

REGULATION BY SURVEY

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INTRODUCTION	603
I. THREE PROVING GROUNDS FOR REGULATION BY SURVEY	607
<i>A. Robo-Advisers</i>	610
<i>B. Crowdfunding</i>	617
<i>C. Virtual Space</i>	622
II. A REGULATORY MODEL AND ITS BENEFITS	632
<i>A. Regulation by Survey Improves Regulator Market Surveillance and Understanding</i>	633
<i>B. Regulation by Survey Promotes Market Confidence</i>	636
<i>C. Regulation by Survey Allows Investors to Engage in Improved Decision-Making</i>	640
III. ARGUMENTS AGAINST REGULATION BY SURVEY	645
<i>A. Regulation by Survey Detects Injuries After They Have Occurred</i>	646
<i>B. Regulation by Survey Depends on Investors to Provide Meaningful Information</i>	647
<i>C. Regulation by Survey Permits Trolling and Manipulation</i>	648
<i>D. Regulation by Survey Creates Additional Administrative Costs</i>	650
CONCLUSION	652

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Abstract: The world has changed dramatically since Congress promulgated the Securities Act of 1933 and the Securities Exchange Act of 1934—especially in the realm of financial technology. Regulators have struggled to address and close the regulatory lag that exists between financial innovation and regulation. Detecting wrongdoing, understanding market behavior, and learning investor preferences have always been and continue to be challenges in closing this gap. This Article recommends supplementing existing federal securities law with a novel form of market surveillance that I have termed, “regulation by survey,” which involves the surveying by regulators of investors for purposes of gaining a deeper understanding of what is occurring within securities markets. The benefits of regulation by survey are plentiful; it improves regulator surveillance and understanding, promotes market confidence, and allows investors to engage in improved decision-making. Although several concerns exist regarding regulation by survey—namely that it detects injuries after they have occurred, depends on investors to provide meaningful information, permits trolling and manipulation, and creates administrative costs—its benefits far outweigh any concerns. This Article contributes to the existing literature in three main ways. First, it proposes “regulation by survey,” a unique form of market surveillance that would not have been possible at the time of the passage of the Securities Act of 1933 and the Securities Exchange Act of 1934. Second, it identifies three emerging areas of securities regulation with market transparency and market surveillance concerns—the regulation of robo-advisers, crowdfunding, and virtual worlds—and it suggests that these emerging areas be used as a proving ground for regulation by survey. Third, it discusses the benefits of a novel theory of regulation, i.e., regulation by survey, that can be used widely throughout the realm of securities law and beyond.

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INTRODUCTION

The United States is viewed by many as having a high-quality system of federal securities regulation.¹ This system can be credited for the dominance of the capital markets in the United States for much of the last century.² Although the dominance of these markets has waned somewhat with the rise of strong national and regional markets abroad,³ the United States is still viewed as a preferred jurisdiction to raise capital, which is thanks in no small part to its first-rate system of securities law.⁴

¹ See Nathaniel G. Dutt, *Current United States Credit Default Swap Regulatory Initiatives: A New World Standard or Just a Ploy?*, 16 ILSA J. INT'L & COMP. L. 169, 186 (2009) (“[T]he United States is the leader of the financial markets and the world looks to the United States for guidance as to regulatory initiatives.”); Howell E. Jackson, *A System of Selective Substitute Compliance*, 48 HARV. INT'L L.J. 105, 119 (2007) (“For much of the twentieth century, the [U.S. Securities and Exchange] Commission justly considered itself to be the world’s premier securities market regulator.”); George W. Madison & Stewart P. Greene, *TIAA-CREF Response to A Blueprint for Cross-Border Access to U.S. Investors: A New International Framework*, 48 HARV. INT'L L.J. 99, 100 (2007) (“The SEC performs its task admirably—and sets the standard against which all other regulators around the globe are judged. The U.S. market is desirable and one of the most efficient at raising capital. The SEC, with its track record and high standards for protecting investors, has historically been a leader in setting benchmarks for market regulation.”).

² See Robert G. DeLaMater, *Recent Trends in SEC Regulation of Foreign Issuers: How the U.S. Regulatory Regime is Affecting the United States’ Historic Position as the World’s Principal Capital Market*, 39 CORNELL INT'L L.J. 109, 109 (2006) (“Since World War II, the United States has been the world’s principal capital market. This market has been uniquely broad and deep . . .”); C. Nicholas Revelos, *Transnational Securities Regulation: Can U.S. Investors Have Their Cake and Eat It Too?*, 3 J. INT'L L. & PRAC. 87, 87 (1994) (“For many years, the U.S. securities markets were essentially the only game in the world.”).

³ See Edward F. Greene, *Beyond Borders: Time to Tear Down the Barriers to Global Investing*, 48 HARV. INT'L L.J. 85, 85 (2007) (“There can be no argument that the securities markets are now global and that the dominance of the United States as the leading player in the global marketplace is being challenged.”); Mark J. Hanson, *Becoming One: The SEC Should Join the World in Adopting the International Financial Reporting Standards*, 28 LOY. L.A. INT'L & COMP. L. REV. 521, 540 (2006) (“America’s financial markets no longer operate in a vacuum. What was once U.S. hegemony in terms of dominating the world’s capital markets is now being successfully challenged.”); Jonathan Shafter, *The Due Diligence Model: An Executive Approach to Odious Debt Reform*, 32 N.C.J. INT'L L. & COM. REGUL. 669, 693 (2007) (“[W]hile the United States is certainly a dominant force in global capital markets, its proportionate dominance is far less than it once was.”).

⁴ See James D. Cox, Response, *Securities Class Actions as Public Law*, 160 U. PA. L. REV. PEN-NUMBRA 73, 75 (2011), https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1084&context=penn_law_review_online [<https://perma.cc/TXN2-GHY6>] (“To be sure, U.S. capital markets do not enjoy the dominance they had twenty-five years ago, but they still are attractive for domestic and foreign issuers at a level that makes U.S. markets competitive.”); Jens Dammann & Horst Eidenmüller, *Codetermination: A Poor Fit for U.S. Corporations*, 2020 COLUM. BUS. L. REV. 870, 937 (“[T]he United States has the most developed capital market in the world and is thus able to infuse new firms with massive amounts of capital quickly.”); Adi Grinapell, *Dual-Class Stock Structure and Firm Innovation*, 25 STAN. J.L. BUS. & FIN. 40, 81 (2020) (“The U.S. financial market provides significant advantages over foreign stock exchanges for its listing firms, as it is the most liquid capital market in the world and has better access to global investors.”).

Nevertheless, the United States system of federal securities regulation is not perfect. Financial regulators have struggled to keep pace with financial technology (FinTech).⁵ This has generated regulatory lag (RegLag), i.e., a gap between current regulation and effective regulation of innovation.⁶ The model of securities regulation that was developed in the 1930s is a good one, but it needs to be updated and adapted regularly to meet the needs of the current world, especially in regard to technology.⁷ This includes harnessing the power of regulatory technology (RegTech) for the purposes of market surveillance, providing cybersecurity, and ensuring compliance with securities law.⁸

⁵ See William Magnuson, *Regulating Fintech*, 71 VAND. L. REV. 1167, 1215 (2018) (“[R]egulators currently struggle to understand and monitor fintech’s behavior.”); Robert Savoie & Philip (PJ) Hoffman, *The Evolving Regulatory Response to Innovation: Special Purpose National Bank Charters, Regulatory Sandboxes, and No-Action Letters*, 74 BUS. LAW. 527, 531 (2019) (“As traditional financial institutions and fintech companies push innovation, regulators and legislators are struggling to keep up.”); Cheng-Yun Tsang, *From Industry Sandbox to Supervisory Control Box: Rethinking the Role of Regulators in the Era of FinTech*, 2019 U. ILL. J.L. TECH. & POL’Y 355, 356 (“The rise of financial technology (fintech) has transformed modern financial markets and poses unprecedented challenges to regulators.”).

⁶ See John W. Bagby & Nizan G. Packin, *Regulatory Technology Shortens Regulatory Lag with Predictive Regulation Targeting Disruptive Technology*, 41 BANKING & FIN. SERVS. POL’Y REP. 1, 1 (2022) [hereinafter Bagby & Packin, *Regulatory Technology*] (“Regulation persistently suffers delay starting at the initial detection of a ‘regulable activity’ until its deployment of effective regulatory response. This is regulatory lag (RegLag).”); John W. Bagby & Nizan G. Packin, *RegTech and Predictive Lawmaking: Closing the RegLag Between Prospective Regulated Activity and Regulation*, 10 MICH. BUS. & ENTREPRENEURIAL L. REV. 127, 129–30 (2021) (reporting that RegLag occurs when “regulators . . . are . . . hamstrung in defining regulable activity by one or more of the following: (i) strict constructionism; (ii) opacity; (iii) narrowly defined wrongs too often resulting from political compromise; (iv) wrongdoer stealth; and/or (v) limited investigatory and enforcement budgets or agency expertise”).

⁷ See John C. Calhoun, *Looking for the Dog That Didn’t Bark: Do Increased SEC Budgets Reduce Rates of Securities Fraud?*, 41 VT. L. REV. 209, 234 (2016) (“Although the SEC is one of the most technically advanced securities regulators in the world, it usually lags the pace of innovation in its regulated industries.”); Stephen J. Choi & Andrew T. Guzman, *National Laws, International Money: Regulation in a Global Capital Market*, 65 FORDHAM L. REV. 1855, 1856 (1997) (“The current framework for securities regulation in the United States emerged from the Great Depression of the 1930s.”); Denis T. Rice, *The Regulatory Response to the New World of Cybersecurity*, 51 ADMIN. L. REV. 901, 902 (1999) (“In an increasingly complex and fast-moving world, this means that those who administer existing statutes must reinterpret them in new ways to address new realities. This pattern is exemplified by the impact of the Internet, and related types of computer networks on the securities marketplace.”); Jane Kaufman Winn, *Regulating the Use of the Internet Securities Markets*, 54 BUS. LAW. 443, 458 (1998) (“Because competitive forces will continue to push participants in securities markets to find ways to take advantage of new technologies such as the Internet, regulators in the United States and other countries will have to continue reexamining their existing laws in light of new developments in global securities markets.”).

⁸ See Lawrence G. Baxter, *Adaptive Financial Regulation and RegTech: A Concept Article on Realistic Protection for Victims of Bank Failures*, 66 DUKE L.J. 567, 600 (2016) (“RegTech . . . involves the development, testing, and deployment of automated systems of compliance, reporting, and surveillance by regulators.”); Yueh-Ping (Alex) Yang & Cheng-Yun Tsang, *RegTech and the New Era of Financial Regulators: Envisaging More Public-Private-Partnership Models of Financial Regu-*

This Article recommends augmenting existing United States federal securities law with a form of market surveillance for which I have coined the term “regulation by survey.”⁹ Regulation by survey is the surveying by regulators of investors for the purposes of understanding market behavior and detecting wrongdoing. The surveying should entail both narrative responses and rankings to maximize the amount and comparability of information received. The information obtained should then be made freely available online for use by investors, regulators, researchers, and anyone else who might find the information helpful. Although such an approach would have been desirable from the outset, regulation by survey would not have been feasible at the time of promulgation of the Securities Act of 1933¹⁰ and Securities Exchange Act of 1934¹¹ due to the state of communication during that period, especially the lack of the internet.¹²

The development of online communication has made regulation by survey plausible.¹³ This Article advocates for the general use of regulation by survey by government officials as a tool for observing and understanding securities markets, especially the experiences and needs of retail investors.¹⁴ Specifi-

lators, 21 U. PA. J. BUS. L. 354, 357 (2018) (“RegTech generally stands for the use of technological solutions to improve regulatory compliance By adopting the advanced technological innovations, such as robotics, artificial intelligence, biometrics, cryptography, blockchain and cloud computing, to facilitate financial regulation and supervision, RegTech can help both the financial institutions and regulators in carrying out the regulatory reporting, risk management, and even behavioral monitoring more effectively.”); Dirk A. Zetsche, Ross P. Buckley, Douglas W. Arner & Janos N. Barberis, *From FinTech to TechFin: The Regulatory Challenges of Data-Driven Finance*, 14 N.Y.U. J.L. & BUS. 393, 400 (2018) (“‘RegTech’ is a contraction of the terms ‘regulatory’ and ‘technology,’ and describes the use of technology, particularly information technology (‘IT’), in the context of regulation, monitoring, reporting and compliance.”).

⁹ See *infra* Part II (describing regulation by survey and its benefits).

¹⁰ 15 U.S.C. §§ 77a–77aa.

¹¹ *Id.* §§ 78a–78rr.

¹² See Stephen J. Choi, *Behavioral Economics and the Regulation of Public Offerings*, 10 LEWIS & CLARK L. REV. 85, 86 (2006) (“Many aspects of the securities regulatory regime reflect the means of communication available to investors in the 1930s. . . . Technology today enables methods of a communication far different from those in use in the 1930s.”); Choi & Guzman, *supra* note 7, at 1856 (“The current framework for securities regulation in the United States emerged from the Great Depression of the 1930s. . . . The advent of cheap and widespread communication mechanisms among countries, as well as the development of more reliable clearance and settlement systems to conduct international transactions, radically transformed world capital markets”); Rice, *supra* note 7, at 904 (“In an industry that relies heavily on communication, it is logical to expect that the Internet would affect the issuance and trading of securities. . . . The Internet’s instantaneous and worldwide communication capability did not exist when existing securities laws were passed.”).

¹³ Regulation by survey envisions publishing the crowdsourced information received from investors online so it may be used by anyone who might find the information helpful. See *infra* note 174 and accompanying text (providing an overview of regulation by survey).

¹⁴ See *infra* Part II.A (explaining that regulation by survey enhances securities market surveillance and understanding).

cally, this Article suggests that regulation by survey would be particularly useful and should be tested in the regulation of robo-advisers, crowdfunding, and virtual worlds.¹⁵ These contexts would serve as good proving grounds for regulation by survey because they present emerging legal issues that challenge existing paradigms, and securities law has not yet ossified surrounding them.¹⁶ Each of these contexts also presents special risks to retail investors, which suggests that securities regulators should take special care to monitor these emerging technologies and properly regulate them.¹⁷

This Article contributes to the existing literature in three main ways. First, it proposes a unique form of market surveillance, regulation by survey, that would not have been possible at the time of the passage of the Securities Act of 1933 and Securities Exchange Act of 1934.¹⁸ Second, it identifies three emerg-

¹⁵ See *infra* Part I (providing background information on robo-advising, crowdfunding, and virtual worlds and how they are currently regulated); Part II.A (describing how regulation by survey enhances securities market surveillance and understanding).

¹⁶ See Pablo Sanz Bayón & Luis Garvía Vega, *Automated Investment Advice: Legal Challenges and Regulatory Questions*, 37 BANKING & FIN. SERVS. POL'Y REP. 1, 8 (2018) ("[T]he task of creating an innovative and specific legal framework for robo-advisors ought to be accomplished carefully since . . . there are many mixed features in robo-advisors that could generate new challenges for the existing legal rules, principles, institutions, and entities . . ."); John S. (Jack) Wroldsen, *The Social Network and the Crowdfund Act: Zuckerberg, Saverin, and Venture Capitalists' Dilution of the Crowd*, 15 VAND. J. ENT. & TECH. L. 583, 601 (2013) ("Crowdfunding investment challenges many of the tenets of paper-based securities laws because it relies on the Internet to facilitate mass electronic investment in start-up companies, which would have been impossible in the 1930s when Congress enacted the legislation that continues to govern federal securities regulation."); ABA Global Cyberspace Jurisdiction Project, *Achieving Legal and Business Order in Cyberspace: A Report on Global Jurisdiction Issues Created by the Internet*, 55 BUS. LAW. 1801, 1933 (2000) ("Thus, in contrast to the largely linear, point-to-point linking between buyers and sellers that has heretofore characterized traditional commerce and early e-commerce, securities transactions (as well as other kinds of commerce) will increasingly occur outside of any geographical place in a truly 'virtual world' All these changes make it necessary to consider new, non-geographical or less geographical paradigms.").

¹⁷ See C. Steven Bradford, *Online Arbitration as a Remedy for Crowdfunding Fraud*, 45 FLA. ST. U. L. REV. 1165, 1165 (2018) ("[O]fferings pursuant to the new federal crowdfunding exemption pose a serious risk of fraud. The buyers will be mostly small, unsophisticated investors, the issuers will be mostly small startups about whom little is known, and crowdfunding offerings lack some of the protections available in registered offerings."); Iris H-Y Chiu, *Fintech and Disruptive Business Models in Financial Products, Intermediation and Markets- Policy Implications for Financial Regulators*, 21 J. TECH. L. & POL'Y 55, 88–89 (2016) ("Robo-advisors . . . are essentially automated interfaces that offer investment advice and discretionary investment management services without the intervention of a human adviser Commentators have mixed views on whether robo-advisers can robustly map and interpret investor information accurately and then 'recommend' a range of suitable products to investors."); Julia Puaschunder & Martin Gelter, *The Law, Economics, and Governance of Generation COVID-19 Long-Haul*, 19 IND. HEALTH L. REV. 47, 90 (2022) ("The anonymous participation in new virtual realities currently also brings along completely new problems such as cyber-crime, hate postings and social censorship by online mobs").

¹⁸ See *supra* notes 9–12 and accompanying text (introducing regulation by survey and explaining why it would not have been possible when the Securities Act of 1933 and the Securities Exchange Act of 1934 were enacted).

ing areas of securities regulation with market transparency and market surveillance concerns—the regulation of robo-advisers, crowdfunding, and virtual worlds—and suggests that they be used as a proving ground for regulation by survey.¹⁹ Third, it discusses the benefits of a novel theory of regulation, i.e., regulation by survey, that can be used widely throughout the realm of securities law and beyond.²⁰

The Article is structured as follows. Part I provides an overview of three emerging areas of federal securities law—the regulation of robo-advisers, crowdfunding, and virtual worlds—in which regulation by survey would be a useful addition to the existing regulatory scheme and suggests that each of these areas provides a proving ground for the use of regulation by survey more broadly as a form of securities market regulation.²¹ Part II provides arguments in favor of the use of regulation by survey, including that it improves regulator surveillance and understanding, promotes market confidence, and allows investors to engage in improved decision-making.²² Part III discusses various drawbacks to regulation by survey, including that it detects injuries after they have occurred, depends on investors to provide meaningful information, permits trolling and manipulation, and creates added administrative costs.²³

Ultimately, this Article concludes that regulation by survey is a useful addition to the existing system of securities regulation.²⁴ This is true not only in the context of regulating robo-advisers, crowdfunding, and virtual worlds but more broadly as well. Although this Article advocates for the testing of regulation by survey in the three areas discussed in Part I, it argues for the broader use of regulation by survey as well.²⁵ Regulation by survey is an idea whose time has come.

I. THREE PROVING GROUNDS FOR REGULATION BY SURVEY

Regulation by survey should be adopted widely because it improves regulator surveillance and understanding, promotes market confidence, and allows investors to engage in improved decision-making.²⁶ With that said, immediate,

¹⁹ See *infra* Part I (examining the areas of robo-advising, crowdfunding, and virtual worlds and discussing how they are regulated).

²⁰ See *infra* Part II (outlining regulation by survey and explaining its benefits).

²¹ See *infra* Part I (providing an overview of the regulation of robo-advising, crowdfunding, and virtual worlds).

²² See *infra* Part II (detailing the benefits of regulation by survey).

²³ See *infra* Part III (describing the drawbacks of regulation by survey).

²⁴ See *infra* notes 265–270 and accompanying text (arguing that regulation by survey should be used as a supplement to current securities regulation).

²⁵ See *infra* notes 177, 194–198 and accompanying text (explaining that regulation by survey should first be tested in the three contexts—robo-advisers, crowdfunding, and virtual worlds—and then should be implemented more broadly).

²⁶ See *infra* Part II (explaining the benefits of regulation by survey).

widespread implementation is likely infeasible.²⁷ In addition, reasons exist to be skeptical of regulation by survey.²⁸ As a result, various proving grounds ought to be used to validate and refine the use of regulation by survey in federal securities law.

This Article suggests that the regulation of robo-advisers, crowdfunding, and virtual worlds offer unique opportunities to test and perfect regulation by survey. Each of these areas reflects an emerging area of federal securities law that disrupts and challenges traditional approaches to securities regulation along with a myriad of other areas of law as well.²⁹ As a result, it is easier to test a novel form of regulation in these areas because regulation of these areas is still evolving.³⁰ In addition, each of these areas reflects special risks to retail investors that make regulation by survey especially attractive because of the market surveillance that it affords.³¹ With robo-advisers, the lack of human intermediation between investment advice and investment activities creates increased risks, including catastrophic losses to investors and threats to market

²⁷ See Bagby & Packin, *Regulatory Technology*, *supra* note 6, at 1 (“Regulators are impeded by: (i) confusion in appropriate choice of regulatory agency, (ii) political resistance to initiating new regulatory programs and agencies, (iii) lack of statutory authorization to address novel problems, (iv) jurisdictional competition among regulators, and (v) design of ineffective counter-measures.”).

²⁸ See *infra* Part III (discussing the drawbacks of regulation by survey).

