SILICON VALLEY MEETS VEGAS: HOW THE SEC CAN REGULATE THE USAGE OF AI BY GAMIFIED INVESTMENT COMPANIES

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INTRODUCTION

In a world where most financial institutions and services have shifted to online platforms, it comes as no surprise that capital markets and trading have followed suit. The transition from trading bulletins and face-to-face road shows to telegraphs and landlines was slow, reflecting the unfamiliarity of a new regulatory scheme. But recently, brokerages and trading platforms have evolved at unprecedented rates, matching the pace of technological advancement in an effort to be the most innovative and advanced. Two factors are now key among firms and platforms that claim to be the most sophisticated—the extent of gamification and AI-integration.

Where there's smoke, there's fire; and where there are large sums of money, there's fraud. Since its establishment, the Securities and Exchange Commission has fought fraud in the market. The SEC diligently follows reports of fraud with a firehose, putting out fires as they arise and attempting to promulgate preventative regulations as market arsonists discover new mechanisms of deceit. However, when it comes to gamification and artificial intelligence, or "AI", the SEC has traded its fireman's uniform for a politician's pressed suit, choosing strategic vagueness (or even silence) to avoid backlash.

This article argues that the SEC's prior resolution to address fraud in the market should continue as new threats, especially those from the simultaneous implementation of gamification techniques and AI systems, emerge. Technological advancement has created new mechanisms for exploitation and deceit that are still being researched, and, as they are discovered, the SEC should proactively promulgate regulations to protect new investors from money-hungry broker-dealers. Part II of this article provides a background on the traditional roles of market players, including broker-dealers, and the securities laws that were designed to protect investors from fraudulent transactions. Part III explores the introduction of gamification investment companies into the financial markets and the positive and negative impacts they have had on investors, sophisticated and unsophisticated, alike. Part IV lays out the AI systems generally used by brokerages and the potential pitfalls that can be encountered through implementation of these systems. It also discusses concerns the SEC has voiced about the use of AI in financial markets and emphasizes the agency's

lack of action. Part V discusses the potential harms caused to unsophisticated investors by e-trading platforms, such as Robinhood, which simultaneously uses gamification tactics and AI. With this background, Part VI then goes on to propose suggested regulatory schemes for the SEC to adopt to address these concerns and also discusses the problems that might arise in implementing such regulatory regimes.

I. THE EVOLUTION OF TRADITIONAL MARKET PLAYERS AND SECURITIES LAWS

The sale of securities can often be complex for young investors, who require more guidance from intermediaries than seasoned investors. Institutional middlemen, such as broker-dealers and e-trading platforms, are often the most accessible resources to these green individuals who seek to enter the capital market. Historically, the intersection of inexperience and greedy, self-interested players has meant ample opportunity for fraud and deceit. This predatory environment gave Congress the motivation it needed to create the SEC and pass a plethora of rules and regulations governing the sale of securities. Despite having a strong interest in preventing fraud, especially as trading has moved online and begun integrating AI into e-trading platforms, Congress and the SEC have shown hesitancy to enact further regulation to prevent any potential form of misconduct through the use of new technologies.

A. The Securities Act of 1933 and the Securities Exchange Act of 1934

The Securities Act of 1933 and the Securities Exchange Act of 1934 were passed back-to-back following the stock market crash that led to the Great Depression.[1] After the "Roaring Twenties," where share prices rose to unprecedented heights,[2] the crash in October 1929 was the embodiment of the adage, "the higher you climb, the harder you fall."[3] Following a period of inconsistent securities regulations[4] and the harrowing "Black

1. *Signing of the Securities Exchange Act of 1934*, LIBR. OF CONG. (May 2025), https://guides.loc.gov/this-month-in-business-history/june/signing-securities-exchange-act-1934.

2. The Dow Jones Industrial Average increased from 63 in August 1921 to 381 in September 1929. Gary Richardson et al., *Stock Market Crash of 1929*, FED. RSRV. HIST. (Nov. 22, 2013), https://www.federalreservehistory.org/essays/stock-market-crash-of-1929.

3. Ron Kelleher, *The Higher You Climb the Harder You Fall*, RONKELLEHER (Aug. 17, 2015), https://ronkelleher.com/130-the-higher-you-climb-the-harder-you-fall/.

4. Before the Securities Act of 1933, states, led by Kansas in 1911, had individualized "Blue Sky Laws", which were passed as responses to increased frequencies of fraudulent transactions. *See*, Jonathan R. Macey & Geoffrey P. Miller, *Origin of the Blue Sky Laws*, 70 TEX. L. REV. 347, 361 (1991); Elisabeth Keller & Gregory A. Gehlmann, *Introductory Comment: A Historical Introduction to the*

Tuesday,"[5] the federal government was forced to confront its lack of uniform legislation and the role it played in this great economic tragedy. In response, Congress passed the Glass-Steagall Act,[6] the Securities Act of 1933,[7] and the Securities Exchange Act of 1934[8] in rapid succession.

The purpose of the Securities Act of 1933 can be gleaned from its nickname—the "truth in securities" law.[9] In response to widespread distrust in the post-Depression market, the Securities Act of 1933 sought to restore

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Securities Act of 1933 and the Securities Exchange Act of 1934, 49 OHIO ST. L.J. 329, 331 (1988).

The inconsistencies between blue sky laws, worsened by states' pursuits of selfish interests in attracting commerce, and their ineffectiveness led to some sentiment in favor of a uniform regulatory scheme to standardize issuances of securities and penalizations of fraud. The House of Representatives passed a bill that "would have eliminated the largest loophole in state blue sky laws . . . [by making] it illegal for any person to use the mails or any facilities of interstate commerce to sell securities in any state, unless there had been compliance with the state's blue sky laws." But this bill received no votes in the Senate. Keller, *supra*, at 336.

5. Before Tuesday, October 29, 1929, the Dow Jones Industrial Average had skyrocketed—rising from 63 in August 1921 to 381 in September 1929. Gary Richardson et al., *Stock Market Crash of 1929*, FED. RSRV. HIST. (Nov. 22, 2013), https://www.federalreservehistory.org/essays/stock-market-crash-of-1929. During the 1920s, a speculative bubble was created by the undervaluation of stocks by banks who extended "broker loans" to facilitate the purchase of securities, partook in a credit expansion by allowing customers to purchase stocks using "margin accounts", and an anomalous "stickiness" of the dollar's value. Brian Domitrovic, *Why Did People Buy Stocks in the 1920s?*, FORBES (Dec. 10, 2021 8:30 a.m.), https://www.forbes.com/sites/briandomitrovic/2020/01/09/why-did-people-buy-stocks-in-the-1920s/; John Kenneth Galbraith, *The 1929 Parallel*, 259 ATLANTIC ONLINE 1, Jan. 1987, at 62, https://www.theatlantic.com/past/docs/issues/87jan/parallel.htm; Anna-Louise Jackson & Michael Adams, *Blowing Bubbles: What Is A Stock Market Bubble?*, FORBES (Apr. 20, 2021), https://www.forbes.com/advisor/investing/stock-market-bubble/; Arthur E. Wilmarth Jr., *Did Universal Banks Play a Significant Role in the U.S. Economy's Boom-and-Bust Cycle of 1921–33? A Preliminary Assessment*, 4 CURRENT DEV. IN MONETARY & FIN. L. 559 (2005).

Furthermore, transparency regarding the contents of the diversified portfolios that banks encouraged their clients to purchase was at a minimum. Investment trusts were often highly leveraged with large amounts of debt securities and preferred stock. Although today, investment trusts are popular amongst investors due to their offer of heightened portfolio diversification, in 1929, investment trusts were bought with margin loans and sold at a premium. Additionally, the portfolio contents were seldom published, and investors were unaware of the net asset values prior to purchase. Harold Bierman, *The 1929 Stock Market Crash*, EH.NET ENCYCLOPEDIA (Robert Whaples, 2008), https://eh.net/encyclopedia/the-1929-stock-market-crash/.

The effects of the Great Depression were far more impactful than they should have been. This was caused by banks "playing the market" with their clients' deposits. The pre-crash interest rates that were historically low were sky-rocketed by the Federal Reserve in response to the market crash. Despite requests to reduce the interest rates, the Federal Reserve refused, causing the government to intervene. Andrew Beattie & Jefreda R. Brown, *The SEC: A Brief History of Regulation*, INVESTOPEDIA (Sept. 23, 2021), https://www.investopedia.com/articles/07/secbeginning.asp.

6. Passed in 1933 by President Franklin D. Roosevelt, the purpose of this Act was to regulate banks by separating commercial and investment banking and preventing funds from being diverted into speculative operations among other things to prevent a repeat of the actions that led to the 1929 crash. MILTON FRIEDMAN & ANNA J. SCHWARTZ, A MONETARY HISTORY OF THE UNITED STATES 1867-1960 (Princeton University Press, 1971).

7. Securities Act of 1933, 15 U.S.C. § 77.

8. Securities Exchange Act of 1934, 15 U.S.C. § 78.

9. SECURITIES AND EXCHANGE COMM'N, *STATUTES AND REGULATIONS* (Oct. 1, 2013), https://www.sec.gov/rules-regulations/statutes-regulations.

public confidence by specifying information for issuers to provide to potential investors, mandating accuracy in all disclosures, and criminalizing misleading reports.[10] Of special importance in this legislation were Sections 5, 11, 12, and 17.[11] These four sections worked in conjunction to provide opportunities for legal recourse to investors who were defrauded by issuers that incorporated deceitful or misrepresentative information, or omitted important information,[12] which would have had great bearing on the investor's financial decisions.

The Securities Exchange Act of 1934[13] contained similar provisions to its predecessor but expanded upon the 1933 Act's liability provisions by criminalizing manipulative techniques such as insider trading[14] and addressing fraud within the secondary market.[15] These laws were primarily directed to those involved in the offer, sale, and purchase of securities, the most important of whom were issuers, underwriters, and broker-dealers.

