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**SECURITIES AND EXCHANGE COMMISSION**

**17 CFR Parts 240 and 275**

**[Release Nos. 34-97990; IA-6353; File No. S7-12-23]**

**RIN 3235-AN00; 3235-AN14**

**Conflicts of Interest Associated with the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisers**

**AGENCY:** Securities and Exchange Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Securities and Exchange Commission (“Commission” or “SEC”) is proposing new rules (“proposed conflicts rules”) under the Securities Exchange Act of 1934 (“Exchange Act”) and the Investment Advisers Act of 1940 (“Advisers Act”) to eliminate, or neutralize the effect of, certain conflicts of interest associated with broker-dealers’ or investment advisers’ interactions with investors through these firms’ use of technologies that optimize for, predict, guide, forecast, or direct investment-related behaviors or outcomes. The Commission is also proposing amendments to rules under the Exchange Act and Advisers Act that would require firms to make and maintain certain records in accordance with the proposed conflicts rules.

**DATES:** Comments should be received on or before October 10, 2023.

**ADDRESSES:** Comments may be submitted by any of the following methods:

*Electronic Comments:*

- Use the Commission’s internet comment form (<https://www.sec.gov/rules/proposed.shtml>); or

- Send an email to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number S7-12-23 on the subject line.

*Paper Comments:*

- Send paper comments to Vanessa A. Countryman, Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090.

All submissions should refer to File Number S7-12-23. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method of submission. The Commission will post all comments on the Commission's website (<https://www.sec.gov/rules/proposed.shtml>). Comments are also available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Operating conditions may limit access to the Commission's Public Reference Room. Do not include personal identifiable information in submissions; you should submit only information that you wish to make available publicly. We may redact in part or withhold entirely from publication submitted material that is obscene or subject to copyright protection.

Studies, memoranda, or other substantive items may be added by the Commission or staff to the comment file during this rulemaking. A notification of the inclusion in the comment file of any such materials will be made available on the Commission's website. To ensure direct electronic receipt of such notifications, sign up through the "Stay Connected" option at [www.sec.gov](http://www.sec.gov) to receive notifications by email.

A summary of the proposal of not more than 100 words is posted on the Commission's website (<https://www.sec.gov/rules/2023/07/s7-12-23#34-97990>).

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**SUPPLEMENTARY INFORMATION:** The Commission is proposing for public comment: 17 CFR 240.151-2 under the Exchange Act<sup>1</sup> (“proposed rule 240.151-2”) and 17 CFR 275.211(h)(2)-4 under the Advisers Act<sup>2</sup> (“proposed rule 275.211(h)(2)-4”) and, together with proposed rule 240.151-2, “proposed conflicts rules”); and amendments to 17 CFR 240.17a-3 and 17 CFR 240.17a-4 (“rules 17a-3 and 17a-4”) under the Exchange Act and 17 CFR 275.204-2 under the Advisers Act (“rule 204-2” and, together with the proposed amendments to rules 17a-3 and 17a-4, “proposed recordkeeping amendments”).

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<sup>1</sup> Unless otherwise noted, when we refer to the Exchange Act, we are referring to 15 U.S.C. 78, and when we refer to rules under the Exchange Act, we are referring to title 17, part 240 of the Code of Federal Regulations [17 CFR 240].

<sup>2</sup> Unless otherwise noted, when we refer to the Advisers Act, we are referring to 15 U.S.C. 80b, and when we refer to rules under the Advisers Act, we are referring to title 17, part 275 of the Code of Federal Regulations [17 CFR 275].

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## I. INTRODUCTION

The adoption and use of newer technologies, such as predictive data analytics (“PDA”), by broker-dealers and investment advisers (together, “firms”) have accelerated.<sup>3</sup> In some instances, firms’ use of PDA and similar technologies may be subject to statutory or regulatory investor protections, but in other cases, it may not. Firms’ use of PDA-like technologies can bring benefits in market access, efficiency, and returns. To the extent that firms are using PDA-like technologies to optimize for their own interests in a manner (intentionally or unintentionally) that places these interests ahead of investor interests, however, investors can suffer harm. Further, due to the scalability of these technologies and the potential for firms to reach a broad audience at a rapid speed, as discussed below, any resulting conflicts of interest could cause harm to investors in a more pronounced fashion and on a broader scale than previously possible.<sup>4</sup>

We believe the current regulatory framework should be updated to help ensure that firms are appropriately addressing conflicts of interests associated with the use of PDA-like technologies. As a result, we are proposing specific protections to complement those already

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<sup>3</sup> See Deloitte, Artificial intelligence: The next frontier for investment management firms (Feb. 5, 2019), <https://www.deloitte.com/global/en/Industries/financial-services/perspectives/ai-next-frontier-in-investment-management.html> (“AI is providing new opportunities which extend far beyond cost reduction and efficient operations. Many investment management firms have taken note and are actively testing the waters, applying cognitive technologies and AI to various business functions across the industry value chain.”); Blake Schmidt and Amanda Albright, *AI Is Coming for Wealth Management. Here’s What That Means*, *Bloomberg Markets* (Apr. 21, 2023), <https://www.bloomberg.com/news/articles/2023-04-21/vanguard-fidelity-experts-explain-how-ai-is-changing-wealth-management> (discussing experts views on AI impact on the wealth management industry). As discussed more below, in addition to PDA, firms have adopted and used artificial intelligence (“AI”), including machine learning, deep learning, neural networks, natural language processing (“NLP”), or large language models (including generative pre-trained transformers or “GPT”), as well as other technologies that make use of historical or real-time data, lookup tables, or correlation matrices (collectively, “PDA-like technologies”). See, e.g., Q. Zhu and J. Luo, *Generative Pre-Trained Transformer for Design Concept Generation: An Exploration*, Proceedings of the Design Society, Design Vol 2 (May 2022), <https://www.cambridge.org/core/journals/proceedings-of-the-design-society/article/generative-pretrained-transformer-for-design-concept-generation-an-exploration/41894D82DCBC0610B5B6E68967B7047F> (“GPT are language models pre-trained on vast quantities of textual data and can perform a wide range of language-related tasks.”) (citations omitted).

<sup>4</sup> See *infra* section I.C.

required under existing regulatory frameworks<sup>5</sup> to better protect investors from harms arising from these conflicts.

## **A. Overview**

Broker-dealers may have a range of conflicts of interest with their retail investors.<sup>6</sup> Likewise, investment advisers may have conflicts of interest with respect to advisory clients and investors in their pooled investment vehicle clients.<sup>7</sup> Some of these conflicts of interest are inherent to the relationship between these firms and investors. For example, an investment adviser that is paid a percentage fee based on assets under management has an incentive to encourage a client to move assets into his or her advisory account, which could conflict with investors' interest, for example, to retain assets in a 401(k) plan or other retirement account. Similarly, a broker-dealer that receives transaction-based (*e.g.*, commission) compensation has an incentive to maximize the frequency of transactions, which could increase costs to the investor or expose them to other risks associated with excess trading.

Many broker-dealers and investment advisers also have conflicts of interest associated with other common business practices. For example, some investment product sponsors offer revenue sharing payments, creating an incentive for broker-dealers and investment advisers that accept such payments to favor those investments. Similarly, firms that offer proprietary products have an incentive to favor those products over other non-proprietary alternatives. Dual registrant

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<sup>5</sup> See *infra* section III.C.3

<sup>6</sup> While the proposed conflicts rules do not use or define the term “retail investors,” we use that term in this release to mean “a natural person, or the legal representative of such natural person, who seeks to receive or receives services primarily for personal, family or household purposes,” which is consistent with the definition of “retail investor” in Form CRS and would include both current and prospective retail customers. See Form CRS, Sec. 11.E. Separately, we note that, for broker-dealers, the proposed conflicts rule defines “investor” consistent with the definition of “retail investor” in Form CRS.

<sup>7</sup> Proposed rule 275.211(h)(2)-4 would apply to clients and prospective clients of advisers as well as investors and prospective investors in pooled investment vehicles advised by those advisers.

and affiliated firms that offer both brokerage and advisory accounts have an incentive to steer investors toward the account type that is most profitable for the firm, regardless of whether it is in the best interest of the investor. Unless adequately addressed, these conflicts of interest can cause broker-dealers and investment advisers to place their interests ahead of investors' interests.

Broker-dealers and investment advisers operate within regulatory frameworks that in many cases require them to, as applicable, disclose, mitigate, or eliminate conflicts.<sup>8</sup> These regulatory frameworks play a fundamental role in protecting retail investors of broker-dealers, clients of investment advisers, and investors in pooled investment vehicle clients of investment advisers (together, "investors") from the negative effects of firms placing their own interests ahead of investors' interests. As the markets grow and evolve, however, and specifically, as firms adopt and utilize newer technologies to interact with investors, we are evaluating our regulations' effectiveness in protecting investors from the potentially harmful impact of conflicts of interest.

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<sup>8</sup> See <https://www.sec.gov/rules/final/2019/34-86031.pdf>, Exchange Act Release No. 86031 (June 5, 2019) [84 FR 33318 (July 12, 2019)] ("Reg BI Adopting Release"); Commission Interpretation Regarding Standard of Conduct for Investment Advisers, Advisers Act Release No. 5248 (June 5, 2019) [84 FR 33669 (July 12, 2019)], at section II.C. ("Fiduciary Interpretation") (describing an adviser's fiduciary duties to its clients). Additionally, rule 206(4)-8 under the Advisers Act prohibits certain statements, omissions, and other acts, practices, or courses of business as fraudulent, deceptive, or manipulative with respect to any investor or prospective investor in a pooled investment vehicle.



Recently, firms' adoption and use of PDA-like technologies<sup>9</sup> have accelerated.<sup>10</sup> While this adoption and use can bring potential benefits for firms and investors (*e.g.*, with respect to efficiency of operations, which can generate cost savings for investors, or enhancing the efficiency of identifying investment opportunities that match an investor's preferences, profile, and risk tolerances), they also raise the potential for conflicts of interest associated with the use of these technologies to cause harm to investors more broadly than before.<sup>11</sup>

While the presence of conflicts of interest between firms and investors is not new, firms' increasing use of these PDA-like technologies in investor interactions may expose investors to unique risks. This includes the risk of conflicts remaining unidentified and therefore unaddressed or identified and unaddressed. The effects of such unaddressed conflicts may be pernicious, particularly as this technology can rapidly transmit or scale conflicted actions across a firm's

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<sup>9</sup> Artificial intelligence is generally used to mean the capability of a machine to imitate intelligent human behavior and machine learning is a subfield of artificial intelligence that gives computers the ability to learn without explicitly being programmed. *See generally* Sara Brown, *Machine Learning, Explained*, MIT Sloan School of Management (Apr. 21, 2021), <https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained>. Predictive data analytics draws inferences from large data sets, relying on hypothesis-free data mining and inductive reasoning to uncover patterns to make predictions about future outcomes, and may use natural language processing, signal processing, topic modeling, pattern recognition, machine learning, deep learning, neural networks, and other advanced statistical methods. *See* Nathan Cortez, *Predictive Analytics Law and Policy: Mapping the Terrain: Challenging Issues in Specific Private Sector Contexts, Substantiating Big Data in Health Care*, 14 ISJLP 61, 65 (Fall 2017). *See generally* Financial Industry Regulatory Authority, Inc. ("FINRA"), *Artificial Intelligence (AI) in the Securities Industry 5* (June 2020) ("FINRA AI Report"), <https://www.finra.org/sites/default/files/2020-06/ai-report-061020.pdf>; Financial Stability Board, *Artificial Intelligence and Machine Learning in Financial Services: Market Developments and Financial Stability Implications* (Nov. 1, 2017) ("FSB AI Report"), <https://www.fsb.org/wp-content/uploads/P011117.pdf>; *see also* Department of the Treasury, et al., *Request for Information and Comment on Financial Institutions' Use of Artificial Intelligence, Including Machine Learning* (Feb. 2021) [86 FR 16837, 16839-40 (Mar. 31, 2021)] ("Treasury RFI").

<sup>10</sup> *See infra* section I.B.

<sup>11</sup> *See, e.g.*, *For AI in Asset Management, Tomorrow is Here*, Markets Media (Mar. 28, 2023), <https://www.marketsmedia.com/for-ai-in-asset-management-tomorrow-is-here/> (citing possible benefits for investment managers in generating alpha, improving efficiency, enhancing product and content distribution, and enhancing risk management and customer experience); Christine Schmid, *AI in Wealth: from Science Fiction to Science Fact*, FinExtra (June 8, 2023), <https://www.finextra.com/blogposting/24323/ai-in-wealth-from-science-fiction-to-science-fact> (citing potential benefits in personalized portfolio creation, enhanced investor engagement, democratized personalized investing, and reduced information overload).

investor base.<sup>12</sup> For example, conflicts of interest can arise from the data the technology uses (including any investor data) and the inferences the technology makes (including in analyzing that data, other data, securities, or other assets). These issues may render a firm’s identification of such conflicts for purposes of the firm’s compliance with applicable Federal securities laws more challenging without specific efforts both to fully understand the PDA-like technology it is using<sup>13</sup> and to oversee conflicts that are created by or transmitted through its use of such technology.<sup>14</sup>

Moreover, PDA-like technologies may have the capacity to process data, scale outcomes from analysis of data, and evolve at rapid rates.<sup>15</sup> While valuable in many circumstances, these technologies could rapidly and exponentially scale the transmission of any conflicts of interest

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<sup>12</sup> 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, at 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”).

<sup>13</sup> See, e.g., *infra* section II.A.2.b and II.A.3 (discussing the testing and policies and procedures requirements, respectively, of the proposed conflicts rules, which if implemented in accordance with the proposal, would necessitate firms’ developing an understanding of the PDA-like technologies they use).

<sup>14</sup> See, e.g., Sohnke M. Bartram, Jurgen Branke & Mehrshad Motahari, *Artificial Intelligence in Asset Management* (2020) (“AI in Asset Management”) (“Understanding and explaining the inferences made by most AI models is difficult, if not impossible. As the complexity of the task or the algorithm grows, opacity can render human supervision ineffective, thereby becoming an even more significant problem.”).

<sup>15</sup> See, e.g., Eray Elicik, *Artificial Intelligence vs. Human Intelligence: Can a game-changing technology play the game?* (Apr. 20, 2022), <https://dataconomy.com/2022/04/is-artificial-intelligence-better-than-human-intelligence/> (“Compared to the human brain, machine learning (ML) can process more data and do so at a faster rate.”); David Nield, *Google Engineers ‘Mutate’ AI to Make It Evolve Systems Faster Than We Can Code Them* (Apr. 17, 2020), <https://www.sciencealert.com/coders-mutate-ai-systems-to-make-them-evolve-faster-than-we-can-program-them> (“[R]esearchers have tweaked [a machine learning system] to incorporate concepts of Darwinian evolution and shown it can build AI programs that continue to improve upon themselves faster than they would if humans were doing the coding.”).

associated with such technologies to investors.<sup>16</sup> For example, a firm may use PDA-like technologies to automatically develop advice and recommendations that are then transmitted to investors through the firm’s chatbot, push notifications on its mobile trading application (“app”), and robo-advisory platform. If the advice or recommendation transmitted is tainted by a conflict of interest because the algorithm drifted<sup>17</sup> to advising or recommending investments more profitable to the firm or because the dataset underlying the algorithm was biased toward investments more profitable to the firm, the transmission of this conflicted advice and recommendations could spread rapidly to many investors.

Unless adequately addressed, the use of these PDA-like technologies may create or transmit conflicts of interest that place a firm’s interests ahead of investors’ interests. This may arise not only when a firm is providing investment advice or recommendations, but also in the firm’s sales practices and investor interactions more generally, such as design elements, features, or communications that nudge or prompt more immediate and less informed action by the investor.<sup>18</sup> In light of these developments and risks, and for the reasons we describe further below, we are proposing that a firm’s use of certain PDA-like technologies in an investor

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<sup>16</sup> See Robo-Advisors and the Fiduciary and Best Interest Standards, *supra* note 12, at 26. See also FINRA AI Report, *supra* note 9 (discussing exploration of the use of AI tools by market participants and noting, among other things, that firms should ensure sound governance and supervision, including effective means of overseeing suitability of recommendations, conflicts of interest, customer risk profiles and portfolio rebalancing) (internal quotations and citation omitted); Y. Minsky, Communications of the ACM, *OCaml for the Masses* (Sept. 27, 2011), <https://dl.acm.org/doi/pdf/10.1145/2018396.2018413> (explaining that “technology carries risk. There is no faster way for a trading firm to destroy itself than to deploy a piece of trading software that makes a bad decision over and over in a tight loop” and that the author’s employer seeks to control these risks by “put[ting] a very strong focus on building software that was easily understood—software that was readable.”).

<sup>17</sup> See *infra* note 157 and accompanying text.

<sup>18</sup> See, e.g., CFA Institute, *Ethics and Artificial Intelligence in Investment Management: A Framework for Professionals* (2022) (stating that professionals should ensure they understand the sources of any potential conflicts generated by the use of algorithms and work with developers to ensure that such systems do not inappropriately incorporate fee considerations in the algorithm generating the investment advice).

interaction that places the firm’s interests ahead of the investors’ interests involves a conflict of interest that must be eliminated or its effects neutralized in accordance with the proposed conflicts rules.

## **B. Background**

### **1. *Evolution in the Investment Industry and its Technology Use***

Over the last several decades, firms’ use of technology to interact with investors and provide products and services has evolved significantly, and with it, the nature and extent of the conflicts of interest this use can create. When Congress first enacted the Exchange Act and the Advisers Act, firms were increasingly deploying what were then considered advanced technologies, such as punch cards and telex machines. As technology improved, firms began adopting other technologies, such as computers, email, spreadsheets, and the internet. The Commission has previously observed that these and other technologies have helped to promote transparency, liquidity, and efficiency in our capital markets.<sup>19</sup> If responsibly implemented and overseen by firms, new technologies can aid firms’ interactions with investors, and bring greater access and product choice, potentially at a lower cost, without compromising investor protection, capital formation, and fair, orderly, and efficient markets.

Where once investors placed trades with their broker in-person, they eventually began to place orders over the phone, and then through a website. Now investors can instantaneously place a trade directly through an app on a smart phone and, instead of a recommendation delivered by a human, they may receive push notifications potentially designed to affect trading

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<sup>19</sup> See Interpretation on Use of Electronic Media, Investment Company Act Release No. 24426 (Apr. 28, 2000) [65 FR 25843 (May 4, 2000)], at section I; see also Investment Adviser Marketing, Investment Advisers Act No. 5653 (Dec. 22, 2020) [86 FR 13024 (Mar. 5, 2021)], at section I (“Investment Adviser Marketing Release”) (noting that the rules are “designed to accommodate the continual evolution and interplay of technology and advice”).

behavior. These technological interactions can be designed to respond to human behavior, for example, sending increased notifications for certain investment products depending on where the person scrolling through investment products pauses on her smartphone. As technology continues to evolve, we believe that firms are likely to increase their reliance on behavioral science frameworks in influencing investor behavior.<sup>20</sup> Investors that previously met in person with their advisers are now able to access computer-generated advice that is delivered rapidly in an app to many investors by, for example, a robo-adviser. Rather than advertising in local newspapers, making cold calls, or relying on referrals, firms are now digitally targeting investors.<sup>21</sup>

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<sup>20</sup> See, e.g., Robert W. Cook, President and CEO of FINRA, *Statement Before the Financial Services Committee U.S. House of Representatives* (May 6, 2021), <https://www.finra.org/media-center/speeches-testimony/statement-financial-services-committee-us-house-representatives> (addressing the “recent trends of retail trading platforms is the use of ‘game-like’ and other features that may encourage investor behaviors” and “the growing prevalence of these features”); Margaret Franklin, *Investment Gamification: Not All Cons, Some Important Pros*, Kiplinger (Feb. 20, 2023), <https://www.kiplinger.com/investing/investment-gamification-pros-and-cons> (discussing the use of behavioral techniques and the rising influence of social media, and stating that the gamification “style of trading, ushered in largely by the next generation of investors, is likely here to stay.”). See also James Tierney, *Investment Games*, 72 DUKE L.J. 353, 355 (Nov. 2022) (describing the growth of retail investing and discussing gamification, including how “mobile app developers have innovated in user-interface design to compete with incumbent brokers [by including features such as] intuitive and appealing design, as well as digital engagement practices that encourage interaction with the app and that shape the information users consider in investing.”); Jill E. Fisch, *GameStop and the Reemergence of the Retail Investor*, 102 B.U. L. REV. 1799, 1802 (Oct. 2022) (discussing gamification and the “evidence that retail investment and engagement will both continue and evolve.”); Ernst & Young, *Social investing: behavioral insights for the modern wealth manager* (Apr. 2021), [https://www.ey.com/en\\_us/wealth-asset-management/social-investing-behavioral-insights-for-the-modern-wealth-manager](https://www.ey.com/en_us/wealth-asset-management/social-investing-behavioral-insights-for-the-modern-wealth-manager) (“As firms continue to develop social investing operating models, they can use behavioral science frameworks to better understand how their client segments are influenced by digital design and choice architecture[.]”).

<sup>21</sup> See, e.g., Disclosure Innovations in Advertising and Other Communications with the Public, FINRA Regulatory Notice 19-31 (Sept. 19, 2019), <https://www.finra.org/rules-guidance/notices/19-31>; see also Leslie K. John, Tami Kim, and Kate Barasz, *Ads that Don’t Overstep*, HARVARD BUS. REV. (Jan.- Feb. 2018), <https://hbr.org/2018/01/ads-that-dont-overstep>.

In recent years, we have observed a rapid expansion in firms' reliance on technology and technology-based products and services.<sup>22</sup> The use of technology is now central to how firms provide their products and services to investors.<sup>23</sup> Some firms and investors in financial markets now use new technologies such as AI, machine learning, NLP, and chatbot technologies to make investment decisions and communicate between firms and investors.<sup>24</sup> In addition, existing technologies for data-analytics and data collection continue to improve and find new applications.<sup>25</sup>

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<sup>22</sup> See generally Marc Andreessen, *Why Software Is Eating the World*, Wall St. J. (Aug. 20, 2011), <http://www.wsj.com/articles/SB10001424053111903480904576512250915629460> (discussing, among other things, the transformation of the financial services industry by software over the last 30 years) (“Why Software is Eating the World”); Robo-Advisors and the Fiduciary and Best Interest Standards, *supra* note 12, at 4 (stating that “[o]ver the past decade, robo-advisors, or automated systems for providing financial advice and services, are becoming more and more popular” and discussing estimated growth); Nicole G. Iannarone, *Fintech’s Promises and Perils Computer as Confidant: Digital Investment Advice and the Fiduciary Standard*, 93 Chi.-Kent L. Rev. 141, 141 (2018) (“Automated investment advisers permeate the investment industry. Digital investment advisers are the fastest growing segment of financial technology (FinTech) and are disrupting traditional investment advisory delivery models.”) (citations omitted).

<sup>23</sup> See, e.g., Investment Adviser Marketing Release, *supra* note 19, at section I (“The concerns that motivated the Commission to adopt the advertising and solicitation rules [in 1961 and 1979, respectively] still exist today, but investment adviser marketing has evolved with advances in technology. In the decades since the adoption of both the advertising and solicitation rules, the use of the internet, mobile applications, and social media has become an integral part of business communications. Consumers today often rely on these forms of communication to obtain information, including reviews and referrals, when considering buying goods and services. Advisers and third parties also rely on these same types of outlets to attract and refer potential customers.”); FINRA Investor Education Foundation, *Investors in the United States: The Changing Landscape* (Dec. 2022) <https://www.finrafoundation.org/sites/finrafoundation/files/NFCS-Investor-Report-Changing-Landscape.pdf> (discussing, among others, website and mobile app use for placing trades and use of social media sites for obtaining investment information).

<sup>24</sup> Michael Kearns & Yuriy Nevmyvaka *Machine Learning for Market Microstructure and High Frequency Trading*, HIGH FREQUENCY TRADING - NEW REALITIES FOR TRADERS, MARKETS AND REGULATORS (David Easley, Marcos Lopez de Prado & Maureen O’Hara editors, Risk Books, 2013); see also Christian Thier & Daniel dos Santos Monteiro, *How Much Artificial Intelligence Do Robo-Advisors Really Use?* (Aug. 31, 2022), <https://ssrn.com/abstract=4218181>; Imani Moise, *Bond Investing Gets the Robo-Adviser Treatment*, THE WALL STREET JOURNAL (June 7, 2023), <https://www.wsj.com/articles/buying-bonds-is-hard-heres-a-way-to-let-a-robot-do-it-70a4587b>.

<sup>25</sup> Natasha Lekh & Petr Pátek, *What’s the Future of Web Scraping in 2023?*, APIFY BLOG (Jan. 20, 2023), <https://blog.apify.com/future-of-web-scraping-in-2023/>; Jon Martindale, *Best Apps to Use GPT-4*, DIGITALTRENDS (May 4, 2023), <https://www.digitaltrends.com/computing/best-apps-to-use-gpt-4/>.

## 2. *Current PDA-Like Technology Use and Expected Growth*

Financial market participants currently use AI and machine learning technologies in a variety of ways. For example, algorithmic trading is a widely used application of machine learning in finance, where machine-learning models analyze large datasets and identify patterns and signals to optimize for, predict, guide, forecast, or direct investment-related behaviors or outcomes.<sup>26</sup> Moreover, the advent and growth of services available on certain digital platforms, such as those offered by online brokerages and robo-advisers, have multiplied the opportunities for retail investors, in particular, to invest and trade in securities, and in small amounts through fractional shares.<sup>27</sup> This increased accessibility has been one of the key factors associated with the increase of retail investor participation in U.S. securities markets in recent years.<sup>28</sup> Firms

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<sup>26</sup> See generally Alessio Azzutti, Wolf-Goerge Ringe, H. Siegfried Stiehl, *Machine Learning, Market Manipulation, and Collusion on Capital Markets: Why the “Black Box” Matters*, 43 U. PA. J. INT’L L. 1 (2021), <https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2035&context=jil> (“Machine Learning and Market Manipulation”) (discussing current uses of algorithmic trading and exploring the risks to market integrity in connection with the evolving uses of artificial intelligence in algorithmic trading).

<sup>27</sup> See, e.g., Nolan Schloneger, *A Case for Regulating Gamified Investing*, 56 Ind. L. Rev. 175 (2022) (“Th[e] rise [of investing applications] is largely attributed to zero commission and fractional-share trading.”); John Csiszar, *How Our Approach to Investing Has Changed Forever*, YAHOO! (Mar. 10, 2021), <https://www.yahoo.com/now/approach-investing-changed-forever-190007929.html> (“Fractional share trading is just in its infancy but appears well on its way to changing how consumers approach investing. With fractional share trading, you can invest any dollar amount into stock, even if you don’t have enough to buy a single share. . . . Fractional share investing allows nearly anyone to get involved in the stock market without needing \$100,000 or more to buy a properly diversified portfolio of individual stock names.”). See also Staff Report on Equity and Options Market Structure Conditions in Early 2021 (Oct. 14, 2021), <https://www.sec.gov/files/staff-report-equity-options-market-struction-conditions-early-2021.pdf> (“Some brokers have sought to attract new customers by offering the ability to purchase fractional shares. Fractional shares give investors the ability to purchase less than 1 share of a stock.”). Any staff statements represent the views of the staff. They are not a rule, regulation, or statement of the Commission. Furthermore, the Commission has neither approved nor disapproved their content. These staff statements, like all staff statements, have no legal force or effect: they do not alter or amend applicable law; and they create no new or additional obligations for any person.

<sup>28</sup> See, e.g., Maggie Fitzgerald, *Retail Investors Continue to Jump Into the Stock Market After GameStop Mania*, CNBC (Mar. 10, 2021), <https://www.cnbc.com/2021/03/10/retail-investor-ranks-in-the-stock-market-continue-to-surge.html> (providing year-over-year app download statistics for Robinhood, Webull,

have also expanded their use of technology to include “digital engagement practices” or “DEPs,” such as behavioral prompts, differential marketing, game-like features (commonly referred to as “gamification”), and other design elements or features designed to engage retail investors when using a firm’s digital platforms (e.g., website, portal, app)<sup>29</sup> for services such as trading, robo-advice, and financial education. Our staff has observed that firms use technology to more efficiently develop investment strategies, including by using technology to automate their services, and to analyze the success of specific features and marketing practices at influencing retail investor behavior.<sup>30</sup> Firms may also seek to lower expenses by replacing customer service personnel with chatbots that can address common customer questions, and outsourcing their back office operations to vendors that rely heavily on technology.<sup>31</sup>

The rate at which PDA-like technologies continues to evolve is increasing<sup>32</sup> and firms are exploring and deploying AI-based applications across different functions of their organizations, including customer facing, investment, and operational activities.<sup>33</sup> These PDA-like technologies

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Sofi, Coinbase, TD Ameritrade, Charles Schwab, E-Trade, and Fidelity from 2018-2020, and monthly figures for January and February of 2021); John Gittelsohn, *Schwab Boosts New Trading Accounts 31% After Fees Go to Zero*, Bloomberg (Nov. 14, 2019), <https://www.bloomberg.com/news/articles/2019-11-14/schwab-boosts-brokerage-accounts-by-31-after-fees-cut-to-zero> (noting that Charles Schwab opened 142,000 new trading accounts in October, a 31% jump over September’s pace).

<sup>29</sup> Examples of DEPs include the following: social networking tools; games, streaks and other contests with prizes; points, badges, and leaderboards; notifications; celebrations for trading; visual cues; ideas presented at order placement and other curated lists or features; subscriptions and membership tiers; and chatbots.

<sup>30</sup> See, e.g., SEC Investor Bulletin: Robo-Advisers (Feb. 23, 2017), [https://www.sec.gov/oiea/investor-alerts-bulletins/ib\\_robo-advisers](https://www.sec.gov/oiea/investor-alerts-bulletins/ib_robo-advisers) (discussing automated digital investment advisory programs); see also FINRA AI Report, *supra* note 9 (discussing three areas where broker-dealers are evaluating or using AI in the securities industry: communications with customers, investment processes, and operational functions).

<sup>31</sup> See, e.g., *SS&C Gets Automation Rolling with 180 ‘Digital Workers’*, Ignites (Feb. 9, 2023), [https://www.ignites.com/c/3928224/508304?referrer\\_module=searchSubFromIG&highlight=SS&C](https://www.ignites.com/c/3928224/508304?referrer_module=searchSubFromIG&highlight=SS&C).

<sup>32</sup> See, e.g., Robin Feldman and Kara Stein, *AI Governance in the Financial Industry*, 27 STAN. J.L. BUS. & FIN. 94, 122 (2022) (describing AI as “a technology that is rapidly evolving and capable of learning.”).

<sup>33</sup> See, e.g., Merav Ozair, *FinanceGPT: The Next Generation of AI-Powered Robo Advisors and Chatbots* (June 27, 2023), <https://www.nasdaq.com/articles/financegpt-the-next-generation-of-ai-powered-robo-advisors-and-chatbots> (describing current uses and development) (“FinanceGPT”).



are complex and may include several categories of machine learning<sup>34</sup> algorithms, such as deep learning,<sup>35</sup> supervised learning,<sup>36</sup> unsupervised learning,<sup>37</sup> and reinforcement learning<sup>38</sup> processes.<sup>39</sup> In the past few years, these PDA-like technologies have made increasing use of natural language processing and natural language generation.<sup>40</sup> For example, AI has revolutionized chatbots by enabling them to understand and respond to natural language more accurately and learn and improve responses over time, leading to more personalized interactions with users. Recently, a new wave of online chatbots has rapidly moved machines using AI into new territory.<sup>41</sup> Some of these chatbots have passed what is known as the “Turing test” and have

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<sup>34</sup> FINRA described “Machine Learning (ML)” as “a field of computer science that uses algorithms to process large amounts of data and learn from it. Unlike traditional rules-based programming, [machine learning] models learn from input data to make predictions or identify meaningful patterns without being explicitly programmed to do so. There are different types of [machine-learning] models, depending on their intended function and structure[.]” *See* FINRA AI Report, *supra* note 9.

<sup>35</sup> FINRA described a “deep learning model” as a model “built on an artificial neural network, in which algorithms process large amounts of unlabeled or unstructured data through multiple layers of learning in a manner inspired by how neural networks function in the brain. These models are typically used when the underlying data is significantly large in volume, obtained from disparate sources, and may have different formats (e.g., text, voice, and video).” *See id.*

<sup>36</sup> FINRA described a “supervised machine learning” as a model that “is trained with labeled input data that correlates to a specified output.... The model is continuously refined to provide more accurate output as additional training data becomes available. After the model has learned from the patterns in the training data, it can then analyze additional data to produce the desired output . . . .” *See id.*

<sup>37</sup> As described by FINRA, in unsupervised machine learning, “the input data is not labeled nor is the output specified. Instead, the models are fed large amounts of raw data and the algorithms are designed to identify any underlying meaningful patterns. The algorithms may cluster similar data but do so without any preconceived notion of the output . . . .” *See id.*

<sup>38</sup> As described by FINRA, in reinforcement learning, “the model learns dynamically to achieve the desired output through trial and error. If the model algorithm performs correctly and achieves the intended output, it is rewarded. Conversely, if it does not produce the desired output, it is penalized. Accordingly, the model learns over time to perform in a way that maximizes the net reward . . . .” *See id.*

<sup>39</sup> *See also* FSB AI Report, *supra* note 9; Treasury RFI, *supra* note 9.

<sup>40</sup> *See, e.g.,* FINRA AI Report, *supra* note 9.

<sup>41</sup> *See* Cade Metz, *How Smart Are the Robots Getting?*, *The New York Times* (Jan. 20, 2023, updated Jan. 25, 2023).

become virtually indistinguishable from humans in particular situations.<sup>42</sup> AI use is increasing year over year and in an array of applications.<sup>43</sup> For instance, some robo-advisers use chatbots and NLP technology for their online platforms to provide investment advice and manage investment portfolios.<sup>44</sup> These platforms may use a combination of AI, machine learning, NLP, and chatbot technologies to provide personalized investment recommendations to customers based on customer risk tolerance and investment goals.

As a result of a growing desire to perform functions remotely and through automated means, the COVID-19 pandemic accelerated the adoption of certain PDA-like technologies.<sup>45</sup> Many expect this momentum to continue, with AI becoming a mainstream technology across many industries, including the financial sector.<sup>46</sup> Organizations, including firms in the securities industry,<sup>47</sup> are using AI in a multitude of ways, including responding to customer inquiries,

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<sup>42</sup> *Id.* The Turing test is a subjective test determined by whether the person interacting with a machine believes that they are interacting with another person. *See id.*

<sup>43</sup> *Embracing the Rapid Pace of AI*, MIT Technology Review Insights (May 19, 2021), <https://www.technologyreview.com/2021/05/19/1025016/embracing-the-rapid-pace-of-ai/>.

<sup>44</sup> *See, e.g.*, FinanceGPT, *supra* note 33 (describing current uses and development).

<sup>45</sup> *See, e.g.*, Joe McKendrick, *AI Adoption Skyrocketed Over the Last 18 Months*, HARVARD BUS. REV. (Sept. 27, 2021), <https://hbr.org/2021/09/ai-adoption-skyrocketed-over-the-last-18-months> (“The [COVID-19] crisis accelerated the adoption of analytics and AI, and this momentum will continue into the 2020s, surveys show. Fifty-two percent of companies accelerated their AI adoption plans because of the Covid crisis, a study by PwC finds. Just about all, 86%, say that AI is becoming a ‘mainstream technology’ at their company in 2021. Harris Poll, working with Appen, found that 55% of companies reported they accelerated their AI strategy in 2020 due to Covid, and 67% expect to further accelerate their AI strategy in 2021.”); KPMG, *Thriving in an AI World: Unlocking the Value of AI Across Seven Key Industries* (May 2021), at 5, <https://advisory.kpmg.us/articles/2021/thriving-in-an-ai-world.html> (“Thriving in an AI World”); Blake Schmidt and Amanda Albright, *AI Is Coming for Wealth Management. Here’s What That Means*, *Bloomberg Markets* (Apr. 21, 2023), <https://www.bloomberg.com/news/articles/2023-04-21/vanguard-fidelity-experts-explain-how-ai-is-changing-wealth-management> (discussing experts views on AI impact on the wealth management industry).

<sup>46</sup> *Id.*

<sup>47</sup> *See* IOSCO, *The use of artificial intelligence and machine learning by market intermediaries and asset managers* (Sept. 2021), at 1 (“IOSCO AI/ML Report”), [iosco.org/library/pubdocs/pdf/IOSCOPD684.pdf](https://iosco.org/library/pubdocs/pdf/IOSCOPD684.pdf) (“Artificial Intelligence (AI) and Machine Learning (ML) are increasingly used in financial services, due to a combination of increased data availability and computing power. The use of AI and ML by market intermediaries and asset managers may be altering firms’ business models.”).

automating back-office processes, quality control,<sup>48</sup> risk management, client identification and monitoring, selection of trading algorithms, and portfolio management.<sup>49</sup> Others are actively developing investment advisory services based on PDA-like technologies.<sup>50</sup> Further, recent advancements in data collection techniques have significantly enhanced the scale and scope of data analytics, and its potential applications. Due to increases in processing power and data storage capacity, a vast amount of data is now available for high-speed analysis using these technologies.<sup>51</sup> Furthermore, the range of data types has also expanded, with consumer shopping histories, media preferences, and online behavior now among the many types of data that data analytics can use to synthesize information, forecast financial outcomes, and predict investor and customer behavior.<sup>52</sup> Consequently, these technologies can be applied in novel and powerful ways which may be subtle, such as using the layout of an app and choice of data presentation and

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<sup>48</sup> See Thriving in an AI World, *supra* note 45; see also FINRA AI Report, *supra* note 9, at 5-10 (noting the use of AI in the securities industry for communications with customers, investment processes, and operational functions); FINRA, *Deep Learning: The Future of the Market Manipulation Surveillance Program* <https://www.finra.org/media-center/finra-unscripted/deep-learning-market-surveillance> (“FINRA’s Market Regulation and Technology teams recently wrapped up an extensive project to migrate the majority of FINRA’s market manipulation surveillance program to using deep learning in what is perhaps the largest application of artificial intelligence in the RegTech space to date.”); Machine Learning and Market Manipulation, *supra* note 26; IOSCO AI/ML Report, *id.*

<sup>49</sup> IOSCO AI/ML Report, *supra* note 47.

<sup>50</sup> See, e.g., Hugh Son, *JPMorgan is developing a ChatGPT-like A.I. service that gives investment advice*, *CNBC* (May 25, 2023), <https://www.cnbc.com/2023/05/25/jpmorgan-develops-ai-investment-advisor.html> (discussing a trademark application filed by JPMorgan for a product called IndexGPT that will utilize “cloud computing software using artificial intelligence” for “analyzing and selecting securities tailored to customer needs[.]”).

<sup>51</sup> See, e.g., Dimitris Andriosopoulos et al., *Computational Approaches and Data Analytics in Financial Services: A Literature Review*, 70 *J. OPERATIONAL RSCH. SOC.* 1581 (2019), <https://doi.org/10.1080/01605682.2019.1595193>; James Lawler & Anthony Joseph, *Big Data Analytics Methodology in the Financial Industry*, 15 *INFO. SYS. ED. J.* 38 (July 2017), <https://isedj.org/2017-15/n4/ISEDJv15n4p38.html>.

<sup>52</sup> Daniel Broby, *The Use of Predictive Analytics in Finance*, 8 *J. FIN & DATA SCI.* 145 (Nov. 2022), <https://doi.org/10.1016/j.jfds.2022.05.003>; OECD, *Artificial Intelligence, Machine Learning and Big Data in Finance: Opportunities, Challenges, and Implications for Policy Makers* (2021), <https://www.oecd.org/finance/financial-markets/Artificial-intelligence-machine-learning-big-data-in-finance.pdf>.

formatting to influence trading decisions.<sup>53</sup> Some trading apps use PDA and AI/machine learning along with detailed user data to increase user engagement and trading activity.<sup>54</sup>

Any risks of conflicts of interest associated with AI use will expand as firms' use of AI grows. These risks will have broad consequences if AI makes decisions that favor the firms' interests and then rapidly deploys that information to investors, potentially on a large scale.<sup>55</sup> Firms' nascent use of AI may already be exposing investors to these types of risks as well as others.<sup>56</sup> We are concerned that firms will intentionally or unintentionally take their own interest into account in the data or software underlying the applicable AI, as well as the applicable PDA-like technologies, resulting in investor harm. Among other things, a firm may use these technologies to optimize for the firm's revenue or to generate behavioral prompts or social

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<sup>53</sup> See, e.g., Sayan Chaudhury and Chinmay Kulkarni, *Design Patterns of Investing Apps and Their Effects on Investing Behaviors* (2021) ("Chaudhury & Kulkarni"), [dl.acm.org/doi/fullHtml/10.1145/3461778.3462008](https://dl.acm.org/doi/fullHtml/10.1145/3461778.3462008) ("investing apps can be considered as technical and social choice architectures that influence investing behavior").

<sup>54</sup> See, e.g., Alex McFarland, *10 "Best" AI Stock Trading Bots*, Unite.AI (June 4, 2023), <https://www.unite.ai/stock-trading-bots/>.

<sup>55</sup> See, e.g., Robo-Advisors and the Fiduciary and Best Interest Standards, *supra* note 12 (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."). See also AI in Asset Management, *supra* note 14 ("AI can make wrong decisions based on incorrect inferences that have captured spurious or irrelevant patterns in the data. For example, ANNs [artificial neural networks] that are trained to pick stocks with high expected returns might select illiquid, distressed stocks."); FINRA AI Report, *supra* note 9, at 11-19 (noting that the use of AI "raises several concerns that may be wide-ranging across various industries as well as some specific to the securities industry. Over the past few years, there have been numerous incidents reported about AI applications that may have been fraudulent, nefarious, discriminatory, or unfair, highlighting the issue of ethics in AI applications."); FINRA AI Report, *supra* note 9, at 13 ("Depending on the use case, data scarcity may limit the model's analysis and outcomes, and could produce results that may be narrow and irrelevant. On the other hand, incorporating data from many different sources may introduce newer risks if the data is not tested and validated, particularly if new data points fall outside of the dataset used to train the model.").

<sup>56</sup> See, e.g., FINRA AI Report, *supra* note 9, at 5 ("The use of AI-based applications is proliferating in the securities industry[.]"); 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, at 26 (2021) ("robo-advisors can be, and often are, intentionally programmed to favor the institution by making recommendations that favor the institution's products, rebalance client portfolios in ways which will allow the institution to earn more fees, and otherwise make recommendations that benefit the firm").

engineering to change investor behavior in a manner that benefits the firm but is to the detriment of the investor.

### **3. *Commission Protection of Investors as Technology Has Evolved***

As noted above, firms' use of technology and subsequent adaptation incorporating emerging technologies are not new.<sup>57</sup> At the same time, the Commission has addressed firms' relationships with investors in a variety of ways to ensure investor protection as use of technology in those relationships has evolved over time.<sup>58</sup> The proposal, thus, is consistent with the Commission's practice of evolving our regulation in light of market and technological developments.

Broker-dealers and investment advisers are currently subject to extensive obligations under Federal securities laws and regulations, and, in the case of broker-dealers, rules of self-regulatory organizations,<sup>59</sup> that are designed to promote conduct that, among other things, protects investors, including protecting investors from conflicts of interest.<sup>60</sup> To the extent PDA-

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<sup>57</sup> See *supra* section I.B.2.

<sup>58</sup> See *infra* note 114.

<sup>59</sup> Any person operating as a "broker" or "dealer" in the U.S. securities markets must register with the Commission, absent an exception or exemption. See Exchange Act section 15(a), 15 U.S.C. 78o(a); see also Exchange Act sections 3(a)(4) and 3(a)(5), 15 U.S.C. 78c(a)(4) and 78c(a)(5) (definitions of "broker" and "dealer," respectively). Generally, all registered broker-dealers that deal with the public must become members of FINRA, a registered national securities association, unless the broker or dealer effects transactions in securities solely on an exchange of which it is a member. See Exchange Act section 15(b)(8), 15 U.S.C. 78o(b)(8); see also 17 CFR 240.15b9-1 (providing an exemption from Section 15(b)(8)). FINRA is the sole national securities association registered with the SEC under Section 15A of the Exchange Act. Because this release is focused on broker-dealers that deal with the public and are FINRA member firms (unless an exception applies), we refer to FINRA rules as broadly applying to "broker-dealers," rather than to "FINRA member firms."

<sup>60</sup> See *infra* section III.C.3; Fiduciary Interpretation, *supra* note 8, at section II.C. ("The duty of loyalty requires that an adviser not subordinate its clients' interests to its own."); see also Reg BI Adopting Release, *supra* note 8, at section II.A.1. (The "without placing the financial or other interest . . . ahead of

like technologies are used in investor interactions that are subject to existing obligations, those obligations apply. These obligations include, but are not limited to, obligations related to investment advice and recommendations;<sup>61</sup> general and specific requirements aimed at addressing certain conflicts of interest, including requirements to eliminate, mitigate, or disclose certain conflicts of interest; disclosure of firms’ services, fees, and costs; disclosure of certain business practices, advertising, communications with the public (including the use of “investment analysis tools”); supervision; and obligations related to policies and procedures.<sup>62</sup> In addition to these obligations, Federal securities laws and regulations broadly prohibit fraud by broker-dealers and investment advisers as well as fraud by any person in the offer, purchase, or sale of securities, or in connection with the purchase or sale of securities.

The Commission has long acted to protect investors against the harm that can come when a firm acts on its conflicts of interest.<sup>63</sup> For example, the Commission has brought enforcement

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the interest of the retail customer” phrasing recognizes that while a broker-dealer will inevitably have some financial interest in a recommendation—the nature and magnitude of which will vary—the broker-dealer’s interests cannot be placed ahead of the retail customer’s interest”). Additionally, broker-dealers often provide a range of services that do not involve a recommendation to a retail customer—which is required in order for Reg BI to apply—and those services are subject to general and specific requirements to address associated conflicts of interest under the Exchange Act, Securities Act of 1933, and relevant self-regulatory organization (“SRO”) rules as applicable. *See also* FINRA Report on Conflicts of Interest (Oct. 2013), at Appendix I (Conflicts Regulation in the United States and Selected International Jurisdictions) (“FINRA Conflict Report”), <https://www.finra.org/sites/default/files/Industry/p359971.pdf> (describing broad obligations under SEC and FINRA rules as well as specific conflicts-related disclosure requirements under FINRA rules).

<sup>61</sup> *See, e.g.*, 17 CFR 240.151-1(a)(1) (“Exchange Act rule 151-1(a)(1)”) (requiring broker-dealers and their associated persons to act in the best interest of retail customers when making recommendations, without placing the financial or other interest of the broker-dealer or its associated person ahead of the interest of the retail customer).

