

WIRELESS INVESTORS & APATHY OBSOLESCENCE

SERGIO ALBERTO GRAMITTO RICCI* & CHRISTINA M.
SAUTTER**

ABSTRACT

This Article discusses how a subgenre of retail investors makes investors' apathy obsolete. In prior work, we dub retail investors who rely on technology and online communications in their investing and corporate governance endeavors "wireless investors." By applying game theory, this Article discusses how wireless investors' global-scale online interactions allow them to circulate information and coordinate, obliterating collective action problems.

* Associate Professor of Law, UMKC School of Law.

** Professor of Law, Southern Methodist University (SMU) Dedman School of Law. The authors would like to thank Jill Fisch, Tyler Gellasch, Max Goldstein, Caleb Griffin, Floris Mertens, Colin Miller, Honorable Jed S. Rakoff, Joel Seligman, Wesley Shrum, and Andrea Vicari for their insightful conversations and comments and the participants at the 2023 Institute for Law and Economic Policy (ILEP) Symposium, the Cesare Beccaria Department Workshop at the University of Milan School of Law, the 2023 BYU Winter Deals Conference, and the World Interdisciplinary Network for Institutional Research (WINIR) Conference. The authors would like to thank Mary Coles, John Federico, and Natalie Marionneaux for their research assistance.

TABLE OF CONTENTS

I. RETAIL INVESTORS' APATHY	1657
A. <i>The Cost of Retail Investors' Participation Within a Non-Cooperative Context</i>	1658
B. <i>The Pro-Rata Benefits for Investors</i>	1660
C. <i>Retail Investors' Governance Inconsequentiality Within a Non-Cooperative Context</i>	1661
II. RETHINKING RETAIL INVESTORS' APATHY	1662
III. WIRELESS INVESTORS & SOCIAL CAPITAL	1666
IV. RETAIL INVESTING IN THE AGE OF INFORMATION	1671
A. <i>The New Information Infrastructure</i>	1671
B. <i>Individual and Collective Benefits of Online Communication and Coordination</i>	1673
V. THE INCREASING INFLUENCE OF WIRELESS INVESTORS	1675
A. <i>Emergence of Social Norms</i>	1675
B. <i>Investing and Corporate Governance Social Norms</i>	1677
C. <i>Corporate Governance Engagement and Political Participation</i>	1678
D. <i>Communities and Norm Generation</i>	1681
E. <i>Risks and Guardrails</i>	1684
CONCLUSION	1686

INTRODUCTION

Today virtually anyone can make investment decisions from their phones. Investing apps allow the average citizen to buy, hold, and sell shares at their fingertips.¹ Conversations about investing and finance have permeated the internet with an increasingly large segment of society engaging in discussions about securities. This is bridging the gap between financial markets and retail investors—individuals typically holding a relatively small number of shares who are not professional investors. While all shareholders of public companies are typically granted the right to vote in director elections and on other significant items, the trend has been that this power is scarcely employed by retail investors.² Traditional investor apathy and free riding have hindered retail investors' engagement.³ Retail

1. See Sergio Alberto Gramitto Ricci & Christina M. Sautter, *Harnessing the Collective Power of Retail Investors*, in A RESEARCH AGENDA FOR CORPORATE LAW (Christopher M. Bruner & Marc Moore eds., forthcoming 2023) (manuscript at 3), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4147388 [https://perma.cc/MBU8-G74F].

2. See Lisa M. Fairfax, *From Apathy to Activism: The Emergence, Impact, and Future of Shareholder Activism as the New Corporate Governance Norm*, 99 B.U. L. REV. 1301, 1314 (2019).

3. ROBERT CHARLES CLARK, CORPORATE LAW 390–93 (2d ed. 1986).

shareholders⁴ with small investments typically leave the burden to vote to larger shareholders.⁵ Many commentators deem investors' apathy for the best. Some view retail investors as unequipped to make informed decisions compared to the sophisticatedly trained Wall Street professionals. Retail investors have been considered "irrational and uninformed noise traders, who distort stock prices and harm market functioning."⁶ This common belief is grounded partly in retail investors' lack of investing education and partly in structural barriers to information and inability to communicate and coordinate.⁷

Despite being the economic beneficiaries of corporations with governance rights,⁸ retail investors have traditionally remained apathetic in yielding shareholder voting power—casting, on average, 31% of their shares despite the overall rate of voting reaching nearly 80%.⁹ On average, only 11% of retail investors choose to vote, with this likelihood increasing for shareholders with a larger stake in the company, when financial returns have been poor, and when Institutional Shareholder Services (ISS) opposes shareholder-sponsored proposals up for a vote.¹⁰

Retail investors have been traditionally studied through their buying and selling behavior to determine approval or dissatisfaction of public companies, rather than voting decisions.¹¹ This "satisfaction or sell" mentality has conventionally been considered rational. The rationality is grounded in the consideration that diversified retail investors with small stakes in large companies will have, at most, a negligible impact on the voting outcome. So, the cost of staying informed and intelligently voting largely outweighs any impact a retail investor's participation may have.¹²

Apathy is typically explained through two interrelated rationales—one of great cost and one of little benefit. In this Article, we offer a supplementary, but probably paramount, explanation of retail investors' apathy, drawing on game theory and using the uber-famous prisoner's dilemma. The prisoner's dilemma paradigm shows how, if retail investors can communicate and coordinate their actions, apathy becomes irrational.¹³

4. In this Article, we interchangeably use the terms "retail investor" and "retail shareholder."

5. CLARK, *supra* note 3, at 390–93.

6. Gaia Balp, *The Corporate Governance Role of Retail Investors*, 31 LOY. CONSUMER L. REV. 47, 71–72 (2018) (footnote omitted).

7. Fairfax, *supra* note 2, at 1304.

8. *See id.*

9. Alon Brav, Matthew Cain & Jonathon Zytznick, *Retail Shareholder Participation in the Proxy Process: Monitoring, Engagement, and Voting*, 144 J. FIN. ECON. 492, 508, 501 (2022).

10. *Id.* at 500–01.

11. *See, e.g.*, Fairfax, *supra* note 2, at 1304–10.

12. *See* Kobi Kastiel & Yaron Nili, *In Search of the "Absent" Shareholders: A New Solution to Retail Investors' Apathy*, 41 DEL. J. CORP. L. 55, 60–61, 66 (2016); Katrin Tinn, *Everyone Is a Stock Trader Now: Retail Investors and COVID-19*, CEPR PRESS, July 2, 2021, at 88, 98–99.

13. *See infra* Part II.

In other words, retail investors' apathy is a suboptimal behavior, explainable with the bygone inability to communicate and coordinate their actions.

A specific type of retail investor is leading the paradigm shift that obliterates traditional obstacles to retail investors' engagement in corporate governance. In prior work, we refer to these retail investors as *wireless investors* because of their use of technology and online communication.¹⁴ Wireless investors tend to invest using app native trading platforms and gather information about investing via social media and online fora.¹⁵ Most wireless investors are Millennials or GenZ'ers. Millennials are considered digital pioneers, while GenZ'ers are "digital natives," with the latter's immersion in technology being more substantial than any generation that has come before them.¹⁶ The two generations' shared immersion in the technological world has created similar values when choosing where to invest finances, for whom to vote in both local and national elections, and where to call their workplace home.¹⁷ Millennials and GenZ'ers develop an online connection that spans from investing to igniting social, environmental, and political change.¹⁸

Informed by the generational features and aptitudes characterizing wireless investors, this Article sheds new light on investors' apathy using game theory. It also discusses how wireless investors can shift retail investing paradigms by obliterating traditional collective action problems along with investors' passivity. Part I of this Article surveys retail investors' apathy. Part II proposes a new framework to investigate retail investors' apathy, based on game theory. Part III examines wireless investors' ability to overcome traditional collective action problems through the creation of

14. Sergio Alberto Gramitto Ricci & Christina M. Sautter, *Corporate Governance Gaming: The Collective Power of Retail Investors*, 22 NEV. L.J. 51, 52–53 (2021) [hereinafter Gramitto Ricci & Sautter, *Corporate Governance Gaming*]; Gramitto Ricci & Sautter, *supra* note 1 (manuscript at 2–3); Sergio Alberto Gramitto Ricci & Christina M. Sautter, *The Wireless Investors Movement*, U. CHI. BUS. L. REV.: ONLINE EDITION (2022) [hereinafter Gramitto Ricci & Sautter, *The Wireless Investors Movement*], <https://businesslawreview.uchicago.edu/online-archive/wireless-investors-movement> [https://perma.cc/7S9V-2HWQ].

15. Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 52–53; Gramitto Ricci & Sautter, *supra* note 1 (manuscript at 2–3).

16. Kim Parker & Ruth Igielnik, *On the Cusp of Adulthood and Facing an Uncertain Future: What We Know About Gen Z So Far*, PEW RSCH. CTR. (May 14, 2020), <https://www.pewresearch.org/social-trends/2020/05/14/on-the-cusp-of-adulthood-and-facing-an-uncertain-future-what-we-know-about-gen-z-so-far-2/> [https://perma.cc/8MSB-KFA3].

17. *Id.* See generally Kim Parker, Nikki Graf & Ruth Igielnik, *Generation Z Looks a Lot Like Millennials on Key Social and Political Issues*, PEW RSCH. CTR. (Jan. 17, 2019), <https://www.pewresearch.org/social-trends/2019/01/17/generation-z-looks-a-lot-like-millennials-on-key-social-and-political-issues/> [https://perma.cc/5ZFR-MX5K].

18. See Parker et al., *supra* note 17; see also Abe Selig, *Generation Influence: Reaching Gen Z in the New Digital Paradigm*, WP ENGINE (Dec. 9, 2022), https://wpengine.com/resources/gen-z-2020-full-report/#Generation_Influence_An_International_Study_Comparing_Gen_Z_With_Other_Generations [https://perma.cc/JF3M-TCXP] (summarizing a study on Gen Z's influence and experience in the digital age conducted by The Center for Generational Kinetics).

social capital online. Part IV discusses retail investing in the age of online communication. Finally, Part V explores wireless investors' power to shift social norm paradigms relating to investing and voting.

I. RETAIL INVESTORS' APATHY

Retail investors traditionally consider the cost of their corporate governance engagement on an individual basis, the benefit of their corporate governance engagement on an individual basis, and their ability to determine an outcome on an individual basis. Small retail shareholders reason that other shareholders, typically with larger equity interests or a duty to vote, will make the best decisions for all shareholders.¹⁹ Such an approach is grounded in the consideration that the opportunity cost of educating themselves to make informed voting decisions outweighs the benefit of doing so.²⁰ This phenomenon is known as free riding.²¹

Even when retail investors acknowledge that other shareholders' voting preferences result in outcomes that do not align with their own interests, retail investors typically refrain from voting as they believe that their vote would not be sufficient to vary the outcome. In other words, retail investors who act on an individual basis fear that their engagement with corporate governance would be costly and in vain. As a result, retail investors typically stay passive even if their interests differ from those of the institutional shareholders that are most likely to drive the vote.²² Retail investors free ride on institutional investors' engagement and voting, and, as a measure of last resort, they rely on the "Wall Street walk" as their exit option.