B. The Original Functions of Key Market Players

Traditionally, one of the most important institutional intermediaries was the broker-dealer. A broker-dealer is an individual, usually employed by a

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10. In ensuring that information would be provided to prospective investors in a timely and accurate fashion, the Securities Act of 1933 required that a "registration statement" be published and distributed publicly. Further, it required that underwriters and dealers furnish prospectuses to prospective investors which contained the information that would be presented in the registration to statement to facilitate informed purchases and deter speculative investments. STATE OF WISCONSIN, DEP'T OF FIN. INSTS., *A Brief History of Securities Regulation*, https://dfi.wi.gov/Pages/Securities/Filings/SecuritiesRegulationHistory.aspx (last visited Oct. 4, 2024).

11. 15 U.S.C. §77e (2012); 15 U.S.C. §77k (1998); 15 U.S.C. §77l (2000); 15 U.S.C. §77q (2010).

12. Under the Securities Act of 1933, the issuer can be held liable for a misrepresentation or omission of material information. Materiality, as defined by Rule 405, is "information… to which there is a *substantial likelihood* that a *reasonable investor* would attach importance in determining whether to purchase the security registered." 17 C.F.R. § 230.405 (1982) (emphasis added).

13. The purpose of this Act was explicated as, "to provide for the regulation of securities exchanges and of over-the-counter markets operating in interstate and foreign commerce and through the mails, to prevent inequitable and unfair practices on such exchanges and markets, and for other purposes." Securities Exchange Act of 1934, 15 U.S.C. §b78b.

14. *See*, STATE OF WISCONSIN, *supra* note 10.

15. The most famous fraud provision addressed in the 1934 Act is Rule 10b-5, which prohibits the use of any "device, scheme, or artifice to defraud" and imposes liability for any misstatement or omission of a material fact. 17 C.F.R. § 250.10b-5 (1951). Rule 10b-5 closely follows §10(b) of the 1933 Act but has been expanded past the scope of § 10(b) to allow implied causes of private actions for secondary and scheme liability and for the SEC and the Department of Justice to bring aiding and abetting claims. *Id.*; *see also* Lorenzo v. SEC, 587 U.S. 71 (2019) (holding that dissemination of false or misleading statements with an intent to defraud can give rise to secondary or scheme liability under Rule 10b-5(a) and (c); Stoneridge Inv. Partners, LLC v. Sci.-Atlanta, 552 U.S. 148, 162 (2008) (allowing for aiding and abetting liability in "actions brought by the SEC but *not* by private parties.") (emphasis added).

firm, that buys and sells securities for either their account or for others.[16] Since even before the enactment of the Securities Act of 1933 and the Securities Exchange Act of 1934, broker-dealers have been an integral part of the team that participates in the sale of securities.[17] Broker-dealers act as professional "matchmakers" by partnering clients who seek to purchase or sell securities with those seeking to sell or purchase.

Before trading became an entirely online endeavor, brokerages provided the most streamlined method of advertising available stocks for sale—a seller could request the broker to list his stocks, which would then be publicized to potential buyers through mailers or bulletin boards, who would then buy the stock directly from the broker. In exchange for facilitating the sale of securities, broker-dealers would charge commissions. As is expected in an unregulated market, competition between the institutional giants was fierce as each sought to strike the most profitable balance between high commissions and business growth. In an attempt to quell unhealthy competition, financiers and the legislature set a 2% fixed commission through the Buttonwood Agreement,[18] the Securities Act of 1933,[19] and the Securities Exchange Act of 1934.[20]

Historically, the facilitation of securities sales was a time-consuming process that involved mountains of paperwork, written correspondence, and face-to-face solicitations, warranting payment of a commission to the broker-dealers who took the time to complete these tasks. However, in the modern era, these "snail-mail" techniques have given way to e-trading, robo-advisors, and brokers in every single person's pocket. The availability of broker-dealers, especially programmable ones, has led to the increased popularity of platforms advertising commission-free trading, leading to the question—how can a broker-dealer earn a wage without a commission and what is their role in a world where information is so broadly disseminated that advertisements are no longer necessary?

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16. *Broker-Dealer*, CORNELL, https://www.law.cornell.edu/wex/broker-dealer (last visited Jan. 22, 2025).

17. M1 Team, *The History of Brokerages*, M1 FINANCE LLC (Dec. 6, 2018), https://m1.com/blog/history-of-brokerages/.

18. NYSE, *The History of NYSE*, NYSE, https://www.nyse.com/history-of-nyse (last visited Dec. 16, 2024, 9:17 a.m.).

19. Securities Act of 1933, 15 U.S.C. § 77.

20. Securities Exchange Act of 1934, 15 U.S.C. § 78.

C. Technological Advancements, the Evolution of Federal Securities Laws, and the Need for Traditional Market Players to Embrace New Responsibilities with the Computerization of Capital Markets

In an era where pigeons were trained to deliver calligraphed letters and the Pony Express was plagued by the likes of Jesse James, state "blue sky" laws governed the sale and dissemination of securities to the public. Prior to the invention of the telegraph, securities markets and traders effectively received information regarding new issuances simultaneously.[21] The invention of the telephone and telegraph allowed issuers to reach brokers and for those brokers to communicate with prospective purchasers with ease.[22]

Similarly, the invention of the internet proved to be more beneficial to investors with the increased availability of information,[23] but without any distinction between accurate and inaccurate information—all was readily available. This heightened the need for gatekeepers[24] to perform their duties with augmented diligence—monitoring and verifying the accuracy of the statements being put forth by issuers, disclosing risks associated with various tiers of investments, and proactively controlling the dissemination of information to prevent the proliferation of erroneous data as best as possible.

Before the internet, the term "gatekeepers" was widely used to describe the key market players of the time—underwriters, brokers, and dealers. The term arose because of the need for these three categories of market players to verify the accuracy and control the dispersion of an issuer's information to the public.[25] Acting as middlemen, underwriters, brokers, and dealers often leveraged their reputations as successful "gatekeepers" to demonstrate the trustworthiness of an issuer and an issuance, thereby attracting prospective purchasers at a time of intense market distrust.[26] A gatekeeper's

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21. John C. Coffee Jr., *Brave New World?: The Impact(s) of the Internet on Modern Securities Regulation*, 52 BUS. LAW. 1195 (1997).

22. Stuart Banner, *What Causes New Securities Regulation? 300 Years of Evidence*, 75 WASH. U.L. REV. 849 (1997).

23. Coffee, *supra* note 21.

24. The term "gatekeeper" has been used in reference to underwriters, auditors, accountants, attorneys, brokers and dealers. It refers to "reputational intermediaries who provide verification and certification services to investors." *See*, Reinier H. Kraakman, *Corporate Liability Strategies and the Costs of Legal Controls*, 93 YALE L.J. 857 (1984); Stephen Choi, *Market Lessons for Gatekeepers*, 92 NW. U.L. REV. 916 (1998); John C. Coffee, Jr., *Understanding Enron: "It's About the Gatekeepers, Stupid"*, 57 BUS. LAW. 1403 (2002).

25. John C. Coffee Jr., *Brave New World?: The Impact(s) of the Internet on Modern Securities Regulation*, 52 BUS. LAW. 1195 (1997); *see also* Reinier H. Kraakman, *Gatekeepers: The Anatomy of a Third-Party Enforcement Strategy*, 2 J.L. ECON. & ORG. 53 (1986).

26. JOHN C. COFFEE, GATEKEEPERS: THE ROLE OF THE PROFESSIONS AND CORPORATE

reputation was worth its weight in gold to individuals who did not have the know-how to independently verify the accuracy of information presented by issuers. The gatekeeper's roles were relatively easy to fulfill where the distribution of preliminary prospectuses and offering materials—a way to "test the waters"[27] for interest before an issuance—were done via mail and paper fliers.

In a world where this process has become computerized, and the internet has become a better detective than Sherlock Holmes and a bigger gossip than a teenage girl, the dispersion of material can hardly be deemed "controlled." Today, the role of gatekeepers has gone from one of proactive assurances of accuracy and truthfulness, grounded in independent due diligence investigations, to one of a reactive nature where they address misrepresentations after-the-fact, due to the unchecked dissemination of information through the plethora of sources available online.[28] E-trading platforms are notorious for perpetuating this unchecked dissemination by creating "simplified" highlights of registration statements and trends under the guise of lowering the barrier of entry into capital markets for new investors.[29]

The increased availability of information combined with the popularity of commission-free trading platforms has led these former "gatekeepers" to seek alternative methods of earning compensations. The modernization of trading has opened the door for broker-dealers to engage in "Payment for Order Flow" ("PFOF"), which, in essence, brings a new middleman into the equation by allowing a broker to route an investor's order to a "market maker," who fulfills the order, but profits from raising the sale price and decreasing the purchase price marginally.[30] This has led to conflicts of interest between broker-dealers and clients.

GOVERNANCE 103 (2006).

27. "Testing the waters" has long been a common practice in capital markets but the SEC's concern regarding these practices was with the dissemination of false information so the role of gatekeepers in "testing the waters" communications was primarily to ensure factual accuracy and control dispersion of information to only highly sophisticated investors. Kevin Mason, *Securities Fraud over the Internet: The Flies in the Ointment and a Hope of Fly Paper*, 30 CASE W. RES. J. INT'L L. 489 (1998).

28. Coffee, *supra* note 23.

29. Saina N., *Stock Trading Simplified: Top Apps for Every Investor*, BRAND VISION INSIGHTS (Dec. 27, 2024), https://www.brandvm.com/post/stock-top-apps-for-investor.

30. Cedric Thompson, *Payment for Order Flow (PFOF): Definition and How It Works*, INVESTOPEDIA (Sept. 23, 2021), https://www.investopedia.com/terms/p/paymentoforderflow.asp.

The SEC has responded to the modernization of trading and the new PFOF system by amending and enacting new regulations that alter definitions of preexisting roles and increase disclosure and registration requirements to avoid the previous economic pitfalls[31] associated with a lack of transparency. The most prominent regulation enacted to address the prevalence of conflicts of interest between broker-dealers and clients was Regulation Best Interest ("Reg BI").[32]

In 2022, the SEC published a staff bulletin detailing a broker-dealer's obligations under Reg BI—"disclosure, care, conflict of interest, and compliance."[33] These four core duties imposed by Reg BI have been the bases for similar concerns raised with respect to the rapid integration of new technology, including AI, into capital markets as with the original concerns that spawned Reg BI.[34] But it is worth noting that, to date, the SEC has limited its regulatory scope to individuals and business entities, not to AI systems comprised of pages of code, which have become integral and marketable parts of e-trading platforms and online broker-dealer companies.