<sup>62</sup> Compliance with the proposed conflicts rules would not alter a broker-dealer’s or investment adviser’s existing obligations under the Federal securities laws. The proposed conflicts rules would apply in addition to any other obligations under the Exchange Act and Advisers Act, along with any rules the Commission may adopt thereunder, and any other applicable provisions of the Federal securities laws and related rules and regulations.

<sup>63</sup> *See infra* section III.C.

actions regarding an investment adviser’s fiduciary duty to its clients with respect to conflicts of interest.<sup>64</sup> Similarly, the Commission has reinforced fraud protection for investors in pooled investment vehicles against conflicts of interest through rule 206(4)-8.<sup>65</sup> The Commission regulates investment adviser advertising and marketing practices to protect against, among others, adviser conflicts of interest that may taint such marketing, including through recent amendments adapting those protections in light of the evolution of practices and technologies.<sup>66</sup>

Likewise, broker-dealers have long been subject to Commission and SRO regulations and rules that govern their business conduct, including general and specific obligations to address conflicts of interest.<sup>67</sup> For example, under existing antifraud provisions of the Exchange Act, a

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<sup>64</sup> See, e.g., SEC Press Release, SEC Share Class Initiative Returning More Than \$125 Million to Investors: Reflecting SEC’s Commitment to Retail Investors, 79 Investment Advisers Who Self-Reported Advisers Act Violations Agree to Compensate Investors Promptly, Ensure Adequate Fee Disclosures (Mar. 11, 2019), <https://www.sec.gov/news/press-release/2019-28> (describing settled orders against 79 investment advisers finding that the settling investment advisers placed their clients in mutual fund share classes that charged 12b-1 fees when lower-cost share classes of the same fund were available to their clients without adequately disclosing that the higher cost share class would be selected; according to the SEC’s orders, the 12b-1 fees were routinely paid to the investment advisers in their capacity as brokers, to their broker-dealer affiliates, or to their personnel who were also registered representatives, creating a conflict of interest with their clients, as the investment advisers stood to benefit from the clients’ paying higher fees); *SEC v. Sergei Polevikov, et al.*, Litigation Release No. 25475 (Aug. 17, 2022) (settled order) (final judgment against employee working as a quantitative analyst at two asset management firms “for perpetrating a front-running scheme that generated profits of approximately \$8.5 million”); SEC Brings Settled Actions Charging Cherry-Picking and Compliance Failures, Adm. Proc. File No. 3-20955 (Aug 10, 2022) (settled order) (alleged multi-year cherry-picking scheme of former investment adviser representative of registered investment adviser preferentially allocating profitable trades or failing to allocate unprofitable trades to a adviser’s personal accounts at the expense of the advisers client accounts).

<sup>65</sup> 17 CFR 275.206(4)-8; see, e.g., In re. Virtua Capital Management, LLC, et al., Advisers Act Release No. 6033 (May 23, 2022) (allegedly failing to disclose conflicts of interest and associated fees, and breaching fiduciary duty to multiple private investment funds) (settled order).

<sup>66</sup> See Investment Adviser Marketing Release, *supra* note 19, at section I (“The concerns that motivated the Commission to adopt the advertising and solicitation rules [in 1961 and 1979, respectively] still exist today, but investment adviser marketing has evolved with advances in technology. In the decades since the adoption of both the advertising and solicitation rules, the use of the internet, mobile applications, and social media has become an integral part of business communications. Consumers today often rely on these forms of communication to obtain information, including reviews and referrals, when considering buying goods and services. Advisers and third parties also rely on these same types of outlets to attract and refer potential customers.”).

<sup>67</sup> See *infra* section III.C.3

broker-dealer has a duty to disclose material adverse information to its customers.<sup>68</sup> Indeed, the Commission has enforced a broker-dealer’s duty to disclose material conflicts of interest under the antifraud provisions.<sup>69</sup> Broker-dealers are subject to specific FINRA rules aimed at addressing certain conflicts of interest.<sup>70</sup> Moreover, in 2019 the Commission adopted Regulation Best Interest (“Reg BI”), which was designed to enhance the quality of broker-dealer recommendations to retail customers and reduce the potential harm to retail customers that may be caused by conflicts of interest,<sup>71</sup> by requiring broker-dealers that make recommendations to retail customers to, among other things, establish, maintain, and enforce policies and procedures reasonably designed to identify and disclose, mitigate, or eliminate, conflicts associated with a recommendation, including conflicts of interest that may result through the use of PDA-like technology to make recommendations (Reg BI’s “Conflict of Interest Obligation”).<sup>72</sup>

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<sup>68</sup> A broker-dealer may be liable if it does not disclose “material adverse facts of which it is aware.” *See, e.g., Chasins v. Smith, Barney & Co.*, 438 F.2d 1167, 1172 (2nd Cir. 1970); *SEC v. Hasho*, 784 F. Supp. 1059, 1110 (S.D.N.Y. 1992); In the Matter of RichMark Capital Corp., Exchange Act Release No. 48758 (Nov. 7, 2003) (Commission Opinion) (“When a securities dealer recommends stock to a customer, it is not only obligated to avoid affirmative misstatements, but also must disclose material adverse facts of which it is aware. That includes disclosure of ‘adverse interests’ such as ‘economic self-interest’ that could have influenced its recommendation.”) (citations omitted).

<sup>69</sup> *See, e.g.,* In re. Edward D. Jones & Co, Securities Act Release No. 8520 (Dec. 22, 2004) (settled order) (broker-dealer violated antifraud provisions of Securities Act and Exchange Act by failing to disclose conflicts of interest arising from receipt of revenue sharing, directed brokerage payments and other payments from “preferred” families that were exclusively promoted by broker-dealer); In re. Morgan Stanley DW Inc., Securities Act Release No. 8339 (Nov. 17, 2003) (settled order) (broker-dealer violated antifraud provisions of Securities Act by failing to disclose special promotion of funds from families that paid revenue sharing and portfolio brokerage).

<sup>70</sup> FINRA rules establish restrictions on the use of non-cash compensation in connection with the sale and distribution of mutual funds, variable annuities, direct participation program securities, public offerings of debt and equity securities, investment company securities, real estate investment trust programs, and the use of non-cash compensation to influence or reward employees of others. *See* FINRA Rules 2310, 2320, 2331, 2341, 5110, and 3220. These rules generally limit the manner in which members can pay or accept non-cash compensation and detail the types of non-cash compensation that are permissible.

<sup>71</sup> *See* Reg BI Adopting Release *supra* note 8, at text accompanying n.21.

<sup>72</sup> 17 CFR 240.151-1(a)(2)(iii) (“Exchange Act rule 151-1(a)(2)(iii)”).



The Commission has and will continue to bring enforcement actions for violations of the Federal securities laws that entail the use of PDA-like technologies. However, the rapid acceleration of PDA-like technologies and their adoption in the investment industry,<sup>73</sup> the additional challenges associated with identifying and addressing conflicts of interest resulting from the use of these new technologies, and the concerns relating to scalability, discussed above, reinforce the importance of ensuring our regulatory regime specifically addresses these issues. In particular, disclosure may be ineffective in light of, as discussed above, the rate of investor interactions, the size of the datasets, the complexity of the algorithms on which the PDA-like technology is based, and the ability of the technology to learn investor preferences or behavior, which could entail providing disclosure that is lengthy, highly technical, and variable, which could cause investors difficulty in understanding the disclosure.

In light of these concerns, and the harm to investors that can result when firms act on conflicts of interest, we are proposing rules to address conflicts of interest associated with a firm's use of PDA-like technologies when interacting with investors that are contrary to the public interest and the protection of investors. In particular, the recent and rapid expansion of PDA-like technologies in the context of investment-related activities, without specific oversight obligations tailored to the specific risks involved in their use, can lead to outcomes that financially benefit firms at the expense of investors. Such a harm to investors might include the use of PDA-like technologies that prompt investors to enroll in products or services that

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<sup>73</sup> See, e.g., Amy Caiazza, Rob Rosenblum, and Danielle Sartain, *Investment Advisers' Fiduciary Duties: The Use of Artificial Intelligence*, Harvard Law School Forum on Corporate Governance (June 11, 2020), <https://corpgov.law.harvard.edu/2020/06/11/investment-advisers-fiduciary-duties-the-use-of-artificial-intelligence/> (“Artificial intelligence (AI) is an increasingly important technology within the investment management industry.”); FINRA AI Report, *supra* note 9, at 5 (“The use of AI-based applications is proliferating in the securities industry and transforming various functions within broker-dealers.”).

financially benefit the firm but may not be consistent with their investment goals or risk tolerance, encourage investors to enter into more frequent trades or employ riskier trading strategies (e.g., margin trading) that will increase the firm’s profit at the investors’ expense, or inappropriately steer investors toward complex and risky securities products inconsistent with investors’ investment objectives or risk profiles that result in harm to investors but that financially benefit the firm. Due to the inherent complexity and opacity of these technologies as well as their potential for scaling, we are proposing that such conflicts of interest should be eliminated or their effects should be neutralized, rather than handled by other methods of addressing the conflicts, such as through disclosure and consent. Moreover, many of these technologies provide means—for example, A/B testing<sup>74</sup>—to empirically assess the conflicts’ impact and thus to neutralize the effect of a conflict on investors. Further, reliance on scalable, complex, and opaque PDA-like technologies can result in operational challenges or shortcomings. For example, failure to identify and address conflicts that may be present in the PDA-like technology used to steer investors toward a product or service could result in a firm’s failure to identify the risks to investors of certain investing behaviors that place the firm’s interest ahead of investors’ interest as well as inadequate compliance policies and procedures that would assist the firm in curbing these practices. As a consequence, this could result in the failure to take sufficient steps to address the potentially harmful effect of those conflicts.<sup>75</sup> For

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<sup>74</sup> A/B testing refers to running a learning model on two different datasets with a single change between the two, which can help identify causal relationships and, through understanding how changes affect outcomes, gain a better understanding of the functionality of a model. *See* Seldon, A/B Testing for Machine Learning (July 7, 2021) (“Seldon”), <https://www.seldon.io/a-b-testing-for-machine-learning>.

<sup>75</sup> *See, e.g.*, William Shaw and Aisha S. Gani, *Wall Street Banks Seizing AI to Rewire the World of Finance*, Financial Review (June 1, 2023) (in discussing fiduciary duty obligation when using AI in finance quoting a law firm partner as saying: “How do you demonstrate to investors and regulators that you’ve done your duty when you’ve used an output without really knowing what the inputs are?”).

these additional reasons, we are proposing that such conflicts of interest be eliminated or their effects be neutralized, rather than handled by other methods of addressing the conflicts, such as through disclosure and consent.

#### **4. Use of Predictive Data Technologies in Investor Interactions**

Firms may use PDA-like technologies to transform user interfaces and the interactions that investors have on digital platforms.<sup>76</sup> For example, firms may collect data from a variety of internal sources (*e.g.*, trading desks, customer account histories, and communications) and external sources (*e.g.*, public filings, social media platforms, and satellite images) in both structured and unstructured formats,<sup>77</sup> enabling them to develop an understanding of investor preferences and adapt the interface and related prompts to appeal to those preferences. Firms may use these tools to increase the quantity of information used to support investment ideas,<sup>78</sup> leverage investor data to send targeted questionnaires to investors regarding evolving investment goals, identify which investors might be open to a new investment product, or identify which investors are most likely to stop using a firm's services.<sup>79</sup> We are concerned, however, that a firm's use of PDA-like technologies when engaging or communicating with—including by providing information to, providing recommendations or advice to, or soliciting—a prospective or current investor could take into consideration the firm's interest in a manner that places its

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<sup>76</sup> See, *e.g.*, FSB AI Report, *supra* note 9, at 14-15 (chatbots are being introduced by a range of financial services firms, often in mobile apps or social media, and chatbots are “increasingly moving toward giving advice and prompting customers to act”).

<sup>77</sup> See FINRA AI Report, *supra* note 9, at 4.

<sup>78</sup> See Deloitte, *Artificial intelligence: The next frontier for investment management firms* (Feb. 5, 2019), <https://www.deloitte.com/global/en/Industries/financial-services/perspectives/ai-next-frontier-in-investment-management.html>.

<sup>79</sup> See Ryan W. Neal, *Three Firms Where Artificial Intelligence is Helping with Financial Planning* (Jan. 17, 2020), <https://www.investmentnews.com/artificial-intelligence-advisers-176541> (describing current uses of AI and their potential application to broker-dealers and investment advisers).

interests ahead of investors' interests and thus harm investors.<sup>80</sup> For example, some members of the public have expressed concern that firms' use of these PDA-like technologies encourages practices that are profitable for the firm but may increase investors' costs, undermine investors' performance, or expose investors to unnecessary risks based on their individual investment profile, such as: (i) excessive trading,<sup>81</sup> (ii) using trading strategies that carry additional risk (e.g., options trading and trading on margin), and (iii) trading in complex securities products that are more remunerative to the firm but pose undue risk to the investor.<sup>82</sup>

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<sup>80</sup> While the proposed rules apply more broadly to the use of covered technology in investor interactions, as discussed below, firms using covered technology to provide advice or make recommendations are subject to standards of conduct, among other regulatory obligations, that already apply to such advice or recommendations. *See infra* section III.C.3. The proposed conflicts rules would apply in addition to these standards of conduct and other regulatory obligations.

<sup>81</sup> *See, e.g.*, Comment Letter from Pace Investor Rights Clinic (Oct. 1, 2021) ("Pace University Letter") ("DEPs can lead investors to trade more frequently and more often than is in their best interest. For example, the push notification feature provides investors with live price updates. This intentionally prompts investors to check their portfolios after receiving the notification, which can lead them to make additional trades or spend more time on the platform than they would have otherwise. Traditionally, the goal of investing for most retail investors is to save for the long term. Frequently checking their portfolio may cause investors to make decisions not in line with the goal of long-term saving and generational wealth building."). *See also, e.g.*, Feedback Flyer Response of Lincoln Li on S7-10-21 (Aug. 27, 2021) ("I started half a decade ago following value investing practices. However, [online investment and trading apps], that I used for a short time got me into day trading and speculation more frequently. I ended up stopping using these apps because they took up so much time with little gain. I spent more time long term trading based off of proper market factors and evaluation. There's a big concern to me, especially as a professional game designer, as to how gamification in life impacting subjects can have negative impact on society, culture and personal finances. I have friends who got into technical trading and day trading due to these apps, who talk more like gamblers than actual investors. It sets a very poor precedent for this industry and behavior."); Feedback Flyer Response of Richard Green on S7-10-21 (Sept. 25, 2021) (responding to a question about online trading and investment platforms: "[m]y broker rewards referrals by offering free stocks for each referral. I think this pulls new investors into trading, which makes a lot of money for the broker, as newer investors are more likely to trade too frequently or make mistakes."); Feedback Flyer Response of Joseph on S7-10-21 (Aug. 28, 2021) ("[A trading app's] user interface is set up in a way to subconsciously influence retail traders to trade more frequently and engage in riskier investment products (options) than the average amount.").

<sup>82</sup> In Congressional hearings related to market events in January 2021, investor protection concerns were identified relating to the use of certain types of DEPs, including advertisements targeted towards specific groups of investors on digital platforms and game-like features on mobile apps. *See Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide: Hearing Before the H.*

In some cases, the use of PDA-like technologies to place a firm’s interests ahead of investors’ interests could reflect an intentional design choice.<sup>83</sup> In other cases, however, the actions that place a firm’s interests ahead of the interest of investors may instead reflect the firm’s failure to fully understand the effects of its use of PDA-like technologies or to provide appropriate oversight of its use of such technologies.<sup>84</sup> For example, AI and other similar technology are only as good as the data upon which it is based. Corrupted or mislabeled data, biased data, or data from unknown sources, can undermine data quality, leading to skewed outcomes with opaque biases as well as unintended failures.<sup>85</sup>

While the risk of poor data quality or skewed data is not unique to AI, the ability of PDA-like technologies used in investor interactions to process data more quickly than humans, and the potential for technology to disseminate the resulting communications to a mass market, can

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Comm. on Fin. Servs., 113<sup>th</sup> Cong. (2021), <https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=407107>; Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide, Part II: Hearing Before the H. Comm. on Fin. Servs., 113<sup>th</sup> Cong. (2021), <https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=406268>; Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide, Part III: Hearing Before the H. Comm. on Fin. Servs., 113<sup>th</sup> Cong. (2021), <https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=407748>; Who Wins on Wall Street? GameStop, Robinhood, and the State of Retail Investing: Hearing Before the S. Comm. On Banking, Hous., & Urban Affairs, 113<sup>th</sup> Cong. (2021), <https://www.banking.senate.gov/hearings/who-wins-on-wall-street-gamestop-robinhoodand-the-state-of-retail-investing>.

<sup>83</sup> See, e.g., Megan Ji, Note, *Are Robots Good Fiduciaries? Regulating Robo-Advisors Under the Investment Advisers Act of 1940*, 117 COLUM. L. REV. 1543, 1580 (Oct. 2017) (recommending that the Commission adopt regulations in which “robo-advisors, in their disclosures, clearly delineate between conflicts that are programmed into their algorithms and conflicts that may affect the design of algorithms.”).

<sup>84</sup> See Catherine Thorbecke, *Plagued with errors: A news outlet’s decision to write stories with AI backfires*, CNN (Jan. 23, 2023), <https://www.cnn.com/2023/01/25/tech/cnet-ai-tool-news-stories/index.html>.

<sup>85</sup> See e.g., Regulation Systems Compliance and Integrity, Release No. 34-97143 (Mar. 15, 2023) [88 FR 23146 (Apr. 14, 2023)] (describing the potential market impact of a corrupted data security-based swap data repository). See also National Institute of Science and Technology Special Publication 1270, *Towards a Standard for Identifying and Managing Bias in Artificial Intelligence* (Mar. 2022), at section 3.1 (describing dataset challenges resulting in AI bias, discrimination, and systematic gaps in performance); Thor Olavsrud, *7 famous analytics and AI disasters* (Apr. 15, 2022), <https://www.cio.com/article/190888/5-famous-analytics-and-ai-disasters.html>.

quickly magnify conflicts of interest and any resulting negative effects on investors. Moreover, erroneous data considered by a firm’s algorithm could have the effect of optimizing for the firm’s interest over investors’ interest by, for example, relying on outdated, previously higher cost information of investment options sponsored by other firms but relying on updated, lower cost information of identical investment options sponsored by the firm. This could result in a recommendation, advice, or other investor interaction that favors the firm’s sponsored products and creates a conflict, regardless of whether the firm intentionally developed the algorithm to optimize for its interest.<sup>86</sup> Poor data quality or skewed data could not only limit the learning capability of an AI or machine learning system but could also potentially negatively impact how it makes inferences and decisions in the future,<sup>87</sup> giving rise to erroneous or poor predictions, resulting in a failure to achieve the system’s intended objectives,<sup>88</sup> and benefiting the firm over investors (whether intentionally or unintentionally).

We have observed instances where conflicts of interest associated with a firm’s use of PDA-like technologies have resulted in harm to investors. A recent enforcement action involved allegations that an adviser marketed that its “no fee” robo-adviser portfolios were determined through a “disciplined portfolio construction methodology” when they allegedly were pre-set to hold a certain percent of assets in cash because the adviser’s affiliate was guaranteed a certain amount of revenue at these levels. The adviser allegedly did not disclose its conflict of interest in

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<sup>86</sup> In this example, it is also possible that erroneous data could result in the reverse effect, generating a recommendation in favor of a non-sponsored product when the firm’s sponsored product may be more cost-effective. This would not result in a conflict under the proposed rules but would nonetheless be subject to firms’ obligations under their respective regulatory regimes, including the applicable standard of conduct.

<sup>87</sup> See Artificial Intelligence/Machine Learning Risk & Security Working Group (AIRS), *Artificial Intelligence Risk & Governance*, at 2.1.1 (accessed Apr. 18, 2023) (“AIRS White Paper”), <https://aiab.wharton.upenn.edu/research/artificial-intelligence-risk-governance/>.

<sup>88</sup> *Id.*

setting the cash allocations; that this conflict resulted in higher cash allocations, which could negatively impact performance in a rising market; and that the cash allocations were higher than other services because clients did not pay a fee.<sup>89</sup> While the focus of that action was on the alleged disclosure failure, it also highlights the potential for PDA-like technologies to be used in ways that advance a firm’s interests at the expense of its investors’ interests. The proposed conflicts rules would require a firm to analyze its investor interactions that use PDA-like technology for the types of conflicts of interest that were at issue in that action in order to determine whether the investor interaction places the firm’s interests ahead of its investors’ interests and, if so, eliminate, or neutralize the effect of, the conflicts of interest on investors. In addition, the Commission’s 2021 Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches (“Request”)<sup>90</sup> solicited comments related to conflicts of interest, among other areas.<sup>91</sup> In response, the Commission received comments reflecting perceived conflicts of interest related to the use of online investing and trading applications, which some commenters indicated undermine their faith in the fairness of the markets.<sup>92</sup>

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<sup>89</sup> In re. Charles Schwab & Co., Inc., et al., Exchange Act Release No. 95087 (June 13, 2022) (settled order).

<sup>90</sup> See Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches, Exchange Act Release No. 92766 (Aug. 27, 2021) [86 FR 49067 (Sept. 1, 2021)].

<sup>91</sup> See *id.*, questions 1.26, 2.6, 3.5, 3.16, and 4.15. For additional discussion regarding the Request, see *infra* section I.B.5

<sup>92</sup> See, e.g., Feedback Flyer Response of Tomas Liutvinas on S7-10-21 (Aug. 28, 2021) (“It seems like there is no conflict of interest regulations in the US financial system. This makes me uneasy. Until the rights are fully explained, reported, and undone I will recommend to anyone I know to stay away from US markets. For myself, I’ve invested in a certain position with plans to leave the investment for the future generations of my family, to hold on hopefully up to a point when markets will be made transparent and fair.”); Feedback Flyer Response of Jasper Pummell on S7-10-21 (Aug. 28, 2021) (“I believe that online

Failures to appropriately oversee these PDA-like technologies compound the risk that conflicts of interest may not be appropriately identified or managed. Due to the complexity and opacity of certain technologies, firms should have robust practices to appropriately oversee and understand their use and take steps to identify and appropriately address any associated conflicts of interest. For example, without appropriate personnel, a firm may not have the ability to modify the software or may lack the expertise to understand, monitor, or appropriately update code, limiting the firm’s ability to identify and appropriately address associated conflicts of interest. Furthermore, if the firm does not understand how the technology operates—including whether it takes into consideration the firm’s interest and how it can influence investor conduct—the firm may not fully understand whether, how, or the extent to which it is placing the firm’s interests ahead of investors’ interests. As a result of the complexity and opacity of PDA-like technologies, a firm needs different and specific practices to evaluate its use of the technology and recognize the risk of conflicts presented by that use compared to other practices. Without appropriate oversight and understanding of the conflicts of interest that could be

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brokerages have a conflict of interest and financial regulation is needed to ensure that the markets are a safe place for retail traders.”); Feedback Flyer Response of Robert on S7-10-21 (Aug. 27, 2021) (“Retail needs a fair and transparent market. There are blatant [sic] conflicts of interest in the market which should be rectified immediately. Failure to do so will have a mass exodus of investors from the US stock market.”). *See also* FINRA AI Report, *supra* note 9, at 11 (“However, use of AI also raises several concerns that may be wide-ranging across various industries as well as some specific to the securities industry. Over the past few years, there have been numerous incidents reported about AI applications that may have been fraudulent, nefarious, discriminatory, or unfair, highlighting the issue of ethics in AI applications.”). *But see, e.g.*, Comment Letter from David Dusseault, President, Robinhood Financial, LLC (Oct. 1, 2021) (“Robinhood Letter”) (stating that conflicts of interest are not new to the financial industry and that the regulatory frameworks established by the SEC, such as Reg BI and the disclosure requirements of the Investment Advisers Act of 1940, rest on the principle that conflicts of interest exist, but investors are able to navigate them when they are adequately disclosed); Comment Letter from Investment Adviser Association (Oct. 1, 2021) (“IAA Letter”); Comment Letter from Kevin M. Carroll, Managing Director and Associate General Counsel, Securities Industry and Financial Markets Association (Oct. 1, 2021) (“SIFMA Letter”) (generally opposing new rules, guidance, or interpretations to address the use of digital engagement practices). These comments are all available in the comment file at <https://www.sec.gov/comments/s7-10-21/s71021.htm>.



amplified when the technology is incorporated into investor-facing interactions, such as design elements, features, or communications that nudge or prompt certain or more immediate action by an investor, investor harm can result.

## **5. *Request for Information and Comment***

In August 2021, the Commission issued a request for information and public comment on the use of DEPs by broker-dealers and investment advisers, as well as the analytical and technological tools and methods used in connection with these DEPs.<sup>93</sup> For purposes of the Request, the Commission defined DEPs broadly to include behavioral prompts, differential marketing, game-like features, and other design elements or features designed to engage retail investors.<sup>94</sup> The Commission stated that DEPs may be designed to encourage account opening, account funding and trading, or may be designed solely to increase investor engagement with investing apps, as there may be value in the number of investors interacting with the platform, how often they visit, and how long they stay.<sup>95</sup> The Request was issued in part to assist the Commission and its staff in better understanding the market practices associated with the use of DEPs by firms, facilitate an assessment of existing regulations and consideration of whether regulatory action may be needed to further the Commission's mission in connection with firms' use of DEPs, as well as to provide a forum for market participants (including investors), and other interested parties to share their perspectives on the use of DEPs and the related tools and

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<sup>93</sup> See Request, *supra* note 90.

<sup>94</sup> See *id.* at 49067.

<sup>95</sup> See *id.* at 49069.

methods, including potential benefits that DEPs provide to retail investors, as well as potential investor protection concerns.<sup>96</sup>

The Commission received over 2,300 public comments, including submissions provided through an online “feedback flyer” that accompanied the Request and was provided to better facilitate responses from retail investors.<sup>97</sup> Commenters offered a wide range of perspectives on broker-dealers’ and investment advisers’ use of DEPs, addressing their purpose, providing information on how investors interact with them, and offering broad reflections on potential regulatory action. Commenters also provided views on benefits and risks related to firms’ use of DEPs, as well as the AI/machine learning and behavioral psychology that firms use to develop and deploy DEPs.<sup>98</sup>

A number of commenters also provided detailed feedback regarding the potential need for additional action to address the issues presented by DEPs and their underlying technology. For example, multiple commenters raised concerns over the risks of harm to investors if the Commission did not act, and requested that the Commission interpret existing regulations in a

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<sup>96</sup> As noted in the Request, the market practices explored included: (i) the extent to which firms use DEPs; (ii) the types of DEPs most frequently used; (iii) the tools and methods used to develop and implement DEPs; and (iv) information pertaining to retail investor engagement with DEPs, including any data related to investor demographics, trading behaviors, and investment performance. *See id.* at 49068.

<sup>97</sup> The “Feedback Flyer” was attached as Appendix A to the Request and asked individual investors to provide their comments with regard to online trading or investment platforms, such as websites and mobile applications, to provide the Commission with a better understanding of retail investors’ experiences on these platforms. The Feedback Flyer provided 11 different question prompts, with an array of both multiple choice, and free text response options whereby respondents could submit relevant comments. Comments received in response to the Request are available at <https://www.sec.gov/comments/s7-10-21/s71021.htm>.

<sup>98</sup> *See e.g.*, Comment Letter from American Securities Association (Sept. 30, 2021); Comment Letter from Securities Arbitration Clinic and Professor of Clinical Legal Education, St. John’s University School of Law Securities Arbitration Clinic, (Oct. 1, 2021) (“St. John’s Letter”); Comment Letter from Morningstar, Inc. and Morningstar Investment Management, LLC (Oct. 1, 2021) (“Morningstar Letter”); Comment Letter from James F. Tierney, Assistant Professor of Law, University of Nebraska College of Law (Oct. 1, 2021) (“Tierney Letter”); Pace University Letter; Comment Letter from Law Office of Simon Kogan, (Oct. 17, 2021) (“Kogan Letter”).

way that would apply to most DEPs and/or adopt additional regulations to address those risks.<sup>99</sup>

Many of these commenters suggested a need to address the standards of conduct applicable to broker-dealers and investment advisers when interacting with retail investors through digital platforms.<sup>100</sup> Some of these commenters noted that Reg BI does not apply to firms with a self-directed brokerage business model, including those that use DEPs<sup>101</sup> and provided additional

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<sup>99</sup> See e.g., Comment Letter from Scopus Financial Group (Sept. 20, 2021); Comment Letter from Better Markets, Inc. (Oct. 1, 2021) (“Better Markets Letter”); Comment Letter from Public Investors Advocate Bar Association (Oct. 1, 2021) (“PIABA Letter”); Comment Letter from University of Miami School of Law Investor Rights Clinic et al. (Oct 1, 2021) (“University of Miami Letter”); Comment Letter from Fidelity Investments (Oct. 1, 2021); St. John’s Letter; Morningstar Letter. We also considered views received from the SEC’s Investor Advisory Committee on ethical guidelines for artificial intelligence and algorithmic models used by investment advisers. See Investor Advisory Committee, Establishment of an Ethical Artificial Intelligence Framework for Investment Advisors (Apr. 6, 2023), <https://www.sec.gov/files/20230406-iac-letter-ethical-ai.pdf>.

<sup>100</sup> See e.g., Pace University Letter (“We believe that retail investors, particularly novice investors, believe that they are receiving advice or recommendations from DEPs. This includes the top mover list, analyst ratings, push notifications, and other DEPs that encourage investment activity. Many of our survey participants stated that they believe that these DEPs influenced their decision-making. At the same time, DEPs may also influence investor decision-making without investors being conscious of it.”); Comment Letter from North American Securities Administrators Association (Oct. 1, 2021) (“NASAA Letter”) (“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.”); Comment Letter from Fiduciary Insights and Practice Growth Partners (Sept. 30, 2021) (“Aikin/Mindicino Letter”) (“[A]s the complexity and heterogeneity of wants, needs, and capabilities of the clientele rises, the sophistication and artificial intelligence and machine learning (AI/ML) of the DEPs must increase dramatically. Commensurately, the internal oversight and regulatory guardrails to assure that customer/client best interests are served must also increase.”); see also Comment Letter from Morgan Stanley Wealth Management (Oct. 1, 2021) (“Morgan Stanley Letter”) (while noting existing protections, stating that “[s]hould the Commission believe additional guidance is necessary, we suggest the adoption of principles-based, technology neutral adjustments to the existing regulatory regime to address the fast evolving technological landscape”); Better Markets Letter; University of Miami Letter (“As the SEC continues its review of standards applicable to financial professional[s], it is critical to enhance investor protection in the fast-growing and increasingly harmful digital platform environment.”).

<sup>101</sup> See e.g., Robinhood Letter (“The SEC acknowledged the benefits of a self-directed model such as Robinhood’s in adopting Reg BI, explicitly stating that Reg BI does not apply to this model.”).

suggestions that the Commission could take to address firms’ use of DEPs.<sup>102</sup> Others provided detailed opinions as to the application of an investment adviser’s fiduciary duty to DEPs.<sup>103</sup> A significant number of commenters also addressed other laws and regulations and their sufficiency, or lack thereof, in their application to DEPs, including discussion addressing (i) antifraud and general standards of conduct;<sup>104</sup> (ii) regulation of advertising, marketing, and communications with the public;<sup>105</sup> (iii) compliance and supervision obligations;<sup>106</sup> (iv) data privacy and cybersecurity concerns;<sup>107</sup> (v) customer onboarding obligations;<sup>108</sup> (vi) Commission Staff’s 2017 Robo-Adviser Guidance;<sup>109</sup> and (vii) the Advisers Act recordkeeping rule.<sup>110</sup>

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<sup>102</sup> See, e.g., Pace University Letter (“DEPs and online platforms have expanded access to the market to new investors, while at the same time influencing the decision-making of those investors – particularly novice investors – in ways that are often in conflict with their best interest.”); see also Tierney Letter; Better Markets Letter; SIFMA Letter; Morningstar Letter; Morgan Stanley Letter; University of Miami Letter (“Due to the influential nature of DEPs, the SEC should enhance the Regulation Best Interest disclosure obligation and conflict of interest obligation by requiring firms to flag investor trades and/or positions where there is a likelihood that the firm will act in a manner adverse to the investor’s position and to notify investors of these potential actions.”).

<sup>103</sup> See e.g., IAA Letter (“Some advisers also use various analytical and technological tools to develop and provide investment advice, including through online platforms or as part of enhancing their in-person investment advisory services. Investment advisers may also engage in DEPs to develop and provide investor education and related tools.”); see also Comment Letter from Envestnet Asset Management, Inc. (Oct. 1, 2021) (“Envestnet Letter”); Comment Letter from Julius Leiman-Carbia, Chief Legal Officer, Wealthfront Corporation (Oct. 8, 2021) (“Wealthfront Letter”); NASAA Letter; Aikin/Mindicino Letter; Better Markets Letter; SIFMA Letter; University of Miami Letter; Morgan Stanley Letter.

<sup>104</sup> See e.g., Comment Letter from Jennifer Schulp, Director of Financial Regulation Studies, Center for Monetary and Financial Alternatives, CATO Institute (Oct. 1, 2021) (“CATO Institute Letter”); Comment Letter from Brandon Krieg, CEO, Stash Financial, Inc. and Stash Investments LLC (Oct. 1, 2021) (“Stash Letter”); Wealthfront Letter; IAA Letter; Robinhood Letter; SIFMA Letter; Tierney Letter.

<sup>105</sup> See e.g., PIABA Letter; CATO Institute Letter; IAA Letter.

<sup>106</sup> See e.g., Comment Letter from James J. Angel, Ph.D., CFP, CFA, Associate Professor of Finance, McDonough School of Business, Georgetown University (Sept. 30, 2021); IAA Letter; Stash Letter; Aikin/Mindicino Letter; PIABA Letter; CATO Institute Letter.

<sup>107</sup> See e.g., NASAA Letter; Envestnet Letter; Kogan Letter.

<sup>108</sup> See e.g., University of Miami Letter.

<sup>109</sup> See e.g., Comment Letter from Penny Lee, CEO, Financial Technology Association (Oct. 1, 2021); IAA Letter.

<sup>110</sup> See e.g., Comment Letter from Pamela Lewis Marlborough, Managing Director and Associate General Counsel, Teachers Insurance and Annuity Association of America (Oct. 1, 2021); SIFMA Letter; University of Miami Letter.

### C. Overview of the Proposal

In view of Commission staff observations, our experience administering our existing rules, the discussion in section 1.B. above on the development of PDA-like technologies in firm investor interactions and the unique risks they raise regarding conflicts of interest, and comments received in response to the Request, we are proposing to update the regulatory framework to help ensure that firms are appropriately addressing conflicts of interest associated with the use of PDA-like technologies. Specifically, we propose that firms should be required to identify and eliminate, or neutralize the effect of, certain conflicts of interest associated with their use of PDA-like technologies because the effects of these conflicts of interest are contrary to the public interest and the protection of investors.<sup>111</sup>

Proposed rules 151-2 under the Exchange Act (17 CFR 240.151-2) and 211(h)(2)-4 under the Advisers Act (17 CFR 275.211(h)(2)-4) (collectively, the “proposed conflicts rules”) are designed to address the conflicts of interest associated with firms’ use of PDA-like technology when engaging in certain investor interactions, and the proposed rules would do so in a way that aligns with (and in some respects may satisfy) firms’ existing regulatory obligations.<sup>112</sup> Except as specifically noted, the texts of proposed conflicts rule applicable to brokers and dealers (17 CFR 240.151-2) and the proposed conflicts rule applicable to investment advisers (17 CFR 275.211(h)(2)-4) would be substantially identical.<sup>113</sup> The proposed conflicts rules would only apply where the firm uses defined covered technology—more specifically, an analytical,

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<sup>111</sup> See *infra* section II.A.2.e.

<sup>112</sup> See *id.*

<sup>113</sup> Citations herein to the “proposed conflicts rules” reference each of the proposed conflicts rules as they would be codified in each location. Citations to a particular section of the CFR reference only the proposed conflicts rule that would apply to broker-dealers or to investment advisers, as applicable.

technological, or computational function, algorithm, model, correlation matrix, or similar method or process that optimizes for, predicts, guides, forecasts, or directs investment-related behaviors or outcomes in an investor interaction.

The proposal is designed to be sufficiently broad and principles-based to continue to be applicable as technology develops and to provide firms with flexibility to develop approaches to their use of technology consistent with their business model, subject to the over-arching requirement that they need to be sufficient to prevent the firm from placing its interests ahead of investor interests. The proposal is also designed to be consistent with the Commission’s prior actions regarding technological innovation.<sup>114</sup> We note that the staff has also provided their

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<sup>114</sup> Historically, the Commission has reviewed the changing technology landscape, provided guidance, and if necessary amended its regulatory framework to protect investors while still allowing firms’ use of technology to innovate and benefit investors. *See, e.g.*, Use of Electronic Media for Delivery Purposes, Release No. 7233 (Oct. 6, 1995) [60 FR 53458 (Oct. 10, 1995)] (providing Commission views with respect to the use of electronic media for information delivery under the Securities Act of 1933, the Securities Exchange Act of 1934, and the Investment Company Act of 1940); Use of Electronic Media by Broker-Dealers, Transfer Agents, and Investment Advisers for Delivery of Information, Exchange Act Release No. 37182 (May 9, 1996) [61 FR 24644 (May 15, 1996)] (“1996 Release”) (providing Commission views on electronic delivery of required information by broker-dealers, transfer agents and investment advisers); and Use of Electronic Media, Exchange Act Release No. 42728 (Apr. 28, 2000) [65 FR 25843 (May 4, 2000)] (“2000 Release”) (providing interpretive guidance on the use of electronic media to deliver documents on matters such as telephonic and global consent; issuer liability for website content; and legal principles that should be considered in conducting online offerings). In addition, the Commission has amended regulations to accommodate evolving technologies and changes in the way investors consume information. *See, e.g.*, Tailored Shareholder Reports for Mutual Funds and Exchange-Traded Funds; Fee Information in Investment Company Advertisements, Investment Company Act Release No. 34731 (Oct. 26, 2022) (87 FR 72758 [Nov. 25, 2022]) (requiring layered disclosure for funds’ shareholder reports and graphical representations of fund holdings); Investment Adviser Marketing, Investment Advisers Act Release No. 5653 (Dec. 22, 2020) [86 FR 13024 (Mar. 5, 2021)] (adopting “principles-based provisions designed to accommodate the continual evolution and interplay of technology and advice,” and providing specific guidance regarding, among others, the use of social media). Further, the Commission has amended regulations to expand the use of electronic filing options by investment advisers and institutional investment managers and updated recordkeeping requirements to make them adaptable to new technologies in electronic recordkeeping. *See, e.g.*, Electronic Submission of Applications for Orders under the Advisers Act and the Investment Company Act, Confidential Treatment Requests for Filings on Form 13F, and Form ADV-NR; Amendments to Form 13F, Advisers Act Release No. 6056 (June 23, 2022) [87 FR 38943 (June 30, 2022)]; *see also* Electronic Recordkeeping Requirements for Broker-Dealers, Security-Based Swap Dealers, and Major Security-Based Swap Participants, Exchange Act Release No. 96034 (Oct. 12, 2022) [87 FR 66412 (Nov. 3, 2022)] (“Electronic Recordkeeping Release”).

views on the industry’s expanding use of technology in the context of robo-advisers<sup>115</sup> and shared examination findings and risks associated with the use of robo-advisory products,<sup>116</sup> among other areas.

The proposal draws upon our authority under section 211(h) of the Advisers Act and section 15(l) of the Exchange Act. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (“Dodd-Frank Act”) added section 211(h)(2) to the Advisers Act and section 15(l)(2) to the Exchange Act, each of which, among other things, authorizes the Commission to “promulgate rules prohibiting or restricting certain sales practices, conflicts of interest, and compensation schemes for brokers, dealers, and investment advisers that the Commission deems contrary to the public interest and the protection of investors.”<sup>117</sup>

The proposal is intended to be technology neutral. We are not seeking to identify which technologies a firm should or should not use. Rather, the proposal builds off existing legal standards and, as discussed throughout the release, is designed to address certain risks to investors associated with firms’ use of certain technology in their interactions with investors, regardless of which such technology is used.<sup>118</sup> The proposal also is designed to permit firms the

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<sup>115</sup> See Robo-Advisers, Division of Investment Management Guidance Update No. 2017-02 (Feb. 2017) (“2017 IM Guidance”), <https://www.sec.gov/investment/im-guidance-2017-02.pdf> (addressing among other things, presentation of disclosures, provision of suitable advice, and effective compliance programs).

<sup>116</sup> See Observations from Examinations of Advisers that Provide Electronic Investment Advice, Division of Examinations Risk Alert (Nov. 9, 2021) (“2021 Risk Alert”), <https://www.sec.gov/files/exams-eia-risk-alert.pdf> (noting, “[n]early all of the examined advisers received a deficiency letter, with observations most often noted in the areas of: (1) compliance programs, including policies, procedures, and testing.”).

<sup>117</sup> See Section 913 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010). As noted in note 8 to subsection (l), another subsection (l) is set out after the first subsection (k) of the Exchange Act.

<sup>118</sup> Firms’ use of PDA-like technology may also be subject to other potential legal and contractual restrictions on the ability for advisers and brokers to collect and use customer information. See, e.g., 17 CFR part 248, subpart A (Regulation S-P), requiring, among other things, brokers, dealers, investment companies, and registered investment advisers to adopt written policies and procedures for administrative, technical, and physical safeguards to protect customer records and information.

ability to employ tools that they believe would address these risks that are specific to the particular technology they use consistent with the proposal. The Commission has long acted to protect investors from the harms arising from conflicts of interests and will continually assess the harms and revise those protections in light of the evolution of practices, including with regard to firms' use of technologies. As discussed in further detail below, conflicts associated with the use of PDA-like technologies should be eliminated or their effects neutralized to protect investors from conflicts of interest associated with firms' use of PDA-like technologies that results in investor interactions that place the interests of the firm and its associated persons ahead of investors' interests.

In particular, the proposed conflicts rules would generally require the following:

- *Elimination, or neutralization of effect of, conflicts of interest.* The proposed conflicts rules would require a firm to (i) evaluate any use or reasonably foreseeable potential use by the firm or its associated person<sup>119</sup> of a covered technology in any investor interaction to identify any conflict of interest associated with that use or potential use;<sup>120</sup> (ii) determine whether any such conflict of interest places or results in placing the firm's or its associated person's interest ahead of the interest of investors; and (iii) eliminate, or neutralize the effect of, those conflicts of interest that place the firm's or its associated person's interest ahead of the interest of investors.

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<sup>119</sup> As used in this release, the term "associated person" means, for investment advisers, a natural person who is a "person associated with an investment adviser" as defined in section 202(a)(17) of the Advisers Act and, for broker-dealers, a natural person who is an "associated person of a broker or dealer" as defined in section 3(a)(18) of the Exchange Act.

<sup>120</sup> Covered technology, conflict of interest, investor interaction are each defined terms under the proposed rules. *See* proposed rules 211(h)(2)-4(a) and 151-2(a); *see also infra* sections II.A.1 and II.A.2.c.



- *Policies and procedures.* The proposed conflicts rules would require a firm that has any investor interaction using covered technology to adopt, implement, and, in the case of broker-dealers, maintain, written policies and procedures reasonably designed to achieve compliance with the proposed conflicts rules, including (i) a written description of the process for evaluating any use (or reasonably foreseeable potential use) of a covered technology in any investor interaction; (ii) a written description of any material features of any covered technology used in any investor interaction and of any conflicts of interest associated with that use; (iii) a written description of the process for determining whether any conflict of interest identified pursuant to the proposed conflicts rules results in an investor interaction that places the interest of the firm or person associated with the firm ahead of the interests of the investor; (iv) a written description of the process for determining how to eliminate, or neutralize the effect of, any conflicts of interest determined pursuant to the proposed conflicts rules to result in an investor interaction that places the interest of the firm or associated person ahead of the interests of the investor; and (v) a review and written documentation of that review, no less frequently than annually, of the adequacy of the policies and procedures established pursuant to the proposed conflicts rules and the effectiveness of their implementation as well as a review of the written descriptions established pursuant to the proposed conflicts rules.

Proposed amendments to applicable recordkeeping rules, rules 17a-3 and 17a-4 under the Exchange Act and rule 204-2 under the Advisers Act, would require firms to make and keep books and records related to the requirements of the proposed conflicts rules. These proposed

amendments are designed to help facilitate the Commission’s examination and enforcement capabilities, including assessing compliance with the requirements of the proposed conflicts rules.

The proposal is designed to prevent firms’ conflicts of interest from harming investors while allowing continued technological innovation in the industry.

## **II. DISCUSSION**

### **A. Proposed Conflicts Rules**

#### **1. Scope**

The proposed conflicts rules would apply only when a firm uses covered technology in an investor interaction. The proposed definitions are designed to identify those conflicts of interest that firms must evaluate to determine whether they result in investor interactions that place the firm’s interest ahead of investors’ interest and must therefore be eliminated or their effect neutralized.<sup>121</sup> The proposed conflicts rules would apply to all broker-dealers and to all investment advisers registered, or required to be registered, with the Commission.

#### **a. Covered Technology**

The proposed conflicts rules would define covered technology as an analytical, technological, or computational function, algorithm, model, correlation matrix, or similar method or process that optimizes for, predicts, guides, forecasts, or directs investment-related behaviors or outcomes.<sup>122</sup> The proposed definition is designed to capture PDA-like technologies, such as AI, machine learning, or deep learning algorithms, neural networks, NLP, or large language

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<sup>121</sup> See *supra* section I.B.4 (describing existing technologies that may involve conflicts of interest) and *infra* section II.A.2.c (discussing the proposed definition of a conflict of interest).

<sup>122</sup> Proposed conflicts rules at (a).

models (including generative pre-trained transformers), as well as other technologies that make use of historical or real-time data, lookup tables, or correlation matrices among others.

The rate at which these technologies evolve has increased in recent years and may continue to increase.<sup>123</sup> Accordingly, the proposed definition of covered technology is also designed to capture the variety of technologies and methods that firms currently use as well as those technologies and methods that may develop over time. The proposed definition would include widely used and bespoke technologies, future and existing technologies, sophisticated and relatively simple technologies, and ones that are both developed or maintained at a firm or licensed from third parties.<sup>124</sup>

The proposed definition, however, would be limited to those technologies that optimize for, predict, guide, forecast, or direct investment-related behaviors or outcomes. The use of these terms in the proposed conflicts rules is designed to capture a broad range of actions. This could include providing investment advice or recommendations, but it also encompasses design elements, features, or communications that nudge, prompt, cue, solicit, or influence investment-related behaviors or outcomes from investors. Investment-related behavior or outcomes can manifest themselves in many forms in addition to buying, selling, and holding securities, such as

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<sup>123</sup> See e.g., Deloitte, *Artificial intelligence: The next frontier for investment management firms* (Feb. 5, 2019), <https://www.deloitte.com/global/en/Industries/financial-services/perspectives/ai-next-frontier-in-investment-management.html> (stating, for example, that “[f]irms have recognized a new opportunity to gain direct distribution to investors, benefit from enhanced efficiencies in servicing small accounts, and offer value-added services for advisors. This has translated into a wave of investment activity, with asset managers and intermediaries acquiring or investing in robo-advice technology.”) See also Bob Veres and Joel Bruckstein, *T3/Inside Information Advisor Software Survey* (Mar. 14, 2023), <https://t3technologyhub.com/wp-content/uploads/2023/03/2023-T3-and-Inside-Information-Software-Survey.pdf>.

