.com/amp/articles/ gamestop-investors-who-bet-bigand-lost-big-11613385002.

[18] 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*, SSRN (Feb. 18, 2021), https://papers.ssrn.com/sol3/ papers.cfm?abstract_id=3788155; Cheng Long, Brian M. Lucy, & Larisa Yarovaya, *'I Just Like the Stock' versus 'Fear and Loathing on Main Street': The Role of Reddit Sentiment in the GameStop Short Squeeze*, SSRN (Apr. 8, 2021), https://papers.ssrn.com /sol3/papers.cfm?abstract_id=3822315.

[19] Brandon Kochkodin, *How WallStreetBets Pushed GameStop Shares to the Moon*, BLOOMBERG (Jan. 25, 2021), https://www.bloomberg.com/news/articles/2021-01-25/how-wallstreetbets-pushed-gamestop-shares-to-the-moon; Will Daniel, *GameStop spikes another 91% as Reddit investors push stock to dizzying new highs*, MKTS. INSIDER (Jan. 26, 2021), https://markets.businessinsider.com/news/stocks/gamestop-stock-climbs-reddit-fueled-rally-continues-2021-1-1030004902.

[20] Lu Wang, Melissa Karsh & Saijel Kishan, *Hedge Fund Pressure Lingers With Short Sellers' Targets Rallying*, BLOOMBERG (Jan. 29, 2021), https://www.bloomberg.com/news/articles/2021-01-29/hedge-fund-pressure-lingers-with-short-sellers-targets-rallying; Eric Levitz, *How Redditors Beat Hedge Funds at Their Own Game(Stop)*, INTELLIGENCER – N.Y. MAG. (Jan. 27, 2021), https://nymag.com/intelligencer/2021/01/ reddit-gamestop-share-price-explained-wallstreetbets-melvin-capital.html.

[21] *Investor Bulletin: An Introduction to Short Sales,* U.S. SEC. & EXCH. COMM'N (Oct. 29, 2015), https://www.sec.gov/oiea/investor-alerts-bulletins/ib_shortsalesintro.html.

[22] The amount Melvin Capital lost could not be confirmed, but fellow hedge funds Citadel LLC and Point72 Asset Management reportedly infused around three billion dollars into Melvin Capital to keep it afloat. Yun Li, *Melvin Capital, Hedge Fund Targeted by Reddit Board, Closes Out of GameStop Short Position*, CNBC (Jan. 27, 2021),

buying, to "hold the line,"[23] and take GameStop "to the moon,"[24] even as industry experts warned that the price was unsustainable and bound to eventually crash.[25] Large swathes of retail traders continued to hold the stock on principle even as its price began to fall as predicted. Some were heartened by how Gill himself continued to hold his shares despite his net worth plummeting millions through GameStop's stock price fluctuations.[26]

Evidently, holding GameStop stock despite potentially incurring losses was seen by many retail investors as contributing to a collective mission that was larger than each of them individually.[27] For many it was no longer solely—or ever—about making money personally, but rather about banding together to send a message about how the power of the individual could destroy even institutions as

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https://www.cnbc.com/2021/01/27/hedge-fund-targeted-by-reddit-board-melvin-capital-closed-out-of-gamestop-short-position-tuesday.html; The Associated Press, *2 Short Sellers Admit Defeat, Bail Out at Huge Loss as GameStop Share Surge Hits 1000%*, CBC (Jan. 27, 2021), https://www.cbc.ca/news/business/gamestop-wednesday-1.5889652.

[23] Charlie Wells & Katherine Gemmell, *Reddit Market Winners Face a Hard Choic e: Sell or 'Hold the Line'?*, BLOOMBERG (Feb. 1, 2021), https://www.bloomberg.com/new s/articles/2021-02-01/gamestop-gme-amc-share-price-sell-or-hold-the-line-on-reddit-stoc ks; Gabrielle Fonrouge, *Ja Rule Urges GameStop Stock Buyers to 'Hold the Line' After R obinhood Blocks Trades*, N.Y. POST (Jan. 28, 2021), https://nypost.com/2021/01/28/ja-ru le-gamestop-stock-buyers-need-to-hold-the-line.

[24] Verlaine, *supra* note 8; Popper, *supra* note 8.

[25] Larry Light, *Why GameStop, A Failing Business, Will See Its Over-Hyped Stock Crash*, FORBES (Jan. 30, 2021), https://www.forbes.com/sites/lawrencelight/2021 /01/30/why-gamestop-a-failing-business-will-see-its-over-hyped-stock-crash; Anne D'Innocenzio, *GameStop's Stupefying Stock Rise Doesn't Hide Its Reality*, CTV NEWS (Feb. 3, 2021), https://www.ctvnews.ca/business/gamestop-s-stupefying-stock-rise-doesn-t-hide-its-reality-1.5293484.

[26] Yun Li, *Reddit User Who Helped Inspire GameStop Mania Says He Lost $13 Million on Tuesday, But is Still Holding on*, CNBC (Feb. 2, 2021), https://www.cnbc. com/2021/02/02/reddit-user-who-helped-inspire-gamestop-mania-says-he-lost-13-million-on-tuesday-but-is-still-holding-on.html; David Matthews, *Reddit user who lost millions on GameStop stock says he won't sell*, N.Y. DAILY NEWS (Feb. 3, 2021), https://www.nydailynews.com/news/national/ny-reddit-wall-street-gamestop-stock-13-million-20210203-i2pav6quzvh5zfituwhzsscqim-story.html.

[27] Matt Phillips & Taylor Lorenz, *'Dumb Money' Is on GameStop, and It's Beating Wall Street at Its Own Game*, N.Y. TIMES (Jan. 27, 2021), https://www.nytimes.com/ 2021/01/27/business/gamestop-wall-street-bets.html; Alicia Adamczyk, *'I Thought I Realistically Could Make $25,000 Off of This:' Why Redditors Are Holding GameStop*, CNBC MAKE IT (Feb. 1, 2021), https://www.cnbc.com/2021/02/01/why-redditors-are-holding-gamestop-stock.html; Roger Cheng, *Reddit's AMC, GameStop Surge Happened Because of Anger Over Wall Street*, CNET (Feb. 1, 2021), https://www.cnet.com /news/reddits-amc-gamestop-surge-happened-because-of-anger-over-wall-street; McDermott, *supra* note 7.

seemingly unshakeable as Wall Street.[28] Amid the frenzy, Robinhood, a popular retail investment app, halted some trading of GameStop shares and raised margin requirements—the percentage of stock bought as a loan that an investor must pay out of pocket[29]—citing "recent volatility" as the impetus for the restrictions.[30] Other brokerage firms also put similar limits on the stock, such as putting option trading into liquidation or blocking trades done entirely on margin, reportedly in an attempt to protect their clearing houses and the liquidity of the market.[31]

These restrictions were met with outrage from individual investors, senators, and law-makers alike, spurring dozens of federal lawsuits.[32] Livid investors took to social media to complain and discuss legal action.[33] Congresswoman Alexandria Ocasio-Cortez criticized Robinhood's limits as "unacceptable" on her Twitter account,[34] with Senator Ted Cruz expressing his subsequent agreement with her position.[35] The United States Securities and Exchange Commission (”SEC”) eventually got involved, investigating WSB and other social media channels

[28] Rachel Louise Ensign, *GameStop Investors Who Bet Big — And Lost Big*, WALL ST. J. (Feb. 15, 2021), https://www.wsj.com/amp/articles/gamestop-investors-who-bet-bigand-lost-big-11613385002; McDermott, *supra* note 7.

[29] *Margin: Borrowing Money to Pay for Stocks*, U.S. SEC. & EXCH. COMM'N (Apr. 17, 2009), http://www.sec.gov/reportspubs/investor-publications/investorpubsmargin htm.html; Caitlin McCabe, *What Is Margin Investing?,* WALL ST. J. (Jan. 13, 2021), https://www.wsj.com/articles/what-is-margin-investing-11610566011.

[30] Maggie Fitzgerald, *Robinhood Restricts Trading in GameStop, Other Names Involved in Frenzy*, CNBC (Jan. 28, 2021, 5:34 PM), https://www.cnbc.com/2021 /01/28/robinhood-interactive-brokers-restrict-trading-in-gamestop-s.html; Claire Miller, *From Elon Musk To AOC, Everybody Has A Tweet About GameStop*, NPR (Jan. 29, 2021, 2:47 PM), https://www.npr.org/2021/01/29/961703023/from-elon-musk-to-aoc-every body-has-a-tweet-about-gamestop.

[31] Fitzgerald, *supra* note 30; Gillian Friedman and Tara Siegel Bernard, *Trading Pla tforms Are Limiting Trades of GameStop And Other Companies,* N.Y. TIMES (Jan. 27, 20 21), https://www.nytimes.com/2021/01/27/business/gamestop-td-ameritrade-robinhood.ht ml.

[32] Megan Leonhardt, *Robinhood Now Faces Roughly 90 Lawsuits After GameStop Trading Halt—Here's How Customers Might Actually Get Their Day in Court*, CNBC (Feb. 17, 2021), https://www.cnbc.com/2021/02/17/robinhood-faces-lawsuits-after-gamestop-trading-halt.html; Siladitya Ray, *Robinhood Faces Anger, Class-Action Suits And Political Pushback After Curbing Trade Of GameStop*, FORBES (Jan. 28, 2021, 2:13 PM), https://www.forbes.com/sites/siladityaray/2021/01/28/robinhood-faces-anger-class-action-suits-and-political-pushback-after-curbing-trade-of-gamestop.

[33] Siladitya, *supra* note 32; *Anger as trading in GameStop shares is restricted*, BBC NEWS (Jan. 28, 2021), https://www.bbc.com/news/business-55837519.

[34] Alexandria Ocasio-Cortez (@aoc), TWITTER (Jan. 28, 2021, 08:36 AM), https://twitter.com/aoc/status/1354830697459032066.

[35] Ted Cruz (@tedcruz), TWITTER (Jan. 28, 2021, 08:47 AM), https://twitter.com /tedcruz/status/1354833603943931905.

playing a part in driving up GameStop's price for evidence of fraud.[36] The SEC also examined the brokerage restrictions that had been placed on GameStop trading for compliance with regulatory and disclosure requirements.[37] There were concerns that the investments in GameStop constituted market manipulation and were inconsistent with "investor protection and fair and efficient markets."[38]

Once the frenzy died down, Congress initiated a hearing before its House Financial Services Committee, seeking answers about what had happened and why. Gill testified, as did the Chief Executive Officers (CEOs) of Reddit, Robinhood, and Melvin Capital.[39] Among lines of questioning concerning each of the parties' roles in the events, the panel scrutinized whether short-selling in general should face additional regulation and whether options like the ones used so frequently by GameStop traders were harmful or beneficial to the common investor.[40]

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[36] Ben Bain, *SEC Hunts For Fraud in Social-Media Posts That Drove Up GameStop*, BLOOMBERG (Feb. 3, 2021), https://www.bloomberg.com/news/articles/2021-02-03/sec-hunts-for-fraud-in-social-media-posts-that-drove-up-gamestop; Dave Michaels, *GameStop Mania Is Focus of Federal Probes Into Possible Manipulation*, WALL ST. J. (Feb. 11, 2021), https://www.wsj.com/articles/gamestop-mania-is-focus-of-federal-probes-into-possible-manipulation-11613066950.

[37] *March 17, 2021, Full Committee Hearing entitled, "Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide, Pt. II*: *Before the H.R. Comm. on Fin. Serv.*, 117th Cong. (2021); Dave Michaels, *SEC to Review Brokers' Restrictions on GameStop, AMC Trading*, WALL ST. J. (Jan. 29, 2021), https://www.wsj.com/articles/sec-to-review-brokers-restrictions-on-gamestop-amc-trading-11611932473; Thomas Franck, *SEC Reviewing Volatility Amid GameStop Frenzy, Vows to Protect Retail Investors*, CNBC (Jan. 29, 2021, 01:01 PM), https://www.cnbc.com/2021/01/29/sec-reviewing-recent-trading-volatility-amid-gamestop-frenzy-vows-to-protect-retail-investors.html.

[38] *See* Bain, *supra* note 36; Tory Newmyer and David J. Lynch, *GameStop Frenzy Leaves Behind a Mess For Wall Street Regulators*, WASH. POST (Feb. 3, 2021), https://www.washingtonpost.com/business/2021/02/03/gamestop-sec-regulation. The saga was also noticed by observers around the world generating proposals for reforms to protect investors.*See, e.g.*, Matteo Arrigoni, *Think Twice, It's All Right. Lessons from the GameStop Saga*, (Eur. Banking Inst. Working Paper Series 2021 - No. 98,2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3877240 (suggesting cooling off periods and other measures to ensure small investors are adequately protected from too much access to trading by average investors).

[39] Ryan Kailath, *'I Am Not A Cat ... I Am Not A Hedge Fund': Trader Roaring Kitty Tells Congress*, NPR (Feb. 18, 2021), https://www.npr.org/2021/02/18/968829355/gamestop-hearing-today-roaring-kitty-along-with-ceos-to-appear-before-congress; Ethan Wolff-Mann, *A Guide to The 'GameStop' Hearing*, YAHOO FIN. (Feb. 18, 2021), https://ca.finance.yahoo.com/news/guide-to-the-game-stop-hearing-140643475.html.

[40] Tory Newmyer, Douglas MacMillan & Hamza Shaban, *Congress Presses Robinhood CEO on Company's Role in GameStop Frenzy*, WASH. POST (Feb. 18, 2021),

B. The Aftermath

As of January 2022, GameStop's price has stabilized somewhat, clocking in at around $150—still far above its price back in December 2020. Congressional hearings on the matter remain ongoing, and we do not yet fully know how the GameStop story will change securities laws going forward, if at all. The SEC is currently reviewing whether large investors should be required to disclose more information concerning their short-selling and considering changes that could protect retail investors from volatile trading activity on investment apps.[41]

One thing that seems increasingly clear is that GameStop is likely not a unicorn. Other so-called meme stocks—low-value stocks that unexpectedly fluctuate in price due to retail investments— may be a recurring phenomenon for the foreseeable future. The aftermath of the GameStop saga has presented retail investor-driven surges in a number of other companies' stocks, including AMC Theatres and Blackberry.[42] These and many other meme stocks have seen stratospheric growth spurred by potentially uninformed retail investors,[43] sometimes followed by dramatic crashes. For example, the year-to-date gain of the cryptocurrency Dogecoin, originally created as a joke, rocketed over 15,000% at its peak after Elon Musk began tweeting about the asset. Various mainstream musicians and brands also joined in on the trend.[44] Shares in Coinbase, a

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https://www.washingtonpost.com/business/2021/02/18/gamestop-robinhood-citadel-roaring-kitty-hearing-live-updates; Ian Sherr & Oscar Gonzalez, *Robinhood's Role in GameStop Spike Scrutinized by Congress*, CNET (Feb. 18, 2021), https://www.cnet.com/personal-finance/investing/robinhoods-role-in-gamestop-stock-spike-scrutinized-by-congress. *See also* Charles M. Jones, Adam V. Reed & William Waller, *When Brokerages Restrict Retail Investors, Does the Game Stop?*, SSRN (last revised 22 Nov. 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3804446 (documenting the role of options in facilitating stock trading even when restrictions are imposed).