II. GAMIFIED INVESTMENT COMPANIES—A NEW ERA OF TECHNOLOGY

The integration of technology into aspects of everyone's daily lives has not passed over the world of capital markets. The accessibility of online resources through handheld devices has led to the increased popularity of apps sponsored by broker-dealers.[35] These apps use flashy features such as

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31. Insider trading and issuers who hid relevant financial information from buyers were two leading causes of adverse market volatility and manipulation leading to heightened disclosure requirements. *See* Kevin S. Haeberle & M. Todd Henderson, *A New Market-Based Approach to Securities Law*, 85 U. CHI. L. REV. 1313 (2018).

32. Regulation Best Interest, 17 C.F.R § 240.15l-1 (2019).

33. *See* Regulation Best Interest: The Broker-Dealer Standard of Conduct, Exchange Act Release No. 34-86031, 84 Fed. Reg. 33318, 33325 (June 5, 2019); SEC Staff Bulletin: Standards of Conduct for Broker-Dealers and Investment Advisers Conflicts of Interest, *available at* https://www.sec.gov/about/divisions-offices/division-trading-markets/broker-dealers/staff-bulletin-standards-conduct-broker-dealers-investment-advisers-conflicts-interest.

34. The mere fact that broker-dealers provide investment advice to investors on a commission basis leads to an assumption that they would not put the interests of a client over personal interests. As such, the SEC promulgated Reg BI in an attempt to lessen instances of conflicts of interests, but, as the Supreme Court has noted, the commission-based compensation structure of broker-dealers blatantly undermines their ability to provide objective advice. SEC v. Capital Gains Research Bureau, Inc., 375 U.S. 180 (1963). Despite these concerns, Reg BI has failed to change broker-dealer suitability practices to any significant extent. Knut A. Rostad, *The Failure of Reg BI and the Death of Fiduciary Principles*, ADVISOR PERSPECTIVES (Apr. 9, 2024), https://www.advisorperspectives.com/articles/2024/04/09/failure-reg-bi-and-death-fiduciary-principles.

35. Kyle Langvardt & James F. Tierney, *On "Confetti Regulation": The Wrong Way to Regulate Gamified Investing*, YALE L.J. FORUM 717 (Jan. 17, 2022).

push notifications, zero-commission trading, and socializing options to entice younger investors into entering the market.[36] These engaging traits of online brokerage apps, or e-trading platforms, have earned them the title of "gamified" companies.[37]

A. The Role of Gamification in Securities Markets and the Rise of Gamified Investment Companies

In the 1930s, regulations of capital markets were predicated on the notion of inherent distrust in the market. However, with the popularization of concepts such as the efficient market hypothesis,[38] the ability to obtain updated information nearly instantaneously, and the automatic adjustment of markets led the new generations to trust the accuracy of information provided by robo-traders and e-trading platforms.

It is unsurprising that a generation raised on video games is enticed by gamified investment. Gamification simplifies the daunting complexities normally associated with investing and capital markets. By integrating intuitive features into a user-friendly platform with social media elements, gamification has reduced the barrier to entry for new generations of investors. Gamified investment platforms have led to increased financial literacy and continued prosperity of capital markets; they have restored the democratization that investing once touted before it became an activity gatekept by the wealthiest individuals and institutions.[39]

Further, gamification has drawn younger shareholders into capital markets, leading to shareholder activism reflecting these young investors' values, such as concern for the environment. In response to these activist proposals, companies appear to have become more environmentally

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36. *See id.*

37. Gamification is "the application of typical elements of game playing, such as point scoring, competition with others, and rules of play." Shane Killeen, *Game On: FINRA Hints at Upcoming Gamification Sweep*, JD SUPRA (June 2, 2021), https://www.jdsupra.com/legalnews/game-on-finra-hints-at-upcoming-3930776/.

38. The efficient market hypothesis suggests that, in an ideal capital market, the current price of a security will best predict its future price and that the price immediately integrates all new, relevant information provided to said market. This hypothesis has been the basis for several SEC regulations, including allowances for integrated disclosures for sophisticated issuers and WKSIs and shelf registrations. *See* Benoit Mandelbrot, *Forecasts of Future Prices, Unbiased Markets, and "Martingale" Models*, 39 J. BUS. 242 (1966); Ronald J. Gilson, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984); Jeffrey N. Gordon & Lewis A. Kornhauser, *Efficient Markets, Costly Information, and Securities Research*, 60 N.Y.U. L. REV. 761 (1985).

39. Jonas Freibauer et al., *The Effects of Trading Apps on Investment Behavior over Time*, EUR. J. FIN. 1 (2024).

friendly[40] and have begun addressing social and governance issues despite associated costs.[41] Also, while gamification might be criticized for using psychological cues to push unsophisticated investors to trade with higher frequency, the digital "nudges" also serve the purpose of encouraging shareholders to act when needed to protect themselves from the adverse consequences of inaction with respect to one or more investments.[42]

However, no rose is without its thorn. The features of gamified investment that are advantageous in lowering barriers of entry, protecting unsophisticated investors, and improving shareholder activism have also been causes for concern among experts and regulatory bodies alike.

B. The Dark Underbelly of Gamified Investment Companies

Within the context of the securities market, gamification has drawn the ire of several agencies and regulatory bodies due to its exploitation of users through individualized behavioral designs. In promulgating the Securities Act of 1933, the Legislature sought to increase the information required to be provided to potential investors in an effort to encourage knowledgeable investments, but recent studies have now shown that merely providing the information is not necessarily indicative of good faith and honest intentions. Rather, the way in which the information is presented can have significant influence on an investor's behavior, and companies seeking to hide disparaging information about their firms can do so behind virtual confetti and emojis.[43]

Beyond deceit, consistent with the teachings of behavioral economics, gamified investment companies also use individualized recommendations based on trading patterns to nudge users into investing in "top stocks" of the day, which can prove risky to those who are not aware of the relevant market trends and fluctuations that might have resulted in an increase in a particular

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40. Using gamification to integrate social behaviors and, by extension, social media, into trading has facilitated the coordination of social activism and capitalism. Akshaya Kamalnath, *Hashtag Capitalism: An Introduction*, 49 ALTERNATIVE L.J. 188 (2024). The widespread availability of a corporation's social or political views can influence investors who might take these factors, with no proven correlation to business success, into consideration when making investment decisions. *Id.*

41. *Id.*

42. Margaret Franklin, *Investment Gamification: Not All Cons, Some Important Pros*, KIPLINGER (Feb. 20, 2023), https://www.kiplinger.com/investing/investment-gamification-pros-and-cons.

43. Sebastian Deterding, *The Ambiguity of Games: Histories and Discourses of a Gameful World in* THE GAMEFUL WORLD: APPROACHES, ISSUES, APPLICATIONS 23, 40 (Steffen P. Walz & Sebastian Deterding eds., (2014) (explaining that "behavioral economics [is] a foundation for gamification" so firms can persuade users into making investments to benefit the firm rather than the investor by creating platforms "whose design patterns directly use cognitive biases and heuristics, social influence, emotional appeals, and the power of habit").

stock.[44] Additionally, socialization elements—including leaderboards, virtual "badges" or awards, or higher points awarded for riskier investments—have led to a substantial increase in riskier investments by unsophisticated investors. The psychological grip that these superficial accolades have upon new investors can be the catalyst for risky, imprudent financial decisions in an environment where taking on risk can lead to unimaginable loss.

Given the SEC's concern with truthfulness and adequate disclosure, these behaviorally manipulative techniques to promote risky investments might not be considered problematic if they were clearly stated on the platforms and limited to sophisticated investors who might be able to recognize them and decide whether or not to permit such tactics to influence their investments. In reality, disclaimers, if any, about gamification and the associated risks are usually buried between layers of text, which an unsophisticated investor might not know to read or would not properly comprehend—that is, if they chose to read the terms and conditions in their entirety.[45] Even if an investor were to find, read, and comprehend such disclosures, these predatory platforms have created a second obstacle to informed investing: allowing "one-click" buying, which severely detracts from an investor's ability to properly review investment opportunities and make a knowledgeable decision.[46]

Given the pros, cons, and inherent risks of gamified investing, the SEC must regulate. However, the SEC and other relevant regulatory bodies have a choice of targets; in this case, they have chosen to target the fraudulent or deceitful uses of gamification in their quest to protect underinformed or unsophisticated investors.

C. The SEC's Treatment of Gamification and Gamified Investment Companies

The SEC has dedicated significant resources towards protecting investors through every era of technological advancement. So, the introduction of gamified investment companies into the system has only created an increased need to strengthen regulations to protect unwary investors from being exploited as the speed of trading within the market quickens and leaves little time for adequate consideration of a transaction.

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44. Ben Bain & Robert Schmidt, *Gensler Targets Broker 'Gamification' After Trading Tumult*, THE BOSTON GLOBE (Mar. 2, 2021 5:27 p.m.), https://www.bostonglobe.com/2021/03/02/business/gensler-targets-broker-gamification-after-trading-tumult/.

45. Franklin, *supra* note 43.

46. *Id*.

Gamification is a recent addition to the world of securities regulation. Shortly before the problems associated with gamification became a prominent concern of regulatory bodies in the world of securities regulation, the SEC passed Reg BI under the Securities Exchange Act of 1934.[47] The purpose of this legislation was to address the allegedly decreasing quality of financial advice in a world where investment recommendations were being formulaically applied via online brokerage platforms.[48] However, merely recognizing that the quality of financial advice was deteriorating did not address the influence of gamification on an investor's consideration of financial advice, irrespective of its adequacy.