<sup>124</sup> The SEC has proposed a new rule under the Advisers Act to prohibit registered investment advisers from outsourcing certain services or functions without first meeting minimum requirements. See *Outsourcing by Investment Advisers*, Investment Advisers Act Release No. 6176; File No. S7-25-22 (Oct. 26, 2022) [87 FR 68816 (Nov. 16, 2022)] (“Proposed Outsourcing Rule”). We encourage commenters to review that proposal to determine whether it might affect comments on this proposal.

an investor making referrals or increasing trading volume and/or frequency. This broad proposed definition is designed to help ensure that, as innovation and technology evolve and firms expand their reliance on technologies to provide services to, and to interact with, investors, our rules remain effective in protecting investors from the harmful impacts of conflicts of interest.

The proposed definition would apply to the use of PDA-like technologies that analyze investors' behaviors (*e.g.*, spending patterns, browsing history on the firm's website, updates on social media) to proactively provide curated research reports on particular investment products, because the use of such technology has been shown to guide or influence investment-related behaviors or outcomes. Similarly, using algorithmic-based tools, such as investment analysis tools, to provide tailored investment recommendations to investors would fall under the proposed definition of covered technology because the use of such tools is directly intended to guide investment-related behavior. As an additional example, a firm's use of a conditional auto-encoder model to predict stock returns would be a covered technology.<sup>125</sup> Similarly, if a firm utilizes a spreadsheet that implements financial modeling tools or calculations, such as correlation matrices, algorithms, or other computational functions, to reflect historical correlations between economic business cycles and the market returns of certain asset classes in order to optimize asset allocation recommendations to investors, the model contained in that spreadsheet would be a covered technology because the use of such financial modeling tool is directly intended to guide investment-related behavior. Likewise, covered technology would

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<sup>125</sup> An autoencoder return model is an unsupervised learning method that attempts to model a full panel of asset returns using only the returns themselves as inputs. *See generally* S. Gu, B. Kelly, and D. Xiu, *Autoencoder Asset Pricing Models* (Sept. 30, 2019), <https://www.aqr.com/Insights/Research/Working-Paper/Autoencoder-Asset-Pricing-Models>.

include a commercial off-the-shelf NLP technology that a firm may license to draft or revise advertisements guiding or directing investors or prospective investors to use its services.

The proposed definition, however, would not include technologies that are designed purely to inform investors, such as a website that describes the investor's current account balance and past performance but does not, for example, optimize for or predict future results, or otherwise guide or direct any investment-related action. Similarly, the proposed definition also would not include a technology that predicts whether an investor would be approved for a particular credit card issued by the firm's affiliate based on other information the firm knows about the investor because the use of such technology does not, and is not intended to, affect an investment-related behavior or outcome. For the same reason, the use of a firm's chatbot that employs PDA-like technology to assist investors with basic customer service support (*e.g.*, password resets or disputing fraudulent account activity) would not qualify as covered technology under the proposed definition.

We request comment on all aspects of the definition of covered technology, including the following items:

1. Is the scope of the proposed definition of a covered technology sufficiently clear? We intend for the proposed definition to cover PDA-like technologies; are there ways we could revise the proposed definition in order to better accomplish this? Are there any technologies covered by the proposed definition that go beyond PDA-like technologies and should be excluded? For instance, should the proposed definition distinguish between different categories of machine learning algorithms, such as deep learning, supervised learning, unsupervised learning, and reinforcement learning processes? Do one or more of these categories present

more investor protection concerns related to conflicts of interest relative to other categories? Would firms be able to identify what would and would not be a covered technology for purposes of the proposed rules? If not, what additional clarity would be beneficial? We have described examples of technologies to which the definition would or would not apply. Should the definition be revised to include or specifically exclude such examples?

2. Would the definition adequately include the technology used by firms that would present the conflicts of interest and resulting risks to investors that these proposed rules are designed to address? If not, how should this definition be changed to further the objective of the proposed conflicts rules? Please explain your answer, including the extent to which these technologies do or do not present conflicts of interest risks to investors. Alternatively, do the technologies included in the proposed definition include technology that does not typically result in risks to investors that these proposed rules are designed to address?
3. Is the proposed definition of covered technology appropriately calibrated to allow for future technological developments? What adjustments, if any, should the Commission make to help ensure that the definition of covered technology will remain evergreen despite future technological advancements? Conversely, what adjustments to the definition of covered technology, if any, are necessary to avoid covering those future technological advancements that do not possess characteristics that the proposed rules are intended to address?
4. The proposed definition of covered technology only applies to technologies that are used to optimize for, predict, guide, forecast, or direct investment-related

behaviors or outcomes. Do the terms “optimize for,” “predict,” “guide,” “forecast,” and “direct” appropriately scope the definition? Is it clear what these terms are intended to capture or would further explanation be helpful? Are there certain technologies that would fit within one or more of those terms but which should be outside the scope of the proposed definition? Alternatively, are there certain technologies that would fall outside those terms but which should be within the scope of the proposed definition? If so, should we use additional or different words to clarify the meaning? For instance, should we include the term “influence” in the definition? If so, how would “influence” differ from the terms “guide” or “direct” in the definition? Should we use “nudge” or “prompt” in the definition? Alternatively, should we remove any of the terms in the proposed definition? For instance, are the terms “guide” and “direct” redundant or do they express distinct meanings within the context of the definition? Does “guide” capture broader activity than “direct” and cause the rule to capture technologies that should not be in scope? Should the definition be limited to technologies that direct or influence an investor?

5. Should the proposed definition of covered technology apply to technologies that are used to optimize for, predict, guide, forecast, or direct investment-related behaviors or outcomes, *directly or indirectly*? Are there certain PDA-like technologies that optimize for, predict, guide, forecast, or direct investment-related behaviors or outcomes *indirectly* that should be covered by this definition? If so, what are they and why? If the definition did include the term “indirectly,”

would it include technologies that should not be covered by the proposed conflicts rules?

6. Should the definition of covered technology not include technology that is solely meant to inform investors, as proposed?
7. Does the term “covered technology” adequately reflect the definition? Should some other defined term be used, such as “covered processes” or “covered methods”? Are there any other terms that should be used?
8. Does the phrase “investment-related behaviors or outcomes” sufficiently clarify the intended scope of the rule and which technologies would not be within the definition? Is it clear what the phrase “investment-related behaviors or outcomes” would capture or would further explanation be helpful? Are there certain behaviors or outcomes that may not be “investment related” but should nonetheless be covered by the proposed definition? For instance, should PDA-like technologies used for back office or administrative functions, such as trade settlement, the routing of customers’ orders, accounting, or document review and processing, be included in the covered technology definition? Are commenters aware of any PDA-like technology that is used for back office functions, such as the routing of customer orders, that is also used to engage or communicate with investors (*i.e.*, that involve an investor interaction)? Are there certain investment-related activities that may not be “behaviors or outcomes” that should be covered by the definition? Is either “behavior” or “outcome” overbroad, capturing activities beyond those intended by the definition? Should a different term, such as “investment-related covered technology” be used?



9. Are there aspects of this definition that should be broadened, narrowed, revised, removed, or added? For instance, should the definition be limited to the use of predictive data analytics and/or artificial intelligence that optimizes for, predicts, guides, forecasts, or directs investment-related behaviors or outcomes? Alternatively, should we limit the scope of the definition to technologies that are used to provide investment advice or recommendations? Should we otherwise limit the scope to technologies that are used directly by investors? Should we expressly exclude technologies that are not used by investors but instead are used by individuals who are associated with a firm and use the technologies in communicating with investors?

**b. Investor Interaction**

The proposed conflicts rules include definitions for both “investor” and “investor interaction.”<sup>126</sup> For brokers or dealers, the definition of investor would include a natural person, or the legal representative of such natural person, who seeks to receive or receives services primarily for personal, family or household purposes. The definition is designed to capture both prospective and current retail investors.<sup>127</sup> For investment advisers, the definition of investor would include a client or prospective client, and any current or prospective investor in a pooled

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<sup>126</sup> See proposed conflict rules at (a).

<sup>127</sup> See *supra* note 6. Broker-dealers are subject to regulation under the Exchange Act and SRO rules, including a number of obligations that attach when a broker-dealer offers services to a retail customer, including making recommendations, as well as general and specific requirements aimed at addressing certain conflicts of interest. The application of these obligations can vary depending on a broker-dealer’s business lines and activities, as well as the level of customer sophistication. See Regulation Best Interest, Exchange Act Release No. 83062 (May 9, 2018) [83 FR 21574 (May 9, 2018)], at 21575 (“Reg BI Proposing Release”); see, e.g., FINRA Rule 2210 (applying broker-dealer obligations related to communications with the public differently to communications directed to retail versus institutional investors). Here, the focus of the proposed rules for broker-dealers is on retail investors.

investment vehicle advised by the investment adviser.<sup>128</sup> The use of PDA-like technology by investment advisers of pooled investment vehicles, such as algorithmically targeted advertisements that are designed to solicit investors in a pooled investment vehicle or algorithmically designed investment strategies in pooled investment vehicles, present the same investor protection concerns as advisers that use the same or similar technology to target or advise their advisory clients. Accordingly, we are proposing to define “investor” so that the proposed conflicts rules would broadly apply both to clients that receive investment advisory services from an investment adviser and to investors in a pooled investment vehicle advised by the investment adviser.<sup>129</sup>

The proposed conflicts rules would generally define investor interaction as engaging or communicating with an investor, including by exercising discretion with respect to an investor’s account; providing information to an investor; or soliciting an investor.<sup>130</sup> This definition would capture a firm’s correspondence, dissemination, or conveyance of information to or solicitation of investors, in any form, including communications that take place in-person, on websites; via smartphones, computer applications, chatbots, email messages, and text messages; and other online or digital tools or platforms. This definition would include engagement between a firm and an investor’s account, on a discretionary or non-discretionary basis. This definition would also capture any advertisements, disseminated by or on behalf of a firm, that offer or promote

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<sup>128</sup> See proposed rule 211(h)(2)-4(a) (specifying that “pooled investment vehicle” has the same meaning as in 17 CFR 275.206(4)-8, meaning any investment company as defined in section 3(a) of the Investment Company Act of 1940 or any company that would be an investment company under section 3(a) of that Investment Company Act but for the exclusion provided from that definition by either section 3(c)(1) or section 3(c)(7) of the Investment Company Act).

<sup>129</sup> See proposed conflict rules at (a) (defining “Investor”).

<sup>130</sup> See proposed conflict rules at (a).

services or that seek to obtain or retain one or more investors. The proposed definition is intended to be sufficiently broad to encompass the wide variety of methods, using current and future technologies, that firms could use to interact with investors.<sup>131</sup>

The proposed definition is generally designed to limit the proposed conflicts rules' scope to a firm's use of covered technology in interactions with investors. This aspect of the proposed conflicts rules recognizes that the conflicts associated with the use of covered technology in investor interactions present a higher risk of harm to investors than conflicts associated with technologies that are not used in such interactions. For instance, a firm could utilize covered technology to analyze historical data and current market data to identify trends and make predictions related to the firm's intra-day liquidity needs, peak liquidity demands, and working capital requirements. A firm could likewise use covered technology to make investment decisions about its own assets. Similarly, a firm could implement covered technology for automation of, for example, "back office" processes like the routing of customers' orders<sup>132</sup> and accounting and trade settlement. In each of these examples, the use of covered technology for these processes does not involve an investor interaction, and therefore would not be subject to the proposed conflicts rules.

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<sup>131</sup> See generally Investment Adviser Marketing Release, *supra* note 19 (a recent Commission rule designed to accommodate the continual evolution of the use of technology in the investment adviser industry as it relates to advisers marketing their services to clients and investors).

<sup>132</sup> Although routing of customers' orders is not covered by this proposal, broker-dealers owe their customers a duty of "best execution." Best execution requires that a broker-dealer seek to obtain for its customer orders the most favorable terms reasonably available in the market under the circumstances. See, e.g., *Newton v. Merrill, Lynch, Pierce, Fenner & Smith*, 135 F.3d 266, 270 (3d Cir. 1998). See also *Kurz v. Fidelity Management & Research Co.*, 556 F.3d 639, 640 (7th Cir. 2009); *Geman v. SEC*, 334 F.3d 1183, 1186 (10th Cir. 2003); see also FINRA Rule 5310 (Best Execution and Interpositioning). The Commission recently proposed a rule that, if adopted, would establish through Commission rule a best execution standard for broker-dealers. See Regulation Best Execution, Exchange Act Release No. 96496 (Dec. 14, 2022) [88 FR 5440 (Jan. 27, 2023)].

In contrast, when a firm’s use or potential use of a covered technology in any investor interaction could involve a conflict of interest, a firm would be subject to the framework of the proposed conflicts rules. The proposed definition of investor interaction does not make any distinctions based on the manner in which an investor or the investor’s account interacts with the covered technology or on the manner in which the firm uses the technology in the interaction. Meaning, “use” of covered technology in an investor interaction can occur directly through the use of a covered technology itself (*e.g.*, a behavioral feature on an online or digital platform that is meant to prompt, or has the effect of prompting, investors’ investment-related behaviors) or indirectly by firm personnel using the covered technology and communicating the resulting information gleaned to an investor (*e.g.*, an email from a broker recommending an investment product when the broker used PDA-like technology to generate the recommendation).<sup>133</sup>

Unlike a purely ministerial or back office function, these examples involve an investment-related communication with an investor and would be considered an investor interaction under the proposed definition. Similarly, a firm may use covered technology to provide individual brokers or advisers with customized insights into an investor’s needs and interests and the broker or adviser may use this information to supplement their existing knowledge and expertise when making a suggestion to the investor during an in-person meeting. Such a scenario would result in the firm using a covered technology in an investor interaction under the proposed rules. An investor interaction would also include firms’ use of game-like

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<sup>133</sup> To the extent a broker-dealer uses PDA-like technology to make a recommendation to a retail customer, the broker-dealer would also be subject to Reg BI and its attendant obligations, including the Conflict of Interest Obligation, as to the recommendation. Similarly, an investment adviser making a recommendation to its client would also be subject to fiduciary obligations that include a duty of loyalty under which an adviser must eliminate or make full and fair disclosure of all conflicts of interest. *See* Fiduciary Interpretation, *supra* note 8.

prompts or marketing that “nudge” investors to take particular investment-related actions on digital platforms. In addition, the investor interaction definition covers solicitations, for example, a firm utilizing covered technology that scrapes public data, which the firm in turn uses to solicit clients through broadcast emails.<sup>134</sup>

The proposed definition of investor interaction would include interactions that have generally been viewed as outside the scope of “recommendations” for broker-dealers.<sup>135</sup> For example, under the proposed definition, an investor interaction could include: firms’ use of research pages or “electronic libraries” to provide investors with the ability to obtain or request research reports, news, quotes, and charts from a firm-created website; or firm’s use of technologies to generate emails to investors as part of a firm-run email communication subscription that investors can sign up for and customize, and which alerts investors to items such as news affecting the securities in the investor’s portfolio or on the investor’s “watch list.”<sup>136</sup> Accordingly, the proposed definition would capture firm communications that may not rise to the level of a recommendation, yet are nonetheless designed to, or have the effect of, guiding or directing investors to take an investment-related action.

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<sup>134</sup> See *infra* section II.A.2.e (acknowledging that although a firm’s use of covered technology to solicit investors to open an account falls under the definition of an investor interaction, it may not involve a conflict of interest that would require elimination or neutralization under the proposed conflicts rules). On the other hand, a conflict of interest may appear if a firm’s chatbot is programmed to solicit only investors that scraped data show are heavy gamblers, and thus perceived as being more profitable to the firm as investors that might invest in risky, high-profit investments that earn the firm more money relative to other investments.

<sup>135</sup> See NASD Notice to Members 01-23 (Apr. 2001) (Online Suitability—Suitability Rules and Online Communications) (discussing the types of online communications may constitute “recommendations” under the NASD suitability rule); Reg BI Adopting Release, *supra* note 8, at section II.B.2 (discussing factors to consider when determining whether a “recommendation” has been made by a broker-dealer).

<sup>136</sup> See NASD Notice to Members 01-23, *id.*

The proposed definition would exclude from the investor interaction definition interactions solely for purposes of meeting legal or regulatory obligations.<sup>137</sup> These interactions are subject to existing regulatory oversight and/or do not involve the type of conflicts the proposed rules seek to address. This exclusion would apply to interactions with an investor for purposes of obligations under any statute or regulation under Federal or State law, including rules promulgated by regulatory agencies. For example, the proposed definition would exclude interactions with investors solely for anti-money laundering purposes, such as using PDA-like technologies to identify and track investor activity for the purposes of flagging suspected fraudulent transactions and requesting identification and verification of the transaction from an investor (*e.g.*, sending two-factor authentication messages).<sup>138</sup> If a firm, however, includes as part of such an interaction actions that are not reasonably designed to satisfy its obligations under applicable law (*e.g.*, circulating a link to a digital platform that includes features designed to prompt investors to trade along with the annual delivery of Form ADV), and such additional actions are otherwise within the definition of an investor interaction, then such action would be considered an investor interaction for purposes of the proposed conflicts rules.

In addition, the proposed definition would also exclude interactions solely for purposes of providing clerical, ministerial, or general administrative support. For example, the proposed definition would exclude basic chatbots or phone trees that firms use to direct customers to the appropriate customer service representative. This aspect of the exclusion is only intended to

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<sup>137</sup> See proposed conflicts rules at (a).

<sup>138</sup> The activities covered under this legal and regulatory obligation exception would qualify as an investor interaction that uses covered technology absent this exception. However, as a practical matter, many of these activities would not involve a firm's use of covered technology under the proposed definition, because such activities would not involve an analytical, technological, or computation function, algorithm, model, correlation matrix, or similar method or process (*e.g.*, delivery of Form ADV or summary prospectus pursuant to legal obligations).

cover basic or first-level customer support designed to efficiently answer simple questions like providing the business hours of a branch office or the balance in the investor’s account, or to guide the investor to a human representative in the appropriate department of the firm who is trained to address the investor’s question. On the other hand, if a firm sought to employ a more advanced chatbot designed to answer complex investment-related questions, such as when or whether to invest in a particular investment product or security, this would no longer fit within the exclusion for clerical, ministerial, or general administrative support, and would constitute an investor interaction under the proposed definition.

In either case, the exclusions would be limited to interactions that are “solely for the purpose” of the relevant category (or categories) of conduct in order to help ensure that interactions that serve several purposes, including purposes that are not excluded, will be within the scope of the definition of investor interaction.<sup>139</sup> The “solely for the purpose” language is designed to help ensure that all the functions of a dual-use technology like a chatbot would be considered when evaluating conflicts of interest associated with use of the chatbot.

We request comment on all aspects of the proposed definitions of investor interaction and investor, including the following items:

10. For broker-dealers, the proposed definition of investor means a natural person, or the legal representative of such natural person, who seeks to receive or receives services from the broker-dealer primarily for personal, family or household purposes. Should we narrow the definition of investor as applied to broker-dealers

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<sup>139</sup> Interactions that are for the purpose of both categories of conduct would also fit within the exclusion. For example, an algorithm whose purpose was both to comply with legal or regulatory obligations *and* to conduct other clerical, ministerial, or general administrative support functions would fit within the exclusion so long as the algorithm did not also have a third purpose that was not excluded from the definition.

to only cover retail customers, as defined under Reg BI? Should we expand the definition of investor for brokers or dealers to cover all current and prospective investors and not just retail investors? We have stated that investors may not be able to understand the complexities of covered technologies and any conflicts associated with their use. Should we expand the definition of investor for broker-dealers to cover a certain subset of non-retail investors? The proposed definition of investor for investment advisers is not limited to services “primarily for personal, family or household purposes.” Should we add such limitation in the investment adviser conflicts rule?

11. Should we narrow the definition of investor for investment advisers? For example, should we only apply it to retail investors, as defined in Form CRS? If so, please explain why in comparison to other rules under the Advisers Act.
12. For investment advisers, the proposed definition of investor also includes investors or prospective investors in a pooled investment vehicle that is a client or prospective client of the investment adviser; should we retain this in the final rules? Are there special considerations for investors in a pooled investment vehicle that cause them to need less protection from conflicts of interest associated with a firm’s use of covered technology? If the definition of “investor” continues to include investors in pooled investment vehicles, as proposed, are there certain structures or types of pooled investment vehicles that should not be included? For example, should investors in collateralized loan obligation vehicles be excluded? Are there unique characteristics of such vehicles, investors, or investors in other pooled investment vehicles, which make the additional



protections that would be provided by the proposed conflicts rules unnecessary?

The proposed definition of “investor” would incorporate the definition of “pooled investment vehicle” in rule 206(4)-8. Should we define the term “pooled investment vehicle” (or use another term)? Should we define the term more broadly for purposes of this rule to include other vehicles to which an investment adviser may provide investment advice that rely on other exclusions from the definition of investment company, such as companies primarily engaged in holding mortgages that are excluded pursuant to section 3(c)(5)(C) of the Investment Company Act, or collective investment trust funds or separate accounts excluded under section 3(c)(11) of the Investment Company Act?

13. Will the proposed definition of investors present challenges for firms that are dually registered as investment advisers and broker dealers?
14. Should we define “prospective investor” in the proposed rules? If so, how should we define this term and why? For example, should we define “prospective investor” as any person or entity that engages in some way with a firm’s services (*e.g.*, downloads the firm’s mobile app, visits the firm’s website, or creates a log-in)? If not, should we provide guidance regarding how firms can identify prospective investors?
15. Is the proposed definition of investor interaction sufficiently clear? Would firms be able to identify what would be an investor interaction for purposes of the proposed conflicts rules? Are there activities that are not covered by the proposed definition of investor interaction that should be? Are there activities that are covered by the proposed definition that should not be? For instance, should a firm

soliciting prospective investors be included within the definition? Should the proposed definition be limited to interactions in which investors directly interact with, or otherwise directly use, covered technology? Do situations in which investors do not directly interact with covered technology raise the same concerns of scalability as those in which investors do interact directly?

16. Do commenters agree that investor interactions, as proposed, may entail conflicts of interest that are particularly likely to result in investor harm or to take additional effort to discern? Are there types of activities we should specifically include or exclude within the definition?
17. Do commenters agree that the definition of investor interaction should exclude interactions solely for purposes of meeting legal or regulatory obligations or providing clerical, ministerial, or general administrative support? Should we remove any or all aspects of these exclusions from the definition in the final conflicts rules? In the case of interactions solely for the purpose of meeting legal or regulatory obligations, should we broaden or narrow the exclusion? For example, should we take into account legal or regulatory obligations as a result of compliance with foreign law, or with policies, rules, or directives of SROs (including securities exchanges) or other bodies? Generally, would investor interactions that fall under the proposed exclusions employ covered technology (*e.g.*, technologies that optimize for, predict, guide, forecast, or direct investment-related behaviors or outcomes)? If so, how? If not, is the exception for legal or regulatory obligations additive? Is the exclusion for providing clerical, ministerial, or general administrative support sufficiently clear? For instance, is it

clear this phrasing would capture trade settlement and the routing of customers' orders or would further explanation be helpful?

18. Do the proposed conflicts rules adequately address how a firm would treat a single covered technology that features functions that are both included and excluded from the investor interaction definition? For instance, a chatbot that is used for both general customer support help (*e.g.*, password resets) and to provide more advanced functions, such as guiding an investor as to when and whether to invest in a particular investment product. Should the proposed conflicts rules treat these dual-purpose covered technologies differently than covered technology used solely for purposes of meeting legal or regulatory obligations or providing clerical, ministerial, or general administrative support?
19. To the extent we retain or expand the exclusions, are there any conditions we should add in order for a firm to be able to rely on particular exclusions? For example, should we require that a firm create and maintain a written record if it relies on an exclusion? Are there other activities that should be excluded? For example, should we provide a more principles-based exclusion for certain activities that the firm affirmatively identifies in writing as low-risk and that are already part of existing compliance programs or subject to other laws, rules, regulations, or policies?
20. As specified in the proposed definition of investor interaction, the definition would include discretionary management of accounts where the engagement is with the investor's account, even if there is no communication or other interaction with investors themselves at the time of trades in their accounts. Should the

discretionary management of accounts be included within the definition of investor interaction? Should it be excluded? Do commenters agree that a firm's discretionary management of accounts using covered technologies may entail conflicts of interest that are particularly likely to result in investor harm and are not sufficiently addressed under the current applicable legal framework? Why or why not?

**2. *Identification, Determination, and Elimination, or Neutralization of the Effect of, a Conflict of Interest***

The proposed conflicts rules would require a firm to eliminate, or neutralize the effect of, certain conflicts of interest associated with the use of a covered technology in investor interactions.<sup>140</sup> The proposed conflicts rules would also require firms to take affirmative steps as a precursor to eliminating or neutralizing the effect of these conflicts. First, a firm would be required to evaluate any use or reasonably foreseeable potential use of a covered technology in any investor interaction to identify whether it involves a conflict of interest, including through testing the technology. Second, a firm would be required to determine if any such conflict of interest results in an investor interaction that places the interest of the firm or an associated person ahead of investors' interests. Third, the proposed conflicts rules would require a firm to take a particular action—elimination or neutralization—to address any conflict of interest the firm determines in step two results in an investor interaction that places its or an associated person's interest ahead of investors' interests.<sup>141</sup> The proposed conflicts rules thus supplement,

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<sup>140</sup> See *infra* section II.A.2.e.

<sup>141</sup> On the application to interests of associated persons, see *infra* sections II.A.2.c, II.A.2.d, and II.A.2.e, and proposed conflicts rules at (b)(2) and (3).

rather than supplant, existing regulatory obligations related to conflicts of interest, laying out particular steps a firm must take to address conflicts of interest arising specifically from the use of covered technologies in investor interactions.<sup>142</sup> This is because the nature of these technologies (for example due to their inherent complexity and ability to rapidly scale transmission of conflicted actions across a firm’s investor base) requires additional steps to address conflicts associated with their use in investor interactions, compared to conflicts of interest more generally.

**a. Evaluation and Identification**

The proposed conflicts rules would require a firm to evaluate any use or reasonably foreseeable potential use by the firm or its associated persons of a covered technology in any investor interaction to identify any conflict of interest associated with that use or potential use.<sup>143</sup> This requirement of the proposal, in connection with the requirement to test and periodically retest any covered technology, is designed to help ensure that a firm has a reasonable understanding of whether its use or reasonably foreseeable potential use of the covered technology in investor interactions would be associated with a conflict of interest.

The proposed conflicts rules do not mandate a particular means by which a firm is required to evaluate its particular use or potential use of a covered technology or identify a conflict of interest associated with that use or potential use. Instead, the firm may adopt an

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<sup>142</sup> The elimination or neutralization requirement of the proposed rules applies only to a narrower, defined subset of the broader universe of conflicts – those conflicts that a firm determines *actually* place the interests of the firm or certain associated persons ahead of the interests of investors. This is in contrast to, for example, an investment adviser’s fiduciary duty, which encompasses any interest that *might* incline the adviser, consciously or subconsciously, to provide advice that is not disinterested., or similarly in contrast to the broader universe of conflicts covered by Reg BI. Other conflicts of interest that *only might* affect the firm’s investor interactions would continue to be subject to these other obligations, as applicable.

<sup>143</sup> See proposed conflicts rules at (b)(1).

approach that is appropriate for its particular use of covered technology, provided that its evaluation approach is sufficient for the firm to identify the conflicts of interest that are associated with how the technology has operated in the past (for example, based on the firm’s experience in testing or based on research the firm conducts into other firms’ experience deploying the technology) and how it could operate once deployed by the firm. If a technology could be used in a variety of different scenarios, the firm should consider those scenarios in which it intends that the technology be used (and for which it is conducting the identification and evaluation process). It should also consider other scenarios that are reasonably foreseeable unless the firm has taken reasonable steps to prevent use of the technology in scenarios it has not approved (for example, by limiting the personnel who are able to access the technology).

A firm could adopt different approaches for different covered technologies.<sup>144</sup> Such approaches could vary depending on the nature of the covered technologies employed by the firm at the time they are implemented, how the technologies are used, and the firm’s plans for future use of those technologies. For example, a firm that only uses simpler covered technologies in investor interactions, such as basic financial models contained in spreadsheets or simple investment algorithms, could take simpler steps to evaluate the technology and identify any conflicts of interest, such as requiring a review of the covered technology to confirm whether it weights outcomes based on factors that are favorable for the adviser or broker-dealer, such as the revenue generated by a particular course of action.<sup>145</sup> Even when a firm identifies a conflict of

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<sup>144</sup> Cf. U.S Chamber of Commerce Technology Engagement Center, Report of the Commission on Artificial Intelligence Competitiveness, Inclusion, and Innovation (Mar. 9, 2023), at 82 (“Chamber of Commerce AI Report”), [https://www.uschamber.com/assets/documents/CTEC\\_AICommission2023\\_Report\\_v6.pdf](https://www.uschamber.com/assets/documents/CTEC_AICommission2023_Report_v6.pdf) (calling for “impact assessments” to help categorize potentially harmful uses of certain technologies in a risk-based framework).

<sup>145</sup> See *infra* section II.A.2.d, discussing financial models.

interest associated with a simple covered technology, depending on the facts and circumstances, it may determine that such conflict of interest does not actually result in the firm’s or an associated person’s interests being placed ahead of those of investors, and that the conflict of interest does not need to be eliminated or its effects to be neutralized.

Firms that use more advanced covered technologies may need to take additional steps to evaluate technology adequately and identify associated conflicts adequately.<sup>146</sup> For example, a firm might instruct firm personnel with sufficient knowledge of both the applicable programming language and the firm’s regulatory obligations to review the source code of the technology, review documentation regarding how the technology works, and review the data considered by the covered technology (as well as how it is weighted).<sup>147</sup> A firm seeking to evaluate an especially complex covered technology and identify conflicts of interest associated with its use may consider other methods as well. For example, if a firm is concerned that it may not be possible to determine the specific data points that a covered technology relied on when it reached a particular conclusion, and how it weighted the information, the firm could build “explainability” features into the technology in order to give the model the capacity to explain why it reached a particular outcome, recommendation, or prediction.<sup>148</sup> By reviewing the output

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<sup>146</sup> These steps could be included in the policies that the firm would be required to adopt under the proposed conflicts rules, and may also be necessary to satisfy the proposed recordkeeping amendments. *See infra* section II.A.3 and II.B. A written description of a covered technology prepared in accordance with policies and procedures that are reasonably designed to prevent violation by the firm of the proposed conflicts rules generally should include a written evaluation of the technology and identify any conflicts of interest presented by the technology. This would also assist the firm in preparing records that would comply with the proposed recordkeeping amendments. *See infra* section II.B.

<sup>147</sup> When evaluating the data considered by a covered technology used by a firm, both the data itself and the weighting of the data may inform a firm’s determination of whether or not any conflict of interest it identifies and evaluates would result in an investor interaction that places the interest of the firm ahead of the interests of investors. *See infra* section II.A.2.d.

<sup>148</sup> *See supra* section I.B.4 (describing complex or opaque technologies, sometimes referred to as “black boxes”).

of the explainability features, the firm may be able to identify whether use of the covered technology is associated with a conflict of interest.<sup>149</sup> Developing this capability would require an understanding of how the model operates and the types of data used to train it.

Not all of these steps would be necessary (or possible) in all circumstances. So long as the firm has taken steps that are sufficient under the circumstances to evaluate its use or reasonably foreseeable potential use of the covered technology in investor interactions and identify any conflicts of interest associated with that use or potential use, this aspect of the proposed conflicts rules would be satisfied. To the extent a technology is customizable, we anticipate a firm will be able to evaluate the technology and identify the conflicts associated with its use through the choices it makes when customizing the technology. For technologies that are not customizable, we anticipate a firm will be able to evaluate the technology and identify conflicts via other means.

For example, a firm that licenses a covered technology from a third party may have no access, or limited access, to the underlying source code of the technology. In such circumstances, provided that the other documentation regarding how the technology functions is sufficiently detailed as to how the technology works, the identification and evaluation could be satisfied through review of such documentation. Firms without access to the underlying source code could review, for example, documentation about how the technology can be tailored to its investors' requirements (such as how to tailor it to eliminate, or neutralize the effect of, conflicts of

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<sup>149</sup> Testing (such as A/B testing) that is designed to determine the influence of a particular factor may also be helpful and is discussed *infra*. If the output of the explainability features is not sufficient for the firm to identify whether a conflict of interest exists at all, the firm may still be able to use the output to determine that any conflict of interest that may exist still does not result in its interests being placed ahead of investors' interests, or alternatively that any conflicts of interest that may exist have been eliminated or their effect has been neutralized due to controls the firm placed on its use of the technology. *See infra* section II.A.2.d (discussing using explainability features for determination) and *infra* section II.A.2.e (discussing using explainability features for elimination or neutralization).



interest). In circumstances where the firm is relying only on the technology’s documentation, its testing methodology would be of special importance to help the firm discover whether there is any undocumented functionality that could be associated with a conflict of interest.

When evaluating a covered technology and identifying conflicts of interest, a firm should consider the circumstances in which a covered technology would be deployed in investor interactions. Firms that use a covered technology in investor interactions that operates autonomously or with limited involvement by firm personnel should consider subjecting it to more scrutiny because the firm’s personnel may not immediately notice if the conflicts become apparent once the technology is deployed, or if its outputs change over time.<sup>150</sup> On the other hand, if a covered technology is only used to provide first drafts of marketing materials, or is only used to provide investment ideas that will be more fully considered by firm personnel who are trained on the firm’s compliance policies, and the drafts or ideas are subjected to scrutiny throughout the review process before the output is ultimately used in an investor interaction, the covered technology generally may need comparatively less scrutiny.

In certain cases, it may be difficult or impossible to evaluate a particular covered technology or identify any conflict of interest associated with its use or potential use within the meaning of the proposed rules. For example, many large language models may consider millions of different data points, which could make it difficult for a firm to determine whether certain of those data points implicate the firm’s interest. In some cases, it may be difficult for the firm to understand exactly what is in the data set that the model is considering, for example, if it was trained on a data set from the entire internet. Likewise, there may be situations where a firm does

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<sup>150</sup> This tendency would also mean that the technology would need to be tested on a more frequent basis. *See infra* section II.A.2.b (discussing proposed testing requirement as it would apply to technologies that “drift” or that operate autonomously).

not have full visibility into all aspects of how a covered technology functions, such as if the firm licensed it from a third party.<sup>151</sup> However, a firm's lack of visibility would not absolve it of the responsibility to use a covered technology in investor interactions in compliance with the proposed conflicts rules.

The Commission is aware that some more complex covered technologies lack explainability as to how the technology functions in practice, and how it reaches its conclusions (e.g., a “black box” algorithm where it is unclear exactly what inputs the technology is relying on and how it weights them). The proposed conflicts rules would apply to these covered technologies, and firms would only be able to continue using them where all requirements of the proposed conflicts rules are met, including the requirements of the evaluation, identification, testing, determination, and elimination or neutralization sections. For example, as a practical matter, firms that use such covered technologies likely may not meet the requirements of paragraph (b) of the proposed conflicts rules where they are unable to identify all conflicts of interest associated with the use of such covered technology. However, in such cases, firms may be able to modify these technologies, for example by embedding explainability features into their models and adopting back-end controls (such as limiting the personnel who can use a technology or the use cases in which it could be employed) in a manner that will enable firms to satisfy these requirements.

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<sup>151</sup> FINRA has stated that outsourcing an activity or function to a third-party vendor does not relieve broker-dealers of their supervisory obligations, which must be reasonably designed to achieve compliance with Federal securities laws and regulations, as well as FINRA rules. *See* Vendor Management and Outsourcing, FINRA Regulatory Notice 21-29 (Aug. 13, 2021), <https://www.finra.org/sites/default/files/2021-08/Regulatory-Notice-21-29.pdf>. We also recently proposed a rule that, if adopted, would govern outsourcing by investment advisers of certain covered functions, and would in certain cases require investment advisers to obtain reasonable assurances that third parties could meet certain standards required by the Advisers Act and the rules thereunder. *See* Proposed Outsourcing Rule, *supra* note 124.

We request comment on all aspects of the proposed conflict rules' identification and evaluation requirement, including the following items:

21. Do the proposed conflicts rules' identification and evaluation requirements complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa?
22. Is the proposed requirement that a firm evaluate any use or reasonably foreseeable potential use of a covered technology to identify any conflict of interest associated with that use or potential use sufficient for a firm to understand how it should comply with the proposed conflicts rules? Should firms only be required to evaluate a technology used in investor interactions and identify associated conflicts of interest if they reasonably believe their use (or potential use) of the technology could be associated with a conflict of interest that results in their interest being placed ahead of investors' interests? Absent the evaluation and identification required under the proposed rule, how would firms form such a reasonable belief? Should we use some other standard, such as a good faith, recklessness, or actual knowledge standard, or some other option? Would such a standard be sufficient to protect investors from the potential harmful impact of conflicts of interest? Is the requirement sufficiently general that it would continue to apply to future technologies with features we may not currently anticipate? If we were to provide additional clarity (whether through guidance or by changing the regulatory text), how should we ensure that the rule's requirement to identify

and evaluate these conflicts is sufficiently general that it would continue to apply to future technologies with features or functionality that we may not currently anticipate? Should we define the terms “identify” or “evaluate” in the regulatory text and, if so, how should they be defined? Should we use different terms to address this concept and, if so, which terms and how should they be defined?

23. The identification and evaluation requirement would also require firms to identify and evaluate conflicts of interest associated with use or potential use of a covered technology by an associated person; what challenges, if any, would firms face due to this aspect of the proposed conflicts rules? Should we make any changes as a result? For example, should we limit the scope of the requirement to conflicts of interest of which the firm is aware or reasonably should be aware or should we limit the scope to any conflict that is reasonably foreseeable? Instead of or in addition to covering conflicts of interest associated with firms’ associated persons’ use of covered technologies, should we prescribe any additional requirements, such as additional diligence or policies and procedures, relating to conflicts of interest associated with firms’ associated persons’ use of covered technologies? The proposed conflicts rules would consider conflicts of associated persons only for associated persons that are individuals, and not of entities that control, are controlled by, or are under common control with a firm, but many of the Commission’s enforcement actions relating to undisclosed conflicts have involved conflicts of firms’ affiliated entities, and not of individuals.<sup>152</sup> In

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<sup>152</sup> See, e.g., In re. Charles Schwab & Co, *supra* note 89.

addition to natural persons, should we broaden the requirement to cover entities controlling, controlled by, or under common control with firms?

24. Do the proposed conflicts rules provide appropriate clarity around when a firm uses covered technology in an investor interaction? For instance, is the guidance included in this release clear that the proposed conflicts rules would not distinguish between a firm directly using a covered technology in an investor interaction, such as when an investor interfaces with the covered technology without an intermediary of the firm, and when a firm uses covered technology indirectly in an investor interaction, such as where staff of the firm receives the output and communicates it to the investor? Do commenters agree with this scope? Should we instead exclude “indirect” use in investor interactions? Alternatively, should we include indirect uses in investor interactions but apply the rule differently? If so, what safeguards, if any, would be necessary or appropriate for indirect uses in investor interactions? As an example, should the rule make a distinction between an investor interaction using a covered technology itself (*e.g.*, a behavioral feature on a digital platform) and an investor interaction in which the firm uses covered technology indirectly (*e.g.*, a broker emailing a recommendation that it generated using AI-tools)? Should we revise the rule text to explicitly include “indirect” investor interactions, for example by adding the phrase “directly or indirectly”? Alternatively, should the rule text include a definition of “use” within the context of a firm’s *use* of a covered technology in an investor interaction?

25. How can scalability rapidly exacerbate the magnitude and potential effect of the conflict in a way that could make full and fair disclosure and informed consent unachievable or more difficult? Does this depend on who the investors are (*e.g.*, individuals versus entities)? Is it possible to disclose conflicts that are associated with the use of certain covered technologies in a manner that would enable investors to understand and provide consent? What are the characteristics of such technologies, and how do they differ from PDA-like technologies? How should the final conflicts rules account for such technologies? For instance, should certain uses of covered technologies by firms not be subject to the identification, determination, and elimination or neutralization requirements in the proposed conflicts rules? Should we permit firms to provide disclosure regarding their use of such technologies as an alternative method of complying with the proposed conflicts rules? If so, should the final rules contain principles pursuant to which firms would decide whether and how they are able to disclose the conflicts? Should the Commission instead adopt disclosure standards or criteria? What would those disclosure standards or criteria entail? For example, should one such standard be that the technology is easily understandable to laypersons? What would constitute “easily understandable to laypersons”? Alternatively, should the Commission set out different classes of conflicts of interest or different classes of covered technologies and prescribe different ways to address each such conflicts or technologies?
26. Are there particular methods that firms use to identify and evaluate conflicts of interest that we should discuss in the proposed conflicts rules? Should we describe

particular methods of identification and evaluation that would comply with the rules? If we were to address such methods specifically, how would we ensure that the rule continues to apply to new technologies and new types of investor interactions as they develop?

27. How widespread is the use of “black box”-type models currently? Under existing law, do firms believe that it is possible to use black box technologies in compliance with the applicable standard of conduct and, if so, what steps do they take to comply with the applicable standard of conduct? How will firms using black box technologies meet the requirements of the proposed conflicts rules? Will this require significant changes in firms’ practices? What challenges would firms face when identifying and evaluating conflicts of interest associated with black box technologies, where the outputs do not always make clear which inputs were relied on, and how those inputs were weighted? Are there situations where firms are not able conclusively to identify and evaluate all potential conflicts of interest associated with a covered technology, including because it is a black box? How prevalent are these situations? Will they be able to identify and evaluate whether a firm interest is being considered, or to determine whether such interest is being placed ahead of the interests of investors? Instead of or in addition to the proposed requirements, should we explicitly require that any technologies used by firms be explainable? Is our understanding correct that firms could build “explainability” features into the technology in order to give the model the capacity to explain why it reached a particular outcome, recommendation, or prediction?

28. How will firms conduct conflict of interest identification and evaluation using personnel who are well-trained on both the inner workings of covered technologies used in investor interactions and how to identify common conflicts of interest under the applicable standard of conduct? Are there other methods firms may use, such as third-party consultants and, if so, should we explicitly address these other methods? For example, should we explicitly permit or require a firm to rely on an analysis prepared by a third party identifying and evaluating the conflicts of interest that could be associated with a particular covered technology? If we were to explicitly address third-party analyses, are there particular situations we should address? For example, should we permit firms to rely on analyses by developers of covered technologies that are licensed to firms? What standards would be necessary in order for a firm to reasonably rely on a third-party analysis? For example, should a third-party analyst be required to demonstrate a particular level of expertise, possess a particular credential, certification, or license, or be independent from the developer of the technology or the firm relying on the analysis? How should firms address situations where the underlying source code is not available or is incomplete, or where it is very complex?
29. When firms license covered technologies used in investor interactions, is the available documentation sufficient for them to determine whether such technologies present conflicts of interest? Is review of such documentation sufficient for a firm to identify and evaluate conflicts of interest?



## **b. Testing**

As part of the identification and evaluation requirement, the proposed conflicts rules would include a requirement to test each covered technology prior to its implementation or material modification, and periodically thereafter, to determine whether the use of such covered technology is associated with a conflict of interest.<sup>153</sup> This obligation would help ensure that conflicts of interest that may harm investors are identified in light of how the covered technology actually operates. For example, such testing may surface additional information that would not be apparent simply from reviewing the source code or documentation for the covered technology or the underlying data it uses. It may also surface pre-existing business practices of a firm where the firm considers firm-favorable information in its interactions with investors, and the firm's use of covered technology that replicates such business practices is associated with a conflict of interest by causing the technology to consider such firm-favorable information.

Although the proposed rules would not specify any particular method of testing or frequency of retesting that the firm must conduct, there are two specific times testing is required. A firm would be required to conduct testing prior to the covered technology being implemented.<sup>154</sup> A firm also would be required to conduct testing before deploying any "material modification" of the technology, such as a modification to add new functionality like expanding the asset classes covered by the technology. We would not generally view minor modifications, such as standard software updates, security or other patches, bug fixes, or minor performance

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<sup>153</sup> Proposed conflicts rules at (b)(1). Testing would only be required by the proposed conflicts rules as part of the identification and evaluation prong of the rules. As a practical matter, some firms that believe they have eliminated, or neutralized the effect of, conflicts of interest associated with their use of a covered technology may wish to confirm this through testing. *See infra* section II.A.2.e (describing elimination and neutralization).

<sup>154</sup> *See infra* section II.A.2.e for additional information regarding drift.

improvements to be a “material modification.” During the time that the material modifications are being tested, a firm could continue to use an older version of the covered technology if the firm’s use of such previous version of the technology complies with the proposed conflicts rules.

The proposed requirement to retest a covered technology periodically does not specify how often retesting would be required. As a result, a firm also would need to determine how often, and the manner in which, to retest covered technologies used in investor interactions.<sup>155</sup> As with the proposed identification and evaluation requirement, a firm’s testing methodologies and frequencies may vary depending on the nature and complexity of the covered technologies it deploys. Relatively simple or easy-to-understand covered technologies where the risk of a conflict of interest is low could be subject to similarly simple testing protocols, and such testing could even take place concurrently with the firm’s efforts to identify and evaluate any conflicts of interest associated with the covered technology. For example, firms that use relatively straightforward technology may determine that it is appropriate to expend the majority of their testing efforts when technology is first implemented (*i.e.*, first deployed) or when it is substantially modified, and any periodic testing may focus only on a sampling of the firm’s covered technologies.

On the other hand, firms that use complex covered technologies generally should use testing methodologies and frequencies that are tailored to this complexity and that are based on a review of the particular features that make the technologies more or less likely to involve a conflict of interest. For example, a firm may determine that it is necessary to use specific testing

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<sup>155</sup> Though the policies and procedures requirement of the proposed conflicts rules would not explicitly require a firm to specify how often it would retest its covered technologies, as a practical matter, many firms may find it easier to comply with the requirement to retest their covered technologies periodically by implementing a policy to guide firm personnel.

methodologies for certain complex covered technologies. Some covered technologies may need to be tested using A/B testing to determine what factors are being optimized, to determine whether any of those factors are the firm’s interests (or act as proxies for the firm’s interests), or to estimate the effect of the methodology with and without the factors that involve the firm’s interests.<sup>156</sup> Firms may also choose to review data about a technology’s historical performance to monitor signs that it may be optimizing for firm-favorable factors.