²⁹ See John T. Holden, Ryan M. Rodenberg & Anastasios Kaburakis, *Esports Corruption: Gambling, Doping, and Global Governance*, 32 MD. J. INT’L L. 236, 267 (2017) (“[T]he challenges with applying real world laws to virtual worlds is one that courts are likely going to have to address for the foreseeable future.”); Nicole G. Iannarone, *Rethinking Automated Investment Adviser Disclosure*, 50 U. TOL. L. REV. 433, 445 (2019) (“As the robo-advice industry continues its rapid growth, we should rethink whether the regulatory scheme designed for a different delivery model still fits the new means for delivering investment advice while examining the untested promise of the new technology to fill gaps.”); Jack Wroldsen, *Creative Destructive Legal Conflict: Lawyers as Disruption Framers in Entrepreneurship*, 18 U. PA. J. BUS. L. 733, 776 (2016) (“[T]he legal conflict surrounding equity crowdfunding fits within a creative destructive paradigm because it results directly from a disruptive innovation that clashes with existing laws.”).

³⁰ See Tom Baker & Benedict Dellaert, *Regulating Robo Advice Across the Financial Services Industry*, 103 IOWA L. REV. 713, 714 (2018) (“The growth of investment robo advisors . . . creates significant opportunities and risks that regulators across the financial services spectrum have yet to systematically assess, let alone address.”); Pedro Magalhães Batista & Wolf-Georg Ringe, *Dynamism in Financial Market Regulation: Harnessing Regulatory and Supervisory Technologies*, 4 STAN. J. BLOCKCHAIN L. & POL’Y 203, 206–07 (2021) (“[P]roducts and services such as crowdfunding, digital currencies, and initial coin offerings all seem to partly display features of solutions that have evolved to sidestep regulation. . . . Regulatory effectiveness requires that policymakers and regulators are continually learning while they regulate, monitoring how market changes can potentially lead to consumer harm or financial instability, and preparing the appropriate counter-measures.”); Wendy Gerwick Couture, *The Risk of Regulatory Arbitrage: A Response to Securities Regulation in Virtual Space*, 74 WASH. & LEE L. REV. ONLINE 234, 245 (2018) <https://scholarlycommons.law.wlu.edu/wlulr-online/vol74/iss2/1/> [<https://perma.cc/NR9X-CBW5>] (describing the application of securities regulation to virtual space as a “burgeoning area”).

³¹ See *infra* notes 32–35 and accompanying text (discussing the unique risks that robo-advisers, crowdfunding, and virtual worlds pose to retail investors).

integrity.³² With crowdfunding, the removal of the traditional registration requirements under Section 5 of the Securities Act³³ creates increased risk of investors falling victim to fraud and other improper behavior.³⁴ Also, with virtual worlds, despite the fact that securities law almost certainly applies within these realms, the gamification of securities trading creates the risk that investors will fail to understand and appreciate the implications of their actions, especially in light of the anonymity and ubiquity of the internet.³⁵ In short, each of these areas would benefit from the additional information that regulation by survey can afford.

³² See Baker & Dellaert, *supra* note 30, at 742–43 (“[I]f one robo advisor gains truly massive market share, or if the models underlying competing robo advisors are sufficiently alike, there is a risk of highly correlated losses that could even pose systemic risk.”); Marta Infantino & Weiwei Wang, *Algorithmic Torts: A Prospective Comparative Overview*, 28 TRANSNAT’L L. & CONTEMP. PROBS. 309, 322 (2019) (“A vivid illustration of the risks posed by financial robo-advisors is the Flash Crash of 2010, in which recursive algorithmic trading wiped out \$600 billion in market value off U.S. corporate stocks in 20 minutes.”); Moran Ofir & Ido Sadeh, *More of the Same or Real Transformation: Does FinTech Warrant New Regulations?*, 21 HOUS. BUS. & TAX L.J. 280, 296 (2021) (“Algorithms with decision-making capacities are increasingly being applied by financial companies, displacing humans and transforming financial service delivery. . . . [T]he use of sophisticated algorithms instead of humans creates new regulatory concerns (e.g., fiduciary duties for robo-advisors) and exacerbate existing financial stability and market integrity risks.”).

³³ 15 U.S.C. § 77e.

³⁴ See Joan MacLeod Heminway, *Business Lawyering in the Crowdfunding Era*, 3 AM. U. BUS. L. REV. 149, 154 (2014) (“When it comes to investment crowdfunding, some think the CROWDFUND Act may go too far in granting an exemption from 1933 Act registration because of, for instance, the capacity of crowdfunding to lead to fraud that causes significant damage to investors.”); Rafael A. Porrata-Doria, Jr., *Resolving the Crowdfunding Conundrum: The Experience of the United States and Spain*, 9 AM. U. BUS. L. REV. 219, 223–24 (2020) (“Crowdfunding presents a difficult conundrum for markets and regulations faced with two contradictory missions: facilitating the acquisition of capital by businesses and protecting investors (and the market) from fraud and manipulation. . . . The easier a regulator makes it for a startup company to raise capital by deregulating the process, the less protection investors have against fraud and manipulation.”); Andrew A. Schwartz, *Crowdfunding Securities*, 88 NOTRE DAME L. REV. 1457, 1465 (2013) (“The disclosure requirements provided for in current securities laws are meant to protect investors from fraud and ensure that information provided by businesses is reliable. Therefore, a possible consequence of the limited disclosure associated with crowdfunding is increased fraud and inaccurate information.”).

³⁵ See Iris H-Y Chiu, *Social Disruptions in Securities Markets—What Regulatory Response Do We Need?*, 28 RICH. J.L. & TECH. 46, 83–84 (2021) (“The US Securities and Exchange Commission (SEC) is looking into whether gamified interactions in online trading apps may be misleading for investors, which could lead to regulatory reform of communications or, even for advice. . . . [G]amified interactions in trading apps can encourage herding in trading behavior. . . .”); Kyle Langvardt & James Fallows Tierney, *On “Confetti Regulation”: The Wrong Way to Regulate Gamified Investing*, 131 YALE L.J.F. 717, 719–20 (2022), <https://www.yalelawjournal.org/forum/on-confetti-regulation-the-wrong-way-to-regulate-gamified-investing> [<https://perma.cc/RDD8-PZW8>] (“[T]he concern is that gamification . . . may subtly influence investors’ behavior and preferences. This influence may not be transparent to users of these stock-trading apps, causing them to make decisions that are inconsistent with their preferences about how to achieve their financial goals—such as by encouraging maladaptive overconsumption of trades.”).

This Part will offer an overview of the current state of the regulation of robo-advisers, crowdfunding, and virtual worlds. The goal of this Part is to provide a foundation and concrete examples for the examination of the benefits and potential harms of regulation by survey, which will be explored later in this Article.³⁶ Section A of this Part provides background information on the robo-adviser industry and how robo-advisers are regulated.³⁷ Section B details the history of crowdfunding and discusses the regulation of crowdfunding through the Securities Act and Regulation Crowdfunding.³⁸ Finally, Section C defines virtual space and outlines how virtual space can interact with federal securities regulation.³⁹

A. Robo-Advisers⁴⁰

Robo-advisers afford one potential proving ground for regulation by survey. The advent of the first robo-adviser is difficult to determine. Although this Article offers a definition of what constitutes a robo-adviser,⁴¹ multiple definitions of the term exist, and the term is difficult to define with precision.⁴² Despite these definitional difficulties, experts generally agree that Betterment became the first pure robo-adviser firm focused on securities markets when it launched in 2010.⁴³ The growth of the robo-adviser industry since that time has

³⁶ See *infra* Part II (detailing the benefits of regulation by survey); Part III (addressing arguments against regulation by survey).

³⁷ See *infra* Part I.A (providing background information on the robo-adviser industry and its regulation).

³⁸ See *infra* Part I.B (exploring the history of crowdsourcing and how it is regulated).

³⁹ See *infra* Part I.C (defining virtual space and describing its interactions with federal securities regulation).

⁴⁰ I discuss regulating robo-advisers in a forthcoming book chapter. See generally Eric C. Chaffee, *Securities Regulation and Artificial Intelligence: Regulating Robo-Advisers*, in THE CAMBRIDGE HANDBOOK OF PRIVATE LAW AND ARTIFICIAL INTELLIGENCE 557 (Ernest Lim & Phillip Morgan eds., forthcoming 2024). The discussion of robo-advisers in this Article builds upon that work.

⁴¹ See *infra* note 49 and accompanying text (defining the term “robo-adviser”).

⁴² See *infra* note 50 and accompanying text (providing various other definitions of the term “robo-adviser”).

⁴³ See Andrea L. Seidt, Noura Zaharis & Charles Jarrett, *Paying Attention to That Man Behind the Curtain: State Securities Regulators’ Early Conversations with Robo-Advisers*, 50 U. TOL. L. REV. 501, 501 (2019) (“Betterment was the first pure robo-adviser firm to enter the securities markets in 2010.”); Megan Ji, Note, *Are Robots Good Fiduciaries? Regulating Robo-Advisors Under the Investment Advisers Act of 1940*, 117 COLUM. L. REV. 1543, 1559 (2017) (“Betterment became the first major player in the market when it launched in 2010”); Bret E. Strzelczyk, Note, *Rise of the Machines: The Legal Implications for Investor Protection with the Rise of Robo-Advisors*, 16 DEPAUL BUS. & COM. L.J. 54, 55 (2017) (“In 2010, the robo-advisor platform, Betterment, burst onto the scene offering low cost financial advice without a human element.”); BETTERMENT, <https://www.betterment.com/about> [https://perma.cc/XW5G-QZRG].

been substantial.⁴⁴ At the end of 2020, robo-adviser firms had approximately \$785 billion assets under management, which was an increase from \$631 billion assets under management in 2019.⁴⁵ This equates to approximately a 25% growth rate from 2019 to 2020.⁴⁶ At the end of 2020, leading firms, in terms of assets under management, included Edelman Financial Engines (approximately \$212 billion), Vanguard Personal Advisor Services (approximately \$212 billion), Schwab Intelligent Portfolio Products (approximately \$60 billion), and Betterment (approximately \$28 billion).⁴⁷ Put simply, the robo-advising industry is substantial and growing.⁴⁸

Robo-advisers can generally be defined as client-facing computerized investment tools that provide financial advice or assist in investment management.⁴⁹ Although other definitions exist, this definition is especially useful because it highlights several important aspects of robo-advisers for purposes of developing a coherent system of regulation.⁵⁰ First, this definition acknowl-

⁴⁴ See generally BACKEND BENCHMARKING, THE ROBO REPORT: SECOND QUARTER 2021, at 19 (2021), <https://storage.googleapis.com/gcs.backendb.com/wordpress/media/2021/05/2020Q2-Robo-Report-Robo-Ranking.pdf> [<https://perma.cc/2CH4-ZHYY>] (providing an overview of the growth in the robo-adviser industry).

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ See *supra* notes 43–47 and accompanying text (describing the growth of the robo-adviser industry since Betterment launched in 2010).

⁴⁹ This definition is based in part on the following discussion by the Financial Industry Regulatory Authority (FINRA) from a 2016 Report:

[D]igital investment advice tools (also referred to as digital advice tools) support one or more of the following core activities in managing an investor’s portfolio: customer profiling, asset allocation, portfolio selection, trade execution, portfolio rebalancing, tax-loss harvesting and portfolio analysis. These investment advice tools can be broken down into two groups: tools that financial professionals use, referred to here as “financial professional-facing” tools, and tools that clients use, referred to here as “client-facing” tools. Client-facing tools that incorporate the first six activities—customer profiling through tax-loss harvesting—are frequently referred to as “robo advisors” or “robos.”

FINRA, REPORT ON DIGITAL INVESTMENT ADVICE 2 (2016), <https://www.finra.org/sites/default/files/digital-investment-advice-report.pdf> [<https://perma.cc/C7P3-MCET>]. Although FINRA was not attempting to create a definition of what constitutes a robo-advisers, its guidance greatly informs the definition used within this article. *Id.*

⁵⁰ See Baker & Dellaert, *supra* note 30, at 720 (“[W]e use the term ‘robo advisor’ broadly to refer to any automated service that ranks, or matches consumers to, financial products on a personalized basis.”); Bayón & Vega, *supra* note 16, at 2 (“Robo-advisor is a relatively new player in the financial markets. Although there is no single definition of the term, most authors will agree that a robo-advisor can be roughly defined as an algorithm, software, or computer program that will help investors somehow”); Nicole G. Iannarone, *Computer as Confidant: Digital Investment Advice and the Fiduciary Standard*, 93 CHI.-KENT L. REV. 141, 149 (2018) (“‘Robo-adviser’ as colloquially used encompasses a wide spectrum of services and business models, but all provide investment advice in a digital format using proprietary algorithms.”).

edges that robo-advisers are tools.⁵¹ Robo-advisers are a form of artificial intelligence, and like all current forms of artificial intelligence, are not sentient or conscious.⁵² As a result, robo-advisers are merely a tool for providing financial advice.⁵³ Second, it acknowledges that robo-advisers are client-facing tools.⁵⁴ In many instances, robo-advisers are the same tools used by human investment advisers without a human intermediary transmitting the investment advice.⁵⁵

Even though it is somewhat ill-fitting, robo-adviser firms are subject to the same regulatory scheme as other investment advisers because robo-adviser firms qualify as investment advisers under the Investment Advisers Act of 1940.⁵⁶ Section 202(a)(11) of the Investment Advisers Act defines “investment advisers” as:

⁵¹ See *supra* note 49 and accompanying text (providing a definition for “robo-adviser”).

⁵² See Susan W. Brenner, *Humans and Humans +: Technological Enhancement and Criminal Responsibility*, 19 B.U. J. SCI. & TECH. L. 215, 244 (2013) (“As far as I can determine, there are, as yet, no advocates formally seeking legal personhood for artificial intelligences, probably because a fully sentient artificially intelligent entity has yet to be developed and may well not be developed until much later in this century (at the earliest).”); Brian L. Frye, *The Lion, the Bat & the Thermostat: Metaphors on Consciousness*, 5 SAVANNAH L. REV. 13, 19 (2018) (“‘Strong’ artificial intelligence is a human-made conscious entity. . . . While computer science has many successes in creating weak artificial intelligence, it has no successes in creating strong artificial intelligence.”); H.C. Robinson, *Shifted Personhood: Corporations, Technology, and Law on the Path to Citizens United and Current Electoral Politics in the U.S.*, 18 U. PA. J.L. & SOC. CHANGE 403, 443 (2016) (“Consciousness remains a scientific mystery, and to animate it in artificial intelligence is one of the great projects of our time.”).

⁵³ See Sophia Duffy & Steve Parrish, *You Say Fiduciary, I Say Binary: A Review and Recommendation of Robo-Advisors and the Fiduciary and Best Interest Standards*, 17 HASTINGS BUS. L.J. 3, 3 (2021) (“Automated investment advice platforms, also known as ‘robo-advisors’, are investment advice tools that have quickly grown in popularity over the last decade.”); Robin Feldman & Kara Stein, *AI Governance in the Financial Industry*, 27 STAN. J.L. BUS. & FIN. 94, 102–03 (2022) (“Artificial intelligence, that is, should not yet be understood as a means of replacing human intelligence. Instead, modern artificial intelligence programs, as with tools, function to expand the human capacity to complete a task.”).

⁵⁴ See *supra* note 49 and accompanying text (providing a definition of a “robo-adviser”).

⁵⁵ See Philipp Maume, *Regulating Robo-Advisory*, 55 TEX. INT’L L.J. 49, 64 (2019) (“[A] robo-advisor is algorithm-based software that provides specifically tailored investment recommendations to the client based on the client’s input. . . . Some human financial advisors also use software internally to prepare the advice to be given to the client in person (so-called financial professional-facing tools). This software might even be the same software or algorithms used for client-facing systems.”); Seidt et al., *supra* note 43, at 503 (“[I]n most instances, robos and traditional human advisers are utilizing the same technological tools to provide their service with the primary differences being the robos make their tools directly available to the investor without the human sales force.”).

⁵⁶ See Howell E. Jackson, *The Nature of the Fintech Firm*, 61 WASH. U. J.L. & POL’Y 9, 17 (2020) (“Robo-advisers are typically organized as . . . investment advisers under the supervision of the Securities and Exchange Commission (SEC), Financial Industry Regulator Authority (FINRA), and in certain respects state securities officials.”); Jerry W. Markham, *Regulating Broker-Dealer Investment Recommendations—Laying the Groundwork for the Next Financial Crisis*, 13 DREXEL L. REV. 377, 414 n.240 (2021) (“The SEC has advised that robo advisers are subject to the provisions of the Investment Advisers Act.”) (citing *Investor Bulletin: Robo-Advisers*, SEC (Feb. 23, 2017), <https://www>).

[A]ny person who, for compensation, engages in the business of advising others, either directly or through publications or writings, as to the value of securities or as to the advisability of investing in, purchasing, or selling securities, or who, for compensation and as part of a regular business, issues or promulgates analyses or reports concerning securities ⁵⁷

Consequently, robo-adviser firms are subject to the same disclosure requirements as other investment advisers.⁵⁸ The U.S. Securities and Exchange Commission (SEC) has provided special guidance to robo-adviser firms regarding additional disclosure as well.⁵⁹

As investment advisers, robo-adviser firms are also subject to a variety of fiduciary duties.⁶⁰ In addition to the duty of disclosure discussed above, as investment advisers, robo-adviser firms have duties of loyalty and care.⁶¹ The

sec.gov/oiea/investor-alerts-bulletins/ib_robo-advisers [https://perma.cc/9TUE-SY8Q]); Edward L. Pittman, *Quantitative Investment Models, Errors, and the Federal Securities Laws*, 13 N.Y.U. J.L. & BUS. 633, 641 n.14 (2017) (“Robo-advisers are registered investment advisers, generally regulated by the SEC.”).

⁵⁷ 15 U.S.C. § 80b-2(a)(11).

⁵⁸ See Chris Brummer & Yesha Yadav, *Fintech and the Innovation Trilemma*, 107 GEO. L.J. 235, 284 (2019) (“The SEC has delivered guidance to explain how robo advising can comply with the body of law governing investment advising. . . . The guidance describes the disclosure practices that firms might comply with when using robo advisors in their business; these practices include both general disclosures as well as those specific to robo advice (for example, telling clients that an algorithm is assisting in managing their money).”); Iannarone, *supra* note 29, at 438 (“Whether human or computer, investment advisers under the 1940 Act only meet their fiduciary duty if they provide full disclosure, avoid conflicts of interest, and act in the customer’s best interests.”).

⁵⁹ DIV. OF INV. MGMT., SEC, IM GUIDANCE UPDATE: ROBO-ADVISERS 3–6 (2017), https://www.sec.gov/investment/im-guidance-2017-02.pdf [https://perma.cc/9M4H-24RQ] (discussing the types of specialized disclosures that should be made by robo-adviser firms).

⁶⁰ See Deborah A. DeMott, *The Domains of Loyalty: Relationships Between Fiduciary Obligation and Intrinsic Motivation*, 62 WM. & MARY L. REV. 1137, 1170 (2021) (“It is long settled in the United States that an investment manager or advisor who is registered as an adviser under the Investment Advisers Act of 1940 owes fiduciary duties to her clients”); Paul G. Mahoney & Adriana Z. Robertson, *Advisers by Another Name*, 11 HARV. BUS. L. REV. 311, 313 (2021) (“Professionals who advise investors on portfolio selection are subject to regulation under the Investment Advisers Act of 1940 (IAA) Among other things, the statutory scheme subjects the investment adviser to registration with the SEC, recognizes that the adviser owes fiduciary duties to its clients, and regulates transactions between a fund and its adviser.”); David Min, *Federalizing Bank Governance*, 51 LOY. U. CHI. L.J. 833, 902 (2020) (“Congress clearly has the power to create express laws that affect fiduciary duties. For example, Congress has created fiduciary duties for investment advisors under Section 206 of the Investment Advisers Act of 1940.”).

⁶¹ See Thomas M. Selman, *Protecting Retail Investors: A New Exemption for Private Securities Offerings*, 14 VA. L. & BUS. REV. 41, 58 (2020) (“Registered investment advisers are subject to a fiduciary duty to their clients, which is comprised of duties of loyalty and care. The adviser must, at all times, serve the best interest of its client and not subordinate its client’s interest to its own.”).

duty of loyalty requires that these firms act in the best interests of clients,⁶² and the duty of care requires that these firms reasonably inform themselves in performing their adviser functions to ensure that they offer suitable investment advice.⁶³ Investment advisers are also required to have an internal compliance program to ensure that they are adhering to their fiduciary duties and other legal obligations.⁶⁴

In addition, robo-adviser firms are regulated, in part, by what can be termed “regulation by litigation.”⁶⁵ Under this model, regulation evolves over time through court opinions.⁶⁶ For example, the fiduciary duties discussed

⁶² See David Groshoff, *Equity Crowdfunding as Economic Development?*, 38 CAMPBELL L. REV. 317, 355 (2016) (“Investment advisers have a fiduciary duty to their advisory clients and must act in the best interest of their clients.”); Andrew Melnick, *What’s in a Name: The Battle Over a Uniform Fiduciary Standard for Investment Advisers and Broker-Dealers*, 87 ST. JOHN’S L. REV. 415, 420 (2013) (“Under the Advisers Act, investment advisers are fiduciaries to their clients. An investment adviser is duty-bound to serve the best interests of its clients, including an obligation to act solely in the client’s best interests and thus subordinate its own interests to those of its clients.”).