An uptick of digital engagement practices ("DEPs"),[49] a more technical phrase used by the SEC to describe gamification, in 2019 coincided with the COVID-19 pandemic of 2020 and the stimulus payments provided to all U.S. citizens.[50] The stimulus payments and lockdowns fostered an environment that decreased the financial barriers faced by unsophisticated investors and, when combined with the DEPs, led to these investors flooding a previously unattainable market. With the influx of unsophisticated investors into the market, the SEC grew more concerned with broker-dealers' use of DEPs to entice these new investors into more frequent or higher-risk investments than the investor would choose absent DEPs because it demonstrated, yet again, the potential for conflicts of interest to cause great harm.[51]

However, the SEC specializes in capital markets and investments, not psychology. To ensure appropriate action, it opened an inquiry into the use of DEPs to analyze how it intersects with the newly enacted Reg BI.[52] There have been three instances of rules being proposed within the SEC to further

47. Regulation Best Interest, 17 C.F.R. § 240.15l-1 (2019).

48. GARY SHORTER, CONG. RSCH. SERV., R46115, REGULATION BEST INTEREST (REG BI): THE SEC'S RULE FOR BROKER-DEALERS (2020).

49. Antoinette Petkov, *The Trading Game: An Analysis of Robinhood's Use of Digital Engagement Practices*, 96 S. CAL. L. REV. POSTSCRIPT 238 (2024).

50. Lorie Konish, *Many Americans Invested Their $1,200 Stimulus Checks. What the Pros Say You Should Know Before You Trade*, CNBC (Aug. 24, 2020, 11:23 a.m.), https://www.cnbc.com/2020/08/24/many-people-invested-their-stimulus-cash-what-to-know-before-you-do.html.

51. Rick Fleming, Investor Advoc., Sec. Exch. Comm'n, Remarks at SEC Speaks (Oct. 13, 2021) (transcript available at https://www.sec.gov/newsroom/speeches-statements/fleming-sec-speaks-101321).

52. Press Release, SEC, *SEC Requests Information and Comment on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology* (Aug. 27, 2021), https://www.sec.gov/newsroom/press-releases/2021-167.

restrict gamification to deter its inherently harmful influence,[53] but none have been enacted as of yet. To rationalize this leisurely approach to gamification regulation, the SEC has cited to Reg BI and its criminalization of inadequate duties of care by broker-dealers to retail customers when making investment recommendations.[54] Additionally, the SEC has praised the surge of young investors into the market, extolling the use of some gamification techniques[55] as encouraging engagement and financial literacy, and hesitating to place "patriarchal" restrictions that would deter an anti-establishment generation.[56] In light of these concerns, the SEC has chosen to tread carefully in this new regulatory scheme, delaying the promulgation of much-needed restrictions on predatory gamified investment companies.[57]

III. ARTIFICIAL INTELLIGENCE—NEW TECHNOLOGY OR NEW EMPLOYEE?

Technology has continued to permeate the securities market, even after the implementation of gamified investment, through the use of AI.[58] The world of AI has grown and evolved faster than predicted by the famous blockbuster film, *The Matrix*.[59] This rapid expansion of AI has led to its categorization into two basic formats—traditional and generative. Invented in the 1930s, AI in its most primitive form was a study of whether a machine could simulate or mimic human intelligence.[60] Following the computerization of statistics and datasets in the 1990s, AI began digesting information designed for machine learning and developed a pattern-

53. Conflicts of Interest Associated with the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisers, 88 Fed. Reg. 53960 (proposed Jul. 26, 2023), https://www.sec.gov/files/rules/proposed/2023/34-97990.pdf.

54. *Id.*

55. These techniques are diminished to "nudges, behavioral prompts, or other features designed to drive engagement." Todd Ehret, *Insight: Dead or Alive? Fate of SEC's Proposed Digital Engagement Practices Rule Remains Uncertain*, REUTERS (Apr. 13, 2023, 10:31 a.m.), https://www.reuters.com/article/business/-dead-or-alive-fate-of-secs-proposed-digital-engagement-practices-rule-remain-idUSKBN2WA16P/.

56. *Id.*

57. LAURIE HARRIS, CONG. RSCH. SERV., R48555, REGULATING ARTIFICIAL INTELLIGENCE: U.S. AND INTERNATIONAL APPROACHES AND CONSIDERATIONS FOR CONGRESS (2025).

58. "AI" is defined as "a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments." National Artificial Intelligence Initiative Act of 2020, H.R. 6216, 116th Cong. § 3(3) (2020).

59. THE MATRIX (Warner Bros. Entertainment Inc. 1999).

60. The first test of human intelligence mimicry was conducted by Alan Turing, in the aptly-named Turing Test. The Turing Test is a measure of human sentience in AI bots which measures interactions between humans and machines and determines whether the human believes they are interacting with another person. Cade Metz, *How Smart Are the Robots Getting?*, N.Y. TIMES (Jan. 20, 2023), https://www.nytimes.com/2023/01/20/technology/chatbots-turing-test.html.

recognition system, similar to a mathematical what-comes-next problem.[61] As larger datasets became available and computing power skyrocketed, AI evolved at unprecedented rates—moving from an simple pattern-recognition algorithm to one that more closely mimics human thinking.[62]

A. The Introduction of AI into the Securities Market

With the continuously increasing disclosure requirements imposed by the SEC on issuers and their agents (including broker-dealers) creating mounting financial burdens upon these players, they are starting to seek financial relief wherever available. The relative cost-effectiveness of AI compared to data analysts, underwriters, and other expertized positions traditionally involved in facilitating the role of broker-dealers in the securities market has caused them to explore the integration of AI into daily practices to decrease expenditures and maximize profits.[63]

The most obvious presence of AI has been in the broker-dealer context. With the increasing pace of trading in the securities market, brokerage firms are forced to either employ more individuals to review available offerings and provide personalized investment advice to clients or seek alternative, cheaper solutions to compete with firms providing near-instantaneous updates to clients.[64] AI's pattern-recognition capabilities and reduction of human error through computerization has made it an alluring, affordable alternative to staffing increases.

B. The SEC and FINRA's Mounting Concerns Regarding AI

With e-trading dominating the securities markets, firms have pivoted to integrating AI into their systems to provide individualized, real-time recommendations to investors and to draft disclosures either for filing with the SEC or for dissemination to shareholders.[65] This has not gone unnoticed by the SEC, which, despite failing to promulgate any regulation regarding

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61. Keith D. Foote, *A Brief History of Machine Learning*, DATAVERSITY (Dec. 3, 2021), https://www.dataversity.net/a-brief-history-of-machine-learning/.

62. Veda C. Storey et al., *Generative Artificial Intelligence: Evolving Technology, Growing Societal Impact, and Opportunities for Information Systems Research*, INFORMATION SYS. FRONTIERS at 6 (Feb. 25, 2025), https://doi.org/10.1007/s10796-025-10581-7.

63. *Artificial Intelligence in Financial Markets: Systemic Risk and Market Abuse Concerns*, SIDLEY (Dec. 17, 2024), https://www.sidley.com/en/insights/newsupdates/2024/12/artificial-intelligence-in-financial-markets-systemic-risk-and-market-abuse-concerns.

64. *Id.*

65. *Id.*

the use of AI, recently held a conference to discuss the risks associated with the integration of AI and potential ways of addressing these risks.[66]

Unsurprisingly, the risks associated with the integration of AI into the securities market as expressed by the SEC are nearly indistinguishable from the general risks associated with technological advancement—security, fraud, lack of governance, transparency, unintended biases, and all unknown risks that are commonplace with newly-developed software.[67] The body that oversees broker-dealers, the Financial Industry Regulatory Authority ("FINRA"), has expressed similar concerns regarding the use of AI by brokerages in customer interactions, trading, and account and portfolio management.[68] The apprehension these regulatory bodies have demonstrated towards AI thus far are largely founded on a fear of fraud caused by a combination of nondisclosure, inaccurate information, lack of supervision, and lack of control over a machine-learning system, all of which are risks associated with the integration of AI into brokerage systems.

The two great financial crises that this nation has experienced, first in 1929 and again in 2008, were largely attributable to the creation of a market bubble through inadequate disclosures and lack of adequate supervision.[69] This pattern repeats itself today with the uptick in institutions integrating AI without expressly disclosing to their clients which services are provided by AI and which are by human beings.[70] This has been highly concerning to members of regulatory bodies, who recognize the potential for this nondisclosure to result in a surge of uninformed investments and litigation, or worse, another financial crisis of an even greater magnitude.[71]

One targeted and often discussed area of concern is related to the use of AI in predictive data analytics ("PDA").[72] PDA allows AI systems to ingest market information, and, beyond just producing an investment plan for

66. SEC, IAC PANEL DISCUSSION*:* AI REGULATION—EMBRACING THE FUTURE (2024), https://www.sec.gov/files/sec-cfu-presentation.pdf.

67. *Id.*

68. FINRA, ARTIFICIAL INTELLIGENCE (AI) IN THE SECURITIES INDUSTRY (2020), https://www.finra.org/rules-guidance/key-topics/fintech/report/artificial-intelligence-in-the-securities-industry/ai-apps-in-the-industry#:~:text=While%20these%20AI%20tools%20offer,to%20each%20customer's%20unique%20circumstances.

69. *See generally* Francesco Bianchi, *The Great Depression and the Great Recession: A View from Financial Markets* (NAT'L BUREAU OF ECON. RSCH., Working Paper No. 21056, Dec. 2018), https://www.nber.org/system/files/working_papers/w21056/w21056.pdf.

70. Gary Gensler, SEC Chair, Prepared Remarks Before the Yale Law School (Feb. 13, 2024) (transcript available at https://www.sec.gov/newsroom/speeches-statements/gensler-ai-021324).

71. *Id.*

72. JENNIFER L. KLASS, AI, BEHAVIORAL PROMPTS, AND OTHER EMERGING TECHNOLOGY—RISK GOVERNANCE AND CONFLICTS MANAGEMENT (2024), https://www.sec.gov/files/outline-iaa-conference-ai-behavioral-prompts.pdf.

customers (who are often incapable of recognizing flawed strategies), to use gamification to entice these customers to accept investment strategies without further contemplation.[73] As a result, through PDA, companies can prey on customers in at least two ways: by presenting potentially flawed information and by encouraging impulsive investment decisions. These concerns seem to stem from a new realization among software engineers that the sentience of AI comes with the drawback of an inability to fully control what the model learns from the teaching materials provided.[74] This revelation is rather recent, so the SEC has yet to factor this fundamental shortcoming of AI into its regulations or discussions, but it has taken other factors into consideration in its treatment of AI thus far.