Likewise, certain learning models are prone to “drift” or “decay,” which can occur when the data the models were trained on differs from the data that they encounter once deployed, and their outputs differ from what would be expected because the training data did not account for such difference. When models are constantly optimized, this can result in a feedback loop that, over time, magnifies small biases and causes the outputs to differ from what would be expected.<sup>157</sup> If a model has experienced drift, the drift, on its own, would not constitute a material modification. But if a firm is aware that a model is prone to drift (*e.g.*, due to information developed during the evaluation and identification stage, or through review of the technology’s documentation), the firm would need to take this into account as it complied with other aspects of the proposed conflicts rules in order to help ensure that the steps it took to comply with the proposed rules were effective. A firm that uses covered technologies that exhibit this phenomenon may determine that it is necessary to test the technology more frequently to determine if it continues to function in accordance with the proposed conflict rules, even if the

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<sup>156</sup> See Seldon, *supra* note 74. Though the testing requirement is contained in section (b)(1) of the proposed conflicts rules, testing could also be used to aid compliance with other aspects of the proposed conflicts rules. For example, as discussed *infra*, testing may assist a firm in the determination process in section (b)(2) of the proposed conflicts rules or the elimination and neutralization process in section (b)(3) of the proposed conflicts rules.

<sup>157</sup> See AI Infrastructure Alliance, *Everything You Need to Know about Drift in Machine Learning* (May 25, 2022), <https://ai-infrastructure.org/everything-you-need-to-know-about-drift-in-machine-learning/>.

covered technology has not been modified by the firm. The same may be true for covered technologies that function with limited involvement from firm personnel, since otherwise firm personnel may not immediately notice any changes in how the technology functions.

As firms consider appropriate timing and manner of retesting, they should consider the nature and complexity of the technology. For example, a firm may determine to test relatively uncomplicated technology or technology used only for interactions that are subject to numerous other compliance controls less frequently than it would test a very complex technology that interacts directly with investors without any other human interaction. A firm should also consider whether covered technology continues to be used as intended and as originally tested. For example, if a firm originally develops a technology only for a limited purpose, but then begins to use the technology in additional investor interactions that differ substantially from the original use case, the firm may determine it is necessary to retest the technology with respect to this new use case in order to determine whether any unforeseen conflicts arise as a result.

We request comment on all aspects of the proposed conflicts rules' testing requirement, including the following items:

30. Is the proposed requirement to test covered technologies used in investor interactions prior to implementation sufficiently clear? For example, are there circumstances where it would not be apparent when a technology has been "implemented" for purposes of the proposed conflicts rules? Should we specifically define the term "implementation," for example by defining it to mean the first time the technology is used in investor interactions? If a firm deploys a covered technology on a "pilot" basis to a limited group of users, should this not be considered to be an "implementation" for purposes of the proposed conflicts

rules, even if the technology is used in investor interactions? If we were to provide such an exclusion, what additional safeguards should be required? For example, should firms seeking to rely on this exclusion be required to subject the covered technology to enhanced oversight, such as requiring regular reports on how the technology is being used, requiring members of the pilot group to determine independently whether their use of the technology is resulting in interactions that place the firm's interests ahead of investors' interests, or only permitting certain firm personnel to use the technology? Should the exclusion be time-limited, such as a limitation of 30, 60, or 90 days? Who would be eligible to be in the pilot group? Should investors be required to be notified, or to affirmatively consent before interactions with such investors are made part of such a pilot program? Would such a limitation create incentives not to test covered technologies thoroughly enough?

31. Is the proposed requirement to test covered technologies prior to material modification sufficiently clear? For example, are there circumstances where it would not be apparent when a technology has been "materially modified" for purposes of the proposed conflicts rules? We expressed our view that normal-course software updates, bug fixes, and security and other patches are not "material modifications" triggering retesting. Should we require testing of such updates, fixes, and patches? Should we modify the rule text to specify that such updates and patches are not material modifications? Should we provide additional guidance on what constitutes a material modification, such as basing it on "major" version numbers (*e.g.*, 1.XXX, 2.XXX, 3.XXX, etc.) vs. "minor" version numbers

(*e.g.*, X.01, X.02, X.03, etc.)? Alternatively, are there situations where reference to version numbers would be inappropriate, such as when a material change for purposes of this rule would be assigned a minor version number? Should we make any special accommodation for technologies that are updated on a regular schedule, regardless of whether such modifications are material? Should firms be required to consider the cumulative impact of several modifications, each of which may not be material on its own, when considering whether a technology has been materially modified? If an algorithm itself has not been modified, but the data considered has been materially modified, should this be treated as a “material modification” for purposes of the proposed conflicts rules? If we were to do so, should we provide additional guidance on how firms should decide when a dataset has been materially modified?

32. Is the proposed requirement to test covered technologies periodically sufficiently clear? Should firms be able to test different covered technologies on different timeframes depending on the specific risks of the covered technologies, as proposed? Should we require that covered technologies at least be tested on an annual basis or other specified frequency? Should we require some or all covered technologies, such as technologies whose outcomes may be difficult to explain or technologies that operate with limited human interaction, to be tested more frequently, such as every 30, 60, or 90 days?
33. Should we specify any particular testing methodologies firms would be required to use, such as A/B testing? If we were to do so, should we only require such methodologies to be used on certain types of technologies and, if so, which ones?

For example, should we require only PDA-like technologies (as opposed to all covered technologies) to be tested using certain methodologies such as A/B testing? Are there certain testing methodologies that are only applicable to certain types of technologies? Are there other methods firms may use to test compliance with the proposed conflicts rules, such as third-party consultants and, if so, should we explicitly address these other methods? For example, should we explicitly permit or require a firm to rely on an analysis prepared by a third party? If we were to explicitly address third-party analyses, are there particular situations we should address? For example, should we permit firms to rely on analyses by developers of covered technologies that are licensed to firms? What standards would be necessary in order for a firm to reasonably rely on a third-party analysis? For example, should a third-party analyst be required to demonstrate a particular level of expertise, possess a particular credential, certification, or license, or be independent from the developer of the technology or the firm relying on the analysis?

34. Should we provide an exception from the testing requirement? For example, for urgent changes that are necessary to protect against immediate investor harm, for regulatory reasons, or to correct unexpected developments, such as major bugs, security issues, or conflicts of interest that had not previously been identified (or that developed between periodic testing intervals). Should we require firms to create or maintain any documentation in connection with relying on such an exception? Should reliance on such an exception be subject to any conditions,

such as conducting testing as soon as practicable or only for a limited, specified period of time (for example, a few days, a week, or a month)?

35. Should we provide a temporary exception from the testing requirement for technologies that are already in use by firms and, if so, when should that exception expire? If we were to provide a temporary exception for technologies that are already in use, should the temporary exception also apply to other aspects of the proposed conflicts rules, such as the identification and evaluation, determination, or elimination or neutralization prongs, the policies and procedures requirement, or the proposed recordkeeping amendments?

**c. Conflict of Interest**

Under the proposed conflicts rules, a conflict of interest would exist when a firm uses a covered technology that takes into consideration an interest of the firm or its associated persons. The proposed conflicts rules would cover use of a covered technology by both a firm and associated persons of the firm and would address technologies that take into account both interests of the firm and the interests of its associated persons.<sup>158</sup> The proposed conflicts rules would define “conflict of interest” broadly and make clear that, if a covered technology considers *any* firm-favorable information in an investor interaction or information favorable to a firm’s associated persons, the firm should evaluate the conflict and determine whether such consideration involves a conflict of interest that places the interest of the firm or its associated

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<sup>158</sup> See paragraph (a) of the proposed conflicts rules. As discussed previously, while the use of covered technology that takes into consideration an interest of the firm or an associated person could present a conflict of interest, the proposed conflicts rules would provide an exception for situations where the covered technology is used in investor interactions solely for purposes of meeting legal or regulatory obligations or providing clerical, ministerial, or general administrative support. See proposed conflicts rules at paragraph (a) and discussion *supra* section II.A.1.b.



persons ahead of investors' interests and, if so, how to eliminate, or neutralize the effect of, that conflict of interest.

We recognize that the proposed conflicts rules—including the broad definition of conflict of interest—means that some conflicts will be identified that do not place the interests of the firm or its associated persons ahead of those of investors, and thus would not need to be eliminated or their effect neutralized. However, a covered technology may consider many factors (*e.g.*, as part of an algorithm or data input). One factor among three under consideration by the technology may be highly likely to cause the technology to place the interests of the firm ahead of investors, and the effect of considering that factor may be readily apparent. On the other hand, one conflicted factor among thousands in the algorithm or data set upon which a technology is based may, or may not, cause the covered technology to produce a result that places the interests of the firm ahead of the interests of investors, and the effect of considering that factor may not be immediately apparent without testing (as discussed above). Without a broad definition and resulting evaluation, this differentiation among factors that do, and do not, result in investor interactions that place the firm's interests ahead of investors' interests may be impossible.

There are many ways in which a use of covered technology in investor interactions can be associated with a conflict of interest. For example, when covered technology takes into account the profits or revenues of the firm, that would be a conflict of interest under the proposal regardless of whether the firm places its interests ahead of investors' interests. Revenue or profits can be taken into account directly, such as if a firm populates an asset allocation algorithm on its website to prioritize investments that it is trying to promote because it benefits the firm (*e.g.*, by

over-weighting funds that make revenue sharing payments or proprietary funds).<sup>159</sup> Likewise, if a firm deploys a covered technology to interact with an investor, such as by displaying selected or ranked options for retirement accounts that takes into account the amount of revenue the firm would receive, the firm's use of the covered technology would involve a conflict of interest regardless of whether the firm places its interests ahead of investors' interests.

Revenue or profits to the firm can also be indirectly taken into consideration and trigger the proposed conflicts rules, such as through incentivizing increased trading activity or opening of options or margin accounts, if increased trading or opening of such accounts would cause the firm to experience higher profits, such as through increased commissions or revenue sharing from the wholesaler that executes the trade or through increased profits for the firm.<sup>160</sup> For example, if a firm uses a neural network to provide investment advice or generate general investment ideas to populate an investment allocation tool, the network may be caused to ingest vast amounts of historical or real-time data, then repeatedly be optimized or trained to determine which outcome(s) to generate.<sup>161</sup> If one of the pieces of data that the neural network considers is the effect on the firm's interests, such as the firm's profitability or revenue, it involves a conflict that should be examined to determine whether it could produce outcomes, including changing

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<sup>159</sup> A conflict could exist irrespective of whether investment in such funds is in the best interest of the investor.

<sup>160</sup> These conflicts are distinct from the limited exception for conflicts of interest associated with more generally attracting investors to open new accounts, discussed in section II.A.2.e, *infra*, because generally attracting new investors is essential to the business of any firm. On the other hand, incentivizing specific types of activity (such as margin or options trading privileges, as opposed to opening a general account, or investing in a particular type of investment, as opposed to just opening an account to invest) that is particularly profitable to a firm (and is not always in investors' interest), is intentionally addressed by the proposed conflicts rules.

<sup>161</sup> See, e.g., Alexey Dosovitskiy, Google Research, *Optimizing Multiple Loss Functions with Loss-Conditional Training* (Apr. 27, 2020), <https://ai.googleblog.com/2020/04/optimizing-multiple-loss-functions-with.html>.

outcomes over time (*e.g.*, through drift), that place the interest of the firm ahead of the interest of the investor.

The specific interest that is taken into account, and the degree to which it is weighted in the covered technology, would not affect the determination of whether a conflict of interest exists, as the presence of any firm interest in any degree, for the reasons discussed above, would constitute a conflict of interest. Such considerations would be relevant, however, when considering whether the conflict of interest places the interest of the firm ahead of those of investors and therefore whether it is necessary to eliminate, or neutralize the effect of, the conflict of interest, as discussed further below, and, if so, what steps could be taken to do so.<sup>162</sup>

We request comment on all aspects of the proposed definition of conflict of interest, including the following items:

36. Do commenters agree that a firm would have a conflict of interest with an investor if the firm takes into consideration its profits and revenues in its investor interactions using covered technology? Why or why not? Are there additional circumstances that should trigger the rule if the firm takes these circumstances into account in its investor interactions, such as considering any factor which is not directly in the interest of the investor? Should we narrow the proposed definition and, if so, are there particular activities that should be excluded, such as when a technology considers a very large dataset where the firm has no reason to believe that the data considers the interests of the firm, like a technology trained on all books in the English language? Are there other datasets that should be

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<sup>162</sup> See *infra* section II.A.2.e.

excluded and, if so, how broad should a dataset be required to be in order to qualify for the exclusion? If we were to provide an exclusion, should we do so by excluding particular activities or types of datasets by name, or through a more principles-based approach?

37. Is the description of when a conflict of interest exists sufficiently clear? Would firms be able to identify what would and would not be a conflict of interest for purposes of the rules? Advisers already have a fiduciary duty to eliminate, or at least to expose, all conflicts of interest which might incline them—consciously or unconsciously—to render advice that is not disinterested, and broker-dealers already have a duty to identify and at a minimum disclose or eliminate all conflicts of interest associated with a recommendation and mitigate certain conflicts of interest under Reg BI. How do firms currently identify conflicts of interest associated with their use of what the proposed conflicts rules would define as covered technologies in order to ensure that such use complies with existing standards? Will it be confusing to firms that the proposed conflicts rules also use the term “conflict of interest” to describe a distinct, but related, concept? If so, should we use a different term other than “conflict of interest,” such as a “technology conflict” or a “potential conflict of interest?”
38. The proposed definition of “conflict of interest” would also include interests of firms’ associated persons. What challenges, if any, would firms face due to this aspect of the proposed conflicts rules? Should we make any changes as a result? For example, should we limit the scope of the definition to conflicts of interest of which the firm is aware or reasonably should be aware? Instead of or in addition

to covering conflicts of interest that arise due to the interests of firms' associated persons, should we prescribe any additional requirements, such as additional diligence or policies and procedures, relating to conflicts of interest of firms' associated persons? In addition to natural persons, should we explicitly adopt a definition of "conflict of interest" that would cover interests of entities controlling, controlled by, or under common control with firms, or other affiliates (or modify the rule provisions requiring the consideration of conflicts of associated persons to remove the limitations to associated persons that are natural persons)?

39. If we were to provide an exclusion for technologies that consider large datasets where firms have no reason to believe the dataset favors the interests of the firm, should we require such datasets to meet minimum standards? For example, should we require firms to conduct diligence regarding how the data was collected in order to support their determination that the dataset does not incorporate the firm's interests? Should there be different standards for data that is itself generated in part by a technology that may meet the definition of covered technology (and thus may incorporate its own conflicts of interest), such as subjecting that technology to all or part of the proposed rules?
40. Should we incorporate other minimum standards into data considered by covered technologies that are not directly related to interests of the firm but may implicate other Commission priorities, or have public policy implications? For example, should we require firms to take steps to understand whether the data does or could involve material nonpublic information? Should firms be required to consider

whether the data is sensitive data that could be subject to cybersecurity or privacy rules?

41. Do firms ever provide firm-favorable information to their covered technologies for the purpose of explicitly instructing the covered technology *not* to consider such information? Are there other circumstances in which covered technologies consider firm-favorable information that do not raise conflict of interest concerns? If so, should we make any changes to the definition of conflict of interest as a result? How could firms determine that no conflict of interest concerns are associated with their use of a covered technology without conducting the steps that would be required under the proposed conflicts rules?
42. Is it clear that the proposed definition of conflict of interest includes when the covered technology has the potential to take into account the firm's (or its associated persons') interests, including the firm's revenue or profits, directly or indirectly? Are there steps we could take to clarify, for example by providing additional examples of factors that, if considered, would constitute a conflict of interest?
43. Do commenters agree that, as proposed, a conflict of interest would exist even if a covered technology factors in a single firm- or associated person-favorable interest among many other factors that do not favor the firm or its associated person, regardless of which interest is favored and the degree to which it is weighted? Should the specific interest of the firm or associated person that is taken into account, such as the firm's revenues or profits, or the degree to which it is weighted in the covered technology, affect the determination of whether a

conflict of interest exists at all? How would this differ in practice from determining that a conflict of interest does exist but does not place the firm's interests ahead of investors' interests?

44. Should we exclude certain categories of conflicts?

**d. Determination**

The proposed conflicts rules would require a firm, after evaluating any use or reasonably foreseeable potential use of a covered technology by a firm or its associated person in any investor interaction to identify any conflict of interest associated with that use or potential use, to determine whether such conflict of interest places or results in placing the firm's or its associated person's interest ahead of investors' interests, subject to certain exceptions.<sup>163</sup> Determining whether an investor interaction involving such a conflict of interest would place or results in placing the firm's or its associated person's interests ahead of investors' interests is a facts and circumstances analysis, and would depend on a consideration of a variety of factors, such as the covered technology, its anticipated use, the conflicts of interest involved, the methodologies used and outcomes generated, and the interests of the investor. Based on this analysis, a firm must reasonably believe that the covered technology either does not place the interests of the firm or its associated persons ahead of investors' interests, or the firm would need to take additional steps to eliminate, or neutralize the effect of, the conflict.<sup>164</sup> Applicable law already limits firms' use of technologies whose outputs are based in part on data points favorable to a firm in certain circumstances. Investment advisers using such technologies to provide investment advice are

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<sup>163</sup> Proposed conflicts rules at (b)(2).

<sup>164</sup> The proposed conflicts rules do not prescribe strict numerical weights. Instead, determination of the relative level of benefits to the firm and to the investor should take into account all applicable facts and circumstances.

already required to consider whether they could cause the adviser “consciously or unconsciously to render advice which is not disinterested.”<sup>165</sup> Similarly, broker-dealers that use technology to make certain recommendations to a retail customer must establish, maintain, and enforce written policies and procedures reasonably designed to achieve compliance with Reg BI, including its Conflict of Interest Obligation.<sup>166</sup>

In the case of many covered technologies, it may be readily apparent that, while the technology may take into account an interest of the firm, it does not result in the firm’s interests being placed ahead of investors’ interests. For example, many investment advisers create financial models of a portfolio company’s three financial statements (*i.e.*, the company’s balance sheet, income statement, and statement of cashflows) to help evaluate whether to advise their clients to invest in a particular portfolio company. It is not uncommon for a financial model to show the potential returns of the investment for the client, along with a potential performance-based fee that would be received by the adviser, if the portfolio company achieved certain levels of growth. An adviser’s consideration of metrics that are favorable to it, such as a potential performance-based fee it could receive, would constitute a conflict of interest under the proposed conflicts rules. Under the determination requirement, however, the adviser could, based on the applicable facts and circumstances, determine that such conflict of interest does not result in its

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<sup>165</sup> See Fiduciary Interpretation, *supra* note 8.

<sup>166</sup> See Exchange Act rule 15l-1(a)(2)(iii) and (iv).



own interests being placed ahead of investors' interests if the outcome is equally (or more) favorable to the investor regardless of whether the factor is considered.<sup>167</sup>

On the other hand, if the model is designed to screen out an investment if it would not result in a sufficient performance-based fee for the adviser despite acceptable returns for investors, this would be an example of the adviser's interests being placed ahead of investors' interests because the investors are being deprived of an investment due to the adviser's consideration of its own interest. Covered technologies like the model in this example, which explicitly and intentionally consider a firm's interests as an integral part of its outputs, are highly likely to result in investor interactions that place the interests of the firm ahead of investors' interests. Firms should consider carefully reviewing the outputs of such technologies to determine whether the firm's or its associated persons' interests are being placed ahead of the interests of the investor (*e.g.*, by reviewing how the outputs vary if the firm's or associated persons' interests are not considered).

Similarly, a broker-dealer may bring general investment ideas to the attention of retail investors, using an algorithm for selection, where some of the investments that may be selected provide revenue to the firm if the investor places an order to purchase. If the firm determines that in selecting the investment ideas, the algorithm used for selecting the investment ideas does not place the firm's interests ahead of investors' interests—because, for example, it does not give more prominence to the investments that provide revenue to the firm than those that do not and

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<sup>167</sup> Even though the proposed conflicts rules would not require the conflict of interest to be eliminated or its effect to be neutralized, this would remain a conflict of interest under the proposed conflicts rules (and under existing law). *See* Performance-Based Investment Advisory Fees, Investment Advisers Act Release No. 5904 (Nov. 4, 2021) [86 FR 62473 (Nov. 10, 2021)], at n.3 and accompanying text (noting the incentive “to engage in speculative trading practices while managing client funds in order to realize or increase [contingent] advisory fees” such as incentive allocations). An adviser would still be required to disclose the conflict with sufficient specificity that a client could provide informed consent. *See* Fiduciary Interpretation, *supra* note 8, at nn.67-70 and accompanying text.

no one investment is being recommended—it could reasonably determine that the conflict of interest created by the algorithm considering the revenue does not require elimination or neutralization under the proposed conflicts rules.<sup>168</sup>

If, on the other hand, the firm determined that the algorithm was more likely to give greater prominence to those investments that are more profitable for the firm over other options of equal or better quality, then it could not reasonably determine that the conflict does not result in investor interactions that place its interests ahead of investors' interest and thus, would be required to eliminate, or neutralize the effect of, the conflict by the proposed conflicts rules. As another example, the covered technology a firm uses to decide when to communicate with investors may send an automatic message to investors encouraging them to “hold steady” during a period of high volatility in the market. If the technology is programmed to send out such a message during a period of high volatility but only after a certain threshold of fee-earning assets are withdrawn from the firm, the use of that technology would involve a conflict of interest because it would consider a proxy for the firm's revenues. However, if the primary purpose of the automatic message is to keep investors from over-reacting to short-term market moves, that could be beneficial for such investors. Even though the firm would be required to identify and evaluate the conflict of interest in order to comply with the proposed conflicts rules, the firm could reasonably determine that its interests were not placed ahead of investors' interests, and thus it did not need to eliminate, or neutralize the effect of, the conflict of interest.

A firm generally should tailor the methods by which it determines whether its use of covered technologies in investor interactions places its interests ahead of investors based on the

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<sup>168</sup> While the proposed conflicts rules may not require elimination or neutralization, to the extent a broker-dealer uses such technology to make a recommendation to a retail customer, other existing regulatory obligations, such as Reg BI and Form CRS, would apply. *See supra* section I.B.

circumstances and the complexity of the underlying covered technology as well as the complexity of the conflict of interest. To the extent a firm has difficulty identifying whether a use of a covered technology in an investor interaction presents a conflict of interest within the meaning of the proposed conflicts rules, it also would have difficulty determining whether the technology could place the interests of the firm ahead of the interests of investors.<sup>169</sup> In such circumstances, the firm may need to use additional tools to comply with the proposed determination requirement. For example, if a firm built “explainability” functionality into the covered technology that gives the model the capacity to explain why it reached a particular outcome, recommendation, or prediction, this functionality could assist with the identification and determination elements of the proposed conflicts rules.<sup>170</sup> A firm using explainability features could review the output to determine whether the firm’s interests were being placed ahead of those of investors and, in any circumstance where it was not clear whether the firm’s interests were being placed ahead of investors, the firm could comply with the proposed conflicts rules for example, by ceasing to use the technology or by prophylactically treating such an ambiguity as a conflict of interest that must be eliminated or its effect neutralized.<sup>171</sup>

Even when explainability features are built into a covered technology, a firm might still be unable to determine whether the covered technology places its own interests ahead of investors’ interests. If a firm cannot determine that its use of a covered technology in investor

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<sup>169</sup> See *supra* note 151 and surrounding text (discussing building explainability features into “black box” algorithms). We believe that the “should have identified” standard in paragraph (b)(3) of the proposed conflicts rules addresses situations where a firm’s determination that a conflict of interest does not place its interests ahead of investors’ turns out to be unreasonable because it would still hold a firm accountable for the unreasonable determination. See *infra* section II.A.2.e.

<sup>170</sup> See *id.*

<sup>171</sup> See *infra* section II.A.2.e.

interactions does not result in a conflict of interest that places its interests ahead of those of investors, the firm generally should consider any conflict of interest associated with such use as one that must be eliminated or its effect neutralized, and take steps necessary to do so.<sup>172</sup> For example, as explained more fully in the following section, the firm could apply a “counterweight” to a conflict (that is, it could give more weight to certain investor-favorable information in order to make up for the consideration of firm-favorable information) that would be sufficient to neutralize the effect of conflicts that the firm reasonably foresees could result from the use of the covered technology.<sup>173</sup> We acknowledge determinations for covered technologies that consider a multitude of different data points may render it more challenging to isolate the effect of any particular data point on the outcome and, thus, to determine whether it causes a conflict of interest that places the interest of the firm ahead of investors. These cases, in particular, may benefit from the testing methods outlined above. For example, A/B testing may reveal that there is no difference in outcomes in cases where the covered technology includes or excludes certain data points or groups of data points.

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<sup>172</sup> See *infra* section II.A.2.e (discussing the “should have” identified standard). Firms that are unable to determine whether their own interests are placed ahead of investors’ for purposes of the proposed conflicts rules should consider whether full and fair disclosure to facilitate informed consent are feasible in such circumstances. See, e.g., *infra* note 316 and accompanying text (discussing informed consent in the context of highly complex algorithms). In such circumstances, when informed consent is impossible, existing law requires an investment adviser to mitigate the conflict, which could include steps similar to those we outline in the discussion of elimination and neutralization. Similarly, where a broker-dealer that makes a recommendation to a retail customer using covered technology cannot provide “full and fair” disclosure of a conflict of interest, the broker-dealer may need to take additional steps to mitigate or eliminate the conflict under the existing standard of conduct. See Reg BI Adopting Release, *supra* note 8, at section I and text accompanying nn.735-36 (“[B]roker-dealers are most capable of identifying and addressing the conflicts that may affect the obligations of their associated persons with respect to the recommendations they make, and are therefore in the best position, to affirmatively reduce the potential effect of these conflicts of interest such that they do not taint the recommendation.”).

<sup>173</sup> This is due to the “should have identified” standard. See *infra* section II.A.2.e.

We request comment on all aspects of the proposed conflict rules' determination requirement, including the following items:

45. Does the proposed conflicts rules' determination requirement complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa?
46. Is the proposed requirement that a firm determine whether any conflict of interest that it has identified places or results in placing its or its associated persons' interests ahead of investors' interests sufficiently clear? Is the requirement sufficiently general that it would continue to apply to future technologies with features we may not currently anticipate? If not, why not? Do commenters agree that a conflict of interest that *places* a firm's or its associated persons' interests ahead of investors' interests also *results in placing* its or its associated persons' interests ahead of investors' interests? If so, is the rule clearer by including both phrases or should the proposed requirement eliminate the phrase "results in placing"?
47. How do firms currently determine whether their use of technology in investor interactions results in a conflict of interest that places the interests of the firm ahead of investors' interests? Are there particular processes or strategies that should be required in the proposed determination requirement? For example, should we specifically require the use of "explainability" features when the relationship between the outputs of a model and the inputs may be unclear (and it

thus may be difficult to identify whether the interests of the firm are being placed ahead of investors' interests)? Do firms use A/B testing to determine the effects of conflicts of interest? What other types of testing do firms use to determine the effects of conflicts of interest, if any?

48. What challenges will firms face when determining whether conflicts of interest associated with "black box" technologies (where the outputs do not always make clear which inputs were relied on, and how those inputs were weighted), result in their interests being placed ahead of those of investors? How prevalent are these situations? How do firms using "black box" technologies to aid in making recommendations or providing advice determine whether they are complying with existing conflicts obligations under the investment adviser fiduciary standard and Reg BI, as applicable? If a firm is not able to determine whether its use of such a technology results in a conflict of interest that places its interests ahead of those of investors, what additional steps will a firm need to take in order to eliminate, or neutralize the effect of, such conflicts and be able to continue to use the covered technology?
49. The determination requirement would also require firms to determine whether the interests of an associated person of a firm are placed ahead of investors' interest. What challenges, if any, would firms face due to this aspect of the proposed conflicts rules? Should we make any changes as a result? For example, should we limit the scope of the requirement to conflicts of interest of which the firm is aware or reasonably should be aware? Instead of or in addition to covering firms' associated persons' interests, should we prescribe any additional requirements,

such as additional diligence or policies and procedures, relating to conflicts of interest associated with firms' associated persons? In addition to natural persons, should the determination requirement apply in the context of entities that control, are controlled by, or are under common control with firms?

50. Should we expand the determination requirement to cover other situations that would not be a "conflict of interest" as defined under the proposed conflicts rules, but would implicate other Federal securities laws, or other laws? For example, should firms be required to identify and evaluate whether their covered technologies use or consider any information that could be material nonpublic information?
51. Are there other methods firms may use to determine whether a conflict of interest results in placing the interest of the firm or an associated person of the firm ahead of the investor, such as third-party consultants and, if so, should we explicitly address these other methods? For example, should we explicitly permit or require a firm to rely on an analysis prepared by a third party? If we were to explicitly address third-party analyses, are there particular situations we should address? For example, should we permit firms to rely on analysis by developers of covered technologies that are licensed to firms? What standards would be necessary in order for a firm to reasonably rely on a third-party analysis? For example, should a third-party analyst be required to demonstrate a particular level of expertise, possess a particular certification or license, or be independent from the developer of the technology or the firm relying on the analysis?

**e. Elimination or Neutralization of Effect**

The proposed conflicts rules would require a firm to eliminate, or neutralize the effect of, any conflict of interest it determines results in an investor interaction that places the firm's (or its associated persons') interest ahead of the interests of its investors.<sup>174</sup> Consideration of *any* firm interest would be sufficient for a conflict of interest to exist under the proposed conflicts rules, but the consideration of a firm's interest, on its own, would not necessarily require that the firm eliminate, or neutralize the effect of, the conflict of interest.<sup>175</sup> After identifying that a conflict of interest exists, the firm would then determine whether the conflict of interest results in the interest of the firm or an associated person being placed ahead of investors' interests. Only where the firm makes (or reasonably should make) such a determination would the firm be required to eliminate, or neutralize the effect of, the conflict of interest.<sup>176</sup> The proposed conflicts rules would require the firm to eliminate, or neutralize the effect of, any such conflict promptly after the firm determines, or reasonably should have determined, the conflict placed the interests of the firm or associated person ahead of the interests of investors. This requirement is designed to require a firm to take steps that are in addition to, but not in conflict with, the standard of conduct that applies when it is providing advice or making recommendations, as discussed below.<sup>177</sup>

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<sup>174</sup> Proposed conflicts rules at (b)(3).

<sup>175</sup> *See infra* section II.A.2.d.

<sup>176</sup> For the avoidance of doubt, the discussion concerns consideration *by a technology* of the interests of a firm, including situations where the firm creates technology that considers the firm's or an associated person's interests. Firms of course will consider their own interests (such as whether the cost of the technology is worth the benefit) when determining whether to deploy a technology. Such consideration, on its own, would not be within the scope of the proposed conflicts rules.

<sup>177</sup> *See infra* section III.C.3. (describing the applicable standards of conduct).



The test for whether a firm has successfully eliminated or neutralized the effect of a conflict of interest is whether the interaction no longer places the interests of the firm ahead of the interests of investors.<sup>178</sup> Under the proposed conflicts rules, a firm could “eliminate” a conflict of interest, for example, by completely eliminating the practice (whether through changes to the algorithm, technology, or otherwise) that results in a conflict of interest or removing the firm’s interest from the information considered by the covered technology. For example, a firm that determined covered technology used in investor interactions favored investments where its receipt of revenue sharing payments placed the firm’s interests ahead of investors’ interests could eliminate the conflict, among other methods, by ending revenue sharing arrangements or by ensuring that its covered technologies do not consider investments that pay it revenue sharing payments.

However, a firm does not have to eliminate such conflicts. A firm instead could “neutralize the effect of” a conflict of interest by taking steps to address the conflict. In this regard, whether through elimination or neutralization, the proposed conflicts rules would require that any conflicts of interest not place the firm’s interest ahead of investors’ interests. In a neutralization scenario, the covered technology could continue to use the data or algorithm that includes the firm’s or associated person’s interest as a factor, but the firm would be required to take steps to prevent it from biasing the output towards the interest of the firm or its associated persons. The measure of whether the effect of the conflict has been neutralized would be if the investor interaction does not place the firm’s or associated person’s interest ahead of the investor. We are including neutralization as an additional method of addressing conflicts of

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<sup>178</sup> For the avoidance of doubt, if a firm substitutes one firm-favorable factor with a different factor that is a proxy for the firm-favorable factor, the firm has not eliminated, or neutralized the effect of, the conflict.

interest under the proposed conflicts rules because of the unique ways that technology can be modified or counterweighted to eliminate the harmful effects of a conflict, as well as the ways it can be tested to confirm the modification or counterweighting was successful.

Neutralization, for example, also could include rendering the consideration of the firm-favorable information subordinate to investors' interests, and thus making the conflict harmless, either by applying a "counterweight" (such as considering additional investor-favorable information that would not have otherwise have been considered in order to counteract consideration of a firm-favorable factor) or by changing how the information is analyzed or weighted such that the technology always holistically weights other factors as more important so that biased data cannot affect the outcome.

The proposed conflicts rules do not prescribe a specific way in which a firm must eliminate, or neutralize the effect of, its conflicts of interest. For example, if a firm that is a robo-adviser determines that it uses covered technology to direct or steer investors to invest in funds the firm itself sponsors and advises when more suitable or less expensive options for the investor are available through the robo-adviser, and thereby prioritizes the firm's own profit over investors' interests, the firm could eliminate this conflict of interest by removing any data that would allow the robo-adviser to determine which funds are sponsored or advised by the firm, thus eliminating any bias in favor of the firm's interest.<sup>179</sup> The firm, alternatively, may choose to

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<sup>179</sup> As discussed *supra* section II.A.1.b, this includes a discretionary adviser where the investor does not need to approve each trade; the investor interaction in this case would be in the form of engagement through directing trades in the investor's account.

neutralize the effect of the conflict.<sup>180</sup> For instance, the firm could neutralize the effect of the conflict of interest by sufficiently increasing the weights given to factors, such as cost to the investor or risk-adjusted returns (including, in each case, comparisons to funds sponsored or advised by other firms), to provide a counterweight that prevents any consideration of the firm’s own interests from resulting in an investor interaction that places the firm’s interests ahead of investors’ interests. The proposed conflicts rules permit firms discretion on how to address the conflict—whether by eliminating it altogether or neutralizing its effect—after considering the applicable facts and circumstances, provided that the method used prevents the firm from placing its interests or an associated person’s ahead of investors’ interest.

The proposed conflicts rules do not prescribe a particular manner by which a firm must eliminate, or neutralize the effect of, any conflict of interest because of the breadth and variations of firms’ business models as well as their use of covered technology. Because of the complexity of many covered technologies, as well as the ways in which conflicts of interest may be associated with their use, we are concerned that prescribing particular means to neutralize the effect of a conflict of interest could be inapplicable or otherwise ineffective with respect to certain covered technologies (or certain conflicts of interest, the nature and extent of which may vary substantially across firms depending on their particular business models and investor

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<sup>180</sup> As discussed above, this is also consistent with an adviser’s fiduciary duty. An adviser “must, at all times, serve the best interest of its client and not subordinate its client’s interest to its own” and, unless neutralized, a conflict of interest would have the effect of subordinating a client’s interest to that of the firm. *See* Fiduciary Interpretation, *supra* note 8. Similarly, under Reg BI, broker-dealers must mitigate (*i.e.*, reduce) or eliminate conflicts of interest that would otherwise cause the broker-dealer or its associated person to make a recommendation that is not in the best interest of the retail customer. *See* Exchange Act rule 151-1(a)(2)(iii); Reg BI Adopting Release, *supra* note 8, at section II.C.3.g (“Elimination of Certain Conflicts of Interest”).

base).<sup>181</sup> The proposed approach is intended to promote flexibility and innovation by allowing the firms that use covered technologies the freedom to determine the appropriate ways to operate them, within the guardrails provided by the proposed conflicts rules, rather than requiring the technologies to be designed in a particular way solely to meet a regulatory requirement.

We recognize that reasonable steps a firm could take to eliminate, or neutralize the effect of, a conflict of interest that results in an investor interaction that places the firm's interest ahead of investors, are likely to vary and would depend on the nature of the conflict, the nature of the covered technology, the circumstances in which the covered technology is used, and the potential harm to investors. For example, if the firm's evaluation of the conflict indicates that the technology would only result in investor interactions that place the firm's or an associated person's interests ahead of investors' interests in certain limited circumstances, a firm could eliminate the conflict of interest by taking steps to prevent the technology from being used in such circumstances, or by choosing to eliminate the business practice that is associated with the conflict in the first place. Similarly, if a technology only involves a conflict of interest due to its consideration of certain data or the weights ascribed to certain data points, the firm could either prevent the technology from accessing such data (eliminating the conflict), or the firm could take steps to prevent its consideration of the data from having an effect on the outcome of the technology (neutralizing the effect of the conflict), either through consideration of additional, investor-favorable data designed to provide a countervailing signal to the technology, or through weighting the data the covered technology considers so that the firm- or associated person-

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<sup>181</sup> This same recognition of the complexity of many covered technologies is why disclosure alone could be insufficient to adequately address the conflicts of interest associated with their use. *Cf. infra* section III.D.1 (disclosure alone may not necessarily address negative outcomes when “the issue lies in human psychological factors, rather than a lack of information.”).

favorable data would not be determinative to the outputs.<sup>182</sup> A firm could also neutralize the effect of a conflict by requiring that firm personnel who are trained on the nature of the conflict of interest (*e.g.*, personnel responsible for supervising the implementation of the firm’s compliance program) operate the technology and only pass along information to investors after they deem, based on their training, that the information does not involve a conflict that results in an investor interaction that places the interests of the firm or an associated person ahead of investors’ interests.<sup>183</sup>

The proposed conflicts rules would require a firm to eliminate, or neutralize the effect of, a conflict of interest that it determines results in an investor interaction that places its interests ahead of investors’ interests “promptly” after the firm determines, or reasonably should have determined, that the conflict results in its own (or an associated person’s) interests being placed ahead of investors’ interests.<sup>184</sup> Determining what constitutes “promptly” in any given situation under the proposed conflicts rules would depend on the facts and circumstances. If eliminating, or neutralizing, the effect of, the conflict is straightforward, as would be the case if a firm simply had to update the settings of an application or restrict access using tools it already possessed, elimination or neutralization could happen soon after the identification of the conflict of interest.

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<sup>182</sup> Whether the firm-favorable data is determinative of the technology’s outputs could be verified through A/B testing. *See supra* section II.A.2.b. The specific data or weights that would be necessary to neutralize a particular conflict would depend on factors such as the conflict itself as well as the design of the applicable technology.

<sup>183</sup> This example assumes the investor interaction is indirect; we anticipate that firm personnel would not have the ability to intervene when a technology directly interacts with investors.

<sup>184</sup> If it is determined before technology is first deployed that a conflict of interest exists that places the firm’s or an associated person’s interests ahead of investors’ interests, “prompt” elimination or neutralization of the conflict could occur any time before the technology is initially deployed. That is, we do not believe it would be consistent with the proposed conflicts rules for a firm to initially deploy a technology that a firm has already determined (or should have determined) is subject to conflicts of interest that place the firm’s or an associated person’s interests ahead of its investors’ interests, then eliminate, or neutralize the effect of, those conflicts after the fact.

But if elimination, or neutralization of the effect of, a conflict of interest would require substantial amounts of new coding by firm personnel, we recognize that such modifications may take longer to implement, including because they may constitute material modifications that would need to be tested to determine whether any modifications eliminated, or neutralized the effect of, the conflict as expected, as well as to consider any new conflicts of interest that the modifications could cause. Though we recognize that modifications would not happen immediately in all circumstances, an extended period of implementation may raise questions about whether the firm acted promptly and may raise questions as to whether they are acting in accordance with their standard of care. If a firm has determined that it needs additional time to eliminate, or neutralize the effect of, a conflict of interest in accordance with the proposed conflicts rules, it would also need to consider whether continuing to use such covered technology before the conflict is eliminated or neutralized would violate any applicable standard of conduct (e.g., fiduciary duty for investment advisers or Reg BI for broker-dealers). In certain cases, it may be impossible to comply with the applicable standard of conduct without stopping use of the covered technology before the conflict of interest can be adequately addressed. As it develops a schedule for eliminating, or neutralizing the effect of, the conflict, a firm should consider the nature of the covered technology, including how it is being used in investor interactions, and the complexity of any elimination or neutralization measures. The firm should also consider and seek to minimize potential risks posed to investors as a result of the continued use of the covered technology. This might include implementing heightened review of investor interactions to help ensure that the harm is relatively limited and weighing the risks of continued exposure to the conflict of interest during remediation against the risk of making the covered technology unavailable during remediation. If a firm has a reasonable basis to believe that pulling a covered

technology out of service due to a conflict of interest would be a greater risk to investors than the conflict itself, a firm generally should consider closely surveilling and monitoring the investor interactions associated with its continued use of the technology to evaluate whether its expectation is accurate, or whether it should cease using the covered technology.

The requirement for a firm to eliminate, or neutralize the effect of, conflicts of interest that place the firm's or an associated person's interest ahead of investors' interests covers such conflicts the firm identifies, as well as those it reasonably *should have* identified. That is, in order to comply with the proposed conflicts rules, a firm would be required to use reasonable care to determine whether these conflicts could arise as a result of its use of covered technologies and how they could affect investor interactions, and to address such conflicts rather than assuming that its covered technologies do not result in its own (or its associated persons') interests being placed ahead of investors' interests. The "reasonably should have identified" standard is designed to require firms to understand the covered technology they are deploying sufficiently well to consider all the material features of the technology both when evaluating the technology and identifying conflicts, and later when determining whether those conflicts place their own (or their associated persons') interests ahead of investors' interests.

Because firms' use of covered technology is likely to be continuously changing, firms generally should consider how they will proactively address reasonably foreseeable uses (which would include potential misuses) of the covered technology. Firms should identify future and evolving conflicts when evaluating their potential use of covered technology to make sure that they have eliminated, or neutralized the effect of, all conflicts they *should have* determined place their interests ahead of investors' interests, including as their use of technology evolves. One way to address potential misuses of a technology could be to limit access to particular

technology to personnel who have been trained on the technology and how to use it in compliance with the proposed conflicts rules. This could prevent the technology from being used in investor interactions that place the firm's interests ahead of investors' interests.

The proposed requirement is also designed to be consistent with a firm's applicable standard of conduct. Investment advisers, as fiduciaries, are prohibited from subordinating their clients' interests to their own (*i.e.*, they may not place their interests ahead of their clients' interests).<sup>185</sup> In addition, investment advisers must eliminate or at least expose through full and fair disclosure all conflicts of interest which might incline an investment adviser—consciously or unconsciously—to render advice which was not disinterested.<sup>186</sup> Where an adviser uses covered technology in an investor interaction, compliance with the proposed conflicts rules' requirement that conflicts of interest be eliminated or their effect neutralized could also help the adviser satisfy its fiduciary duty. Likewise, in satisfying its fiduciary duty, an adviser may also satisfy the proposed conflicts rules' requirement to eliminate, or neutralize the effect of, certain conflicts of interest. However, due to our concerns that scalability could rapidly exacerbate the magnitude and potential effect of conflicts,<sup>187</sup> an adviser would not satisfy the proposed conflicts rules' requirement to eliminate, or neutralize the effect of, certain conflicts solely by providing disclosure to investors. As the Commission has previously stated, in cases where an investment adviser cannot fully and fairly disclose a conflict of interest to a client such that the client can provide informed consent, the adviser must take other steps such that full and fair disclosure and informed consent to the adviser's other business practices are possible.<sup>188</sup> Moreover, as the

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<sup>185</sup> See Fiduciary Interpretation, *supra* note 8, at section II.

<sup>186</sup> See Fiduciary Interpretation, *supra* note 8, at n.57 and accompanying text.

<sup>187</sup> See *supra* section I.A. for a discussion about scalability concerns.

<sup>188</sup> See Fiduciary Interpretation, *supra* note 8, at text following n.67.



Commission has previously stated, investment advisers must act in the best interests of their clients at all times and must not subordinate their clients' interests to their own.<sup>189</sup> The standard in the proposed conflicts rules is thus consistent with that over-arching fiduciary obligation.

Similarly, when making recommendations, broker-dealers must act in the best interest of a retail customer at the time the recommendation is made, without placing the firm's financial or other interest ahead of the retail customer's interests. This would include, under Reg BI's Conflict of Interest Obligation, a requirement to establish, maintain, and enforce written policies and procedures reasonably designed to, among other things, identify and at a minimum disclose, or eliminate, all conflicts of interest associated with a recommendation; identify and mitigate (*i.e.*, modify practices to reduce) conflicts of interest at the associated person level; prevent any limitations placed on the securities or investment strategies involving securities that may be recommended to a retail customer and associated conflicts of interest from causing the broker-dealer, or a natural person who is an associated person of the broker-dealer, to make recommendations that place the interest of the broker-dealer or such natural person ahead of the interest of the retail customer; and eliminate sales contests, sales quotas, bonuses, and non-cash compensation that are based on the sales of specific securities or specific types of securities within a limited period of time.<sup>190</sup> Accordingly, where a broker-dealer uses covered technology to make a recommendation, compliance with the proposed conflicts rules' requirement that conflicts of interest be eliminated or their effect neutralized could also help a broker-dealer comply with similar aspects of Reg BI's Conflict of Interest Obligation.

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<sup>189</sup> *See generally id.*

<sup>190</sup> *See* Exchange Act rule 151-1(a)(2)(iii).

For example, if a broker-dealer uses covered technology to make a recommendation to a retail customer, and the broker-dealer eliminates, or neutralizes the effect of, any firm- and associated person-level conflicts of interest under the proposed conflicts rule, it could help address compliance with certain aspects of Reg BI's Conflict of Interest Obligation. Conversely, compliance with Reg BI's Conflict of Interest Obligation could help a broker-dealer comply with the proposed conflicts rules' requirement to eliminate, or neutralize the effect of, certain conflicts of interest. However, because the proposed conflicts rules apply more broadly to the use of covered technology in investor interactions as noted earlier,<sup>191</sup> and not just to recommendations, broker-dealers would be subject to both the proposed conflicts rules' requirements and, separately when making a recommendation, Reg BI, depending on the facts and circumstances of the investor interaction and the use of the covered technology.<sup>192</sup>

Depending on the facts and circumstances, the proposed requirement may apply in addition to existing requirements for addressing conflicts of interest. While existing requirements often address conflicts of interest through disclosure, certain obligations require more than disclosure to adequately address conflicts. For instance, under both the fiduciary standard and Reg BI, disclosure of conflicts alone does not necessarily satisfy the applicable standard of conduct. As noted above, under these standards, certain conflicts should (and in some cases, must) be addressed through elimination or mitigation.<sup>193</sup> Similarly, when a firm uses covered

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<sup>191</sup> See *supra* note 80.