⁶³ See Barbara Black, *How to Improve Retail Investor Protection After the Dodd-Frank Wall Street Reform and Consumer Protection Act*, 13 U. PA. J. BUS. L. 59, 85 (2010) (“[T]he SEC views the suitability obligation as an aspect of the investment adviser’s fiduciary duty”); William Magnuson, *Artificial Financial Intelligence*, 10 HARV. BUS. L. REV. 337, 367 (2020) (“The Investment Advisers Act requires financial advisors to give suitable investment advice to consumers, taking into account the client’s financial situation, investment experience, and investment objectives.”); Brent T. White, *Walking Away Scot-Free: Trust, Expert Advice, and Realtor Responsibility*, 40 REAL EST. L.J. 312, 358 n.163 (2011) (“Investment advisers owe a fiduciary duty to provide only suitable investment advice.” (citing *General Information on the Regulation of Investment Advisers*, SEC (Mar. 11, 2011), <https://www.sec.gov/investment/divisionsinvestmentiaregulationmemoiahtm> [<https://perma.cc/W353-SRG8>])); Ji, *supra* note 43, at 1552 (“Section 206 provides for two obligations that do stem from the duty of care—suitability and best execution Suitability requires investment advisers to reasonably determine that the advice they give is appropriate to a client’s circumstances.”).

⁶⁴ See James A. Fanto, *The Governing Authority’s Responsibilities in Compliance and Risk Management, as Seen in the American Law Institute’s Draft Principles of Compliance, Risk Management, and Enforcement*, 90 TEMP. L. REV. 699, 701 (2018) (“[I]n 2004 the Securities and Exchange Commission (SEC) required registered investment advisers to have a compliance program with a chief compliance officer (CCO).”); Randall D. Gynn, *The Global Financial Crisis and Proposed Regulatory Reform*, 2010 BYU L. REV. 421, 471 (“Registered investment advisers that are subject to the Advisers Act are required to implement a comprehensive compliance program, adopt a code of ethics and an insider trading policy, comply with certain custody procedures, advertising restrictions and document retention obligations, disclose and report specified information on Form ADV, and be subject to SEC examinations.”); Doris Toyou, *Protection of Private Equity Investors Under the Dodd-Frank Act*, 37 J.L. & COM. 115, 150 (2019) (“[I]nvestment advisers registered with the Commission must develop a comprehensive compliance program administered by a chief compliance officer.”).

⁶⁵ See generally ANDREW P. MORRIS, BRUCE YANDLE & ANDREW DORCHAK, *REGULATION BY LITIGATION* (2009) (defining “regulation-by-litigation” and exploring various regulation-by-litigation case studies).

⁶⁶ *Id.* at 1 (“Regulation-by-litigation . . . uses litigation and the courts to achieve and apply regulatory outcomes to entire industries. Lawyers, both private and public, were bringing suits and achieving ends that could be and traditionally had been achieved by regulatory agencies using rulemaking procedures.”).

above are derived from Section 206 of the Investment Advisers Act of 1940, which provides the following:

It shall be unlawful for any investment adviser, by use of the mails or any means or instrumentality of interstate commerce, directly or indirectly—

(1) to employ any device, scheme, or artifice to defraud any client or prospective client;

(2) to engage in any transaction, practice, or course of business which operates as a fraud or deceit upon any client or prospective client;

(3) acting as principal for his own account, knowingly to sell any security to or purchase any security from a client, or acting as broker for a person other than such client, knowingly to effect any sale or purchase of any security for the account of such client, without disclosing to such client in writing before the completion of such transaction the capacity in which he is acting and obtaining the consent of the client to such transaction. . . . ; or

(4) to engage in any act, practice, or course of business which is fraudulent, deceptive, or manipulative ⁶⁷

Despite the fact that this provision makes no mention of fiduciary duties, in 1963, beginning with *SEC v. Capital Gains Research Bureau, Inc.*,⁶⁸ the Supreme Court has held that this provision provides fiduciary duty standards for investment advisers.⁶⁹ The metes and bounds of these fiduciary duties have

⁶⁷ 15 U.S.C. § 80b-6.

⁶⁸ 375 U.S. 180 (1963).

⁶⁹ See *id.* at 191–92 (“The Investment Advisers Act of 1940 thus reflects a congressional recognition ‘of the delicate fiduciary nature of an investment advisory relationship,’ as well as a congressional intent to eliminate, or at least to expose, all conflicts of interest which might incline an investment adviser—consciously or unconsciously—to render advice which was not disinterested.” (quoting 2 LOUIS LOSS, *SECURITIES REGULATION* 1412 (2d ed. 1961))); Alexander T. Kraik, *Environmental, Social, and Governance Issues: An Altered Shareholder Activist Paradigm*, 44 VT. L. REV. 493, 531 (2020) (“*SEC v. Capital Gains Research Bureau* interpreted § 206 as congressional recognition of the fiduciary nature of an investment-advisory relationship. The agreed-upon legal conclusion is that every investment institution is obligated to further and safeguard the interests of its investors.”); Susan Mosher, *Private Equity Firms: Beyond SEC Registration as an Investment Adviser How to Build and Administer an Effective Compliance Program*, 1 MICH. J. PRIV. EQUITY & VENTURE CAP. L. 177, 178 (2012) (“In 1963, the United States Supreme Court in *SEC v. Capital Gains Research Bureau, Inc.* deliberated on the scope of the fiduciary duties imposed by Section 206 of the Advisers Act.”); Mahoney & Robertson, *supra* note 60, at 331 (“In *SEC v. Capital Gains Research Bureau*, the Supreme Court concluded that a breach of an adviser’s fiduciary duty of loyalty constituted a violation of the IAA’s general antifraud provision, Section 206.”).

been established, in large part, by litigation in federal court.⁷⁰ Similarly, the implied right of action under Section 10(b) of the Securities Exchange Act of 1934⁷¹ and Rule 10b-5⁷² promulgated thereupon, which are also applicable to robo-advisers because of their involvement in securities transactions, were also created and refined through extensive litigation.⁷³

The question then becomes: what might be added to the existing framework to improve the regulation of robo-advisers without stifling innovation in this area? Robo-advisers have been praised as a means of providing accessible and affordable investment advice to a much wider range of investors.⁷⁴ Be-

⁷⁰ See Roberta S. Karmel, *The Challenge of Fiduciary Regulation: The Investment Advisers Act After Seventy-Five Years*, 10 BROOK. J. CORP. FIN. & COM. L. 405, 410 (2016) (“The SEC pursued other fraudsters using section 206, emboldened by the Supreme Court’s imposition of a formal fiduciary duty. Between the 1960s and 1980s, the SEC became more forceful with its use of section 206, not only to eradicate practices like scalping, but also to eliminate *any* conduct it felt was inconsistent with the *Capital Gains* fiduciary duty standard.”); Christine Lazaro, *The Future of Financial Advice: Eliminating the False Distinction Between Brokers and Investment Advisers*, 87 ST. JOHN’S L. REV. 381, 394 (2013) (“Over time, courts interpreted the antifraud section of the Advisers Act to establish a federal fiduciary duty on the part of investment advisers”); Paul Rissman & Diana Kearney, *Rise of the Shadow ESG Regulators: Investment Advisers, Sustainability Accounting, and Their Effects on Corporate Social Responsibility*, 49 ENV’T L. REP. NEWS & ANALYSIS 10155, 10179 (2019) (“The contours of an [investment adviser’s] fiduciary duty to act in the client’s best interest emerge from a web of statutes and common law: the Investment Advisers Act of 1940 regulates the behavior of investment advisers and protects their customers from any deceptive behavior, while subsequent case law from the Supreme Court and lower courts alike affirm that this protection specifically creates fiduciary duties of care and loyalty on investment advisers.”).

⁷¹ 15 U.S.C. § 78j(b).

⁷² 17 C.F.R. § 240.10b-5 (2023).

⁷³ See Jill E. Fisch, *As Time Goes By: New Questions About the Statute of Limitations for Rule 10b-5*, 61 FORDHAM L. REV. S101, S101 (1993) (“There are dozens of Supreme Court decisions and perhaps thousands of lower court opinions addressing problems of statutory interpretation that arise in connection with private rights of action under section 10(b) of the Securities Exchange Act of 1934 (‘1934 Act’) and Rule 10b-5 of the Securities and Exchange Commission (‘SEC’).”); James D. Gordon III, *Acorns and Oaks: Implied Rights of Action Under the Securities Acts*, 10 STAN. J.L. BUS. & FIN. 62, 62 (2004) (noting that “federal courts have issued thousands of decisions defining the scope of th[e] private right of action” under § 10(b) and Rule 10b-5); Steven Thel, *Section 12(2) of the Securities Act: Does Old Legislation Matter?*, 63 FORDHAM L. REV. 1183, 1189 (1995) (“The Supreme Court did not decide its first rule 10b-5 case until a large body of law had already developed in hundreds of lower court decisions. A tremendous body of case law from the lower courts still governs innumerable questions. However, in more than a dozen cases, the Supreme Court itself has established most of the basic doctrines that govern private actions for violations of rule 10b-5.”).

⁷⁴ See Bayón & Vega, *supra* note 16, at 5 (“[T]he other advantage of robo-advisors is to take advantage of economies of scale since they can manage data from thousands of customers and thousands of products, assets, and portfolios, and additionally because thanks to the algorithmic trading they can turn the investment services into a low-cost model”); Iris H.-Y. Chiu, *The Regulatory Implications and Limitations of Robo-Advice*, 38 BANKING & FIN. SERVS. POL’Y REP. 11, 18 (2019) (“It has been observed that robo-advisers are able to offer on-demand 24/7 access in the comfort of one’s environment as long as one has an internet connection. . . . The cost of use is also generally lower than other forms of investment fund management, as annual charges can be three times lower.”); Duffy &

cause of the lack of human intermediation between the technology and the investor, robo-advisers create risks of unique quality and kind, in comparison to other investment adviser relationships.⁷⁵ More aggressive interventions could be used to reduce these risks, but they create the danger of destroying or hobbling the industry. The imposition of merit regulation, for example, can lead to investors being prevented from investing in innovative technology.⁷⁶ During the 1980s, for example, Massachusetts, a state with merit-based securities regulation, banned the sale of stock in Apple Computer Inc. because it was too speculative.⁷⁷ Further, for better or worse, Ohio, another state with merit regulation, has historically prevented individuals from investing in the prevailing model of peer-to-peer lending.⁷⁸ For that reason, a mechanism that provides improved surveillance of the relationship between robo-advisers and investors without stifling innovation is needed and, as will be explained later in this Article, is exactly what regulation by survey affords.

B. Crowdfunding⁷⁹

Crowdfunding offers another proving ground for regulation by survey. Crowdfunding was originally conceived of as means of allowing widely dispersed individuals to support artistic activities or to provide charity via the internet, usually through the use of social media.⁸⁰ Because these types of fund-

Parrish, *supra* note 53, at 19 (“[R]obo-advised services are typically offered at a lower cost compared to a human advisor, making advisor services more accessible to a broader population.”).

⁷⁵ See *supra* note 32 and accompanying text (discussing the unique risks created by robo-advisers).

⁷⁶ See *infra* note 215 and accompanying text (defining “merit regulation”).

⁷⁷ See Usha R. Rodrigues, *Dictation and Delegation in Securities Regulation*, 92 IND. L.J. 435, 499 n.411 (2017) (“Massachusetts used merit review to bar its residents from buying Apple stock in the 1980s because it was deemed to be too risky.”).

⁷⁸ See Eric C. Chaffee & Geoffrey C. Rapp, *Regulating Online Peer-to-Peer Lending in the Aftermath of Dodd-Frank: In Search of an Evolving Regulatory Regime for an Evolving Industry*, 69 WASH. & LEE L. REV. 485, 491, 520 (2012) (“Online [peer-to-peer] lending can be defined as any transaction arranged using the Internet in which one or more individuals lend money to one or more other individuals.” . . . “Ohio, through its Department of Commerce, Division of Securities, blocked Prosper.com [a peer-to peer lending platform] from accepting ‘investors.’ . . . Ohio requires ‘merit review’ for securities registrants . . .”).

⁷⁹ I have previously discussed crowdfunding as part of a treatise on securities regulation and the internet. See generally HOWARD M. FRIEDMAN & ERIC C. CHAFFEE, *SECURITIES REGULATION IN CYBERSPACE* § 5.03 (4th ed. Supp. 2023) (discussing the origins of crowdfunding and the CROWD-FUND Act). The discussion of crowdfunding in this Article builds upon that work.

⁸⁰ See Edan Burkett, *A Crowdfunding Exemption? Online Investment Crowdfunding and U.S. Securities Regulation*, 13 TRANSACTIONS: TENN. J. BUS. L. 63, 71 (2011) (“[Crowdfunding’s] conceptual origins are in charitable giving. By the 1990s, however, some musicians and filmmakers raised money through online funders.”); Thaya Brook Knight, Huiwen Leo & Adrian A. Ohmer, *A Very Quiet Revolution: A Primer on Securities Crowdfunding and Title III of the Jobs Act*, 2 MICH. J. PRIV. EQUITY & VENTURE CAP. L. 135, 136 (2012) (“[C]rowdfunding has previously focused on projects

ing activities did not involve investment for a profit, they typically fell outside of the realm of federal securities regulation.⁸¹ In 2010, for example, the SEC issued a no-action letter to Poplogix LLC,⁸² a company that proposed facilitating crowdfunding of specific art projects through the creation of a website that allowed artists to solicit loans to support their work from members of the public via the internet.⁸³ As proposed, lenders who funded artist projects would be repaid the principal of their loans without interest or receiving artwork or anything else of value.⁸⁴ Poplogix's counsel requested a no-action letter from the SEC based on their opinion that the loans were not securities under Section 2(a)(1) of the Securities Act of 1933.⁸⁵ The Division of Corporate Finance issued a no-action letter stating it would not seek an enforcement action if Poplogix solicited the loans without registering with the SEC.⁸⁶

such as artistic works, community service, and product development for items with a sufficiently high coolness factor to draw donors despite the lack of financial gain.”); Thomas Murphy, Note, *Playing to a New Crowd: How Congress Could Break the Startup Status Quo by Raising the Cap on the Jobs Act's Crowdfunding Exemption*, 58 B.C. L. REV. 775, 791 (2017) (“[C]rowdfunding largely happens through Internet portals, blending social networking with capital raising. Popular online crowdfunding portals include Kickstarter, Indiegogo, and GoFundMe.”); Lynnise E. Phillips Pantin, *What's Wrong with Jumpstart(ing) Our Business Startups (JOBS) Act?*, 16 N.Y.U. J.L. & BUS. 185, 199 (2019) (“Before the JOBS Act, project-based crowdfunding was the predominant model for solicitation via the internet because entrepreneurs were prevented from soliciting the public to invest in the securities of their company. As a result, crowdfunding was primarily used for donations and fundraising for feel-good projects or to support the arts.”); Kurtis Urien & David Groshoff, *An Essay Inquiry: Will the JOBS Act's Transformative Regulatory Regime for Equity Offerings Cost Investment Bankers' Jobs?*, 1 TEX. A&M L. REV. 559, 569 (2014) (“Crowdfunding began with charitable giving, and then was adapted for use of funding artistic projects of musicians and filmmakers.”).

⁸¹ See Abraham J.B. Cable, *Mad Money: Rethinking Private Placements*, 71 WASH. & LEE L. REV. 2253, 2255 n.3 (2014) (“Prior to the JOBS Act, crowdfunding sites were limited to charitable purposes or advanced product sales, out of concern that sale of stock would violate securities laws.”); Thomas Lee Hazen, *Crowdfunding or Fraudfunding - Social Networks and the Securities Laws - Why the Specially Tailored Exemption Must Be Conditioned on Meaningful Disclosure*, 90 N.C. L. REV. 1735, 1737 (2012) (“Unlike raising money for charities or other nonprofit ventures, a business seeking investors through crowdfunding implicates the securities laws which provide investor protection by requiring disclosure and, in many instances, registration of securities offered to the public.”); Joan MacLeod Heminway, *What Is a Security in the Crowdfunding Era?*, 7 OHIO ST. ENTREPRENEURIAL BUS. L.J. 335, 359 (2012) (“Crowdfunding interests regulated as securities are regulated under the relatively weighty realm of securities regulation (federal and state), while those that are not securities are subject to a different regulatory regime (e.g., charitable or other nonprofit donation, gambling or consumer protection regulation).”).

⁸² Poplogix LLC, SEC No-Action Letter (Nov. 5, 2010), 2010 WL 4472794, <https://www.sec.gov/divisions/corpfin/cf-noaction/2010/poplogix110510-2a1.htm> [<https://perma.cc/BS6Y-4DC9>].

⁸³ See Letter from Edwin T. Markham, Satterlee Stephens Burke & Burke LLP, Counsel to Poplogix LLC, to Office of Chief Counsel, SEC 1 (Oct. 1, 2010), <http://www.sec.gov/divisions/corpfin/cf-noaction/2010/poplogix110510-2a1-incoming.pdf> [<https://perma.cc/SFF4-TLC4>].

⁸⁴ *Id.* at 2.

⁸⁵ *Id.* at 18; 15 U.S.C. § 77b(a)(1).

⁸⁶ See Poplogix LLC, SEC No-Action Letter, *supra* note 82, at *1 (“[T]he Division will not recommend enforcement action to the Commission if, in reliance on your opinion as counsel that neither

As crowdfunding evolved, the application of federal securities regulation to various models of crowdfunding became apparent. For example, in 2011, in *In re Migliozi*, the SEC issued a cease-and-desist order against the creators of BuyBeerCompany.com.⁸⁷ The purpose of the website was to solicit \$300 million from online investors for the purchase of Pabst Brewing Company, which was for sale at that time.⁸⁸ Investors were to make pledges via the website that would become due upon passing the \$300 million threshold.⁸⁹ In addition to the website, the undertaking was advertised using Facebook and Twitter accounts, along with a press release.⁹⁰ The cease-and-desist order alleged that the creators of the website had violated Section 5(c) of the Securities Act⁹¹ by selling unregistered securities.⁹²

Because the interests purchased in investment crowdfunding typically constitute securities under federal securities law,⁹³ federal securities regulation typically applies to investment crowdfunding.⁹⁴ Consequently, because securities must be registered with the SEC under Section 5 of the Securities Act, interests sold in crowdfunding efforts must be registered with the SEC, unless an exemption applies.⁹⁵ Under the federal securities laws, registration is an expensive and time-consuming undertaking.⁹⁶ Because of the law in place at the

the Loans nor the Notes are securities as defined in Section 2(a)(1) of the Securities Act of 1933, Poplogix LLC or the Company offers and sells the Loans or Notes without registration under the Securities Act.”).

⁸⁷ *In re Migliozi*, Securities Act Release No. 9216, at 1–2 (June 8, 2011), <https://www.sec.gov/files/litigation/admin/2011/33-9216.pdf> [<https://perma.cc/N8UF-HLN3>].

⁸⁸ *Id.* at 2.

⁸⁹ *Id.*

⁹⁰ *Id.* at 2–3.

⁹¹ 15 U.S.C. § 77e(c).

⁹² *In re Migliozi*, Securities Act Release No. 9216, *supra* note 87, at 3–4.

⁹³ See 15 U.S.C. § 77b(a)(1) (providing the definition of a “security” under the Securities Act of 1933); *id.* § 78c(a)(10) (providing the definition of a “security” under the Securities Exchange Act of 1934).

⁹⁴ See Burkett, *supra* note 80, at 82 (“[M]ost, if not all, investment crowdfunding schemes will fall under the aegis of U.S. securities laws”); Adrian Chiang, *How Entrepreneurs Can Crowdfund Renewable Energy Projects*, 8 J. BUS. ENTREPRENEURSHIP & L. 659, 685 (2015) (“In the early years of Internet crowdfunding, there was a debate as to whether the above securities law even applied to crowdfunding financing, and if it did whether crowdfunding could fit within one of the registration exemptions, but that debate has been settled. United States federal securities law does apply”); Heminway, *supra* note 34, at 152 (“Crowdfunding involving the offering of financial instruments classified under federal or state law as securities is referred to as, among other things, securities crowdfunding, investment crowdfunding, or crowdfund investing. . . . [S]ecurities crowdfunding is subject to securities regulation on a federal and state basis.”).

⁹⁵ See 15 U.S.C. § 77e (requiring securities to be registered with the SEC).

⁹⁶ See Jeffrey E. Alberts & Bertrand Fry, *Is Bitcoin a Security?*, 21 B.U. J. SCI. & TECH. L. 1, 5 (2015) (“Registration of securities under the Securities Act is time-consuming, expensive, and typically necessitates the involvement of attorneys, accountants, and other professionals.”); Stuart R. Cohn & Gregory C. Yadley, *Capital Offense: The SEC’s Continuing Failure to Address Small Business Fi-*

time of the development of crowdfunding, most crowdfunding offerings were not eligible for an exemption based on the nature of the solicitation occurring via the internet.⁹⁷ As a result, the law made the use of crowdfunding impossible or impractical for most individuals and entities seeking capital.⁹⁸

In response to mounting pressure to make crowdfunding more widely accessible,⁹⁹ Congress enacted the Capital Raising Online While Deterring Fraud

nancing Concerns, 4 N.Y.U. J.L. & BUS. 1, 7–8 (2007) (“The time, delay and expense of a registered securities offering are simply beyond the reach or practical levels for small companies. Under ideal conditions, a registered offering may take up to six months or longer from the time of initial preparation to the effective date. . . . Costs and expenses of lawyers, accountants, underwriters, and other professionals will generally total over 10% of the offering amount.”); Joan MacLeod Heminway & Shelden Ryan Hoffman, *Proceed at Your Peril: Crowdfunding and the Securities Act of 1933*, 78 TENN. L. REV. 879, 908 (2011) (“The costs of an initial SEC registration typically include underwriting compensation, a registration fee paid to the SEC, legal and accounting fees and expenses, printing and engraving costs, a Financial Industry Regulatory Authority filing fee, electronic filing fees when using a service for filing, stock exchange listing fees (if applicable), Blue Sky filing fees (if applicable), and transfer agent and registrar fees when the issuer retains the services of a third party to handle its stock records.”).