C. The SEC's Treatment of AI in Light of its Concerns

In light of AI's ability to wreak immense havoc, the SEC and FINRA have begun strategizing potential regulatory schemes targeted to addressing the weaknesses created by AI and by prosecuting misuses of AI by various market players, especially broker-dealers. Having recognized threats to cybersecurity as an unaddressed defect associated with AI, the SEC promulgated two new rules under the reporting requirements of the Securities Exchange Act of 1934, which would require disclosure of material cybersecurity incidents under Form 8-K and an annual disclosure of cybersecurity risk management measures.[75] Although the SEC has encouraged transparency from brokerages and market players utilizing AI, it has yet to affirmatively address more technical concerns (such as training methods and information, biases caused by flawed training mechanisms, or increased sentience).

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73. One type of predatory behavior demonstrated by AI is insider trading, a strict-liability offense. Philippa Wain & Imran Rahman-Jones, *AI Bot Capable of Insider Trading and Lying, Say Researchers*, BBC (Nov. 2, 2023), https://www.bbc.com/news/technology-67302788.

Another flaw inherent in AI with predatory consequences is confirmation bias. Large language models draw data from a relatively small pool, which can cause such a bias to arise, especially in the context of smaller companies (ones that sell penny stocks). This has led to AI-generated investment advice being called "'algorithm-assisted gambling.'" Samuel O'Brient, *Are You Getting Bad Investment Advice from AI? Experts Explain How to Tell*, BUSINESS INSIDER (Aug. 11, 2025 11:58 a.m.), https://www.businessinsider.com/ai-investing-advice-warnings-red-flags-risks-stocks-day-trading-2025-8.

74. Stuart Russell, *Artificial Intelligence and the Problem of Control*, *in* PERSPECTIVES ON DIGITAL HUMANISM 19–24 (Werthner, Prem, Lee, Ghezzi eds., 2022).

75. Erik Gerding, SEC Director Div. of Corp. Fin., Statement: The State of Disclosure Review (June 24, 2024), https://www.sec.gov/newsroom/speeches-statements/gerding-statement-state-disclosure-review-062424#_ftn14.

What the SEC *has* done, however, is penalize companies for engaging in "AI washing,"[76] a term broadly applied to misrepresenting or falsifying AI use in business. In March 2024, the SEC settled a case against two investment advisors for falsely advertising that they provided "expert AI-driven forecasts."[77] In July of the same year, the SEC filed charges against another company that misrepresented its design and use of AI.[78] SEC Chair, Gary Gensler, views these actions as the beginning of a "crack down" against "AI washing," a practice he claims has the potential to mislead investors and violate federal securities laws.[79] But the SEC's playful nomenclature does little to hide that these cases are all akin to a majority of securities litigations—a material misrepresentation or omission.

Seeing how the SEC has shown trepidation with respect to regulating AI and gamification, there is much room for speculation about how they will, or should, govern these new, yet burgeoning, elements of the modern capital market.

IV. USING ROBINHOOD TO MODEL ISSUES THAT ARISE WITH GAMIFICATION AND AI

Unlike the well-known, arrow-touting vigilante who stole from the rich to give to the poor,[80] the investment company, Robinhood, has not stolen assets in order to enrich the poor, but, rather, has lowered the barrier of entry to capital markets, allowing unsophisticated investors the opportunity to earn their own riches.

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76. Cara M. Peterman et al., *Navigating AI-Related Disclosure Challenges: Securities Filing, SEC Enforcement, and Shareholder Litigation Trends*, ALSTON & BIRD LLP (Jul. 26, 2024), https://www.alston.com/en/insights/publications/2024/07/navigating-ai-related-disclosure-challenges.

77. Press Release, SEC, SEC Charges Two Investment Advisers with Making False and Misleading Statements About Their Use of Artificial Intelligence (Mar. 18, 2024), https://www.sec.gov/newsroom/press-releases/2024-36.

78. David Rhinesmith et al., *AI Washing Enforcement Continues, Highlighting Risks to Companies and Investors*, ORRICK INSIGHTS (Jul. 2, 2024), https://www.orrick.com/en/Insights/2024/07/AI-Washing-Enforcement-Continues-Highlighting-Risks-to-Companies-and-Investors.

79. Amy Longo et al., *Decoding the SEC's First "AI-Washing" Enforcement Actions*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Apr. 18, 2024), https://corpgov.law.harvard.edu/2024/04/18/decoding-the-secs-first-ai-washing-enforcement-actions/.

80. ROBIN HOOD AND OTHER OUTLAW TALES, 602–20 (Stephen Knight & Thomas H. Ohlgren eds., 1997) (ebook), https://web.archive.org/web/20200331050954/https://d.lib.rochester.edu/teams/text/gest-of-robyn-hode.

A. The Allure of Robinhood

Robinhood is one of the more popular gamified investment companies today.[81] It is marketed as a financial-services company that allows users to trade cryptocurrencies, traditional stocks, exchange-traded funds, and options.[82] Creators Vladimir Tenev and Baiju Bhatt have stated that their intent in building such a product was to increase access to financial markets.[83]

With a stated mission to bring accessibility of financial markets to the masses and the youth, Tenev and Bhatt created a user-friendly, quasi-educational interface that piqued the interest of Gen-Z and younger Millennials, both of whom were raised during a time when the internet was widely accessible, and ownership of smartphones and laptops were the norm. Many of these new investors rely on the simplified information provided by Robinhood combined with the availability of low risk penny stocks to become more knowledgeable about the workings of the market before investing in riskier financial instruments.[84]

For those with realistic expectations, Robinhood has been a boon—from drawing new investors into the market to facilitating financial literacy amongst the new generation. By limiting itself to only stock trading, Robinhood was able to guarantee a low-risk, available-for-all system.[85] However, despite the benefits that previously led to Robinhood being lauded as a pioneer in inclusive e-trading and financial literacy in the younger generations, Robinhood has since turned to predatory tactics designed to help increase profit margins. By the time new investors realize

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81. David Curry, *Robinhood Revenue and Usage Statistics (2025)*, BUS. APPS (Oct. 6, 2025), https://www.businessofapps.com/data/robinhood-statistics/.

82. *See About Us*, ROBINHOOD, https://robinhood.com/us/en/about-us/ (last visited Sept. 11, 2025).

83. The "About Us" page of Robinhood's website states, "At Robinhood Markets, our values are in service of our customers. We believe that the financial system should be built to work for everyone. That's why we create products that let you start investing at your own pace, on your own terms. [Our founders] buil[t] a financial product that would give everyone—not just the wealthy—access to financial markets." *About Us*, ROBINHOOD, https://robinhood.com/us/en/about-us/ (last visited Oct. 4, 2024).

84. The common consensus seems to be that there are little disadvantages to using Robinhood for first-time or new investors due to the friendly user interface and low-risk options. The commenters discuss the lack of fees and simplified financial information to facilitate a more gradual learning curve. *What's So Bad About Robinhood?*, R/ROBINHOOD, REDDIT (Jul. 5, 2020, 12:27 p.m.), https://www.reddit.com/r/RobinHood/comments/hlqf9c/whats_so_bad_about_robinhood/.

85. When it first started, Robinhood was highly successful in only offering stock trading. It made "four to 15 times more than Schwab in the most recent quarter, according to the filings." Nathaniel Popper, *Robinhood Has Lured Young Traders, Sometimes With Devastating Results*, N.Y. TIMES (Sept. 25, 2021), https://www.nytimes.com/2020/07/08/technology/robinhood-risky-trading.html.

the problems associated with the app, they have lost large sums of money through underinformed, high-risk investments.[86]

B. The Predatory Nature of Robinhood

While there is much to praise about Robinhood enhancing accessibility, educating new generations on financial planning, and preserving the economy during the COVID-19 pandemic,[87] there is also a dark side to this seemingly wholesome company. The app is designed to appeal to young first-time investors. The interface is designed like the popular game Candy Crush[88] and advertises no trading fees or account minimums.[89] But, because no company can realistically expect to make money on these low-risk investments, Robinhood preyed upon unsophisticated investors by using the Silicon Valley playbook[90]—targeted advertisements, behavioral influence, and push notifications.

Robinhood's system allows trading to be done with just one click, making it no different from a casino game.[91] To further pique the younger generation's interest, Robinhood created a social component to trading by promoting a refer-a-friend program and creating a raffle system where users are entered for a chance to win more expensive stock by sharing their positive experiences online.[92] These features encourage active trading and

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86. Nicole Casperson, *Robinhood Attracts Young Investors, But At What Cost?*, INVESTMENTNEWS (Aug. 31, 2020), https://digitaledition.investmentnews.com/articles/robinhood-attracts-young-investors-but-at-what-cost-.

87. Mallika Mitra, *Robinhood for Beginners: A Complete Guide to Investing With the Controversial Stocks App*, MONEY (Aug. 21, 2025), https://money.com/how-to-use-robinhood-beginners/.

88. Shira Ovide, *Is Robinhood's Disruption a Good Thing?*, N.Y. TIMES (Sept. 25, 2021), https://www.nytimes.com/2021/07/28/technology/robinhood-ipo.html.

89. Popper, *supra* note 86.

90. Elif Doyuran, *Nudge Goes to Silicon Valley: Designing for the Disengaged and the Irrational*, J. CULTURAL ECON. (Aug. 28, 2023), https://www.pure.ed.ac.uk/ws/portalfiles/portal/393700097/DoyuranJCE2023NudgeGoesToSiliconValley.pdf.