Retail investors' behavior and beliefs with respect to apathy are grounded on a false premise—they consider themselves as necessarily solo actors. Thinking exclusively on an individual basis leads retail investors to refrain from exercising their power on corporations. It is this reasoning bias for individualism that informs retail investors' apathetic behavior. Different from the prisoners in the famous prisoner's dilemma, however, retail investors are not required to act in a context in which communication and cooperation are prohibited from the outset.²³

In this Part, after reviewing the traditional reasons typically associated with investors' apathy, we look at apathy through a new lens—questioning the bias that retail investors' decisions ought to be made in a non-

19. CLARK, *supra* note 3, at 393.

20. *Id.* at 392.

21. *Id.*

22. *Id.* at 392–93.

23. *See infra* Part II.

cooperative environment, like those of the prisoners facing the prisoner's dilemma.²⁴ But wireless investors are overcoming that bias and are on the verge of causing a lasting paradigm shift in corporate governance.

A. *The Cost of Retail Investors' Participation Within a Non-Cooperative Context*

With respect to costs, the apathy of retail investors is largely credited to the fact that, for most, it is simply economically rational to stay uninformed and uninvolved in shareholder voting.²⁵ The financial incentives to monitor management paired with the costly process of being informed and actually voting tilt the cost-benefit analysis to the side of "too costly," resulting in deference to management or reliance on institutional investors to make decisions for all shareholders.²⁶ In other words, without coordination among shareholders, great costs result in retail investors' passivity.

Voting costs are multifaceted—chief among those are "the cost[s] of becoming informed, that is, of acquiring, processing, and assessing the implications of relevant information" as it relates to the vote.²⁷ To vote intelligently, information must be gathered as to the nature of shareholder rights in addition to that of "the underlying business of the issuer."²⁸ An investor must evaluate this information, bearing an additional cost.²⁹ In fact, "[b]oth gathering and assessing . . . information is costly."³⁰ In the current system, absent mass communication among retail investors, the cost to gather and assess information prohibits such investors from taking advantage of the benefits of voting their shares.³¹

The cost of staying informed and voting intelligently is driven up by several factors. It is partially attributable to securities regulation requirements, which have increased over the past decades, resulting in disclosure and proxy statements that are substantially more

24. See *infra* Part II.

25. Artem Meshcheryakov & Drew B. Winters, *Retail Investor Attention and the Limit Order Book: Intraday Analysis of Attention-Based Trading*, INT'L REV. FIN. ANALYSIS, May 2022, at 1, 2–3 (discussing how retail investors are commonly uninformed, and those that believe they are informed are trading more on "noise" than committed investigations); see also CLARK, *supra* note 3, at 390–92 (discussing benefits and costs of voting).

26. See Fairfax, *supra* note 2, at 1311.

27. Luca Enriques & Alessandro Romano, *Institutional Investor Voting Behavior: A Network Theory Perspective*, 2019 U. ILL. L. REV. 223, 231–32.

28. See Stephen J. Choi & Jill E. Fisch, *How to Fix Wall Street: A Voucher Financing Proposal for Securities Intermediaries*, 113 YALE L.J. 269, 271 (2003).

29. *Id.* at 271, 300.

30. *Id.* at 271.

31. See Jill E. Fisch, *Standing Voting Instructions: Empowering the Excluded Retail Investor*, 102 MINN. L. REV. 11, 50–51 (2017).

comprehensive.³² New items on which shareholders vote, such as say-on-pay,³³ more shareholder proposals,³⁴ and contested director elections,³⁵ have resulted in a complex and voluminous task for shareholders willing to engage. For example, Apple's proxy statement increased from eighteen pages and only two proposals being submitted for shareholder vote in 1994,³⁶ to 132 pages (including appendices) and ten proposals in 2022.³⁷ Interestingly, reforms aimed at providing more information and power to shareholders benefit institutional investors while making engagement more burdensome for small retail investors who act individually. Such reform efforts further exacerbate the unevenness of the financial markets playing field, ultimately frustrating the mission of the Securities and Exchange Commission.³⁸

Diversification of equity investments is another factor that increases the cost of exercising governance rights and engaging. The cost of being informed and exercising corporate governance rights is amplified by modern investment trends—with the average retail investor's portfolio being more diversified than in the past.³⁹ Shareholders, in the early to mid 1900s, participated much more significantly in corporate governance than today. For example, “[i]n 1961, *twenty thousand* shareholders showed up to AT&T's annual shareholder meeting in Chicago—more than the number of attendees at the opening of baseball season.”⁴⁰ This was not an isolated instance, with occurrences of shareholders in the 1940s “being turned away . . . for a lack of space” and individuals driving hundreds of miles to participate in shareholder meetings.⁴¹ Notably, at that time, most retail investors did not hold diversified portfolios of stock.⁴²

32. See Kastiel & Nili, *supra* note 12, at 66.

33. See, e.g., Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 951, 124 Stat. 1899 (2010).

34. Bonnie G. Buchanan, Jeffrey M. Netter, Annette B. Poulsen & Tina Yang, *Shareholder Proposal Rules and Practice: Evidence from a Comparison of the United States and United Kingdom*, 49 AM. BUS. L.J. 739, 740–43 (2012).

35. Kobi Kastiel & Yaron Nili, “*Captured Boards*”: *The Rise of “Super Directors” and the Case for a Board Suite*, 2017 WIS. L. REV. 19, 34–35.

36. Kastiel & Nili, *supra* note 12, at 69.

37. Apple Inc., Notice of 2022 Annual Meeting of Shareholders and Proxy Statement 59–98 (Schedule 14A) (Mar. 4, 2022).

38. See generally Donald C. Langevoort, *The SEC, Retail Investors, and the Institutionalization of the Securities Markets*, 95 VA. L. REV. 1025, 1025 (2009) (stating that the SEC perceives itself as the advocate for retail investors).

39. See Sarah C. Haan, *Corporate Governance and the Feminization of Capital*, 74 STAN. L. REV. 515, 590 (2022).

40. *Id.* at 587.

41. *Id.* at 586–87.

42. See *id.* at 525 n.41 (showing average shareholder holding stock in, on average, 2.5 corporations in 1940) (citing TEMP. NAT'L ECON. COMM., 76TH CONG., INVESTIGATION OF CONCENTRATION OF ECONOMIC POWER: THE DISTRIBUTION OF OWNERSHIP IN THE 200 LARGEST NON-

By the 1960s and 1970s, however, the rise of intermediation and the shift away from retail investing came with the promotion of diversification as an investment strategy.⁴³ As diversification gained traction also among retail investors and retail investors became fully diversified, they could “rarely detect firms’ ineffectiveness because of their inferior position in gathering and processing information.”⁴⁴ An investor holding stock in numerous companies is faced with heightened information costs as well as heightened opportunity costs associated with voting shares in dozens of companies.⁴⁵ By multiplying the costs associated with informed voting, diversification has been leading retail investors to “give up” on corporate governance and focus on the mere financial dimension of investing.⁴⁶

B. The Pro-Rata Benefits for Retail Investors

The costs associated with staying informed and voting are independent from an investment’s size, but the benefits of informed voting extend to all shareholders pro rata.⁴⁷ So, absent coordination among shareholders, the cost-benefit analysis of free riding or voting ultimately depends on the size of a shareholder’s equity investment in a given company. Unless the shareholder’s interest is large enough to offset costs with the benefits that the shareholder can internalize, the incentives to free ride outweigh the incentives to vote. In other words, investors who hold small amounts of shares are likely better off free-riding, while the cost-benefit analysis tilts in the favor of participation for investors with larger amounts of shares.⁴⁸ As a result, investors’ disengagement disproportionately appeals to holders of small amounts of shares. This, in turn, further exacerbates socioeconomic inequality due to the influence deriving from voting shares. Retail investors who have the right to vote a small number of shares tend not to vote at all.⁴⁹ So, institutional investors as well as individuals with share blocs advance their agenda in corporate governance with virtually no counterpoint.

FINANCIAL CORPORATIONS, at 17 (Comm. Print 1940)); N.Y. STOCK EXCH., SHARE OWNERSHIP IN AMERICA: 1959, at 5 (1959) (showing increase, by 1959, to the average shareholder holding stock in, on average, 3.5 corporations).

43. Haan, *supra* note 39, at 590.

44. Kunpeng Sun, Dan Wang & Xing Xiao, *Another Victory of Retail Investors: Social Media’s Monitoring Role on Firms’ Earnings Management*, INT’L REV. FIN. ANALYSIS, July 2022, at 1, 2.

45. Kastiel & Nili, *supra* note 12, at 60–61, 66.

46. *Id.* at 60–61, 66, 69.

47. Enriques & Romano, *supra* note 27, at 231–32.

48. Julian Velasco, *Taking Shareholder Rights Seriously*, 41 U.C. DAVIS L. REV. 605, 623 (2007).

49. Brav et al., *supra* note 9, at 500.

C. *Retail Investors' Governance Inconsequentiality Within a Non-Cooperative Context*

Due to the dissipated ownership of shares, retail investors “recognize that they have no influence in a corporation of hundreds of millions of dollars capital,” thus considering their participation inconsequential.⁵⁰ The difficulty of aggregation is only exacerbated by the structure of ownership of many public corporations listed on the New York Stock Exchange (NYSE) today—one that is largely concentrated in the hands of institutional investors.

Fifty years ago, households directly owned almost 80% of U.S. corporate equity.⁵¹ Such direct ownership has declined dramatically over the years, reducing by more than a half, so that today less than 40% of U.S. corporate equity is directly owned by households.⁵² The remainder is held by institutional investors.⁵³ Further, the remaining non-institutional ownership is also somewhat concentrated in managerial and family ownership blocs.⁵⁴

The concentration of ownership exacerbates the retail investor's sense of an inconsequential role in corporate governance, especially since most publicly traded companies operate on a majority rules model.⁵⁵ Defeat of any proposal supported by institutional investors, the founding family, or management would require opposing votes by a massive proportion of the retail shareholders.⁵⁶ Apathy is furthered as the “resulting need to obtain a very high percentage of public shareholder votes[] sharply reduces the probability of a successful battle and thus lowers the expected payoff.”⁵⁷

One contributing factor is the cost of coordination.⁵⁸ Collective action is largely impossible without the ability to communicate. Costs to

50. Christopher M. Bruner, *The Enduring Ambivalence of Corporate Law*, 59 ALA. L. REV. 1385, 1390–91 & n.21 (2008) (quoting Louis D. Brandeis, *On Industrial Relations*, in *THE CURSE OF BIGNESS: MISCELLANEOUS PAPERS OF LOUIS. D. BRANDEIS* 70, 77 (Osmond K. Fraenkel ed., 1934)).

51. See Amil Dasgupta, Vyacheslav Fos & Zacharias Sautner, *Institutional Investors and Corporate Governance* 4 (Eur. Corp. Governance Inst., Fin. Working Paper No. 700/2020, 2021), http://ssrn.com/abstract_id=3682800 [<https://perma.cc/4FRJ-BD5D>] (providing the specific household decline statistics from 80% to today's 38.3%); Charles R. Korsmo, *Selling Stock and Selling Legal Claims: Alienability as a Constraint on Managerial Opportunism*, 70 OKLA. L. REV. 215, 222 (2017) (providing evidence that fifty years ago households held roughly 85% of corporate equity, but since a shift in the 1970s, 1980s, and 2000s, corporate institutions now hold 70–80% of corporate equity).