⁹⁷ See Miriam A. Cherry, *Cyber Commodification*, 72 MD. L. REV. 381, 416 (2013) (“Until very recently, there was no exemption from the securities laws for crowdfunding, since a general solicitation on a website would have run afoul of the 1933 Securities and Exchange Act rules against unregistered public offerings.”); Edward A. Fallone, *Crowdfunding and Sport: How Soon Until the Fans Own the Franchise?*, 25 MARQ. SPORTS L. REV. 7, 20 (2014) (“Prior to 2012, offerings of securities sold under the equity crowdfunding model were not a good fit with the available exemptions from registration. . . . The result was that most equity crowdfunding transactions could not take place without being registered.”); Hazen, *supra* note 81, at 1749 (“[P]rior to the JOBS Act, there were no exemptions from registration that could be used for crowdfunding capital raising without requiring that an offering circular be sent to potential investors prior to their being asked to make an investment decision.”).

⁹⁸ See C. Steven Bradford, *Crowdfunding and the Federal Securities Laws*, 2012 COLUM. BUS. L. REV. 1, 24 (reporting that, prior to the CROWDFUND Act, “[b]ecause of the regulatory issues it raise[d], the equity crowdfunding model [was] not common in the United States”); Ryan Sanchez, *The New Crowdfunding Exemption: Only Time Will Tell*, 14 U.C. DAVIS BUS. L.J. 109, 110 (2013) (“Prior to the JOBS Act, existing securities regulations prevented the use of the Internet in marketing securities to investors without adhering to sophistication requirements—greatly limiting the potential pool of investors.”); John S. Wroldsen, *The Crowdfund Act’s Strange Bedfellows: Democracy and Start-Up Company Investing*, 62 KAN. L. REV. 357, 362 (2013) (“Prior to the Crowdfund Act, . . . securities laws made it difficult for start-up companies to offer their securities to the general public, which effectively prohibited crowdfunding for equity securities in start-up companies.”).

⁹⁹ See Joan MacLeod Heminway, *Crowdfunding and the Public/Private Divide in U.S. Securities Regulation*, 83 U. CIN. L. REV. 477, 485 (2014) [hereinafter Heminway, *Crowdfunding and the Public/Private Divide*] (“[I]n response to public outcry, extensive lobbying efforts, and a perceived political need for the U.S. Congress to do something—anything—bipartisan in nature to better serve small businesses in the lingering shadows of the recent global financial crisis (especially something promoted as a potential means of helping rescue what then was a somewhat stagnant economy), the CROWDFUND Act addressed both the public offering and public company issues raised by crowd-funded offerings of securities.”); Joan MacLeod Heminway, *How Congress Killed Investment Crowdfunding: A Tale of Political Pressure, Hasty Decisions, and Inexpert Judgments That Beggars for a Happy Ending*, 102 KY. L.J. 865, 879 (2013–14) (“Given presidential support and bipartisan backing in Congress (after all, who wants to oppose a bill that effectively promises to increase and broaden the base of investment capital and, perhaps, spur entrepreneurial activity and job creation during an eco-

and Unethical Non-Disclosure Act of 2012 (CROWDFUND Act) as Title III of the Jumpstart Our Business Startups Act (JOBS Act).¹⁰⁰ The CROWDFUND Act added Section 4(a)(6) to the Securities Act of 1933,¹⁰¹ and it required the SEC to engage in rulemaking that resulted in the enactment of Regulation Crowdfunding (Regulation CF), which became effective on May 16, 2016.¹⁰² These provisions currently exempt offerings of up to \$5,000,000 from federal and state registration requirements, if the offerings meet the requirements of the exemption, which include limitations on the amount an individual investor may risk, the requirement that the transaction be conducted through a broker or funding portal, and the requirement that various disclosures be made.¹⁰³ Notably, under the crowdfunding rules, an issuer that has sold securities in an exempt crowdfunding offering must file an annual report on Form C-AR within 120 days after the end of its fiscal year.¹⁰⁴

The successfulness of the crowdfunding exemption is open to debate.¹⁰⁵ Evidence suggests that noncompliance with the requirements of the exemption is common.¹⁰⁶ When the SEC adopted the final rules for Regulation CF to implement the CROWDFUND Act, the SEC required that its staff undertake a study and submit a report examining its impact on capital formation and investor protection within three years of its effective date.¹⁰⁷ The staff submitted its

conomic downturn?), there undeniably was significant political pressure to pass the CROWDFUND Act.”); Andrew A. Schwartz, *Crowdfunding Issuers in the United States*, 61 WASH. U. J.L. & POL’Y 155, 158 (2020) (“The idea to let startup companies and other small businesses seek public capital without having to comply with all the rules and regulations governing a traditional IPO began to garner broad support. In response, Congress authorized equity crowdfunding in Title III of the Jumpstart Our Business Startups (JOBS) Act of 2012 by exempting crowdfunded offerings from the ordinary registration required under the Securities Act of 1933.”).

¹⁰⁰ Jumpstart Our Business Startups (JOBS) Act, Pub. L. No. 112-106, §§ 301–305, 126 Stat. 306, 315–23 (2012) (codified as amended in scattered sections of 15 U.S.C.).

¹⁰¹ 15 U.S.C. § 77d(a)(6).

¹⁰² Crowdfunding, 80 Fed. Reg. 71388 (Nov. 16, 2015) (codified at 17 C.F.R. pts. 200, 227, 232, 239, 240, 249, 269, 274). Regulation CF is codified at 17 C.F.R. Part 227. 17 C.F.R. § 227 (2023).

¹⁰³ 17 C.F.R. §§ 227.100–.404 (2023).

¹⁰⁴ *Id.* § 227.202.

¹⁰⁵ See Joan MacLeod Heminway, *Selling Crowdfunded Equity: A New Frontier*, 70 OKLA. L. REV. 189, 211 (2017) (“[T]he costs of using the Crowdfunding Exemption may outweigh its benefits.”); Chang-hsien Tsai, *Legal Transplantation or Legal Innovation? Equity-Crowdfunding Regulation in Taiwan After Title III of the U.S. JOBS Act*, 34 B.U. INT’L L.J. 233, 253 (2016) (“[W]hile the text of the CROWDFUND Act and its various promulgations indicate support for the goal of capital formation, the practical reality of the equity crowdfunding exemption is still unclear, and it depends on the development of case law in the U.S.”).

¹⁰⁶ See Mercer Bullard, *Crowdfunding’s Culture of Noncompliance: An Empirical Analysis*, 24 LEWIS & CLARK L. REV. 899, 948 (2020) (“During the first 13 months of crowdfunding offerings, compliance with the simplest, most fundamental crowdfunding requirements was extremely low.”).

¹⁰⁷ Crowdfunding, 80 Fed. Reg. at 71390 (“The staff will undertake to study and submit a report to the Commission no later than three years following the effective date of Regulation Crowdfunding on the impact of the regulation on capital formation and investor protection.”).

report on June 18, 2019.¹⁰⁸ The report summarized a variety of data available about the effect of Regulation CF.¹⁰⁹ Nevertheless, the staff was cautious about the usefulness of its findings. The report presents a summary of the available quantitative information, qualitative remarks from the SEC and FINRA staff, and feedback from market participants about their interactions with Regulation Crowdfunding.¹¹⁰ The report notes that the Commission's summary was constrained by lack of data, a short time frame, and a small number of issuers.¹¹¹ As such, the report states that the conclusions may not be predictive of the future crowdfunding industry.¹¹²

Consequently, continued and improved market surveillance would be useful in this area because Regulation CF creates a reduction in information available through registration.¹¹³ Mechanisms for market surveillance that do not stifle innovation are needed in this area, and regulation by survey could potentially fill this gap.

*C. Virtual Space*¹¹⁴

The regulation of securities transactions in virtual space offers an additional proving ground for regulation by survey. Video games have a lengthy history.¹¹⁵ The first patent for a video game was filed by Thomas T. Goldsmith

¹⁰⁸ SEC STAFF, REPORT TO THE COMMISSION: REGULATION CROWDFUNDING (June 18, 2019), https://www.sec.gov/files/regulation-crowdfunding-2019_0.pdf [<https://perma.cc/L6HG-E8Z7>].

¹⁰⁹ See *id.* at 3 (reporting the SEC staff findings “on the impact of [Regulation Crowdfunding] on capital formation and investor protection”).

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ See Bradford, *supra* note 17, at 1167–68 (“[T]he amount of disclosure required by the crowdfunding exemption is more limited than in a registered offering, and, unlike registered offerings by small businesses, the offering is not contingent on SEC review and approval.”); Heminway, *Crowdfunding and the Public/Private Divide*, *supra* note 99, at 499 (“[M]andatory disclosure requirements under the CROWDFUND Act are not the equivalent of those under the registration and reporting regimes for registered public offerings and public companies under the federal securities laws before the advent of the CROWDFUND Act. The capacity for transparency, accountability, and openness appears to exist but be diminished.”); Pantin, *supra* note 80, at 203–04 (“Title III permits investment crowdfunding to be made available online to unaccredited investors via crowdfunding portals registered with the SEC. Effectively, Title III permits companies to sell securities to both accredited and non-accredited investors without registering or complying with the full disclosure requirements of a public offering.”).

¹¹⁴ I have previously discussed regulating virtual space in another article. See generally Eric C. Chaffee, *Securities Regulation in Virtual Space*, 74 WASH. & LEE L. REV. 1387, 1394 (2017) (discussing the definition of virtual space, providing an overview of federal securities regulation and how it may interact with virtual space, and concluding that securities contained within virtual space should be exempted from federal securities law). This Article builds upon that work.

¹¹⁵ See *infra* notes 116–119 and accompanying text (providing a brief history of the video games industry).

Jr. and Estle Ray Mann on January 25, 1947; the patent was subsequently issued on December 14, 1948.¹¹⁶ During the 1970s and 1980s, video arcade games and video gaming consoles became a part of everyday life for many individuals.¹¹⁷ During the 1990s, greater availability of home computers and the development of the internet fueled the video game industry.¹¹⁸ Today, video gaming is a multi-billion dollar industry that entails a wide range of gaming environments and involves more than a billion players.¹¹⁹ The virtual reality and augmented reality created by these games and virtual worlds are of growing importance and promise.¹²⁰ Many envision a metaverse in which the internet be-

¹¹⁶ Cathode-Ray Tube Amusement Device, U.S. Patent No. 2,455,992 (filed Jan. 25, 1947) (issued Dec. 14, 1948); Steven Howard Roth, *Keller v. Electronic Arts: How Copyright Law Precludes Electronic Arts' First Amendment Defense*, 13 TEX. REV. ENT. & SPORTS L. 1, 2 (2011) ("Since the creation of the Cathode Ray Tube Amusement Device, the world's first legitimate electronic game, by Thomas T. Goldsmith Jr. and Estle Ray Mann in 1947, the video game industry has grown exponentially.").

¹¹⁷ See Terri R. Day & Ryan C.W. Hall, *Déjà Vu: From Comic Books to Video Games: Legislative Reliance on "Soft Science" to Protect Against Uncertain Societal Harm Linked to Violence v. the First Amendment*, 89 OR. L. REV. 415, 445 (2010) ("Home video game consoles did not become common household items until the late 1970s or early 1980s."); Christian Genetski & Christian Troncoso, *Copyright Industry Perspectives: The Pivotal Role of TPMs in the Evolution of the Video Game Industry*, 38 COLUM. J.L. & ARTS 359, 359 (2015) ("Although there is considerable debate about the industry's precise birthdate, most point to the early- to mid-1970s as the point at which video games entered into the mainstream consciousness."); John T. Holden & Kathryn Kisska-Schulze, *Taxing Sports*, 71 AM. U. L. REV. 845, 853 (2022) ("[V]ideo games have been integral to U.S. culture since *Space Invaders* entered homes in the 1970s . . .").

¹¹⁸ See Andrew E. Jankowich, *Property and Democracy in Virtual Worlds*, 11 B.U. J. SCI. & TECH. L. 173, 175 (2005) ("Through widespread public adoption of the Internet in the 1990s, the increasingly mainstream appeal of video games, and continuing increases in computer power, the evolution of sophisticated virtual worlds became possible."); Christopher C. Schwarz, *Has the Supreme Court's Sports Gambling Decision Opened the Door for Corruption in eSports?*, 35 ENT. & SPORTS LAW. 42, 42 (2019) ("In the 1990s, as world came online, internet PC games exploded in popularity and Nintendo fostered video game tournaments of epic proportions.").

¹¹⁹ See Sheldon A. Evans, *Pandora's Loot Box*, 90 GEO. WASH. L. REV. 376, 378 (2022) ("The video game industry boasts a multi-billion-member player base and revenues that have already overtaken other traditional entertainment mediums such as sports, movies, and music combined."); Britton Payne, *Copyright Your Life: The Implications of Works Made for Hire and Termination of Transfer in Non-Scripted Entertainment*, 15 U. BALT. INTELL. PROP. L.J. 171, 183 (2007) ("Video gaming has become a multi-billion dollar industry since *Pong* was introduced in 1973."); Van S. Wiltz, *Will the JOBS Act Jump-Start the Video Game Industry? Crowdfunding Start-Up Capital*, 16 TUL. J. TECH. & INTELL. PROP. 141, 143–44 (2013) ("The video game industry is a billion-dollar industry with a consumer base of over one billion users. It is also an integral part of the global entertainment industry and is driven by the constant advancement of the underlying technology used to produce and play video games.").

¹²⁰ See David E. Fink & Jamie N. Zagoria, *VR/AR in a Real World*, 33 ENT. & SPORTS LAW. 1, 1 (2016) ("In case you have been living under a rock, virtual reality (VR) and its first cousin, augmented reality (AR), have arrived. The highly publicized and long-awaited head-mounted displays (HMDs), the headsets through which the world of virtual reality can be accessed, have been or will be made available for sale to the public this year In other words, VR/AR is going mainstream."); Mary Anne Franks, *The Desert of the Unreal: Inequality in Virtual and Augmented Reality*, 51 U.C. DAVIS

comes a single immersive virtual world.¹²¹ Facebook, Inc. is so enamored with this idea that it officially changed its name to Meta Platforms, Inc. on June 9, 2022 and is doing business as Meta.¹²² In short, virtual space is here to stay.

“Virtual space” is a term that I have coined elsewhere, and it designates any software-created environment, including the virtual elements of augmented reality.¹²³ This definition employs the popular usage of the term “virtual,” which can be defined as “being on or simulated on a computer or computer network . . . such as . . . of, relating to, or existing within a virtual reality.”¹²⁴ Virtual space involves a wide range of virtual environments such as video games, virtual worlds, virtual reality, and augmented reality.¹²⁵ It entails anything as basic as a video game chessboard to sophisticated virtual reality environments, including whatever form the metaverse will eventually take.¹²⁶ Virtual space is different from cyberspace.¹²⁷ Cyberspace is defined as “the online

L. REV. 499, 503 (2017) (“Virtual and augmented reality technologies hold out the promise of a more perfect world, one that offers us more stimulation, more connection, more freedom, more equality than the ‘real’ world.”); Jonathon W. Penney, *Privacy and the New Virtualism*, 10 YALE J.L. & TECH. 194, 223–24 (2008) (“These virtual worlds offer new spaces and social communities to explore while expanding or transforming our individual identity. A lot of cyber-cultural literature focuses on this very idea—how cyberspace and virtual worlds liberate the person from his or her real-space identity, and allow creative self-invention and transformation. Moreover, this experimentation can foster better community cohesion and belonging by fostering tolerance and diversity.”).

¹²¹ See Jon M. Garon, *When AI Goes to War: Corporate Accountability for Virtual Mass Disinformation, Algorithmic Atrocities, and Synthetic Propaganda*, 49 N. KY. L. REV. 181, 206 (2022) (“The metaverse . . . is a collection of platforms that share a similar user interface which relies on virtual reality or augmented reality designed to facilitate the interaction between participants and to provide interactions among participants with computer-generated characters.”); Bettina M. Chin, Note, *Regulating Your Second Life: Defamation in Virtual Worlds*, 72 BROOK. L. REV. 1303, 1306 n.34 (2007) (“‘Metaverse’ was coined in Neal Stephenson’s novel *Snow Crash* and is used to describe virtual reality in an online environment.”).

¹²² See Ruby O’Kane, *Meta’s Private Speech Governance and the Role of the Oversight Board: Lessons from the Board’s First Decisions*, 25 STAN. TECH. L. REV. 167, 207 (2022) (“The change of the company’s name from Facebook to Meta was in many ways a symbolic attempt to escape the backlash of these revelations and prevent user exit, instead compelling users to look towards their new ‘Metaverse’ and continue to share moments of their lives through new Meta technology.”); Edward Lee, *Virtual Governments*, 27 UCLA J.L. & TECH. 1, 30 (2022) (“Mark Zuckerberg changed Facebook’s name to Meta, to shift the business to the emerging metaverse, a major part of Web3.”).

¹²³ See Chaffee, *supra* note 114, at 1394–95 (introducing and explaining the definition of the term “virtual space”).

¹²⁴ *Virtual*, MERRIAM-WEBSTER DICTIONARY, <https://www.merriam-webster.com/dictionary/virtual> [<https://perma.cc/4V9L-TLG5>].

¹²⁵ See Chaffee, *supra* note 114, at 1394 (stating that virtual space includes “video games, virtual worlds, virtual reality, and augmented reality”).

¹²⁶ See *id.* at 1395 (explaining that virtual space includes “everything from a simple video game chess board to a complex virtual reality environment”).

¹²⁷ See *id.* (“[Virtual] space is different from cyberspace, although the two are closely related.”).

world of computer networks and especially the internet.”¹²⁸ Although virtual space will often involve cyberspace, virtual space can exist beyond the realm of networked computers.¹²⁹

Federal securities regulation can interact with virtual space in three main ways: (1) securities purchased and sold in virtual space based upon real world activity, (2) securities purchased and sold in real world transactions based upon virtual activity, and (3) securities purchased and sold in virtual space based upon activity in that space.¹³⁰ The application of federal securities regulation to the first two contexts is not controversial. In regard to the first context, if Apple, Chipotle, IMAX, or any other issuer chooses to sell its securities in virtual space, use of virtual space as a means of communication, which would almost certainly involve the use of the internet, is covered by federal securities law.¹³¹ In regard to the second context, issuers commonly base their business models upon virtual activity.¹³² Otherwise, Facebook, Twitter, and many videogame developers would be exempt from federal securities law, which is obviously not the case.¹³³

In regard to the third context, securities purchased and sold in virtual space based upon activity in that space, the law is still developing, but federal

¹²⁸ *Cyberspace*, MERRIAM-WEBSTER DICTIONARY, <https://www.merriam-webster.com/dictionary/cyberspace> [<https://perma.cc/43N2-PV7J>].

¹²⁹ See Chaffee, *supra* note 114, at 1395 (“Although virtual space and cyberspace do overlap in most instances, virtual space does exist beyond the world of networked computers. For example, an individual could create a computer with a video game, virtual reality experience, or augmented reality experience that is not networked with any other computer and is not in any way connected to the Internet. This virtual space would exist separate and apart from cyberspace.”).

¹³⁰ See *id.* at 1419 (listing the situations that should be analyzed in order to understand the interaction between virtual space and federal securities regulation).

¹³¹ See Eric C. Chaffee, *The Dodd-Frank Wall Street Reform and Consumer Protection Act: A Failed Vision for Increasing Consumer Protection and Heightening Corporate Responsibility in International Financial Transactions*, 60 AM. U. L. REV. 1431, 1437 (2011) (“The United States Securities and Exchange Commission (SEC) . . . has demonstrated little concern about broadening its reach to cover securities transactions occurring online, even in the absence of an edict from Congress to do so.”); Robert K. Cowan, *Time for Plan(et) B? Why Securities Litigation Is a Misguided Attempt at Regulating Climate Change*, 33 GEO. ENV’T L. REV. 333, 368 (2021) (“The federal securities laws, however, need only a transaction that affects interstate commerce—a low hurdle because it includes communications over the internet.”); Michael L. Rustad, *Punitive Damages in Cyberspace: Where in the World Is the Consumer?*, 7 CHAP. L. REV. 39, 105 n.402 (2004) (“[T]he SEC has been active in extending federal securities law to the enforcement of predatory, anti-fraud and anti-competitive practices in cyberspace.”).

¹³² See Chaffee, *supra* note 114, at 1421 (“[P]ublicly traded companies commonly create their business models upon activities occurring in virtual space.”).