[41] Katanga Johnson, *U.S. SEC Chair Says Reviewing Short-Selling, Swap Rules After GameStop, Archegos Sagas*, REUTERS (May 5, 2021), https://www.reuters.com/business/us-sec-chief-plans-scrutinize-short-sellers-rein-gamification-following-gamestop-2021-05-05; Benjamin Bain, *GameStop Prompts U.S. to Consider New Rules for Options, Shorts*, BLOOMBERG (Mar. 9, 2021), https://www.bloomberg.com/news/articles/2021-03-09/gamestop-prompts-u-s-to-consider-new-rules-for-options-shorts.

[42] *AMC, GameStop, Blackberry: What to Watch in the Stock Market Today*, WALL ST. J. (Jan. 28, 2021), https://www.wsj.com/livecoverage/amc-gamestop-stock-market.

[43] Proinsias O'Mahoney, *Stocktake: Clueless Investors are Headed for Trouble*, IRISH TIMES (Mar. 16, 2021), https://www.irishtimes.com/business/personal-finance/stocktake-clueless-investors-are-headed-for-trouble-1.4510012.

[44] Caitlin Ostroff & Caitlin McCabe, *What is Dogecoin, How to Say it, and Why it's No Longer a Joke*, WALL ST. J. (updated June 2, 2021), https://www.wsj.com/articles/what-is-dogecoin-how-to-say-it-and-why-its-no-longer-a-joke-thanks-elon-11612820776; Pete

cryptocurrency exchange, peaked in price on April 14 before crashing 32% after the market capitalization of cryptocurrency abruptly tanked 4 days later.[45] Shares in the tech-driven mortgage lending company Rocket Companies, Inc. (RKT) similarly crashed more than 30% after climbing more than 70% and gaining popularity with many Reddit retail investors.[46] Non-fungible tokens (NFTs), which are mostly part of the Ethereum cryptocurrency blockchain, constitute yet another example. NFTs are unique digital items—art, music, GIFs, photos, even tweets—to which ownership is sold online, with some fetching prices in the millions of dollars (for now).[47] These are but a few examples of assets that have swelled in popularity with individual investors, with values seemingly dissociated from typical underlying expectations for profit. As with GameStop, some retail traders profited handsomely from these assets. Others were burned.

II. THE LAW OF SECURITIES MEETS MEME STOCKS: THE MEME STOCK PARADOX

A. A Brief Introduction to Securities Laws

One of the main goals of securities laws is to protect investors, a well-known point made by statutes, judicial opinions, and learned commentary alike.[48] Indeed, investors need to be protected, as enumerated by Professor Guttentag, from 1)

Evans, *What is Dogecoin? And Why is it Rising and Falling with Elon Musk?*, CBC (May 10, 2021), https://www.cbc.ca/news/ business/dogecoin-1.6020408.

[45] Peter Cohan, *Coinbase Stock Down 32% as Crypto's Value Plunges $220 Billion*, FORBES (Apr. 25, 2021), https://www.forbes.com/sites/petercohan/2021/04/25/coinbase-stock-down-32-as-cryptos-value-plunges-220-billion; Matthew De Saro, *Coinbase Hits Historic Low as Bitcoin Price Drops Below $50,000*, YAHOO FIN. (Apr. 23, 2021), https://finance.yahoo.com/news/coinbase-hits-historic-low-bitcoin-183000085.html.

[46] Orla McCaffrey, *Rocket Stock is the New Meme Trade. Move Over, GameStop*, WALL ST. J. (Mar. 3, 2021), https://www.wsj.com/articles/rocket-is-becoming-the-new-meme-stock-move-over-gamestop-11614782903; Yun Li, *Shares of Rocket Companies Drop 30% After a 70% Irrational Pop in the Heavily Shorted Name*, CNBC (Mar. 3, 2021), https://www.cnbc.com/2021/03/03/shares-of-rocket-companies-are-dropping-after-a-70percent-irrational-pop-in-the-heavily-shorted-name.html.

[47] Alexis Benveniste, *The First-Ever Tweet Sold as an NFT for $2.9 Million*, CNN (Mar. 23, 2021), https://www.cnn.com/2021/03/23/tech/jack-dorsey-nft-tweet-sold /index.html.

[48] *See, e.g.*, Michael D. Guttentag, *Protection from What? Investor Protection and the JOBS Act*, 13 U.C. DAVIS L.J. 207, 212-18 (2013). *See* Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 711 (2006) (providing a good general overview). *See also* Kevin S. Haeberle & M. Todd Henderson, *A New Market-Based Approach to Securities Law*, 85 CHI. L. REV. 1313 (2018) (providing a good overview and a critique of current securities regulations including proposals for reforms).

fraud, 2) an unleveled informational playing field, 3) the extraction of private benefits, 4) and the investors themselves, *i.e*. to keep them from making unwise decisions, but 5) not financial losses.[49]

Section 10(b) of the Securities Exchange Act (1934) (SEA)[50] and the Securities Exchange Commission's (SEC) Rule 10b-5[51] form the foundation for the modern prohibition of general and fraudulent manipulation of the market.[52] General manipulation includes the classic "pump and dump" as well as "cyber-smear" schemes.[53] The "pump and dump" schemes usually center around false news that is spread by a holder of a stock in order to cause its price to rise, albeit temporarily. The spreader of the false news then profitably sells the stock prior to the falsity of the information being revealed. The most famous of these schemes is that of a 15-year-old boy who "purchased large blocks of thinly traded microcap stocks and, within hours of making such purchases, sent numerous false and/or misleading messages … over the Internet touting the stocks he had just

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[49] Guttentag, *supra* note 48, at 222-32. Guttentag added the protection of investors from themselves relying on the extensive research of Donald C. Langevoort. *See* Donald C. Langevoort, *The SEC, Retail Investors, and the Institutionalization of Securities Markets*, 95 VA. L. REV. 1025 (2009).

[50] It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce or of the mails, or of any facility of any national securities exchange . . . (b) To use or employ, in connection with the purchase or sale of any security registered on a national securities exchange . . . any manipulative or deceptive device or contrivance in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of investors.

15 U.S.C. § 78j(b).

[51] It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails or of any facility of any national securities exchange, (a) To employ any device, scheme, or artifice to defraud, (b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or (c) To engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.

17 C.F.R. § 240.10b-5.

[52] Guttentag, *supra* note 48, at 213; Moin A. Yahya, *The Law & Economics of Sue and Dump: Should Plaintiffs' Attorneys Be Prohibited from Trading the Stock of Companies They Sue*, 39 SUFFOLK U. L. REV. 425, 434-35 (2006).

[53] Richard H. Walker & David M. Levine, "*You've Got Jail": Current Trends in Civil and Criminal Enforcement of Internet Securities Fraud*, 38 AM. CRIM. L. REV. 405, 411 (2001); Yahya, *supra* note 52, at 435-37.

purchased."[54] What was interesting about his messages was that they were "generally devoid of substantive content" and would make simple statements—for instance, that the stock would "take off," be the "next stock to gain 1,000%," or that the stock was "the most undervalued stock ever."[55] The SEC charged the young man and settled the case, ordering him to disgorge his profits.[56] "Cyber-smears" are the reverse of "pump and dump" schemes.[57] These involve a person who short-sells the stock of a company and then spreads false bad news about the company with an eye to having the price of the stock fall. The short-seller then profitably closes their position.[58]

Fraudulent manipulation of the market includes the prohibition on insider trading, although the exact reason insider trading is considered fraud is more complex.[59] Nonetheless, there is a clear sense that those who possess material confidential information by virtue of their status as insiders (or those adjacent to insiders such as tippees) are prohibited from using that confidential information to their advantage, whether it be a gain or avoiding a loss.[60] To further beef up the prohibition against insider trading, the SEC passed Regulation Fair Disclosure (FD) in 2000, which requires issuers of securities to disclose any information they wish to disclose to all or no one.[61] Other securities legislation, such as the Sarbanes-Oxley and Dodd-Frank Acts, also have several disclosure requirements aimed at improving access to information by investors.[62]

B. The Meme Stock Context

The meme stock context presents a unique challenge to securities regulators because neither "pump and dump" nor "cyber-smear" seem to happen.[63] If

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[54] In re Jonathan G. Lebed, Exchange Act Release No. 33-7891, 2000 WL 1353040 *1, (Sept. 20, 2000).

[55] *Id.*

[56] *Id.* at *3.

[57] Yahya, *supra* note 52, at 435.

[58] *Id.* at 436-37.

[59] *Id.* at 437-47 (discussing the various theories upon which the prohibition against insider trading is founded).

[60] Yahya, *supra* note 52, at 437-47.

[61] 17 C.F.R. § 243.100-103 (2005).

[62] A good overview of these can be found in John C. Coffee Jr., *The Political Economy of Dodd-Frank: Why Financial Reform Tends to be Frustrated and Systemic Risk Perpetuated*, 97 CORNELL L. REV. 1019 (2012).

[63] Professors Newman and Trautman survey some of the relevant securities regulations that could be applicable to the meme stock saga. *See* Neal Newman & Lawrence J. Trautman, *Securities Law: Overview and Contemporary Issues*, 16 OHIO BUS. L.J. (forthcoming).

anything, the GameStop saga was a "pump and hold" or a "cyber-praise" operation. Moreover, there is also no claim that insiders were involved in trading the various stocks. Rather, it was one group of outsiders to the company taking long positions in its shares in order to squeeze out another group of outsiders, namely the short-sellers. As such, the traditional modes of securities fraud and market manipulation are absent here.

The closest analogy to the meme stock investors that we can think of is short-selling plaintiffs.[64] In that case, plaintiffs suing a company would tip off a hedge fund who would short-sell the stock of the defendant company. The announcement of the lawsuit would trigger a fall in the stock's price, which would allow the hedge fund to profitably execute its short-selling. Although the plaintiffs and the recipients of the information regarding their lawsuit are not traditional insiders, they should arguably be deemed temporary insiders until the news of the lawsuit is made public.[65] After all, the lawsuit was the very act that destroyed value and lowered the stock price. Those selling the shares prior to announcing the lawsuit should therefore be viewed as committing fraud on the market.

In the meme stock context, the analogy is reversed. Here, the investors come together to rally to raise the price of the company, thereby depriving the short-selling hedge funds of profitable opportunities. Should the meme stock investors be deemed temporary insiders? The answer is no, for one simple but important reason: there is typically no destruction of value that gives rise to immediate profits. In fact, in the GameStop saga, there did not seem to be an intent to defraud anyone or, for that matter, devalue the stock. Rather, there was genuine belief by retail investors of the righteousness of their cause, and indeed many of the investors held onto their shares even as the stock price rose. Even after the price dipped, sometimes substantially, many held on refusing to surrender to the dip, evidencing their strong genuine belief in their meme stock. Insofar as these investors were trying to teach the hedge funds a lesson, it was almost as if individual investors were collectively punishing what they perceived as value-destroying short-selling. This collective action could only have been fraudulent if it resulted in great losses to the hedge funds, profits for the investors, and then a reversion of the price back to what it was originally. However, many of the investors held on to their stock as it was losing value, and the price of GameStop's stock (as well as other such meme stocks) has stayed substantially higher than what it was in December 2020. The retail investors, in the process, seem to have created, rather than diminished, value that has now allowed GameStop and other companies to raise capital and invest in new strategies. This is the Meme Stock Paradox.

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[64] Yahya, *supra* note 52, at 425-27.
[65] *Id.* at 462.

C. Introducing the Meme Stock Paradox

As noted above, existing securities laws are premised on, and are designed to, protect investors from traditional dangers such as fraud, unleveled informational playing fields, as well investors' own naïveté. This is because stock prices are assumed to be efficient and to reflect all information in the market, or at least all publicly available information.[66] When information is impure, secret, or fraudulent, the integrity of stock prices are affected. As such, this will deceive investors.[67] Yet, the traditional tools that securities regulators employ to protect investors from these risks, such as general and fraudulent market manipulation, are becoming rapidly outdated as investors behave in unexpected ways, diminish some of these traditional risks, and create new ones. The confidence retail investors displayed in GameStop and other meme stock companies, as well as the actual market impact of their activities, signals that the conventional wisdom of both institutional investors and securities regulators may be obsolete. There may be a new game in town, bringing with it not only new market opportunities for companies to take advantage of, but also new risks for investors which do not fall within the traditional notions of fraud or investor naïveté.[68]

One such potential new risk builds on the traditional concern of protecting investors from false or skewed information. But what if investors utilize correct and accurate information in unexpected ways? And what if it is not even clear what the 'correct' or 'accurate' information really is?

III. INVESTOR BEHAVIOR

Traditional financial theory assumes that market participants—investors—are rational.[69] A rational investor, it is thought, will only make fully researched investments that are in their best interests. Trading GameStop, for many people, meant going against what a rational investor would do. It meant buying stock even

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[66] *See* notes 89-90 *infra*.

[67] *See* notes 89-90 *infra*.

[68] We note that since the meme stock saga, there have been several authors who have addressed these issues. Professor Macey provocatively described the current state of securities regulation, in light of the saga, as class warfare. He argues that given that markets are not orderly or fair by their nature, more regulations make the markets less efficient. If anything, current regulation serves the interests of the big players at the expense of the ordinary investors, such as the meme stock investors. Jonathan R. Macey, *Securities Regulation and Class Warfare*, COLUM. BUS. L. REV. (forthcoming).

[69] No one source states this explicitly, but the use of expected utility models in traditional finance theory is one example of the rational investor model. *See, e.g.*, THOMAS E. COPELAND & J. FRED WESTON, FINANCIAL THEORY AND CORPORATE POLICY 77-128 (3d ed. 1988).

when the price was so volatile no one knew whether it would spike $20 or crash $50 in the next ten minutes and holding that stock when no one knew when the bubble would burst, leaving investors vulnerable to potential heavy losses. A rational investor would not, or should not, hold GameStop stock without researching and thoroughly understanding the underlying fundamentals of the company, but that is precisely what many retail investors did. Even more remarkable is that many such investors arguably *did* understand what they were getting themselves into, and participated in these supposedly irrational trades knowingly, and even enthusiastically. They were excited to hold onto volatile shares and happy to risk losing their money—all for the glory or satisfaction of playing some small part in the possible takedown of Wall Street. Some investors were surely in it exclusively in the hopes of making a quick buck, but many others seemed to buy stock (and sometimes buy high) and hold through the volatility and steep drops for other purposes.