<sup>192</sup> Moreover, while compliance with the proposed rule's requirements could help address compliance with Reg BI's Conflict of Interest Obligation, a broker-dealer that makes a recommendation to retail customers would still be subject to Reg BI's other component obligations.

<sup>193</sup> See, e.g., Fiduciary Interpretation, *supra* note 8, at nn.67-70 (discussing informed consent); Reg BI Adopting Release, *supra* note 8, at text accompanying nn.17-19 (discussing the Conflict of Interest Obligation's requirement for broker-dealers to identify and disclose, eliminate or mitigate conflicts associated with recommendations to retail customers).

technology in an investor interaction involving a conflict of interest, scalability can make disclosure of the conflict unachievable in many circumstances such that disclosure alone would be insufficient to adequately address the conflicts of interest. This is because a conflict can replicate to a much greater magnitude and at a much greater speed than would be possible to address through timely disclosure.

We recognize that many investor interactions could have the sole goal of encouraging investors to open a new account, and that firms may use covered technologies for this purpose. The proposed conflicts rules would not require conflicts of interest that exist solely due to a firm seeking to open a new investor account to be eliminated or their effect neutralized. Even though opening an account would likely be in the interest of the firm, the proposed conflicts rules are not designed to limit firms' abilities to attract clients and customers. However, as noted above, incentivizing specific types of activity (such as margin or options trading privileges, as opposed to opening a general account, or investing in a particular type of investment, as opposed to just opening an account to invest) that is particularly profitable to a firm (and is not always in investors' interest), is intentionally addressed by the proposed conflicts rules.

We request comment on all aspects of the proposed conflicts rules' elimination or neutralization requirement, including the following items:

52. Considering that the proposed conflicts rules' elimination or neutralization evaluation requirement may overlap with existing regulatory requirements for broker-dealers and investment advisers, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa? If so, in what ways?

53. Are our concerns correct that scalability could rapidly exacerbate the magnitude and potential effect of the conflict in a way that could make full and fair disclosure and informed consent unachievable? Are there some conflicts that are more appropriately addressed by disclosure than others? Does this depend on the kind of investor interaction or kind of technology? For example, is scalability more problematic when an investor directly uses a covered technology than when an associated person communicates recommendations or advice that the associated person has generated using covered technology?
54. The elimination or neutralization requirement would also require firms to eliminate, or neutralize the effect of, conflicts of interest associated with use or potential use of a covered technology by an associated person of a firm. What challenges, if any, would firms face due to this aspect of the proposed conflicts rules? Should we make any changes as a result? Instead of or in addition to covering conflicts of interest associated with associated persons' use of covered technologies, should we prescribe any additional requirements, such as additional diligence or policies and procedures, relating to conflicts of interest associated with associated persons? In addition to natural persons, should the elimination or neutralization requirement apply in the context of entities controlling, controlled by, or under common control with firms?
55. Should firms be required to eliminate, or neutralize the effect of, conflicts of interest that place the firm's interests ahead of investors' interests as required under the proposed rules? Instead, should the elimination or neutralization obligation (or the requirements of sections (b)(1) or (b)(2) of the proposed

conflicts rules) be limited to investor interactions involving, as applicable, investment advice or recommendations by a firm or its associated persons (or by a covered technology employed by a firm or its associated persons)? Should that obligation or requirements be limited to investor interactions directly with covered technologies? What other ways could we address the risks that conflicts of interest associated with firms' use of covered technologies will result in investor interactions that place the firm's interest ahead of the investor interest?

56. Is the requirement to eliminate, or neutralize the effect of, certain conflicts of interest sufficiently clear? Should we provide any additional guidance on what we mean by "neutralize the effect of"? If so, how? Instead of, or in addition to, elimination and neutralization, should the proposed conflicts rules require mitigation of some or all of the effects of conflicts of interest determined to place a firm's interests ahead of investors' interests under section (b)(2) of the proposed conflicts rules? If so, which conflicts? Is there additional guidance we should provide, or changes we should make to the text of the proposed conflicts rules, to clarify the distinction between elimination or neutralization, on the one hand, and mitigation, on the other hand?
57. Are there particular methods that firms currently use to eliminate, or neutralize the effect of, conflicts of interest in investor interactions using covered technology? Should we indicate that certain methods (including limiting access to the technology, providing policies and procedures for "safe" use of the technology, limiting the data the technology considers, providing "counterweights," or training the algorithm to ignore certain information) are

methods we believe are generally appropriate to eliminate, or neutralize the effect of, conflicts of interest under the proposed conflicts rules or that certain methods are not appropriate for compliance with the proposed conflicts rules? If we were to provide additional guidance, how should we ensure that the proposed conflicts rules' requirement to eliminate, or neutralize the effect of, conflicts is sufficiently general that it would continue to apply to future technologies or future conflicts we may not currently anticipate as such technologies develop? Is using a "counter-signal" to train a learning model a useful way to eliminate, or neutralize the effect of, conflicts associated with the model? In addition to the testing requirement in section (b)(1) of the proposed conflicts rules, should we also require that firms that are eliminating, or neutralizing the effect of, conflicts of interest test the covered technology after such elimination or neutralization to determine whether it was successful?

58. Is our understanding correct that the proposed conflicts rules, including the proposed elimination or neutralization requirement, are consistent with the applicable standards of conduct? To what extent will firms be able to utilize existing methods of addressing conflicts of interest and existing policies and procedures in order to comply with the proposed conflicts rules? For example, do firms expect to utilize their existing methods of addressing conflicts of interest under Reg BI or the fiduciary standard, as applicable, in order to comply with the proposed conflicts rules?
59. The proposed investment adviser conflict prohibition would only apply to investment advisers registered or required to be registered under section 203 of

the Advisers Act, meaning certain firms, including exempt reporting advisers and state-registered advisers, would not be covered. Should the prohibition be expanded to cover these entities? If the investment adviser conflict prohibition is widened to capture these entities, should the policies and procedures requirement in paragraph (c) of the proposed conflicts rules be similarly widened? Would certain types of advisers, such as those that primarily provide advice through an interactive website, be disproportionately affected by this proposal? Would any such advisers seek to restructure their operations to avoid this result? We are separately proposing updates to the internet adviser exemption, 17 CFR 275.203A-2. Should we modify any aspect of the proposed conflicts rules in order to coordinate with the proposed updates to the internet adviser exemption?<sup>194</sup>

60. How do firms currently ensure their use of what the proposal would define as covered technologies complies with applicable existing rules and regulations or other legal obligations, including standards of conduct? Do firms using “black box” algorithms currently rely on disclosure instead of or in addition to affirmative design steps to address the actual and potential conflicts of interest associated with such algorithms? If so, what disclosure do firms provide and what form of informed consent do investors provide regarding firms’ use of such algorithms? How do firms comply with the applicable standard of conduct, including the duty to act in the investor’s best interest, particularly where they

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<sup>194</sup> See Exemption for Certain Investment Advisers Operating Through the Internet, Investment Advisers Act Release No. 6354 (July 26, 2023).

have been unable to determine whether their interests are being placed ahead of their investors?

61. Is the exclusion for the use of covered technologies in investor interactions that have the sole goal of encouraging investors to open a new account sufficiently clear? Should this exclusion be narrowed or broadened, and, if so, how? For example, should we provide that the exclusion is only available if a firm does not differentially market to investors in order to guide them to open a particular type of account that is especially profitable for the firm, such as an options or margin account?

### **3. *Policies and Procedures Requirement***

The proposed investment adviser conflicts rule would require every investment adviser that is subject to paragraph (b) of the rule and uses covered technology in any investor interaction to adopt and implement written policies and procedures reasonably designed to prevent violations of paragraph (b) of that rule.<sup>195</sup> Likewise, the proposed broker-dealer conflicts rule would require every broker-dealer that is subject to paragraph (b) of that rule and that uses covered technology in any investor interaction to adopt, implement, and maintain written policies and procedures reasonably designed to achieve compliance with paragraph (b) of that rule.<sup>196</sup> For

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<sup>195</sup> See proposed rule 211(h)(2)-4(c)(3). See also discussion of proposed conflicts rules at paragraphs (b)(1) through (3) *supra* section II.A.2. As noted above, the definition of “investor interaction” “does not apply to interactions solely for purposes of meeting legal or regulatory obligations or providing clerical, ministerial, or general administrative support.” See proposed conflicts rules at paragraph (a) and discussion *supra* section II.A.1.b.

<sup>196</sup> See proposed rule 15l-2(c). Under the Commission’s rules, investment advisers historically have been required to “adopt and implement” policies and procedures that are “reasonably designed to prevent violation” of the Advisers Act or rules adopted thereunder, while broker-dealers have been required to



all firms, these policies and procedures would need to include: (i) a written description of the process for evaluating any use or reasonably foreseeable potential use of a covered technology in any investor interaction pursuant to paragraph (b)(1) of the proposed conflicts rules and a written description of any material features of, including any conflicts of interest associated with the use of, any covered technology used in any investor interaction prior to such covered technology's implementation or material modification, which must be updated periodically;<sup>197</sup> (ii) a written description of the process for determining whether any conflict of interest identified pursuant to paragraph (b)(1) of the proposed conflicts rules results in an investor interaction that places the interest of the firm or its associated persons ahead of the interests of the investor;<sup>198</sup> (iii) a written description of the process for determining how to eliminate, or neutralize the effect of, any conflicts of interest determined pursuant to paragraph (b)(2) of the proposed conflicts rules to result in the interest of the investment adviser, broker-dealer, or the firm's associated persons being placed ahead of the interests of the investor;<sup>199</sup> and (iv) a review and written documentation of that review, no less frequently than annually, of the adequacy of the policies and procedures and written descriptions established pursuant to this policies and procedures

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“establish, maintain, and enforce” policies and procedures that are “reasonably designed to achieve compliance with” the particular rule. *Compare* 17 CFR 206(4)-7(a) (investment advisers required to “adopt and implement written policies and procedures reasonably designed to prevent violation”) *with* 17 CFR 240.151-1(a)(2)(iv) (broker dealers required to “establish[], maintain[], and enforce[] written policies and procedures reasonably designed to achieve compliance with”). In order to assist firms with compliance with the proposed conflicts rules’ policies and procedures requirements, we have used language that is consistent with these respective rules. Accordingly, the wording of the proposed policies and procedures requirements varies between investment advisers and broker-dealers. We do not believe, however, that there is a substantive difference between how firms would need to comply with each proposed rule. *See, e.g.*, Reg BI Adopting Release, *supra* note 8, at text accompanying n.810 (discussing policies and procedures requirements for investment advisers and broker-dealers without noting any difference despite the differing language).

<sup>197</sup> Proposed conflicts rules at (c)(1).

<sup>198</sup> Proposed conflicts rules at (c)(2).

<sup>199</sup> Proposed conflicts rules at (c)(3).

requirement and the effectiveness of their implementation. Although it is possible that some firms that use covered technology in investor interactions may not identify any conflicts of interest in carrying out the requirements of paragraph (b)(1) of the proposed conflicts rules, such firms would still be required to adopt, implement, and, in the case of broker-dealers, maintain these written policies and procedures, so as to be prepared to address any instance where such a conflict of interest is later identified by the firm in the course of its ongoing operations.

These proposed policies and procedures requirements are designed to help ensure that a firm understands how its covered technologies work when engaging in any investor interaction using covered technologies, the conflicts of interest those covered technologies present, and the potential effects of those conflicts on investors.<sup>200</sup> Further, these proposed requirements are designed to help ensure that firms will not place their own interests ahead of the interests of investors where such conflicts of interest are associated with the firm's use of covered technology. A firm's failure to adopt and implement (and, in the case of broker-dealers, maintain) these policies and procedures would constitute a violation of the proposed conflicts rules independent of any other securities law violation. As a result, the proposed conflicts rules would address the failure of a firm to adequately describe how a covered technology works and the actual or potential conflicts the technology's use could create with the interests of investors before any such conflicts cause actual harm to investors.

We are proposing minimum standards for the written descriptions and annual review that a firm's policies and procedures would need to include. However, the proposed conflicts rules

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<sup>200</sup> The policies and procedures requirements complement the elimination and neutralization requirement, and are intended to encourage development of risk-based best practices by firms, rather than to impose a one-size-fits-all solution. *Cf.* Chamber of Commerce AI Report, *supra* note 144, at 89 (discussing necessity of firms deploying certain technologies "having sufficient understanding of the system to provide effective human oversight").

would provide firms with flexibility to determine the specific means by which they address each element, and the degree of prescriptiveness the firm includes in their policies and procedures. To satisfy the proposed conflicts rules' requirement to have policies and procedures including the specified written descriptions and annual review, firms generally should take into consideration the nature of their operations, and account for the covered technologies in use or to be used. Further, in satisfying the proposed conflicts rules, a firm should account for any use or reasonably foreseeable potential use of a covered technology that does or could result in conflicts of interest in light of the firm's particular operations. For example, under the proposed conflicts rules, the level of detail firms would need to include when producing a written description of any material features of any covered technology used in any investor interaction, and the conflicts of interest associated with the use of that technology, will generally be less for those firms that either engage in a very limited use of covered technology, or that only use covered technologies that are relatively simple.

On the other hand, for a firm that makes extensive use of more complex covered technology, such as machine learning technologies that function automatically without direct interaction with firm personnel, or a firm whose conflicts of interest are more complex or extensive, the policies and procedures would need to be substantially more robust. This could include consideration of all aspects of the covered technologies the firm uses, including the data used to train the technologies, "explainability" requirements, specific training for technical staff, and maintaining (and regularly reviewing) logs sufficient to identify any risks the firm's use of a covered technology presents of non-compliance with the proposed conflicts rules.

In addition to the requirements outlined in paragraphs (c)(1)-(4) of the proposed conflicts rules, firms designing policies and procedures reasonably designed to achieve compliance with

paragraph (b) of the proposed conflicts rules generally should consider including other elements, as appropriate, such as: (i) compliance review and monitoring systems and controls; (ii) procedures that clearly designate responsibility to appropriate personnel for supervision of functions and persons; (iii) processes to escalate identified instances of noncompliance to appropriate personnel for remediation; and (iv) training of relevant personnel on the policies and procedures, as well as the forms of covered technology used by the firm.

We request comment on all aspects of the scope of the proposed conflicts rules' policies and procedures requirement, including the following items:

62. Does the proposed conflicts rules' policies and procedures requirement complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa?
63. Are all aspects of these proposed policies and procedures requirements, as well as the particular written descriptions and review to be required by a firm's policies and procedures, necessary and appropriate for achieving compliance with paragraph (b) of the proposed conflicts rules? If not, what elements should be added, deleted, or modified to better ensure firms' compliance with paragraph (b) of the proposed conflicts rules?
64. Several aspects of the proposed conflicts rules address conflicts of interest associated with use or potential use of a covered technology by an associated person of a firm; should any aspect of the proposed policies and procedures requirement be changed as a result? For example, instead of, or in addition to,

maintaining an explicit reference to a firm's associated persons in paragraph (b) of the proposed conflicts rules, should we prescribe any additional requirements, such as additional diligence or policies and procedures, relating to conflicts of interest of firms' associated persons?

65. Is the scope of firms covered by the proposed policies and procedures requirement appropriate in light of the requirements of paragraph (b) of this proposed rule? Should the proposed rule be modified to only require these policies and procedures of those firms that have identified at least one conflict of interest in their evaluation of any covered technology that is used or that it is reasonably foreseeable that the firm could potentially use in any investor interaction?
66. Should the proposed rule require that senior firm personnel and/or specific technology subject-matter experts participate in the process of adopting and implementing these policies and procedures? If so, which parties, and what should be their required scope of responsibilities? Further, should any senior firm personnel and/or specific technology subject-matter experts be required to certify that such policies and procedures that the firm adopts and implements are in compliance with the requirements of this paragraph (c) of the proposed conflicts rules? Would there be costs associated with such participation or certification? If so, what are they? When designing their policies and procedures, should firms be required to include some or all of the following: (i) compliance review and monitoring systems and controls; (ii) procedures that clearly designate responsibility to appropriate personnel for supervision of functions and persons; (iii) processes to escalate identified instances of noncompliance to appropriate

personnel for remediation; and (iv) training of relevant personnel on the policies and procedures, as well as the forms of covered technology used by the firm?

**a. Written Description of Evaluation Process to Identify Conflicts of Interest and Written Description of Material Features**

Under the proposed policies and procedures requirement, firms would need to adopt and implement (and, in the case of broker-dealers, maintain) written policies and procedures reasonably designed to achieve compliance with paragraph (b) that include a written description of the process for evaluating any use or reasonably foreseeable potential use of a covered technology in any investor interaction pursuant to paragraph (b)(1), and a written description of the material features of, including any conflicts of interest associated with the use of, any covered technology used in any investor interaction.<sup>201</sup>

The proposed requirement to include a written description of the process for evaluating any use or reasonably foreseeable potential use of a covered technology in any investor interaction within the firm's written policies and procedures is designed to help ensure the firms establish and follow a defined process for evaluating any use or reasonably foreseeable potential use of a covered technology in any investor interaction and consequently identifying any conflict of interest associated with that use or potential use, as required by paragraph (b)(1). Although the scope of any individual evaluation may depend on a variety of factors, including the specific covered technology in question, the manner in which that covered technology would interact with investors, and how the technology may be used, this process generally should be designed to provide firms with a consistent approach to satisfying the requirements of paragraph (b)(1) of

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<sup>201</sup> Proposed conflicts rules at (c)(1).

the proposed conflicts rules. This written description would assist firms in performing the vital initial step of identifying all relevant conflicts of interest, which is necessary to ultimately complying with the proposed conflicts rules' requirement to eliminate, or neutralize the effect of, those conflicts of interest that place or result in placing the interest of the firm or its associated persons ahead of the interests of the investor. In addition to assisting the firm's internal staff, this written description of the process that firms will use would assist the Commission's examinations staff in assessing the firm's compliance with the entirety of the proposed conflicts rules.

This written description must articulate a process for the firm to use in evaluating any use or reasonably foreseeable potential use of a covered technology by the firm or its associated persons in any investor interaction to identify any conflict of interest associated with that use or potential use. Further, this process must address how the firm will conduct the required testing of each such covered technology prior to its implementation or material modification, and periodically thereafter, to determine whether the use of such covered technology is associated with a conflict of interest. Although we recognize that this process must be flexible enough to account for different types of covered technologies and investor interactions that those technologies might be used in, the firm's written description generally should be specific enough to ensure the consistent identification of any associated conflicts of interest. The process described by the firm generally should detail those steps it will take in conducting this evaluation, as well as the means it will use in identifying each relevant conflict of interest.

To further promote compliance with the evaluation and identification required under paragraph (b)(1), a firm's policies and procedures would be required to include a written description of the material features of any covered technology used in any investor interaction,

including any conflicts of interest associated with the use of the covered technology, and would need to be prepared prior to its implementation or material modification, and updated periodically. As discussed above, we are concerned that some firms currently lack a holistic understanding of the covered technologies they employ, and that this could result in investor interactions that are based on unknown conflicts of interest that are harmful to the investor.<sup>202</sup> These concerns are heightened when firm personnel who are responsible for ensuring the covered technology complies with applicable laws and regulations, including SRO rules, do not fully understand how the covered technology would work in interactions with investors, and, thus, the risks the covered technology might present to those investors.

The proposed written description element is designed to address these risks in a manner that helps ensure that the firm has identified and developed an understanding of those conflicts of interest that might impact the firm's investor interactions through the use of covered technology. The material features of a covered technology generally would include how the technology works, including how it optimizes for, predicts, guides, forecasts, or directs investment-related behaviors or outcomes, in a manner that would enable the appropriate personnel at a firm to understand the potential conflicts of interest associated with the technology. Further, firms generally should include within this written description detail on when and how the firm intends to use, or could reasonably foresee using, the covered technology in investor interactions.

To the extent that the outcomes of the technology are difficult or impossible to explain (e.g., in the case of a "black box"), the description of how any associated conflicts arise would be critical to informing the application of the firm's elimination or neutralization procedures. As

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<sup>202</sup> See *supra* section I.B (background discussion on conflicts of interest).



discussed above, the Commission is aware that some more complex covered technologies lack explainability as to how they function in practice, and how they reach their conclusions.<sup>203</sup> The proposed conflicts rules would apply equally to these covered technologies, and firms would only be able to continue using them where all requirements of the proposed conflicts rules are met, including the requirements of paragraph (c). As discussed above, as a practical matter, it would be impossible for firms to use such covered technologies and meet the requirements of paragraph (b) of the proposed conflicts rules where they are unable to identify all conflicts of interest associated with the use of such covered technology.<sup>204</sup> For similar reasons, if a firm is incapable of preparing this written description of all such conflicts of interest associated with the use of the covered technology in any investor interaction as a result of the lack of explainability of the analytical, technological, or computational function, algorithm, model, correlation matrix, or similar method or process comprising the covered technology, as well as its resulting outcomes, it would not be possible for the firm to satisfy the requirements paragraph (c) of the proposed conflicts rules. However, similar to the discussion above, where firms are not able to satisfy the requirements of paragraph (c) of the proposed conflicts rules with a particular covered technology in its current form, firms may be able to modify these technologies, for example by embedding explainability features into their models and adopting back-end controls in a manner that will enable firms to satisfy these requirements.<sup>205</sup>

A high degree of specificity may not be necessary when creating the written description of every material feature of any covered technology used by the firm in any investor interaction.

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<sup>203</sup> See *supra* section II.A.2.a (discussion on Evaluation and Identification).

<sup>204</sup> See *id.*

<sup>205</sup> See *id.*

For example, if a material feature could not reasonably be expected to be associated with a conflict of interest (*e.g.*, a financial model that is used to compute whether risks are sufficiently diversified in a portfolio containing various asset classes), a firm could reasonably determine that a simple description of that feature would be sufficient. However, at a minimum, it would need to describe the material features of the covered technology used by the firm at a level of detail sufficient for the appropriate personnel at the firm to understand whether its use would be associated with any conflicts of interest.

A firm would be required to update this written description periodically. This requirement is designed to help ensure that firms are appropriately monitoring their use of covered technologies and accurately memorializing any material features of any covered technology that the firm uses in any investor interaction. These periodic updates to the written description should occur where a covered technology has been upgraded or materially modified in a manner that would make the previously existing written description inaccurate or incomplete. Additionally, if firm personnel become aware of either additional material features of the covered technology used by the firm, or of the firm engaging in a different use of the covered technology that was not previously contemplated by the written description, the written description should be updated at that time to include such information.

We request comment on all aspects of this proposed written description requirement found in paragraph (c)(1) of the proposed conflicts rules, including the following items:

67. Does the proposed conflicts rules' requirement that firms include written descriptions as part of their policies and procedures complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those

other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa?

68. Should we require greater specificity within the written description as to the means a firm will use for evaluating any use or reasonably foreseeable potential use of covered technology in any investor interaction, in addition to a description of the firm's process for conducting such an evaluation? If so, what additional points of specificity should be required? Should we require less specificity? Does the level of specificity in the proposed requirement allow for sufficient flexibility to administer this aspect of the policies and procedures in a variety of circumstances?
69. Should we require that the written description of the firm's evaluation and identification process be prepared by specific firm personnel or approved by firm management? If so, by whom? Similarly, should this written description require the designation of specific individuals to carry out the process firms will use for evaluating any use or reasonably foreseeable potential use of covered technology in any investor interaction?
70. What are the challenges associated with compiling a written description of any material features of and any conflicts of interest associated with the use of any covered technology they employ? Should the proposed conflicts rules be revised to account for those challenges? If so, how?
71. As a practical matter, firms using black box technologies would find it challenging, and potentially impossible, to meet the requirements of the proposed rules to the extent they find it difficult to identify and describe all conflicts of

interest associated with the use of such covered technology. In addition to these proposed requirements, should we explicitly require that any technologies used by firms must be explainable?

72. Is it sufficiently clear what features of a covered technology would constitute “material features” beyond those features that present conflicts of interest? If not, what additional detail should the Commission provide? Should the Commission define “material features” for the purpose of the proposed rule? For example, should the Commission specify as “material features” the types of recommendations or advice, or other investor interactions, a covered technology is designed to produce? Should the term also include the types of inputs, the specific methods of analysis, or the user interface of the technology? Why or why not?
73. Is the proposed level of specificity and detail of the written description of the material features of any covered technology used by the firm in any investor interaction appropriate under the circumstances? Should the rule explicitly require that this description be sufficient for the appropriate personnel at the firm to understand whether the use of the covered technology would be associated with any conflicts of interest the appropriate standard? If not, what should be the standard? Does the level of specificity and detail still allow for flexible implementation in a variety of circumstances?
74. Is the scope of covered technologies subject to this written description requirement appropriate in light of the requirements of paragraph (b) of this proposed conflicts rules? Should the proposed conflicts rules be modified to only

require a written description of the material features of those covered technologies that the firm uses in any investor interaction that the firm has identified as containing at least one conflict of interest?

**b. Written Description of Determination Process**

The proposed conflicts rules would also require that firms' policies and procedures must include a written description of the process for determining whether any conflict of interest identified pursuant to paragraph (b)(1) of the proposed conflicts rules results in an investor interaction that places the interest of the investment adviser, broker-dealer, or the firm's associated persons ahead of the interests of the investor.<sup>206</sup> This requirement is designed to help ensure that firms create and implement a process for determining which of those conflicts of interest that they have identified in their use or potential use of a particular covered technology results in an investor interaction that would place the interests of that firm or its associated persons ahead of the interests of the investor. While this determination will ultimately depend on the individual conflict of interest, covered technology, related investor interactions, and other factors that may not be easily predictable, this process generally should be designed to provide a consistent approach to satisfying the requirements of paragraph (b)(2) of the proposed conflicts rules. In doing so, this written description would assist firms in performing this essential step to ultimately comply with the requirement in paragraph (b)(3) of the proposed conflicts rules to eliminate, or neutralize the effect of, such conflicts of interest. In addition to assisting the firm's internal staff, this written description would assist the Commission's examinations staff in assessing the firm's compliance with the proposed rules.

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<sup>206</sup> Proposed conflicts rules at (c)(2).

This written description generally should clearly articulate the process for the firm to use in determining whether any conflict of interest that it has identified would result in placing its own interests or the interests of its associated persons ahead of the interests of investors. Although we recognize that the idiosyncrasies of differing conflicts of interest or different types of investor interactions may necessitate some manner of flexibility as to the firm's process, the written description of the firm's process generally should be specific enough to help ensure that the process will be consistently effective in producing determinations by the firm that accurately reflect those conflicts of interest that would result in placing the interests of the firm or its associated persons ahead of the interests of investors. The process described by the firm generally should detail certain steps for determining the effect that the conflict of interest has, or would have, on an investor interaction if the covered technology or material modification were put into use by the firm. This should include a means of determining whether the interest of the firm, or associated person, is or would be placed ahead of investors' interests if the firm used the covered technology or a material modification to the covered technology in investor interactions.

We request comment on all aspects of this proposed written description requirement found in paragraph (c)(2) of the proposed conflicts rules, including the following items:

75. Does this aspect of the proposed conflicts rules complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa?
76. Should we require the written description of the firm's process for determining whether any conflict of interest identified pursuant to paragraph (b)(1) of the

proposed conflicts rules results in an investor interaction that places the interest of the firm, or associated person, ahead of the interests of investors be prepared by specific firm personnel or approved by firm management? If so, by whom? Similarly, should this written description require the designation of specific individuals, such as those in legal, compliance, technology, or managerial positions, to carry out the process firms will use for determining whether a particular conflict of interest places the interest of the firm, or associated person, ahead of the interests of the investor?

77. Does the level of specificity in the proposed requirement allow for sufficient flexibility to administer this aspect of the policies and procedures in a variety of circumstances? Should we require greater specificity within the written description as to the means a firm will use for determining whether a conflict places the interest of the firm, or associated person, ahead of the interest of the investor, in addition to a description of the firm's process for making such a determination? If so, what additional points of specificity should be required? Should we instead require less specificity? If so, what details should not be required to be included in this written description?

**c. Written Description of Process for Determining How to Eliminate, or Neutralize the Effects of, Conflicts of Interest**

The proposed conflicts rules would also require that firms' policies and procedures include a written description of the process for determining how to eliminate, or neutralize the effect of, any conflict of interest determined by the firm, pursuant to paragraph (b)(2) of the proposed conflicts rules, to result in an investor interaction that places the interest of the

investment adviser, broker-dealer, or the firm's associated persons ahead of the interests of the investor.<sup>207</sup> This element is designed to require firms to have an established framework for eliminating, or neutralizing the effect of, conflicts of interest, which we believe should assist those firms in complying with paragraph (b)(3) of the proposed conflicts rules. The description will also assist the firm's internal staff, as well as examination staff, in assessing a firm's compliance.

The process for elimination or neutralization that a firm sets forth in the written description should be tailored to account for the differing circumstances presented to the firm when making its determination as to a particular conflict of interest. For example, the process described by the firm should account for whether the particular conflict of interest involves a covered technology that is already being used in investor interactions, or instead only involves a conflict of interest from a reasonably foreseeable potential use. Where the process pertains to a reasonably foreseeable potential use, the firm should address how its personnel would determine whether a covered technology has been sufficiently modified such that any identified conflicts of interest have been eliminated, or their effect has been neutralized, prior to any use in an investor interaction. However, if the firm is already using the covered technology in any of its investor interactions, the firm's written description of this process must address how it would promptly eliminate, or neutralize the effect of, any identified conflict of interest. The written process for a covered technology that is already used in investor interactions might, for example, require the firm to immediately limit access to or use of the technology or, if possible, immediately

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<sup>207</sup> Proposed conflicts rules at (c)(3); *see also* proposed conflicts rules at (b)(2) requiring such determination by the firm, discussed *supra* section II.A.2.d.



eliminate the identified conflict of interest, prior to considering further modifications.<sup>208</sup> In either instance, the firm would need to include a written description of the steps that the firm would take under its elimination or neutralization procedures to prevent any investor interaction that places the interest of the firm ahead of the interests of investors (*e.g.*, by explicitly eliminating consideration of the factors that reflect the firm's interest, by disabling a part of the technology, by training it to use reinforcement learning to prioritize investors' interest in all cases, or by eliminating the business practice that is associated with the conflict).

To support their efforts at compliance with the proposed conflicts rules, firms using covered technologies in investor interactions could consider providing additional training to staff who will be implementing their elimination and neutralization policies. For example, firms may benefit from providing additional training to their staff responsible for maintaining the covered technologies in order to give them a better understanding of the legal framework governing their firm's use of covered technologies. In addition, firms may consider providing additional technical training to relevant personnel, so that they are better able to understand how the covered technologies that the firm uses work, and as a result can better understand the technical aspects of what is necessary to eliminate or neutralize a given conflict of interest.

Because a firm's policies and procedures would need to address all covered technologies used by the firm in any investor interaction, and each conflict of interest involving such covered technologies, this written description should contain a clear articulation of the process the firm uses for determining how a conflict should be eliminated or its effect neutralized. In addition,

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<sup>208</sup> Additional discussion of how firms may eliminate, or neutralize the effect of, conflicts of interest may be found above *supra* section II.A.2.e.

when a firm's policies and procedures dictate a specific means of making such a determination, the firm's written description would need to reflect this.

We request comment on all aspects of this proposed written description requirement found in paragraph (c)(3) of the proposed conflicts rules, including the following items:

78. Does this aspect of the proposed conflicts rules complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa?
79. Should we require greater specificity within the written description as to the means a firm will use for determining whether and how a conflict should be eliminated or neutralized, in addition to a description of the firm's process for making such a determination? If so, what additional points of specificity should be required? Should we require less specificity? Does the level of specificity in the proposed requirement allow for sufficient flexibility to administer this aspect of the policies and procedures in a variety of circumstances?
80. Should we require that the written description of the firm's elimination or neutralization process be prepared by specific firm personnel or approved by firm management? If so, by whom? Similarly, should this written description require the designation of specific individuals to carry out the process firms will use for determining how a particular conflict of interest must be eliminated or neutralized?

81. Should a firm's policies and procedures be required to specifically address the conduct of individuals? For example, should a firm's policies and procedures be required to address conflicts of interest where all of the benefit may accrue to one of the firm's personnel, such as when firm personnel took an action that is designed to increase their own compensation regardless of the overall impact on the firm? If those persons are not registered or required to be registered as an investment adviser, broker, or dealer, would their actions otherwise be covered by the firm's policies and procedures?

**d. Annual Review of the Adequacy and Effectiveness of the Policies and Procedures and Written Descriptions**

The proposed conflicts rules would also require that the policies and procedures include a review and a written documentation of that review, no less frequently than annually, of the adequacy of the policies and procedures established under the proposed conflicts rules and the effectiveness of their implementation, as well as a review of the written descriptions established pursuant to this section.<sup>209</sup> During this review, firms would need to specifically evaluate whether their policies and procedures and written descriptions have been adequate and effective over the period under review at achieving compliance with the proposed conflicts rules' requirements to identify and evaluate all instances where their use or potential use of a covered technology in an investor interaction involves a conflict of interest, determine whether that conflict of interest places the interest of the investment adviser, broker-dealer, or an associated person of the firm ahead of those of the investor, and to then eliminate, or neutralize the effect of, any such conflict

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<sup>209</sup> Proposed conflicts rules at (c)(4).

of interest promptly after the firm has, or reasonably should have, identified the conflict. Further, firms generally should use this annual review to consider whether there have been any changes in the business activities of the firm or its associated persons, any changes in its use of covered technology generally, any issues that arose from its use of covered technologies during the previous year, any changes in applicable law, or any other factor that might suggest that certain covered technologies now present a different or greater risk than the firm's policies and procedures and written descriptions had previously accounted for, and what adjustments might need to be made to such documents or their implementation to address these risks.

Firms would also be required to prepare written documentation of the review that they have conducted. Such documentation would serve to assist firms in assessing their compliance with all obligations under the proposed conflicts rules, and any related adjustments to their policies and procedures and written descriptions that might be necessary. To the extent that firms' annual review identifies any policies and procedures and written descriptions as being inadequate or ineffective, firms would need to make sure that they are in compliance with the requirement to establish and implement, and in the case of broker-dealers, maintain, policies and procedures that are reasonably designed to achieve compliance with the proposed conflicts rules.

Under 17 CFR 275.206(4)-7 ("Advisers Act Compliance Rule"), an investment adviser is required to adopt and implement written policies and procedures reasonably designed to prevent violation, by the adviser and its supervised persons, of the Advisers Act and the rules thereunder as well as review, no less frequently than annually, the adequacy of the policies and procedures established pursuant to the Advisers Act Compliance Rule and the effectiveness of their implementation. Any policies and procedures an investment adviser adopts under the proposed

conflicts rules could be reviewed in conjunction with the annual review under the Advisers Act Compliance Rule.

While the Commission has no parallel rule requiring annual review of a broker-dealer's policies and procedures for their adequacy and effectiveness, a broker-dealer that is a FINRA member is required to "establish, maintain, and enforce written procedures to supervise the types of business in which it engages and the activities of its associated persons that are reasonably designed to achieve compliance with applicable securities laws and regulations, and with applicable FINRA rules."<sup>210</sup> In addition, each FINRA member broker-dealer must "have its chief executive officer(s) (or equivalent officer(s)) certify annually . . . that the member has in place processes to establish, maintain, review, test and modify written compliance policies and written supervisory procedures reasonably designed to achieve compliance with applicable FINRA rules, MSRB<sup>211</sup> rules and Federal securities laws and regulations, and that the chief executive officer(s) has conducted one or more meetings with the chief compliance officer(s) in the preceding 12 months to discuss such processes."<sup>212</sup> Those broker-dealers who would be subject to the proposed conflicts rule could conduct this annual review in conjunction with their required review and certification obligations under FINRA's rules, in order to increase the organizational efficiency and likely effectiveness of this annual review.

We request comment on all aspects of this proposed annual review requirement found in paragraph (c)(4) of the proposed conflicts rules, including the following items:

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<sup>210</sup> See FINRA Rule 3110(b)(1).

<sup>211</sup> Municipal Securities Rulemaking Board.

<sup>212</sup> See FINRA Rule 3130(b); see also FINRA Rule 3130(c) detailing procedures required for such certification.

82. Does this aspect of the proposed conflicts rules complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed conflicts rules, and vice versa?
83. Should we limit the scope of the annual review requirement for policies and procedures relating to certain covered technologies, or types of covered technologies? For example, if a covered technology has not changed in the past year, or if a covered technology were considered low risk for creating conflicts or changing since the last year, and the firm has not modified how it uses the covered technology, would it still be necessary to require firms to conduct a review in that area? If we were to limit the scope of the annual review requirement, should we require firms to monitor changes in technology more generally in order to be aware of whether, even if the covered technology itself has not changed, its interaction with other technologies in use by the firm could create conflicts of interest? What limitations would be necessary and appropriate to account for any risk of potential harm to investors if such limitations on the scope of the annual review requirement were provided?
84. Should we require more or less frequent reviews? For example, monthly, quarterly, or every other year? Should we require the review be conducted by specific firm personnel, such as a technology compliance specialist? If so, by whom?

## B. Proposed Recordkeeping Amendments

We are proposing to amend rules 17a-3 and 17a-4 under the Exchange Act and rule 204-2 under the Advisers Act to set forth requirements for broker-dealers and investment advisers to maintain and preserve, for the specific retention periods,<sup>213</sup> all books and records related to the requirements of the proposed conflicts rules. The proposed recordkeeping amendments would also include making and maintaining six specific types of records discussed in detail below. These proposed recordkeeping amendments are designed to work in concert with the proposed conflicts rules to help ensure that a record with respect to a firm's use of covered technology is maintained and preserved in easily accessible locations for an appropriate period of time consistent with existing recordkeeping obligations.

The proposed retention periods also conform to existing retention periods for broker-dealers and investment advisers. This approach is intended to allow firms to minimize their compliance costs by integrating the proposed requirements into their existing recordkeeping systems and record retention timelines. The proposed retention periods also conform to existing rules by having consistent requirements for maintaining records in an easily accessible location.<sup>214</sup> And, as with other recordkeeping rules, the proposed recordkeeping amendments would help both the firm's compliance staff, as well as examinations staff (including relevant SRO staff, as applicable), assess the firm's compliance with the requirements of the proposed conflicts rules.

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<sup>213</sup> For broker-dealers, rule 17a-4(a) under the Exchange Act would require that records be "preserve[d] for a period of not less than 6 years, the first two years in an easily accessible place." For investment advisers, rule 204-2(e)(1) under the Advisers Act provides that records, including those under the proposed recordkeeping amendments, "shall be maintained and preserved in an easily accessible place for a period of not less than five years from the end of the fiscal year during which the last entry was made on such record, the first two years in an appropriate office of the investment adviser."

<sup>214</sup> *See id.*

First, firms would be required to make and maintain written documentation of the evaluation, pursuant to paragraph (b)(1) of the proposed conflicts rules, of any conflict of interest associated with the use or potential use by the firm or associated person of a covered technology in any investor interaction.<sup>215</sup> This written documentation would include a list or other record of all covered technologies used by the firm in investor interactions, including: (i) the date on which each covered technology is first implemented (*i.e.*, first deployed), and each date on which any covered technology is materially modified, and (ii) the firm’s evaluation of the intended use as compared to the actual use and outcome of the covered technology.<sup>216</sup> Firms would also be required to make and maintain documentation describing any testing of the covered technology performed under paragraph (b)(1) of the proposed conflicts rules, including: (i) the date on which testing was completed;<sup>217</sup> (ii) the methods used to conduct the testing; (iii) any actual or reasonably foreseeable potential conflicts of interest identified as a result of the testing; (iv) a description of any changes or modifications made to the covered technology that resulted from the testing and the reason for those changes; and (v) any restrictions placed on the use of the covered technology as a result of the testing.<sup>218</sup> This documentation generally should include, for example, a record of any research or third-party outreach the firm conducted related to any testing of a covered technology that is performed under the proposed conflicts rules.

This information would assist examinations staff, who would have a record they can reference when assessing compliance. This information also may assist firms in evaluating their

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<sup>215</sup> Proposed 17 CFR 240.17a-3(e)(36)(i); 17 CFR 275.204-2(a)(24)(i).

<sup>216</sup> *See id.*

<sup>217</sup> *See id.* We are aware that in certain cases, for example when complex technologies are involved, testing could take longer than one day. We propose that this requirement would refer to the date the testing was completed so that staff are able to assess whether the firm frequently relies on “stale” information.

<sup>218</sup> *See id.*



initial testing methodologies and in evaluating and, where appropriate, remediating instances when the intended use or outcome of a covered technology differs from its actual use or outcome. In some instances, for example where the covered technology is using relatively straightforward mathematical models such as those contained in spreadsheets, firms could simply list all such technologies as a single entry, which we anticipate would ease firms' compliance with the proposed recordkeeping amendments for these technologies.

Second, firms would be required to make and maintain written documentation of the determination, pursuant to paragraph (b)(2) of the proposed conflicts rules, whether any conflict of interest identified pursuant to paragraph (b)(1) of the proposed conflicts rules places the interest of the firm, or associated person of a firm, ahead of the interests of the investor. This would include the rationale for such determination.<sup>219</sup> This written documentation of the rationale generally should include, for example, the basis on which a firm concludes that a conflict did or did not result in an investor interaction that places the firm or associated person's interests ahead of an investor. This information would assist examinations staff, who would have records they can reference when assessing compliance with the proposed conflicts rules. This information also may assist firms in determining whether actual or reasonably foreseeable potential conflicts of interest place the interests of the firm, or an associated person of the firm, ahead of the interests of the investor, as well as reviewing the effectiveness of the policies and procedures to achieve compliance with this requirement pursuant to paragraph (c).

Third, firms would be required to make and maintain written documentation evidencing how the effect of any conflict of interest has been eliminated or neutralized pursuant to

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<sup>219</sup> Proposed 17 CFR 240.17a-3(e)(36)(ii); 17 CFR 275.204-2(a)(24)(ii).

paragraph (b)(3) of the proposed conflicts rules.<sup>220</sup> This written documentation generally should include a record of the specific steps taken by the firm (*i.e.*, show your work) in deciding how to eliminate, or neutralize the effects of, any conflicts of interest as required under the proposed conflicts rules. The written documentation also generally should include the rationale for any determination to make changes or modifications to or place restrictions on the covered technology<sup>221</sup> to eliminate, or neutralize the effect of, any identified conflicts of interest, the methodology used to make any such determination, and a description of the firm's analysis that resulted in any such determination. This information would assist examinations staff, who would have records they can reference when assessing compliance. This information also may assist firms in the determination of how to eliminate or neutralize conflicts of interest, as well as reviewing the effectiveness of the policies and procedures to achieve compliance with this requirement pursuant to paragraph (c).

Fourth, firms would be required to maintain the written policies and procedures, including any written descriptions, adopted, implemented, and, with regard to broker-dealers, maintained pursuant to paragraph (c) of the proposed conflicts rules.<sup>222</sup> This documentation would include the date on which the policies and procedures were last reviewed.<sup>223</sup> Firms must also maintain written documentation evidencing a review, occurring at least annually, of the adequacy of the policies and procedures established pursuant to paragraph (c) of the proposed conflicts rules, and the effectiveness of their implementation, as well as a review of the written descriptions established pursuant to paragraph (c) of the proposed conflicts rules. These

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<sup>220</sup> Proposed 17 CFR 240.17a-3(e)(36)(iii); 17 CFR 275.204-2(a)(24)(iii).

<sup>221</sup> See proposed 17 CFR 240.17a-3(e)(36)(i); 17 CFR 275.204-2(a)(24)(i).

<sup>222</sup> Proposed 17 CFR 240.17a-3(e)(36)(iv); 17 CFR 275.204-2(a)(24)(iv).

<sup>223</sup> See *id.*

provisions would assist examinations staff in assessing firms' compliance with the proposed conflicts rules.

To help demonstrate compliance with the proposed conflicts rules, a firm may elect to maintain records documenting other information regarding covered technology, which could help to demonstrate that it took a reasonable approach when identifying and evaluating the conflicts of interest associated with the technology. For example, a firm may choose to maintain a record of any uses, other than in investor interactions, that the firm reasonably foresees for each covered technology.<sup>224</sup>

Fifth, firms would be required to make and maintain a record of any disclosures provided to investors regarding the firm's use of covered technologies, including, if applicable, the date such disclosure was first provided or the date such disclosure was updated.<sup>225</sup> We do not intend this proposed requirement to impose new disclosure requirements, nor do we intend that firms maintain documents in two locations. Many firms could satisfy this proposed requirement by maintaining a simple bullet-point list with cross-references to all disclosures they make to investors regarding their use of covered technologies (whether the disclosure is made pursuant to an existing requirement or voluntarily). Maintaining a list of any such disclosures would assist examinations staff in reviewing disclosures given to investors regarding a firm's use of covered technologies, to help ensure that these disclosures are full and fair.

Sixth, firms would be required to make and maintain records of each instance in which a covered technology was altered, overridden, or disabled; the reason for such action; and the date thereof. This requirement would include making and maintaining records of all instances where

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<sup>224</sup> *See id.*

<sup>225</sup> Proposed 17 CFR 240.17a-3(e)(36)(v); 17 CFR 275.204-2(a)(24)(v).

an investor requested that a covered technology be altered or restricted in any manner.<sup>226</sup> We believe these records will assist in identifying which technologies may present higher risks, for example if they require constant alterations or if certain investors request that such technologies not be used on their accounts.

We request comment on all aspects of the proposed recordkeeping amendments, including the following items:

85. Do the proposed recordkeeping amendments complement, overlap with, or duplicate the existing regulatory framework for broker-dealers and investment advisers? If so, in what ways? Specifically, would firms' compliance with those other regulatory requirements contribute to compliance with the proposed recordkeeping amendments, and vice versa?
86. Are there additional records that firms would naturally create as they complied with the proposed conflicts rules that we should require them to maintain? Are there any records beyond what firms would already naturally create that would be useful to require them to maintain? Should we require fewer records? If so, which ones should we eliminate and why?
87. Would the records that firms would be required to make and retain under the proposed recordkeeping amendments likely require firms to retain additional "backup" documentation, such as logs, training data, or other documentation? Should we make any changes as a result? For example, should we explicitly require such information to be made and retained? Are there reasons such

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<sup>226</sup> Proposed 17 CFR 240.17a-3(e)(36)(vi); 17 CFR 275.204-2(a)(24)(vi).

information should not be required to be made and retained? For example, is it likely that such information would be voluminous, and could therefore be difficult for firms to retain for the full timeframe that records would be required to be maintained? If so, should we reduce the time that firms would be required to retain such records?