¹³³ See *id.* at 1420 (“Securities purchased and sold in real world transactions based upon virtual activity are also covered by federal securities law . . . Easy examples of this include companies such as Facebook, Snap, and Twitter. Each of these companies is founded upon virtual interaction among members of these social networks, and each of these companies is a publicly traded company under federal securities law.”).

securities law likely also applies.¹³⁴ The foundational question is whether securities purchased and sold in virtual space based upon activity in that space, constitute securities for purposes of federal securities regulation. To put the question differently, if a virtual world developer incorporates a stock exchange into a virtual world in which the securities are based upon in world activity, would the federal securities law apply? Although that might seem farfetched, Second Life—a virtual world that was developed, owned, and operated by Linden Lab,¹³⁵ which was popular during the 2000s—has had various securities exchanges operating within it throughout its existence.¹³⁶

To answer the question of whether federal securities regulation applies to securities sold in virtual space based upon activity in that space, one must examine whether these virtual securities meet the definitions of a “security” found in Section 2(a)(1) of the Securities Act and Section 3(a)(10) of the Securities Exchange Act.¹³⁷ Although the language of these sections varies, the Supreme Court has interpreted them as being substantively similar.¹³⁸ They will be treated as the same for purposes of the discussion within this Article because the variations do not matter for purposes of this analysis. Both defini-

¹³⁴ See *infra* notes 137–156 and accompanying text (explaining why federal securities law likely also applies to the third context outlined).

¹³⁵ SECOND LIFE, <https://secondlife.com/> [https://perma.cc/U6W5-JCZG].

¹³⁶ See Nell A. Beekman, *Virtual Assets, Real Tax: The Capital Gains/Ordinary Income Distinction in Virtual Worlds*, 11 COLUM. SCI. & TECH. L. REV. 152, 159 (2010) (“Some virtual worlds provide users with opportunities to invest their virtual world money. For example, users of some virtual worlds have the opportunity to invest in virtual world companies. Second Life has user-created virtual stock exchanges in which users buy and sell shares of Second Life companies.”); Robert J. Bloomfield & Young Jun Cho, *Unregulated Stock Markets in Second Life*, 78 S. ECON. J. 6, 6 (2011) (examining “data on issuer activity and investor returns in the Second Life Capital Exchange (SLCapex), an exchange created and operated by residents of the virtual world Second Life”); Shannon L. Thompson, *Securities Regulation in a Virtual World*, 16 UCLA ENT. L. REV. 89, 94–95 (2009) (“Some Second Life entrepreneurs have taken virtual consumption so far as to build stock exchanges, which often imitate many of the characteristics of a real world stock exchange. . . . Virtual exchanges give virtual business owners the ability to raise capital by selling shares in their virtual companies.”).

¹³⁷ 15 U.S.C. §§ 77b(a)(1), 78c(a)(10).

¹³⁸ See, e.g., SEC v. Edwards, 540 U.S. 389, 393 (2004) (holding that the Supreme Court of the United States has treated the “slightly different formulations” of the definition of a “security” in § 2(a)(1) of the Securities Act and § 3(a)(10) of the Exchange Act “as essentially identical in meaning”); Landreth Timber Co. v. Landreth, 471 U.S. 681, 686 n.1 (1985) (“We have repeatedly ruled that the definitions of ‘security’ in § 3(a)(10) of the 1934 Act and § 2(1) of the 1933 Act are virtually identical and will be treated as such in our decisions dealing with the scope of the term.”); Marine Bank v. Weaver, 455 U.S. 551, 555 n.3 (1982) (“We have consistently held that the definition of ‘security’ in the 1934 Act is essentially the same as the definition of ‘security’ in § 2(1) of the Securities Act of 1933”); United Hous. Found., Inc. v. Forman, 421 U.S. 837, 847 n.12 (1975) (“The definition of a security in § 3(a)(10) of the 1934 Act . . . is virtually identical [to the definition of a security in the 1933 Act] and, for present purposes, the coverage of the two Acts may be considered the same.”).

tions incorporate some types of investments with narrow, well-settled meanings and some types of investments with broad, more flexible meanings.¹³⁹

Although multiple categories of investments incorporated into the definitions found within the Securities Act and Exchange Act may potentially exist in virtual space, this analysis will focus on investment contracts, a term that appears within the definitions found in the Securities Act and Exchange Act.¹⁴⁰ This Article focuses on investment contracts because the term “investment contract” is a “catch-all” that includes a wide variety of investments that are considered securities.¹⁴¹ The term “investment contract” is not defined by the Securities Act or the Exchange Act.¹⁴² As a result, in 1946, in *SEC v. W.J.*

¹³⁹ See Seth C. Oranburg, *Hyperfunding: Regulating Financial Innovation*, 89 U. COLO. L. REV. 1033, 1075–76 (2018) (“A security is defined by the 1933 Securities Act expressly to include stocks, bonds, debentures, and transferrable shares. These standard financial instruments are surely subject to securities regulation. However, the definition in the Securities Act includes several catchall generic terms, such as: investment contracts, evidence of indebtedness, and certificates of interest in profit-sharing agreements.”); Jonathan Rohr & Aaron Wright, *Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets*, 70 HASTINGS L.J. 463, 470, 487 (2019) (“The term ‘security’ is defined broadly and includes a variety of common investment mechanisms, like stocks and bonds, as well as a catch-all term—‘investment contract’—intended to capture innovative financial arrangements that are, in substance, securities but which do not take the form of a traditional security.”); Elaine A. Welle, *When Are Limited Liability Partnership Interests Securities?*, 27 J. CORP. L. 63, 67 n.21 (2001) (“The statutory definition of a ‘security’ sets forth a list of specific instruments that are considered securities, such as stocks, bonds, notes, and debentures, but also includes a number of catch-all phrases for instruments that do not fit in conventional categories, such as ‘investment contract’ . . .”).

¹⁴⁰ 15 U.S.C. § 77b(a)(1); *id.* § 78c(a)(10).

¹⁴¹ See Benjamin Akins, Jennifer L. Chapman & Jason Gordon, *The Case for the Regulation of Bitcoin Mining as a Security*, 19 VA. J.L. & TECH. 669, 683 (2015) (“Within the categories of security described in the federal securities laws, courts have developed multiple tests to determine whether a particular type of investment constitutes a security. Perhaps most notably, the investment contract category is essentially a ‘catch-all’ provision whereby lots of unique instruments or interests constitute a security.”); Lindsay Sain Jones, *Beyond the Hype: A Practical Approach to CryptoReg*, 25 VA. J.L. & TECH. 175, 205 (2022) (“‘Investment contract’ has been used as a catchall term for transactions that do not neatly fit into a specific category under the definition of securities.”); Jonathan Macey, Geoffrey Miller, Maureen O’Hara & Gabriel D. Rosenberg, *Helping Law Catch Up to Markets: Applying Broker-Dealer Law to Subprime Mortgages*, 34 J. CORP. L. 789, 808 (2009) (“‘Investment contract’ is the catch-all for things that walk and talk like a security but do not fit into any of the other categories. Indeed, a large number of cases involving whether a specific instrument is or is not a security come down to whether a specific financial transaction is an investment contract.”).

¹⁴² See Carol R. Goforth, *Regulation of Crypto: Who Is the Securities and Exchange Commission Protecting?*, 58 AM. BUS. L.J. 643, 648 (2021) (“The phrase ‘investment contract’ is not defined in the statute but rather by case law.”); Kristin N. Johnson, *Decentralized Finance: Regulating Cryptocurrency Exchanges*, 62 WM. & MARY L. REV. 1911, 1982 (2021) (“[A]longside the enumerated examples of asset classes commonly referred to as securities, Congress included, but did not define, a catch-all term: ‘investment contract.’”); Michael J. O’Connor, *Overreaching Its Mandate? Considering the SEC’s Authority to Regulate Cryptocurrency Exchanges*, 11 DREXEL L. REV. 539, 569 (2019) (“[T]he term ‘investment contract’ was unknown to federal law prior to the Securities Act, and it remained undefined by that Act. But the term had previously appeared in multiple state laws . . .”).

Howey Co., the Supreme Court of the United States provided the commonly used definition of that term.¹⁴³ Writing for the majority in that case, Justice Frank Murphy stated that to determine the existence of an investment contract, “[t]he test is whether the scheme involves an investment of money in a common enterprise with profits to come solely from the efforts of others.”¹⁴⁴ This definition has been interpreted to include a wide variety of nontraditional securities.¹⁴⁵

Although the case law is very limited, one circuit court has held that investments sold in virtual space based upon activity in that space can constitute securities under the Securities Act and Exchange Act.¹⁴⁶ In 2001, in *SEC v. SG Ltd.*, the U.S. First Circuit Court of Appeals decided the leading case on this issue.¹⁴⁷ In that case, SG Ltd. operated an online investment game, called “StockGeneration” that offered players the ability to purchase shares using real money in “virtual companies” that were listed on a “virtual stock exchange.”¹⁴⁸ SG made representations and promised that one of these virtual companies, which was known as the “privileged company,” would constantly rise in value based on the inflow of capital from new participants and that it had measures in place to prevent any rapid decline in share price.¹⁴⁹ The value of the shares of all of the virtual companies listed on the virtual stock exchange in Stock-Generation eventually plummeted, including the shares of the privileged company.¹⁵⁰ As a result, the SEC brought a civil action against SG Ltd. for injunctive relief and disgorgement under Section 5 of the Securities Act, Section 17(a) of the Securities Act, and Section 10(b) of the Exchange Act and Rule 10b-5 promulgated thereupon, alleging that SG Ltd. sold unregistered securi-

¹⁴³ *SEC v. W.J. Howey Co.*, 328 U.S. 293, 301 (1946).

¹⁴⁴ *Id.* at 294, 301.

¹⁴⁵ See Harry S. Gerla, *Issuers Raising Capital Directly from Investors: What Disclosure Does Rule 10b-5 Require?*, 28 J. CORP. L. 111, 121 (2002) (“A vast variety of business arrangements are securities by virtue of their being investment contracts. Condominiums pooled with rental programs, cattle feeding and marketing programs, beaver ranching schemes, and horse racing syndications are among the diverse endeavors deemed to be ‘investment contracts’ and, therefore, securities.”); Usha R. Rodrigues, *Financial Contracting with the Crowd*, 69 EMORY L.J. 397, 406 (2019) (“[I]nvestment contract’ [is] an undefined term that has become a catchall provision, capturing pay phones, earthworms, chinchillas, and other questionable assets offered for sale.”); Elaine A. Welle, *Freedom of Contract and the Securities Laws: Opting Out of Securities Regulation by Private Agreement*, 56 WASH. & LEE L. REV. 519, 537 (1999) (“Courts have used the investment contract test to reach a wide variety of instruments, from interests in conventional investment vehicles (like limited partnerships, franchises, and certain general partnerships) to more unusual investment opportunities (such as schemes involving fruit trees, chinchillas, self-improvement courses, and cemetery lots).”).

¹⁴⁶ See *infra* notes 147–156 and accompanying text (discussing *SEC v. SG Ltd.*).

¹⁴⁷ *SEC v. SG Ltd.*, 265 F.3d 42 (1st Cir. 2001).

¹⁴⁸ *Id.* at 44.

¹⁴⁹ *Id.* at 44–45.

¹⁵⁰ *Id.* at 45.

ties and committed fraud in the process.¹⁵¹ In 2001, in *SG Ltd.*, the U.S. District Court for the District of Massachusetts dismissed the case for failure to state a claim on the rationale that the virtual shares were not securities because StockGeneration was a game with no business context.¹⁵²

The First Circuit reversed and held that investments sold in virtual space based upon activity in that space can constitute securities under the Securities Act and Exchange Act, regardless of whether they are within a video game.¹⁵³ Writing for the three-judge panel, Judge Bruce Selya stated, “*Howey* supplies the appropriate template for identifying investment contracts within the overarching ambit of the federal securities laws. Contrary to the district court’s conclusion, this template admits of no exception for games or gaming.”¹⁵⁴ He continued, “the language on SG’s website emphasizing the game-like nature of buying and selling virtual shares of the privileged company does not place such transactions beyond the long reach of the federal securities laws.”¹⁵⁵ As a consequence, the court held that federal securities law can and does apply to investments sold in virtual space based upon activity in that space.¹⁵⁶

Even though preventing the application of the Securities Act or the Exchange Act through the end-user license agreements or any other agreement is expressly prohibited, at least three plausible options exist for removing activity in virtual space from the ambit of federal securities law.¹⁵⁷ First, developers could decouple activity in virtual space from real world money. Under the *Howey* test, the investment of money is an element of an “investment contract.”¹⁵⁸ In the absence of a connection with real world money, investment contracts would not exist, and federal securities law would not apply.¹⁵⁹ This is unlikely to occur because developers, owners, and operators of virtual space are openly motivated, at least in part, by making a profit, which requires some

¹⁵¹ *Id.*

¹⁵² *Id.* at 42, 46; *SEC v. SG Ltd.*, 142 F. Supp. 2d 126, 131 (D. Mass.), *rev’d*, 265 F.3d 42 (1st Cir. 2001).

¹⁵³ *SG Ltd.*, 265 F.3d at 55.

¹⁵⁴ *Id.* at 44, 48.

¹⁵⁵ *Id.* at 48.

¹⁵⁶ See *supra* notes 147–155 and accompanying text (analyzing *SG Ltd.*).

¹⁵⁷ 15 U.S.C. § 77n (“Any condition, stipulation, or provision binding any person acquiring any security to waive compliance with any provision of this subchapter or of the rules and regulations of the Commission shall be void.”); *id.* § 78cc(a) (“Any condition, stipulation, or provision binding any person to waive compliance with any provision of this chapter or of any rule or regulation thereunder, or of any rule of a self-regulatory organization, shall be void.”).

¹⁵⁸ *SEC v. W.J. Howey Co.*, 328 U.S. 293, 301 (1946) (holding that the test for an investment contract is “whether the scheme involves an investment of money in a common enterprise with profits to come solely from the efforts of others”).

¹⁵⁹ See *id.* (setting forth the inquiry for determining an investment contract).

connection to real world money.¹⁶⁰ Further, developers, owners, and operators of virtual space commonly allow real world money to be transferred into property and other value in virtual space, which is openly embraced by participants in these realms, and undoing this phenomenon is likely impossible.¹⁶¹ Finally, the development of digital currencies like Bitcoin has created significant questions about what constitutes money in cyberspace, and as a result, it might be impossible to completely decouple money from virtual space.¹⁶² As long as money remains connected with virtual space, concerns about understanding this space and surveillance of markets within this space remain.

Second, courts and the SEC could interpret the definition of a security to preclude the application of federal securities regulation to virtual space. Both Section 2(a)(1) of the Securities Act and Section 3(a)(10) of the Securities Exchange Act, which define a “security,” include the prefatory language “unless the context otherwise requires.”¹⁶³ Elsewhere, I have argued that eliminating the application of federal securities law is the correct solution because of the intended scope of federal securities regulation, various constitutional law principles, and concerns about hindering creativity and regulatory experimenta-

¹⁶⁰ See Oliver A. Khan, Note, *Me, Myself, and My Avatar: The Right to the Likeness of Our Digital Selves*, 5 ISJLP 447, 461 (2010) (“The difference between the virtual and real worlds is that the virtual worlds are owned and operated entirely by for-profit corporations.”).

¹⁶¹ See Casey W. Baker, Thomas Norton & Ralph E. McKinney, *U.S. State Taxation of Cryptocurrency-Involved Transactions: Trends and Considerations for Policy Makers*, 75 TAX LAW. 601, 605 (2022) (“In some video games, players can convert real world currency to virtual currency for in-game use, and then ‘cash out’ virtual currency for real currency. These virtual currencies have been labeled as ‘bidirectional’ or ‘open-flow’ virtual currencies by certain observers.”); M. Scott Boone, *Virtual Property and Personhood*, 24 SANTA CLARA COMPUT. & HIGH TECH. L.J. 715, 720 (2008) (“Exchange of virtual world objects for real money is so extensive that economists have demonstrated that both the gross GNP and the per capita GNP of some virtual worlds rival that of real world countries.”); Judith A. Powell & Lauren Sullins Ralls, *Best Practices for Internet Marketing and Advertising*, 29 FRANCHISE L.J. 231, 236 (2010) (“Real money changes hands in this virtual world through the buying and selling of virtual goods and services—a staggering \$35 million a month.”).

¹⁶² See Scott D. Hughes, *Cryptocurrency Regulations and Enforcement in the U.S.*, 45 W. ST. L. REV. 1, 7 (2017) (“The legal classification of cryptocurrencies as a type of money is controversial in the literature. . . . The differences between traditional and internet-based monies are of direct relevance for the understanding of the applicability of law to individuals and businesses that deal with cryptocurrencies.”); Ronald J. Mann, *Reliable Perfection of Security Interests in Crypto-Currency*, 21 SMU SCI. & TECH. L. REV. 159, 160 (2018) (“The author is . . . not the first to consider how cryptocurrencies should be categorized for legal purposes. For Bitcoin in particular, the topic already has arisen, provoking considerable debate under a variety of legal regimes. For the most part, those debates have focused on the question whether Bitcoin is or is not ‘money,’ as opposed to some other asset.”); Saule T. Omarova, *New Tech v. New Deal: Fintech as a Systemic Phenomenon*, 36 YALE J. ON REGUL. 735, 773 n.160 (2019) (“Not surprisingly, the debate on Bitcoin and other cryptocurrencies is frequently framed in terms of their role as an alternative form of money.”).

¹⁶³ 15 U.S.C. §§ 77b(a)(1), § 78c(a)(10).

tion.¹⁶⁴ Although this is the best solution, courts and the SEC have not yet adopted it. Until that happens, securities in virtual space remain the SEC's responsibility, and the SEC is tasked with understanding how securities exist in virtual space and engaging in market surveillance within these realms.¹⁶⁵

Third, Congress or possibly the SEC could create an exemption that would exempt securities in virtual space from federal securities law. The extent of the SEC's power to do this is in question because it can legally act only within the scope of the power that Congress has given it.¹⁶⁶ At least one leading commentator, however, has suggested an exemption as a solution to how to deal with securities in virtual space.¹⁶⁷ Because registration is an expensive and time-consuming process, this would lessen the burden on those operating in virtual space.¹⁶⁸ Importantly, even if an exemption were created, securities in virtual space would still be subject to the anti-fraud provisions of federal securities law because exemptions only remove securities from the registration process.¹⁶⁹ As a result, the SEC would still need to continue to understand how securities operate in virtual space and maintain surveillance of those markets.

Consequently, under the current state of the law, understanding how securities operate within virtual worlds and the markets associated with them is important. Although law and regulation might evolve to remove securities from virtual space, until that happens, the SEC will need, and should want, to

¹⁶⁴ See generally Chaffee, *supra* note 114 (providing an extensive discussion about how securities regulation ought to apply to virtual space).

¹⁶⁵ See *supra* note 156 and accompanying text (stating that federal securities law applies to investments sold in virtual space based upon activity in that space).

¹⁶⁶ See Charles T. Haag & Zachary A. Keller, *Honored in the Breach: Issues in the Regulation of Tender Offers for Debt Securities*, 9 N.Y.U. J.L. & BUS. 199, 208 (2012) ("The SEC's rulemaking must comply with the Administrative Procedure Act and cannot exceed the authority delegated to the SEC governing the rulemaking process."); James D. Redwood, *To Make or to Mar: The Supreme Court Turns Away Another Securities Law Plaintiff*, 14 U. PA. J. BUS. L. 463, 478–80 (2012) ("It is axiomatic that the SEC's administrative mandate may not exceed the power which Congress has given the agency in the relevant statute . . .").

¹⁶⁷ See Couture, *supra* note 30, at 236 ("[I]n response to Professor Chaffee's compelling argument that securities regulation would hinder creativity within this burgeoning area, I argue that a better response is to enact a new exemption from registration that would further the policy goals of the securities laws while not stifling innovation in virtual space.").

¹⁶⁸ See *supra* note 96 and accompanying text (discussing the time and expense associated with registering securities with the SEC).

¹⁶⁹ See Carol R. Goforth, *Using Cybersecurity Failures to Critique the SEC's Approach to Crypto Regulation*, 65 S.D. L. REV. 433, 465 (2020) ("An exemption from registration is not an exemption from the anti-fraud provisions of the federal securities laws . . ."); Cary Martin, *One Step Forward for Hedge Fund Investors: The Removal of the Solicitation Ban and the Challenges That Lie Ahead*, 16 U. PA. J. BUS. L. 1143, 1173 (2014) ("The general anti-fraud provisions provided under the federal securities laws apply to all advisers, even if they are exempt from registration."); Elizabeth Pollman, *Information Issues on Wall Street 2.0*, 161 U. PA. L. REV. 179, 214 n.200 (2012) ("Compliance with a registration exemption does not preclude liability under anti-fraud provisions of the securities laws, such as Rule 10b-5 governing omissions or misstatements.").

conduct effective market surveillance within these realms. Regulation by survey offers a solution for how this market surveillance might be achieved.