The GameStop saga, therefore, speaks to how securities laws almost certainly need to adapt to the significant spontaneity and uncertainty that new technology and investor behavior contribute to the market in order to overcome the resulting Meme Stock Paradox.[70] We do not mean to suggest that short-squeezes, like the one demonstrated by GameStop, are a new phenomenon. Indeed, they are "nothing new"—the businessman behind the then-revolutionary grocery chain Piggly Wiggly tried to short-squeeze Wall Street on his own in 1923.[71] But while short-squeezes are not new, they are different. The difference is, in addition to the Piggly

[70] This includes the new emerging cryptocurrencies and other innovative financial media. There have been several attempts at regulating cryptocurrencies, either by outright banning them, suing them, attempts at taxing them, or proposing new regulations. *See, e.g.*, Anna Baydakova, *Thriving Under Pressure: Why Crypto Is Booming in Nigeria Despite the Banking Ban*, COINDESK (July 6, 2021), https://www.coindesk.com/crypto-booming-in-nigeria-despite-banking-ban; David H. Freedman, *Why Ripple's SEC lawsuit could have a lasting impact on crypto*, FORTUNE (July 29, 2021), https://fortune.com/2021/07/29/ripple-xrp-sec-lawsuit-impact-on-crypto-industry/; Laura Davison, Joe Light & Allyson Versprille, *Crypto Surprise Rattles Industry in Rare Bipartisan Tax Plan*, BLOOMBERG (July 29, 2021), https://www.bloomberg.com/news/articles/2021-07-29/crypto-surprise-rattles-industry-in-rare-bipartisan-tax-plan; Kevin Helms, *SEC Chairman Outlines Regulation of Crypto Assets Relating to Security-Based Swaps*, BITCOIN.COM (July 22, 2021), https://news.bitcoin.com/sec-chairman-regulation-crypto-assets-security-based-swaps/.

[71] Shiva Nagaraj, *When Piggly Wiggly Tried to Stick It to Wall Street,* Slate, SLATE (Feb. 8, 2021), https://slate.com/business/2021/02/piggly-wiggly-short-squeeze-game stop-wall-street-nyse.html. In the commodities market, the Hunt brothers tried to corner the silver market, but also failed. Kim Iskyan, *Here's the story of how the Hunt brothers tried to corner the silver market*, INSIDER (May 17, 2016), https://www.businessinsider .com/hunt-brothers-trying-to-corner-silver-market-2016-5.

Wiggly squeeze being a solo effort, the added complexity of the internet, the social pressure of thousands of people egging each other on to trade, and the unprecedented accessibility of trading to the average person through apps and websites. Long ago, a trading frenzy of this scale was arguably impossible, but it is now easily accomplished by the availability of the internet. Were it not for the ease of communication between traders and the ability of the average person to buy and sell GameStop shares and options with a click of a button, none of this could have happened in a sustained manner. This virtual revolution of the securities market has bred fear of the possibility of future similar market takeovers. After all, if one puny subreddit full of "dumb money" investors could upend sophisticated hedge funds with armies of advanced analysts simply for the memes, what else could they be capable of?[72]

The basic piece of information that drives a company's stock prices is any measure that signals profitability for that company. Indeed, there are many factors that can enter the pricing of a stock, or any financial asset, which signal profitability. These include the following: 1) expected dividends,[73] 2) growth of

[72] The sentiment in the two previous paragraphs can be distilled from popular commentary on the GameStop saga. *See, e.g.*, Jacob Silverman, *The GameStop Saga Shows How Casino Capitalism Is Eating the World: It turns out Reddit can move markets. Can Wall Street regain control? Is anyone better off if it does?*, NEW REPUBLIC (Jan. 27, 20201), https://newrepublic.com/article/161082/gamestop-saga-shows-casino-capitalism-eating-world; Thomas Franck, *SEC reviewing volatility amid GameStop frenzy, vows to protect retail investors*, CNBC (Jan. 29 2021), https://www.cnbc.com/2021/01/29/sec-reviewing-recent-trading-volatility-amid-gamestop-frenzy-vows-to-protect-retail-investors.html; Katherine Greifeld & Claire Ballentine, *GameStop Mania Is Delivering a Dangerous Rush to the Reddit Mob: The absurdist morality tale over the unalienable right of Redditors to pump up meme stocks and punish Wall Street has obscured a more reckless impulse*, BLOOMBERG (Jan. 30, 2021), https://www.bloomberg.com/news/articles/2021-01-30/-like-a-drug-redditors-stock-mania-fueled-by-gambling-high; Taylor Tepper, *The Lesson Of GameStop: Investing Is Not A Game*, FORBES (Feb. 3, 2021), https://www.forbes.com /advisor/investing/gamestop-investing-lessons/; Theron Mohamed, *The GameStop buying frenzy was driven by 'irrational exuberance' - and investors should consider cashing out, market bull Ed Yardeni said*, BUS. INSIDER (Feb. 8, 2021), https://markets.businessinsider .com/news/stocks/gamestop-stock-price-frenzy-irrational-exuberance-taking-profits-ed-yardeni-2021-2; David Moadel, *Exploit the Market's Irrationality with GameStop Stock: GME stock doesn't 'deserve' to go up, but the greater fool theory will likely prevail*, INV. PLACE (Mar. 8, 2021), https://investorplace.com/2021/03/exploit-the-markets-irrational-tendencies-with-gme-stock/; Emily Stewart, *GameStop. Dogecoin. Now AMC. Do meme traders need to be protected from themselves? "If you're trading like it's a game, you're probably going to lose.,"* VOX (June 16, 2021), https://www.vox.com/policy-and-politics/22528238/gme-amc-robinhood-stock-market-reddit.

[73] Investors in a given company generally expect that the venture will be successful and result in profits. Commonly, at least some of a company's profits are paid to investors

earnings,[74] 3) the risk-free interest rate,[75] 4) the beta-value of the stock[76], and 5)

in the form of dividends, which can be in the form of stock or cash. Profits that are not distributed as dividends may be reinvested back into the company. ERIK BANKS, FINANCE: THE BASICS 25 (2d ed. 2010). If a company's future dividends are expected to be higher rather than lower, the company's stock price will rise. Although unlike cash dividends, stock dividends do not result in a value increase for investors, both types of dividends have a similar effect on the price of a company's stock. *See also* C. Austin Barker, *Price Changes of Stock-Dividend Shares at Ex-Dividend Dates*, 14 J. FIN. 373 (1959) (explaining the difference between the two and their impact on the stock value); JAMES A. BRICKLEY & JOHN J. MCCONNELL, *Dividend Policy* in THE NEW PALGRAVE FINANCE 119 (John Eatwell, Murray Milgate & Peter Newman eds., 1989).

[74] Companies reinvest their profits into themselves to grow their operations. This growth will presumably lead to even more profits in the future, resulting in increased dividend distributions at a later date. Because of this, stock prices are generally higher for companies with higher expected growth. Banks, *supra* note 73, at 25. *See also* Eugene F. Fama, *Stock Returns, Expected Returns, and Real Activity*, 45 J. FIN. 1089 (1990) (empirically documenting the relationship between expected earnings growth and stock valuation).

[75] To completely assess the value of an asset, investors must determine the value that asset's future expected cash flows would have if they were available today. Banks, *supra* note 73, at 68. The process of translating future cash flows to their value today is known as discounting. Discounting requires the use of a discount rate, which can vary depending on the purpose of the financial analysis, to discount future cash flows. For standard assets, this discount rate is often the risk-free rate, which is the return an investor would expect to receive from a zero-risk investment over a period of time. If the risk-free rate is being used as the discount rate, then a higher risk-free rate will lead to a lower stock value, while a higher risk-free rate will lead to a higher stock value. *Id.*

[76] A stock's beta reflects how much a given stock's price moves—how sensitive and volatile it is—in relation to market changes. This in turn reflects the stock's return potential or, in other words, its price range. A beta value of 1.0 shows that the stock is no more or less risky than the overall market and will move in the same direction and amount as standard indices used to measure the market. Accordingly, a beta lower than 1.0 reflects that the stock is less sensitive to market changes and less risky of an investment compared to the overall market, whereas a beta higher than 1.0 indicates that the stock is more volatile than the market and thus riskier. If the market goes up, a high beta stock will be very sensitive to the change and swing in price more substantially than a lower beta stock; the same is true if the market experiences a downturn. *Id.* at 55. In general, stocks with higher beta values are riskier, but have higher potential returns—and risk—for investors; stocks with lower beta values are less risky, but also have lower return potential. Higher beta stocks have higher theoretical maximum price changes and lower minimum price changes than their lower-beta counterparts. The effect of beta in the Capital Asset Pricing Model (CAPM) reports stock returns as a function of beta and market returns combined with the risk-free rate: $R = \beta \times [Rm - Rf] + Rf$. Erik. *Id.* at 56. *See also,* THOMAS E. COPELAND & J. FRED WESTON, FINANCIAL THEORY AND CORPORATE POLICY 193-235 (3d ed. 1988); ZVI BODIE & ROBERT C. MERTON, FINANCE 343-59 (2000).

the terminal value of the asset.[77]

Shareholders, generally speaking, purchase shares with the idea that this piece of ownership in a company will entitle them to some cash flow in the future. The cash flow may be in the form of dividends paid out by the company's management or capital appreciation of the stock, which means the shareholder can sell the shares later on for a gain. The stock will appreciate in price if there is some potential growth in the profits of the company. This can come in the form of current profits being reinvested into the company to expand capacity and satisfy growing demand. It can also come in the form of growing demand for the product. It can come in the form of decreasing costs either by innovation or by other means. Even those investors who may buy a company for non-financial reasons will, all things being equal, prefer a profitable socially responsible firm (for example) to a less profitable socially responsible firm.

Other information that could be important is the discount rate, which is comprised of the interest rate as well the beta of the company. The beta of the company is a relative measure of the correlation between the earnings of the company and the overall performance of the market (or maybe even the economy as a whole). The growth of the earnings is also a measure that is important to shareholders, as this is a factor in evaluating the price of the stock.

Finally, the terminal value of the assets of the firm in the event of a liquidation also enters into the calculation. An airline company that has tangible assets, *i.e.* planes, has some terminal value in the event no one is flying that airline company anymore. Of course, if no one is flying at all, the terminal value of the airlines can also diminish. Goodwill, which is not a tangible asset, is usually another factor in the assessment of terminal value or residual value. If a company has a brand name that is valuable regardless of who makes the product, then even if the company loses money, say because of bad management, another company can buy the company and turn it around. The other company will still pay a good price for the

[77] As mentioned previously, an investment opportunity's value is the value of its expected future earnings if they were available today. Investors thus need to account somehow for an asset's potential future cash flows. This can be done through an analysis of its terminal value. An asset's terminal value is how much it is projected to be worth beyond its future cash flow forecast period. Beyond the period during which cash flows can be forecasted, an asset's growth rate is expected to be the same as the final projected year in perpetuity. Since terminal value is a measure of an asset's future financial performance, higher terminal value reflects positively on an asset and generally contributes to a higher price. Banks, *supra* note 73, at 95. *See also* Stephen H. Penman, *A Synthesis of Equity Valuation Techniques and the Terminal Value Calculation for the Dividend Discount Model*, 2 REV. ACCTG. STUD. 303 (1998). For a more modern reference on valuation techniques generally, *see* ASWATH DAMODARAN, DAMODARAN ON VALUATION: SECURITY ANALYSIS FOR INVESTMENT AND CORPORATE FINANCE, (2d ed. 2006).

money-losing company because the brand it possesses is still valuable. Hence, the information needed is not only what assets the company possesses, but also what uses other purchasers may have for these assets.

The assessment of the value of the brand and terminal assets is related to the concept of intrinsic valuation or expressive investing.[78] If a shareholder likes a particular company because it is socially responsible, then the shareholder is not only investing in the company for its dividends, its growth, or even its beta, but rather for what the company does. In this sense, there is more of an ownership aspect for the shareholder than a purely financial aspect.

Shareholders are, of course, legally and technically speaking, the owners of the company whose shares they own. But their ownership entitles them to very little other than, at best, a pro-rata vote at the annual general meeting. It certainly entitles them to be owed a variety of fiduciary duties from the board of directors and the managers of the firm,[79] but in terms of the day-to-day operations, it gives them very little. As such, most financial economists would view those who own shares as simply in it for the purpose of portfolio diversification.[80] Only large investors are seen as legitimate exercisers of influence and control over the company.[81] After all, that is why large investors are exempt from various investor

[78] Innovations like expressive trading can be disruptive and demand a reimagining of the established order. Expressive trading presents new challenges and risks to firms. It will require adjustments by traditional investors and speculators alike. Market participants and regulators are, however, cautioned against hasty adjustments or reforms. As expressive trading proliferates and can be studied, the most promising path forward is sure to emerge.

John P. Anderson, Jeremy Kidd & George A. Mocsary, *Social Media, Securities Markets, and the Phenomenon of Expressive Trading*, 25 LEWIS & CLARK L. REV. (forthcoming 2021).

[79] William M. Lafferty, Lisa A. Schmidt & Donald J. Wolfe Jr., *A Brief Introduction to the Fiduciary Duties of Directors under Delaware Law*, 116 PENN ST. L. REV. 837 (2012).

[80] The theoretic argument was presented by the Nobel Laureate in Harry Markowitz, *Portfolio Selection*, 7 J. FIN. 77 (1952). Many articles have examined the extent to which investors are properly diversified. *See, e.g.*, William N. Goetzmann & Alok Kumar, *Equity Portfolio Diversification*, 12 REV. FIN. 433 (2008) (documenting the levels of diversification of portfolios among different groups of investors by age, sophistication, income, and other factors).

[81] Eliezer M. Fich, Jarrad Harford, Anh L. Tran, *Motivated Monitors: The importance of institutional investors' portfolio weights*, 118 J. FIN. ECON. 21 (2015) (documenting the importance of large institutional investors in corporate governance).

protection regulations.[82] It is also why investors who own large percentages of a company have certain obligations regarding how they act with respect to the company and its shares.[83] But what about the average investor who may only have a few hundred or few thousand dollars invested in the company?