52. Dasgupta et al., *supra* note 51, at 4; see also Korsmo, *supra* note 51, at 222.

53. Dasgupta et al., *supra* note 51, at 4.

54. Jeffrey N. Gordon, *Ties That Bond: Dual Class Common Stock and the Problem of Shareholder Choice*, 76 CALIF. L. REV. 1, 44–47 (1988); Ronald Anderson, Nan Li, David M. Reeb & Masud Karim, *The Family Firm Ownership Puzzle*, 2 REV. CORP. FIN. 679, 679 (2022).

55. See Bo Becker & Guhan Subramanian, *Improving Director Elections*, 3 HARV. BUS. L. REV. 1, 9–11 (2013) (discussing increase in majority voting in director elections).

56. Gordon, *supra* note 54, at 45–46.

57. *Id.* at 46.

58. See CLARK, *supra* note 3, at 390–96.

communicate and coordinate with large groups of dispersed shareholders arise to a greater degree than in smaller groups.⁵⁹ Efforts to organize or share costs among all members of the group are also more difficult when individual shareholders would not expect to accrue a beneficial return due to “free-rider” problems.⁶⁰

II. RETHINKING RETAIL INVESTORS’ APATHY

One model helpful to explain retail investors’ apathy arises out of game theory—a subset of decision theory—which studies how a single rational agent can maximize their outcome, especially when facing uncertainty. Game theory has found application across fields of engineering, economics, psychology, computer science, and policy making.⁶¹ Game theory, specifically, “is used to identify equilibria solutions from which no player is likely to deviate.”⁶² One model prevalent among game theory—the prisoner’s dilemma—was developed by economists during the 1950s to model strategic operations of international politics during the Cold War.⁶³ Since then, the prisoner’s dilemma has gained popularity as a model for the “social dilemma occur[ring] when agents individually seek higher payoffs . . . to the detriment of their collective interests.”⁶⁴

The prisoner’s dilemma is illustrated by two people being charged with a violation of law and being separately held.⁶⁵ However, officials are faced with a quandary as there is not enough evidence to convict either person unless one or both confess.⁶⁶ The individuals are brought in for questioning and not permitted to communicate with each other before the officials explain to both that each person’s respective sentence will depend both on their *own* confession or lack thereof and on *their co-criminal’s confession* or lack thereof.⁶⁷ Simple rules govern the questioning. First, “if both confess, each will be fined one unit.”⁶⁸ Second, “if neither confesses, both

59. Gordon, *supra* note 54, at 46.

60. *Id.* at 44.

61. Lucas Kruitwagen, Kaveh Madani, Ben Caldecott & Mark H. W. Workman, *Game Theory and Corporate Governance: Conditions for Effective Stewardship of Companies Exposed to Climate Change Risks*, 7 J. SUSTAINABLE FIN. & INV. 14, 16 (2017).

62. *Id.*

63. *Id.* at 18; *see also* WILLIAM POUNDSTONE, PRISONER’S DILEMMA 8–9 (1993).

64. Kruitwagen et al., *supra* note 61, at 17.

65. A. W. Tucker, *The Mathematics of Tucker: A Sampler*, 14 TWO-YEAR COLL. MATHEMATICS J. 228, 228 (1983).

66. POUNDSTONE, *supra* note 63, at 118.

67. Anatol Rapoport, *Prisoner’s Dilemma*, in THE NEW PALGRAVE: GAME THEORY 199, 199 (John Eatwell, Murray Milgate & Peter Newman eds., 1989).

68. Tucker, *supra* note 65, at 228. While Tucker uses fines and rewards, most iterations of the prisoner’s dilemma provide for prison time. *Id.*; *see, e.g.*, POUNDSTONE, *supra* note 63, at 118

will go clear.”⁶⁹ Third, “[i]f one confesses and the other does not,” the individual who confesses will receive an award of one unit while the other “will be fined two units.”⁷⁰

To an omnipresent observer, the best decision is evident—if the prisoners were able to communicate, and neither confessed, they would both be cleared.⁷¹ However, because the prisoners are separated and without the ability to communicate, they are faced with uncertainty—this uncertainty pushes both prisoners to likely confess, as it creates the next-best possible outcome regardless of what the other prisoner does.⁷² Clearly, the ability to communicate determines whether two people are able to reach the optimal outcome for themselves or only the suboptimal outcomes.

The use of the prisoner’s dilemma to explain behavior has been considered especially useful in analyzing collective action problems.⁷³ Collective action is necessary “when a group possesses a common interest or faces a common fate.”⁷⁴ However, group interest to cooperate often conflicts with an individual’s interest in defection, a conflict illustrated by the free-rider dilemma, where “each individual’s inclination to free ride coexists with an exactly” adverse interest to collectively cooperate for the interest of the group, in which the individual is included.⁷⁵ Thus, the prisoner’s dilemma is often helpful to explain suboptimal outcomes resulting from individual rational decisions when an individual would need to cooperate with another individual, but impossibility of communication prevents them from coordinating.⁷⁶

Impossibility of communication hinders the ability to reach an optimal outcome. Retail investors could often implement and effect changes they care about, but when they fail to communicate, they settle for apathy even

(explaining that over time the prisoner’s dilemma came to “almost always concern[] prison terms”). Furthermore, different iterations of the prisoner’s dilemma provide for varying prison time. Compare POUNDSTONE, *supra* note 63, at 118 (describing that both prisoners are to be sentenced to prison for a year, but if either prisoner A or B takes the deal and testifies against the other, then he will go free and his partner receives three years in prison, but if both prisoners testify against each other, then both must serve two years in prison), with Rapoport, *supra* note 67, at 199 (describing that both prisoners are to be sentenced to prison for six months, but if either prisoner A or B takes the deal to confess, he will go completely free and his partner will receive five years in prison, but if both prisoners confess, they will both receive two years in prison). In this Article, we have adopted Tucker’s numbers as he originally articulated them. See POUNDSTONE, *supra* note 63, at 116–17 (explaining Tucker’s role in developing the prisoner’s dilemma).

69. Tucker, *supra* note 65, at 228.

70. *Id.*

71. *Id.*; see also Rapoport, *supra* note 67, at 199.

72. Rapoport, *supra* note 67, at 199.

73. Douglas D. Heckathorn, *Collective Action and the Second-Order Free-Rider Problem*, 1 RATIONALITY & SOC’Y 78, 97 (1989).

74. *Id.* at 78.

75. *Id.* at 79.

76. *Id.* at 97.

when that is a suboptimal outcome for them.⁷⁷ The parallels between the prisoners' decision-making and shareholders' decision-making are evident—the choice for each investor is to either become informed or remain uninformed as to the probable implications on shareholder welfare.⁷⁸ Because acquiring information is costly, an investor with a smaller stake will almost always find the advantages of becoming informed outweighed by the costs of doing so even if their vote would be decisive.⁷⁹

Similarly, a retail shareholder with a more substantial investment whose vote is not single-handedly outcome determinative may find the cost of becoming informed inferior to the expected returns. Nevertheless, that shareholder still faces the problem of other shareholders being uninformed. This shareholder's vote, therefore, will still not be decisive unless the shareholder incurs the costs necessary to inform other shareholders.⁸⁰ The cost of informing other shareholders who would not benefit from becoming informed individually discourages relatively larger shareholders from engaging.⁸¹ Thus, as a whole, public shareholders will likely remain uninformed, or by analogy to the prisoner's dilemma, confess—because there is no compulsory cost-sharing mechanism.

However, shareholders may have turned a new corner—effectively breaking “free” of the prisoner's dilemma through online coordination. Apathy is becoming increasingly less rational due to the progressive dissipation of the aggregation dilemma upon which the normative argument relies. The cost of coordination, traditionally, was high—including the cost of obtaining information regarding other shareholders' voting intentions, communicating among shareholders, and coordinating voting behavior.⁸² Further, “[t]he greater the number of shareholders, the higher [the coordination costs]” become.⁸³ Online coordination, however, allows retail investors to lower the cost of participating in corporate governance and circumvent the costs of obtaining information in efforts to achieve their optimal outcome.

Before the internet allowed for efficient and inexpensive coordination, shareholders and corporations long grappled with coordination among shareholders and accessibility to corporate governance. For example, shareholders and corporations would sometimes clash over where

77. Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 81–82.

78. Jeffrey N. Gordon, *The Mandatory Structure of Corporate Law*, 89 COLUM. L. REV. 1549, 1575 (1989).

79. *Id.*

80. *Id.* at 1575–76.

81. *Id.* at 1576.

82. See Chiara Picciau, *The (Un)Predictable Impact of Technology on Corporate Governance*, 17 HASTINGS BUS. L.J. 67, 77 (2021).

83. *Id.* at 99.

shareholder meetings should be held.⁸⁴ Companies sometimes attempted to hold meetings in less populated locations to avoid dissenting shareholders.⁸⁵ In response, self-proclaimed independent shareholders like John and Lewis Gilbert, Wilma Soss, and Evelyn Davis advocated for companies to hold shareholder meetings in more accessible locations, like New York City.⁸⁶ Conversely, in the 1940s and 1950s, many large companies held regional meetings throughout the year to supplement annual and special meetings.⁸⁷ These regional meetings allowed shareholders who were unable to attend annual meetings to learn about companies by interacting with officers and engaging in Q&As.⁸⁸ Of course, a byproduct of regional meetings was also the ability to meet and interact with fellow shareholders.

One of the aspects of shareholder meetings is the impromptu interactions among shareholders and between shareholders and management.⁸⁹ Although not emphasized typically in literature, these interactions are crucial to shareholder engagement and corporate governance.⁹⁰ For example, shareholder activist James McRitchie has written about items he has learned from informal conversations at shareholder meetings, which can have an effect on voting and even future investing.⁹¹ These items include instances where shareholders did not understand certain agenda items; a company's outsourcing of functions; and even a lack of succession planning.⁹² Had he not partaken in these conversations in person at shareholder meetings, he would not be privy to this information.

Online communities allow shareholders to recreate a sense of spontaneous communication that resembles side conversations at regional and annual meetings, but with global access. The internet offers retail

84. See, e.g., John Brooks, *Stockholder Season*, NEW YORKER, Oct. 8, 1966, at 159, 160–66.

85. *Id.* at 160.

86. See *id.* at 160, 162, 166, 181 (explaining Evelyn Davis complained about the 1966 AT&T meeting location in Detroit saying that “she had been forced to come all the way from New York by bus”).

87. LEWIS D. GILBERT, *DIVIDENDS AND DEMOCRACY* 202 (1956).

88. *Id.* The regional meeting allowed management to personally meet shareholders from all over the United States. See *id.* at 205.

89. Steven Davidoff Solomon, *Online Shareholders' Meetings Lower Costs, but Also Interaction*, N.Y. TIMES DEALBOOK (May 31, 2016), <https://www.nytimes.com/2016/06/01/business/dealbook/online-shareholder-meetings-lower-costs-but-also-interaction.html> [<https://perma.cc/2F37-Y3NH>] (explaining that “at many small and midsize companies, the conversation continues as shareholders talk with management before and after the meeting”).

90. *Hoschett v. TSI Int'l Software, Ltd.*, 683 A.2d 43, 45 (Del. Ch. 1996) (“Certainly, the annual meeting may in some instances be a bother to management, or even, though rarely, a strain, but in all events it provides a certain discipline and an occasion for interaction and participation of a kind.”).