II. A REGULATORY MODEL AND ITS BENEFITS

As explained in the previous Part, robo-advisers, crowdfunding, and virtual space each challenge and disrupt the existing model of federal securities regulation,¹⁷⁰ while creating significant risks for investors.¹⁷¹ As a result, each of these areas deserves special attention from the SEC because they represent emerging areas of securities law, which demands additional market surveillance and potentially additional regulation.¹⁷² The danger with regulating emerging financial technology, however, is that regulation can kill innovation.¹⁷³

This Article recommends supplementing existing federal securities law in each of these areas with a form of market surveillance for which I have coined the term “regulation by survey.”¹⁷⁴ Regulation by survey is the surveying by regulators of investors for purposes of understanding market behavior and detecting wrongdoing. To avoid manipulation by the actors being observed, the regulator should develop the survey instrument. The instrument should include both narrative responses and rankings to maximize the amount and comparability of information received. The regulator should aggregate and analyze the information collected to ensure that as many lessons as possible are learned through the regulation by survey. Finally, the information obtained should then

¹⁷⁰ See also *supra* note 29 and accompanying text (explaining that robo-advisers, crowdfunding, and virtual space challenge and disrupt existing models of securities regulation).

¹⁷¹ See also *supra* notes 32–35 and accompanying text (exploring the special investor risks created by robo-advisers, crowdfunding, and virtual space).

¹⁷² See *supra* Part I (exploring the need for additional market surveillance relating to robo-advising, crowdfunding, and virtual space).

¹⁷³ See Larry Downes & John W. Mayo, *The Evolution of Innovation and the Evolution of Regulation: Emerging Tensions and Emerging Opportunities in Communications*, 23 COMMLAW CON-SPECTUS 10, 31 n.119 (2014) (“Heavy regulation and the regulatory machinery cannot keep pace with advances and often kills innovation.”); Yafit Lev-Aretz & Katherine J. Strandburg, *Regulation and Innovation: Approaching Market Failure from Both Sides*, 38 YALE J. ON REGUL. BULL. 1, 2 (2020) (“From pharmaceuticals and environmental markets to DNA testing and big tech, the argument that regulation can ‘stifle’ innovation has a long pedigree. Simply put, regulation is said to inhibit innovation by limiting potentially innovative paths and/or increasing innovation costs.”); Scott J. Stafford, Note, *Overreliance on a Broken System: The Merits of a Comparative Fault Analysis for Mortgage-Backed Security Insurance Contracts*, 46 U. TOL. L. REV. 647, 678 (2015) (“The basic, standard argument against increased regulation of financial markets (or any market) is that it will stifle innovation, increase transaction costs, and overall tie the arms of business leaders behind their backs.”).

¹⁷⁴ See Chaffee, *supra* note 40, at 574 (“This Chapter suggests that in addition to disclosure-based regulation, fiduciary duties, investor education, and regulation by litigation, the government in attempting to regulate the robo-adviser industry should engage in what shall be termed ‘regulation by survey.’”).

be made freely available online for use by regulators, researchers, and anyone else who might find the information helpful.

The SEC should employ regulation by survey in regard to robo-advisers, crowdfunding, and virtual space because of the unique investor risks in each of these areas, and because the law surrounding them is still evolving.¹⁷⁵ Incorporating this technique in new and developing areas would be easier than attempting to embed it in well-established areas of federal securities law.¹⁷⁶ With that said, the lessons learned from employing regulation by survey in these areas should eventually be exported to other areas of federal securities law, such as questions of materiality, and beyond.¹⁷⁷

This Part discusses various arguments in favor of regulation by survey. Section A of this Part describes how regulation by survey improves regulator surveillance and understanding.¹⁷⁸ Section B outlines how regulation by survey promotes market confidence.¹⁷⁹ Finally, Section C suggests that regulation by survey allows investors to engage in improved decision-making.¹⁸⁰

A. Regulation by Survey Improves Regulator Market Surveillance and Understanding

To regulate markets, one must understand markets, and as a result, effective market surveillance by the SEC and other regulators is a key part of achieving their missions.¹⁸¹ Regulation by survey can be a useful supplement

¹⁷⁵ See *supra* notes 32–35 and accompanying text (noting the special risks posed by robo-advising, crowdfunding, and virtual space).

¹⁷⁶ See *supra* notes 16, 29–30 and accompanying text (explaining that robo-advising, crowdfunding, and virtual space have created emerging issues of securities regulation that challenge the existing regulatory model, and as a result, the law surrounding these areas has not hardened and become established yet).

¹⁷⁷ At least one commentator has already suggested that questions of materiality ought to be answered via surveying. See Stefan J. Padfield, *Is Puffery Material to Investors? Maybe We Should Ask Them*, 10 U. PA. J. BUS. & EMP. L. 339, 340–41 (2008) (“Materiality is generally deemed to be a fact-intensive issue only to be resolved on the basis of pretrial motions when no reasonable shareholder could find the challenged statement material. . . . This Article seeks to fill some of the void of empirical research in this area by reporting the results of an investor survey (the ‘Puffery Survey’), focusing on materiality determinations in the puffery context, and comparing these responses to judicial predictions that no reasonable investor could find the surveyed statements material.”).

¹⁷⁸ See *infra* Part II.A (explaining how regulation by survey improves regulator understanding and market surveillance).

¹⁷⁹ See *infra* Part II.B (describing how regulation by survey fosters market confidence).

¹⁸⁰ See *infra* Part II.C (detailing how regulation by survey allows investors to make informed investment decisions).

¹⁸¹ See Mark Klock, *Lessons Learned from Bernard Madoff: Why We Should Partially Privatize the Barney Fifes at the SEC*, 42 ARIZ. ST. L.J. 783, 808 (2010) (“Surely it is not too much to expect that the regulators of financial markets have a minimal understanding of the markets they regulate. Lawyers have strong analytical skills and are fully capable of learning and understanding the basics of financial markets and should be expected to do so if their area of work requires it.”); Michael K. Pow-

to existing market surveillance techniques. Beyond that, regulation by survey can provide oversight to certain markets—such as robo-advisers, crowdfunding, and virtual space—in a way that other surveillance techniques cannot. In addition, specifically in regard to the SEC and its mission, regulation by survey can be relatively easily implemented with additional rulemaking using the resources that the SEC already has at its disposal.

Regulation by survey in general is a useful market surveillance tool, but this Article identifies three areas—robo-advisers, crowdfunding, and virtual space—in which regulation by survey can provide effective oversight in which other market surveillance techniques cannot. As discussed in the previous Part, robo-advisers pose a special risk to investors and create oversight challenges because of the lack of human intermediation in providing investment advice.¹⁸² In addition, crowdfunding poses a special risk to investors and creates unique oversight challenges because of the removal of registration requirements to facilitate the existence of this means of raising capital.¹⁸³ Also, virtual space creates a special risk to investors because of the gamification of securities trading, especially in light of the ubiquity and anonymity of the internet and the challenges of oversight this creates.¹⁸⁴ In each instance, the SEC could implement regulation by survey to reduce these risks and provide additional oversight by revealing additional information about these markets, including otherwise undetected wrongdoing, market behavior, and investor preferences.

Additionally, the SEC could implement regulation by survey in these areas relatively easily through rulemaking and use of existing resources. In 2009, the SEC created the Division of Risk, Strategy, and Financial Innovation,¹⁸⁵

ell, *Communications Policy Leadership for the Next Century*, 50 FED. COMM'NS L.J. 529, 535 (1998) (“[I]n order to promote national policies in a free market system, regulators must understand fully business and economic realities. We must take account of the variables that inform decisions by company executives—the returns on investment, the cost of capital, the efficiencies and synergies of choices.”); Robert J. Rhee, *The Madoff Scandal, Market Regulatory Failure and the Business Education of Lawyers*, 35 J. CORP. L. 363, 364–65 (2009) (“[I]t is difficult to see how a lawyer regulator, from the most senior to the most junior rank and file, can purport to regulate complex financial instruments and markets without having a detailed understanding of these matters beyond legal definitions, qualitative intuitions, and half-guesses.”).

¹⁸² See *supra* note 32 and accompanying text (explaining that robo-advisers create special risks, including catastrophic losses to investors and threats to market integrity, because of the lack of human intermediation in providing investment advice).

¹⁸³ See *supra* notes 33–34 and accompanying text (explaining that crowdfunding creates increased risks to investors because of the exemption of certain transactions from traditional registration requirements).

¹⁸⁴ See *supra* note 35 and accompanying text (explaining that virtual space creates additional risks to investors because of the gamification of securities trading coupled with the realities of the internet).

¹⁸⁵ See *Press Release: SEC Renames Division Focusing on Economic and Risk Analysis*, SEC (June 6, 2013), <https://www.sec.gov/news/press-release/2013-2013-104.htm> [<https://perma.cc/64PQ-DJ5N>] (“The [Division that is currently known as DERA] was created in 2009 as the successor to

which was renamed the Division of Economic and Risk Analysis (DERA) in 2013.¹⁸⁶ As described on the SEC's website, DERA "advances the Commission's statutory mission to protect investors, maintain fair, orderly and efficient markets, and facilitate capital formation through sound economic analysis and rigorous data analytics."¹⁸⁷ DERA's work is integrated into all of the SEC's functions.¹⁸⁸ The SEC's website explains, "DERA's data analytics work develops a variety of financial and market data-analysis tools, supplies economic statistics, and promotes data standards."¹⁸⁹ DERA currently makes its staff papers and analyses publicly available.¹⁹⁰ It is also composed of a robust group of well-trained economists.¹⁹¹ Thus far, DERA appears to have undertaken its work admirably, and its work appears to have been well-received.¹⁹²

Although additional resources might need to be allocated, the SEC could implement regulation by survey through DERA and its existing resources in the realms of robo-advising, crowdfunding, and virtual space. The current system of securities regulation is based on a model of regulation that was devel-

three then-existing offices: the Office of Economic Analysis, Office of Risk Assessment, and Office of Interactive Data.").

¹⁸⁶ *Id.* ("The Securities and Exchange Commission today announced that it has changed the name of its Division of Risk, Strategy, and Financial Innovation to better reflect its core responsibilities and focus. Starting today, it will be called the 'Division of Economic and Risk Analysis.'").

¹⁸⁷ *About the Division of Economic and Risk Analysis*, SEC, <https://www.sec.gov/dera/about> [<https://perma.cc/5ZJS-UPNC>].

¹⁸⁸ *Id.* ("DERA engages across the entire range of the agency's functions, including rulemaking, examination, and enforcement. . . . DERA assists the Commission in its efforts to identify, analyze, and respond to economic and market issues, including those related to new financial products, investment and trading strategies, systemic risk, and fraud.").

¹⁸⁹ *Id.*

¹⁹⁰ *See Staff Papers and Analyses*, SEC, <https://www.sec.gov/dera/staff-papers> [<https://perma.cc/8DGN-WMT7>] ("Working papers in the series were prepared in full or in part by SEC staff economists in the Division of Economic and Risk Analysis. They investigate a broad range of issues relevant to the Commission's mission and are disseminated to stimulate discussion and critical comment to the benefit of the public.").

¹⁹¹ *See generally Economists*, SEC, https://www.sec.gov/page/dera_economists [<https://perma.cc/2ZWG-23U5>] (providing a list of SEC economists involved in DERA activities with links to their bios).

¹⁹² *See* Onnig H. Dombalagian, *Preserving Human Agency in Automated Compliance*, 11 BROOK. J. CORP. FIN. & COM. L. 71, 78 (2016) ("DERA is credited with developing many of the SEC's new analytic tools in collaboration with enforcement and surveillance programs in other divisions or offices."); Hiba Hafiz, *Economic Analysis of Labor Regulation*, 2017 WIS. L. REV. 1115, 1144-45 ("DERA thus pushes the SEC beyond its current docket and dependence on parties' submissions . . ."); Bruce R. Kraus, *Economists in the Room at the SEC*, 124 YALE L.J.F. 280, 283 (2015), <https://www.yalelawjournal.org/forum/economists-in-the-room-at-the-sec> [<https://perma.cc/587S-HDFJ>] ("[W]e should nonetheless pause to admire the informative empirical results and mathematical models that the SEC's recently re-named Division of Economic and Risk Analysis (DERA) has been cranking out, as well as the SEC's increased use of home-grown economic data and analysis.").

oped during the 1930s.¹⁹³ Although that model of regulation is still working well,¹⁹⁴ the time has come to update that model with tools that were not available or feasible at its inception.¹⁹⁵ Regulation by survey is one such of these tools, especially considering the challenges that exist in market surveillance in the areas of robo-advising, crowdfunding, and virtual space.¹⁹⁶

Once the usefulness of regulation by survey has been proven and fine-tuned, it should be imported into other areas of securities law and beyond. To protect investors, a regulator has to understand their interests,¹⁹⁷ and to regulate markets, a regulator must understand those markets.¹⁹⁸ Regulation by survey will afford more understanding of investor and market behavior than currently exists.

B. Regulation by Survey Promotes Market Confidence

Regulation by survey would also be a useful addition to the existing system of federal securities law because it would improve market confidence. The primary purpose of federal securities law is to protect securities markets.¹⁹⁹

¹⁹³ See M. Todd Henderson & Max Raskin, *A Regulatory Classification of Digital Assets: Toward an Operational Howey Test for Cryptocurrencies, ICOs, and Other Digital Assets*, 2019 COL-UM. BUS. L. REV. 443, 444 (“The securities laws in place were, and still are, a product of the 1930s.”); Jerry W. Markham, *Super Regulator: A Comparative Analysis of Securities and Derivatives Regulation in the United States, the United Kingdom, and Japan*, 28 BROOK. J. INT’L L. 319, 326–27 (2003) (“Aside from some tinkering principally designed to increase regulation, the federal securities laws remain more or less in the form arrived at in the 1930s.”); Steven R. Salbu, *Tipper Credibility, Noninformational Tippee Trading, and Abstention from Trading: An Analysis of Gaps in the Insider Trading Laws*, 68 WASH. L. REV. 307, 309 (1993) (“While the securities laws have been subject to minor modifications since their legislative inception in the 1930s, they remain essentially intact today.”).

¹⁹⁴ See *supra* note 1 and accompanying text (noting that the United States is viewed as having a high-quality system of securities regulation).

¹⁹⁵ See *supra* note 7 and accompanying text (noting that federal securities law needs to be regularly updated and adapted, especially in regard to emerging technology); *supra* note 12 and accompanying text (noting that communication has changed dramatically since the development of federal securities law during the 1930s, especially as a result of the development of the internet).

¹⁹⁶ See *supra* Part I (exploring the need for market surveillance relating to robo-advisers, crowdfunding, and virtual space).

¹⁹⁷ See Kathryn Judge, *The New Mechanisms of Market Inefficiency*, 45 J. CORP. L. 915, 926 (2020) (“[R]egulators misfire when they fail to understand investor preferences for certain types of assets, like safe assets. A frequent result is policies that fail to achieve intended aims.”).

¹⁹⁸ See *supra* note 181 and accompanying text (noting the importance of regulators being knowledgeable about the markets that they are regulating).

¹⁹⁹ See Arthur R. Pinto, *The Nature of the Capital Markets Allows a Greater Role for the Government*, 55 BROOK. L. REV. 77, 77 (1989) (“[T]he securities laws were enacted during the New Deal to insure that our capital markets remain free from the abuses and fraud that Congress believed plagued both the sale and trading of securities.”); Joel P. Trachtman, *Unilateralism, Bilateralism, Regionalism, Multilateralism, and Functionalism: A Comparison with Reference to Securities Regulation*, 4 TRANSNAT’L L. & CONTEMP. PROBS. 69, 78 (1994) (“[I]n the area of securities law it is generally accepted that the main purpose of securities regulation is to promote the efficient operation of the securities market. Although there is vigorous debate on how best to achieve this goal, there is little

Section 2 of the Securities Exchange Act of 1934 is a codification of Congress's views on the "[n]ecessity for regulation" found within the federal securities law.²⁰⁰ This provision provides in part:

- (3) Frequently the prices of securities on such exchanges and markets are susceptible to manipulation and control, and the dissemination of such prices gives rise to excessive speculation, resulting in sudden and unreasonable fluctuations in the prices of securities which (a) cause alternately unreasonable expansion and unreasonable contraction of the volume of credit available for trade, transportation, and industry in interstate commerce, (b) hinder the proper appraisal of the value of securities and thus prevent a fair calculation of taxes owing to the United States and to the several States by owners, buyers, and sellers of securities, and (c) prevent the fair valuation of collateral for bank loans and/or obstruct the effective operation of the national banking system and Federal Reserve System.
- (4) National emergencies, which produce widespread unemployment and the dislocation of trade, transportation, and industry, and which burden interstate commerce and adversely affect the general welfare, are precipitated, intensified, and prolonged by manipulation and sudden and unreasonable fluctuations of security prices and by excessive speculation on such exchanges and markets, and to meet such emergencies the Federal Government is put to such great expense as to burden the national credit.²⁰¹

Although investor protection is important, it is not the main goal of securities regulation and is instead subsidiary to the primary purpose of market protection.²⁰² Congress's focus on market stability is unsurprising considering that

disagreement on the goal itself . . ."); Brittany Fritsch, Comment, *Broken Windows Is a Broken Policy*, 47 U. TOL. L. REV. 767, 782 (2016) ("The principal purpose of securities regulation is to maintain healthy markets . . .").

²⁰⁰ 15 U.S.C. § 78b.

²⁰¹ *Id.*

²⁰² See Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 711, 713 (2006) ("Any serious examination of the role and function of securities regulation must sidestep the widespread, yet misguided, belief that securities regulation aims at protecting the common investor. Securities regulation is not a consumer protection law. Rather, scholarly analysis of securities regulation must proceed on the assumption that the ultimate goal of securities regulation is to attain efficient financial markets . . ."); Lyman Johnson, *The Eventual Clash Between Judicial and Legislative Notions of Target Management Conduct*, 14 J. CORP. L. 35, 66 (1988) ("Because the major purpose of the federal securities laws is maintaining fair and honest capital markets, their intended beneficiary is, naturally enough, the investor."); Janet E. Kerr & Tor S. Sweeney, *Look Who's Talking: Defining the Scope of the Misappropriation Theory After United States v. O'Hagan*, 51 OKLA. L. REV. 53, 55 (1998) ("The purpose of securities laws is to protect the integrity of the market. Ensuring that investors cannot trade without risk preserves that integrity.").

the Securities Act and Exchange Act were passed in the wake of and in response to the stock market crash of 1929.²⁰³

Congress's theory of market protection is founded upon instilling investor confidence.²⁰⁴ The willingness to invest and the willingness to hold investments for an extended period of time are key to creating stable securities markets, and in their absence, securities markets crash.²⁰⁵ Investor confidence is key to both of these, and Congress promulgated the Securities Act and Exchange Act as a means of restoring investor confidence.²⁰⁶ These Acts are de-

²⁰³ See Shlomit Azgad-Tromer, *Corporations and the 99%: Team Production Revisited*, 21 FORDHAM J. CORP. & FIN. L. 163, 203 (2016) ("The federal securities laws enacted in the 1930s were a response to the 1929 stock market crash and the Great Depression."); Ernest E. Badway & Jonathan M. Busch, *Ending Securities Industry Self-Regulation as We Know It*, 57 RUTGERS L. REV. 1351, 1352 (2005) ("After the 1929 stock market crash, political sentiment shifted and forced the federal government to discuss public regulation of the capital markets, in an effort to re-establish market confidence."); Elizabeth Cosenza, *Is the Third Time the Charm? Janus and the Proper Balance Between Primary and Secondary Actor Liability Under Section 10(b)*, 33 CARDOZO L. REV. 1019, 1025 (2012) ("Following the Stock Market Crash of 1929 and the resulting Great Depression, Congress enacted two landmark pieces of legislation to instill public confidence in the financial markets: the Securities Act of 1933 . . . and the Securities Exchange Act of 1934 . . .").

²⁰⁴ See Linda S. Eads, *From Capone to Boesky: Tax Evasion, Insider Trading, and Problems of Proof*, 79 CALIF. L. REV. 1421, 1458 n.179 (1991) ("Those who create and enforce the securities laws believe that investor confidence in the fairness of the market is the primary purpose of the securities laws."); Robert Prentice, *Contract-Based Defenses in Securities Fraud Litigation: A Behavioral Analysis*, 2003 U. ILL. L. REV. 337, 419 ("In 1933 and 1934, Congress passed two major federal securities laws for the purpose of restoring confidence in the securities markets by, in part, protecting investors from fraud."); Ching-Ping Shao, *Representative Litigations in Corporate and Securities Laws by Government-Sanctioned Nonprofit Organizations: Lessons from Taiwan*, 15 ASIAN-PACIFIC L. & POL'Y J. 58, 63 (2013) ("The main purpose of securities law . . . is to require issuers to fully disclose all pertinent information in order to strengthen investors' confidence in the stock market . . .").

²⁰⁵ See Brett Deforest Maxfield, *Ethics, Politics and Securities Law: How Unethical People Are Using Politics to Undermine the Integrity of Our Courts and Financial Markets*, 35 OHIO N.U. L. REV. 243, 274 (2009) ("What caused the Great Depression . . . in part was the lack of confidence of people in the integrity of the market after the crash. People were very slow to put faith in the stock market after the devastation caused by its crash."); Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 214–15 (2008) ("Panics can trigger market failures even outside the banking arena, however, such as when doubt arising over a market's future liquidity triggers a stampede to sell first while the market is still liquid, thereby inadvertently destroying the market's liquidity; or, as in the generic example of a systemic market meltdown, when contractual counterparties rush to try to close out their positions, causing prices to drop so sharply that one or more capital markets stop functioning (at least temporarily), which in turn leads to a vicious cycle in which investors lose confidence.").