91. The SEC and Warren Buffett have rebuked Robinhood's marketing tactics, stating that they cater to a "casino aspect" through gamification and cause many inexperienced investors to risk their life savings as part of a "get rich quick" pitch. Julia Boorstin, *Robinhood's Disruptive Force: The Good, The Bad, and the Controversy*, CNBC DISRUPTOR|50 (May 25, 2021), https://www.cnbc.com/2021/05/25/robinhoods-disruptive-trade-the-good-the-bad-and-the-controversy.html.

92. In addition to these social aspects, Robinhood also enables users to send cryptocurrency to friends as gifts, which was especially enticing during the cryptocurrency "rage" in the early 2020s. Barbara Friedberg, *Robinhood Broker Review*, U.S. NEWS & WORLD REPORTORTREPORT MONEY (Apr. 12, 2024), .

Avi Salzman, *Robinhood Turned Millions of People Stuck at Home Into Investors. What's Next for the App?*, BARRONS (Aug. 16, 2020), https://www.barrons.com/articles/what-is-robinhood-apps-next-act-its-already-mastered-the-stock-market-game-51597451777.

draw unsophisticated investors into a complex financial web. Eventually, investors are enticed to engage in option trading, a high-risk form of trading that has historically been limited to more sophisticated investors.[93]

Under a guise of providing a novice-friendly interface, Robinhood sacrificed the complex analytics provided by other brokerage platforms for a more user-friendly, enticing interface that also encourages risky trades and contains limited information.[94] Further, the number of users has proven to be too high for Robinhood's platform to support on multiple occasions, causing outages and trade restrictions during highly volatile market periods.[95] A third issue has been the lack of adequate customer service, which has led to significant delays in responsiveness to user inquiries and even led to the death of one individual whose question was left unanswered.[96]

C. Robinhood's Ongoing Tension with the SEC and FINRA

The aforementioned outages during periods of market volatility have been a basis for considerable tension between Robinhood and the SEC and FINRA, but Robinhood's questionable practices, which were uncovered during investigations of these outages, have also come under fire. In 2019, the SEC brought an enforcement action against Robinhood alleging violations of Sections 8A of the Securities Act of 1933 and 15(b) of the Securities Exchange Act of 1934 due to its failure to disclose its primary method of income—payments from "electronic market makers" in exchange for routed customer orders and the role this prioritization of a self-serving interest played in a failure to adequately execute orders as advertised.[97] Shortly after, in 2020, Robinhood was subjected to a hefty fine by FINRA for "systemic" failures, including systems outages, which, when combined with material misrepresentations and feeble attempts to control options trading, led to alarmingly high losses by customers.[98]

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93. Popper, *supra* note 86.

94. Rae Hartley Beck, *Robinhood Review* 2025, FORBES ADVISOR, https://www.forbes.com/advisor/investing/robinhood-review/ (Jun. 18, 2025, 12:50 p.m.),

95. Jordan Valinsky, *What Made the Robinhood App Crash? Record Trading as the Market Soared and Tanked*, CNN (Mar. 4, 2020), https://www.cnn.com/2020/03/04/business/robinhood-outage-explanation/index.html.

96. Matt Egan, *Robinhood Settles Lawsuit Over 20-Year-Old Trader Who Died by Suicide*, CNN (July 1, 2021 2:55 p.m.), https://www.cnn.com/2021/07/01/business/robinhood-lawsuit-suicide-settlement/index.html.

97. Robinhood Fin. LLC, Securities Act Release No. 10906, Exchange Act Release No. 90694 (Dec. 17, 2020), https://www.sec.gov/files/litigation/admin/2020/33-10906.pdf.

98. Chris Prentice & Pete Schroeder, *Robinhood Fined $70 Mln for Harming 'Millions' Via Misleading Info, Outages*, REUTERS (June 30, 2021), https://www.reuters.com/technology/broker-robinhood-pay-70-mln-systemic-supervisory-failures-2021-06-30/.

Most recently, in 2025, Robinhood agreed to a settlement with the SEC for failing to maintain communications with customers, failing to maintain records in accordance with federal securities laws, and failing to report security breaches to the platform that caused identity theft and suspicious activity.[99] However, of greatest significance in this 2025 action was Robinhood's failure to comply with the SEC's regulatory framework intended to prevent abusive short-selling techniques.[100] In connection with Reg BI, brokerages receive a second source of potential income through short sales—via interest and commission—which demonstrates yet another revival of the omnipresent conflict of interest concerns associated with broker-dealers. Robinhood's latest transgression with short sales reinforces the need for additional regulation, especially where machine-learning is involved.

D. Robinhood's Venture into AI: Acquisition of Pluto

Before Robinhood's public exploration into the integration of AI into its services, a smaller company made a name for itself in national news—Magnifi.[101] At a period where Robinhood was receiving scathing criticisms regarding its lack of customer service and individualized recommendations,[102] Magnifi responded to those limitations by using ChatGPT[103] and other programs to "provide personalized, data-driven investment advice."[104] Magnifi demonstrated the strengths associated with AI integration into a trading platform, much to the chagrin of Robinhood, which claimed to be "the most innovative trading platform in the market."[105]

Companies that desire efficiency, increased profits, and technological advancement have begun integrating AI into their daily routines. This desire for increased business efficiency and profitability has not escaped Robinhood. In a clear departure from its previously disparaging comments

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99. Press Release, SEC, *Two Robinhood Broker-Dealers to Pay $45 Million in Combined Penalties for Violating More Than 10 Separate Securities Law Provisions* (Jan. 13, 2025), https://www.sec.gov/newsroom/press-releases/2025-5.

100. *Id*.

101. Yun Li, *ChatGPT meets Robinhood? New Investing App Features AI-Powered Portfolio Mentor*, CNBC (Apr. 27, 2023), *https://www.cnbc.com/2023/04/27/chatgpt-meets-robinhood-new-app-features-ai-powered-portfolio-mentor-.html***.**

102. [deleted], *What's so Bad About Robinhood?*, REDDIT: R/ROBINHOOD (Jul. 5, 2020), https://www.reddit.com/r/RobinHood/comments/hlqf9c/whats_so_bad_about_robinhood/.

103. *Using ChatGPT for Investing*, MAGNIFI (June 8, 2023), https://magnifi.com/learn/chat-gpt-for-investing.

104. *See* Li, *supra* note 102.

105. *Robinhood CEO: Every Company Will Transition Into an AI Company*, PYMNTS (May 10, 2023), https://www.pymnts.com/earnings/2023/robinhood-ceo-every-company-will-transition-into-an-ai-company/.

towards Magnifi, a trading platform seeking to integrate AI into its systems to improve efficiency and profitability, Robinhood has now officially acquired a larger AI company that advertises just that—Pluto, AI ("Pluto").[106] The growth of AI from a merely algorithmic system into a near-sentient infrastructure was presumably a primary motivation for brokerage firms such as Magnifi and Robinhood to initiate mergers with AI companies to provide cutting-edge services to clients.

Robinhood's response to this March 2023 introduction of Magnifi as a "copilot for the self-directed investor" was one that can be characterized as petty. In addressing the impact that Robinhood has had in the new world of securities, Tenev credited it with "introduc[ing] several innovations that have become norms,"[107] an overstatement in light of the inadequacies of the platform in comparison to the more-advanced Magnifi. To bolster this self-assessment as a leading, innovative platform, Robinhood merged with an AI investment-research platform.[108] On July 1, 2024, Robinhood announced on its website that it had acquired Pluto with the intention of providing "highly-customized" investment advice "based on customer needs and financial goals."[109]

Predicated on a notion that financial literacy should be accessible without barriers to all, Pluto was incorporated in 2021 to serve that purpose through AI.[110] Pluto is heralded as a trailblazer in the fusion of investment research with AI analytic output.[111] Recognizing that the primary barrier of entry to capital markets is a lack of financial literacy, Pluto claims to digest highly technical and complicated "raw data" and "churn" it into "meaningful insights" that can, among other services, predict needs and suggest actions to help reach a certain end result.[112] Although Pluto has a relatively miniscule individual internet presence, there must have been some basis behind its claims of high levels of cybersecurity, advanced machine-learning capabilities, and client prioritization that persuaded Robinhood to pursue an acquisition. It is possible that Pluto's utilization of a highly

106. *Welcome to Pluto*, PLUTO, http://www.pluto.fi/ [https://web.archive.org/web/20241222130240/http://www.pluto.fi/] (last visited Dec. 20, 2024) [hereinafter, PLUTO.FI] (Pluto, using AI, "actively analyses patterns, predicts needs, and comes up with actionable proposals to get closer to the perfect finance.").

107. *Robinhood CEO: Every Company Will Transition Into an AI Company*, PYMNTS (May 10, 2023), https://www.pymnts.com/earnings/2023/robinhood-ceo-every-company-will-transition-into-an-ai-company/.

108. *Robinhood Acquires Pluto, AI Investment Research Platform*, ROBINHOOD (Jul. 1, 2024), https://newsroom.aboutrobinhood.com/robinhood-acquires-pluto-ai-investment-research-platform/.

109. *Id*.

110. *See* PLUTO.FI*, supra* note 107.

111. Coinfomania, *Robinhood Now Offers AI-Powered Investing With Pluto Acquisition*, BINANCE SQUARE (Jul. 1, 2024), https://www.binance.com/en-NG/square/post/10227703699641.

112. PLUTO.FI, *supra* note 110.

advanced large language model ("LLM") to conduct predictive data analysis was a motivational factor for Robinhood, but, as the SEC has stated, the integration of generative AI models into financial markets can be a recipe for disaster.[113]

E. The Mechanisms of AI and Potential Causes for Concern

The utilization and reliability of an AI system is dependent on a multitude of factors, including its method of learning.[114] In traditional AI systems, predictability was high relative to a generative LLM due to the rigidly formulaic nature of the traditional system's learning and application—the teaching material was often algorithmic and produced an output based on a prewritten mathematical formula, a form of supervised learning.[115] While this is the popular form of AI among investment managers and broker-dealers, the platforms that pride themselves on innovation, like Robinhood, have favored untested AI models in the hopes of creating a better product.[116]

AI models that use deep or reinforcement learning techniques to increase anthropomorphism and utility are highly beneficial in fields in which shutting down systems in response to stressors is an acceptable outcome, but in capital markets, where movement is heightened through gamification and predictability is steadily decreasing, stressors can cause AI-created algorithmic trading strategies to implode. Under the current application of AI in e-trading, factors that are taken into consideration in creating an individualized trading strategy include risk thresholds of individual clients. As a way of constraining the unbounded learning capabilities of LLM-AI systems, risk thresholds are programmed to trigger de-risk actions. This means that, if an AI system is allowed to conduct trading strategies without supervision and reaches the risk threshold, it can

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113. Gary Gensler, *AI, Finance, Movies, and the Law—Prepared Remarks Before the Yale Law School* (Feb. 13, 2024), https://www.sec.gov/newsroom/speeches-statements/gensler-ai-021324.