91. James McRitchie, *Chat Rooms Missing at Shareholder Meetings*, CORPGOV.NET (Aug. 31, 2020), <https://www.corpgov.net/2020/08/chat-rooms/> [<https://perma.cc/8VW9-3565>].

92. *Id.*

shareholders the opportunity to strategize and coordinate at a low cost.⁹³ Through repeated digital coordination, cooperation may overcome barriers presented by share dispersion.⁹⁴ Wireless investors lead the charge toward digital cooperation. Digital coordination and cooperation make investors' apathy obsolete.

III. WIRELESS INVESTORS & SOCIAL CAPITAL

Wireless investors' propensity to come together online and ability to coordinate on a global scale allow them to wield an extraordinary amount of power, particularly in overcoming issues typically associated with retail shareholding, mostly traceable to collective action problems. The power of individuals forming online communities has been displayed in multiple ways in recent years. In January 2021, retail investors shocked the world by using the Reddit community⁹⁵ wallstreetbets (WSB) to target short-selling activity by hedge funds on GameStop shares.⁹⁶ This coordination caused a surge in the share price and triggered significant losses for the institutional investors involved.⁹⁷ As such an effective collective action was unprecedented in finance, scholars have spent the following months and years attempting to explain how unrelated retail investors were able to, effectively, beat Wall Street out of billions of dollars.⁹⁸ Multiple elements combined organically, resulting in this unprecedented action. The most noteworthy element was these wireless investors' ability to coordinate online and form an unlikely "army" of mostly strangers who came together for a common cause.⁹⁹

Gathering online for a common cause is not unique to the GameStop trading or even to investing. For years, activists have successfully used online venues to organize support, including in-person protests and

93. See Gabriel Uchechi Emeasoba, *The Fallacy of the Rational Apathy Theory: Minority Shareholder Electronic Participation in Nigerian Corporate Governance*, 9 J. CORP. GOVERNANCE, INS. & RISK MGMT. 243, 250–51 (2022).

94. See *id.*

95. Alexis Ohanian & Michael Sidgmore, *Community, Camaraderie, & Capital*, Community x Capital, at 18:17–19:00 (Aug. 2021), <https://open.spotify.com/episode/OTjDdhhQGzlxF3RnusEouM?si=80a6c126ca524efc> [<https://perma.cc/T8AM-DD5Q>] (discussing how Reddit communities were traditionally called "subreddits" but Alexis Ohanian, co-founder of Reddit, clarifies that they have since been changed to "communities" to better reflect the true meaning of the Reddit feature).

96. Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 59–60; Lorenzo Lucchini, Luca Maria Aiello, Laura Alessandretti, Gianmarco De Francisci Morales, Michele Starnini & Andrea Baronchelli, *From Reddit to Wall Street: The Role of Committed Minorities in Financial Collective Action*, 9 R. SOC. OPEN SCI. 1, 2–3 (2022), <https://royalsocietypublishing.org/doi/full/10.1098/rsos.211488> [<https://perma.cc/HYA8-KB3B>].

97. Lucchini et al., *supra* note 96, at 3–4.

98. See *id.* at 2.

99. See Gramitto Ricci & Sautter, *The Wireless Investors Movement*, *supra* note 14.

demonstrations, for various movements.¹⁰⁰ In fact, the global nature of social media has empowered citizens across the globe to become networked and has “inspired large-scale transnational democratic movements.”¹⁰¹ The role of social media took on a new dimension in 2020 when the pandemic appeared initially to thwart the possibility of protests and demonstrations of the influential social movements of the time, such as the Black Lives Matter Movement.¹⁰² The impossibility of being physically present did not hinder wireless generations’ activism. Instead, social media was used to further social and racial justice issues. Demonstrations were held in the digital world including on digital games like *Animal Crossing: New Horizons*,¹⁰³ *The Sims*,¹⁰⁴ *World of Warcraft*, *Grand Theft Auto*, and *NBA 2K20*, among many others.¹⁰⁵

Social demonstrations in digital games should not come as a surprise, as many individuals in the United States are gamers, including 96% of GenZ’ers and Millennials, 89% of GenX’ers, and 57% of Boomers.¹⁰⁶ For many, there is a blurring of the line between what one would think of as the online and offline worlds. In a Deloitte survey, gamers cited to games as satisfying emotional and social needs, including providing relaxation and self-expression, assisting in getting through “difficult time[s],” and staying connected and making connections with others.¹⁰⁷ As the Deloitte survey results suggest, gaming contributes to the formation of social ties among

100. K. Hazel Kwon, Chun Shao & Seungahn Nah, *Localized Social Media and Civic Life: Motivations, Trust, and Civil Participation in Local Community Contexts*, 18 J. INFO. TECH. & POL. 55, 56 (2020).

101. *Id.*

102. See, e.g., Frederikke Christiansen, *Online Activism Meets Digital Gaming: Protesters Are Now Taking to the Virtual Streets*, MASTERS OF MEDIA (Sept. 27, 2020), <https://mastersofmedia.hum.uva.nl/blog/2020/09/27/online-activism-meets-digital-gaming-protesters-are-now-taking-to-the-virtual-streets/> [<https://perma.cc/E887-WSK7>].

103. Alexis Ong, *Animal Crossing: New Horizons Is Fast Becoming a New Way for Hong Kong Protesters to Fight for Democracy*, VG247 (Apr. 1, 2020), <https://www.vg247.com/animal-crossing-new-horizons-is-fast-becoming-a-new-way-for-hong-kong-protesters-to-fight-for-democracy> [<https://perma.cc/9SAW-7PU9>].

104. Ebonix • manifesting 🙌 (@Ebonix), TWITTER (June 7, 2020, 9:47 PM), <https://twitter.com/Ebonix/status/1269808276520284163> [<https://perma.cc/4UB8-7M8G>].

105. Daisy Schofield, *Black Lives Matter Meets Animal Crossing: How Protesters Take Their Activism into Video Games*, GUARDIAN (Aug. 17, 2020, 9:21 AM), <https://www.theguardian.com/games/2020/aug/07/black-lives-matter-meets-animal-crossing-how-protesters-take-their-activism-into-video-games> [<https://perma.cc/99CZ-K5CJ>].

106. KEVIN WESTCOTT, JANA ARBANAS, JEFF LOUCKS, KEVIN DOWNS, CHRIS ARKENBERG & BROOKE AUXIER, DELOITTE, 2022 DIGITAL MEDIA TRENDS, 16TH EDITION: TOWARD THE METAVERSE 13 fig.7 (2022), <https://www2.deloitte.com/us/en/insights/industry/technology/digital-media-trends-consumption-habits-survey/summary.html> [<https://perma.cc/5WCN-KMUS>]. For GenZ’ers, playing video games is their favorite form of entertainment. *Id.* at 9.

107. See *id.* at 14 fig.8.

participants which leads to both gaming social capital and real-world social capital.¹⁰⁸

Social scientists have used the social capital theory to explore how social networks affect changes in society.¹⁰⁹ Robert Putnam defines social capital as “connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them.”¹¹⁰ Accordingly, trust is a key element of social capital.¹¹¹ Definitions of trust vary but they largely coalesce around a “willingness to rely on another party, coupled with a sense of vulnerability or risk if the trust is violated.”¹¹² When interpersonal or social trust exists, it has been found to result in greater civic engagement, including higher participation rates in community and political organizations.¹¹³

Social media naturally leads to social capital formation as social media lends itself easily to discourse and bonding among like-minded individuals.¹¹⁴ In fact, the very foundation of social media is the sharing of information.¹¹⁵ Participants use social media to not only maintain existing social networks but to establish new ones, both of which include the sharing of personal information.¹¹⁶ Social media users regularly share personal information, including their thoughts and experiences, and studies have shown that users trust others in their online social networks with their personal information.¹¹⁷

Trust arises on social media from several bases, including a shared membership in a social network.¹¹⁸ Such a shared membership leads users to “attribute positive characteristics such as honesty, benevolence, integrity,

108. See Logan Molyneux, Krishnan Vasudevan & Homero Gil de Zúñiga, *Gaming Social Capital: Exploring Civic Value in Multiplayer Video Games*, 20 J. COMPUT.-MEDIATED COMM’N 381, 393–95 (2015) (finding that multiplayer gaming is associated with the formation of gaming social capital, which has a spillover effect into real-world social capital formation).

109. ROBERT D. PUTNAM, *BOWLING ALONE: REVISED AND UPDATED: THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY* 17 (2001).

110. *Id.*

111. See Kenneth Newton, *Trust, Social Capital, Civil Society, and Democracy*, 22 INT’L POL. SCI. REV. 201, 202 (2001).

112. Sonja Grabner-Kräuter, *Web 2.0 Social Networks: The Role of Trust*, 90 J. BUS. ETHICS 505, 506 (2009).

113. PUTNAM, *supra* note 109, at 94–95.

114. Christian Fieseler & Matthes Fleck, *The Pursuit of Empowerment Through Social Media: Structural Social Capital Dynamics in CSR-Blogging*, 118 J. BUS. ETHICS 759, 761 (2013).

115. See Grabner-Kräuter, *supra* note 112, at 506.

116. Sonja Grabner-Kräuter & Sofie Bitter, *Trust in Online Social Networks: A Multifaceted Perspective*, 44 F. SOC. ECON. 48, 48 (2015); Grabner-Kräuter, *supra* note 112, at 507 (stating that online social networks “support the maintenance of already existing social ties, but there are also networking services that support the formation of new connections with strangers, based on shared interests, political views, or activities”).

117. Grabner-Kräuter, *supra* note 112, at 506.

118. *Id.* at 516.

and cooperativeness to other network members.”¹¹⁹ Trust evolves over time with more interactions among members. With more interactions, trust is based on past interactions or what is called knowledge- or experience-based trust.¹²⁰ As the trust among users grows, so does the sense of community and cohesion which in turns satisfies the human need for social relatedness. Social relatedness refers to behavior motivated by the need for “belonging, attachment, and care in relation to a group of significant others”—it is “the basic desire . . . for coherent integration with the social environment.”¹²¹

By way of an example, the WSB subreddit has been described as having “a well-defined identity reinforced also by the common use of jargon (e.g. ‘stonks’ for stocks, ‘tendies’ for profits, and ‘diamond hands’ or ‘paper hands’ for people that hold stocks through turbulent times or sell them at the first loss, respectively).”¹²² Specifically, an ethnographic study found that active members of WSB shared similar linguistic markets and reciprocated awards to express and reinforce the community’s sense of identity.¹²³ Such a sense of identity and reciprocated awards enhances the trust and social relatedness among the group’s participants.

Further, an analysis of the social interactions between users of the WSB community and the subsequent surges in GameStop shares indicated a strong influence of cooperative features—indicating that group goals and motivations may have been a factor in the GameStop trading success.¹²⁴ The interactions between the committed WSB users and the remainder of WSB users resulted in the ability of the group to act collectively.¹²⁵ Researchers found that the committed users, being a part of the core network of conversations, pre-dated the initial surge in GameStop shares, attracted more users, and triggered more events and discussions of commitment which led to the “growth” of the WSB team and made the subsequent GameStop event possible.¹²⁶

119. *Id.*

120. Grabner-Kräuter & Bitter, *supra* note 116, at 54.

121. Michael Sailer, Jan Ulrich Hense, Sarah Katharina Mayr & Heinz Mandl, *How Gamification Motivates: An Experimental Study of the Effects of Specific Game Design Elements on Psychological Need Satisfaction*, 69 *COMPUTS. HUM. BEHAV.* 371, 374 (2017).