88. For records related to all instances where an investor requested that a covered technology be altered or restricted, what challenges would firms face with respect to maintaining this information? What factors should we consider if we qualify this requirement?
89. Are the proposed periods of time for preserving records appropriate, or should certain records be preserved for different periods of time? If records should be preserved for different periods of time, which records should have different time periods and what should those periods of time be?
90. We are proposing to require broker-dealers and investment advisers to maintain the same records. Are there any differences in the way that investment advisers and broker-dealers conduct business that would advocate for maintaining different sets of records?
91. Should the proposed recordkeeping requirement that advisers maintain records of all instances where an investor requested that a covered technology be altered or restricted in any manner apply to prospective clients and prospective investors in a pooled investment vehicle? Should an investment adviser be required to maintain a record of instances where a prospective client or prospective investor in a pooled investment vehicle requested that the covered technology be altered or

restricted, but the investment adviser rejected the request, and the prospective client did not ultimately invest?

92. We are proposing to require firms to maintain a record of any disclosures provided to each investor regarding the firm's use of covered technologies. Should the proposed recordkeeping amendments require specific disclosures to be provided or maintained? If so, what disclosures? Should the disclosures be limited to use of covered technologies in investor interactions, or be broadened to include more technology? Should we also require records of disclosures about a firm's or associated person's conflicts associated with the use of such technologies in investor interactions?
93. We are proposing to require firms to make and maintain documentation describing any testing of the covered technology performed under paragraph (b)(1) of the proposed conflicts rules. Along with the existing specifics, should we also require information about who developed and/or conducted the testing (*e.g.*, firm personnel, an outside vendor)?

### **III. ECONOMIC ANALYSIS**

#### **A. Introduction**

The Commission is sensitive to the economic consequences and effects, including costs and benefits, of its rules. Section 3(f) of the Exchange Act<sup>227</sup> and section 202(c) of the Advisers Act<sup>228</sup> provide that when engaging in rulemaking that requires it to consider or determine whether an action is necessary or appropriate in the public interest, the Commission shall also

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<sup>227</sup> 15 U.S.C. 78c(f).

<sup>228</sup> 15 U.S.C. 80b-2(c).

consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation. Additionally, section 23(a)(2) of the Exchange Act<sup>229</sup> requires the Commission, when making rules under the Exchange Act, to consider the impact such rules would have on competition. Section 23(a)(2) also provides that the Commission shall not adopt any rule which would impose a burden on competition that is not necessary or appropriate in furtherance of the purposes of the Exchange Act.

The analysis below addresses the likely economic effects of the proposed conflicts rules and proposed recordkeeping amendments, including the anticipated benefits and costs of the proposed rules and amendments, and their likely effects on efficiency, competition, and capital formation. Where practicable, the Commission quantifies the likely economic effects of the proposed rules and amendments; however, the Commission is unable to quantify certain economic effects because it lacks the information necessary to provide estimates or ranges. Some of the benefits and costs discussed below are impracticable to quantify because quantification would necessitate general assumptions about behavioral responses that would be difficult to quantify. The Commission is providing both a qualitative assessment and, where feasible, a quantified estimate of the economic effects. The Commission seeks comment on any data that could aid quantification of these responses.

The proposed conflicts rules and proposed recordkeeping amendments may have economic implications for investors, investment advisers, and broker-dealers, and could also affect third-party service providers. The proposed conflicts rules would introduce requirements to identify conflicts of interest associated with the use of covered technologies in investor

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<sup>229</sup> 15 U.S.C. 78w(a)(2).

interactions and eliminate or neutralize those conflicts that place or result in placing the interest of the firm or associated person ahead of the interest of the investor, as well as proposed recordkeeping requirements regarding such determinations and resulting actions. This economic analysis aims to examine the potential benefits and costs of the proposed rules and amendments and the impact the proposed rules and amendments may have on the market's efficiency, competition, and capital formation.

## **B. Broad Economic Considerations**

In the last two decades and after the proliferation of internet-based services, the advent of new technologies has modified the business operations of broker-dealers and investment advisers.<sup>230</sup> Access to cheaper and more granular data, plus the additional availability of advanced computing power, have advanced data collection and processing techniques. These developments have significantly enhanced the scale and scope of data analytics and their potential applications by investment advisers and broker-dealers in their interactions with investors. These advances have increased the ability of each of these investor interactions to contain conflicted conduct, given the more widespread availability of data about investors, advances in user interface design and gamification, and business practices that could place the firm's or an associated person's interest ahead of investors' interests. Also, some PDA-like technologies are now able to update their interactions with investors dynamically, based on information or data they have gained from their users or from other data sources, which can dynamically alter the nature and scope of conflicts of interest.

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<sup>230</sup> See *supra* section I.B.



The capabilities of these technological advances—including the data the technology uses (including any investor data) and the inferences the technology makes (including in analyzing investor data, other data, securities, or other assets)—may be opaque to investors and firms. This opacity makes it more challenging for an investor to identify the presence of a conflict of interest, understand its importance, and take protective action when making an investment decision or otherwise interacting with the firm. Likewise, a firm’s identification of such conflicts is more challenging without unique efforts to both fully understand the PDA-like technology it is using and oversee conflicts that are created by or transmitted through such technology for purposes of the firm’s compliance with applicable Federal securities laws. Further, PDA-like technologies can have the capacity to process data, scale outcomes from analysis of data, and evolve at incredibly rapid rates. These traits could rapidly and exponentially scale the effects of any conflicts of interest associated with such technologies, which could impact the markets more broadly.<sup>231</sup>

The Commission considered two broad economic themes raised by firms’ use of covered technology in investor interactions. First, the use of covered technology in investor interactions can entail conflicts of interest related to the principal-agent problem between firms and investors, and second, the use of complex and opaque technologies can potentially create events that can harm investors.<sup>232</sup>

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<sup>231</sup> See *supra* sections I.A and I.B. For example, a firm may use PDA-like technologies to automatically develop advice and recommendations that are then transmitted to investors through the firm’s chatbot, mobile trading app, and robo-advisory platform. If the advice or recommendation is tainted by a conflict of interest, that conflict would rapidly reach many investors. See *supra* note 16 and surrounding text.

<sup>232</sup> The proposed conflicts rules’ definition of “conflict of interest” is broader than how economists usually define “conflicts of interest” such as in the context of the principal-agent problem. One economist’s definition of “conflict of interest” is “a situation in which a party to a transaction can potentially gain by taking actions that adversely affect its counterparty.” Hamid Mehran & René M. Stulz, *The Economics of Conflicts of Interest in Financial Institutions*, 85 J. FIN. ECON. 267-296 (Aug. 2007).

The principal-agent problem arises when one party, known as the principal, hires an agent to perform a task on the principal's behalf, but the interests of the principal and the agent are not aligned.<sup>233</sup> The principal-agent problem can result in the agent acting in its own self-interest ahead of the principal's interest. This problem is particularly relevant in the financial industry, where firms manage investments or execute orders on behalf of investors in exchange for fees. Firms usually have more information about the investments they are recommending, pricing, and market dynamics than the investors that they serve, and can potentially place their interests ahead of investors' interests. Similarly, firms can encourage investors to use more services, or increase transactions, potentially placing the firm's interest over investors' interests. These conflicts of interest are exacerbated by firms' use of certain covered technologies because the technologies that firms use may be complex and opaque to investors, who may not have the knowledge or time to understand how firms' use of these technologies may generate conflicts of interest in their interactions with investors. If these conflicts of interest were left unaddressed, investors could be harmed by less efficient investment strategies<sup>234</sup> and incur agency costs.<sup>235</sup> This could also adversely affect the formation of capital, as investors might choose to invest less or might lose confidence in capital markets.

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<sup>233</sup> Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976) ("Jensen & Meckling").

<sup>234</sup> A rational investor seeks out investment strategies that are *efficient* in the sense that they provide the investor with the highest possible expected net benefit, in light of the investor's investment objective that maximizes expected utility. *See, e.g.*, ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, *Chapter 10: Competitive Markets for a Discussion of Efficient Allocations of Resources*, in MICROECONOMIC THEORY (1995).

<sup>235</sup> The difference between the net benefit to the investor from accepting a less than efficient recommendation about a securities transaction or investment strategy, where the associated person or broker-dealer puts its interests ahead of the interests of the investor's interests, and the net benefit the investor might expect from a similar securities transaction or investment strategy that is efficient for him or her, is an *agency cost*. *See, e.g.*, Jensen & Meckling, *supra* note 233 for a more general discussion of agency costs.

Disclosure can sometimes help address conflict of interest problems in principal-agent relationships. When firms fully and fairly disclose conflicts of interest, investors may be able to make informed decisions about their investments. For example, investment advisers are required to provide clients with a Form ADV, which details information about the adviser’s business practices, fees, and certain conflicts of interest.<sup>236</sup> The Commission has brought enforcement actions against broker-dealers that failed to disclose certain conflicts to customers.<sup>237</sup> In addition, investment advisers and broker-dealers are required to provide “retail investors” with Form CRS, which explains fees, commissions, and other information that may be relevant when choosing a firm.<sup>238</sup> These disclosure requirements provide investors with information that may help them choose among firms. They also help to create a more transparent relationship between a firm and its investors and potentially help investors assess whether investment advisers and broker-dealers are placing their own interests ahead of their investors’ interests. In section III.C.3, we discuss the current disclosures that investment advisers and broker-dealers are required to make in addition to other obligations, and in section III.D.1, we discuss why we believe disclosure is unlikely to be sufficient to address the principal-agent problems generated by covered technologies.<sup>239</sup>

Firms may adopt certain DEPs in the use of covered technology in investor interactions that can exploit common biases or tendencies in investors and lead these investors to make

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<sup>236</sup> Amendments to Form ADV, Investment Adviser Act Release No. 3060 (July 28, 2010) [75 FR 49233 (Aug. 12, 2010)] (“Amendments to Form ADV”).

<sup>237</sup> See *supra* note 64.

<sup>238</sup> Fiduciary Interpretation, *supra* note 8.

<sup>239</sup> See also Reg BI Adopting Release, *supra* note 8, at III.B.4.c. (discussing the effectiveness and limitations of disclosure).

investment decisions that will place the firm’s interest ahead of investors’ interests.<sup>240</sup> These practices can exacerbate the principal-agent problem, as disclosure might not be as effective at addressing the misaligned incentives between the firm and the investor. For example, firms could use demographic information about an investor or their risk-taking behavior to encourage them to take actions that place the firm’s interest ahead of the investors’ interest.<sup>241</sup> These could be actions such as trading unnecessarily, allowing the firm to collect extra fees or payments from the additional trading activity (*e.g.*, through increased commissions or payment for order flow) or investing in riskier positions that are more profitable to the firm.<sup>242</sup>

Studies have shown, for example, that excess trading has a negative impact on investment returns, with frequent traders exhibiting lower net annual returns than infrequent traders due to overconfidence.<sup>243</sup> Other studies have found that some stock trading apps appear to follow strategies employed by some firms in the gambling industry to encourage frequent repeat

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<sup>240</sup> Ontario Securities Commission, Staff Notice 11-796, *Digital Engagement Practices in Retail Investing: Gamification and Other Behavioural Techniques* (2022), [https://www.osc.ca/sites/default/files/2022-11/sn\\_20221117\\_11-796\\_gamification-report.pdf](https://www.osc.ca/sites/default/files/2022-11/sn_20221117_11-796_gamification-report.pdf). George M. Korniotis & Alok Kumar, *Do Portfolio Distortions Reflect Superior Information or Psychological Biases?*, 48 J. FIN. QUANT. ANALYSIS 1 (2013) (“Korniotis”); Thomas Dohmen et al., *Individual Risk Attitudes: Measurement, Determinants, and Behavioral Consequences*, 9 J. EUR. ECON. ASS’N 522–550 (June 2011) (“Thomas Dohmen et al.”); Brad M. Barber & Terrance Odean, *Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors*, 55 J. FIN. 773-806 (2000) (“Trading Is Hazardous”); Brad M. Barber & Terrance Odean, *Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment*, 116 Q. J. ECON. 261–292 (Feb. 2001) (“Boys Will Be Boys”); Marie Grall-Bronnec et al., *Excessive Trading, a Gambling Disorder in its Own Right? A Case Study on a French Disordered Gamblers Cohort*, 64 ADDICTIVE BEHAV. 340-348 (Jan. 2017); M. Mosenhauer, et al., *The Stock Market as a Casino: Associations Between Stock Market Trading Frequency and Problem Gambling*, 10 J. BEHAV. ADDICTIONS 683-689 (Sept. 2021); Alex Bradley & Richard JE James, *Defining the Key Issues Discussed by Problematic Gamblers on Web-based Forums: A Data-driven Approach*, 21 INT’L GAMBLING STUD. 59-73 (2021).

<sup>241</sup> For example, attitudes toward risk and risk-taking behavior have been found to be meaningfully predicted by sex, age, height, and parental educational achievement. See Dohmen, et al., *supra* note 240.

<sup>242</sup> Korniotis, *supra* note 240.

<sup>243</sup> See, *e.g.*, *Trading is Hazardous*, *supra* note 240.

betting,<sup>244</sup> obscure costs, and offer complex instruments with lottery-like large payoffs in rare cases, and that these behavior-influencing strategies benefit from survivorship bias.<sup>245</sup> These practices might not constitute recommendations, and therefore might not face the same obligations that recommendations would. In addition, given that these strategies exploit psychological biases and innate tendencies of the investor rather than information deficiencies or asymmetries, even comprehensive, accurate, and legible disclosure might be less effective at ensuring disinterested investor interactions, including recommendations, which do not place the firm's interest above that of investors.<sup>246</sup> Firms could profit from these strategies through increased fees or payment for order flow due to higher transaction frequency and higher fees on more complex trades, among other means. In contrast to these strategies, initial efforts at design research as applied to financial applications identified several practices that could improve investor thoughtfulness and informed decision-making.<sup>247</sup>

The scale and scope of investor interactions that are now possible with new technologies, and the scope and dynamic nature of the conflicts of interest that can be generated by or associated with firms' use of covered technology, present challenges for the use of disclosure to address conflicts of interest. A single, large disclosure at the beginning of the firm's relationship with the investor might be too lengthy to be meaningful or actionable, or not specific enough to

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<sup>244</sup> Philip W. S. Newall & Leonardo Weiss-Cohen, *The Gambification of Investing: How a New Generation of Investors Is Being Born to Lose*, 19 INT. J. ENV'T. RES. PUB. HEALTH (Apr. 28, 2022).

<sup>245</sup> M. W. Brandt & J. A. Gaspar, *Trading on Margin: The Effect of Financial Market Information Services and Trading Apps on Day Trading Behavior*, 33 REV. FIN. STUD. 2331-2372 (2020).

<sup>246</sup> Human behavior exhibits conditioned responses. See William S. Verplanck, *The operant conditioning of human motor behavior*, 53 PSYCHOLOGICAL BULLETIN 70 (1956). Moreover, the anticipation of monetary rewards creates similar neural circuitry to anticipation of primary rewards in other primates. See B. Knutson et al., *fMRI visualization of brain activity during a monetary incentive delay task*, 12 Neuroimage, 20-27 (2000).

<sup>247</sup> Chaudhury & Kulkarni, *supra* note 53, at 777-788.

be effective, because it would have to capture the full set of conflicts of interest that could evolve dynamically, across investors, through the use of PDA-like technologies, especially if the technology rapidly adjusts in response to prior interactions with an investor.<sup>248</sup> Alternatively, attaching a disclosure to each individual investor interaction could address the potential for conflicts of interest that are dynamically generated through the use of PDA. However, the overall large number of disclosures would impose costs on firms and investors, and effectiveness of these disclosures might be reduced because of the sheer quantity of disclosures.<sup>249</sup>

Firms' use of PDA-like technologies could also impact markets more broadly, because these technologies can process data and amend analytical outcomes at incredibly fast rates, thereby creating unanticipated conflicts of interest that can affect numerous investors, and create market disruptions that affect market participants broadly.<sup>250</sup> A given firm might not fully bear the cost of the use of these technologies, and thus might not fully internalize the full cost of the use of these technologies. The costs imposed on entities external to the firm are called negative externalities, and regulatory intervention may be needed to address these costs.

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<sup>248</sup> See e.g., Maartje Elshout, et al., *Study on consumers' attitudes towards Terms and Conditions (T&Cs)*, European Commission Final Report (2016); Uri Benoliel & Shmuel I. Becher, *The Duty to Read the Unreadable*, 60 B. C. L. Rev. 2255 (2019); Yannis Bakos, et al., *Does Anyone Read the Fine Print? Consumer Attention to Standard-Form Contracts*, 43 J. LEGAL STUD. 1 (2014).

<sup>249</sup> Due to the potential scalability of these disclosures, incremental costs for firms might be de minimis, but these disclosures would still take costly effort by investors to interpret.

<sup>250</sup> SEC Staff Report, *Equity and Options Market Structure Conditions in Early 2021* (Oct. 4, 2021) ("GameStop Report"), <https://www.sec.gov/files/staff-report-equity-options-market-structure-conditions-early-2021.pdf>.

## C. Economic Baseline

### 1. *Affected Parties*

Broadly, the proposed rules would affect investment advisers, broker-dealers, and investors. They could also indirectly affect third-party service providers that provide covered technologies used by these parties.

As of February 28, 2023, there were 15,402 investment advisers registered with the Commission<sup>251</sup> and 3,504 broker-dealers registered with the Commission.<sup>252</sup> There were 308,565 individuals registered with FINRA as broker-dealer representatives only, 80,977 individuals registered as investment adviser representatives only, 312,317 individuals registered as both investment adviser and broker-dealer representatives, and a total of 971,758 employees reported by investment advisers.<sup>253</sup> However, because the proposed rules would also affect associated persons of firms these numbers may undercount the number of affected individuals, because not all associated persons of a firm are registered representatives of the firm. Approximately 73.5% of registered broker-dealers report retail customer activity.<sup>254</sup>

Form ADV requires investment advisers to indicate the approximate number of advisory clients and the amount of total regulatory assets under management (“RAUM”) attributable to various client types.<sup>255</sup> Table 1 provides information on the number of client accounts, total RAUM, and the number of advisers by client type.

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<sup>251</sup> Based on IARD data as of Mar. 27, 2023.

<sup>252</sup> Based on SEC data as of Mar. 1, 2023, <https://www.sec.gov/help/foiadocsbdfioa>.

<sup>253</sup> Based on FOCUS Filing data, as of March 2023.

<sup>254</sup> Consistent with the Form CRS Adopting Release, we estimate that 73.5% of registered broker-dealers report retail activity and thus, would likely be subject to the proposed conflicts rule. However, we recognize this may capture some broker-dealers that do not have retail activity.

<sup>255</sup> If a client fits into more than one category, Form ADV requires an adviser to select one category that most accurately represents the client (to avoid double counting clients and assets).

**Table 1: Clients of Investment Advisers from Form ADV<sup>256</sup>**

Client Type	Total RAUM (Billions)	Clients (Millions)	RIAs
Investment Companies	\$42,955	0.022	1,565
Pooled Investment Vehicles – Other	\$34,433	0.094	5,897
High Net Worth Individuals	\$11,664	6.898	9,166
Pension Plans	\$7,807	0.442	5,429
Insurance Companies	\$7,623	0.015	1,381
Non-High Net Worth Individuals	\$7,030	44.092	8,493
State/Municipal Entities	\$4,214	0.029	1,608
Corporations	\$3,198	0.348	5,196
Foreign Institutions	\$2,194	0.003	752
Charities	\$1,580	0.127	5,369
Other Advisers	\$1,385	0.904	1,202
Banking Institutions	\$903	0.011	825
Business Development Companies	\$213	0.000	97

As of February 2023, 50,554 private funds were reported on Form PF, and 5,620 registered investment advisers listed private funds on their Form ADV.<sup>257</sup> The effects of the proposed rules to firms and associated persons would be contingent on a number of factors, such as, among others, the types of covered technologies the firm uses, the number of current and prospective clients or customers of the firm, the number of investors in pooled investment vehicles advised by the firm, the frequency of investor interactions, and the nature and extent of the conflicts of interest. Because of the wide diversity of services and relationships offered by firms, we expect that the obligations imposed by the proposed rules would, accordingly, vary substantially. The Commission seeks public comment on the number and type of these affected

<sup>256</sup> This report reflects analysis of Form ADV data downloaded from the Enterprise Data Warehouse as of February 28, 2023. Form ADV, Items 5C, 5D, and 5F(2)(c). Prior to the October 2017 changes to Form ADV, clients and client RAUM were estimated based on the midpoint of ranges reported.

<sup>257</sup> SEC, Div. of Investment Mgmt, Analytics Office, *Private Funds Statistics Third Calendar Quarter 2022*, (Apr. 6, 2023).



parties. When developing the baseline, we considered how current trends in technological development and the conflicts associated with them might reasonably affect financial markets in the absence of the proposed rules. The Commission invites public comment on our characterization of these trends in the baseline.

The proposed rules would affect investors. As discussed earlier in this release, the proposed rules would define “investor” differently for investment advisers as compared to broker-dealers. For investment advisers, “investor” is defined as any prospective or current client of an investment adviser or any prospective or current investor in a pooled investment vehicle advised by the investment adviser. For broker-dealers, “investor” is defined to mean a natural person, or the legal representative of such natural person, who seeks to receive or receives services primarily for personal, family or household purposes. This definition is identical to the one used for “retail investor” in Form CRS, and it excludes non-retail investors of broker-dealers.

According to the Federal Reserve Board’s 2019 Survey of Consumer Finances, a total of 41.3 million U.S. households have either an individual retirement account (“IRA”) or a brokerage account; an estimated 23.0 million U.S. households have a brokerage account, and 32.7 million households have an IRA (including 63% of households that also hold a brokerage account).<sup>258</sup> Households have increased their use of business professionals for investment decisions, rising from 48.9 percent in 2001 to 56.5 percent in 2019. In addition, household use of the internet for investment decisions has risen from 14.8 percent in 2001 to 45.2 percent in

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<sup>258</sup> The data is obtained from the Federal Reserve System’s 2019 Survey of Consumer Finances (“SCF”). See Board of Governors of the Fed. Rsrv. Sys., *Survey of Consumer Finances* (2019), <https://www.federalreserve.gov/econres/scfindex.htm>.

2019.<sup>259</sup> A 2019 survey of households found that approximately 10 million U.S. households use robo-advisers.<sup>260</sup> In 2022, the top 10 robo-advisers reported \$353.2 billion in assets under management.<sup>261</sup> The Commission seeks comment on the number of investors this definition could cause to be affected by the proposed conflicts rules, and the extent and nature of the use of covered technologies.

The proposed conflicts rules may indirectly affect third-party service providers of covered technologies. A firm may be using a covered technology developed by a third-party service provider, including through some license agreement with the third-party service provider. A firm may also outsource certain functionality of the covered technology to, or utilize the support or services of, a third-party provider for a variety of reasons, including cost efficiencies, increased automation, particular expertise, or functionality that the firm does not have in-house.

Based on Commission staff experience, the Commission believes that these third-party providers play a growing role with respect to the development of covered technologies, and the Commission anticipates that third-party providers will likely arise to provide other types of functionality, service, or support to firms that are not contemplated yet today.

Due to data limitations, we are unable to quantify or characterize in much detail the structure of these various service provider markets. The Commission lacks specific information on the exact extent to which third-party service providers are retained, the specific services they

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<sup>259</sup> See Neil Bhutta et al., Board of Governors of the Fed. Rsrv. Sys., 106 FED. RSRV. BULLETIN 31 (Sept. 2020) (“Business professionals” combines seven options: accountant, banker, broker, financial planner, insurance agent, lawyer, and real estate agent).

<sup>260</sup> Michael Mackenzie, *Demand for Advice Rises as Not All Investors Go It Alone*, FIN. TIMES (Sept. 13, 2020), <https://www.ft.com/content/3900c943-245a-424d-b2e5-da6128655ed5>.

<sup>261</sup> Barbara Friedberg, *Top-10 Robo-Advisors by Assets under Management*, FORBES ADVISOR (July 9, 2022), <https://www.forbes.com/advisor/investing/top-robo-advisors-by-aum/>.

provide, and the costs for those services. We also do not have information about the market for these services, including the competitiveness of such markets. We request information from commenters on the services related to covered technologies provided by third parties to firms, the costs for those services, and the nature of the market for these services.

## **2. *Technology and Market Practices***

The use of technology in investing has undergone significant transformation in recent years.<sup>262</sup> Some firms and investors in financial markets now use new technologies such as AI, machine learning, NLP, and chatbot technologies to communicate and make investment decisions.<sup>263</sup> In addition, improvements and new applications for existing technologies for data-analytics, data collection, and investor interaction continue to be developed.<sup>264</sup>

Financial market participants currently use AI and machine learning technologies in a variety of ways. For example, algorithmic trading is a widely used application of machine learning in finance, where machine-learning models analyze large datasets and identify patterns and signals to optimize, forecast, predict, guide, or direct investment-related behaviors or outcomes.<sup>265</sup> Several banks and other financial institutions have developed chatbots to assist with customer service and support, and have attempted to make the chatbot interactions feel similar to

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<sup>262</sup> See *supra* section I.A; see Shaw & Gani, *supra* note 75.

<sup>263</sup> Kearns & Nevmyvaka, *supra* note 24; Thier & dos Santos Monteiro, *supra* note 24.

<sup>264</sup> Lekh & Pátek, *supra* note 25; Martindale, *supra* note 25.

<sup>265</sup> Forecasting in contexts contemplated by these rules, such as machine learning, involves estimation of a future value based on data which includes a temporal component. Prediction, in contrast, is the more general estimation of unknown data from known data, for example, missing words in a transcript. See, e.g., Mattias Döring, *Prediction vs Forecasting*, DATA SCIENCE BLOG (Dec. 9, 2018), [https://www.datascienceblog.net/post/machine-learning/forecasting\\_vs\\_prediction/](https://www.datascienceblog.net/post/machine-learning/forecasting_vs_prediction/).

conversations with humans.<sup>266</sup> These chatbots can help customers with a range of tasks, from checking account balances and transactions to making payments and disputing fraudulent charges. NLP is used to analyze financial news and social media data, identifying trends and sentiment that may influence market behavior. For instance, hedge funds and trading firms use NLP tools to analyze financial news articles, press releases, and social media posts in real-time, to identify patterns and make trading decisions based on sentiment analysis.<sup>267</sup> Some robo-advisers use chatbots and NLP technology to provide investment advice via online platforms.<sup>268</sup> These platforms may use a combination of AI, machine learning, NLP, and chatbot technologies to provide personalized investment recommendations to investors based on risk tolerance and investment goals.

Recent advancements in data collection techniques have significantly enhanced the scale and scope of data analytics and its potential applications. Thanks to increases in processing power and data storage capacity, a vast amount of data is now available for high-speed analysis using these technologies.<sup>269</sup> Furthermore, the range of data types has also expanded, with consumer shopping histories, media preferences, and online behavior now among the many types

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<sup>266</sup> See, e.g., Suman Bhattacharyya, *Bank of America Wants a Human Bridge for Its AI Help*, BANKINGDIVE (Dec. 12, 2022), <https://www.bankingdive.com/news/bank-america-erica-chatbot-virtual-assistant-human-middle-interaction-gopalkrishnan/638523/>; Sara Castellanos, *Capital One Brings 'Humanity' to Its Forthcoming Chatbot*, CIO BLOG (July 19, 2017), <https://www.wsj.com/articles/capital-one-brings-humanity-to-its-forthcoming-chatbot-1500488098> (retrieved from Factiva database); Moise, *supra* note 24.

<sup>267</sup> See, e.g., Patrick Henry & Dilip Krishna, *Making the Investment Decision Process More Naturally Intelligent*, DELOITTE INSIGHTS (Mar. 2, 2021), <https://www2.deloitte.com/us/en/insights/industry/financial-services/natural-language-processing-investment-management.html>; see also Yong Chen et al., *Sentiment Trading and Hedge Fund Returns*, 76 J. FIN. 2001 (Apr. 8, 2011).

<sup>268</sup> See *supra* note 41 and surrounding text.

<sup>269</sup> See, e.g., Andriosopoulos et al., *supra* note 51; Lawler et al., *supra* note 51; Alex Padalka, *Tech Firms Court Fidelity for Data Heap to Build AI Systems*, FIN. ADVISOR IQ (June 8, 2023), [https://www.financialadvisoriq.com/c/4104954/529084/tech\\_firms\\_court\\_fidelity\\_data\\_heap\\_build\\_systems](https://www.financialadvisoriq.com/c/4104954/529084/tech_firms_court_fidelity_data_heap_build_systems).

of data that data analytics can use to synthesize information, forecast financial outcomes, and predict investor and customer behavior.<sup>270</sup> As a result, these technologies can be applied in novel and powerful, yet subtle ways, such as using data layout and formatting choices to influence trading decisions.<sup>271</sup> Some technologies use predictive data analytics and AI/machine learning along with detailed user data to increase user engagement, and trading activity.

The use of these technologies can generate conflicts of interest if firms use these technologies to suggest or nudge users to trade more frequently on their platform, or to invest in products that are more profitable for the firm but expose investors to higher costs or risks, against investors' interests. In addition, although investors are free to choose a firm that uses technology in a manner with which they are comfortable, investors may have to undertake costly efforts to understand how firms are using technology and to be comfortable with newer technologies used by firms, including any associated disclosures of conflicts of interest. In the case of broker-dealers, non-recommendation interactions with investors are not subject to Reg BI's Conflict of Interest Obligation, but can still influence investor behavior in a way that places the firm's interests ahead of investors' interests.

Many of these technologies are not directly developed by investment advisers or broker-dealers, but are instead licensed from third party providers.<sup>272</sup> This practice can harness the economies of scale in the development and testing of a technology with broad applications, by

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<sup>270</sup> Daniel Broby, *supra* note 52; OECD, *supra* note 52.

<sup>271</sup> See Chaudhuri & Kulkarni, *supra* note 53.

<sup>272</sup> See, e.g., Karl Flinders, *Banks Don't Want to Develop Fintech In-house*, COMPUTER WKLY (Apr. 20, 2023), <https://www.computerweekly.com/news/365535576/Banks-dont-want-to-develop-fintech-in-house>; Justin L. Mack, *What Advisors Really Use Fintech For, and Why Ease of Use Matters Most: Wealthtech Weekly*, FIN. PLAN. (July 7, 2023), <https://www.financial-planning.com/list/what-most-financial-advisors-are-using-fintech-for-wealthtech-weekly>.

centralizing the costs within the service provider, rather than spreading the costs across multiple firms independently developing similar technologies. However, the use of third party providers can also potentially concentrate the risks that stem from conflicts of interest from the use of these technologies if such providers are concentrated within the market serving covered entities and provide products or services which operate broadly similarly across their covered customers.

### **3. Regulatory Baseline**

Investment advisers and broker-dealers are currently subject to obligations under Federal securities laws and regulations, and, in the case of broker-dealers, rules of SROs (in particular, FINRA),<sup>273</sup> which are designed to promote conduct that, among other things, protects investors, including from certain conflicts of interest.<sup>274</sup> The specific obligations are designed for the particular practices of investment advisers and broker-dealers and, accordingly, the regulatory baseline differs for each population.

#### **a. Investment Advisers**

The Advisers Act establishes a Federal fiduciary duty for investment advisers, which includes a duty to eliminate or disclose conflicts of interest.<sup>275</sup> An adviser's fiduciary duty, which encompasses both a duty of loyalty and a duty of care,<sup>276</sup> extends to the entire relationship between the adviser and client.<sup>277</sup> Accordingly, an investment adviser (including one who uses PDA-like technologies) must, at all times, serve the best interest of its client and not subordinate

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<sup>273</sup> See *supra* note 59 and surrounding text.

<sup>274</sup> See *supra* note 60 and surrounding text.

<sup>275</sup> *SEC v. Capital Gains*, 375 U.S. 180, 194 (1963) (“Capital Gains”). See also Investment Adviser Codes of Ethics, Investment Advisers Act Release No. 2256 (July 2, 2004) [69 FR 41695 (July 9, 2004)]; Compliance Programs of Investment Companies and Investment Advisers, Investment Advisers Act Release No. 2204 (Dec. 17, 2003) [68 FR 74713 (Dec. 24, 2003)] (“Compliance Programs Release”).

<sup>276</sup> See Fiduciary Interpretation, *supra* note 8, at n.15 and accompanying text.

<sup>277</sup> See Fiduciary Interpretation, *supra* note 8, at section II.A.

its client’s interest to its own. In other words, an investment adviser must not place its own interest ahead of its client’s interests. As part of meeting this fiduciary duty, investment advisers must eliminate conflicts of interest—interests that might incline an investment adviser, consciously or unconsciously, to render advice that is not disinterested— or at a minimum, make full and fair disclosure of the conflict of interest such that a client can provide informed consent to the conflict.<sup>278</sup> Under this duty, investment advisers must also make full and fair disclosure of all material facts relating to the advisory relationship.<sup>279</sup>

Advisers are required to provide clients with a Form ADV brochure, which details information about the adviser’s business practices, fees, and certain conflicts of interest.<sup>280</sup> The information provided must be sufficiently specific that a client is able to understand the investment adviser’s business practices and conflicts of interests,<sup>281</sup> and it is essential that the information be presented in a manner that clients are likely to read (if in writing) and understand.<sup>282</sup> In addition, investment advisers (and broker-dealers) are required to provide

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<sup>278</sup> See Fiduciary Interpretation, *supra* note 8, at section II.C; Capital Gains, *supra* note 275, at 191-192 (describing a Congressional intent to “eliminate, or at least to expose, all conflicts of interest which might incline an investment adviser—consciously or unconsciously—to render advice which was not disinterested”).

<sup>279</sup> See Fiduciary Interpretation, *supra* note 8, at section II.C. See also Capital Gains, *supra* note 275 (“Failure to disclose material facts must be deemed fraud or deceit within its intended meaning.”); Amendments to Form ADV, *supra* note 236 (“as a fiduciary, an adviser has an ongoing obligation to inform its clients of any material information that could affect the advisory relationship”); General Instruction 3 to Part 2 of Form ADV (“Under federal and state law, you are a fiduciary and must make full disclosure to your clients of all material facts relating to the advisory relationship.”).

<sup>280</sup> See Amendments to Form ADV, *supra* note 236, at section I (“Since 1979, the Commission has required each adviser registered with us to deliver a written disclosure statement to clients pursuant to rule 204-3 under the Advisers Act.”) (citations omitted).

<sup>281</sup> See Amendments to Form ADV, *supra* note 236, at n.28.

<sup>282</sup> See Amendments to Form ADV, *supra* note 236, at section I. (“To allow clients and prospective clients to evaluate the risks associated with a particular investment adviser, its business practices, and its investment strategies, it is essential that clients and prospective clients have clear disclosure that they are likely to read and understand.”); see also Fiduciary Interpretation, *supra* note 8, at section I.C. (“In order for disclosure to be full and fair, it should be sufficiently specific so that a client is able to understand the material fact or conflict of interest and make an informed decision whether to provide consent.”) and at n.59.

“retail investors” with Form CRS, which explains fees, commissions, and other information that may be relevant when choosing a firm.<sup>283</sup>

The duty of care requires, among other things, investment advisers to provide investment advice in the client’s best interest, based on a reasonable understanding of the client’s objectives. Investment advisers are subject more generally to the antifraud provisions, including section 206 of the Advisers Act,<sup>284</sup> which prohibits fraud or deceit upon any client or prospective client; and 17 CFR 240.10b-5 (“Exchange Act rule 10b-5”), which makes it unlawful for any person to engage in fraud or deceit upon any person. Similarly, with respect to investors in pooled investment vehicles, rule 206(4)-8 under the Advisers Act makes it unlawful to make any untrue statement of a material fact, or to omit to state a material fact necessary to make the statements made, in light of the circumstances under which they were made, not misleading.<sup>285</sup> It also makes it unlawful to engage in any act, practice, or course of business that is fraudulent, deceptive, or manipulative with respect to any investor or prospective investor in the pooled investment vehicle.<sup>286</sup>

In addition, the Advisers Act Compliance Rule requires advisers to adopt and implement written policies and procedures reasonably designed to prevent violations of the Act and the rules thereunder. In designing its policies and procedures pursuant to the Advisers Act Compliance

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<sup>283</sup> See Form CRS, General Instructions (“Under rule 17a-14 under the Securities Exchange Act of 1934 and rule 204-5 under the Investment Advisers Act of 1940, broker-dealers registered under section 15 of the Exchange Act and investment advisers registered under section 203 of the Advisers Act are required to deliver to retail investors a relationship summary disclosing certain information about the firm.”).

<sup>284</sup> 15 U.S.C. 80b-6.

<sup>285</sup> Prohibition of Fraud by Advisers to Certain Pooled Investment Vehicles, Investment Adviser Release No. 2628 (Aug. 3, 2007) [72 FR 44756 (Aug. 9, 2007)] (“[Our] intent is to prohibit all fraud on investors in pools managed by investment advisers”).

<sup>286</sup> 17 CFR 275.206(4)-8.



Rule, each adviser should first identify conflicts and other compliance factors creating risk exposure for itself and its clients, and then design policies and procedures to address those risks.<sup>287</sup> Moreover, rule 206(4)-1 under the Advisers Act prohibits advisers from disseminating any advertisement that violates any requirements of that rule, including making untrue statements of material fact or misleading omissions, and discussing with clients or investors in a private fund<sup>288</sup> any potential benefits connected with or resulting from the investment adviser's services or methods of operation without providing fair and balanced treatment of any material risks or material limitations associated with the potential benefits.<sup>289</sup> An investment adviser that uses PDA-like technology is subject to these obligations as applicable, and the fiduciary duty and the Advisers Act rules apply to an investment adviser's conduct for the entire scope of its relationship with its client, regardless of whether the adviser's conduct relies on the use of technology.<sup>290</sup>

#### **b. Broker-dealers**

Broker-dealers are subject to comprehensive obligations under the Federal securities laws and SRO rules.<sup>291</sup> For example, under the antifraud provisions of the Federal securities laws and SRO rules, broker-dealers have a duty to deal fairly with their customers and observe high

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<sup>287</sup> Compliance Programs Release, *supra* note 275.

<sup>288</sup> As discussed above, in the case of investment advisers the proposed conflicts rules would apply with respect to an adviser's clients as well as investors in a private fund that an adviser manages. The Commission's existing regulatory regime under certain circumstances also applies to investors in a private fund. *See, e.g.*, 17 CFR 275.206(4)-1, 275.206(4)-8, 240.10b-5.

<sup>289</sup> *See* 17 CFR 275.206(4)-1(a).

<sup>290</sup> *See* Fiduciary Interpretation, *supra* note 8, at section II.A; *see, e.g.*, 2017 IM Guidance, *supra* note 115 (addressing among other things, presentation of disclosures, provision of suitable advice, and effective compliance programs).

<sup>291</sup> These obligations cannot be waived or contracted away by customers. *See* Exchange Act section 29(a), 15 U.S.C. 78cc(a) ("Any condition, stipulation, or provision binding any person to waive compliance with any provision of [the Exchange Act] or any rule or regulation thereunder, or any rule of a [SRO], shall be void.").

standards of commercial honor and just and equitable principles of trade.<sup>292</sup> As discussed below, these existing regulatory obligations apply generally, including to broker-dealers' current use of technology.

Broker-dealers are subject to general and specific requirements aimed at addressing certain conflicts of interest, including requirements to eliminate,<sup>293</sup> mitigate,<sup>294</sup> or disclose certain conflicts of interest.<sup>295</sup> Disclosure obligations related to conflicts of interest include disclosures

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<sup>292</sup> See, e.g., Duker & Duker, Exchange Act Release No. 2350 (Dec. 19, 1939) (Commission opinion) (“Inherent in the relationship between a dealer and his customer is the vital representation that the customer be dealt with fairly, and in accordance with the standards of the profession.”); see also SEC, REPORT OF THE SPECIAL STUDY OF SECURITIES MARKETS OF THE SECURITIES AND EXCHANGE COMMISSION, H.R. Doc. No. 95, at 238 (1st Sess. 1963) (“An obligation of fair dealing, based upon the general antifraud provisions of the Federal securities laws, rests upon the theory that even a dealer at arm’s length impliedly represents when he hangs out his shingle that he will deal fairly with the public.”); FINRA Rule 2010 (Standards of Commercial Honor and Principles of Trade); FINRA Rule 2020 (Use of Manipulative, Deceptive, or Other Fraudulent Devices). See also FINRA Rule 2090 (Know Your Customer) requiring the broker-dealer to know essential facts concerning every customer and the authority of each person acting on behalf of the customer; FINRA Rule 4512 (Customer Account Information) requiring the broker-dealer to know, among other things, whether the customer is of legal age.

<sup>293</sup> See, e.g., 17 CFR 240.151-1(a)(2)(iii)(D) (requiring broker-dealers subject to Reg BI to “[i]dentify and eliminate any sales contests, sales quotas, bonuses, and non-cash compensation that are based on the sales of specific securities or specific types of securities within a limited period of time”); 17 CFR 240.17a-14 (requiring broker-dealers offering services to retail investors to disclose certain conflicts of interest in their Form CRS).

<sup>294</sup> See, e.g., 17 CFR 240.151-1(a)(2)(iii)(B) (requiring broker-dealers subject to Reg BI to “[i]dentify and mitigate any conflicts of interest associated with such recommendations that create an incentive for a natural person who is an associated person of a broker or dealer to place the interest of the broker, dealer, or such natural person ahead of the interest of the retail customer”); FINRA Rule 3110(c)(3) (firm must have procedures to prevent the effectiveness of an internal inspection from being compromised due to conflicts of interest); FINRA Rule 3110(b)(6)(C) (supervisory personnel generally cannot supervise their own activities); FINRA Rule 3110(b)(6)(D) (firm must have procedures reasonably designed to prevent the required supervisory system from being compromised due to conflicts of interest). In addition, FINRA rules establish restrictions on the use of non-cash compensation in connection with the sale and distribution of mutual funds, variable annuities, direct participation program securities, public offerings of debt and equity securities, investment company securities, real estate investment trust programs, and the use of non-cash compensation to influence or reward employees of others. See FINRA Rules 2310, 2320, 2331, 2341, 5110 and 3220. These rules generally limit the manner in which members can pay or accept non-cash compensation and detail the types of non-cash compensation that are permissible.

<sup>295</sup> See *supra* note 68 and surrounding text explaining that a broker-dealer may be liable if it does not disclose “material adverse facts of which it is aware.” For example, when engaging in transactions directly with

before or at inception of the customer relationship.<sup>296</sup> For example, broker-dealers (and investment advisers) are required to provide “retail investors” with Form CRS, which includes disclosures about, among other things, fees, commissions and firm—and financial professional—level conflicts of interest such as incentives created by the ways the firm makes money and how it compensates its financial professionals.<sup>297</sup>

Additionally, broker-dealers are liable under the antifraud provisions for failing to disclose material information to their customers when they have a duty to make such disclosure, including disclosures associated with the use of PDA-like technologies.<sup>298</sup> Specifically, the antifraud provisions prohibit broker-dealers from making misstatements or misleading omissions

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customers on a principal basis, a broker-dealer violates Exchange Act Rule 10b-5 when it knowingly or recklessly sells a security to a customer at a price not reasonably related to the prevailing market price and charges excessive markups without disclosing the fact to the customer. *See, e.g., Grandon v. Merrill Lynch*, 147 F.3d 184, 189-90 (2d Cir. 1998). In addition, Exchange Act Rule 10b-10 requires a broker-dealer effecting transactions in securities (other than U.S. savings bonds or municipal securities) to provide written notice to the customer of certain information specific to the transaction at or before completion of the transaction, including the capacity in which the broker-dealer is acting (*i.e.*, agent or principal) and any third-party remuneration it has received or will receive). *See also* 17 CFR 240.15c1-5 and 17 CFR 240.15c1-6, which require a broker-dealer to disclose in writing to the customer if it has any control, affiliation, or interest in a security it is offering or the issuer of such security. There are also specific, additional obligations that apply, for example, to recommendations by research analysts in research reports and to public appearances under Regulation Analyst Certification (AC). *See, e.g.*, 17 CFR 242.500 et seq. Moreover, 17 CFR 240.151-1(a)(2)(i)(B) requires broker-dealers subject to Reg BI to fully and fairly “disclose [a]ll material facts relating to conflicts of interest that are associated with the recommendation.” Finally, SRO rules apply to specific situations, such as FINRA Rule 2124 (Net Transactions with Customers); FINRA Rule 2262 (Disclosure of Control Relationship with Issuer), and FINRA Rule 2269 (Disclosure of Participation or Interest in Primary or Secondary Distribution).

<sup>296</sup> The Form CRS relationship summary requires disclosure of the broker-dealer’s services, fees, costs, conflicts of interest and disciplinary history. *See* 17 CFR 240.17a-14.

<sup>297</sup> *See* 17 CFR 240.17a-14; Form CRS, Instruction to Item 3.B.(ii) of Form CRS (requiring firms to summarize the incentives created by certain ways in which they make money, including incentives created by proprietary products); Form CRS, Instruction Item 3.C.(i)(requiring firms to summarize how their financial professionals are compensated, and the conflicts of interest those payments create).

<sup>298</sup> *See Basic v. Levinson*, 485 U.S. 224, 239 n.17 (1988). Generally, under the antifraud provisions, a broker-dealer’s duty to disclose material information to its customer is based upon the scope of the relationship with the customer, which depends on the relevant facts and circumstances. *See, e.g., Conway v. Icahn*, 16 F.3d 504, 510 (2d Cir. 1994) (“A broker, as agent, has a duty to use reasonable efforts to give its principal information relevant to the affairs that have been entrusted to it.”).

of material facts, and fraudulent or manipulative acts and practices, in connection with the purchase or sale of securities.<sup>299</sup>

Broker-dealers are subject to Reg BI when the broker-dealer, or an associated person of the broker-dealer, makes a recommendation of a securities transaction, or an investment strategy involving securities (including an account recommendation), to a retail customer. Reg BI requires that broker-dealers and associated persons act in the best interest of the retail customer at the time a recommendation is made, without placing the financial or other interest of the broker-dealer or an associated person making the recommendation ahead of the interests of the retail customer.<sup>300</sup> This includes a requirement to have a reasonable basis to believe that a series of recommended transactions is not excessive and is in the retail customer's best interest when taken together in light of the retail customer's investment profile.<sup>301</sup>

Broker-dealers and, as applicable, their associated persons, satisfy the general obligation of Reg BI by complying with four specified component obligations: Disclosure, Care, Conflict of Interest, and Compliance.<sup>302</sup> Reg BI, among other things, requires that broker-dealers address conflicts of interest by establishing, maintaining, and enforcing policies and procedures reasonably designed to identify and fully and fairly disclose material facts about conflicts of interest. In instances where the Commission has determined that disclosure is insufficient to

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<sup>299</sup> See, e.g., Exchange Act Sections 10(b) and 15(c). Broker-dealers may also be held liable under the Securities Act [of 1933] if "in the offer or sale" of any securities, the broker-dealer (1) employs any device, scheme, or artifice to defraud, (2) obtains money or property by means of any untrue statement of a material fact or any omission to state a material fact, or (3) engages in any practice which operates as a fraud or deceit upon the purchaser. See Securities Act of 1933 Section 17(a); see also *Aaron v. SEC*, 446 U.S. 680 (1980) (holding that violations of Section 17(a)(1) require proof of scienter, but that violations of 17(a)(2) and (3) do not).