114. Dominik Kowald et al., *Establishing and Evaluating Trustworthy AI: Overview and Research Challenges*, 7 FRONT. BIG DATA 1467222 (Nov. 28, 2024), https://doi.org/10.3389/fdata.2024.1467222.

115. Iqbal H. Sarker, *Machine Learning: Algorithms, Real-World Applications and Research Directions*, 2 SN COMP. SCI. 160 (Mar. 22, 2021).

116. Dean Emerick, *The Best AI Trading Software for Sustainable Investments*, ESG THE REPORT, https://esgthereport.com/best-ai-trading-software/ (last visited Jan. 27, 2024). Companies that boast the use of generative AI in helping provide their expansive services include BlackRock Inc., JPMorgan Chase & Co., Morgan Stanley, Goldman Sachs Group Inc., and Fidelity Investments. *See*, Brian O'Connell, *7 Top Investment Firms Using AI For Asset Management*, US NEWS & WORLD REPORT (Jul. 19, 2024), https://money.usnews.com/investing/articles/7-top-investment-firms-using-ai-for-asset-management.

theoretically limit liquidity[117] or enter a churning loop in an effort to rebalance portfolios towards safer investments to rectify the de-risk trigger.[118]

Supervision alone will not cure this structural flaw found in the application of LLMs in capital market settings. Another risk is a reemergence of the post-Great Depression market distrust, this time due to the lack of traceability and transparency when it comes to the extent to which AI is implemented, what information is used to teach the model, or even what model is used. Without clarity on these matters, there may be overreliance on AI systems, as e-trading platforms attempt to maximize profitability and efficiency. But the most problematic situation would be one where broker-dealers, taking advantage of the lack of mandatory disclosure,[119] train the systems to serve their own interests over the client's. When combined with gamification, DEPs and AI together can lead to heavy market manipulation by broker-dealers through predatory tactics targeted towards unsophisticated investors.

Another risk factor is AI's potential to hallucinate and the inability to entirely control its output from the information provided.[120] As broker-dealers feed data into their systems to facilitate learning, the system's takeaways from the data might vary to differing degrees from the lessons the broker-dealer believes is being taught.[121] This poses a potential issue if brokerages utilize AI to provide individualized real-time investment advice because the AI system's goals, and therefore its advice, may not perfectly match those the system trainer intended to establish.[122]

When combined with gamification, these potential pitfalls associated with AI are cause for concern. The DEP behavioral triggers that entice

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117. International Monetary Fund, *Chapter 3: Advances in Artificial Intelligence: Implications for Capital Market Activities*, *in* Global Financial Stability Report at 87 (Oct. 22, 2024), https://www.elibrary.imf.org/display/book/9798400277573/CH003.xml.

118. *Id.* at 88.

119. *See supra* discussion accompanying note 34.

120. Yujie Sun et al., *AI Hallucination: Toward a Comprehensive Classification of Distorted Information in Artificial Intelligence-Generated Content*, 11 HUMANITIES SOC. SCI. COMM. 1278 (2024).

121. This effect is commonly seen in generative AI models in a phenomenon called "unfounded fabrication" where the system creates opinions, amongst other things, without adequate substantiation but that opinion is so plausible that this error often goes unnoticed without excessive scrutiny. *See id*. There is also a discrimination bias that occurs with high-performance AI systems that cannot feasibly be eliminated. *Id.* This bias can lead to the perpetuation of conflicted interests among AI-generated investment advice because it has a tendency to "reinforce advantages for certain groups over other groups and their members." *Id.*

122. There are studies showing that "current autonomous AIs can manifest new, unintended goals" which make its behavior and output highly unpredictable. *See* Peter S. Park et al., *AI Deception: A Survey of Examples, Risks, and Potential Solutions*, 5 PATTERNS 5, 11 (2024), https://www.sciencedirect.com/science/article/pii/S266638992400103X?via%3Dihub.

investors, combined with advice that is inconsistent with broker-dealer or investor goals, can allow market manipulations and create sudden fluctuations that are only addressable after-the-fact. This inability to prevent market manipulations can cause Depression-esque unpredictability and distrust.

V. THE FUTURE OF SEC REGULATION OF GAMIFIED INVESTMENT PLATFORMS WITH GENERATIVE AI FEATURES

In regulating gamification and AI, the primary considerations are security, disclosure, conflicts of interest, and a lack of knowledge about the systems in general. The SEC has expressed a fear of uncertainty associated with gamification and AI, but has yet to actually enact any regulations.[123]

A. Recent AI and Gamification Regulations Proposed by the SEC

In 2023, the SEC proposed new rules under the Securities Exchange Act of 1934 and the Investment Advisers Act of 1940 to "eliminate, or neutralize the effect of, certain conflicts of interest associated with broker-dealers' . . . interactions with investors through [their] use of technologies that optimize for, predict, guide, forecast, or direct investment-related behaviors or outcomes."[124] In 2024, the SEC put forth a proposed regulation that would require firms utilizing AI to disclose business strategies, AI usage, and associated risks.[125] It follows that a key market player whose role is to be the ultimate gatekeeper would need to disclose risks to customers when they delegate part of their gatekeeping role to an AI system. The comments received by esteemed members of the legal community and Congress all echo the same sentiment—that it is not the concept of AI in the marketplace that causes concern, but rather when AI is, knowingly or unknowingly, used by broker-dealers to create conflicts of interest by putting the adviser's interests ahead of the client's.[126] The consensus among commenters is that the way to address these concerns is to closely study the data being fed to teach these AI systems and to create a disclosure system that builds upon

123. Gensler, *supra* note 114.

124. Conflicts of Interest Associated with the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisers, Exchange Act Release No. 34-97990, Investment Advisers Act Release No. 6353, 89 Fed. Reg. 19292 (proposed Jul. 26, 2023) (withdrawn).

125. *See* Cara M. Peterman et al., *Navigating AI-Related Disclosure Challenges: Securities Filing, SEC Enforcement, and Shareholder Litigation Trends*, ALSTON & BIRD (Jul. 26, 2024), https://www.alston.com/en/insights/publications/2024/07/navigating-ai-related-disclosure-challenges.

126. James Tierney et al., Second Supplemental Comment Letter on Proposed Rule Regarding Predictive Data Analytics by Broker-Dealers (May 28, 2024), https://www.sec.gov/comments/s7-12-23/s71223-478771-1370434.pdf.

Reg BI[127] to ensure that any potential conflicts of interest created by the use of PDA[128] is clearly and wholly presented to potential investors, especially newer ones who are unaware of these sales techniques.[129]

B. Potential Explanations for the SEC's Lack of Legislation

However, the SEC, being experts in financial, legal, and economic matters, have hesitated to address highly technical flaws within AI that have the potential to devastate the markets if left untreated. AI's sentience is underscored by its human-esque foibles such as hallucinations, biases, and conflicts of interest. There might be a rationale for this hesitancy other than a strong aversion to software mechanisms; Section 17(a)[130] of the Securities Act of 1933 and Section 10(b)[131] and Rule 10b-5[132] of the Securities Exchange Act of 1934 provide for causes of actions against, amongst others, broker-dealers who possess a minimum scienter of recklessness.[133] Conversely, under the new Reg BI standard, there is no scienter requirement to establish a litigable violation.[134]

With the rapid evolution of AI, it is only logical that a majority of the litigable mistakes caused by a brokerage's use of AI would lack the requisite scienter. This gives rise to further questions, such as who would bear the liability—the brokerage or the third-party AI company—and if there is liability imposed, what the standard would be. Further, the causes of action provided by the SEC and Congress's legislation all reference a broker-

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127. North American Securities Administrators Association, Comment Letter on Proposed Rule: Conflicts of Interest (Oct. 1, 2021), https://www.sec.gov/comments/s7-10-21/s71021-9316149-260067.pdf ("To assist with compliance and to protect investors, the Commission should provide further guidance as to when DEP-based communications constitute recommendations. However, given the speed of technology, NASAA suggests that guidance should not be limited to any particular DEP, but rather should be focused on the effects of technologies on investor behavior generally.").

128. *See, e.g.*, Sophia Duffy and 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, 26 (2021) (stating that the impact of firm conflicts of robo-advisors "are arguably more detrimental than personal conflicts between an advisor and client because the number of clients impacted by the firm conflict is potentially exponentially higher.") ("Robo-Advisors and the Fiduciary and Best Interest Standards").

129. Members of Congress, Comment Letter on Proposed Rule Regarding Predictive Data Analytics by Broker-Dealers (Mar. 12, 2024), https://www.sec.gov/comments/s7-12-23/s71223-447599-1145103.pdf.

130. Fraudulent Interstate Transactions, 15 U.S.C. § 77q (2010).

131. 15 U.S.C. § 78j (2010).

132. 17 C.F.R. § 250.10b-5 (1951).

133. Jeanne P. Bolger, *Recklessness and the Rule 10b-5 Scienter Standard after Hochfelder*, 49 FORDHAM L. REV. 817, 817–19 (1980).

134. Regulation Best Interest: The Broker-Dealer Standard of Conduct, Exchange Act Release No. 34-86031, 84 Fed. Reg. 33318 (published on Aug. 9, 2019).

dealer's responsibility to supervise "associated person[s]"[135] where the ordinary meaning of "persons" has traditionally been used.[136] Even if the scienter element were met, this begs the question of whether an AI system is a "person" for purposes of securities laws and if so, whether this classification only applies to deep-learning systems that more closely mimic humans or whether it also encompasses the traditional AI systems that are more algorithmic than lifelike.