Conventional wisdom suggests that those types of investors should simply acquire shares in a manner that diversifies their portfolio. In the meme-stock saga, many investors sunk large amounts of money into various meme stocks. While this may have been done expressively, it could also be that they were onto something in terms of the fundamentals of the stocks. The price of a stock, based on the discussion, can be mathematically expressed as:

$P = \frac{E(d)}{E(r)-g}$, where $E(r) = r_f + \beta(r_m - r_f)$ and $\beta = \frac{\mathrm{Cov}(r_m,r_f)}{\mathrm{Var}(r_{mf})}$.[84]

In January 2021, because of the efforts of the Federal Reserve (Fed), two circumstances were in the mix. The first is that the risk-free rate was practically zero due to the Fed's efforts at avoiding a Covid-induced catastrophic recession.[85] This meant that the risk-free rate in the stock pricing formula above was close to zero. Furthermore, the efforts by the Fed to avoid bankruptcies and bail out companies may have upended traditional expectations about the volatility of earnings relative to the market. This may have meant that the betas of various stocks were also falling. As a result, investors may have changed their expectations regarding the risk-free rate, the market return, and the individual betas of stocks. It could even be that investors changed their expectation of the betas of the collective set of meme stocks. This means that to an observer, Jensen's alpha was

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[82] *See, e*.g., *Frequently Asked Questions About Exempt Offerings*, U.S. SECURITIES AND EXCHANGE COMMISSION, https://www.sec.gov/smallbusiness/exemptofferings /faq.

[83] *See* Section 13(d) of the SEA and 17 CFR § 240.13d-1.

[84] The left-hand side is known as the Gordon growth formula. Any finance textbook will have this formula in one version or another. *See, e.g.*, THOMAS E. COPELAND & J. FRED WESTON, FINANCIAL THEORY AND CORPORATE POLICY 533 (3d ed. 1988). The explanation of *E(r)* can be found at 195-98.

[85] Heather Long, *Federal Reserve Slashes Interest Rates to Zero as Part of Wide-Ranging Emergency Intervention*, WASH. POST (Mar. 15, 2020), https://www.washingtonpost.com/business/2020/03/15/federal-reserve-slashes-interest-rates-zero-part-wide-ranging-emergency-intervention; Jessica Dickler, *Fed Holds Rates Near Zero – Here's Exactly What That Means for Your Wallet*, CNBC (June 10, 2020, 2:02 PM), https://www.cnbc.com/2020/06/10/fed-holds-rates-near-zero-heres-what-that-means-for-your-wallet.html; Jeff Cox, *Fed Commits to Keep Buying Bonds Until the Economy Gets Back to Full Employment*, CNBC (Dec. 16, 2020, 2:00 PM), https://www.cnbc.com/2020/12/16/fed-decision-december-2020-fed-commits-to-keep-buying-bonds-until-the-economy-gets-back-to-full-employment.html.

now positive,[86] and returns to the market were now volatile and uncorrelated with market fundamentals.[87] When there is chaos in the market, the old maxims that only sophisticated investors can expect to have the proper information and unsophisticated small investors should stay in their lanes are no longer operative. Indeed, the rise of the meme stock investors is fully consistent with the volatility measured and observed in the stock market.[88]

Putting aside the rationality of the meme stock investors, and by implication the irrationality of the short-sellers, there are still questions about how these investors coalesced around the various meme stocks, which raises more questions about the dissemination of information in the marketplace. After all, the low interest rates and upending of traditional beta measure could have applied to all stocks in the market. Hence the question becomes, 'Why these specific stocks?'

IV. INVESTMENT INFORMATION

In addition to unexpected or irrational investor behavior, the Meme Stock Paradox also results from the deterioration in the integrity of the information that is supposed to guide investor behavior to begin with. Surely, if the goal is to prevent fraud on the market,[89] this means that the goal of securities regulation is to

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[86] Michael C. Jensen, *The Performance of Mutual Funds in the Period 1945–1964*, 23 J. FIN. 389 (1967).

[87] Christopher Kantos & Dan DiBartolomeo, *How the Pandemic Taught Us to Turn Smart Beta into Real Alpha*, 21 J. ASSET MGMT. 581 (2020) (explaining how rare extreme events such as Covid can be priced into stock prices as well how zero-beta assets, i.e., those who have almost no correlation with the market, can be priced). *See also* Josue Cox, Daniel L. Greenwald & Sydney C. Ludvigson, *What Explains the COVID-19 Stock Market?*, NBER Working Paper 27784 (Sep. 2020) (finding that much of the stock market's performance was "more reflective of sentiment than substance," implying that traditional valuation methods were no longer operative); Hui Hong, Zhicun Bian & Chien-Chiang Lee, *COVID-19 and Instability of Stock Market Performance: Evidence from the U.S.*, 7 FIN. INNOV. 1 (2021) (finding that "pandemic crisis was associated with market inefficiency, creating profitable opportunities for traders and speculators.").

[88] *See infra* note 90; Ben Eisen, *America Went on a Borrowing Binge, but Banks Were Left Out*, WALL ST. J. (Feb. 10, 2021, 5:30 AM ET), https://www.wsj.com/articles/america-went-on-a-borrowing-binge-but-banks-were-left-out-11612953008.

[89] The 1934 [Securities and Exchange] Act was designed to protect investors against manipulation of stock prices. . . Underlying the adoption of extensive disclosure requirements was a legislative philosophy: "There cannot be honest markets without honest publicity. Manipulation and dishonest practices of the market place thrive upon mystery and secrecy." . . . This Court "repeatedly has described the 'fundamental purpose' of the Act as implementing a 'philosophy of full disclosure.'

ensure the integrity of the information available to investors.[90] This goal emanates from the idea that market prices reflect the information available to the public, which allows investors to decide where best to allocate their resources. A company with a relatively high stock price indicates to the market that investors have confidence in its performance, and as such, new investors will want to put money into it. In contrast, a relatively low stock price signals that a company is not doing well, and investors may want to shy away from it. In this manner, financial resources are allocated to match the real performance of the company. Imagine a company whose sales are rising and whose costs are falling, thereby indicating rising profits. Such a company should expect its stock price to rise. If investors flock to this company, it can raise more capital either through issuing more shares or retaining earnings (without fear of the stock price falling), which may allow it to make further investments in cost-saving endeavors that produce more products for its markets. A company whose sales are faltering due to low demand or whose profits are falling due to higher costs can expect fewer financial resources to flow to its coffers, which will signal to the company that it must either find better cost-saving technologies or focus on its customers.

Basic, Inc. v. Levinson, 485 U.S. 224, 230 (1988). The fraud on the market theory has its critics, generally speaking, even in the context of the meme stock saga. *See* Christine Hurt & Paul J. Stancil, *Short Sellers, Short Squeezes, and Securities Fraud*, 47 J. CORP. L. (Forthcoming) (discussing the role of short-sellers and their status in a world where short-selling operates under different conditions than what the traditional theories of fraud assume); Barbara Black, *The Strange Case of Fraud on the Market: A Label in Search of a Theory*, 52 ALB. L. REV. 923 (1988). Professor Black also critiques the fraud on the market theory using behavioral economics, which counters the 'investors are rational' narrative. Her article, if applied to the GameStop saga, could land on the side of the meme stock investors needing protection from themselves, but of course it could also land on the side of too much manipulation by short-sellers. Barbara Black, *Behavioral Economics and Investor Protection: Reasonable Investors, Efficient Markets*, 44 LOY. U. CHI. L.J. 1493 (2013).

> [90] Congress expressly relied on the premise that securities markets are affected by information, and enacted legislation to facilitate an investor's reliance on the integrity of those markets . . . The presumption is also supported by common sense and probability. Recent empirical studies have tended to confirm Congress' premise that the market price of shares traded on well-developed markets reflects all publicly available information, and, hence, any material misrepresentations.

Basic, Inc., 485 U.S. at 246.

Therefore, securities regulation is guided by the view that the price always reflects all the publicly available information, if not also all private information.[91] This view comes from what is known in finance literature as the Efficient Market Hypothesis (EMH). The EMH argues that the price of a stock reflects all publicly available information, and hence there is no advantage to anyone trying to buy or sell the stock based on any insight they may have about the stock.[92] In other words, the prices move randomly, or more accurately, the prices follow a random walk.[93] The reasoning is as follows. Suppose the price of a stock was $10 a share, and one investor had some information regarding the company that made them think the price should be higher. If the information was publicly available, then all investors would have access to the same information, and this would mean that all investors should also surmise that the price of the share should be higher than $10. As such, the price would almost instantly rise to whatever the market thought was

[91] *Id.* at 246 n.24. The Court cited several scholarly papers that discussed the efficient capital market hypothesis or theory. In Halliburton Co. v. Erica P. John Fund, Inc. 573 U.S. 258 (2014), the Supreme Court reaffirmed its endorsement of the efficient capital market theory used in *Basic*, subject to some nuanced modifications of the burden of proof on the plaintiffs and defendants in securities fraud cases. *See* Eric Alan Isaacson, *The Roberts Court and Securities Class Actions: Reaffirming Basic Principles*, 48 AKRON L. REV. 923 (2015) (discussing the evolution of the efficient market theory over the years in the Supreme Court).

[92] A good overview of the theory can be found in Burton G. Malkiel, *Efficient Market Hypothesis* and in The New Palgrave Dictionary of Money & Finance. *See* Burton G. Malkiel, *The Efficient Market Hypothesis and its Critics*, 17 J. ECON. PERSP. 59 (2003); THE NEW PALGRAVE DICTIONARY OF MONEY & FINANCE 127 (John Eatwell et al. eds., 1st ed., 1987).

[93] The term is a statistical term but made popular in the finance literature by Burton Malkiel. BURTON G. MALKIEL, A RANDOM WALK DOWN WALL-STREET (12 ed. 2020).

> The efficient market hypothesis is associated with the idea of a "random walk," which is a term loosely used in the finance literature to characterize a price series where all subsequent price changes represent random departures from previous prices. The logic of the random walk idea is that if the flow of information is unimpeded and information is immediately reflected in stock prices, then tomorrow's price change will reflect only tomorrow's news and will be independent of the price changes today. But news is by definition unpredictable, and, thus, resulting price changes must be unpredictable and random. As a result, prices fully reflect all known information, and even uninformed investors buying a diversified portfolio at the tableau of prices given by the market will obtain a rate of return as generous as that achieved by the experts..

Burton Malkiel, *The Efficient Market Hypothesis and its Critics*, 17 J. ECON. PERSP. 59 (2003).

appropriate given the publicly available information. But what if the positive information regarding the stock was not public?

The EMH, in one of its forms, argues that even non-public information will be reflected in the price of the stock. To elaborate on this, consider the same example where the price is $10 a share—but now suppose there is an investor who has some secret information that the price should really be $12. This informed investor could purchase as many shares as possible of the company for $10 and hold on to them until the secret information became public and the price rises to $12 a share. The informed investor would be able to profit handsomely. Hence, this investor would have every incentive to use whatever resources it had, including borrowing money if the borrowing rate were relatively cheap, to purchase as many shares as it could buy. Indeed, the investor would have every incentive to bid any amount higher than $10 a share up to $12 a share to corner the market. The process of purchasing all these shares would signal to the market that someone thought the price should be higher than $10. This would get the price up to $12 a share almost instantly, or so the EMH would argue.

The EMH at one level flows from the insights of the Economics Nobel Laureate Fredrich Hayek's foundational article *The Use of Knowledge in Society*.[94] The basic idea in that article is that prices allow the coordination of economic activity in society.[95] If the demand for a product increases, then the price of this product should go up as more people demand more of the product. This signals to suppliers to increase the production of the product to meet the increased demand. Similarly, a reduced demand results in lower prices, which in turn signals to producers to lower their production. The coordination of supply and demand can take place via the prices without the need of a central planner. In the stock market, the higher demand for a stock will signal that there is information out there suggesting that the price should rise, while a lower demand for the stock can also signal negative information suggesting the price should fall.

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[94] Friedrich A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519 (1945).

[95] Leonard Read used the insight of this article to write his class *I, Pencil* to illustrate how the process of building a pencil requires many economic steps. These include the planting and harvesting of trees for the wood, the mining of the graphite that makes the lead in the pencil, and the manufacturing of the rubber that forms the eraser of the pencil. Hundreds of complex steps must be taken before even the parts to the pencil can be brought together. What coordinates all these steps are the prices of the various inputs as well as the price of the pencil.

Hayek's insight was formalized into the finance literature by Professor Grossman.[96] In his article, he demonstrated mathematically that information will ultimately lead investors to reach the correct price in the market, notwithstanding that there is always noise and uncertainty and that no one investor has all the information. Prices act as an aggregator of all the dispersed information in the economy. Of course, these mathematical models are only as good as the assumptions built into them. Over time, other economists came up with other models of the market with other assumptions.[97] For example, if there are uninformed but wealthy investors, they can move the market in the 'wrong' direction, albeit temporarily. When uniformed but wealthy investors purchase or short-sell a stock, because they think the price will go up or down respectively, they could indeed move the price up or down by their sheer volume of trades.[98] But as information is revealed about the true nature of the stock price, or more importantly the factors which enter into the pricing, such as earnings, those uninformed investors may lose money. Eventually, they will be poorer. As such, their ability to influence the price in the 'wrong' direction will diminish. The actual price may never reflect the true price of the stock, as it may be a combination of what informed investors believe it is and what uniformed investors believe.

Of course, there could be investors who view the stock as overvalued, and they will want to short-sell the stock. Others may view the stock as undervalued, and they will want to take long positions in the stock. But on average, the prices will reflect an equilibrium of views between the bulls and the bears. What determines the equilibrium price, therefore, will be the relative liquidity and strength of convictions of the various investors. An investor who is convinced a stock is underpriced, but whose liquidity constrained, may only be able to purchase a limited amount of the stock. As such, the stock price may not rise at all, notwithstanding the purchases of this investor. Alternatively, an investor who is erroneously convinced the stock in underpriced and who has access to large amounts of funds may be able to purchase so many shares of the company that the price substantially rises. Of course, if this investor is erroneous because they thought the company would have higher earnings than the market expected, then when the true earnings are revealed, the price will fall back down. Therefore, in

[96] Sanford J. Grossman, *On the Efficiency of Competitive Stock Markets Where Traders Have Diverse Information*, 31 J. FIN. 573 (1976).

[97] A good collection of these theories and their historical linkages can be found in MARK RUBINSTEIN, A HISTORY OF THE THEORY OF INVESTMENTS: MY ANNOTATED BIBLIOGRAPHY (2006).

[98] The first to show this possibility theoretically was Stephen Figlewski. *See* Stephen Figlewski, *Market "Efficiency" in a Market with Heterogeneous Information*, 86 J. POL. ECON. 581 (1978).

the long run, the price of the stock may reflect all the information public and private, but the process of arriving at the long-run price may be more complicated.