<sup>300</sup> Reg BI Adopting Release, *supra* note 8, at n.549 and surrounding text.

<sup>301</sup> 17 CFR 240.151-1(a)(2)(ii)(C); Reg BI Adopting Release, *supra* note 8.

<sup>302</sup> See Reg BI Adopting Release, *supra* note 8, at n.16 and surrounding text.

reasonably address a conflict, the requirement is to mitigate or, in certain cases, eliminate the conflict.

Section 17(a) of the Securities Act of 1933 and Exchange Act rule 10b-5 both prohibit fraud and deceit in the context of an offer, purchase, or sale of securities. These provisions generally prohibit fraudulent, deceptive, or manipulative practices and require issuers, broker-dealers, and advisers to be transparent and honest in their dealings with investors.<sup>303</sup> In addition, FINRA rules govern broker-dealer communications with the public—requiring them to reflect fair dealing, good faith, and to be fair and balanced—and prices for securities and services, which must be fair and reasonable given the relevant circumstances. Broker-dealers must also comply with FINRA’s Rules of Fair Practice, which generally require broker-dealers to observe high standards of commercial honor and just and equitable principles of trade in conducting their business. Further, under the Federal securities laws and FINRA rules, prices for securities and broker-dealer compensation are required to be fair and reasonable, taking into consideration all relevant circumstances.<sup>304</sup>

Under FINRA Rule 2210, broker-dealers’ written (including electronic) communications with the public are subject to obligations pertaining to content, supervision, filing, and recordkeeping. FINRA has also adopted specialized requirements for communications with the

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<sup>303</sup> See *supra* notes 285 and 299.

<sup>304</sup> See, e.g., Exchange Act sections 10(b) and 15(c); FINRA Rules 2121 (Fair Prices and Commissions), 2122 (Charges for Services Performed), and 2341 (Investment Company Securities); see also FINRA Rule 3221 (Non-Cash Compensation).

public applicable to certain types of investments, including options.<sup>305</sup> A broker-dealer’s use of PDA-like technology is subject to these obligations as applicable. In addition, FINRA Rule 2214 provides a limited exception to FINRA Rule 2210’s prohibition on projected performance and allows broker-dealers to use “investment analysis tools” provided certain conditions are met.<sup>306</sup> In particular, FINRA Rule 2214 requires broker-dealers using investment analysis tools to describe the criteria and methodology used, including the tool’s limitations and key assumptions.<sup>307</sup> Moreover, broker-dealers using investment analysis tools pursuant to the rule must, among other things, describe the universe of investments considered in the analysis, explain how the tool determines which securities to select, and disclose if the tool favors certain securities.<sup>308</sup>

Broker-dealers are also subject to supervision obligations, including the establishment of policies and procedures and systems for applying such policies and procedures reasonably designed to prevent and detect violations of, and to achieve compliance with, the Federal securities laws and regulations,<sup>309</sup> as well as applicable SRO rules.<sup>310</sup> Specifically, the Exchange Act authorizes the Commission to sanction a broker-dealer or any associated person that fails to

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<sup>305</sup> See, e.g., FINRA Rule 2211 (Communications with the Public About Variable Life Insurance and Variable Annuities); FINRA Rule 2212 (Use of Investment Companies Rankings in Retail Communications); FINRA Rule 2213 (Requirements for the Use of Bond Mutual Fund Volatility Ratings); FINRA Rule 2215 (Communications with the Public Regarding Security Futures); FINRA Rule 2216 (Communications with the Public About Collateralized Mortgage Obligations (CMOs)); and FINRA Rule 2220 (Options Communications).

<sup>306</sup> See FINRA Rule 2214 (Requirements for the Use of Investment Analysis Tools). Investment analysis tools “are interactive technological tools that produce simulations and statistical analyses that present the likelihood of various investment outcomes if particular investments are made or particular investment strategies or styles are undertaken.” FINRA Regulatory Notice 16-41, Communications with the Public (Oct. 2016).

<sup>307</sup> See FINRA Rule 2214(c)(1).

<sup>308</sup> See FINRA Rule 2214(c)(3).

<sup>309</sup> See section 15(b)(4)(E) of the Exchange Act.

<sup>310</sup> See FINRA Rule 3110 (Supervision).

reasonably supervise another person subject to the firm's or the person's supervision that commits a violation of the Federal securities laws.<sup>311</sup> In addition to broker-dealers' supervisory obligations under the Exchange Act, FINRA Rule 3110 requires firms to establish and maintain a supervisory system for their business activities and to supervise the activities of their registered representatives, principals and other associated persons for purposes of achieving compliance with applicable securities laws and FINRA rules. This supervisory system must include, among other things, the establishment, maintenance and enforcement of policies and procedures reasonably designed to achieve compliance with applicable securities laws and regulations and FINRA rules.<sup>312</sup> FINRA rules also require policies and procedures to identify and manage conflicts of interest related to research analysts.<sup>313</sup>

FINRA further requires that the chief executive officer (or equivalent officer) of each member firm must annually certify that it has in place processes which include testing and modifying the firm's policies and procedures to help ensure that they achieve compliance with applicable laws, regulations, and rules.<sup>314</sup>

### **c. Third-Party Service Providers**

Currently, third-party service providers who work with investment advisers or broker-dealers may not be required to address or disclose any conflicts of interest that may arise between the firm and the investor when firms use their services. Providers that develop covered

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<sup>311</sup> See section 15(b)(4)(E) of the Exchange Act.

<sup>312</sup> FINRA Rule 3110(a). In addition, FINRA Rule 3120 requires each member firm to (i) have a system of supervisory control policies and procedures to test and verify that the member's supervisory procedures are reasonably designed to achieve compliance with applicable securities laws and FINRA rules, and (ii) where necessary, amend or create additional supervisory procedures.

<sup>313</sup> FINRA Rule 2241 (Research Analysts and Research Reports).

<sup>314</sup> See *supra* note 212 (citing FINRA Rule 3130(b)).

technologies for use in the financial sector, however, are likely to be aware of the regulatory requirements governing the use of their products and may alter behavior as a result. Additionally, firms may contractually require service providers to identify potential sources of conflicts to aid firms' compliance with Commission and SRO rules.<sup>315</sup>

#### **D. Benefits and Costs**

The proposed conflicts rules would impose several requirements on investment advisers and broker-dealers related to conflicts of interest associated with their use of a covered technology in investor interactions. Existing obligations already restrict firms from placing their interests ahead of customers, clients, or investors in certain contexts, such as when providing investment advice or recommendations, including as a result of conflicting interests related to their use of covered technologies. But the proposed conflicts rules would be beneficial because they would apply to a broader set of investor interactions and impose express requirements to evaluate and document certain conflicts of interest and to eliminate them or neutralize their effect. Because advisers and broker-dealers have different regulatory obligations currently, our discussion sometimes addresses the benefits and costs of the proposal to advisers separately from the benefits and costs of the proposal to broker-dealers.

For advisers using covered technologies, the proposed rules may represent a shift in their obligations, as firms would be required to take proactive steps to address the conflicts of interest through elimination of conflicts or neutralization of the effect of the conflicts.<sup>316</sup> For some

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<sup>315</sup> See, e.g., the baseline discussion in Proposed Outsourcing Rule, *supra* note 124.

<sup>316</sup> While full and fair disclosure of all material facts relating to the advisory relationship or of conflicts of interest and/or a client's informed consent could prevent the presence of those material facts or conflicts themselves from violating the adviser's fiduciary duty, such disclosure and/or consent do not themselves satisfy the adviser's duty to act in the client's best interest. See Fiduciary Interpretation, *supra* note 8, at n.58 and accompanying text.



technologies, though, advisers may be unable to rely on disclosure to address their existing conflicts obligations to the extent that the complex nature of the technologies and associated conflicts makes it difficult or impossible for the adviser to accurately determine whether it has designed a disclosure to put its clients in a position to be able to understand and provide informed consent to the conflicts; for these technologies, the proposed conflicts rules would specify the steps advisers must take with respect to a conflict of interest associated with the technology, but would not change advisers' underlying obligation to the extent that full and fair disclosure might be impossible.<sup>317</sup>

Broker-dealers are governed by, among other requirements, the obligations of Reg BI, which requires that broker-dealers act in the best interest of the customer, when making a recommendation regarding securities to a retail customer. For recommendations, certain conflicts of interest at the firm level can be addressed through disclosure, and others which arise at the level of the firm's associated persons or resulting from limited menu options can be addressed through mitigation. In addition, under its care obligations, the broker or associated person must have a reasonable basis to believe its recommendations do not place its interests ahead of the retail customer's interests. However, a broker-dealer has no Regulation BI obligations for non-recommendation investor interactions, and instead is bound by underlying antifraud provisions and FINRA rules including the Rules of Fair Practice and those governing communications with the public.

Firms that have any investor interactions using covered technology would also be required to adopt, implement, and (in the case of broker-dealers) maintain specific policies and

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<sup>317</sup> An adviser is already obligated to eliminate or mitigate conflicts of interest that cannot be fully and fairly disclosed. *See* Fiduciary Interpretation, *supra* note 8.

procedures with respect to the proposed conflicts rules' requirements to address conflicts, including with regard to the elimination or neutralization of conflicts of interest that place the firm's interests ahead of investors' interests. Firms generally are already required to have policies and procedures with respect to conflicts of interest, which may address conflicts associated with their use of technologies, including technologies that are highly complex and may pose serious risks of conflicts of interest.<sup>318</sup> The proposed conflicts rules would provide minimum standards for what such policies must require, and would also seek to ensure all firms using covered technologies in connection with investor interactions.<sup>319</sup> By requiring all such firms to have policies and procedures meeting these minimum standards, the proposed conflicts rules would likely represent a shift as compared to the baseline.

Many of the investor protection benefits of the proposed conflicts rules would be reduced to the extent that firms are already evaluating and eliminating, or neutralizing the effect of, conflicts associated with the use of covered technology. Benefits could also be reduced to the extent that firms already understand and are able to disclose the potential conflicts of interest associated with covered technology and investors already understand and respond to those disclosures such that disclosure adequately addresses the conflict of interest. On the other hand, for those covered technologies where it is difficult, or impossible, for firms to accurately determine whether they have designed their disclosures to put investors in a position to be able to understand and provide informed consent to conflicts of interest due to the complex nature of the

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<sup>318</sup> See Section III.C.3.

<sup>319</sup> This may include firms that generally meet the proposed requirements already, and, to varying degrees, firms that do not already meet the proposed requirements for a variety of possible reasons including that the firms may not completely understand the covered technology they use or may not recognize conflicts of interest or recognize when disclosure is inadequate.

underlying technologies, the proposed conflicts rules could have comparatively greater benefits.<sup>320</sup>

## **1. Benefits**

We preliminarily believe the primary benefit of the proposed conflicts rules and proposed recordkeeping amendments would stem from the requirement to eliminate, or neutralize the effect of, conflicts of interest that place the firm or associated person's interest ahead of investors' interests. This requirement could enhance investor protection by eliminating or neutralizing the effects of certain conflicts of interest, particularly in the context of the increasing scope and scale of investor interactions made possible by new technologies and by firms' increased ability to influence investor behavior in interactions that may not be viewed as constituting a recommendation or investment advice. The evaluation and identification requirements, the policies and procedures requirements, and the recordkeeping requirements primarily support the policy objectives of the elimination and neutralization requirement, and would serve to aid the examinations staff. However, we also note that the evaluation and identification requirements and the policies and procedures requirements might also yield ancillary benefits to investors, which we discuss below.

In the following subsections, we discuss the specific requirements of the proposed conflicts rules and proposed recordkeeping amendments in detail. In the first part of this section, we discuss the benefits of the proposed conflicts requirements, and in the second part, we discuss

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<sup>320</sup> See, e.g., Bakos, et al., *supra* note 248; Agnieszka Kitkowska, Johan Högberg & Erik Wästlund, *Online Terms and Conditions: Improving User Engagement, Awareness, and Satisfaction Through UI Design*, CHI '22: Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems, Article No. 624, at 1–22 (Apr. 2022).

the benefits of the policies and procedures requirements, and in the third, we discuss the benefits of the proposed recordkeeping amendments.

**a. Proposed Conflicts Requirements**

***i. Evaluation and Identification***

The proposed conflicts rules would require that firms evaluate any use or potential use by the firm of a covered technology in any investor interaction, to identify any conflict of interest (including by testing each such covered technology prior to its implementation or material modification and periodically thereafter). The terms “covered technology,” “investor interaction,” and “conflict of interest” are defined broadly in the proposal. They would capture a wide variety of technology uses, interactions, and conflicts of interest, not all of which would be required to be eliminated or their effect to be neutralized. However, identifying and evaluating this broad set of activities would help firms to determine which conflicts of interest place a firm’s interests ahead of investors’ interests.

This proposed requirement is important to help ensure that firms take proactive steps to identify conflicts of interest and evaluate their nature. Although firms already have obligations to address conflicts of interest, these do not necessarily apply equally to all forms of investor interaction, and the novelty and opacity of some covered technologies may leave firms unaware of conflicts of interest unless they take proactive steps to identify them.<sup>321</sup>

In addition, the proposed conflicts rules would require firms to test periodically whether any covered technology is associated with a conflict of interest. The test would be required prior to implementation or material modification of the technology, and periodically thereafter. This

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<sup>321</sup> See *supra* section I.B.4.a.

requirement is important for the proposed conflicts rules because certain technologies might change or adapt over time. For example, algorithms that adapt the firm's recommendations based on the data it collects from its users might display behaviors that change over time, even though the underlying technology may not have been materially modified, which would need periodic testing to evaluate and to identify any new conflicts of interest that are generated.

***ii. Determination, Elimination, and Neutralization***

The proposed conflicts rules would require the firm to determine whether an identified conflict of interest places the interest of the firm or an associated person ahead of the interests of the investor. As discussed below, these types of conflicts may require additional action. Requiring firms to make this determination is critical for the investor protection objectives of the proposed conflicts rules. This requirement would facilitate the elimination and neutralization requirements of the proposed conflicts rules.

The proposed conflicts rules would impose requirements on firms to eliminate, or neutralize the effect of, conflicts of interest that place the firm's or an associated person's interest ahead of investors' interests (except for conflicts which exist solely due to seeking to open a new account).

As discussed in section III.B, the scale and scope of investor interactions that are now possible with new technologies, and the scope and dynamic nature of the conflicts of interest that can be associated with the use of the technologies, present challenges for the use of disclosure. Disclosure of the full scope and dynamic nature of conflicts of interest that can be associated with the use of covered technologies can potentially be too broad and unspecific to be useful to a particular investor, or alternatively could entail too many disclosures to be useful to an investor. By requiring firms to eliminate, or neutralize, the effect of conflicts of interest that place the

firm's or an associated person's interest ahead of investors' interest, the proposed conflicts rules could enhance investor protection and address some of the unique challenges posed by the use of covered technologies in investor interactions.

Currently, broker-dealers' non-recommendation interactions with investors are not subject to conflict of interest requirements under Reg BI, and are instead bound by underlying antifraud provisions and FINRA rules including the Rules of Fair Practice, the requirement to observe just and equitable principles of trade, and rules governing communications with the public. Given the advances in covered technologies and DEPs, these non-recommendation interactions have the potential to influence investor behavior and place the firm's or associated person's interest ahead of investors' interests.

The use of DEPs in retail investing can exacerbate the principal-agent problem, by influencing investor behavior even if no recommendation is made. These platforms often utilize game-like features such as points, rewards, badges, leaderboards, interactive interfaces, push notifications, and other methods to encourage users to engage in trading activities. Some platforms use PDA technologies to target investors with notifications using detailed datasets, or use social proof and peer influence to influence investor behavior. These practices can take advantage of psychological biases and lead to impulsive, irrational investment decisions.

While DEPs are perhaps the clearest and best understood case, behavioral nudges embedded in interfaces, choices about data displays, the responses of chat bots, and other existing or future features may likewise influence investor behavior to their detriment and the benefit of covered firms. These uses of technology in investor interactions make it possible for firms to influence investor behaviors in a way that places the firm's or associated person's interest ahead of investors' interests.

The addition of more information through disclosure may not mitigate the negative effects of the use of these DEPs on investing behavior. This is because the use of DEPs can rely on human psychological factors, rather than a lack of information. Given the rate of investor interactions and the ability of technology to learn investor preferences or behavior, disclosures may be too unspecific (if provided to cover the entire relationship) or too frequent (if provided with every interaction) to be useful to investors.<sup>322</sup> Moreover, the features and design of covered technologies increase the risk through the constant presence enabled by automation, design practices which encourage habit formation, and the ability to collect data and individually and automatically tailor interventions to the proclivities of each investor. Elimination, or neutralization of the effect of, a conflict of interest could have greater investor protection benefits than disclosure to the extent that it could be difficult for a firm to accurately determine whether it has designed a disclosure that puts investors in a position to be able to understand the conflict of interest despite these psychological factors.

Many of the covered investor interactions are already subject to existing requirements described in the baseline. These include the requirements of the investment adviser's fiduciary duty obligations toward clients; and the broker-dealer's Conflict of Interest Obligation under Reg BI for recommendation interactions. However, some interactions covered by the proposed conflicts rules would not constitute recommendations for the purposes of Reg BI, and might not receive the same investor protection benefits as recommendations. Relative to the baseline, the proposed conflicts rules would impose requirements specific to the use of covered technologies in investor interactions. The proposed conflicts rules' conflict of interest obligations would cover

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<sup>322</sup> See *supra* section III.B generally, and *supra* note 248 on disclosures. See also Reg BI Adopting Release, *supra* note 8, at III.B.4.c. (discussing the effectiveness and limitations of disclosure).

the entirety of investment advisers' interactions with investors, and for broker-dealers the entirety of their interactions with retail investors. This addition is motivated by the complex, opaque, and evolving nature of covered technologies and how firms use them to interact with investors, and the fact that they can operate on psychological rather than rational factors. In this context, for the use of certain complex and opaque technologies, the proposed conflicts rules could enhance investor protection and address some of the unique challenges posed by conflicts of interest in the use of covered technologies in investor interactions.

The scope and frequency of investor interactions with new technologies and the complex, dynamic nature of those technologies may make it difficult for investors to understand or contextualize disclosures of conflicts of interest to the extent that the investors interact with the technologies, with interfaces or communications which feature outputs of the technologies, or with associated persons who make use of outputs of the technologies. For example, complex algorithms used in discretionary or non-discretionary robo-advising platforms could make it difficult for an investor to understand material facts or conflicts of interest and make an informed decision whether to consent or to allocate assets into or out of the platform. This could make it difficult for a firm to accurately determine whether it has designed a disclosure to put investors in a position to be able to understand and provide informed consent to the conflict of interest. Similarly, a chat-bot might provide investment advice based on a set of firm-investor conversations it has been trained to mimic using large language models. This advice may inherit any tendency to act on conflicts already present in conversations with firms or which were introduced by preferentially including conversations in the training data which resulted in the firm deriving greater benefits from the investor's resulting actions, for instance by overcoming investor resistance. In this situation where a conflict of interest may be exacerbated by the use of



a covered technology, eliminating or neutralizing effects that place the firm's or associated person's interests ahead of investors' interests would better protect investors to the extent that investors may be unable to assess, or have difficulty in assessing, the significance of conflicts in the firm's interactions with them.

By eliminating, or neutralizing the effect of, conflicts of interest that place the firm's or its associated persons' interest ahead of investors' interests, the proposed rules would protect investors from the negative effects of these conflicts. As mentioned in Section III.B, these conflicts of interest could lead firms to influence investors to use more services, increase transactions, or invest in risky investments that yield the firm or its associated persons higher profits than other products. To the extent that covered technologies present unique challenges to the current regulatory obligations of firms, eliminating, or neutralizing the effect of these conflicts would benefit investors by protecting them from these behaviors, and enabling them to make investment decisions that are in their best interests and aligned with their investment preferences, or improve the decisions made for the investor on their behalf.

The scope and dynamic nature of covered technologies in investor interactions, and the scale at which they can reach investors, can also prompt bandwagon or herding effects in investor behavior that enhance volatility and liquidity risks.<sup>323</sup> However, the firms that use covered technologies in investor interactions do not bear all of the costs of these risks. This negative externality creates a suboptimal incentive to allocate resources toward mitigating these risks. The proposed conflicts rules would require identification and evaluation of conflicts of interest, determination of which conflicts of interest place the firm's or an associated person's

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<sup>323</sup> GameStop Report, *supra* note 250.

interest ahead of investors' interests, and elimination, or neutralization of the effect of, these conflicts, which could improve investor confidence in these technologies and prevent the loss of confidence in these technologies from spreading from one firm to another.<sup>324</sup>

**b. Policies and Procedures**

Under the proposed conflicts rules, any firm that is subject to paragraph (b) of the proposed conflicts rules and that has any investor interactions using covered technology will have policies and procedures obligations. Specifically, investment advisers will be required to adopt and implement written policies and procedures reasonably designed to prevent violation of paragraph (b) of the proposed conflict rule, and broker-dealers will be required to adopt, implement, and maintain written policies and procedures reasonably designed to achieve compliance with paragraph (b) of the proposed conflict rule.<sup>325</sup> We do not believe, however, that there is a substantive difference between how firms would need to comply with each proposed conflict rule.<sup>326</sup> The written policies and procedures must include the following features:

***i. Written Description of Process Evaluating Use, Material Features and Conflicts of Interest of Covered Technology***

The policies and procedures must include: (i) a written description of the process for evaluating any use or reasonably foreseeable potential use of a covered technology in any investor interaction pursuant to paragraph (b) and (ii) a written description of any material features of, including any conflicts of interest associated with the use of, any covered technology

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<sup>324</sup> Some broker-dealers use covered technologies and interact with both retail and non-retail investors. Even though non-retail investors are not defined by the proposed conflicts rule applicable to broker-dealers as investors, they might nevertheless indirectly benefit from the elimination or neutralization of conflicts of interest that place the firm's interest ahead of investors' interests.

<sup>325</sup> See *supra* note 196.

<sup>326</sup> See *id.*

used in any investor interaction prior to such covered technology's implementation or material modification, which must be updated periodically. These written policies and procedures help to ensure firms adopt effective implementation plans and help examinations staff assess whether firms have complied with paragraph (b) of the proposed conflicts rules. Requiring that firms describe the process they use to evaluate the use or potential use of covered technologies is important for helping ensure that firms understand and document how their technology will be used or potentially used, and whether it involves investor interaction. Similarly, requiring a description of the material features of, and any conflicts of interest associated with the use of, the covered technology is important for helping ensure firms understand and document how their technology functions, and the conflicts of interest associated with their use. Requiring that the description of material features and conflicts of interest be in place before implementation or material modification would help ensure that firms consider covered technologies and identify and address conflicts of interest before investors could be harmed.

In addition, these written descriptions would be required to be updated periodically. Given that the effects of technologies can change materially as they are further developed or used in new contexts, this requirement would help ensure that the information remains current and the firm performs the necessary evaluation before harmful changes can proliferate.

***ii. Written Description Determining Whether and How to Eliminate, or Neutralize the Effect of, any Conflict of Interest***

The proposed conflicts rules would require that the policies and procedures include a written description of the process for determining whether and how to eliminate, or neutralize the effect of, any conflicts of interest determined pursuant to paragraph (b)(2) of the proposed conflicts rules to place the interest of the firm or an associated person ahead of the interests of

the investor. The proposed conflicts rules give firms considerable latitude to determine how to approach the elimination, or neutralization of the effect of, conflicts of interest. While this is necessary to help the proposed conflicts rules apply to a wide variety of business models and technologies, it also raises the risk that firms could adopt approaches that are inadequate to prevent them from placing their interests ahead of those of investors. This requirement would promote the development of considered and documented policies and procedures for determining whether and how to eliminate, or neutralize the effect of, any conflict of interest, instead of doing so on an ad hoc basis. Having a documented policy and procedure could also aid the training of the firm's compliance staff, and aid examiners and the firm when assessing a firm's compliance with the rules.

### ***iii. Review of Written Description***

The proposed conflicts rules would also require that the policies and procedures include a review of the written description required pursuant to paragraph (c)(1) of the proposed conflicts rules. The periodic review element requires a firm to consider whether any changes in the business activities, any changes in the use of technology generally, any issues that arose with the technologies during the previous year, and any changes in applicable law might suggest that certain covered technologies are of a different or greater risk than the firm had previously understood. Based on this periodic review, firms might be better able to determine whether changes are necessary in their approach to identification, determination, and elimination or neutralization of conflicts of interest and whether material changes to the use of technology are reflected by the written description. The regular review of the written description can help to ensure that the investor protection benefits of the proposed rules do not diminish after a covered technology is initially implemented, and improve investor confidence that firms have updated

policies and procedures to identify, determine, and eliminate or neutralize certain conflicts of interest.

**c. Proposed Recordkeeping Amendments**

The proposed recordkeeping amendments would require firms to make and keep several types of records. First, firms would be required to maintain written documentation of the evaluation conducted pursuant to paragraph (b)(1) of the proposed conflicts rules, including a list or other record of all covered technologies used by the firm in investor interactions, as well as documentation describing any testing of the covered technology in accordance with paragraph (b)(1) of the proposed conflicts rules. Second, firms would be required to maintain written documentation of each determination made pursuant to paragraph (b)(2) of the proposed conflicts rules, including the rationale for such determination. Third, firms would be required to maintain written documentation of each elimination or neutralization made pursuant to paragraph (b)(3) of the proposed conflicts rules. Fourth, firms would be required to maintain written policies and procedures, including written descriptions, prepared in accordance with paragraph (c) of the proposed conflicts rules. Fifth, firms would be required to maintain a record of the disclosures provided to investors regarding the firm's use of covered technologies. And sixth, firms would be required to maintain records of each instance in which a covered technology was altered, overridden, or disabled, the reason for such action, and the date thereof, including records of all instances where an investor requested that a covered technology be altered or restricted in any manner.

The proposed recordkeeping amendments would help ensure that a record of a firm's use of covered technology is maintained and preserved for an appropriate period of time consistent with the firm's other existing recordkeeping obligations. The proposed recordkeeping

amendments would also help facilitate the Commission’s oversight and enforcement capabilities by creating a record that the staff could use to assess compliance with the requirements of the proposed conflicts rules, and help ensure that the investor protection benefits of the proposed rules are realized.

## **2. Costs**

This section discusses two types of costs. We discuss the direct costs of the requirements of the proposed conflicts rules and proposed recordkeeping amendments and provide quantitative estimates of the costs of each provision. We then discuss the indirect costs of the proposed conflicts rules and proposed recordkeeping amendments, such as the potential impact on the use of technology and innovation.

### **a. Direct Costs**

#### ***i. Proposed Conflicts Rules – Eliminate, or Neutralize the Effect of, Conflicts of Interest***

We preliminarily anticipate that firms might need to hire dedicated personnel or dedicate the time of existing personnel to comply with the requirements of the proposed conflicts rules. The cost of identifying the presence of conflicts present in technology and determining if they lead to interactions in which the interests of the firm are placed ahead of those of the investor may vary greatly. Firms which have more conflicts of interest, or have conflicts more deeply embedded in the covered technologies they use, would likely bear greater costs than those that do not. Similarly, a firm’s costs are likely to vary depending on the nature of covered technology they use in investor interactions and the extent of that use. For tools and processes which are relatively transparent, a code review may suffice. For technology where the process of generating outputs from a given set of inputs is opaque, as is often the case with the product of

machine learning, it may be necessary to develop a testing system or engage with an independent third party with a system to identify conflicts of interest in all reasonably foreseeable uses of the technology. Such a system might record the outputs of the technology, measure the prospective or achieved outcomes for the investor and the firm, and compare them to those achieved by alternative specifications of the technology. To the extent that training models often require substantial computational resources and human feedback during the training process, testing of opaque systems could entail significant costs, which could entail the need to either hire dedicated personnel, or allocate the time of existing personnel.

The direct costs to eliminate, or neutralize the effect of, conflicts of interest in covered technologies would depend strongly on the technology used, the firm's business model, the nature of the conflicts, and the nature and extent of the interactions. For traditional optimizing methods or functions where a conflict is explicitly included in the model, the cost of excising the offending features may be trivial. In contrast, for methods which are opaque or where the technology optimizes over factors other than the firm's or an associated person's interest, but which may correlate with the firm's or associated person's interest, a more substantial and thus costly testing regime might be necessary. For some methods, such as NLP methods trained to replicate employee responses to investor communications, additional human input into the training process may be necessary to identify responses which potentially reflect conflicts of interest. This training input could be substantial and may need to be repeated as market institutions and conditions change, particularly if such changes are such that the data set on which the technology was trained does not adequately reflect new conditions. In some cases, firms could opt to eliminate conflicts directly, such as by changing their fee structure or other

revenue generation models, rather than eliminating or neutralizing the consideration of the conflicts within their covered technologies.

We provide two sets of cost estimates in Table 1, to reflect the extent to which the costs can vary depending on the complexity of the firm’s use of covered technology. Firms with complex covered technologies, such as machine learning or NLP algorithms, or those that process large datasets, might require more resources to comply with the requirements associated with eliminating, or neutralizing the effect of, conflicts of interest where the firm’s or an associated person’s interest is placed ahead of the interests of investors. Firms with simple technologies, such as spreadsheets or basic algorithms, would likely require fewer resources. In addition, firms might have business models of varying complexity, or with varying degrees of investor interaction, which could affect the costs they would bear. The Commission seeks comment or data on the costs of requirements of the proposed rules that could improve these estimates.

**Table 2: Direct Costs of Proposed Rules Requirements to Evaluate, Identify, Determine, and Eliminate, or Neutralize the Effect of, Certain Conflicts of Interest**

Proposed Rules Requirement	Simple Covered Technology Firm				Complex Covered Technology Firm			
	Initial Hours	Initial Cost	Annual Hours	Annual Cost	Initial Hours	Initial Cost	Annual Hours	Annual Cost
Evaluate Use of Covered Technology and Identify Conflicts of Interest	10	\$4,460	5	\$2,230	100	\$44,600	50	\$22,300
Determine Which Conflicts of Interest Require Elimination or Neutralization	5	\$2,230	2.5	\$1,115	50	\$22,300	25	\$11,150



Eliminate or Neutralize Effects of Certain Conflicts of Interest	10	\$4,460	5	\$2,230	200	\$89,200	100	\$44,600
<b>Sub-Total Burden</b>	<b>25</b>	<b>\$11,150</b>	<b>12.5</b>	<b>\$5,575</b>	<b>350</b>	<b>\$156,100</b>	<b>175</b>	<b>\$78,050</b>
<b>Total Number of Firms</b>			<b>16,182</b>				<b>1,798</b>	
<b>Total Aggregate Burden</b>	<b>404,550</b>	<b>\$180,429,300</b>	<b>202275</b>	<b>\$90,214,650</b>	<b>629300</b>	<b>\$280,667,800</b>	<b>314650</b>	<b>\$140,333,900</b>

1. Commission staff estimates, based on blended rate for a senior portfolio manager (\$383), senior operations manager (\$425), compliance attorney (\$425), assistant general counsel (\$523), senior programmer (\$386), and computer operations department manager (\$513), rounded to the nearest dollar.
2. Based on the estimates in section IV.B, we preliminarily estimate that 17,719 firms will bear the cost of a Simple Covered Technology firm, consisting of 15,402 investment advisers and 2,317 broker-dealers. We preliminarily estimate that 1,798 firms will bear the cost of Complex Covered Technology firm, consisting of 1,540 investment advisers and 258 broker-dealers.

**ii. Proposed Conflicts Rules - Policies and Procedures**

The policies and procedures portion of the proposed conflicts rules would require investment advisers to adopt and implement written policies and procedures reasonably designed to prevent violations of paragraph (b) of the proposed conflicts rules, and broker-dealers to adopt, implement, and maintain written policies and procedures reasonably designed to achieve compliance with paragraph (b) of the proposed conflicts rules.<sup>327</sup> These policies and procedures would need to include a written description of any material features of, any conflicts of interest associated with the use of, and any covered technology used in any investor interaction prior to such covered technology’s implementation or material modification. In addition, the policies and procedures must require that the adequacy of the policies and procedures and written description of material features be reviewed regularly. The policies and procedures also must require a written description of the process by which the firm determines whether and how to eliminate, or

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<sup>327</sup> See *supra* note 196.

neutralize the effect of, any conflicts of interest determined pursuant to paragraph (b)(2) of the proposed rules to place the interest of the firm or an associated person ahead of the interests of the investor.

We note that the Commission has provided certain estimates for purposes of compliance with the Paperwork Reduction Act of 1995 (“PRA”), as further discussed in Section IV below. Those estimates, while useful to understanding the collection of information burden associated with the final rules, do not purport to reflect the full economic costs associated with making the required disclosures. The PRA cost estimates are: (1) for the adoption and implementation of policies and procedures, an annual cost of \$14,610 for the firm; (2) for the requirement to create and maintain a written description of the covered technology, an annual cost of \$18,955 on firms and (3) and for the annual review requirement, an ongoing annual cost of \$2,230.<sup>328</sup>

### ***iii. Proposed Recordkeeping Amendments***

As discussed above, the proposed recordkeeping amendments would require firms to maintain information about the firm’s use of covered technology in investor interactions, and any associated conflicts of interest. This includes written documentation of the evaluation conducted pursuant to paragraph (b)(1) of the proposed conflicts rules, including a list or other record of all covered technologies used by the firm in investor interactions, as well as documentation describing any testing of the covered technology in accordance with paragraph (b)(1) of the proposed conflicts rules; written documentation of each determination made pursuant to paragraph (b)(2) of the proposed conflicts rules, including the rationale for such determination; written documentation of each elimination or neutralization made pursuant to paragraph (b)(3) of

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<sup>328</sup> See *infra* section IV.B.

the proposed conflicts rules; written policies and procedures, including written descriptions, prepared in accordance with paragraph (c) of the proposed conflicts rules; a record of the disclosures provided to investors regarding the firm's use of covered technologies; and records of each instance in which a covered technology was altered, overridden, or disabled, the reason for such action, and the date thereof, as well as records of all instances where an investor requested that a covered technology be altered or restricted in any manner. While these requirements aid the Commission in assessing the extent to which firms have complied with the other requirements of the proposed conflicts rules, we expect these requirements to impose costs on firms that will have to create and maintain these records. As further discussed in Section IV below, the PRA estimates that firms would face an ongoing annual cost of \$7,622 from the recordkeeping requirements, but would not face initial costs.

**b. Indirect Costs**

In the previous section, we discussed the direct costs of complying with the requirements of the proposed conflicts rules and proposed recordkeeping amendments. However, firms might not bear the ultimate burden of these costs. Firms might pass the cost of the requirements along to investors through higher fees, commissions, or other methods. It is difficult to estimate or quantify how much of these costs firms will end up paying themselves instead of passing on to investors, and this depends on how sensitive investors are to changes in the cost of the service provided by the firm, and how sensitive the firm is to changes in the costs of providing that service.<sup>329</sup>

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<sup>329</sup> Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, 70 J. POL. ECON. 215-240 (1962). The ultimate cost burden will be determined by the relative elasticity of the demand and supply curves for the service provided by the technology. Although this paper refers to the incidence of the tax burden, it is mechanically identical to determining which entities will bear the ultimate cost of the proposed rules.

The proposed requirements to eliminate, or neutralize the effect of, conflicts of interest which place the firm's or an associated person's interest ahead of the interests of investors can impose additional costs on the firm. Eliminating conflicts or neutralizing their effect can cause firms to lose the revenue that might have been generated by conflicts associated with uses of the technology, where the firm complied with and made adequate disclosure under all preexisting rules regarding conflicts of interest. In addition, eliminating conflicts or neutralizing their effect could also make technologies less efficient, as firms might alter these technologies with internal checks and safeguards to comply with the rules. For example, firms might add testing code to the technology or guard rails to the development process that could make the technology or its development less efficient and impose costs on the firm.

The overall costs, including recordkeeping costs, of the proposed conflicts rules and proposed recordkeeping amendments could also cause some firms to avoid using certain covered technologies in investor interactions, even if the technologies did not create any conflicts of interest. This might happen if the costs of complying with the proposed rules and amendments exceed the revenue that can be gained and/or costs that can be saved by using the technology. For example, a firm might opt not to use an automated investment advice technology because of the costs associated with complying with the proposed rules and amendments. In these types of situations, firms would lose the potential revenues that these technologies could have generated, and investors would lose the potential benefits of the use of these technologies. In addition, in the absence of these technologies, firms might raise the costs of their services, thus increasing the costs to investors.

In addition, to the extent that the firm's existing obligations do not require the elimination, neutralization, or disclosure of covered conflicts of interest, the requirement to

identify conflicts of interest in a technology could dissuade firms from using certain technologies when it is too difficult or costly to adequately evaluate the use of the covered technology, identify a conflict of interest, or determine whether they place the firm's or an associated person's interest ahead of an investor's. Some types of AI and machine learning, or a marketing algorithm with a large dataset, could be costly to test or difficult for the firm to assess. In these situations, investors would lose the potential benefit of these types of technologies, which could in theory have no conflict of interest, but firms might have no practical or financially viable way to demonstrate that there was not a conflict of interest or that any such conflict did not result in actions placing the firm's or an associated person's interest ahead of an investor's interest. Similarly, there may be technologies that do create conflicts that must be eliminated or their effect neutralized, but that also benefit investors if firms address those conflicts. Investors would lose the benefit of such technologies if firms determine that the process of eliminating, or neutralizing the effect of, conflicts is too difficult, costly, or uncertain to succeed.

Broker-dealers that use covered technologies and interact with both retail and non-retail investors might pass along some of the cost burden of the rules onto both retail and non-retail investors. Even though non-retail investors are not defined by the proposed rules as investors, they might nevertheless indirectly bear some of the costs of the proposed conflicts rule. In addition, non-retail investors might also be adversely affected to the extent that broker-dealers alter the use of their covered technologies to respond to conflicts of interest with retail investors.

We anticipate that firms may rely on third-party providers to develop covered technologies. Even if these third-party providers are not regulated entities under the proposed conflicts rules, they could consider the proposed rules when designing their products and processes for firms that must meet the proposed conflicts rules' requirements, either

independently or at the request of firms covered by the proposed conflicts rules. To the extent that the requirements of the proposed conflicts rules result in more costly development, testing, and documentation, these third-party providers may incur costs. In addition, competition between third-party providers might drive down the costs of compliance for firms. Firms with bargaining power might also seek to pass on certain compliance costs to third-party providers, for instance by seeking assurances that the covered technology provided by the third party would not generate conflicts of interest between the firm and the investor. In this context, competition between third-party providers might pass some or all of these costs on to firms in product prices and service fees, and firms in turn may pass some or all of these costs on to investors. The proportion of costs that are passed through each entity will depend on competition among providers and firms, the price sensitivity of investors, and the perceived value of the various covered technologies.

The requirements to test and document conflicts related to the use of technologies would not only add costs to firms that use covered technologies in investor interaction, they could also slow down the rate at which firms update existing or develop or adopt new technologies. The time needed to review and document changes to the technology could incentivize firms to reduce the frequency of technological updates, or slow the overall rate of updates, which could harm both the firm and investors. These delays and associated monetary costs could reduce the quality or increase the cost of the technology or service for investors, and could reduce the revenues of the firms.

## **E. Effects on Efficiency, Competition, and Capital Formation**

### **1. *Efficiency***

The proposed conflicts rules would positively impact efficiency by providing investors with greater confidence regarding the conflicts of interest associated with the use of covered technologies that they interact with or whose outputs help determine the form or content of investor interactions. Investors would not have to expend costly efforts (including in terms of the opportunity cost of time) on understanding the effects of complex and opaque technologies, and the disclosures thereof, that the firms use in their interactions with investors when they can instead rely on conflicts which place the interest of the firm or an associated person ahead of investors' interests to have been eliminated or their effect to have been neutralized. Further, myriad of investors would not have to duplicate these costly efforts that they each may otherwise independently expend. In this context, the proposed conflicts rules would enhance economic efficiency by improving the efficiency of portfolio allocations, or by enabling the resources thereby saved to be allocated to more productive economic outcomes. In addition, reducing the costly effort that investors must undertake to understand covered technologies and their associated disclosures by eliminating, or neutralizing the effect of, conflicts of interest that place the firm's or an associated person's interest ahead of an investor's could increase participation in financial markets and improve efficiency.

The proposed conflicts rules could negatively affect efficiency by impeding the use of technology in several ways. First, the compliance costs of the proposed conflicts rules could dissuade some firms from using covered technologies in investor interactions. For example, a firm might decide that using a chatbot technology that provided investment advice would be too costly because of the obligations imposed by these rules, and instead opt for human alternatives.

To the extent that the chatbot technology was more efficient at providing support to investors, the efficiency of the firm's ability to provide advice would be decreased. Second, certain types of technology might be too difficult or costly to evaluate, or to modify to comply with the rules, and firms could avoid using these technologies. For example, a firm might decide that a covered technology was developed based on data that are too complex to evaluate, or to identify all conflicts of interest, and therefore the firm might have difficulty complying with the proposed conflicts rules. In these cases, firms and investors would not enjoy any of the efficiency gains that the covered technology might have yielded, or have yielded if already implemented. Third, the costs and requirements could slow down the frequency or overall rate of technological updates to existing covered technologies and exploration of new covered technologies, as well as make the technology itself less efficient. For example, firms might need to add guard rails to the development process, or additional layers of review of any potential changes to the technology. Not only could this harm the firm and investors due to, for example, foregone cost savings, lack of tailoring of recommendations to individual investors, or unimplemented user experience improvements, but it also could slow down technological innovation and progress more broadly.<sup>330</sup> However, to the extent rapid development and implementation of such innovations result in the release of flawed or otherwise harmful products into the marketplace, efficiency may be improved.<sup>331</sup>

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<sup>330</sup> These losses in efficiency could also adversely affect non-retail investors that interact with broker-dealer covered technologies that also interact with retail investors.

<sup>331</sup> We do not expect the proposed recordkeeping amendments to generate significant effects on efficiency. The proposed recordkeeping amendments generally would serve to support the implementation of the proposed conflicts rules.



## 2. *Competition*

Eliminating, or neutralizing the effect of, conflicts of interest would have two principal competition-related effects. First, investors could have greater confidence in interactions with firms using covered technologies, and could therefore be more likely to participate in financial markets. Second, when evaluating firms, investors would likely put additional weight on key factors such as advisory, management, or brokerage fees and execution quality, which also directly impact market efficiency, thereby increasing the extent to which firms compete on these factors. These two effects could positively affect competition between firms and result in lower fees and higher service quality for investors.

The proposed conflicts rules could also result in costs that could act as barriers to entry or create economies of scale, potentially making it challenging for smaller firms to compete with larger firms utilizing covered technologies – as firms continue to increasingly rely on covered technologies for investor interactions.<sup>332</sup> Ensuring compliance with the proposed conflicts rules would require additional resources and expertise, which could become a significant barrier to entry, potentially hindering smaller firms from entering the market or adopting new technologies. Moreover, larger firms with a larger client or customer base may have a competitive advantage over smaller firms because they may be better able to spread the (fixed) cost of the proposed conflicts rules across their clients, or more effectively negotiate with third party providers to obtain compliant technology externally. Smaller firms subject to the proposed conflicts rules

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<sup>332</sup> Similarly, some broker-dealers with a small retail investor business line and a larger non-retail investor business line could decide to cut back on serving retail investors to avoid incurring the compliance costs. This could increase market concentration among broker-dealers that service retail investors.

could also face a competitive disadvantage compared to larger firms when negotiating with technology companies to build software that complies with the proposed conflicts rules.

These competitive effects might be mitigated to the extent that firms are using technologies licensed from third party providers. Third party technology providers might compete with each other to lower the cost of compliance, compared to the case where firms bore the costs of compliance internally. Moreover, to the extent that firms have bargaining power over third party providers, they may be able to shift some of the compliance burden onto these providers. To the extent that third party providers develop the ability to lower compliance costs through competition, smaller firms may also experience reduced compliance costs.<sup>333</sup>

### **3. *Capital Formation***

The impact of the proposed conflicts rules on capital formation would be influenced by a number of factors. On the one hand, the elimination or neutralization of the effects of certain harmful conflicts of interest in firms' use of covered technologies could enhance capital formation if the quality of services is improved, or investment performance or execution quality is improved, and investors trust these technologies more and invest more as a result. On the other hand, the costs associated with the proposed conflicts rules could have the opposite effect. If these costs result in increased fees for investors or deter firms from using covered technologies in investor interaction, then capital formation could be hindered. This could be particularly problematic for smaller firms who may struggle to absorb these additional costs. In addition, to

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<sup>333</sup> We do not expect the proposed recordkeeping amendments to generate significant effects on competition. The proposed recordkeeping amendments generally would serve to support the implementation of the proposed conflicts rules.

the extent that the costs of the technology are too high and firms avoid using certain covered technologies that benefit investors, capital formation could be hindered.<sup>334</sup>

## **F. Reasonable Alternatives**

In formulating our proposal, we have considered various alternatives. Those alternatives are discussed below and we have also requested comments on certain of these alternatives.

### **1. *Expressly permit, or require, the use of independent third-party analyses.***

This alternative would expressly state that firms may utilize independent third parties to assess compliance with elements of the proposed conflicts rules.<sup>335</sup> A variation on this alternative would require the use of independent third-party assessments. Allowing or requiring the use of independent third parties to carry out and assess compliance could help ensure that identification and evaluation of conflicts of interest, the determination of which conflicts of interest place the firm's or an associated person's interest ahead of investors', and the elimination, or neutralization of the effect of, the conflict of interest are done in an objective and unbiased manner. In addition, the use of independent third parties could reduce the costs of complying with the associated proposed conflicts rules and eliminate or reduce the need for firms to maintain dedicated staff. Independent third-party firms might have more expertise or be more efficient than individual firms, especially smaller firms, at analyzing the function and the effects of covered technologies, especially technologies licensed from third party service providers.

However, this alternative could undermine the investor protection benefits of the proposed conflicts rules and proposed recordkeeping amendments if independent third parties are

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<sup>334</sup> We do not expect the proposed recordkeeping amendments to generate significant effects on capital formation. The proposed recordkeeping amendments generally serve to support the implementation of the proposed conflicts rules.

<sup>335</sup> The proposed conflicts rules do not prohibit such third-party analyses.

less efficient at identifying and evaluating conflicts of interest in the use of covered technologies in investor interactions, because they might not have the same level of information about a firm's business and investors. In addition, competition between independent third parties for the business of firms could result in a "race to the bottom" of the quality of compliance assessments.