122. Lucchini et al., *supra* note 96, at 3.

123. Christian J. Boylston, Beatriz E. Palacios & Plamen T. Tassev, *WallStreetBets: Positions or Ban* 5 (Jan. 28, 2021) (unpublished manuscript), <https://arxiv.org/abs/2101.12110> [<https://perma.cc/4ATW-R4TU>].

124. Lucchini et al., *supra* note 96, at 6.

125. Researchers explained:

These interactions occur over a rapidly evolving social network. . . . In these networks, users are connected if they submitted a comment in reply to the post or comment of another during the time-span considered. As new users join, the number of small disconnected components in the network increases The structural transformation of the network happens abruptly rather than gradually.

Id. (footnote omitted).

126. *Id.* at 2.

As was evident from WSB and GameStop, due to its global reach and ease of use, social media reduces transaction costs associated with gathering and coordinating actions, which in turn facilitates collectively acting toward a common goal.¹²⁷ Such reduced transaction costs include enhanced access to information.¹²⁸ This is particularly important for wireless investors. In a 2021 study, Millennial and Gen Z investors indicated Twitter, TikTok, Reddit, YouTube, Instagram, and Facebook were their most used sources of investing information.¹²⁹ Reliance on social media for information is not unique to investing information. In 2022, Google's internal data revealed that many GenZ'ers prefer to use TikTok and Instagram as general search engines as opposed to Google.¹³⁰ These generations do not just rely on social media for information but also use social media to gather commitment to causes dear to their hearts.

Online communities increase the social capital of a group as well as wireless investors' trust in each other. In-person social networks have been the driving force in creating changes in society.¹³¹ With the ability to develop more social networks, through the use of the internet, corporate change can too be expeditiously brought forward. While accurate and digestible information must be conveyed in order to establish trust, once trust is established within an online forum, wireless investors will have the ability to rely on trust to collectively vote their shares in a manner that leads them to the optimal outcome.¹³² Through mass communication on the internet, wireless investors do not only share the costs of gathering and assessing information, but they are able to reap the same benefits institutional investors do when voting their shares.¹³³ As trust in each other's opinions and the information conveyed increases, the amount, and more importantly, the cost, of gathering and transmitting information decreases.¹³⁴

127. Fieseler & Fleck, *supra* note 114, at 761.

128. *See id.* at 771.

129. Jack Caporal, *Gen Z and Millennial Investors: Ranking the Most Used, Trusted Investing Tools*, MOTLEY FOOL (Aug. 3, 2021, 3:59 PM), <https://www.fool.com/research/gen-z-millennial-investors-tools/> [<https://perma.cc/24FZ-7368>]. GenZ'ers say they relied most heavily on social media in the preceding thirty days with 91% indicating social media as their preferred source of investing information compared to 75% of Millennials. *Id.*

130. Samantha Delouya, *Nearly Half of Gen Z Is Using TikTok and Instagram for Search Instead of Google, According to Google's Own Data*, BUS. INSIDER (July 13, 2022, 12:48 AM), <https://www.businessinsider.com/nearly-half-genz-use-tiktok-instagram-over-google-search-2022-7> [<https://perma.cc/YBP4-BH46>].

131. PUTNAM, *supra* note 109, at 17–18.

132. Gramitto Ricci & Sautter, *The Wireless Investors Movement*, *supra* note 14.

133. *See* Fisch, *supra* note 31, at 51.

134. *See* Fieseler & Fleck, *supra* note 114, at 761.

When trust is developed, individuals will feel compelled to act in a way that identifies them with the group and proves their belonging.¹³⁵ Just like a prisoner may not confess in order to prove belonging in a criminal community and conform to the social norm of not being a “rat” or “snitch,” wireless investors will feel increasingly compelled to stick to the collective action. This is similar to what occurred during the 2021 GameStop trading when retail investors did not want to be identified as someone with “paper hands.”¹³⁶

IV. RETAIL INVESTING IN THE AGE OF INFORMATION

A. *The New Information Infrastructure*

Despite a widespread acceptance of retail investors’ apathy, there is little question that investors’ participation would be impactful. For example, in a survey of twenty-one contested elections, it was found that in 47.6% of the elections, “a change would have been theoretically feasible if voting turnout had been higher.”¹³⁷ Accordingly, retail investors’ voting could have changed the outcome in these contested elections.¹³⁸

Traditionally, a retail investor has been required to “resort to publicly available or free resources to gather information.”¹³⁹ This includes gathering company-related information through “published financial reports, news, or other public sources” on an individual basis—bearing the costs individually.¹⁴⁰ The internet, as opposed to traditional means of disseminating information, offers retail investors a far cheaper way to gather information as well as to spread information and to communicate.¹⁴¹ It enables the creation of online forums and communities, which significantly reduce shareholders’ costs of participation.¹⁴² The internet also alleviates the cost of obtaining data due to many of the resources accessible via the internet being free.¹⁴³ Further, the internet permits reduced costs in

135. See Amartya Sen, *Goals, Commitment, and Identity*, 1 J.L. ECON. & ORG. 341, 349 (1985).

136. See *What Does ‘Paper Hands’ Mean?*, MYWALLST (Sept. 13, 2022), <https://mywallst.com/blog/what-does-paper-hands-mean> [<https://perma.cc/2GJS-5GDR>].

137. Kastiel & Nili, *supra* note 12, at 79.

138. See *id.* at 66 (discussing how retail investors’ votes could alter election outcomes even by mobilizing only 10–15% of eligible voters).

139. Bilal Hafeez, M. Humayun Kabir & Udomsak Wongchoti, *Are Retail Investors Really Passive? Shareholder Activism in the Digital Age*, 49 J. BUS. FIN. & ACCT. 423, 427 (2022).

140. Bilal Hafeez, M. Humayun Kabir & Udomsak Wongchoti, *Are Retail Investors Really Passive? Shareholder Activism in the Digital Age 7–8* (May 2021) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4153726 [<https://perma.cc/27GM-5KXA>].

141. Hafeez et al., *supra* note 139, at 427, 429.

142. Dov Solomon, *The Voice: The Minority Shareholder’s Perspective*, 17 NEV. L.J. 739, 753 (2017).

143. Hafeez et al., *supra* note 139, at 427, 429 & n.16.

transferring data, including documents, and allows the ease of “conducting personal and group communication among shareholders.”¹⁴⁴

Wireless investors are, in fact, utilizing these modern avenues to obtain information. Data compilations of Google searches during the three-week period leading up to votes on shareholder proposals indicated abnormally high searches, with more pronounced results where proposals included a negative or controversial tone.¹⁴⁵ Retail investors will not remain apathetic where it is not rational to do so—as is the case in many instances today through technology allowing for fast and free information at the retail investors’ fingertips.

Wireless investors’ aptitude for gathering online and sharing information in environments protected by the trust-based relations of these communities further facilitates the circulation of information. Moreover, Millennials and GenZ’ers are determined to deviate from the status quo and solve long-standing conflicts.¹⁴⁶ They allow their frustrations to be made known by becoming vocal in both their local communities and digital communities.¹⁴⁷ Over half of Millennials identify themselves as long-term activists¹⁴⁸ with a focus on making everyday change by becoming more politically involved, spending money with companies that mirror their own values, and speaking out when faced with injustice.¹⁴⁹ Millennials and GenZ’ers have developed a passion for resolving long-established conflict and flawed status quos tolerated by the preceding generations, specifically in facets where they feel the status quo has disproportionately impacted themselves and minorities.¹⁵⁰ Wireless investors are aware of the power of corporations and the effects of

144. Solomon, *supra* note 142, 753–54.

145. Hafeez et al., *supra* note 139, at 425.

146. DELOITTE, STRIVING FOR BALANCE, ADVOCATING FOR CHANGE: THE DELOITTE GLOBAL 2022 GEN Z & MILLENNIAL SURVEY 2 (2022), <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/deloitte-2022-genz-millennial-survey.pdf> [<https://perma.cc/GG8B-JLS2>] (discussing how Millennials and GenZ’ers worry about the state of the world and are fighting to reconcile commonly accepted issues within everyday life that create restraints).

147. Megan Carnegie, *Technology Has Given Young People A Louder Voice Than Ever Before. Gen Z Are Angry – And Unafraid to Speak Up*, BBC (Aug. 8, 2022), <https://www.bbc.com/worklife/article/20220803-gen-z-how-young-people-are-changing-activism> [<https://perma.cc/26YF-ENAR>]; Alec Tyson, Brian Kennedy, & Cary Funk, *Gen Z, Millennials Stand Out for Climate Change Activism, Social Media Engagement with Issue*, PEW RSCH. CTR. (May 26, 2021), <https://www.pewresearch.org/science/2021/05/26/gen-z-millennials-stand-out-for-climate-change-activism-social-media-engagement-with-issue/> [<https://perma.cc/3WGA-9YZV>].

148. *Millennials Unhappy with Status Quo, Believe in Voting, Report Finds*, PHILANTHROPY NEWS DIG. (Mar. 9, 2018), <https://philanthropynewsdigest.org/news/millennials-unhappy-with-status-quo-believe-in-voting-report-finds> [<https://perma.cc/J577-V62D>].

149. Emily Mossburg, *For Millennials and Gen Zs, Social Issues Are Top of Mind—Here’s How Organizations Can Drive Meaningful Change*, FORBES (July 22, 2021, 10:38 AM), <https://www.forbes.com/sites/deloitte/2021/07/22/for-millennials-and-gen-zs-social-issues-are-top-of-mind-heres-how-organizations-can-drive-meaningful-change/?sh=2400cb09450c> [<https://perma.cc/2AZS-ZXZ8>].

150. *See id.*

leveraging on that power.¹⁵¹ Engaging with corporations through voting allows them to magnify their power as individuals.¹⁵² They have already been engaging with corporations through their consumer¹⁵³ and employment choices¹⁵⁴ as well as through their investments and on social media.¹⁵⁵ Wireless investors will not fail to exert leverage on corporations through corporate governance.

New technologies may lower the information costs of exercising shareholder rights even further—Blockchain and smart contracts, for instance, are being discussed in the context of making “corporate documents and data more readily available,” while “preserving the integrity and authenticity of the information.”¹⁵⁶ Moreover, investing apps are playing a role in informing retail investors and in providing accessible financial education, making information even more accessible.¹⁵⁷ Apps like Robinhood have provided users and the general public with educational tools to be accessed online and on mobile phones, with programs such as Robinhood Learn and Robinhood Snacks.¹⁵⁸ Robinhood also has in-app education and information specifically for its customers, including access to financial news and interactive lessons.¹⁵⁹

With easy access to information and communications facilitated by online forums and communities, retail investors can reach an optimal outcome—participating in the governance of corporations.

B. Individual and Collective Benefits of Online Communication and Coordination

Zohar Goshen places emphasis on the power of coordination by highlighting how prisoners reap the maximum benefits when they align their

151. Gramitto Ricci & Sautter, *The Wireless Investors Movement*, *supra* note 14.

152. Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 92–93.

153. DELOITTE, A CALL FOR ACCOUNTABILITY AND ACTION: THE DELOITTE GLOBAL 2021 MILLENNIAL AND GEN Z SURVEY 28 (2021), <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/2021-deloitte-global-millennial-survey-report.pdf> [https://perma.cc/789T-DTNH] (stating Millennials and GenZ’ers put their money where their values are as consumers).