As mentioned above,[99] there are at least five broad factors that can enter the valuation of a company's stock. These factors are all unknown since investors are always using forward-looking expectations. A rational investor does not care if a particular stock has been generating profits if the outlook for the future is grim. Hence, a drop in expected earnings can lead to a drop in the stock price notwithstanding past performance. That being said, the future is always unknown and uncertain. As such, what is available is the expectations of each individual investor. These expectations are then aggregated and shape the final price.

For example, if there are investors who are bullish on the future of a specific company's earning potential, then these investors will want to purchase the stock, especially if they feel that it is undervalued in the market. In contrast, other investors who are bearish about the same company may sell or even short-sell the stock if they feel it is overvalued. Which group will prevail depends on the relative intensity of these views. There may be a small number of short-sellers, but they may have sold short much more, in dollar terms, than those who are bullish. This may lead to a drop in the price. On the other hand, there may be many diffuse investors who are bullish, and their aggregated demand for the stock in the market can push up the price of the stock notwithstanding the large short positions that the few but heavily concentrated bears have taken. This is what happened in the GameStop saga.

At any point in time, there is a mix of bears and bulls to varying degrees of intensity and ratios for any particular stock publicly traded in the market. Even if all the investors are bearish or all are bullish on a specific stock, they will disagree on the extent of their pessimism or optimism with respect to the stock's earning potential. For example, suppose a stock's price is currently $6 per share. Now suppose some good news emerges regarding the company and this good news suggests that the company's profits are expected to rise in the future. While all investors may be optimistic, it may be that only 10% of the investors think the stock's future earnings justify a price of $10 a share. The other 90% of investors may also be optimistic but only believe the share to be worth $8. As such, the price will rise above $6 a share, but most likely will settle somewhere above $8. Whether it reaches $10 depends on how intense the demand is for the stock by those

[99] *See supra* notes 734-78.

believing the stock is worth $10. After all, the price of the stock is typically set by the price of the last stock purchased/sold.[100]

The mix of different assessments for what the fundamentals of a stock price are, like the various factors listed above, is what drives the prices of the stock. After all, for every purchaser willing to pay a certain price, there has to be a seller who is willing to sell at that price, which *ipso facto* means that the seller does not believe the stock is valued any higher than what they are willing to sell at. Otherwise, they would have held on to their stock or demanded, or asked, for a higher price.

While the EMH may point to the ultimate result in terms of the equilibrium price, what the EMH does not do is point out the process by which the final price is achieved. Purchasers making bids and sellers making asks only explains the mechanics of how the prices are set in the market. But what this does not explain is how the purchasers and sellers come to assess the information, whether public or private. Indeed, what the EMH does not explain is whether the information that the purchasers or sellers are relying on is even accurate in the first place. Nor does the EMH explain how the information is obtained by the various investors, or which investors are more likely to obtain the information. How investors process the information they have obtained may vary from one investor to another even if

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[100] Typically, in any stock market platform, there are those who are bidding to buy the stock and those asking, i.e., selling their stock. Those bidding will state the price at which they will be willing to buy the stock. It could be the "market price", i.e., whatever the person selling the stock is asking for. Or it could be set at a limit, i.e., the buyer will pay no more than a certain price. Similarly, the ask is the price at which the seller is willing to sell their shares. Again, it could be whatever is being offered by the purchasers or it could be set at a limit below which the seller will not sell. The trading platforms for the various stock markets endeavor to bring bidders and sellers together to clear the market. So, if there are 1,000 shares being bid on for $10 a share and 1,000 shares being sold at whatever price is being offered, then the 1,000 shares will change hands and the market price will be listed as $10 a share. There could also be a situation where buyers are willing to buy 1,000 shares, but only 900 of those shares are being bid on at $9 a share, while the bidders on the remaining 100 shares are willing to pay $10 a share. In this case, assuming those selling their shares are willing to take whatever they can get, depending on whose order gets executed first, the final price may be $9 a share or $10 a share. The reader can see that the final market price can easily be affected by a simple mismatch between the sequence of execution of orders. For a basic explanation of this, see *Why Trade Execution Matters*, CENTERPOINT SEC. (Dec. 28, 2021) , https://centerpointsecurities.com/stock-trading-execution-quality/; John Csiszar, *What is the Difference Between Bid Size & Ask Size?*, ZACKS (May 29, 2018), https://finance.zacks.com/difference-between-bid-size-ask-size-2599.html; Jason Fernando, *Bid and Ask*, INVESTOPEDIA (Aug. 25, 2021), https://www.investopedia.com/terms/b/bid-and-ask.asp; *Understanding Order Execution*, INVESTOPEDIA (Jan. 21, 2021), https://www.investopedia.com/articles/01/022801.asp.

all the investors have access to the same information. This leads to the regulatory question of whether all the information that should be publicly available is indeed publicly available.

There may be several reasons why certain information is not public. The information may be internal to the corporation, in which case legal insiders are the ones who possess this information. If they release it, the stock price will reflect the newly released information, but the insiders cannot profit once that information is released. If they trade shares of the company—buy, sell, or short-sell—using the information prior to its release, then they have engaged in insider trading. Certainly, the status of the insider trading may be legal or illegal. But regardless, once the insiders execute the trades, the impact will ripple into the stock price. This may provide the insiders some compensation for generating the very information that will affect the market. For example, if the insiders are the corporate executives in charge of developing a new profitable product or closing a profitable new deal with a customer, then this information will certainly impact the price. But this information was created by these executives, who are now barred from secretly trading on it. As such, to incentivize the creation of such profitable corporate opportunities, alternatives to allowing insiders to trade on confidential information have been developed.

If all information must be disclosed to all with no opportunity to profit from the creation of that information, then in the long run, one of three things can take place. The first possibility is that no more information will be generated, and all will suffer since this implies that less and less profitable enterprises are being created.[101] More realistically, information and profitable opportunities will be generated, but the information will be disclosed in a manner that will make it useless for the retail investor or the small investor to take advantage of it. Insiders will have pre-set trades that allow them to capitalize on profitable information without it appearing that they are insider trading. The cost of obtaining information will go up so that only large investors will find it profitable to figure out which information is true.[102] For example, suppose a company is working on developing a new drug. The company might not disclose all the preliminary details of its testing or if it does, does so in a manner that is very cryptic and technical. Only a well-informed business analyst with a high level of scientific sophistication will be able to tell whether the new drug is promising or simply another dud.

[101] This insight was provided by Sanford J. Grossman & Joseph E. Stiglitz, *On the Impossibility of Informationally Efficient Markets*, 70 AM. ECON. REV. 393 (1980).

[102] Professors Gordon and Kornhauser raised this issue many years ago in their classic article. *See* Jeffrey N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information, and Securities Research*, 60 N.Y.U. L. REV. 761 (1985).

This means that in the long run, small investors have very little recourse to access private information before big players do. This makes the whole process feel like "class warfare".[103] As such, what happened in the GameStop saga could be seen as the revenge of small investors against large hedge funds. This is definitely one way to view the saga, and one that has resonated with the general public. The backlash against Robinhood for halting trading, despite doing so to comply with what was probably a regulatory requirement, suggests that politicians and the public were very much on the side of small Reddit investors and against large hedge funds.

The idea that large investors possess informational superiority to the average investor has been demonstrated empirically in many studies. For example, one study examined the returns that risk arbitrageurs earned. Risk arbitrageurs are those investors that invest in companies when an event is announced, but also when there is a divergence between the company's stock price and the ultimate price that the stock reaches after the event is consummated. The study found that risk arbitrageurs earn higher than average returns when they invest in companies undergoing major re-organizations such as restructuring, a merger, or acquisition.[104] The study concluded that these investors not only had some private information that they had acquired in a costly manner, but that they were able to profit from their costly acquisition of information. What allowed them to do so was that, notwithstanding the efficiency of the markets, there was sufficient noise, or randomness, in the stock prices, to make it worthwhile to search for more information. Although the study did not indicate what kind of information was acquired, one can imagine a scenario where a large hedge fund invests in studying all the mergers and acquisitions over a large period of time. This allows them to discern which mergers and acquisitions will succeed by generating synergies (through revenue growth or cost savings) and which will fail. Although such information could easily be discerned by the public, the cost of collecting all the data and analyzing it may be enormous.[105]

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[103] Jonathan R. Macey, *Securities Regulation and Class Warfare*, COLUM. BUS. L. REV. (forthcoming).

[104] David F. Larcker & Thomas Lys, *An Empirical Analysis of the Incentives to Engage in Costly Information Acquisition: The Case of Risk Arbitrage*, 18 J. FIN. ECON. 111 (1987).

[105] For example, one study found that a "substantial portion of short sellers' trading advantage comes from their ability to analyze publicly available information." The study used "a database of short sales combined with a database of news releases" and showed that the "well-documented negative relation between short sales and future returns is twice as large on news days and four times as large on days with negative news." They concluded that "public news provides valuable trading opportunities for short sellers who are skilled

Such financial analysts may acquire such information by poring over hundreds of pages of publicly available information.[106] Sometimes the information is obtained by being in the very same space as the companies whose shares are being traded. For example, one study examined whether hedge funds that made syndicated loans also short-sold the shares of the companies to which they lent money.[107] Hedge funds lend money to companies just like banks,[108] but they also make trades on the market. While the lending unit is supposed to keep information away from the trading unit,[109] undoubtedly, knowledge can spill over. This means that a trading unit of the hedge fund may learn from its lending unit that a debtor company's performance is not as great as first advertised. In order to hedge its exposure to this now-shaky loan, it may short-sell the company's stock in order to avoid the exposure to the risky loan. It could also, of course, be making the loan to get access to the information and hence make better trades (and presumably more money than what they could lose from a bad loan). The legal status of the latter might be suspect but detecting it may be difficult.[110] Regardless of what the motivations are,[111] the study found:

> Evidence consistent with the short-selling of the equity of the hedge fund borrowers prior to public announcements of both loan originations and loan amendments. [The study] also [found] that hedge funds are more likely to lend to highly leveraged, lower credit quality firms, where access to private information is

information processors." Joseph E. Engelberg, Adam V. Reed & Matthew C. Ringgenberg, *How are Shorts Informed?: Short sellers, News, and Information Processing*, 105 J. FIN. ECON. 260 (2012).

[106] Andrew N. Vollmer, *How Hedge Fund Advisers Can Reduce Insider Trading Risk*, 3 J. SEC. L. REG. & COMPLIANCE 106 (2010).

[107] Nadia Massoud, Debarshi Nandy, Anthony Saunders & Keke Song, *Do Hedge Funds Trade on Private Information? Evidence from Syndicated Lending and Short-Selling*, 99 J. FIN. ECON. 477 (2011).

[108] Banks have been recently hobbled by what is known as the Volcker rule, which is contained in the various provisions of the Dodd-Frank legislation. *See* 12 U.S.C. § 1851 (2018).

[109] Vollmer, *supra* note 106.

[110] For a fascinating look at the ethical issues facing hedge-funds, especially from a gendered perspective, see KARA TAN BHALA, ETHICS IN FINANCE: CASE STUDIES FROM A WOMAN'S LIFE ON WALL STREET (Palmgrave Macmillan, Cham eds., 2021).

[111] *See* Yawen Jiao, Massimo Massa & Hong Zhang, *Short Selling Meets Hedge Fund 13F: An Anatomy of Informed Demand*, 122 J. FIN. ECON. 544 (2016) (discussing various motivations for why hedge fund may take opposite positions in a company, which may just be simple hedging of risk as opposed to profitable trading).

> potentially the most valuable and where trading on such information could lead to enhanced profits.[112]

The study points to the case of the now defunct video-chain store Movie Gallery. The company had taken out loans that contained covenants. When the company lost more money than expected, thereby violating a covenant in one of the loans from a hedge fund, it notified the hedge fund of the news. The hedge fund agreed to modify the covenants, and this new agreement was announced a week later. In that week, the short-sales of Movie Gallery's shares increased substantially. Some of the authors of this study conducted another study with other authors where they found similar profitable trades by hedge funds in the stocks of companies engaged in mergers and acquisitions (M&A).[113] The study points to the investigation and prosecutions by the SEC of those associated with such trades by the Galleon hedge fund. The study examined over a thousand M&A deals and found that hedge funds were somehow able to profitably discern which companies were about to announce M&A deals.

Another study examined whether systemic industry information factored into stock prices.[114] The study found that short-sellers exploited industry-specific information to allow them to target firms whose sales or revenues may be declining. Unlike general information about the macro-economy, such as interest rates, GDP growth, or firm-specific news, like firm-specific earnings, industry-specific information is not as widely available. Therefore, analysts and traders who have access to and the ability to process industry-specific information have an informational advantage over the market as a whole, even if such information is available, albeit not so widely. Nonetheless, once these analysts exploit this information through short-sales and other trades, the information eventually disseminates to the market as a whole, which serves a valuable function to properly price the shares of target companies. Companies whose leaders knew President Trump many years prior to his election in his capacity as a businessperson saw their stock prices rise above market-equivalent companies right after his election in 2016.[115] This could be driven by more expected government contracts or easier

[112] Massoud, *supra* note 107.

[113] Rui Dai, Nadia Massoud, Debarshi K. Nandy & Anthony Saunders, *Hedge Funds in M&A Deals: Is There Exploitation of Insider Information?*, 47 J. FIN. ECON. 23 (2017).

[114] Zsuzsa R. Huszár, Ruth S.K. Tan & Weina Zhang, *Do Short Sellers Exploit Industry Information?*, 41 J. EMP. FIN. 118 (2017).

[115] Travers B. Child, Nadia Massoud, Mario Schabus & Yifan Zhou, *Surprise Election for Trump Connections*, 140 J. FIN. ECON. 676 (2021).

regulatory enforcement against the connected firms, and the results of this study have been found in other political contexts as well.[116]

Information about firms can be built into the stock prices in an anticipatory or expectations-driven manner. For example, even if a company has not had a profitable history, if the market expects the company to generate profits soon due to increased sales or lower costs, the profits can be factored into the stock price.[117] Unexpected news, such as the approval of a drug for a pharmaceutical company by the FDA, can also lead to a sudden jump in stock price.[118] But sometimes the market can also learn information about the company based on the rise or fall in stock price, especially when the market cannot learn the news or know what to expect. For example, in 1954, a young economist named Dr. Armen Alchian, who later joined the economics department at UCLA, was able to discover what fuel material was being used in the then-newly developed hydrogen bomb.[119] Despite all the national security-enforced secrecy, Dr. Alchian was able to look at the stock market returns of various companies around the time nuclear tests were being conducted at the Marshall Islands and Bikini Atoll. He reasoned that by looking at the stock market, companies who were supplying the fuel materials to build the bomb would be experiencing rapidly increased profits right around the time of these nuclear tests. As such, companies experiencing abnormal returns would be

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[116] *See, e.g.*, Raymond Fisman, *Estimating the Value of Political Connections*, 91 AM. ECON. REV. 1095 (2001).