²⁰⁶ See Jill Gross, *The Historical Basis of Securities Arbitration as an Investor Protection Mechanism*, 2016 J. DISP. RESOL. 171, 180 ("After the stock market crash of 1929 led to the Great Depression, a concerned Congress enacted the federal securities laws to restore investor confidence in and facilitate the healthy functioning of capital markets."); Wes Henricksen, *Deceive, Profit, Repeat: Public Deception Schemes to Conceal Product Dangers*, 42 CARDOZO L. REV. 2395, 2435–36 (2021) ("After the stock market crash of 1929, Congress identified a need to protect and restore investor confidence."); Susanna Kim Ripken, *The Dangers and Drawbacks of the Disclosure Antidote: Toward a More Substantive Approach to Securities Regulation*, 58 BAYLOR L. REV. 139, 204 (2006)

signed to promote investor confidence in two main ways. First, the Securities Act and Exchange Act are designed to promote investor confidence through full and truthful disclosure.²⁰⁷ In 1963, in *SEC v. Capital Gains Research Bureau, Inc.*,²⁰⁸ Supreme Court Justice Arthur Goldberg, famously wrote, “[a] fundamental purpose . . . [of federal securities law] was to substitute a philosophy of full disclosure for the philosophy of *caveat emptor* and thus to achieve a high standard of business ethics in the securities industry.”²⁰⁹ To put it differently, federal securities law is designed to give investors confidence that they have ample truthful information on which to make their investment decisions.²¹⁰ Second, federal securities regulation is designed to give investors con-

(“One of the fundamental purposes of securities regulation is to promote investor confidence and provide investor protection.”).

²⁰⁷ See Charles R. Korsmo, *Market Efficiency and Fraud on the Market: The Danger of Halliburton*, 18 LEWIS & CLARK L. REV. 827, 831–32 (2014) (“In an effort to bolster investor confidence following the market crash of 1929, Congress passed the Securities Act of 1933 . . . , creating an elaborate system of registration and disclosure of information to investors. The next year, Congress passed the Securities Exchange Act of 1934 . . . , which largely addressed the problem of stock market manipulation and fraud.”); Troy A. Paredes, *On the Decision to Regulate Hedge Funds: The SEC’s Regulatory Philosophy, Style, and Mission*, 2006 U. ILL. L. REV. 975, 999 (“The logic of federal securities regulation . . . is that the mandatory disclosure regime of the federal securities laws shores up investor confidence and the integrity of securities markets by redressing information asymmetries and targeting fraud. Mandatory disclosure and federal antifraud provisions, in the conventional view, encourage investors to invest, leading to more efficient and more highly valued securities markets.”); Robert A. Prentice, *The Inevitability of a Strong SEC*, 91 CORNELL L. REV. 775, 803 (2006) (“After the Great Crash of 1929, Congress attempted to restore investor confidence in the nation’s markets. Its two primary tools, embodied in the Securities Act of 1933 and the Securities Exchange Act of 1934, were mandatory disclosure and punishment for fraudulent disclosures.”).

²⁰⁸ 375 U.S. 180, 181 (1963).

²⁰⁹ *Id.* at 186.

²¹⁰ See Mark Latham, *Environmental Liabilities and the Federal Securities Laws: A Proposal for Improved Disclosure of Climate Change-Related Risks*, 39 ENV’T L. 647, 672–73 (2009) (“To provide investors with material information and to prevent fraudulent practices in the sale of securities, both [securities] statutes and their subsequent implementing regulations as adopted by the SEC mandated that issuers disclose to the investing public a wide range of financial and nonfinancial information relevant to the decision to purchase or sell a security. By this statutorily mandated disclosure obligation, Congress sought to restore investor confidence through the provision of all material facts so that investors could make informed decisions about the purchase and sale of securities.”); Troy A. Paredes, *Blinded by the Light: Information Overload and Its Consequences for Securities Regulation*, 81 WASH U. L.Q. 417, 422–23 (2003) (“Our federal securities laws are designed to protect investors and the integrity of capital markets by mandating disclosure that enables informed investor decision making, boosts investor confidence, and reduces agency costs. . . . [T]he disclosure regime of the federal securities laws is designed to disseminate information to investors, who in turn use this information in making investment decisions—both good ones and bad ones.”); Marc I. Steinberg & Brent A. Kirby, *The Assault on Section 11 of the Securities Act: A Study in Judicial Activism*, 63 RUTGERS L. REV. 1, 55 (2010) (“The [Securities] Acts function as a crucial link between investors and the securities markets, providing investors with confidence that they will receive accurate information necessary to make informed investment decisions, and further providing an avenue for financial redress of corporate wrongdoings.”).

fidence that regulators, especially the SEC with its specialized expertise, are exercising adequate oversight of the securities markets in the United States.²¹¹ Otherwise, investors could not feel confident that full and fair disclosure was occurring.

As described in this Article, regulation by survey promotes investor confidence. First, regulation by survey gives investors confidence that they have adequate truthful information to make their investment decisions. Regulation by survey assists in full and truthful disclosure regarding securities transactions because it reveals additional information about these transactions, including otherwise undetected wrongdoing, market behavior, and investor preferences. In addition, it reveals this information in a relatively efficient, expeditious, and transparent manner—especially considering that the model for regulation by survey proposed in this Article includes that the information obtained should be made freely available online for use by regulators, researchers, and anyone else who might find the information useful. Second, regulation by survey gives investors confidence that regulators, especially the SEC, are exercising adequate oversight of the securities markets in the United States. As explained above, regulation by survey improves regulator market surveillance.²¹² As a result, investors can have greater confidence in the ability of regulators to enforce securities laws and preserve market integrity because they have better understanding of these markets through the information gained from regulation by survey.

C. Regulation by Survey Allows Investors to Engage in Improved Decision-Making

Regulation by survey can also improve investor decision-making by providing a pool of information that investors are likely to use and internalize. Although Congress enacted federal securities regulation principally to restore

²¹¹ See Mitchell A. Agee, *Friends in Low Places: How the Law Should Treat Friends in Insider Trading Cases*, 7 CHARLESTON L. REV. 345, 346 n.1 (2013) (“Congress created the Securities and Exchange Commission (SEC) in 1934 in order to restore and maintain investor confidence after the stock market crash of 1929.”); Roberta S. Karmel, *Little Power Struggles Everywhere: Attacks on the Administrative State at the Securities and Exchange Commission*, 72 ADMIN. L. REV. 207, 208 (2020) (“The Securities and Exchange Commission (SEC or Commission) was created as an independent federal administrative agency, designed to bolster capitalism by exerting its specialized expertise to increase investor confidence.”); Sunitha Malepati, *The Future (Public Company Boardroom) Is Female: From California SB 826 to a Gender Diversity Listing Standard*, 28 AM. U. J. GENDER SOC. POL’Y & L. 493, 507 (2020) (“The SEC was created in the aftermath of the Great Crash of 1929 and during the ensuing Great Depression, as a way to restore public confidence in the capital markets and thereby promote economic recovery.”).

²¹² See *supra* Part II.A (explaining that regulation by survey improves securities market surveillance).

investor confidence in the securities markets in the United States,²¹³ that purpose is intertwined and often indistinguishable from investor protection and promoting investor well-being generally.²¹⁴ As previously discussed, rather than enacting merit regulation to pass judgment on the worth of investments,²¹⁵ Congress opted for a disclosure-based system of regulation that was designed to provide investors with ample truthful information to make their investment decisions.²¹⁶ By adopting a system of disclosure-based regulation, Congress chose to respect investors' freedom to choose the investments that they want,²¹⁷ even if in some cases they end up making risky, poor, or even catastrophic decisions.²¹⁸

²¹³ See *supra* notes 199–203 and accompanying text (explaining that Congress's primary purpose in enacting federal securities regulation in the wake of the stock market crash of 1929 and during the ensuing depression was to promote investor confidence in securities markets in the United States).

²¹⁴ See *supra* note 202 and accompanying text (noting that investor protection is secondary to promoting investor confidence, but it is closely related and not mutually exclusive).

²¹⁵ See Thomas Lee Hazen, *Disparate Regulatory Schemes for Parallel Activities: Securities Regulation, Derivatives Regulation, Gambling, and Insurance*, 24 ANN. REV. BANKING & FIN. L. 375, 382–83 n.19 (2005) ("Merit regulation is a regulatory system under which a securities administrator has the power to evaluate the merits of an investment before allowing it to be sold."); Anita K. Krug, *The Other Securities Regulator: A Case Study in Regulatory Damage*, 92 TUL. L. REV. 339, 378 (2017) ("Merit regulation . . . assumes that investors will get it wrong and that regulators will get it right."); Mark A. Sargent, *State Disclosure Regulation and the Allocation of Regulatory Responsibilities*, 46 MD. L. REV. 1027, 1039 (1987) ("In essence, merit regulation is a paternalistic system of securities regulation permitting the administrator to deny effectiveness to a registration statement if the terms of the offering, the structure of the issuer, or any associated transactions do not (i) ensure a fair relationship between promoters and public investors, and (ii) provide public investors with a reasonable relation between risk and return.").

²¹⁶ See *supra* notes 208–209 and accompanying text (containing Justice Arthur Goldberg's famous quotation from *Capital Gains* regarding the system of securities regulation in the United States being a disclosure-based system of securities regulation); see also Zachary J. Gubler, *Reconsidering the Institutional Design of Federal Securities Regulation*, 56 WM. & MARY L. REV. 409, 417 n.29 (2014) ("The original draft of the federal securities laws incorporated a form of such 'merit review,' but this proposal was ultimately replaced with a purely disclosure-based regime."); Darian M. Ibrahim, *Public or Private Venture Capital?*, 94 WASH. L. REV. 1137, 1143 (2019) ("Tracing to the New Deal, the existing body of securities laws is a federally-imposed disclosure-based system, meaning that regulators will not pass judgment on the desirability of securities so long as companies disclose all relevant information to potential investors."); Michael C. Macchiarola, *Get Shorty: Toward Resurrecting the SEC's Ill-Fated Pursuit of PIPE Arbitrageurs*, 4 VA. L. & BUS. REV. 1, 4 (2009) ("In ushering in this new federal securities law, Congress embraced a disclosure-based system of regulation aimed at minimizing the financial risks that an investor faces when investing on the basis of imperfect or insufficient information.").

²¹⁷ See Sean M. O'Connor, *Crowdfunding's Impact on Start-Up IP Strategy*, 21 GEO. MASON L. REV. 895, 902 (2014) ("The core premise of the federal securities laws is that the government should not review the merits of investments represented by offers of securities, but rather simply mandate disclosures from the issuers of these securities so that investors can make reasonably informed decisions."); Ian K. Peck, *Where Are the Jobs in the JOBS Act? An Examination of the Uneasy Connection Between Securities Disclosure and Job Creation*, 4 AM. U. BUS. L. REV. 397, 402 (2015) ("While some state securities disclosure regimes passed on the merits of securities offerings (known as merit review), the '33 Act chose instead to favor disclosure and let investors decide on the merits."); Ripken, *supra* note

Implicit in disclosure-based regulation, however, is the idea that informed decisions are likely to be better decisions.²¹⁹ As the well-worn saying goes, knowledge is power.²²⁰ Put differently, having ample truthful information is likely to improve decision-making.²²¹ Because disclosure-based regulation is about providing ample truthful information, it generally improves decision-making as well.²²²

206, at 196 (“The philosophy of disclosure in securities regulation is rooted in the notion that in a democratic society, the government should not be so paternalistic as to mandate or prohibit certain corporate behaviors and certainly should not tell people what they can or cannot invest in.”).

²¹⁸ See Ronald J. Colombo, *Merit Regulation via the Suitability Rules*, 12 J. INT’L BUS. & L. 1, 7 (2013) (“[T]he disclosure approach [to federal securities regulation] allows investors and the market to determine whether a given offering is fair or excessively risky, whereas it is a government official who makes that determination in merit regulation.”); Brent J. Horton, *In Defense of a Federally Mandated Disclosure System: Observing Pre-Securities Act Prospectuses*, 54 AM. BUS. L.J. 743, 747–48 (2017) (“[R]ather than preventing issuers from offering risky securities to the public, the Securities Act imposes a disclosure requirement (the issuer must provide information to the prospective investor, which the prospective investor can use to determine whether the security is too risky for their taste).”); Susanna Kim Ripken, *Paternalism and Securities Regulation*, 21 STAN. J.L. BUS. & FIN. 1, 2 (2015) (“Rather than flatly and paternalistically prohibiting certain transactions that might harm investors, disclosure laws merely require the dissemination of relevant information, thereby empowering investors to analyze their options and make optimal investment decisions based on disclosed potential risks and returns. The disclosure approach to securities regulation is intended to support free market principles and preserve the autonomy of investors to decide for themselves whether they wish to participate in risky transactions.”).

²¹⁹ See Thomas Lee Hazen, *Social Issues in the Spotlight: The Increasing Need to Improve Publicly-Held Companies’ CSR and ESG Disclosures*, 23 U. PA. J. BUS. L. 740, 752 (2021) (“The underlying premise of federal securities law was to eliminate the ‘let that buyer beware’ from securities transactions and to provide transparency and full disclosure to allow investors to make informed investment decisions.”); Cheryl Nichols, *Mutual Recognition Based on Substituted Compliance: An Integral Component of the SEC’s Mandate*, 34 N.C. J. INT’L L. & COM. REGUL. 1, 16–17 (2008) (“The federal securities laws are based on the principle of full disclosure of all material, non-public information required by a reasonable investor to make an informed investment decision.”); Ann Morales Olazábal & Howard Marmorstein, *Structured Products for the Retail Market: The Regulatory Implications of Investor Innumeracy and Consumer Information Processing*, 52 ARIZ. L. REV. 623, 642–43 (2010) (“[I]t is beyond cavil that the federal securities regulatory scheme is designed to provide investors with the disclosures they need to make informed investment decisions and to penalize those who intentionally or recklessly deceive investors.”).

²²⁰ This saying is commonly attributed to Sir Francis Bacon, as the English translation of his statement in Latin: “*Ipsa scientia potestas est.*” FRANCIS BACON, *MEDITATIONES SACRAE* (1597), reprinted in *THE WORKS OF FRANCIS BACON* 241 (James Spedding, Robert Leslie Ellis & Douglas Denon Heath eds., 1879).

²²¹ *Id.*

²²² See Stephen J. Choi & A.C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1, 22 (2003) (“[D]isclosure may assist rational investors in allocating their investment dollars, leading to better use of capital and more accurate securities prices.”); Miri Berlin, Note, *Environmental Auditing: Entering the Eco-Information Highway*, 6 N.Y.U. ENV’T L.J. 618, 633 (1998) (“The federal securities laws require disclosure to ensure investors the opportunity to make well-informed investment decisions and to control fraud and manipulation of the securities market. Underlying this disclosure system is the concept that markets are affected by the availability of information, and that lack of information obstructs market functioning by hindering the calculation of value.”).

Regulation by survey is designed to provide additional truthful information, including information regarding otherwise undetected wrongdoing, market behavior, and investor preferences. Specifically, in regard to the model of regulation by survey advocated for above, the information obtained through regulation by survey should be made freely available online for use by regulators, researchers, and anyone else who might find the information helpful. As a consequence, this information is likely to be used by investors to improve their decision-making processes. Although the information that regulation by survey provides would be helpful generally in regard to securities regulation and beyond, it would be especially helpful in the areas highlighted in this Article—robo-advising, crowdfunding, and virtual space—because of the market surveillance problems that currently exist within each of those contexts.²²³

Additionally, regulation by survey is also likely to improve investor decision-making because investors are more likely to internalize the crowdsourced feedback than many other types of investor education efforts.²²⁴ The SEC currently undertakes robust investor education efforts.²²⁵ With that said, investor education is a challenge for at least two reasons. First, financial literacy in the United States is relatively low, and as a result, investor education efforts may exceed investors' abilities to understand what is occurring within financial markets.²²⁶ Second, even if investors are sufficiently financially literate, getting them to engage with investor education materials can be a challenge.²²⁷

²²³ See *supra* Part I (providing an overview of the market surveillance issues raised by robo-advising, crowdfunding, and virtual space).

²²⁴ See *infra* note 230 and accompanying text (describing that information obtained by regulation by survey would be internalized by investors similar to consumer reviews).

²²⁵ See Cable, *supra* note 81, at 2270 (“[T]he SEC dedicates substantial resources to ‘investor education.’ Through these educational efforts, the SEC endorses conventional views of the personal finance industry regarding appropriate asset allocation, retirement planning, and diversification.”); John Reed Stark, *EnforceNet Redux: A Retrospective of the SEC’s Internet Program Four Years After Its Genesis*, 56 BUS. LAW. 105, 121 (2001) (reporting that the SEC uses free publications, its website, and town meetings to educate investors about the risks associated with investing).

²²⁶ See Barbara Black, *Behavioral Economics and Investor Protection: Reasonable Investors, Efficient Markets*, 44 LOY. U. CHI. L.J. 1493, 1495 (2013) (“Recent studies consistently show that retail investors lack basic financial literacy.”); Lisa M. Fairfax, *The Securities Law Implications of Financial Illiteracy*, 104 VA. L. REV. 1065, 1121 (2018) (“Studies conclusively and consistently reveal that Americans lack basic understanding of financial concepts and how to effectively apply those concepts in financial decision making. Those studies also reveal that the American investor is no exception.”); 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, 620 (2014) (“Empirical studies demonstrate a wide variety of investor mistakes ranging from saving too little to trading too frequently. Investors lack basic financial literacy, including the ability to understand the effect of compound interest or to construct a diversified portfolio.”).

²²⁷ See Fairfax, *supra* note 226, at 1110–11 (“[S]tudies reveal that people do not seek out or take advantage of investor education programs, even when those programs are easily accessible, such as when employers periodically offer such programs to their employees.”).

With investor education efforts, such as HoweyCoins.com, the SEC has found creative ways to educate investors, but the SEC should always be searching for new ways to help investors internalize investment education information.²²⁸

Regulation by survey offers an opportunity for the SEC to help investors internalize investor education information that should improve their investment decision-making processes. For better or worse, consumers use and internalize consumer reviews, which can lead to the success or failure of the subject matter of these reviews.²²⁹ In a very sophisticated manner, regulation by survey is designed to generate consumer reviews of securities market activity. The model proposed here advocates that the information obtained through regulation by survey should be made freely available online for use by regulators, researchers, and anyone else who might find the information helpful. As a result, similar to consumer reviews, investors are likely to internalize that information and use it in their decision-making processes.²³⁰ As discussed in the next Part, investor re-

²²⁸ See Henderson & Raskin, *supra* note 193, at 454 (“The SEC has articulated its positions on digital assets through informal guidance, enforcement actions, and even a website that explains the perils of the ICO market and relays up-to-date information. Humorously, it also hosts a website promoting its own fake ICO called Howeycoin to demonstrate the problems with parts of the market.”); Matthew R. Lyon, *The Trump Administration’s Response to the Blockchain Era*, 70 MERCER L. REV. 641, 668 (2019) (“The SEC . . . will also likely continue to increase their efforts at educating investors on cryptocurrencies and crypto-assets, as illustrated by products such as ‘Howeycoins,’ the SEC’s website modeling an ICO that leads potential investors to an informational webpage”); Samuel N. Weinstein, *Blockchain Neutrality*, 55 GA. L. REV. 499, 582 (2021) (“To underscore the dangers of ICO frauds, the SEC created a mock ICO website, Howeycoins.com The site includes a mock whitepaper and other enticements ICO fraudsters commonly use.”).

²²⁹ See Jens Dammann, *Electronic Word of Mouth and Consumer Protection: A Legal and Economic Analysis*, 94 S. CAL. L. REV. 423, 426 (2021) (“A wealth of empirical research demonstrates that electronic word of mouth is highly relevant to consumers’ purchasing decisions. Positive consumer reviews can cause sales to increase substantially; negative ones tend to have the opposite effect.”); Scott R. Peppet, *Freedom of Contract in an Augmented Reality: The Case of Consumer Contracts*, 59 UCLA L. REV. 676, 737 (2012) (“[A]lthough consumers may not read a standard form contract and understand all of its terms, they might focus on the fact that the average consumer gave that product only one out of five stars on Amazon. Or, a consumer might pull up mostly negative consumer reviews that highlight problems experienced with the product, thereby making salient the likelihood of needing to depend on the warranty.”); Lori A. Roberts, *Brawling with the Consumer Review Site Bully*, 84 U. CIN. L. REV. 633, 635 (2016) (“There is no question that consumer review sites have had a profound effect on business practices and the impact of reviews posted on these sites can make-or-break a small business.”).

²³⁰ See Max N. Helveston, *Regulating Digital Markets*, 13 N.Y.U. J.L. & BUS. 33, 58 (2016) (“As individuals’ access to the internet has expanded, so too has their reliance on digital reputation information. Survey data have shown that an increasing number of consumers view online reputational information as one of the most important factors influencing their commercial behavior.”); Amanda Rose Martin & Richik Sarkar, *Developments in Advertising and Consumer Protection in Cyberspace*, 73 BUS. LAW. 295, 299 (2017) (“Consumer reviews, especially those appearing on social media, can have a large impact on a business’s revenue, especially for small, consumer-facing companies.”); Cassandra Burke Robertson, *Online Reputation Management in Attorney Regulation*, 29 GEO. J. LE-

views of segments of the securities industry do create various concerns.²³¹ Even if that is the case, the model advocated here suggests that the SEC oversees the surveying process and the distribution of the information obtained, which means that the investor reviews will provide useful crowdsourced information that will help improve other investors' decision-making.