154. *Id.* (reporting that Millennials and GenZ’ers make their values clear when making career choices).

155. See Sergio Alberto Gramitto Ricci & Christina M. Sautter, *The Corporate Forum*, 102 B.U. L. REV. 1861, 1873 (2022) (proposing a forum for retail investors to engage with companies); Jill Goldsmith, *AMC Entertainment CEO Adam Aron Slams Spreaders of “FUD” (Fear, Uncertainty & Doubt) After Annual Meeting*, DEADLINE (July 30, 2021, 10:37 AM), <https://deadline.com/2021/07/amc-entertainment-adam-aron-shareholders-reddit-1234806684/> [https://perma.cc/NL4B-FHRK] (discussing investors taking to social media to express grievances with AMC Entertainment).

156. Picciau, *supra* note 82, at 106; see also Christopher M. Bruner, *Distributed Ledgers, Artificial Intelligence and the Purpose of the Corporation*, 79 CAMBRIDGE L.J. 431, 435–36 (2020).

157. Gramitto Ricci & Sautter, *supra* note 1 (manuscript at 2).

158. Sergio Alberto Gramitto Ricci & Christina M. Sautter, *The Educated Retail Investor: A Response to “Regulating Democratized Investing,”* 83 OHIO ST. L.J. ONLINE 205, 215 (2022).

159. *Id.*

actions.¹⁶⁰ Similarly, retail investors yield the greatest benefit, individually and collectively, when they coordinate. Because of the imbalance between the quantity of shares owned by retail investors and those owned by institutional investors,¹⁶¹ retail investors are more inclined to vote when their votes can determine the outcome.¹⁶² However, retail investors are unable to predict the consequentiality of their participation through voting unless they communicate and coordinate. By communicating on a global scale retail investors can test the sentiment of fellow retail investors, anticipate the likelihood of an outcome-determinative participation, convince fellow retail investors to vote, and orchestrate collective action voting.

The ability to overcome the coordination problem through shareholder coordination and communication has already been documented in the context of institutional investors. Specifically, a recent study found that:

[F]irms with high levels of ownership by cliques of institutional investors experience more direct intervention in the form of votes against bad management proposals. Evidence from a plausibly exogenous shock to the network of institutional investors suggest that this relationship between coordination among institutional investors and governance is causal.¹⁶³

The results of the study, then, indicated that “[s]hareholder coordination increases governance via *voice* by overcoming the free rider problem”¹⁶⁴ Thus, this indicates that there is at least some causal relationship between shareholder coordination and implications within corporate governance. If retail investors coordinate and communicate, this trend would also likely result in governance implications through retail investors.

Thus, coordination and information-sharing online, engaging the collective power of the retail investors, will almost always yield retail investors’ most optimal outcome, or receiving no jail time in the coordination dilemma. However, without online coordination and communication, retail investors will likely be outvoted by institutional investors. This leads to the suboptimal outcome of the coordination

160. See Zohar Goshen, *Controlling Strategic Voting: Property Rule or Liability Rule?*, 70 S. CAL. L. REV. 741, 761 (1997).

161. In 2021, 70% of shares were owned by the institutional investor segment while 30% of shares were owned by the retail investor segment. BROADRIDGE & PWC, PROXYPULSE: 2022 PROXY SEASON PREVIEW 9 (2022), https://www.broadridge.com/proxypulse/_assets/docs/broadridge-proxypulse_2022-season-preview-and-2021-review.pdf [<https://perma.cc/4TJU-YEBU>].

162. Brav et al., *supra* note 9, at 498–500.

163. Alan D. Crane, Andrew Koch & Sébastien Michenaud, *Institutional Investor Cliques and Governance*, 133 J. FIN. ECON. 175, 195–96 (2019).

164. *Id.* at 175 (emphasis added).

dilemma by undertaking the costs associated with voting while failing to reap the benefits of implications within corporate governance, as is the case with both prisoners confessing and receiving jail time.

V. THE INCREASING INFLUENCE OF WIRELESS INVESTORS

The involvement of Millennials and GenZ'ers as stakeholders, investors, and shareholders signals that we are in the beginning stages of a shift in social norms. As we have described, the social norm among retail shareholders has been largely passive—both with respect to investing and to corporate governance participation. Since the early 1990s, individuals have mainly invested in stock indirectly, largely through mutual funds and pension accounts.¹⁶⁵ Moreover, individual investors who hold stock directly and, thus, have the right to vote at shareholder meetings traditionally have not voted.¹⁶⁶ Wireless investors have the power to radically change these social norms.

A. Emergence of Social Norms

James Coleman, utilizing social theory,¹⁶⁷ set forth two requirements for the emergence of a social norm: First, that a demand for the norm arises.¹⁶⁸ And, second, that there is a condition under which that demand will be realized.¹⁶⁹ The demand for a norm is explained through the existence of unregulated negative or positive externalities.¹⁷⁰ New social norms, thus, may arise from newly emerging externalities, such as regulating the consequence of new technology, or from the re-evaluation of existing externalities with new knowledge or value priorities, like the regulation of smoking bans as the dangers of secondhand smoke came into focus.¹⁷¹ However, this demand alone is not sufficient—the second requirement for the emergence of a norm also requires that such a demand will be realized, as “[t]he norm will emerge, however, only when it is rational for group members to provide positive or negative sanctions.”¹⁷² Whether positive or negative sanctioning arises depends on the strength of social relationships

165. See EDWARD N. WOLFF, A CENTURY OF WEALTH IN AMERICA 122–24 (2017).

166. Brav et al., *supra* note 9, at 498–500.

167. Social theory is a subset of social science involving the “functioning of social systems of behavior,” addressing “the question of the peaceful coexistence of man and society, as two intersecting systems of action.” JAMES S. COLEMAN, FOUNDATIONS OF SOCIAL THEORY 1, 5 (1990).

168. *Id.* at 241.

169. *Id.*

170. Andreas Diekmann, *Emergence of and Compliance with New Social Norms: The Example of the COVID Crisis in Germany*, 34 RATIONALITY & SOC'Y 129, 131 (2022).

171. *Id.* at 131–32.

172. Richard L. Hasen, *Voting Without Law?*, 144 U. PA. L. REV. 2135, 2149–50 (1996).

or “[s]ocial connectedness[, which] means that there will be (1) unintentional observation of group members’ behavior; (2) opportunities for gossip; and (3) concern about esteem.”¹⁷³ Once a norm becomes “sticky,”¹⁷⁴ individuals follow the norm and sanctions without engaging in an outcome-oriented rational calculus, such that the norm remains even where the demand that supported its origin diminishes.¹⁷⁵

Social norms can and do decline under some conditions. Because the second condition for norm emergence relies on sanctions attributed to social connectedness, norms may diminish where social connectedness diminishes.¹⁷⁶ Further, a social norm may diminish where the payoffs for violating or reinforcing a norm change. While a norm may emerge where the benefits of adherence to the norm are high, such as the benefit of free riding in a collective action problem, this calculus may later change where the benefits of adhering to the norm decrease.¹⁷⁷ Thus, where the benefits of free riding later decrease, with either lowered costs or greater benefits, individuals may start considering outcomes once again and re-evaluate the benefits of adhering to a particular norm.¹⁷⁸ As more and more members violate a norm, such a phenomenon may have a “snowball effect” where others become encouraged to violate the norm, decreasing the members sanctioning violation of a norm, “thereby decreasing the odds of being punished for a norm violation or rewarded for following the norm.”¹⁷⁹

Specifically, individuals may change their behavior when they expect others will do the same.¹⁸⁰ This is dependent on the preferences of others as well as their actions becoming known.¹⁸¹ Individuals have differing

173. *Id.* at 2150 (emphasis added).

174. *See id.* Stickiness refers to the perpetuation of norms through the social sanctions attached to such norms, creating decisions based not on a rational calculation of a decision but repeated adherence to decisions and customs to avoid “feelings of embarrassment, anxiety, guilt, and shame that a person suffers by the prospect of violating them.” *See* Jon Elster, *Norms of Revenge*, 100 *ETHICS* 862, 864 (1990). Thus, it follows that:

[I]f norms can regulate expectations and behavior it is ultimately because they have a grip on the mind that is due to the strong emotions they can trigger. Even complex norms are simple to obey and follow, compared to the canons of rationality which often require us to make difficult and uncertain calculations.

Id. Thus, the adherence to norms and the social sanctions connected to doing so is often a mechanism of a reduced transaction cost, such that “[t]he operation of norms is to a large extent blind, compulsive, mechanical, or even unconscious.” *Id.* This “grip on the mind” is what Hasen considers such a “stickiness,” perpetuating norms even much later where the cost-benefit analysis for adherence may not be the same as it was when the norm emerged. *See* Hasen, *supra* note 172, at 2150.

175. Hasen, *supra* note 172, at 2149–50.

176. *See id.* at 2150.

177. *See id.* at 2151.

178. *Id.*

179. *Id.*

180. Melvin A. Eisenberg, *Corporate Law and Social Norms*, 99 *COLUM. L. REV.* 1253, 1264 (1999); CASS R. SUNSTEIN, *HOW CHANGE HAPPENS* 11 (2019).

181. *See* Eisenberg, *supra* note 180, at 1264; SUNSTEIN, *supra* note 180, at 6.

thresholds at which they will change their actions.¹⁸² As more individuals' thresholds are met, more individuals act differently from the existing norm and a critical mass is formed which leads to a tipping point, thus changing the existing social norm.¹⁸³ In his book, *How Change Happens*, Cass Sunstein focused on the role of "norm entrepreneurs" in exposing the unreasonableness of existing social norms, in making preferences known, and in changing norms.¹⁸⁴ As an example, he pointed to musician Taylor Swift as a norm entrepreneur.¹⁸⁵ In 2017, Swift, a Millennial, testified regarding unwanted touching and, in turn, became a voice in the #MeToo Movement empowering other women, particularly of her generation, to speak out against sexual harassment and assault.¹⁸⁶

B. Investing and Corporate Governance Social Norms

Like the individuals who amassed in the #MeToo Movement, a similar phenomenon can develop among new generations of investors to collectively act to alter investing norms and corporate governance norms.¹⁸⁷ In a movement that we first identified in *Corporate Governance Gaming: The Collective Power of Retail Investors* and in *The Wireless Investors Movement*, signals indicate that wireless investors will not only more actively manage their investments directly as opposed to investing solely through funds and relying on financial advisors, but also, they will take an active role in corporate governance.¹⁸⁸ More specifically, the norm of passivity in retail voting will shift so that retail investors will vote their corporate shares.

This shift in social norms regarding retail investor voting is like the shift that Melvin Eisenberg identified in his 1999 article, *Corporate Law and Social Norms*.¹⁸⁹ Eisenberg detailed the shift of institutional investors from

182. Mark Granovetter, *Threshold Models of Collective Behavior*, 83 AM. J. SOCIO. 1420, 1436–37 (1978).

183. Eisenberg, *supra* note 180, at 1264; *see also* SUNSTEIN, *supra* note 180, at 8.

184. SUNSTEIN, *supra* note 180, at 8.

185. *Id.* at 8 n.25.