[117] Clorox's shares fell recently upon news that less people were using their wipes in anticipation of the Covid pandemic nearing its end. *See* Steven M. Sears, *Clorox Stock Fell the Most in 20 Years. How to Play a Bounceback*, BARRON'S (Aug. 5, 2021), https://www.barrons.com/articles/rising-covid-cases-could-help-clorox-stock-climb-higher-how-to-play-it-51628151301?siteid=yhoof2. Of course, a savvy investor who thinks the news of the end of the pandemic is premature may wish to buy Clorox stock in anticipation of a new wave of Covid cases. But of course, only time will reveal which assessment is more accurate.

[118] Cristin Flanagan, *Biotech Shares Soar as Biogen Drug Approval Stokes Optimism*, BNN BLOOMBERG (June 7, 2021), https://www.bnnbloomberg.ca/biotech-shares-soar-as-biogen-drug-approval-stokes-optimism-1.1613728; Sean Williams, *Why MannKind Corporation Stock Skyrocketed 39% in 2014*, NASDAQ (Sept. 9, 2014, 8:23 AM), https://www.nasdaq.com/articles/why-mannkind-corporation-stock-skyrocketed-38-2014-2014-09-09; *With FDA Approval in Place, AVEO Shares Could Be Worth $27, Says Analyst*, YAHOO FIN. (Mar. 12, 2021), https://finance.yahoo.com/news/fda-approval-place-aveo-stock-175836449.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAE-eh_xXI6I5QWHWNnS-ClmtALoyv4yyNtDpO3DPBw1Q3ER3PVv3juD9WGFiTpDpW-D9a4WQlRnAso2xTJcrQ8PNZWOawnc5A1Bk3fndetSo9Zd2_hZcgbh2HEil8L3-tLoD6dPyB1nD65gUXP4d5gGKA69h8fTuAB4vZC7dXy0I.

[119] Joseph M. Newhard, *The Stock Market Speaks: How Dr. Alchian Learned to Build the Bomb*, 27 J. FIN. ECON. 116 (2014).

the ones that were involved in supplying the fuel for the bomb. He was able to figure out which companies were involved, and he successfully identified lithium as one of the secret ingredients in making the hydrogen bomb.[120]

Hence, at one level, the idea that only the sophisticated have access to information either through their skill and research resources or through inside information can be off-putting. It creates the perception that the system is rigged against the small investor. The advice that many investment gurus give to the broad public is not to try to pick individual stocks, but rather invest in index funds.[121] This further compounds the view that only large investors should be actively trading, in both long, short, and other convoluted strategies, in the market while small investors have no business picking winners and losers.[122] This explains why, notwithstanding the popular sentiment supporting the GameStop investors and their troubles with Robinhood, elite observers all stood against the Redditors.[123]

V. PROPOSED APPROACHES TO OVERCOMING THE MEME STOCK PARADOX

The persistence of GameStop's stock price (as well as the other meme stocks) well above what it was prior to January 2021 suggests that the investors had managed to discover among themselves information that large hedge funds had overlooked. This debunks the traditional theories discussed above regarding both investor behavior and market information. We provide three possible approaches to understanding what happened during the GameStop saga, which in turn could assist in overcoming the Meme Stock Paradox: 1) what we observed was a process of discovery of new information not available anywhere else; 2) the discovery

[120] The government suppressed Dr. Alchian's study, and it was only later that we leant of this through various sources. *See id*.

[121] Kathleen Elkins, *Warren Buffett: Most People Shouldn't Pick Individual Stocks-Here's How to Invest Instead*, CNN (May 22, 2020, 12:14 PM), https://www.cnbc.com/2020/05/22/warren-buffett-most-people-shouldnt-pick-single-stocks.html; Victor Reklaitis & William Watts, *Wall Street Will Always Crush the Little Guy, but the Stock Market Could Be Fairer*, MARKETWATCH (July 16, 2015, 10:49 AM), https://www.marketwatch.com/story/why-the-stock-market-is-unsafe-for-the-average-investor-2015-05-21; Meir Statman, *Investors Still Believe They Can Beat the Stock Market*, WALL ST. J. (Sept. 7, 2020, 8:33 PM), https://www.wsj.com/articles/investors-still-believe-they-can-beat-the-stock-market-11599491572.

[122] There is now some research suggesting that institutional investors are not that great either at investing strategies. *See, e.g.*, Klakow Akepanidtaworn, Rick Di Mascio, Alex Imas & Lawrence Schmidt, *Selling Fast and Buying Slow: Heuristics and Trading Performance of Institutional Investors* (Nat'l Bureau of Econ. Rsch., Working Paper No. 29076, 2021), https://privpapers.ssrn.com/sol3/papers.cfm?abstract_id=3301277.

[123] *See supra* note 72.

related to something very personal like an article of fashion; and 3) the discovery was related to a pride in owning the stocks in question.

A. Discovery and the Collective Wisdom of the Reddit Chatroom[124]

In terms of entrepreneurship, several economists in the Austrian economics tradition emphasized a few keys aspects of the market. Austrian economists emphasize that the market is not always in equilibrium. Rather, there are entrepreneurs who are constantly searching for profits or arbitrage opportunities.[125] These entrepreneurs are the ones who keep the market in equilibrium. These entrepreneurs take advantage of ignorance as opposed to simple asymmetric information.[126] Asymmetric information is the situation where information exists, but only some actors in the economy possess it. In the Gamestonk meme stock saga, those actors would be the insiders in a corporation and perhaps the well-informed analyst and hedge funds. The small investor does not have access to this information, and the asymmetry of information availability allows the hedge funds to execute profitable trades. In contrast, ignorance means that there is no information available at all. It is the entrepreneurs' role to discover this new information.[127] For example, suppose there is a market where apples are being sold in the city at various locations. All the supermarkets are purchasing their apples from the local farmers. But suppose an entrepreneur discovers that there are apple farms in another part of the world, and even with the cost of shipping these apples, the apples can be profitably sold in the city. This will not only add to the supply of apples in the city; it may also create new markets. For example, now that there are more apples, local businesses may start selling more apple pies or apple jams. Another example can be found in technological innovation. Suppose there is a

[124] A note on the use of chatrooms throughout the article: Reddit generally operates using threads, although they often have subreddit-associated chatrooms, such as Discords. As such, the use of chatrooms in this article generally refers to all the chatter across the internet relating to the meme stock discussion, including Reddit and other social media, etc., but when Reddit chatrooms are mentioned, this specifically means the Reddit threads.

[125] While there have been many Austrian economists who have contributed to the theory of discovery and entrepreneurship, none more than Israel Kirzner stand out in this aspect. *See* Israel M. Kirzner, *Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach*, 35 J. ECON. LITERATURE 60 (1997). For Kirzner's place and others' in the Austrian school, *see* STEVEN HORWITZ, AUSTRIAN ECONOMICS: AN INTRODUCTION 60-66 (2020); GERALD P. O'DRISCOLL, JR. & MARIO RIZZO, AUSTRIAN ECONOMICS RE-EXAMINED: THE ECONOMICS OF TIME AND IGNORANCE 267-71 (2014).

[126] Peter W. Roberts & Kathleen M. Eisenhardt, *Austrian Insights on Strategic Organization: From Market Insights to Implications for Firms*, 1 STRATEGIC ORG. 345, 346 (2003).

[127] This is very similar to the distinction between risk and uncertainty.

market for phones. An entrepreneur decides to attach a camera to the phone. This creates a new market and a new opportunity for profit. The entrepreneur exploited two existing technologies but discovered that consumers actually had a preference for a camera in their phone.

The Austrian economics scholarship on entrepreneurship emphasizes that there are "five general characteristics of knowledge …. Knowledge is (1) private, (2) empirical, (3) often tacit, (4) not all gained through price signals and (5) often the source of surprise."[128] In analyzing the GameStop saga, we suggest that some of these factors were present. Retail investors may have been initially motivated to exact revenge on the short-selling hedge funds, but what made them fixate on specific stocks? This is how discovery sometimes works. By coalescing in Reddit chatrooms, retail investors seemed to have discovered that certain stocks were being unfairly—at least, in their minds—targeted based on erroneous expectations by the hedge funds.[129] By erroneous, we do not mean that based on market analysis the hedge funds misjudged the potential in these stocks. Rather, what we mean is that this particular community of investors saw or discovered potential that the market at the time did not see. Much like an entrepreneur who discovers a new use for a phone and a camera, these investors suddenly saw potential in these stocks that no one else did. Information generated from the crowds can lead to discovery, but of course nothing is guaranteed. Sometimes the information turns out to be a passing fad, but sometimes the information discovered is right on the mark.[130]

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[128] O'Driscoll, Jr. & Rizzo, *supra* note 125, at 140.

[129] There has been some work applying these insights to financial markets. *See, e.g.*, Gregory M. Dempster, *Austrian Foundations for the Theory and Practice of Finance,* 10 J. ECON. FIN. ED. 70 (2011) (outlining a "distinctive Austrian approach to finance that rests on the foundations of fundamental uncertainty, reasonable views of individual and collective expectations, social capital and embeddedness, methodological subjectivism, and organic, evolutionary processes.").

[130] There is a literature on the wisdom of the crowds that addresses when crowds, whose members individually may not possess all the information but who act collectively, can generate accurate information. The classic example of this is when contestants on *Who Wants to be a Millionaire* would poll the audience. The English polymath Francis Galton argued that there was wisdom in the crowds, when he found that although individuals individually were wrong in their estimate of the weight of an animal, the median of their estimates was almost exactly the true weight of the animal. Francis Galton, *Vox Populi (The Wisdom of Crowds)*, 75 NATURE 450 (1907). In contrast, the classic text by Charles Mackay argued using several examples that crowds generated fads, bubbles, and irrational outcomes. *See* CHARLES MACKAY, EXTRAORDINARY POPULAR DELUSIONS AND THE MADNESS OF CROWDS (1841). Recent research suggests that social influences can affect the wisdom of crowds, and this can explain why sometimes collective information can become inaccurate. *See* Jan Lorenz, Heiko Rauhut, Frank Schweitzer & Dirk Helbing, *How Social Influence Can Undermine the Wisdom of Crowd Effect,* 108 PROC. NAT'L ACAD. SCI. 9020 (2011).

At one level, the information that percolated inside Reddit chatrooms could be analogized to the classic pump and dump schemes in that there was chatter spread online that generated large rises in the stock price. But unlike pump and dumps, the chatter was not spread by one or two investors who hoped to profitably offload their stocks once the price rose. Rather, the chatter was a very loud noise that not only translated into dramatic price spikes at the time, but also persistent high prices that continue to date.

So, what did these investors discover that the sophisticated hedge funds did not? Perhaps, notwithstanding that GameStop was fast becoming an obsolete brick-and-mortar company selling games when the world is already selling these products online, the investors had some sense of optimism that post-pandemic GameStop's management would turn things around. Unlike the video-store companies that ultimately disappeared and what hedge funds anticipated would happen to GameStop, GameStop's management has somewhat validated meme stock investors' faith in them. Although they missed their initial chance when the first stock price spike took place,[131] GameStop has been cashing in on its high stock price by repeatedly raising capital through the issuance of new stock and debt.[132] The new cash is being used to retire old debt, but the newly invigorated company has been taking cues from the meme stock rally:

> GameStop, in addition to raising capital, is also shifting direction in a bid to catch up to the changing technology that threatened the company's existence, namely that gamers are downloading games rather than buying discs from places like GameStop.

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[131] Jessica DiNapoli, Svea Herbst-Bayliss & Joshua Franklin, *Exclusive: How GameStop Missed Out on Capitalizing on the Reddit Rally*, REUTERS (Feb. 11, 2021, 4:03 AM), https://www.reuters.com/article/us-retail-trading-gamestop-capitalraise-idUSKBN2AB14F (indicating that financial regulations relating to updated earnings reports may have prevented issuing new shares).

[132] Yun Li, *GameStop Stock Jumps After the Original Meme Stock Cashes in Again with $1 Billion Share Sale*, CNBC (June 22, 2021, 7:50 AM), https://www.cnbc.com/2021/06/22/gamestop-jumps-9percent-after-the-original-meme-stock-cashes-in-again-with-1-billion-share-sale.html; Yun Li, *GameStop Stock Jumps After the Reddit Favorite Raises $551 Million in Stock Sales*, CNBC (Apr. 26, 2021, 5:15 PM), https://www.cnbc.com/2021/04/26/gamestop-shares-jump-after-the-reddit-favorite-raises-more-than-500-million-in-stock-sales.html; Chavi Mehta, *GameStop Raises $551 Million to Accelerate E-Commerce Push, Shares Jump*, YAHOO (Apr. 26, 2021), https://finance.yahoo.com/news/gamestop-raises-551-million-accelerate-225407775.html; *GameStop Announces New $500 Million Share & Debt Repurchase Authorization*, GAMESTOP CORP. (Feb, 4, 2011), https://news.gamestop.com/news-releases/news-release-details/gamestop-announces-new-500-million-share-debt-repurchase.

> And a lot of new talent has arrived this year to try to make that happen.
>
> Ryan Cohen, the co-founder of Chewy, an online pet supply company, revealed that he had compiled a massive stake in GameStop and began agitating for change. Earlier this month, the company reshaped its executive leadership team and its board, making Cohen its chairman.
>
> Under new leadership, the company is attempting to move aggressively into digital sales and earn a loyal following in ways other than its stores that had generated enormous revenue for almost two decades.[133]

So, were meme stock investors more rational or prescient than their hedge fund counterparts, or did their newfound faith in GameStop allow its management to discover new opportunities that did not exist prior to early 2021? Perhaps a bit of both. Indeed, we note that other companies that were also lifted by the Gamestonk meme stock saga[134] have been busy raising money. AMC, the movie theater chain, raised over $1 billion since its stock price took off.[135]

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[133] Michelle Chapman, *GameStop Raises More Than $1 Billion in Its Latest Stock Offering*, ASSOCIATED PRESS (June 22, 2021), https://www.theglobeandmail.com/business/international-business/us-business/article-gamestop-raises-more-than-1-billion-in-its-latest-stock-offering/.

[134] David Randall, *Analysis: A Tulip By Another Name? 'Gamestonk' and the Case for Investor Caution*, REUTERS (Jan. 30, 2021, 5:16 AM), https://www.reuters.com/article/us-retail-trading-bubbles-analysis-idUSKBN29Z0HG.