III. ARGUMENTS AGAINST REGULATION BY SURVEY

Regulation by survey provides some substantial benefits, including that it improves regulator surveillance and understanding, promotes market confidence, and allows investors to engage in improved decision-making.²³² Importantly, however, regulation by survey is similar to, or perhaps is even a type of, consumer review, and as a result, it is subject to many of the concerns raised by consumer reviews.²³³ For example, regulation by survey detects injuries after they have occurred, depends on investors to provide meaningful information, permits trolling and manipulation, and creates added administrative costs. Although some of these concerns can be lessened by adjusting how the surveying is conducted, each of the concerns is valid. With that said, the benefits of regulation by survey in improving regulator surveillance and understanding, promoting market confidence, and allowing investors to engage in improved decision-making outweigh these concerns, even if there is no way to eliminate them. Each of these concerns will be examined in turn. Section A of this Part will discuss concerns stemming from regulation by survey's backward-looking nature.²³⁴ Section B outlines the issues with depending on inves-

GAL ETHICS 97, 105 (2016) ("Consumer reviews have a real effect on business decisions. An overwhelming majority of consumers say that they are influenced by online reviews . . .").

²³¹ See *infra* Part III (explaining that regulation by survey creates concerns because it detects injuries after they have occurred, depends on investors to provide meaningful information, permits trolling and manipulation, and creates added administrative costs).

²³² See *supra* Part II (discussing the benefits of regulation by survey).

²³³ See Wayne R. Barnes, *The Good, the Bad, and the Ugly of Online Reviews: The Trouble with Trolls and a Role for Contract Law After the Consumer Review Fairness Act*, 53 GA. L. REV. 549, 560–61 (2019) ("In addition to fake reviews, other problems businesses encounter with online reviews include, but are not necessarily limited to: (1) businesses who pay customers (or complete strangers) to leave a good review, (2) customers who extort the business with a threat of a negative review unless some benefits are received, (3) review sites' . . . alleged practices of conditioning the promotion of positive reviews (and the minimization of negative reviews) on whether the business purchases advertising from the review site, (4) being the type of business (such as a utility provider) where customers only think to post reviews when bad things happen and thus the posted reviews are almost uniformly negative, and (5) reviews that are not relevant to the merchant's provision of goods or services . . ."); Dammann, *supra* note 229, at 440 ("Online reviews suffer from various inherent biases that undermine their ability to provide consumers with the information they need.").

²³⁴ See *infra* Part III.A (addressing the concern that regulation by survey is backward-looking).

tors to provide meaningful information.²³⁵ Section C analyzes the potential consequences of trolling and manipulation.²³⁶ Finally, Section D examines the additional administrative costs.²³⁷

A. Regulation by Survey Detects Injuries After They Have Occurred

As discussed above, regulation by survey promotes regulator market surveillance and understanding by surveying investors and other market participants about their experiences. As a result, regulation by survey is by its nature backward-looking.²³⁸ This means that to the extent that it is a tool to discover wrongdoing, a harm will have already occurred by the time it is discovered. As a result, one potential criticism of regulation by survey is that it is a tool for discovering wrongdoing retrospectively, rather than prospectively, and it would be better to detect wrongful conduct before it occurs to prevent injuries.

This criticism is legitimate, but at least five good responses exist to it. First, regulation by survey is designed to be an addition to the existing system of securities regulation, and consequently, other measures already exist to prevent or lessen wrongdoing before it occurs. Consequently, regulation by survey would be a useful addition to that system. Second, some forms of wrongdoing in securities markets are difficult to detect, and detection of wrongdoing through regulation by survey after the fact is better than it not being detected at all.²³⁹ Third, even if some harm has already occurred, the harm may be ongoing to the original victim or additional victims, and regulation by survey can still be a means of preventing future harm. Fourth, knowing that regulation by survey may lead to the detection of wrongdoing after the fact, potential wrongdoers may be disincentivized and deterred from committing wrongful acts because they know that they will be eventually caught. Fifth, regulation by survey is not just about the prevention of harm.²⁴⁰ It is about regulator market surveillance and understanding, promoting market confidence, and allowing

²³⁵ See *infra* Part III.B (acknowledging and discussing regulation by survey's reliance on investors to provide information).

²³⁶ See *infra* Part III.C (analyzing the potential harm that stems from trolling and manipulation).

²³⁷ See *infra* Part III.D (examining the administrative costs of regulation by survey).

²³⁸ Regulation by survey is backward-looking because the information collected from investors is about their past experiences. See *supra* note 174 and accompanying text (explaining the model for regulation by survey).

²³⁹ See, e.g., Ana Carvajal & Jennifer Elliott, *The Challenge of Enforcement in Securities Markets: Mission Impossible?* 1 (Int'l Monetary Fund, Working Paper No. 168, 2009), <https://www.imf.org/external/pubs/ft/wp/2009/wp09168.pdf> [<https://perma.cc/TY4E-UFSP>] ("The recent scandal in the United States, wherein a Ponzi scheme orchestrated by Bernard Madoff went undetected by the U.S. authorities for more than two decades, has once again highlighted the importance of effective enforcement of securities regulation, as well as the challenges that securities regulators around the world face in implementing credible enforcement programs.").

²⁴⁰ See *supra* Part II (detailing the many benefits of regulation by survey).

investors to engage in improved decision-making.²⁴¹ The detection of wrongdoing, whether it be prospective or retrospective, is only one of the many reasons why regulation by survey is beneficial. In short, although regulation by survey is not a perfect tool, it is a very useful one.

B. Regulation by Survey Depends on Investors to Provide Meaningful Information

As discussed above, regulation by survey provides some substantial benefits, including that it improves regulator surveillance and understanding, promotes market confidence, and allows investors to engage in improved decision-making.²⁴² Nevertheless, regulation by survey is dependent on investors providing meaningful information. Real challenges exist to collecting this information from investors.²⁴³ Even if investors are required to periodically fill out surveys to engage in certain types of market behavior, they may attempt to refuse to do so. If they can be forced to fill out the surveys, they may do so in haphazard and useless ways. Moreover, because of deficits in financial literacy, which are pervasive in the United States, investors may not understand or convey information effectively about the subject matter of the surveying,²⁴⁴ especially in the complex areas suggested by this piece as proving grounds for regulation by survey, i.e., robo-advisers, crowdfunding, and virtual space.²⁴⁵ Worse yet, investors may import bias and discrimination into how they answer survey questions, which may make it difficult for historically stigmatized groups who already face challenges in engaging in capital raising and other market activity.²⁴⁶

²⁴¹ See *supra* Part II (exploring the benefits created through regulation by survey, including improved regulator surveillance and understanding, promotion of market confidence, and allowing investors to engage in better decision-making).

²⁴² See *supra* Part II (listing and explaining the benefits of regulation by survey).

²⁴³ See *infra* notes 244–246 and accompanying text (detailing the barriers to collecting meaningful information from investors).

²⁴⁴ See *supra* note 226 and accompanying text (explaining that financial literacy is relatively low in the United States).

²⁴⁵ See *supra* Part I (exploring the three contexts in which this Article recommends testing regulation by survey).

²⁴⁶ See Anat Alon-Beck, *Alternative Venture Capital: The New Unicorn Investors*, 87 TENN. L. REV. 983, 1001 (2020) (“[B]usinesses may face significant bias that precludes them from raising capital. For example, startups led by women face significant bias that has made it difficult for them to attract funding from venture capitalists.”); Lynnise E. Phillips Pantin, *Race and Equity in the Age of Unicorns*, 72 HASTINGS L.J. 1453, 1463–64 (2021) (“The startup world—its investors and entrepreneurs—is a mostly homogenous, white and male community. Intentions aside, the startup space has been dominated by middle and upper-class white males.”); W. Sherman Rogers, *The Black Quest for Economic Liberty: Legal, Historical, and Related Considerations*, 48 HOW. L.J. 1, 110 (2004) (“African Americans have always found it more difficult to obtain capital to start, maintain, and grow their business enterprises largely due to discrimination and social realities. This history of discrimination

All of these concerns are legitimate and valid. The model for regulation by survey proposed in this Article requires that regulators construct and administer the surveys involved, and it requires that regulators compile, present, and distribute the information as well. Some of the concerns discussed above can be addressed by having regulators construct and administer the surveys involved, rather than allowing the individuals and entities being regulated or a third party create the survey instruments in potentially careless and less thoughtful ways. Still, the concerns mentioned above persist.

With that said, despite the challenges regarding investors providing meaningful information within the model for regulation proposed within this Article, the information obtained will still be useful in improving regulator surveillance and understanding, promoting market confidence, and allowing investors to engage in improved decision-making. As the aphorism often attributed to Voltaire states: "The perfect is the enemy of the good."²⁴⁷ Or, put differently, the demand for a perfect solution is often used as a criticism of a good solution. Although regulation by survey is not a perfect solution to providing market surveillance and understanding, promoting market confidence, and allowing investors to engage in improved decision-making, it is a good one. The challenges in depending on investors to provide meaningful information should be recognized as valid concerns, but regulation by survey is nonetheless a useful model that should be employed.

C. Regulation by Survey Permits Trolling and Manipulation

Section B of this Part explored concerns relating to investors innocently failing to provide meaningful information through regulation by survey.²⁴⁸ The failure to provide meaningful information, however, does not always occur innocently. As previously mentioned, regulation by survey is similar to, or perhaps is even a type of, consumer review, and as a result, it is subject to many of the concerns raised about consumer reviews.²⁴⁹ One of these concerns is trolling, which is the posting of insulting or misleading remarks on the internet for purposes of annoying or harming someone or generally creating conflict or

has forced African American entrepreneurs to rely on bootstrapping, the art of learning to do more with less, as a routine matter.").

²⁴⁷ This quotation is a translation of Voltaire. See Voltaire, *La Begueule*, in 3 RECUEIL DES MEILLEURS CONTES EN VERS 77, 77 (1778) ("[L]e mieux est ennemi du bien . . .").

²⁴⁸ See *supra* Part III.B (explaining that one potential barrier to regulation by survey is that investors may not provide meaningful information).

²⁴⁹ See *supra* note 233 and accompanying text (comparing regulation by survey to consumer reviews, including in regard to the concerns that they create).

disruption.²⁵⁰ Trolling creates the risk that the information obtained through regulation by survey is inaccurate or incorrect; it is a form of information manipulation. Other forms of information manipulation can occur as well. For example, in the context of the experimentation of regulation by survey suggested by this Article, a robo-adviser firm; a party raising capital through crowdfunding; or a developer, owner, or operator of virtual space containing securities could work to manipulate the data obtained, which could lead to distorted or inaccurate information being received through regulation by survey.

The concern that regulation by survey is at risk for trolling and manipulation is a valid one. Having a regulator oversee the creation of the survey instrument, the surveying process, the processing of the information obtained, and the distribution of the information to the public helps to lessen some of these concerns about data manipulation. In addition, trolling and manipulation of the surveying process likely violate federal securities law. For example, assuming that a deception is made with scienter, attempting to manipulate the surveying process is almost certainly a violation of Section 10(b) of the Securities Exchange Act of 1934²⁵¹ and Rule 10b-5 promulgated thereupon.²⁵² Still, the risk of information manipulation and public dissemination of compromised information persists.

Similar to the concern that regulation by survey is dependent on investors to provide meaningful information, concerns about manipulation and trolling in the information provided are also outweighed by improving regulator surveillance and understanding, promoting market confidence, and allowing investors to engage in improved decision-making. Regulators should work to make sure that the information obtained through regulation by survey is as free

²⁵⁰ See Darin E.W. Johnson, *Russian Election Interference and Race-Baiting*, 9 COLUM. J. RACE & L. 191, 199 n.26 (2019) (“‘Trolls’ refers to people who disrupt online interactions with antagonistic and offensive rhetoric and posts.”); Daniel H. Kahn, *Social Intermediaries: Creating a More Responsible Web Through Portable Identity, Cross-Web Reputation, and Code-Backed Norms*, 11 COLUM. SCI. & TECH. L. REV. 176, 187 (2010) (“[A] ‘troll’ refers to someone who intentionally engages in disruptive behavior characterized by abusiveness to other Web users”); Tamar Megiddo, *Online Activism, Digital Domination, and the Rule of Trolls: Mapping and Theorizing Technological Oppression by Governments*, 58 COLUM. J. TRANSNAT’L L. 394, 423 (2020) (“‘Trolling’ is . . . , generally speaking, . . . online activity aimed to create disruption or conflict.”).

²⁵¹ See 15 U.S.C. § 78j(b) (“It shall be unlawful for any person . . . (b) To use or employ, in connection with the purchase or sale of any security registered on a national securities exchange or any security not so registered, or any securities-based swap agreement[,] any manipulative or deceptive device or contrivance in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of investors.”).

²⁵² See 17 C.F.R. § 240.10b-5 (2023) (“It shall be unlawful for any person . . . (a) To employ any device, scheme, or artifice to defraud, (b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made . . . not misleading, or (c) To engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.”).

from manipulation and trolling as possible. Further, in reviewing the information provided through regulation by survey, regulators will need to be cautious about drawing conclusions and pursuing alleged wrongdoing, but this should be true in general in conducting their work. Finally, when making the information available online for use by regulators, researchers, and the general public, regulators should work to make sure to post meaningful warnings about the limitations of the information obtained, including that it may be subject to some manipulation. Although the information obtained may be imperfect, it will still be useful and serve good purposes.²⁵³

D. Regulation by Survey Creates Additional Administrative Costs

The SEC has a legal obligation to consider the economic impact of the rules and regulations that it promulgates.²⁵⁴ Courts have held that failure to consider a rule's economic impact can result in that rule being invalidated as arbitrary and capricious.²⁵⁵ In a memorandum from March 16, 2012 that provided guidance on economic analysis in SEC rulemakings, the SEC's Division of Risk, Strategy, and Financial Innovation—which later became DERA²⁵⁶—and the Office General Counsel stated:

²⁵³ See *supra* note 247 and accompanying text (noting that the demand for perfect solutions can often prevent implementation of good ones).

²⁵⁴ See Jerry Ellig, *Improvements in SEC Economic Analysis After Business Roundtable: A Structured Assessment*, 19 FLA. ST. U. BUS. REV. 51, 53–54 (2020) (“Courts have interpreted the SEC’s authorizing legislation to require the commission to assess the economic effects of new rules before it adopts them.”); Markham, *supra* note 56, at 425 (“The SEC is required by law to analyze the costs and benefits of proposed regulations before their adoption.”); Harvey L. Pitt, *Bringing Financial Services Regulation into the Twenty-First Century*, 25 YALE J. ON REGUL. 315, 322–23 (2008) (“When regulators put pen to paper, they should recall it is always cheaper for government to implement a new rule than it is for the regulated to comply. . . . At present, the SEC performs economic analyses because it must, not because it wants to.”).

²⁵⁵ See Hilary J. Allen, *A New Philosophy for Financial Stability Regulation*, 45 LOY. U. CHI. L.J. 173, 186 n.44 (2013) (“The D.C. Circuit’s decision in *Business Roundtable v. S.E.C.* . . . is indicative of that court’s tendency to invalidate as arbitrary and capricious agency rulemakings that it views as being based on flawed economic analysis.” (citing *Business Roundtable v. S.E.C.*, 647 F.3d 1144 (D.C. Cir. 2011))); Reeve Bull & Jerry Ellig, *Judicial Review of Regulatory Impact Analysis: Why Not the Best?*, 69 ADMIN. L. REV. 725, 755 (2017) (“The SEC has lost multiple court cases in recent years as a result of incomplete economic analysis. . . . [T]he SEC’s response to the court decisions suggests that judicial review can create a powerful incentive for better [regulatory impact analysis]”); Jerry Ellig, *Why and How Independent Agencies Should Conduct Regulatory Impact Analysis*, 28 CORNELL J.L. & PUB. POL’Y 1, 5 (2018) (“[T]he Securities and Exchange Commission (SEC) lost several high-profile court cases because of insufficient economic analysis after courts interpreted language in the SEC’s authorizing statute to require benefit-cost analysis of regulations.”).

²⁵⁶ See *supra* note 186 and accompanying text (stating that the Division of Risk, Strategy, and Financial Innovation was renamed DERA in 2013).

It is widely recognized that the basic elements of a good regulatory economic analysis are: (1) a statement of the need for the proposed action; (2) the definition of a baseline against which to measure the likely economic consequences of the proposed regulation; (3) the identification of alternative regulatory approaches; and (4) an evaluation of the benefits and costs—both quantitative and qualitative—of the proposed action and the main alternatives identified by the analysis.²⁵⁷

In short, the economic impact of SEC rules and regulations has to be considered.

As proposed in this piece, regulation by survey will necessarily place additional burdens on the SEC through the creation of survey instruments, the conducting of surveying, the review of data obtained, and the distribution of that data. As previously mentioned, the existence of the DERA and its available resources provide a good foundation for conducting regulation by survey, but additional resources will likely prove necessary.²⁵⁸ The additional resources will not be insignificant, and the expense of regulation by survey is a legitimate concern.

With that said, although the cost should be considered and regularly evaluated, the benefits of regulation by survey make it worth undertaking. As this Article explains, regulation by survey improves regulator surveillance and understanding, promotes market confidence, and allows investors to engage in improved decision-making.²⁵⁹ These benefits would be realized in a myriad of different contexts. Nevertheless, because regulation by survey represents a departure from how the SEC currently regulates securities markets, this Article offers three proving grounds for regulation by survey, i.e., robo-advisers, crowdfunding, and regulation of securities transactions in virtual space.²⁶⁰ As previously detailed, the benefits of regulation by survey are especially strong in these contexts because of the special risks that they pose to investors and the difficulties in market surveillance.²⁶¹ Regulation by survey could be refined in these contexts to minimize costs while maximizing benefits, and it can then be imported into other contexts as well.

²⁵⁷ Memorandum from Division of Risk, Strategy, and Financial Innovation (RSFI) & Office of the General Counsel (OGC) on Current Guidance on Economic Analysis in SEC Rulemakings to Staff of the Rulewriting Divisions and Offices 1, 4 (Mar. 16, 2012), https://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf [<https://perma.cc/TER5-LQM7>].

²⁵⁸ See *supra* notes 185–192 (exploring the role that DERA could play in regulation by survey).

²⁵⁹ See *supra* Part II (explaining the benefits of regulation by survey).

²⁶⁰ See *supra* Part I (suggesting that regulation by survey should be tested in the contexts of robo-advisers, crowdfunding, and virtual space).

²⁶¹ See *supra* Part I (discussing the special risks and market surveillance problems that exist regarding securities transactions involving robo-advisers, crowdfunding, and virtual space).

CONCLUSION

The United States has a high-quality system of securities regulation.²⁶² Nevertheless, it is not a perfect system. The world has changed dramatically since Congress promulgated the Securities Act and the Exchange Act during the 1930s.²⁶³ Especially in the realm of FinTech, regulators have struggled to address and close the RegLag that exists between financial innovation and regulation.²⁶⁴

This Article recommends supplementing existing federal securities law with a form of market surveillance that I have termed “regulation by survey,”²⁶⁵ which involves the surveying by regulators of investors for purposes of understanding market behavior and detecting wrongdoing.²⁶⁶ The benefits of regulation by survey are plentiful because it improves regulator surveillance and understanding, promotes market confidence, and allows investors to engage in improved decision-making.²⁶⁷ These benefits outweigh concerns about regulation by survey, including that it detects injuries after they have occurred, depends on investors to provide meaningful information, permits trolling and manipulation, and creates added administrative costs.²⁶⁸

Such an approach could be tested in the realms of robo-advisers, crowd-funding, and virtual space because of the unique risks these realms pose to investors and the special market surveillance issues that each create.²⁶⁹ This Article advocates for the testing of regulation by survey in those three realms, but it argues for the broader use of regulation by survey as well. Regulation by survey would not have been feasible at the time of promulgation of the Securities Act and Securities Exchange Act because of the state of communication during that period, especially the lack of the internet.²⁷⁰ It is an idea whose time has come.

²⁶² See *supra* notes 1–4 and accompanying text (discussing the high-quality system of securities law in the United States and its role in making the United States a preferred jurisdiction to raise capital).

²⁶³ See *supra* note 193 and accompanying text (reporting that federal securities law in the United States is based on a model developed in the 1930s).

²⁶⁴ See *supra* notes 5–8 and accompanying text (explaining the issue of RegLag as a result of the continued evolution of securities markets in the United States).

²⁶⁵ See Chaffee, *supra* note 40, at 574 (“This Chapter suggests that in addition to disclosure-based regulation, fiduciary duties, investor education, and regulation by litigation, the government in attempting to regulate the robo-adviser industry should engage in what shall be termed ‘regulation by survey.’”).

²⁶⁶ See *supra* note 174 and accompanying text (presenting a model for implementing regulation by survey).

²⁶⁷ See *supra* Part II (explaining the benefits associated with regulation by survey).

²⁶⁸ See *supra* Part III (addressing the concerns created by regulation by survey).

²⁶⁹ See *supra* Part I (discussing the securities law issues associated with robo-advisers, crowd-funding, and virtual space).

²⁷⁰ See *supra* note 12 and accompanying text (reporting that communication has changed substantially since the development of federal securities law during the 1930s, especially as a result of the development of the internet).