186. Melena Ryzik, *Taylor Swift Spoke Up. Sexual Assault Survivors Were Listening.*, N.Y. TIMES (Aug. 15, 2017), <https://www.nytimes.com/2017/08/15/arts/music/taylor-swift-sexual-assault.html> [<https://perma.cc/SB4B-H4DA>].

187. Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 96; Gramitto Ricci & Sautter, *supra* note 1 (manuscript at 5).

188. *See* Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 54–55 (discussing Millennials and GenZ'ers as wireless investors and analyzing their involvement in shifting the corporate governance status quo by investing directly and using their voting power to change corporate governance to mirror their values); Gramitto Ricci & Sautter, *The Wireless Investors Movement*, *supra* note 14 (describing the dynamics that lead to the formation of social movements of investors).

189. Eisenberg, *supra* note 180.

what he deemed a passivity norm to an activity norm.¹⁹⁰ In the 1960s and 1970s, institutional investors were passive, meaning that they did not act against management.¹⁹¹ If institutional investors did not like management, they would sell their shares but otherwise they supported management.¹⁹² However, institutional investors changed course and became willing to oppose management while remaining shareholders.¹⁹³ Among the several factors that led to this norm shift was an increase in institutional shareholdings and assets under institutional investors' control.¹⁹⁴ Moreover, critical mass played a role in the shift.¹⁹⁵ When it became clear to institutional investors that other institutional investors would become more active in opposing management in some cases, it caused other institutional investors to also act.¹⁹⁶

The retail investing norm shift from passive investing and voting to active investing and voting is already underway. Millennial and Gen Z investors have accounted for the majority of new brokerage accounts, with most using commission-free trading apps to invest directly in corporate stocks.¹⁹⁷ These investors are sharing their investing preferences on social media and relying on social media to obtain investing information.¹⁹⁸ But not only are they sharing investing information on social media, they also are sharing their voting preferences and encouraging others to vote.¹⁹⁹

C. Corporate Governance Engagement and Political Participation

The social norm shift with respect to corporate governance engagement may track the expected norm shift in political election participation. In the context of political elections, over the next thirty years, GenZ'ers are set to "lead a resurgence of civic participation" and will cause "US citizens [to] be among the most active voters in the world."²⁰⁰ These statistics are crucial,

190. *Id.* at 1278.

191. *Id.* at 1283–87 (discussing the historical evolution from the norm of passivity).

192. *Id.* at 1283.

193. *Id.* at 1283–87.

194. *Id.* at 1284.

195. *Id.* at 1263–64.

196. *Id.* at 1287.

197. Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 75; Gramitto Ricci & Sautter, *supra* note 1 (manuscript at 2–3).

198. Jill E. Fisch, *GameStop and the Reemergence of the Retail Investor*, 102 B.U. L. REV. 1799, 1821 (2022).

199. *See* Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 83–88 (analyzing Millennials and GenZ'ers sharing investing information on social media platforms such as Reddit); *see also* Gramitto Ricci & Sautter, *supra* note 1 (manuscript at 5) (discussing Millennial and Gen Z retail investors' trend to discuss annual shareholder meeting voting virtually and persuade others to vote as well).

200. JOHN DELLA VOLPE, FIGHT: HOW GEN Z IS CHANNELING THEIR FEAR AND PASSION TO SAVE AMERICA 198 (2022).

as a recent study of retail investor voting found that “[s]hareholder turnout in corporate elections is positively associated with aggregate turnout in the shareholder’s county in political elections”²⁰¹ While there is some debate as to whether political and shareholder voting can properly be analogized,²⁰² a middle-ground approach is taken by some and is likely the most helpful for the purposes of this analysis.²⁰³ Critically, the analogy of corporate and shareholder voting is relevant because the theory of norm emergence may be applied to political voting to shine valuable light on the wireless investor’s evolving role within corporate governance. It may explain how increased shareholder participation norms will evolve in the future. Thus, GenZ’ers are not only set to lead the charge in political voting but also in corporate voting.

Applying norm emergence theory, Coleman has assessed that the choice to vote, or not doing so, fits squarely within the norm emergence framework, in that the choice to vote acts as a social norm.²⁰⁴ Applied broadly, Coleman assumes that there is a system of actors, each of whom has an interest in the outcome of an election, but a negative interest in the actual act of voting.²⁰⁵ Because of the nature of elections, each actor has only a small fraction of control over the election through their individual

201. See Brav et al., *supra* note 9, at 493.

202. Some have considered the two similar, building analogies upon one another on the premise that:

Like civic governance, corporate governance has many dimensions, but there are good reasons to single out voting rights as its foundation stone. Voting rights necessarily define a baseline of power relations. In and of themselves, of course, they do not do so completely or sufficiently, but in the first instance they structure relations among individuals.

Colleen A. Dunlavy, *Social Conceptions of the Corporation: Insights from the History of Shareholder Voting Rights*, 63 WASH. & LEE L. REV. 1347, 1354 (2006) (footnote omitted). However, others believe this analogy a “seductive comparison,” arguing that “[c]omparisons of this kind are common and tempting. But corporations and political states are marked by differences so fundamental that it is dangerous to extrapolate lessons from one realm to the other.” Usha Rodrigues, *The Seductive Comparison of Shareholder and Civic Democracy*, 63 WASH. & LEE L. REV. 1389, 1397 (2006) (footnote omitted). Rodrigues points out that:

Four key contrasts between the corporation and the state demonstrate why: (1) investing in a corporation is a completely voluntary endeavor; (2) representative democracy plays only a limited role in a corporation; (3) the shareholder vote, with the important exception of takeovers, is generally an empty exercise; and (4) shareholders have an important power that political voters lack: the power of easy exit through the sale of their shares—that is, the power to leave their polity.

Id. at 1397–98.

203. J. W. Verret, *Pandora’s Ballot Box, or a Proxy with Moxie? Majority Voting, Corporate Ballot Access, and the Legend of Martin Lipton Re-Examined*, 62 BUS. LAW. 1007, 1052 (2007). Regarding the comparison between political voting and corporate voting, J. W. Verret suggests that “[a]ll one can do is keep the different objectives of the two spheres in mind throughout the comparison, and remain prepared to alter or abandon principles from civic democracy when comparison is inappropriate.” *Id.*

204. COLEMAN, *supra* note 167, at 291.

205. *Id.*

vote.²⁰⁶ Because of this, each actor's action becomes of interest to all other actors, such that the action of voting has externalities.²⁰⁷ Thus, the demand for a voting norm will arise—in that the outcome of a vote becomes a collective action dilemma.²⁰⁸ However, as discussed, such a demand alone is not sufficient. There must be “the existence of social relationships among potential beneficiaries of the norm.”²⁰⁹ According to Coleman, “[w]hen those conditions are met, there will be a general transfer of rights of control over the action of voting or not voting, by each to all.”²¹⁰ However, some have argued that several of the conditions under which a norm may diminish have occurred in the context of political voting, resulting in lower turnouts.

Hasen, assessing a trend of low voter turnout in the late 1990s²¹¹ under norm emergence theory, observed that “[o]nce a voting norm arises, the theory predicts it should remain stable unless social connectedness decreases or the payoff for free-riding increases to such an extent that obeying the norm becomes an outcome-oriented calculation.”²¹² Hasen then argued that society at the time experienced a period of decreasing social connectedness, in that “many people do not know even three of their neighbors.”²¹³ Further, Hasen observed that Americans at the time worked more and had less time for leisure, such that “[t]he extent to which voting [had to] be ‘scheduled in’ to a busy day [led] to renewed outcome-oriented thinking about voting, creating conditions for the norm’s erosion.”²¹⁴

However, the conditions Hasen identified as attributing to an eroding voting norm regarding lower turnout in political elections during the 1990s provide valuable insight. The opposite trends are occurring today in the context of shareholder voting. So, shareholder voting is set to increasingly become the norm among wireless investors, challenging existing social conventions and ideas traditionally ingrained in corporate behavior. The internet has created the infrastructure that facilitates an unprecedented global scale social connectedness among shareholders. In this framework, the payoffs of voting increase substantially due to declining information costs. This works to significantly strengthen the norm of voting among retail

206. *Id.*

207. *Id.*

208. *See id.*

209. *Id.*

210. *Id.*

211. The year 1996 represented a turnout of 51.7%, the lowest national average since the 1920s. Turnout increased slowly but remained low in 2000 at 54.2% before increasing to 60.1% in 2004. Michael P. McDonald, *National Turnout Rates 1789–Present*, US ELECTIONS PROJECT, <https://www.electproject.org/national-1789-present> [https://perma.cc/5CV2-GTRM] (last visited Mar. 3, 2023).

212. Hasen, *supra* note 172, at 2154.

213. *Id.* at 2154–55.

214. *Id.* at 2155.

investors and create avenues for unprecedented shifts in corporate governances.

The ability for wireless investors to coordinate and communicate—identified previously as an essential condition for breaking free of the rational apathetic prisoner’s dilemma—has also been pivotal in creating conditions to support the emergence of a voting norm among wireless investors.²¹⁵ The internet, then, aids in both creating social connectedness, through networks, and creating likely the most expansive mechanism for communication in existence.

D. Communities and Norm Generation

Networks have been described as “the building blocks of norm-generating communities.”²¹⁶ Norm emergence requires a community of some kind, and no community can exist without networks through which communication, social norms, and social cues are transferred.²¹⁷ Directly relevant to the emergence of a voting norm, “[r]esearch indicates that more closely interconnected social networks generate mimetic behavior because tighter networks facilitate the transmission of both ideas and norms.”²¹⁸ Thus, the wide reach of the internet has created conditions conducive to increased voting behavior to extend beyond geographic borders.

Since the beginning of history, networks have been created by and through facilitated trust between members.²¹⁹ As discussed previously in the context of collective action among wireless investors, growing trust created through online communities has also worked to support conditions creating a voting norm among retail investors.²²⁰ While this trust was created for the vast majority of history through face-to-face interactions, the internet has allowed digital networks to form and even flourish in challenging social norms.²²¹ While the long-term implications of the internet and its ever-expanding influence are in their infancy, early indications appear that digital networks do, in fact, facilitate trust, trustworthiness, and social capital.²²² Specifically, “the research seems to show that digital networks help to build weak ties, disintermediate engagement, communicate norms, strengthen the ability to coordinate efforts of a network, offer new modes of engagement,

215. See *supra* Part IV.B.

216. Raymond H. Brescia, *The Strength of Digital Ties: Virtual Networks, Norm-Generating Communities, and Collective Action Problems*, 122 DICK. L. REV. 479, 482 (2018).

217. *Id.*

218. Langevoort, *supra* note 38, at 1035.

219. Brescia, *supra* note 216, at 483.

220. See *supra* Part III.

221. Brescia, *supra* note 216, at 483.

222. *Id.* at 528.

amplify network effects, lower transaction costs, and facilitate effective crowdsourcing.”²²³

Beyond the factors identified previously as attributing to lower voting costs for wireless investors, there are a few trends among wireless investors today that relate directly to the inverse relationship between voting costs and the strengthening of a voting norm. First, again parallel to the concept of political voting, research has shown a “strong empirical connection between political knowledge and political participation.”²²⁴ Related to social norms, however, research has specifically shown that “people whose social networks are populated with people who have greater political expertise are more likely to participate in politics.”²²⁵ Further, there seems to be a connection between political talk and political participation.²²⁶ Finally, individuals are more likely, at least somewhat, to engage in information-seeking measures where voting information prompts include references to other connected social media users who reported voting, compared to prompts including no references to social connections.²²⁷ Thus, even where voting information is not spread directly via social networks, indications that others within a social network have sought out information regarding the vote led to an increase in users seeking out their own information.²²⁸

While there is far less data considering whether information costs are lowered via social networks in the context of shareholder voting, there are at least some indications this trend has similarly occurred among retail investors and may lead to increased shareholder voting turnout. Online communities like r/wallstreetbets, developed to facilitate discussion on wireless investors’ participation in the stock market,²²⁹ appear to act as a mechanism for shareholder voting discussion and are potentially responsible for the emergence of a social norm of voting among its users. For instance, users have posted to engage members of the community to discuss their voting decisions, stating “I just got my proxy vote for the 2022 Annual Meeting. How are y’all going to vote? If there’s one company that

223. *Id.* (footnote omitted).