[135] Yun Li, *AMC Says It Has Already Completed Share Offering, Raises $587 Million*, CNBC (June 3, 2021, 10:31 PM), https://www.cnbc.com/2021/06/03/amc-says-it-has-already-completed-share-offering-raises-587-million.html; Thornton McEnery, *What Dilution? AMC Can't Stop Raising Capital By Selling More of Its Meme Stock, and the Market Can't Stop Buying*, MARKETWATCH (June 1, 2021, 1:32 PM), https://www.marketwatch.com/story/what-dilution-amc-cant-stop-raising-capital-by-selling-more-of-its-meme-stock-and-the-market-cant-stop-buying-11622568761; Maggie Fitzgerald, *AMC files to sell 11 million shares, hitting stock* temporarily, CNBC (June 3, 2021, 1:47 PM EDT), https://www.cnbc.com/2021/06/03/amc-files-to-sell-11-million-shares-as-retail-trading-frenzy-continues-to-boost-stock.html; Matt Phillips, *AMC Cashes In on Meme Stock Mania, Raising $587 Million,* N.Y. TIMES (June 3, 2021), https://www.nytimes.com/2021/06/03/business/amc-meme-stock.html#:~:text=meme%2Dstock.html,AMC%20Cashes%20In%20on%20Meme%20Stock%20Mania%2C%20Raising%2 0%24587%20Million,the%20stock%20could%20still%20sink; Bailey Lipschultz & Katherine Doherty, *AMC Defies Gravity as Retail Traders Propel Gains to 1,150%*, BLOOMBERG (May 27, 2021, 2:33 PM MDT), https://www.bloomberg.com/news/articles/2021-05-27/amc-surges-past-10-billion-market-value-as-2021-rally-hits-880.

These examples suggest that the idea of efficient capital markets as facilitating the goal of investment protection under existing securities laws might be misplaced. While one would want to prevent outright fraud, a lot of what might be labelled a violation of securities laws is nothing more than the result of information discovery efforts by entrepreneurs and investors. The idea that entrepreneurs can only look like hedge fund managers or investment bankers is also misplaced. Small investors can collectively generate their own new information which can not only be transmitted via higher stock prices, but also drive the management of these companies to follow its direction.

B. Fashion Trends, Cool Cafés, and the Symbolism of Meme Stock Investing

In this manner, the diffused small investors who rallied up the prices of these meme stocks can also be thought of as fashion creators, which is apt given the usage of the term 'meme'. Another way to approach this is to think of the meme stock investors as creators of fashion. This is in contrast to the usual individual creator of fashion, such as designers whose names create value.[136] The validation of the financial expectations of meme stock investors will take quite some time. While many meme stock companies' management teams have been capitalizing on their stock price surges, it will take a while to see if these companies can turn things around permanently. But regardless of whether these companies will prove the hedge funds wrong and the Reddit investors right, these stocks seem to have their own intrinsic value to their investors.

Much like a work of art, sometimes assets have no inherent value other than the fact that there are many who appreciate the asset. Whether it be Beanie Babies[137], Furbies[138], or baseball cards, sometimes consumers create a market with

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[136] The classic fashion creator most law students are familiar with is Lady Lucy Duff-Gordon described by Judge Cardozo (as he was then) as one who:

> Styles herself "a creator of fashions." Her favor helps a sale. Manufacturers of dresses, millinery and like articles are glad to pay for a certificate of her approval. The things which she designs, fabrics, parasols and what not, have a new value in the public mind when issued in her name.

Wood v. Duff-Gordon, 118 N.E. 214, 214 (N.Y. 1917).

[137] Larry Getlen, *How the Beanie Baby Craze Was Concocted – Then Crashed,* N. Y. POST (Feb. 22, 2015, 6:00 AM), https://nypost.com/2015/02/22/how-the-beanie-baby-craze-was-concocted-then-crashed/.

[138] Lucie Peters, *Here's How That Furby Craze in the 90's REALLY Began – And Why They Still Give You Nightmares*, BUSTLE (Feb. 2, 2018), https://www.bustle.com /p/the-history-of-furby-the-electronic-pet-that-took-the-late-90s-by-storm-8080509.

little or no warning.[139] This is what the Austrian economists alluded to when they argued that information discovery means that sometimes tacit information that is not entirely gained through price signals is the source of market surprise.[140] In other words, what item becomes fashionable sometimes is not discovered through markets analysts looking through financial reporting records or market researchers analyzing daily sales data from shopping centers. Rather, word of mouth among parents can sometimes make a children's toy the hottest commodity, an example of tacit knowledge that surprises those in the market.

Indeed, fashion trends are a good example of this tacit knowledge spreading not by market signals but through other mechanisms. Sometimes, fashion can be the cool café where all the cool kids hang out.[141] What makes the café cool is both a function of the ability of a group of people who share certain values to congregate there and consume their lattes without interference from those outside that group. But there also has to be an ability among the group members to communicate with each other that this is the cool café. That said, once a small group has established a specific café as the cool hangout, it becomes easier for others outside the small group to imitate their acquired behavior and preferences. This may lead the original group to move on and find another cool place, but in the meantime, the outside group is now enjoying their newfound café.[142]

In the meme stock saga, there were also two groups, and who the cool kids were depended on where one was standing. The hedge funds may have been the usual cool kids on Wall Street, but the Reddit investors decided that they no longer were. Instead, they ganged up on the short-selling hedge funds, and in classic in and out groups showed them who was boss. Ordinarily, such a move would have backfired on the meme stock investors, even if the short-sellers lost money, but as noted above, so far, the buy and hold strategy seems to have paid off.[143]

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[139] Frances Romero, *From Tickle Me Elmo to Squinkies: Top 10 Toy Crazes,* TIME MAG. (Dec. 23, 2010), http://content.time.com/time/specials/packages/article/0,28804,1947621_1947626_1947523,00.html.

[140] GERALD P. O'DRISCOLL & MARIO RIZZO, AUSTRIAN ECONOMICS RE-EXAMINED: THE ECONOMICS OF TIME AND IGNORANCE 141 (2015).

[141] Giacomo Corneo & Olivier Jeanne, *Segmented Communication and Fashionable Behavior*, 39 J. ECON. BEHAV. & ORG. 371, 372 (1999).

[142] *Id.* at 372-73. *See also* A. K. Naimzada & M. Pireddu, *Fashion Cycle Dynamics in a Model With Endogenous Discrete Evolution of Heterogeneous Preferences*, 28 CHAOS 055907 (2018); Chaim Fershtman & Uzi Segal, *Preferences and Social Influence,* 10 AM. ECON. J: MICROECONOMICS 124 (2018).

[143] Traditional finance models can explain what happened using network analysis and asset pricing models. *See* Lasse Heje Pedersen, *Game On: Social Networks and Markets*, N.Y.U. STERN SCH. BUS. (forthcoming) (providing a theoretical model of how asset prices can form in social networks when there are a mix of investors, some informed, some fanatical, and some rational).

Notwithstanding the earnings of these meme stock companies underperforming due to the pandemic and other reasons, at least for now, these stocks have acquired some sort of symbolism among meme stock investors. The question becomes whether this symbolism is unwarranted and possible deleterious for the market. To understand this, one can look to other assets, such as works of art, the valuation of which is supported by status rather than financial return, or even stocks that have a similar status. These include stocks that have good records in the environmental, social, and governance (ESG) front or Corporate Social Responsibility (CSR).[144]

Theoretically speaking, if a company decides to engage in socially responsible or environmentally friendly activities (above and beyond what is legally required), this decision will take place if one of two options are present. Either the CSR or ESG friendly policies will, notwithstanding the costs of incurring these policies, create some other efficiencies in production or mitigating legal or economic risk in the future, or these policies will generate goodwill among customers and investors. Customers willing to pay more for the firm's product will offset any costs, while investors' willingness to hold the shares of the company will offset any lower profits due to the higher costs. The latter is what is known as a lower cost of capital. Of course, a company could engage in these policies and see neither benefit. This would then mean that the company will eventually abandon its policies, a decision that will be made either by the current management or by new management that takes over the company due to its cheap shares. Hence, empirically measuring the impact of these policies can be hard to discern. Companies pursuing these policies will only do so if it makes sense, so when measuring rates of return to such companies one should expect those companies that have been engaged in these policies in the long run to have been performing quite well.

Anecdotally, there are instances of when CSR and ESG policies have resulted in investor backlash when the higher costs have not been offset by better revenues or risk reduction. For example:

> After more than seven years at the helm, Danone CEO Emmanuel Faber was ousted by the board on Monday, March 15. The board

[144] This point has also been made by Sergio Alberto Gramitto Ricci & Christina M. Sautter, *Corporate Governance Gaming: The Power of Retail Investors*, 22 NEV. L.J. (forthcoming 2021). Professor Ryan Clements discusses the meme stock saga, ESG stocks and the associated governance challenges in a broader context of "money manager capitalism," a point also related to the 'pride of ownership' point we make in this paper. *See* Ryan Clements, *Misaligned Incentives in Markets: Envisioning Finance That Benefits All of Society*, DEPAUL BUS. & COMM. L.J. (forthcoming 2021).

> acted under pressure from activist shareholders, centered around Bluebell Capital Partners and Artisan Partners APAM +0.4%. Emmanuel Faber will enter history as one of the leading executives promoting stakeholder capitalism and centering core business units around ESG (Environmental, Social, Governance) objectives. Yet his footprint and departure reveal a pervasive rift between staunch supporters of sustainable capitalism and hard-rugged corporate activists.[145]

Sometimes the claims of CSR compliance are not as strong as the company claims. One of the most famous socially responsible companies, The Body Shop, touted its natural products that were not tested on animals and its social campaigns. The company had gone public in the early 1980s, but a decade later found itself embroiled in social and financial scandal.[146] The company may not have been completely animal-testing free, and its financial performance in the 90's was not as stellar as when the company was originally growing and had just gone public.

But perhaps that was then, and today things are different. A new study by Morgan Stanley suggests that investors today are embracing sustainable investing strategies.[147] Recently, a "tiny hedge fund dealt a major blow to Exxon Mobil Corp . . . unseating at least two board members in a bid to force the company's leadership to reckon with the risk of failing to adjust its business strategy to match global efforts to combat climate change."[148] These efforts have led scholars to examine whether a company complying with CSR or ESG results in better financial performance. The studies examining the impact of these policies offer a mixed bag of results. For one, the question of how companies are rated as being ESG compliant is not consistent and may lead to different ESG ratings; agencies may

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[145] *Sustainability And The Downfall Of Danone CEO Faber*, FORBES (Mar. 20, 2021), https://www.forbes.com/sites/frankvangansbeke/2021/03/20/sustainability-and-the-downfall-of-danone-ceo-faber-12/?sh=4e6c5f0e5b16.

[146] The journalist who broke the story is Jon Entine, and he maintains an archive or articles by himself and others on the Body Shop. *See* John Entine, *The Boy Shop File: Beyond "Shattered Image,"* JOHN ENTINE BLOG (2016), http://archives.jonentine.com/the-body-shop.html.

[147] Amy Brown, *Sustainable Investing at All-Time High, Says Morgan Stanley*, BUS. ETHICS (Oct. 1, 2019), https://business-ethics.com/2019/10/01/sustainable-investing-at-all-time-high-says-morgan-stanley/.

[148] Jennifer Hiller, Svea Herbst-Bayliss, *Exxon Loses Board Seats to Activist Hedge Fund in Landmark Climate* Vote, REUTERS (May 26, 2021), https://www.reuters.com/business/sustainable-business/shareholder-activism-reaches-milestone-exxon-board-vote-nears-end-2021-05-26/.

come to opposite conclusions when rating companies.[149] This means that when examining the impact of ESG compliance on the financial performance of companies, the results can be counterproductive because investors do not even know which firms to invest in.[150]

All of this is to say that as a matter of financial performance, ESG and CSR compliance is more a matter of investor taste as opposed to a desire for financial performance. Notwithstanding this observation, no one would suggest that investors, large or small, should be protected from companies that proclaim to be ESG compliant or that such claims should be prohibited. Indeed, the green hedge fund that elected two members to Exxon's board could hardly be accused of orchestrating a value-destroying move. As such, we argue that if investors are allowed and sometimes encouraged to invest in enterprises that have socially desirable, but perhaps not as financially advantageous, characteristics, then this further reinforces that meme stock investors should be, at the very least, allowed to decide which stocks are now their preferred meme.

Investors today are seen as wise to choose to invest in companies that are sustainable and socially responsible, defying what was once conventional wisdom. The mixed evidence regarding the financial performance of these companies only proves that the collective wisdom of these investors can be all over the map when assessing the viability of these companies. As such, it is not clear what is wrong with a group of investors who decided in an online chatroom to anoint a group of stocks as their preferred meme stocks. With the SEC coming down on people like Keith Gill and searching for evidence of fraud on social media among Redditors discussing meme stocks – at the end of the day, it seems to us that there's nothing wrong with what they did; it's a regular part of information discovery and the creation of fashion trends and memes.

Conventional wisdom, represented by the short-selling hedge funds and even the SEC, may be that these meme stocks should be sold, while the meme stock investors think otherwise. Perhaps their optimism will be rewarded or perhaps not. But just as sustainable investing is a mixed bag, so too can the long-term financial performance of these meme stocks.

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[149] Monica Billio, Michele Costola, Iva Hristova, Carmelo Latino & Loriana Pelizzon, *Inside the ESG Ratings: (Dis)Agreement and Performance* 21-22 (Leibniz Inst. for Fin. Rsch. SAFE, Working Paper No. 284, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3659271.

[150] *Id.*

C. Pride of Ownership

The third aspect of the GameStop saga is the pride of ownership aspect. Although normally investors purchase stocks as a means of financial investing, many invest in companies for other reasons. They also, as we discussed above, invest for the sake of being part of a socially responsible movement. But such investors may choose to invest in a portfolio of socially conscious companies as opposed to a specific one.[151] In the case of the meme stocks, what was obvious from the discussions in the chatrooms was that these investors attached a specific value to these specific companies, whether it was GameStop, AMC Theatres, or others. This is because investors, retail or institutional, are all owners of any corporations whose common stock they hold. Traditionally, attention has always been paid to the role institutional investors play in the governance of firms,[152] with retail investors always being left out.[153] But the meme stock saga allowed retail investors to upset the apple cart of corporate governance in addition to the cart of profitable trading.[154] Indeed, in the case of AMC, the idea that retail investors boosted its share price has permeated into social media with "My AMC" and #AMCArmy trending on Twitter.[155] In one TikTok video with almost a million likes:

[151] *See, e.g.*, Maria del Mar Miralles-Quirós & Jose Luis Miralles-Quirós, *Improving Diversification Opportunities for Socially Responsible Investors*, 140 J. BUS. ETHICS 339 (2017) (documenting the benefits of diversification when investing in ESG and CSR funds and stocks).