C. Guidance on How the SEC Should be Regulating Gamified Investment Platforms that Use AI and the Potential Implications of the Recommended Regulatory Frameworks

The SEC has demonstrated a clear intent to promulgate preventative regulations such as hefty disclosure requirements, certain strict liabilities, monitoring and supervision requirements, and other mechanisms to prevent conflicts of interest and other types of fraud. With this regulatory precedent, the SEC should bring the same practices to regulating the intersection of gamification and AI in e-trading companies or brokerages in general.

Generally, a useful step to preventing fraud is requiring disclosure,[137] so the SEC could increase the requirements of the risk disclosures by mandating brokerages that utilize gamification, AI, or both to disclose the specific DEPs being used, the target audience for these DEPs, the AI system being utilized, any risks commonly associated with such systems, how the firm is mitigating the risks if at all, and any risks associated with a lack of knowledge or understanding about the intersection of AI and gamification as used by the firm. In addition to requiring that these risk disclosures be provided to investors by the brokerage in a "terms and conditions" or "privacy notice" format, there should also specifically be a requirement to include these two specific categories of risk disclosures in a conspicuous location on the platform where new investors would be made aware of them.

One potential implication of this heightened disclosure requirement is a shrinkage of gamified investment companies' profit margins. Disclosure is generally accompanied by increased business expenses and, for commission-free trading companies, such as Robinhood, a significant decrease in profit margins.[138] This combination will likely cause brokers to seek additional forms of compensation to offset the decreased profits. The

135. 15 U.S.C. § 78c(a)(18).
136. *Id*.
137. *See, e.g.*, *supra* text accompanying notes 9–15.
138. *See generally* Nicholas Witten, *Eliminating Payment for Order Flow to Ensure Loyal Agents*, 64 B.C. L. REV. 701 (2023).

desire to earn more money can lead to fraud and deceit, which might lead this option to be ineffective because mitigating instances of one type of fraud might lead to the increase of another.

It is also possible that brokerages will be unable to accurately detail risks associated with AI and gamification. Because AI technology is relatively new and still under development, there are unknown risks. If the software engineers and programmers are unaware of such risks, it is unreasonable to expect broker-dealers to know of and effectively communicate such risks. This might result in increased instances of 10b-5 claims, which, although potentially unsuccessful due to the lack of scienter, might result in waste of judicial and prosecutorial resources.

Under the umbrella of increased requirements for SEC filings, the SEC could require broker-dealers to include a provision in their annual financial reports detailing any use of AI with respect to client services, the data used to train the AI systems, the percentage of clients who request investment advice from the firm's AI system upon responding to gamified prompts, and the demographics of investors that respond to DEPs and use AI generally. This would be a hefty burden on broker-dealers who generally only report financial records and compliance with regulations and exemptions on an annual basis.[139] Requiring the inclusion of these more technical statistics and data might have unpredictable effects.

One mixed benefit of such regulation would be to deter broker-dealers from using AI or gamification at all to avoid having to expend time and finances into fulfilling the disclosure requirements. Alternatively, broker-dealers might opt to create generic language that would satisfy the disclosure requirements without needing to be heavily amended for each annual filing, which would be ineffective at addressing the issue presented. The SEC has long recognized that boilerplate language in filings is insufficient disclosure to satisfy the purposes of fraud deterrence and prevention.[140]

Instead of heightened requirements, the SEC could choose to use a restrictive regulatory regime. One method of addressing the concerns regarding broker-dealers' exploitation of green investors would be to restrict gamification tactics, such as leaderboards or pop-up notifications, for riskier investments to only sophisticated investors. The recent instances of unsophisticated investors being coaxed into participating in high-stakes trading through psychological and behavioral triggers used by e-trading

139. 17 C.F.R. § 240.17a–5(d) (2025).

140. *See* Glazer Capital Mgmt, L.P. v. Forescout Techs., Inc., 63 F.4th 747, 779 (9th Cir. 2023) (holding that a company "cannot rely on boilerplate language describing *hypothetical* risks to avoid liability").

platforms would be addressed with this graduated restrictive scheme. By restructuring the WKSI[141] financial qualifications to an individual scale, the SEC would be able to set barriers of entry for the use of gamification on investors determined by sophistication and presumed knowledge. In theory, sophisticated investors would be quicker to decide whether riskier investments are in their best interests, regardless of gamification techniques, whereas a new investor might not make an educated decisions under the pressure of an urgent pop-up notifying them of new options or a leaderboard showing their peers making more money via higher-risk investments.

Along with this form of progressively restrictive schematic, the SEC could also opt to prohibit broker-dealers from using gamification techniques and AI assistance simultaneously. When a platform user gets a notification on their phone about a new potential investment or about a friend who surpassed them on a leaderboard, they will be prompted, via behavioral manipulations, to respond by using the AI bot to get quick investment advice based on their current portfolio and goals before acting pursuant to that advice.[142] While this may not present as large of a problem among sophisticated investors who are able to discern between good and bad investment advice, unsophisticated investors will be more likely to trust the advice they are receiving, possibly because of the assumption that such real-time advice is from a human and not a machine. This proscription of the simultaneous use of DEPs and AI is especially impactful where the AI system is a large language model or deep-learning one. The more complex an AI system, the more capable it is of mimicking human interactions, so in situations where a platform fails to clearly state when the investment advice is coming from a human and when it is coming from an AI system, a user's ability to recognize the difference decreases exponentially.[143] This can cause new users to place unwarranted trust in the investment advice they receive, especially where they believe it to be from a human being.

The biggest challenge with these two restrictive regulatory regimes is implementation and enforcement. Numerous platforms have already integrated AI and DEPs into their daily routines and client service programs.[144] Requiring platforms to limit the usage of both, or to choose between one or the other, might lead to outcry from the companies (which

141. "Well-Known Seasoned Issuer" is a term of art defined by Rule 405 of the 1933 Act. It refers to issuers who receive special benefits due to their experience and prowess with the market and issuances, generally. *See* 17 C.F.R. § 230.405 (2024).

142. *See* discussion *supra* Section III.

143. *See* discussion *supra* Section V.

144. The top 5 AI-integrated platforms are Magnifi, TrendSpider, Danelfin, Composer, and AInvest. Marc Guberti, *Can AI Pick Stocks? 5 AI Investing Apps to Try*, U.S. NEWS (Aug. 12, 2025), https://money.usnews.com/investing/articles/can-ai-pick-stocks.

will now face higher business expenses to compensate) for the loss of one and from the public (who will likely face extended wait-times for investment advice or see the barrier of entry to financial markets be resurrected) for the other.[145] Additionally, enforcement of such restrictions might be challenging, especially if there is a "either/or" requirement only for LLMs, which would require the SEC's enforcement division to distinguish between LLMs and other forms of AI without necessarily having the expertise to do so.[146] Furthermore, if the graduated DEP restriction regulation were used, the SEC would not only have to find a way to determine the frequency with which audits must be conducted on gamified investment platforms to ensure compliance but also the tiers for the graduation portion of the regulation to ensure fairness to both investors and broker-dealers alike.

From a different restriction standpoint, rather than restricting the usage of gamification tactics or AI, the SEC could implement a mandatory lock-up period for investments made using AI-generated advice or when prompted by gamification techniques. Gamification has increased the speed of trading, which, when inadequately regulated, can lead to poor investment decisions by unsophisticated investors.[147] By requiring a short lock-up, the SEC can manually reduce the speed of trading and allow investors to make more educated choices that positively impact their portfolios rather than spur-of-the-moment decisions fueled by psychologically manipulative techniques and based on AI-digested-and-simplified data outputs. While this would help reduce the unintended detrimental consequences of AI and gamification, this regime would be subject to the traditional anti-regulatory criticisms—excessive restriction of free markets and governmental intervention will cause market manipulations that were previously seen and disfavored during pro-regulatory administrations.[148]

On a more technical note, the likely causes of actions for AI- and gamification-related fraud will be under Sections 15(b)(4)(E) and (6) of the Securities Exchange Act of 1934, both of which respectively impose liabilities upon broker-dealers under a secondary liability theory[149] and

145. Dolly Gaur et al., *AI Powered Gamification: The New Catalyst in the Arena of Online Investment Platforms Impacting Behavioral Intentions*, INT'L J. OF HUM. COMPUT. INTERACTION, at 1 (Apr. 7, 2025), https://www.tandfonline.com/doi/full/10.1080/10447318.2025.2483862?src=.

146. SIDLEY, *supra* note 64.

147. Lokeshwari D.V. et al., *The Influence Of Gamification In Investment Apps on Risky Financial Behavior Among Youth*, 13 INT'L J. CREATIVE RSCH. THOUGHTS 550 (May 2025).

148. Ana Carvajal & Jennifer Elliot, *Strengths and Weaknesses in Securities Market Regulation: A Global Analysis* (IMF Monetary & Capital Mkts, Working Paper No. 259, 2007).

149. 15 U.S.C. § 780(b)(4)(E).

associated "persons."[150] This then raises the question of where AI-induced fraud would fall—whether a broker-dealer would be liable for "willfully . . . procur[ing] the violation *by any other person* of any provision of [the regulations]"[151] or whether the broker-dealer would be a "person who is associated . . . with a broker or dealer."[152] where the AI system is acting as a broker or dealer. The definition of "persons" for purposes of these provisions appears narrow in light of the perceived growing sentience of LLM AI systems[153] to nearly mimic human intelligence.

CONCLUSION

AI and gamification both bring unpredictable risks and unintended consequences that have the potential to greatly impact the safety of unsophisticated investors who trade on e-trading brokerage platforms. As technological advancement grows and intertwines with psychologically manipulative techniques, regulatory intervention risks falling so far behind as to become ineffective in addressing the associated harms. For better or worse, this means the SEC has a lot of work to do.

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150. 15 U.S.C. § 780(6).
151. 15 U.S.C. § 780(b)(4)(E) (emphasis added).
152. 15 U.S.C. § 780(6)(A).