224. David E. Campbell, *Social Networks and Political Participation*, 16 ANN. REV. POL. SCI. 33, 40 (2013).

225. *Id.*

226. *Id.*

227. Robert M. Bond, Christopher J. Fariss, Jason J. Jones, Adam D. I. Kramer, Cameron Marlow, Jamie E. Settle & James H. Fowler, *A 61-Million-Person Experiment in Social Influence and Political Mobilization*, 489 NATURE 295, 296 (2012).

228. *Id.* at 295.

229. Gramitto Ricci & Sautter, *Corporate Governance Gaming*, *supra* note 14, at 59–60.

the proxy votes will actually make a difference, it's probably GME."²³⁰ Similarly, instances of information being disseminated to users with less investment knowledge are also present, including one post informing users that "[i]f this year's timeline resembles last year's, then you *might* have to be a GME shareholder by either April 7th or 14th to vote in the annual meeting where the stock dividend vote will occur."²³¹ Further, users have not shown to be just passive as to obtaining peer-to-peer investment information, with comments on posts asking questions like "I've never understood what those votes are for. I get notices and ultimately end up missing them. What am I missing out on? (Really asking for those who know and want to share the knowledge),"²³² and receiving responses stating:

One of your key rights as a shareholder is the right to vote your shares in corporate elections. Shareholder voting rights give you the power to elect directors at annual or special meetings and make your views known to company management and directors on significant issues that may affect the value of your shares.²³³

Notably, on a post discussing AMC's shareholder vote on March 20, 2021, one user stated: "[t]his is the first time I feel voting on a[n] annual meeting means something. No other stock has given me that feeling."²³⁴ Thus, the r/wallstreetbets community, among many other purposes, has seemingly evolved into a peer-to-peer information-sharing and information-seeking mechanism for wireless investors, potentially resulting in increased turnout and individual information-seeking, as has been the case in political elections.

Accordingly, GenZ'ers are not only set to lead the charge in political voting but also in corporate voting. If wireless investors, led by GenZ'ers, successfully shift the paradigm from not voting in corporate elections to

230. u/AnonymousPotato6, *GME - How Are You Voting?*, REDDIT (Apr. 29, 2022, 7:25 AM), https://www.reddit.com/r/wallstreetbets/comments/uekrsv/gme_how_are_you_voting/ [<https://perma.cc/B5B7-XTXK>].

231. u/OB1KENOB, *GME - You MIGHT Have to Be a Shareholder by Early or Mid-April to Vote on the Stock Dividend Plan in the Annual Meeting in June*, REDDIT (Apr. 2, 2022, 3:02 PM), https://www.reddit.com/r/wallstreetbets/comments/turtay/gme_you_might_have_to_be_a_shareholder_by_early/ [<https://perma.cc/6G3B-T8P8>].

232. u/Capt_Draconn, *What Does This AMC Shareholder Meeting Rule Mean for Counting Synthetic Shares?*, REDDIT (June 3, 2021, 5:49 PM), https://www.reddit.com/r/wallstreetbets/comments/nrpzsx/comment/h0hy47m/?utm_source=share&utm_medium=web2x&context=3 [<https://perma.cc/6EMR-56JL>].

233. u/blast4310, *What Does This AMC Shareholder Meeting Rule Mean for Counting Synthetic Shares?*, REDDIT (June 3, 2021, 5:51 PM), https://www.reddit.com/r/wallstreetbets/comments/nrpzsx/comment/h0hybet/?utm_source=share&utm_medium=web2x&context=3 [<https://perma.cc/6EMR-56JL>].

234. u/Navi79, *AMC Voting Megathread for Saturday, March 20th, 2021*, REDDIT (Mar. 24, 2021, 1:45 AM), https://www.reddit.com/r/wallstreetbets/comments/m97v39/comment/g50t804/?utm_source=share&utm_medium=web2x&context=3 [<https://perma.cc/7D6G-VV9G>].

voting, they will establish a new social norm. Under this new paradigm, every citizen who holds corporate shares with voting rights will feel that they “ought” to vote. Further, investing without exercising voting rights in corporate governance would be frowned upon.

E. Risks and Guardrails

The transition, from rational apathy to an informed and coordinated emergence of retail investors within corporate governance, does not come without risks. One such risk is that information gathered online comes with the potential for overreliance and misinformation. Further, such a transition is not without costs of its own—retail investors may incur transition costs in becoming informed and potentially make poor investment decisions while society as a whole may also incur costs as the entirety of the financial marketplace adjusts to make room for retail investors. These costs will likely yield greater long-term benefits, as retail investors—even those making what may be poor investment decisions—will in turn gain experience and knowledge of the securities markets and acquire an experiential education. Further, the transition costs for society as a collective will also likely be alleviated in that such a transition has the opportunity to upset the status quo system, based on centralized power and reduced personal agency, currently perpetuating inequality.

As anticipated, while the internet allows vast opportunities in terms of corporate governance, it also gives way to risks of misinformation and overreliance. Social media and online forums carry an inherent risk of inaccurate or deceptive information, potentially requiring mechanisms for fact-checking or verification.²³⁵ Misinformation, or “fake news,” has been found to impact stock prices, at least temporarily.²³⁶ Further, there are risks not only of the substance of misinformation, but at the speed and ability it may spread.²³⁷ Despite this, there are many mechanisms available to act as guardrails to risks of misinformation.

Similarly, a corporate forum, acting as a centralized venue on a company’s website where shareholders can easily gather information and ask questions, offers the opportunity for companies themselves to rectify misinformation and disinformation—a powerful fact-checking toolkit.²³⁸ Not only would such a proposal offer retail investors a cost-effective and efficient way to gather information, but it would also allow corporations an

235. See Gramitto Ricci & Sautter, *supra* note 1 (manuscript at 14).

236. Marina Niessner, *Does Fake News Sway Financial Markets?*, YALE INSIGHTS (June 27, 2018), <https://insights.som.yale.edu/insights/does-fake-news-sway-financial-markets> [<https://perma.cc/V8WE-QT59>].

237. Gramitto Ricci & Sautter, *supra* note 155, at 1872.

238. *Id.*

opportunity to alleviate public relations costs, in mitigating misinformation spread online, and allow for increased investment in disseminating accurate and easily digestible information to their shareholders.

Despite these risks and potential guardrails, there is no way around the inevitable costs, undertaken by individuals and society, as retail investors transition into the realm of corporate governance. As for individual investors, there is certainly a risk of financial loss in making financial decisions. In fact, “[m]ounting evidence demonstrates that retail investors make predictable, costly mistakes. They save too little, they trade too frequently, they buy high and sell low, they invest in fad instruments they do not understand, and they pay excessive fees.”²³⁹ However, these financial losses may not be without use—financial losses, if a result of educated financial decisions, may lead to increased experience and knowledge of the securities market. Thus, the financial loss may yield an experiential gain. In fact, this phenomenon has been documented, with at least one study indicating that:

[I]t is relatively easy for investors to identify excessive trading activity, understand the nature and resulting costs of the mistake, and avoid it in the future. . . . In light of the significant underperformance of individual investors, our findings suggest that learning from investment mistakes helps individual investors to close to some extent the performance gap to the overall market.²⁴⁰

Retail investors may initially undertake some financial loss in the process of obtaining investing literacy. This negative experience, however, does not always come without a non-monetary benefit. In fact, such financial loss could come with significant educational advantages. As the saying goes, “what doesn’t kill you makes you stronger.” Analogously, mistakes rooted in inadequate investing education can foster investing literacy with positive long-term ramifications.

Further, society as a whole may be impacted by the emergence of the retail investors’ newfound engagement within the financial market. Financial institutions will be required to adapt, potentially altering their “customer acquisition strategy, product mix, pricing, risk management, compliance protocols, and processes for anticipating and meeting funding requirements.”²⁴¹ Additionally, such a change may result in a period of

239. Jill E. Fisch & Tess Wilkinson-Ryan, *Why Do Retail Investors Make Costly Mistakes? An Experiment on Mutual Fund Choice*, 162 U. PA. L. REV. 605, 606 (2014) (footnote omitted).

240. Maximilian Koestner, Benjamin Loos, Steffen Meyer & Andreas Hackethal, *Do Individual Investors Learn from Their Mistakes?*, 87 J. BUS. ECON. 669, 701 (2017).

241. DELOITTE CTR. FOR FIN. SERVS., DELOITTE, *THE RISE OF NEWLY EMPOWERED RETAIL INVESTORS: HOW THEY’RE CHANGING CUSTOMER EXPECTATIONS AND INVESTING DYNAMICS* 2

instability in the financial market, in that “[c]ertain actions of retail investors can raise concerns about market functioning. Sudden bursts of trading activity can push prices far away from fundamental values, especially for less liquid securities, thus impairing their information content.”²⁴²

Despite such a cost, however, the costs undertaken by society will likely yield far greater benefits. Retail investors’ increased influence within corporate governance has the potential to challenge longstanding systems and ideas, based on centralized power and reduced personal agency, increasingly exacerbating inequality. The divergence of institutional investors’ and individuals’ interests causes an agency problem.²⁴³ Allowing financial intermediaries to exercise almost exclusive power over corporate governance “raises an additional complexity in that those who act on behalf of institutions may not fairly represent the views of those whose economic interests they are charged with serving.”²⁴⁴ Removing this centralized power, from the hands of institutional investors, creates an avenue to combat inequality by allowing individuals, as investors, to influence corporate governance, decentralizing long-standing power in the hands of few to reflect the views of many.

CONCLUSION

Game theory offers a new explanation of traditional investors’ apathy. Although investors know that they would be better off voting the shares they own, their traditional inability to communicate and coordinate collective endeavors has been driving them toward the suboptimal option of nonengagement. A new information technology landscape combined with the habit of Millennials and GenZ’ers to “hang out” online, however, make circulation of information and coordination on a global scale the new paradigm. The substantial change of context in which retail investors operate is set to determine a new norm in investing and corporate governance. Staying apathetic will no longer be rational, and investors will finally strive to reach the optimal outcome rather than settle for a suboptimal one.

(2021), <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-the-rise-of-newly-empowered-retail-investors-2021.pdf> [<https://perma.cc/Y5ZJ-8BEB>].

242. Sirio Aramonte & Fernando Avalos, *The Rising Influence of Retail Investors*, BIS Q. REV., Mar. 2021, at 6, 6–7.

243. See Jill E. Fisch, *Mutual Fund Stewardship and the Empty Voting Problem*, 16 BROOK. J. CORP. FIN. & COM. L. 71, 84 (2021).

244. *Id.* at 95.