[152] *See, e.g.*, for a discussion of the role of institutional investors Serdar Çelik & Mats Isaksson, *Institutional Investors as Owners: Who Are They and What Do They Do?*, (OECD Corp. Governance, Working Papers No. 11, 2013), https://www.oecd-ilibrary.org/governance/institutional-investors-as-owners_5k3v1dvmfk42-en (discussing their role in OECD countries); Ian R. Appel, Todd A. Gormley & Donald B. Keim, *Passive investors, not passive owners*, 121 J. FIN. ECON. 111 (2016) (discussing the role of passive institutional investors in corporate governance); John Hendry, Paul Sanderson, Richard Barker and John Roberts, *Owners or traders? Conceptualizations of Institutional Investors and Their Relationship with Corporate Managers*, 59 HUM. RELS. 1101 (2016) (discussing some of the issues that affect the relationship between institutional investors and company managers in the UK).

[153] For a discussion of how retail investors can have an influence on the governance of firms, under traditional regimes, see Gaia Balp, *The Corporate Governance Role of Retail Investors*, 31 LOY. CONSUMER L. REV. 47 (2018).

[154] Sirio Aramonte & Fernando Avalos, *The Rising Influence of Retail Investors*, BIS QUARTERLY REV. (Mar. 1, 2021), https://www.bis.org/publ/qtrpdf/r_qt2103a.pdf.

[155] Katherine Doherty & Brandon Kochkodin, *AMC Became the People's Stock by Not Being a GameStop Remake*, BLOOMBERG (June 4, 2021), https://www.bloomberg.com/news/articles/2021-06-04/amc-to-the-moon-how-meme-stock-embraced-reddit-boom-unlike-gamestop-gme.

> A cocky young guy walks into an AMC theater wearing a white, backwards ball cap. An attendant asks him if he needs anything. "I'm just making sure the theaters are running smoothly," says ball cap guy.
>
> The cashier does a double take. "Do you work here?"
>
> "Let's just say, I'm a partial owner. I'm the money."
>
> The cashier is still puzzled. "Don't you come in here every Saturday night with your mom?"[156]

The movie theater chain, which, prior to the meme stock saga, was close to bankruptcy, finds itself now 80% owned by individuals, with its price allowing for it to issue new stock and focus on the long-term future.[157] Nonetheless, management has been cautioning the new investors that things could still go sideways, warning against buying the newly issued shares, "unless [they] are prepared to incur the risk of losing all or a substantial portion of [their] investment."[158] But for those who are willing to take the plunge, AMC's management has been courting and welcoming the new army of retail investors with perks such as "a free large popcorn, as well as exclusive screenings."[159] And why not? After all, as AMC's CEO explained, "[m]any of our investors have demonstrated support and confidence in AMC . . . After all, these people are the owners of AMC, and I work for them."[160]

This sudden interest in specific stocks by retail investors suggests a different motivation than simple income earning or other financial goals. Rather, these investors wish to become true owners. Ownership, as noted by legal scholars and economists, confers certain legal and economic rights on owners. In a recent article, a group of scholars in the field of strategic management explain why

[156] The 25-year-old actor Andrea Angiolillo, who plays both characters, is one of the many small investors who have jumped into AMC Entertainment Holdings Inc. in recent months. They've helped push up the price more than 2300% this year while writing themselves into a strange kind of turnaround story for AMC. *Id.*

[157] *Id.*

[158] *AMC Cinema Chain Issues Warning to Small Investors*, BBC (June 4), https://www.bbc.com/news/business-57334264.

[159] Katherine Doherty & Brandon Kochkodin, *AMC Became the People's Stock by Not Being a GameStop Remake*, BLOOMBERG BUSINESSWEEK (June 4, 2021, 4:14 AM), https://www.bloomberg.com/news/articles/2021-06-04/amc-to-the-moon-how-meme-stock-embraced-reddit-boom-unlike-gamestop-gme.

[160] *Id.*

ownership matters to the management of a firm.[161] Property ownership comes with its own set of rights and responsibilities. It also provides whoever owns an asset with an opportunity to solve many problems that economists call agency problems as well as incomplete contract problems. Ownership also comes in many forms of competences. Some owners are competent, and some are not. But even competence comes in different forms. The authors explain that there are three key competences that allow the owner to take an asset and add value to it. The first is "matching competence," which is the skill of identifying what asset to own in the first place. The second is "governance competence," which is the skill of knowing how to manage the asset. The third is "timing competence," which is the skill of choosing when to own the asset. These competences are similar to the alertness that an entrepreneur displays in the Austrian theory of entrepreneurship.

Indeed, just because someone owns an asset does not mean that they will settle on the same path of managing an asset. Consider the classic example of Blockbuster and Netflix. Both started as video rental companies, one brick and mortar and one mail order. At one point, Blockbuster was approached about buying Netflix. Blockbuster declined, and the rest is history. Different sets of beliefs regarding an asset can make two different owners of the same asset come to different conclusions regarding how to manage it. Consider also the example of venture capitalists. They not only bring their capital to finance the creation of an asset, usually a company in its infancy, but also their own skillsets as creators of value. This allows them to guide the original creator of the idea behind the startup to successfully see the idea to fruition as a full-blown operational company, which is hopefully sold off for a profit to other investors.

When owners purchase an asset, they operate under both conditions of risk and "Knightian uncertainty and vast complexity," which means there is not only an array of resources and strategies but also an array of possible outcomes for each managerial decision. On top of that, the owner does not know all of these possibilities, whether inputs or outputs. But what ownership affords the owner is the ability to take control and test whether the owner's judgment is sound.[162] The owner then exercises various competences, namely knowing what asset to purchase, how to manage it, and when to exercise the ownership, in a manner that should maximize the value of the asset.[163] The authors provide a good example of

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[161] Nicolai J. Foss et al., *Ownership Competence*, 42 STRATEGIC MGMT. J. 302 (2020).

[162] Foss et al., *supra* note 161, at 308; *see also* Nicolai J. Foss & Peter G. Klein, *Entrepreneurial Opportunities: Who Needs Them?*, 34 ACAD. MGMT. PERSP. 366 (2020).

[163] Foss et al., *supra* note 161, at 309; *see also* Richard P. Castanias & Constance E. Helfat, *Managerial Resources and Rents*, 17 J. MGMT. 155 (1991); *see also* Richard P.

an individual who decides to start a taxi business.[164] The individual realizes that her car is not suited for being a taxi, so she borrows some money and buys a suitable car.[165] This is an example of matching competence, or what to own. She then has to decide on whether to drive it herself or hire a driver. Once the driver is behind the wheel, they have a lot of discretion on how to drive the car, which customers to pick up, which routes to take, when to take a coffee break, etc. As such, the driver is not an employee who simply carries out commands, but rather, the driver is both an employee and a manager in this example. If she hires a driver, she has to decide on how to structure the compensation and how to monitor performance. This is the governance competence. Finally, she may decide to sell her company to another company that can add more value to the company than what she can by herself. This is the timing competence.[166]

What the article points out is that not all owners have all three competences. Some are good at starting businesses, some are good at running existing ones, and some are good at knowing when to get in or out of a specific business. Some owners may indeed have all three.

Those who possess matching competence are good at matching the resources and ideas with higher value usage.[167] When it comes to matching competences, the authors note that in "an uncertain, entrepreneurial context, investment and divestment decisions are often not made in a competitive Darwinian context, but well before an owned resource configuration can compete in the product market or have positive cash flow."[168] The real skill is having the ability to "foresee valuable resource configurations" as "resources [that] have multiple attributes—uses, functions, and complementarities with other resources."[169] In other words, it is not the case that every owner of a resource or asset will know how to pick a winner. This is because not every asset or resource is a loser, but the owner must decide how to match various assets and resources when there are many possibilities and configurations that these resources can take. In other words:

> Matching competence is related to what the venture capital literature calls the ability to "pick winners" or to select better matched resource bundles from the many proposed. Owners with better matching skills see value in available resources that can be

Castanias & Constance E. Helfat, *The Managerial Rents Model: Theory and Empirical Analysis*, 27 J. MGMT. 661 (2001).

[164] Foss et al., *supra* note 161, at 310-11.

[165] *Id.*

[166] *Id.*

[167] *Id.*

[168] *Id.*

[169] Foss et al., *supra* note 161, at 311.

> productively rearranged or recombined with the existing resource base of the owner. They recognize assets that are "underpriced assets" in their current arrangement, precisely because they recognize more valuable alternative arrangements. Others may simply recognize owners with a superior capacity to match resources, and then coinvest with these more competent owners.[170]

The authors go on to discuss governance competence and timing competence. Governance competence is "concerned with skillfully managing the distribution of rents generated within firms in ways that provide value-generating incentives. Owners with governance competence will assemble incentives, controls, and delegation arrangements into value generating patterns."[171] Timing competence is the "capacity to schedule their investments to optimize strategic flexibility."[172]

When it comes to meme stocks such as GameStop and AMC, what happened in January 2021 can be seen as a reshuffling of competences between the old and new owners. Those who owned the shares of these firms prior to January 2021 had very little faith in the performance of these firms, evidenced by the already-low share prices. Whether it was related to the pandemic's impact on economic performance or long-term trends in certain sectors, it is clear that there was little confidence in these firms. The fact that the short-selling hedge funds were in the market further exacerbated the lack of faith and competence. Indeed, short-sellers can be thought of as anti-owners. They are investors who own negative shares of a firm. Their competence is in predicting that the current configuration of the assets and their management is going nowhere. As such, these anti-owners are willing to borrow shares (or at least they should have) and short-sell them with a view that their lack of faith in these companies will be validated by the market.

Meme stock investors can be thought of as owners with a different set of beliefs regarding the assets at stake, namely the existing GameStop and AMC (and other) assets including their brand name. These owners brought to the table both matching and timing competences by investing their money in these companies' shares notwithstanding the heavy volume of short-sales that the hedge funds were engaged in. The fact that eleven months (and counting) after the saga the prices of the shares of these companies are still much higher than they were pre-January 2021 suggests that there is something more fundamental at play than a passing fad

[170] *Id.*

[171] Foss et al., *supra* note 161, at 313. Both the matching and governance competence related to point that Professor Lavoie recently argued is associated with ownership, namely local knowledge. *See* Malcolm Lavoie, *Property and Local Knowledge*, 70 CATH. U. L. REV. (forthcoming 2021). Owners usually have a better handle on local knowledge than non-owners, which gives them better competences.

[172] Foss et al., *supra* note 161, at 314.

or fashion. In other words, perhaps these stocks are no longer meme stocks. Rather, the fact that the rising prices have allowed these companies to inject new capital and new management into their operations shows that, at least for now, their new owners have indeed brought their timing and matching competences to bear.[173] The fact that new management has followed through with some managerial reforms further validates the governance competence aspect of the saga.

CONCLUSION

Did Redditors hatch a conspiratorial, borderline-fraudulent plot to take down Wall Street?[174] Or should we rather sympathize with the investor and (rather paternalistically) cry out for their protection? Or does the fault ultimately lie with Robinhood and the blocking of the investors' orders to purchase more shares?[175] What is clear is that all of these perspectives exist, but they cannot simultaneously be true. GameStop, BlackBerry, and AMC may have simply been terribly performing companies and are financially unsound propositions due to long-term economic trends. If that is true, Robinhood was in the right to block trades due to the Dodd-Frank margin requirements.[176] But if the retail investors should have had the right to squeeze out the hedge funds, then this must mean that these investors were on to something that the big guns on Wall Street had missed all along: the Meme Stock Paradox.

[173] The earlier example of Netflix is also somewhat analogous here. Netflix has been responsible for TV shows that were cancelled from network television due to low ratings only to be re-discovered on the streaming format. This has led to the revival of some shows not only in terms of viewership, but also in terms of producing more episodes. The show *Lucifer* is an example of this, and the show *Manifest* has captured fans' attention and led to a campaign for producing a remaining season or film. *See* James Hibberd, *Netflix Orders More Lucifer Episodes for Final Season*, ENT. WKLY. (July 26, 2019, 11:11 AM), https://ew.com/tv/2019/07/26/netflix-lucifer-final-season-episodes/; Kayla Keegan, *Melissa Roxburgh Tweets Super Exciting News About 'Manifest' on Netflix*, GOOD HOUSEKEEPING (Aug. 3, 2021), https://www.goodhousekeeping.com/life/entertainment/a37211014/manifest-season-4-melissa-roxburgh-netflix-tweet/. In this regard, a repackaging of a product can lead to its revival and reassessment of financial viability, just as the meme stock investors did with their stocks.

[174] Christian Berthelsen, *'Roaring Kitty' Sued for Securities Fraud Over GameStop Rise*, BLOOMBERG (Feb. 17, 2021, 10:30 AM MST), https://www.bloomberg.com/news/articles/2021-02-17/-roaring-kitty-sued-for-securities-fraud-over-gamestop-rise.

[175] Michelle Ong, Ray Pellecchia, Angelita Plemmer Williams & Andrew DeSouza, *FINRA Orders Record Financial Penalties Against Robinhood Financial LLC*, FINRA (June 30, 2021), https://www.finra.org/media-center/newsreleases/2021/finra-orders-record-financial-penalties-against-robinhood-financial.

[176] Telis Demos, *Why Did Robinhood Ground GameStop? Looking at Clearing*, WALL ST. J. (Jan. 29, 2021, 7:33 PM), https://www.wsj.com/articles/how-clearing-demands-grounded-the-wallstreetbets-stocks-for-a-day-11611966092.

What this Paradox exposes, as demonstrated in the GameStop saga, is a tension that exists within securities regulation. Securities regulation is obsessed with the most accurate and proper information reaching the market to effectively protect investors. Any slight deviation from absolute purity of information or purity of disclosers of information is punished, whether it be by the regulation of fraud, disclosure, or even insider trading. But this protection and policing of information means that only those with large armies of analysts have access to the minutiae of most information that allows them to go long or short on the stocks of their targets. The small retailer investor has largely been shut out of the process, at least until now, or so it seems. But the chatrooms and the ease of trading on new online platforms are a game changer in terms of investor behavior. They are ushering in a new era where information can not only be discovered by the small investors, but the value from creating information can also be generated by them. To effectively protect investors, securities regulators have to realize that the rules of the game are changing and resolve the paradox that has resulted from imposing traditional rules on a new generation of meme stock investors. Only time will tell whether they will rise to the occasion.