**2. *Require that senior firm personnel and/or specific technology subject-matter experts participate in the process of adopting and implementing these policies and procedures.***

This alternative would add a requirement to the proposed conflicts rules that senior firm personnel and/or specific technology subject-matter experts participate in the process of adopting and implementing these policies and procedures. In addition, these senior firm personnel and/or specific technology subject-matter experts would be required to certify that such policies and procedures that the firm adopts and implements (and, in the case of broker-dealers, maintains) are in compliance with the requirements of this paragraph (c) of the proposed conflicts rules. Requiring the use of these personnel could potentially enhance the effectiveness of the policies and procedures that firms create, which could improve a firm's ability to evaluate and identify conflicts of interest, and eliminate or neutralize conflicts of interest that place the firm's interest ahead of the investors. To the extent that such personnel are not necessary to satisfy the policies and procedures requirements of the proposed conflicts rules, the requirement to use these personnel could impose additional costs on firms, which would have to hire additional personnel to satisfy the requirement, divert the labor of existing personnel, or engage with a third-party service provider. In addition, the requirement that these personnel provide a certification for the policies and procedures would also add additional costs not present in the proposal on firm, and create potential barriers to entry for small firms.

3. *Provide an exclusion for technologies that consider large datasets where firms have no reason to believe the dataset favors the interests of the firm from the identification, evaluation, and testing requirements.*

This alternative would provide an exclusion from all of the proposed requirements for technologies that consider large datasets, where firms have no reason to believe the dataset favors the interests of the firm. An example of this type of technology might include a chatbot technology that is trained on large portions of the internet. To the extent that the training dataset is not chosen or created in a biased manner, a firm could reasonably believe that it does not consider the interest of the firm, and yet the firm could have difficulty complying with the proposed conflicts rules' requirements to identify conflicts of interest generated by the use of the technology.

An exclusion for this type of technology use could reduce the costs imposed on the firms that use these technologies, or make certain covered technologies cost-effective to use. However, the exclusion could also undermine the investor protection goals of the proposed conflicts rules by lowering the standards placed on firms' use of covered technologies in investor interactions. Even though firms likely would need to conduct due diligence in order to establish their reasonable belief, and update it regularly, this alternative could result in a regime where firms only reasonably believe that their technologies do not have conflicts of interest, rather than one where firms have tested for conflicts of interest in their covered technologies. In addition, this alternative may incentivize firms to avoid testing datasets in order to avoid receiving information that would challenge their reasonable belief about the unbiased nature of their data.

**4. *Apply the requirements of the proposed conflicts rule and proposed recordkeeping amendments only to broker-dealer use of covered technologies that have non-recommendation investor interaction.***

This alternative would limit the scope of the requirements to covered technologies used by broker-dealers in non-recommendation interactions with investors. Such an alternative would target those investor interactions that fall outside Reg BI's Conflict of Interest Obligation. These broker-dealer non-recommendation interactions can influence investor behavior due to advances in technology and the psychological biases of investors. Imposing requirements on broker-dealer covered technologies that have non-recommendation interactions with investors would expand the set of investor interactions that have some form of conflict of interest obligation, requiring that broker-dealers eliminate, or neutralize the effect of, certain conflicts of interest that arise in non-recommendation interactions covered by the proposed conflicts rule. This alternative would also place on certain non-recommendation interactions the proposed policies and procedures and recordkeeping obligations, including those related to testing.

However, this alternative cedes the benefits and costs of the proposed conflicts rules' requirements for a large portion of investor interactions with covered technologies, namely those interactions with broker-dealers that involve a recommendation, and with investment advisers. These interactions would still be subject to existing conflict of interest obligations, but would not benefit from, for example, the proposed evaluation and identification (including testing) provisions or the requirement to eliminate, or neutralize the effects of, conflicts of interest that place the firm's or an associated person's interest ahead of investors' interests. In addition to forgoing these benefits, this alternative would result in non-recommendation interactions being subject to more prescriptive requirements, and more documentation pursuant to the policies and

procedures and recordkeeping elements of the proposal, than recommendation interactions, which could create frictions for broker-dealers that use covered technologies that have both recommendation and non-recommendation interactions with investors.

Another variation of this alternative would, in addition to the application of the requirements of the proposed conflicts rules to broker-dealer use of covered technology for non-recommendation investor interactions, apply the policy and procedures requirements and the recordkeeping requirements of the proposed conflicts rules and proposed recordkeeping amendments to investment adviser and broker-dealer use of covered technology with any investor interaction. This alternative would forgo the benefits and costs associated with the proposal's requirement to eliminate, or neutralize the effect of, certain conflicts of interest for advice and recommendation interactions. However, the alternative might strengthen existing conflict of interest obligations by requiring that firms have documented policies and procedures to evaluate the use of covered technologies, the conflicts of interest associated with their use, and the extent to which any conflicts of interest place the firm's interest ahead of the investors, which could yield investor protection benefits for investors. This alternative would impose the costs of the policies and procedures requirements and the recordkeeping requirements on firms.

**5. *Require that firms test covered technologies on an annual basis, or at a specific minimum frequency.***

This alternative would require that firms test covered technologies used in investor interactions on an annual basis at a minimum, instead of periodically as under the proposal. This alternative could enhance investor protection by ensuring that covered technologies used in investor interactions are tested regularly at a minimum level for conflicts of interest. However, this alternative could impose unnecessary costs on firms that use covered technologies which

have relatively static potential for conflicts of interest. For example, an investment recommendation algorithm that bases its responses on a static data set and accepts limited input from investors from a simple questionnaire, might not need to be tested as frequently as push notifications based on a dataset that is frequently being updated. Similarly, a covered technology operating within a static business model or defined set of investor interactions might not need to be tested as frequently. Imposing a minimum testing frequency that would be adequate for the latter example would impose unnecessary costs on the former, and a minimum testing frequency that would be suitable for the former example might be too infrequent for the latter example, potentially exposing investors to unidentified conflicts of interest.

**6. *Require that firms provide a prescribed and standardized disclosure.***

This alternative would require that firms deliver to investors prescribed and standardized disclosure of conflicts of interest that place the firm's or an associated person's interest ahead of investors' interests, in lieu of the proposed conflicts rules' requirement to eliminate, or neutralize the effect of, such conflicts of interest.<sup>336</sup> Firms would also have to file their disclosures with the Commission. This disclosure would be a free-standing form like Form CRS, but would focus on the conflicts of interest associated with covered technologies and their use in investor interactions. The prescribed and standardized disclosure would require information such as the technologies used, a brief description of how they work, the data used, any third-party service providers associated with the technology, and any conflicts of interest identified. This disclosure would be in addition to the firm's existing Reg BI, fiduciary duty, and other baseline disclosure obligations.

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<sup>336</sup> However, the use of covered technology in investor interaction would still be subject to the firm's existing conflict of interest obligations, which might require the firm to eliminate or mitigate the conflict of interest.



By providing a prescribed and standardized disclosure, the firm could address the effects of the conflicts of interest by providing additional information and context in a format that is more easily understood by investors. A prescribed and standardized disclosure could also reduce the costs to investors to understand and interpret information about covered technologies. In addition, these disclosures might allow investors to more easily compare the conflicts of interest that firms have, or understand which firms use the same or similar underlying covered technologies.

However, it is not clear that prescribing a standardized disclosure would be sufficient to enable investors to provide informed consent or otherwise achieve the investor protection goals of the proposed rules. In particular, disclosure may be ineffective in light of, as discussed in section III.B, the rate of investor interactions and the ability of the technology to learn investor preferences or behavior, which could entail providing disclosure that is highly technical and variable. Firms might have difficulty fully conveying the scope of conflicts of interest generated by the use of covered technologies, which could hamper its ability to address the effects of conflicts of interest they generate. And, as previously discussed, disclosures may be too lengthy to be meaningful or actionable.<sup>337</sup> Conflicts disclosure may also, for example, lead to under- or over-reaction by investors: investors may not know how to respond to information about conflicts and therefore fail to adequately adjust their behavior, or may overreact to disclosures of conflicts of interest and therefore forgo valuable investment advice.<sup>338</sup>

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<sup>337</sup> See *supra* note 248 and surrounding text.

<sup>338</sup> See, e.g., James M. Lacko & Janis K. Pappalardo, *The Effect of Mortgage Broker Compensation Disclosures on Consumers and Competition: A Controlled Experiment*, Federal Trade Commission, Bureau

## G. Request for Comment

We request comment on all aspects of the economic analysis of the proposed conflicts rules and proposed recordkeeping amendments. To the extent possible, we request that commenters provide supporting data and analysis with respect to the benefits, costs, and effects on competition, efficiency, and capital formation of adopting the proposed conflicts rules and proposed recordkeeping amendments or any reasonable alternatives. In particular, we ask commenters to consider the following questions:

94. What additional regulatory, qualitative, or quantitative information should be considered as part of the baseline for the economic analysis of the proposed conflicts rules and proposed recordkeeping amendments?
95. The Commission seeks comment on the types of technologies that are currently in use that could potentially be affected by the proposed conflicts rules and proposed recordkeeping amendments. Have they been accurately characterized? If not, why not? Are there any technologies that haven't been included, that should be? Are there any technologies that have been included, that shouldn't be? Is the simpler and complex technology distinction discussed in this release sufficient to describe the cost burdens of technologies?

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of Economics Staff Report (Feb. 2004), <https://www.ftc.gov/sites/default/files/documents/reports/effect-mortgage-broker-compensation-disclosures-consumers-and-competition-controlled-experiment/030123mortgagefullrpt.pdf> (documenting that when mortgage customers receive information about mortgage broker compensation through disclosures, such disclosures lead to an increase in more expensive loans and create a bias against broker-sold loans, even when the broker-sold loans are the more cost effective option); George Loewenstein, Cass R. Sunstein, & Russell Golman, Disclosure: Psychology Changes Everything, 6 ANN. REV. ECON. 391 (2014). *See also* Reg BI Adopting Release, *supra* note 8, at III.B.4.c. (discussing the effectiveness and limitations of disclosure). *See also* SEC Staff Study Regarding Financial Literacy Among Investors, August 2012, at <https://www.sec.gov/news/studies/2012/917-financial-literacy-study-part1.pdf>.

96. The Commission seeks comment on the conflicts of interest associated with the use of covered technologies. What types of conflicts of interest are associated with the use of these technologies? What costs do they impose on investors? What practices exist for eliminating, or neutralizing the effect of, these conflicts of interest? What practices exist for mitigating the effects of these conflicts of interest? What are the current costs of these methods?
97. Are the costs and benefits of the proposed conflicts rules and proposed recordkeeping amendments accurately characterized? If not, why not? Should any of the costs or benefits be modified? What, if any, other costs or benefits should be taken into account? If possible, please offer ways of estimating these costs and benefits. What additional considerations can be used to estimate the costs and benefits of the proposed conflicts rules and proposed recordkeeping amendments?
98. Are the effects on competition, efficiency, and capital formation arising from the proposed conflicts rules and proposed recordkeeping amendments accurately characterized? If not, why not?
99. The Commission seeks comment on the potential costs associated with the proposed conflicts rules and proposed recordkeeping amendments. What types of costs are likely to be incurred by firms in order to comply with the proposed conflicts rules and proposed recordkeeping amendments? How might these costs vary depending on the types of technology, the business model, or the nature and extent of investor interactions used by the firms? To what extent do firms already incur these costs in order to comply with their existing obligations? What costs would there be for investors?

100. The Commission seeks comment on the types of labor and other resources that would be required for firms to comply with the proposed conflicts rules and proposed recordkeeping amendments. What personnel would need to be involved in complying with the proposed conflicts rules and proposed recordkeeping amendments? What types of expertise would be required? How might the size and complexity of a firm impact the resources needed to comply with the proposed conflicts rules and proposed recordkeeping amendments?
101. The Commission seeks comment on how the proposed conflicts rules and proposed recordkeeping amendments might impact a firm's or a technology provider's software development process. What changes might be necessary in order to help ensure that firms using covered technologies in investor interactions are in compliance with the proposed conflicts rules and proposed recordkeeping amendments? How might the proposed conflicts rules and proposed recordkeeping amendments impact the speed or efficiency of software development?
102. The Commission seeks comment on the potential impact of the proposed conflicts rules and proposed recordkeeping amendments on smaller firms, or firms with simpler or more transparent covered technologies. What additional costs might these firms face in order to comply with the proposed conflicts rules and proposed recordkeeping amendments? How might these costs impact smaller firms and their investors differently than larger firms and their investors?
103. The Commission seeks comment on the potential benefits of the proposed conflicts rules and proposed recordkeeping amendments. How might the proposed

conflicts rules and proposed recordkeeping amendments improve transparency and fairness in the use of covered technologies? What impact might this have on investor confidence and trust in the market?

104. The Commission seeks comment on the potential alternatives to the proposed conflicts rules and proposed recordkeeping amendments. Are there other approaches that might be more effective at achieving the goals of the proposed conflicts rules and proposed recordkeeping amendments? What trade-offs might be involved in pursuing these alternatives?
105. Are the economic effects of the above alternatives accurately characterized? If not, why not? Should any of the costs or benefits be modified? What, if any, other costs or benefits should be taken into account?
106. Are there other reasonable alternatives to the proposed conflicts rules and proposed recordkeeping amendments that should be considered? What are the costs, benefits, and effects on competition, efficiency, and capital formation of any other alternatives?

#### **IV. PAPERWORK REDUCTION ACT**

##### **A. Introduction**

Certain provisions of our proposal would result in new “collection of information” requirements within the meaning of the Paperwork Reduction Act of 1995 (“PRA”).<sup>339</sup> Proposed rule 151-2 under the Exchange Act and proposed rule 211(h)(2)-4 under the Advisers Act would result in new collection of information burdens and related amendments to rule 17a-3 and 17a-4

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<sup>339</sup> 44 U.S.C. 3501 *et seq.*

under the Exchange Act and rule 204-2 under the Advisers Act and would have an impact on current collection of information burdens. The titles of the new collection of information requirements we are proposing are “Rule 211(h)(1)-4 under the Advisers Act” and “Rule 151-2 under the Exchange Act.” The Office of Management and Budget (“OMB”) has not yet assigned control numbers for these new collections of information. The titles for the existing collections of information that we are proposing to amend are: (i) “Rule 204-2 under the Investment Advisers Act of 1940” (OMB control number 3235-0278); and (ii) “Rule 17a-3 and Rule 17a-4 under the Exchange Act” (OMB control numbers 3235-0033 and 3235-0279). The Commission is submitting these collections of information to the OMB for review and approval in accordance with 44 U.S.C. 3507(d) and 5 CFR 1320.11. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

We discuss below the new collection of information burdens associated with the proposed new rules, and amendments to existing rules. Responses provided to the Commission in the context of its examination and oversight program concerning the proposed rules and corresponding amendments would be kept confidential subject to the provisions of applicable law. A description of the proposed new rules and proposed amendments to existing rules, including the need for the information and its use, as well as a description of the types of respondents, can be found in section II above, and a discussion of the expected economic effects of the proposed new rules and proposed amendments to existing rules can be found in section III above.

## **B. Proposed Conflicts Rules and Proposed Recordkeeping Amendments**

The proposed conflicts rules are designed to address the conflicts of interest associated with firms' use of certain technology when engaging in certain investor interactions. As discussed in greater detail above, the proposed conflicts rules would generally require the elimination or neutralization of the effects of certain conflicts of interest. Specifically, paragraph (b) of the proposed conflicts rules would require a firm to (i) evaluate any use or reasonably foreseeable potential use by the firm of a covered technology in any investor interaction to identify any conflict of interest associated with that use or potential use (including by testing each such covered technology prior to its implementation or material modification, and periodically thereafter, to determine whether the use of such covered technology is associated with a conflict of interest); (ii) determine whether any such conflict of interest places or results in placing the firm's or an associated persons interest ahead of investors' interests; and (iii) eliminate, or neutralize the effect of, any such conflict of interest.<sup>340</sup> As also discussed above, paragraph (c) of the proposed rules would require a firm that has any investor interaction using covered technology to adopt, implement, and in the case of broker-dealers, maintain written policies and procedures that are, in the case of investment advisers, reasonably designed to prevent violations of, or in the case of broker-dealers, reasonably designed to achieve compliance with, paragraph (b) of the rules.

We believe that paragraph (c) constitutes a collection of information. We do not believe that the proposed requirements under paragraph (b) constitute an independent information collection. But, to the extent they do, we believe that the process firms would engage in to

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<sup>340</sup> See proposed rule 211(h)(2)-4(b); see also *supra* sections II.A.1 and II.A.2.c.

comply with the policies and procedures requirements under paragraph (c) of the proposed conflicts rules, and the information collection burden related thereto, are inextricable from any information collection burden under paragraph (b) of the proposed conflicts rules. Therefore, the information collection burden resulting from the policies and procedures required under the proposed conflicts rules would constitute the full burden of the rules.

Finally, the proposed recordkeeping amendments would require investment advisers that are registered or required to be registered under the Advisers Act and broker-dealers that use covered technologies in investor interactions to make and maintain written records documenting compliance with the requirements of the proposed conflicts rules. Under the proposed recordkeeping amendments, the time periods for preserving records would vary between those for investment advisers that are registered or required to be registered under the Advisers Act and broker-dealers, in accordance with the existing recordkeeping rules that would be amended.<sup>341</sup> Time periods for maintaining records where they are easily accessible would be the same between investment advisers and broker-dealers.<sup>342</sup>

Each of the proposed requirements to obtain or maintain information constitutes a “collection of information” requirement under the PRA and is mandatory. These proposed collections are designed to require firms to have an established framework for eliminating or neutralizing conflicts of interest that could harm clients and which we believe would assist these firms in complying with the requirements under paragraph (b)(3) of the proposed rules.

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<sup>341</sup> Pursuant to current rule 204-2(e)(1), the records required to be maintained and preserved under proposed amendments to rule 204-2 under the Advisers Act would be required to be maintained and preserved in an easily accessible place for a period of not less than five years from the end of the fiscal year during which the last entry was made on such record, the first two years in an appropriate office of the investment adviser. For broker-dealers, rule 17a-4(a) requires that records be “preserve[d] for a period of not less than 6 years, the first two years in an easily accessible place.” *See also supra* section II.B.

<sup>342</sup> *See id.*



Accordingly, we believe the proposal would have investor protection benefits. Additionally, the Commission’s staff could use the information obtained through these collections in its enforcement, regulatory, and examination programs. The respondents to these collections of information requirements would be investment advisers that are registered or required to be registered under the Advisers Act and broker-dealers that are registered under the Exchange Act that used covered technologies in investor interactions.

As of February 28, 2023, there were 15,402 investment advisers registered with the Commission<sup>343</sup> and 3,504<sup>344</sup> broker-dealers registered with the Commission. We believe that substantially all of the 15,402 registered investment advisers would be subject to the proposed rules and, based on an analysis of filings by these firms performed by the staff, we believe that approximately 2,575<sup>345</sup> broker-dealers would be subject to the proposed rules.

The application of the provisions of the proposed conflicts rules and proposed recordkeeping amendments—and thus the extent to which there are collections of information and their related burdens—would be contingent on a number of factors, such as, among others, the types of covered technologies a firm uses, a firm’s business model, the number of clients or customers of the firm, the extent, nature and frequency of investor interactions, and the nature and extent of its conflicts. Because of the wide diversity of services and relationships offered by firms, we expect that the obligations imposed by the proposed rules would, accordingly, vary

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<sup>343</sup> Based on IARD data as of Mar. 27, 2023.

<sup>344</sup> Based on FOCUS Filing data, as of Mar. 2023.

<sup>345</sup> Consistent with the Form CRS Adopting Release, we estimate that 73.5% of registered broker-dealers report retail activity and thus, would likely be subject to the proposed rules. However, we recognize this may capture some broker-dealers that do not have retail activity.

substantially. However, we have made certain estimates of this data solely for the purpose of this PRA analysis.

**Table 3: Proposed Conflicts Rules and Proposed Recordkeeping Amendments**

	Internal initial burden hours <sup>1</sup>	Internal annual burden hours <sup>2</sup>	Wage rate <sup>3</sup>	Internal time cost <sup>4</sup>	Annual external cost burden <sup>5</sup>
<b>PROPOSED ESTIMATES</b>					
Adopting and implementing policies and procedures	21 hours	30 hours	\$487 (blended rate for senior corporate and information technology managers, assistant general counsel, and compliance attorney)	\$14,610 (equal to the internal annual burden X the wage rate)	\$0
Preparation of written descriptions <sup>6</sup>	60 hours	42.5 hours	\$446 (blended rate for senior corporate and information technology managers and staff, assistant general counsel, and compliance attorney)	\$18,955 (equal to the internal annual burden X the wage rate)	\$0
Annual review of policies and procedures and written descriptions		5 hours	\$446 (blended rate for senior corporate and information technology managers and staff, assistant	\$2,230 (equal to the internal annual burden hours X the wage rate)	\$0

			general counsel, and compliance attorney)		
Recordkeeping requirements <sup>7</sup>	N/A	18.5 hours	\$412 (blended rate for compliance attorney, senior programmer, and senior corporate manager)	\$7,622 (equal to the internal annual burden hours X the wage rate)	\$0
Total new annual burden		96 hours (equal to the sum of the above four boxes)		\$43,417 (equal to the sum of the above four boxes)	\$0 (equal to the sum of the above four boxes)
Number of investment advisers covered		x 15,402 covered investment advisers <sup>7</sup>		x 15,402 covered investment advisers	\$0
Number of broker-dealers covered		x 2,573 covered broker-dealers		x 2,573 covered broker-dealers	\$0
Total new annual aggregate burden for investment advisers covered		1,478,592 hours		\$668,708,634	\$0
Total new annual aggregate burden for broker-dealers covered		247,008 hours		\$ 111,711,941	\$0

**Notes:**

1. In the case of investment advisers, most advisers using covered technology already have certain policies and procedures in place relevant to these technologies so as to fulfill the adviser’s fiduciary duty, comply with the Federal securities laws, and protect clients from potential harm. Similarly, broker-dealers are already subject to extensive obligations, including certain policies and procedures requirements, under Federal securities laws and regulations, and rules of self-regulatory organizations (in particular, FINRA) that would apply to the extent PDA-like technologies are used in investor interactions that are subject to such existing obligations. In reaching our estimates, we considered that advisers and broker-dealers relying more heavily on complex covered technologies may exceed this average, while advisers and broker-dealers relying less heavily on these technologies may fall below this average.
2. Totals for this category include internal initial hour burden estimates annualized over a three-year period.
3. The Commission’s estimates of the relevant wage rates are based on salary information for the securities industry compiled by Securities Industry and Financial Markets Association’s Office Salaries in the Securities Industry 2013, as modified by Commission staff for 2023 (“SIFMA Wage Report”). The estimated figures are modified by firm size, employee benefits, overhead, and adjusted to account for the effects of inflation.
4. All costs calculated are rounded to the nearest dollar.
5. Firms may incur third-party costs in connection with the proposed conflicts rules but, due to data limitations, for the purpose of this Paperwork Reduction Act analysis, we estimate the full cost of compliance to be internal. *See supra* section III.C.1. (discussing data limitations).
6. Includes all written descriptions to be required under proposed rules 275.211(h)(2)-4(c)(1) through (3) and 240.151-2 (c)(1) through (3).

7. In our most recent Paperwork Reduction Act submission for rule 204-2, we estimated for rule 204-2 a total annual aggregate hour burden of 2,764,563 hours, and a total annual aggregate external cost burden of \$175,980,426. The table above summarizes the initial and ongoing annual burden estimates associated with the proposed amendments to rule 204-2. We have made certain estimates of the burdens associated with the proposed amendments solely for the purpose of this PRA analysis. We estimate that the proposed amendments would result in an aggregate burden of 284,937 hours (18.5 hours x 15,402 advisers) and with an estimated aggregate internal monetized cost of \$117,394,044 (284,937 hours x \$412 blended rate of professional staff described above = \$117,394,044). Based on our most recent Paperwork Reduction Act submission, we believe that the total burden under rule 204-2, including the proposed amendments to rule 204-2, amount to 3,049,500 hours with a total internal monetized cost of \$293,374,470.

### **C. Request for Comment**

We request comment on whether these estimates are reasonable. Pursuant to 44 U.S.C. 3506(c)(2)(B), the Commission solicits comments in order to: (i) evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information will have practical utility; (ii) evaluate the accuracy of the Commission's estimate of the burden of the proposed collection of information; (iii) determine whether there are ways to enhance the quality, utility, and clarity of the information to be collected; and (iv) determine whether there are ways to minimize the burden of the collection of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology. Persons wishing to submit comments on the collection of information requirements of the proposed amendments should direct them to the OMB Desk Officer for the Securities and Exchange Commission, MBX.OMB.OIRA.SEC\_desk\_officer@omb.eop.gov, and should send a copy to Vanessa A. Countryman, Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090, with reference to File No. S7-12-23. OMB is required to make a decision concerning the collections of information between 30 and 60 days after publication of this release; therefore, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days after publication of this release. Requests for materials submitted to OMB by the Commission with regard to these collections of information should be in writing, refer to File

No. S7-12-23, and be submitted to the Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549-2736.

## **V. INITIAL REGULATORY FLEXIBILITY ANALYSIS**

The Commission has prepared the following Initial Regulatory Flexibility Analysis (“IRFA”) in accordance with section 3(a) of the Regulatory Flexibility Act.<sup>346</sup> It relates to: (i) proposed rule 15l-2 under the Exchange Act and proposed rule 211(h)(2)-4 under the Advisers Act; and (ii) proposed amendments to rules 17a-3 and 17a-4 under the Exchange Act and rule 204-2 under the Advisers Act.

### **A. Reason for and Objectives of the Proposed Action**

The reasons for, and objectives of, the proposed rules and amendments are discussed in more detail in sections I and II, above. The burdens of these requirements on small advisers and broker-dealers are discussed below as well as above in sections III and IV, which discuss the burdens on all advisers and broker-dealers. Sections II through IV discuss the professional skills that we believe compliance with the proposed rules and amendments would require.

#### **1. *Proposed Rules 15l-2 and 211(h)(2)-4***

We are proposing rules 15l-2 under the Exchange Act and 211(h)(2)-4 under the Advisers Act (collectively, the “conflicts rules”) which, generally, would require investment advisers and broker-dealers registered with the Commission to take certain steps to eliminate, or neutralize the effect of, certain conflicts of interest from these firms’ use of covered technology when engaging in certain investor interactions. As firms adopt and utilize covered technologies at an increasingly rapid pace, the risk of conflicts of interest associated with the use of those

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<sup>346</sup> 5 U.S.C. 603(a).

technologies becomes increasingly pronounced and potentially harmful on a broader scale than previously possible. In addition, the conflicts associated with a firm's use of these technologies may expose investors to unique and opaque conflicts of interest for which disclosure may not be possible or sufficient and which may not otherwise be sufficiently addressed by the existing legal framework. The proposed conflicts rules, therefore, would require a firm to identify and evaluate whether any use or potential use by the firm of a covered technology in any investor interaction involves a conflict of interest, determine whether any such conflict of interest results in an investor interaction that places the firm's or an associated person's interest ahead of investors' interests, and eliminate, or neutralize the effect of, any such conflict of interest.

The proposed conflicts rules would also require a firm that has any investor interaction using covered technology to adopt, implement, and, in the case of broker-dealers, maintain, written policies and procedures reasonably designed to achieve compliance with the elimination and neutralization of effect of conflicts of interest requirement. These proposed policies and procedures requirements, as well as the written descriptions and annual review to be required by those policies and procedures, are designed to require firms to have an established framework for eliminating, or neutralizing the effect of, conflicts of interest that could harm clients and which we believe would assist these firms in complying with the requirements under paragraph (b) of the proposed rules. The description would also assist the firm's internal staff, as well as examination staff, in assessing a firm's compliance. In turn, this design would help ensure that firms are appropriately eliminating, or neutralizing the effects of, any conflict of interest in accordance with the proposed rules.

The proposed rules would require the policies and procedures to address certain matters that, collectively, are designed to help ensure that a firm understands how its covered

technologies work and the actual or potential conflicts they could involve. The policies and procedures would require a firm that has any investor interaction using covered technology to adopt, implement, and maintain written policies and procedures reasonably designed to achieve compliance with the proposed conflicts rules, including policies and procedures designed to require: (i) a written description of any material features of, including any conflicts of interest associated with the use of, any covered technology used in any investor interaction prior to such covered technology's implementation or material modification, which must be updated periodically thereafter; (ii) a written description of the process for determining whether any conflict of interest identified pursuant to the proposed conflicts rules places or results in placing the interest of the firm or person associated with the firm ahead of the interests of the investor; (iii) a written description of the process for determining how to eliminate, or neutralize the effect of, any conflicts of interest determined pursuant to the proposed conflicts rules to result in an investor interaction that places the interest of the firm or person associated with the firm ahead of the interests of the investor; and (iv) a review and written documentation of that review, no less frequently than annually, of the adequacy of the policies and procedures established pursuant to the proposed conflicts rules and the effectiveness of their implementation as well as a review of the written descriptions established pursuant to the proposed conflicts rules.

The proposed conflict rules are designed to promote investor protection while allowing continued technological innovation in the industry.

## **2. *Proposed Amendments to Rules 17a-3 and 17a-4 and Rule 204-2***

Proposed amendments to rules 17a-3 and 17a-4, the books and records rules under the Exchange Act, and proposed amendments to rule 204-2, the books and records rule under the Advisers Act, would require firms to make and keep books and records related to the

requirements of the proposed conflicts rules and are designed to help facilitate the Commission's examination and enforcement capabilities by creating records staff can use to assess compliance with the requirements of the proposed conflicts rules, and to help facilitate assessment by firm compliance staff of such compliance. The rules would require firms to maintain six types of records, as follows, and as more fully described in section II above: (1) written documentation of the evaluation conducted pursuant to paragraph (b)(1) of the proposed conflicts rules, including a list or other record of all covered technologies used by the firm in investor interactions, as well as documentation describing any testing of the covered technology in accordance with paragraph (b)(1) of the proposed conflicts rules; (2) written documentation of each determination made pursuant to paragraph (b)(2) of the proposed conflicts rules, including the rationale for such determination; (3) written documentation of each elimination or neutralization made pursuant to paragraph (b)(3) of the proposed conflicts rules; (4) written policies and procedures, including written descriptions, prepared in accordance with paragraph (c) of the proposed conflicts rules; (5) a record of the disclosures provided to investors regarding the firm's use of covered technologies; and (6) records of each instance in which a covered technology was altered, overridden, or disabled, the reason for such action, and the date thereof, as well as records of all instances where an investor requested that a covered technology be altered or restricted in any manner.

## **B. Legal Basis**

The Commission is proposing the new rules and rule amendments described above under the authority set forth in sections 204 and 211 of the Investment Advisers Act of 1940 (15 U.S.C. 80b-4 and 80(b)-11) and sections 15 and 17 of the Securities Exchange Act of 1934 (15 U.S.C. 78j).



## **C. Small Entities Subject to the Rules and Rule Amendments**

In developing these proposals, we have considered their potential impact on small entities that would be subject to the proposed rules and rule amendments. The proposed rules and amendments would affect investment advisers registered, or required to be registered, with the Commission and broker-dealers registered with the Commission, including some small entities.

### **1. *Small Advisers Subject to Proposed Rule 211(h)(2)-4 and Proposed Amendments to Recordkeeping Rule***

Under Commission rules under the Advisers Act, for the purposes of the RFA, an investment adviser generally is a small entity if it: (i) has assets under management having a total value of less than \$25 million; (ii) did not have total assets of \$5 million or more on the last day of the most recent fiscal year; and (iii) does not control, is not controlled by, and is not under common control with another investment adviser that has assets under management of \$25 million or more, or any person (other than a natural person) that had total assets of \$5 million or more on the last day of its most recent fiscal year. Our proposed rules and amendments would not affect most investment advisers that are small entities (“small advisers”) because they are generally registered with one or more state securities authorities and not with the Commission. Under section 203A of the Advisers Act, most small advisers are prohibited from registering with the Commission and are regulated by state regulators. We estimate that approximately 489 SEC-registered advisers are small entities under the RFA.<sup>347</sup>

As discussed above in section IV (the Paperwork Reduction Act Analysis), the Commission estimates that based on IARD data through March 31, 2023, approximately 15,402

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<sup>347</sup> Based on IARD data as of Dec. 31, 2022.

investment advisers would be subject to proposed rule 211(h)(2)-4 and the related amendments to the recordkeeping rule. We estimate that all of the approximately 489 SEC-registered advisers that are small entities under the RFA would be subject to the proposed conflicts rules and amendments to the recordkeeping rule.

**D. Small Broker-Dealers Subject to Proposed Conflicts Rule and Amendments to Recordkeeping Rules**

For purposes of the RFA, under the Exchange Act a broker or dealer is a small entity if it: (i) had total capital of less than \$500,000 on the date in its prior fiscal year as of which its audited financial statements were prepared or, if not required to file audited financial statements, on the last business day of its prior fiscal year; and (ii) is not affiliated with any person that is not a small entity.<sup>348</sup> Based on Commission filings, we estimate that approximately 764 broker-dealers may be considered small entities.<sup>349</sup>

**E. Projected Reporting, Recordkeeping, and Other Compliance Requirements**

The proposed conflicts rules and amendments to rule 204-2 and to rules 17a-3 and 17a-4 would impose certain compliance and recordkeeping requirements on those investment advisers and broker-dealers subject to the terms of the rules, including those that are small entities. All advisers and broker-dealers that have any investor interaction using covered technology would be subject to the proposed conflict rules' requirement to adopt, implement, and (in the case of broker-dealers) maintain written policies and procedures reasonably designed to achieve compliance with the proposed conflicts rules. These firms would also be subject to the recordkeeping requirements in the proposed amendments to rule 204-2 and rules 17a-3 and 17a-

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<sup>348</sup> 17 CFR 240.0-10.

<sup>349</sup> Estimate based on FOCUS Report data collected by the Commission as of Sept. 30, 2022.

4. The proposed requirements and rule amendments, including compliance, reporting, and recordkeeping requirements, are summarized in this IRFA (section V.A., above). All of these proposed requirements are also discussed in detail, above, in sections I and II, and these requirements and the burdens on respondents, including those that are small entities, are discussed above in sections III and IV (the Economic Analysis and Paperwork Reduction Act Analysis, respectively) and below. The professional skills required to meet these specific burdens are also discussed in section IV.

**1. *Proposed Conflicts Rules***

As discussed above, approximately 489 small advisers were registered with us as of December 31, 2022, and we estimate that all of these advisers would be subject to proposed rule 211(h)(2)-4. As discussed above in our Paperwork Reduction Act Analysis in section IV above, proposed rule 211(h)(2)-4 would create an annual burden of approximately 77.5 hours per adviser, or 37,897.5 hours in aggregate for small advisers.<sup>350</sup> We therefore expect that the annual monetized aggregate cost to small advisers associated with proposed rule 211(h)(2)-4 would be \$17,432,850.<sup>351</sup>

As discussed above, approximately 764 broker-dealers may be considered small entities as of September 30, 2022, and we estimate that 562<sup>352</sup> of those small registered broker-dealers would be subject to the proposed amendments (73.5% of all registered small broker-dealers). As

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<sup>350</sup> 77.5 hours x 489 small advisers subject to the proposed rule and rule amendments.

<sup>351</sup> \$460 (blended rate for professionals assisting with adopting and implementing policies and procedures, (ii) preparation of written descriptions, and (iii) annual review of policies and procedures and written descriptions) x 37,897.55 hours.

<sup>352</sup> 2,573 (estimated number of broker-dealers subject to proposed rule and rule amendments) / 3,501 (number of registered broker-dealers) = 0.735 (estimated ratio of broker-dealers subject to rule and rule amendments). 0.735 x 764 (number of small broker-dealers) = 562 small broker-dealers subject to proposed rule and rule amendments.

discussed above in our Paperwork Reduction Act Analysis in section IV above, proposed rule 15l-2 would create an annual burden of approximately 77.5 hours per broker-dealers, 43,555 hours in aggregate for small broker-dealers.<sup>353</sup> We therefore expect that the annual monetized aggregate cost to small broker-dealers associated with proposed rule 15l-2 would be \$20,035,300.<sup>354</sup>

## **2. Proposed Amendments to Rule 204-2**

The proposed amendments to rule 204-2 would impose certain recordkeeping requirements on investment advisers using covered technology in interactions with investors. The proposed amendments, including recordkeeping requirements, are summarized above in this IRFA (section V.A). All of these proposed requirements are also discussed in detail, above, in section II, and these requirements and the burdens on respondents, including those that are small entities, are discussed above in sections III and IV (the Economic Analysis and Paperwork Reduction Act Analysis) and below. The professional skills required to meet these specific burdens are also discussed in section IV.

Our Economic Analysis (section III above) discusses these costs and burdens for respondents, which include small advisers. As discussed above in our Paperwork Reduction Act Analysis in section IV above, the proposed amendments to rule 204-2 would create an annual burden of approximately 18.5 hours per adviser. Based on our estimate of 489 advisers subject to the proposed amendments to the rule, we estimate the aggregate burden on small advisers to

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<sup>353</sup> 77.5 hours x 562 small broker-dealers subject to the proposed rule and rule amendments.

<sup>354</sup> \$460 (blended rate for professionals assisting with adopting and implementing policies and procedures, (ii) preparation of written descriptions, and (iii) annual review of policies and procedures and written descriptions) x 43,555 hours.

amount to 9,046.5 hours.<sup>355</sup> We therefore expect that the annual monetized aggregate cost to small advisers associated with the proposed amendments to rule 204-2 would be \$3,727,158.<sup>356</sup>

### **3. *Proposed Amendments to Rules 17a-3 and 17a-4***

The proposed amendments to rules 17a-3 and 17a-4 would impose certain recordkeeping requirements on broker-dealers using covered technology in interactions with investors. The proposed amendments, including recordkeeping requirements, are summarized above in this IRFA (section V.A). All of these proposed requirements are also discussed in detail, above, in section II, and these requirements and the burdens on respondents, including those that are small broker-dealers, are discussed above in sections III and IV (the Economic Analysis and Paperwork Reduction Act Analysis) and below. The professional skills required to meet these specific burdens are also discussed in section IV.

Our Economic Analysis (section III above) discusses these costs and burdens for respondents, which include small broker-dealers. As discussed above in our Paperwork Reduction Act Analysis in section IV above, the proposed amendments to rules 17a-3 and 17a-4 would create an annual burden of approximately 18.5 hours per broker-dealer. Based on our estimate of 562 small broker-dealers subject to the proposed amendments to the rule, we estimate the aggregate burden on small broker-dealers to amount to 10,397 hours.<sup>357</sup> We therefore expect that the annual monetized aggregate cost to small broker-dealers associated with the proposed amendments to rules 17a-3 and 17a-4 would be \$4,283,564.<sup>358</sup>

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<sup>355</sup> 18.5 hours x 489 advisers.

<sup>356</sup> \$412 (blended rate for compliance attorney, senior programmer, and senior corporate manager) x 9,046.5 hours.

<sup>357</sup> 18.5 hours x 562 small broker-dealers.

<sup>358</sup> \$412 (blended rate for compliance attorney, senior programmer, and senior corporate manager) x 10,397 hours.

## **F. Duplicative, Overlapping, or Conflicting Federal Rules**

### **1. Proposed Rule 211(h)(2)-4 and Proposed Amendments to Rule 204-2**

In proposing rule 211(h)(2)-4, we recognize that investment advisers today are subject to a number of laws, rules, and regulations which indirectly address the oversight of the way an adviser relies on and uses technology in its interactions with advisory clients. As discussed in section I and section III.C.3, their fiduciary duty requires them to take steps to protect client interests, which would include steps to provide investment advice that it reasonably believes is in the best interest of the client regardless of whether the adviser is using a covered technology in an investor interaction. This duty requires investment advisers to eliminate a conflict of interest or, at a minimum, make full and fair disclosure of the conflict of interest such that a client can provide informed consent to the conflict.<sup>359</sup> Investment advisers are subject to the antifraud provisions found in section 206 of the Advisers Act,<sup>360</sup> which prohibits fraud or deceit upon any client or prospective client; rule 206(4)-8 under the Advisers Act, which makes it unlawful for any investment adviser to a pooled investment vehicle to engage in fraud or deceit upon any investor or prospective investor in the pooled investment vehicle,<sup>361</sup> and Exchange Act rule 10b-5, which makes it unlawful for any person to engage in fraud or deceit upon any person.<sup>362</sup> Advisers are also subject to the Advisers Act Compliance Rule, requiring advisers to adopt, implement, and annually review written policies and procedures reasonably designed to prevent violations of the Act and the rules thereunder,<sup>363</sup> and rule 206(4)-1 under the Advisers Act,

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<sup>359</sup> See Fiduciary Interpretation, *supra* note 8, at section II.

<sup>360</sup> 15 U.S.C. 80b-6.

<sup>361</sup> 17 CFR 275.206(4)-8.

<sup>362</sup> 17 CFR 240.10b-5.

<sup>363</sup> See rule 206(4)-7.

prohibiting advisers from disseminating any advertisement that violates any requirements of that rule, including making untrue statements of material fact or misleading omissions and discussing any potential benefits connected with or resulting from the investment adviser's services or methods of operation without providing fair and balanced treatment of any material risks or material limitations associated with the potential benefits.<sup>364</sup> Individually and collectively, these impose obligations on an adviser's use of covered technologies in investor interactions depending on how the adviser uses the technology.

However, investment advisers do not have specific obligations under the Advisers Act or any of its rules to eliminate, or neutralize the effect of, conflicts of interest promptly after the adviser identifies, or reasonably should have identified, such conflict of interest.<sup>365</sup> Further, the Advisers Act compliance rule is principles based and, as such, does not require *specific* elements that would be required under the policies and procedures requirements of the proposed conflict rule.<sup>366</sup> Similarly, existing recordkeeping obligations do not specifically require the records that firms would be required to keep under the proposed amendments to that rule.<sup>367</sup> The proposed rules would provide a comprehensive oversight framework, consisting of targeted obligations, policies and procedures, and recordkeeping requirements, which we believe would be complementary to existing obligations and practices rather than duplicative or conflicting. To the extent there is overlap among the existing and proposed requirements, it is incomplete overlap and would ease burdens on smaller firms in complying with the proposed rules.

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<sup>364</sup> See rule 206(4)-1(a)(1), (4).

<sup>365</sup> See proposed rule 211(h)(2)-4(b).

<sup>366</sup> See proposed rule 211(h)(2)-4(c).

<sup>367</sup> See proposed rule 204-2.

## 2. *Proposed rule 15l-2 and proposed amendments to rules 17a-3 and 17a-4*

As noted above, broker-dealers are currently subject to extensive obligations under Federal securities laws and regulations, and rules of self-regulatory organizations (in particular, FINRA), that are designed to promote conduct that, among other things, protects investors from conflicts of interest.<sup>368</sup> To the extent PDA-like technologies are used in investor interactions that are subject to existing obligations (including, but not limited to, obligations related to recommendations, general and specific requirements aimed at addressing certain conflicts of interest, including requirements to eliminate, mitigate or disclose certain conflicts of interest, disclosure of firms' services, fees and costs, disclosure of certain business practices, communications with the public, supervision, and obligations related to policies and procedures), those obligations would apply. In addition to these obligations, Federal securities laws and regulations broadly prohibit fraud by broker-dealers as well as fraud by any person in the offer, purchase, or sale of securities, or in connection with the purchase or sale of securities. However, broker-dealers do not have specific obligations under the Exchange Act or any of its rules to eliminate, or neutralize the effect of, conflicts of interest in the same way as required under proposed rule 15l-2. Similarly, while existing recordkeeping obligations apply more generally to "business" records, they do not specifically require the records that firms would be required to

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<sup>368</sup> See Reg BI Adopting Release, *supra* note 8, at section II.A.1. (The "without placing the financial or other interest . . . ahead of the interest of the retail customer" phrasing recognizes that while a broker-dealer will inevitably have some financial interest in a recommendation—the nature and magnitude of which will vary—the broker-dealer's interests cannot be placed ahead of the retail customer's interest"). Additionally, broker-dealers often provide a range of services that do not involve a recommendation to a retail customer—which is required in order for Reg BI to apply—and those services are subject to general and specific requirements to address associated conflicts of interest under the Exchange Act, Securities Act of 1933, and relevant SRO rules as applicable. See, e.g., Reg BI Proposing Release, *supra* note 8; see also FINRA Conflict Report, *supra* note 60, at Appendix I (Conflicts Regulation in the United States and Selected International Jurisdictions) (describing broad obligations under SEC and FINRA rules as well as specific conflicts-related disclosure requirements under FINRA rules).



keep under the proposed amendments to the proposed conflict rule for broker-dealers. The proposed rules would provide a comprehensive oversight framework, consisting of targeted obligations, policies and procedures, and recordkeeping requirements, which we believe would be complementary to existing obligations and practices rather than duplicative or conflicting. To the extent there is overlap among the existing and proposed requirements, it is incomplete overlap and would ease burdens on smaller firms in complying with the proposed rules.

**G. Significant Alternatives**

The RFA directs the Commission to consider significant alternatives that would accomplish our stated objectives, while minimizing any significant adverse impact on small entities. In connection with the proposed rules and rule amendments, the Commission considered the following alternatives: (i) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (ii) the clarification, consolidation, or simplification of compliance and reporting requirements under the proposed rules and rule amendments for such small entities; (iii) the use of performance rather than design standards; and (iv) an exemption from coverage of the proposed rules and rule amendments, or any part thereof, for such small entities.

Regarding the first and fourth alternatives, we do not believe that differing compliance or reporting requirements or an exemption from coverage of the proposed rules and rule amendments, or any part thereof, for small entities, would be appropriate or consistent with investor protection. Because the protections of the Advisers Act and Exchange Act are intended to apply equally to clients and customers of both large and small advisory and brokerage firms, it would be inconsistent with the purposes of the Advisers Act and Exchange Act to specify different requirements for small entities under the proposed rules and rule amendments. We

believe there has been, and will continue to be, rapid adoption and use of covered technologies in the industry,<sup>369</sup> and that the effects of conflicts of interest associated with these covered technologies are contrary to the public interest and the protection of investors.<sup>370</sup> Consequently, we believe that investors would receive important protections under the proposed conflicts rules and proposed recordkeeping amendments and that establishing different conditions for large and small firms, when investors use both large and small firms, would negate these benefits.

Regarding the second alternative, the proposed conflicts rules and amendments to rule 204-2 and rules 17a-3 and 17a-4 are intended to prohibit conduct that the Commission considers to be contrary to the public interest and protection of investors under section 211 of the Advisers Act and Section 15 of the Exchange Act. We have endeavored to consolidate and simplify the compliance requirements under the proposed conflicts rules and the proposed amendments to rule 204-2 and 17a-3 and 17a-4 for all firms, and we do not believe that the goal of the proposed conflicts rules and proposed recordkeeping amendments of enhancing investor protection would be achieved as well by further consolidating or simplifying the requirements. In addition, the proposed conflicts rules provide minimum standards for all covered technologies, but the elimination and neutralization requirement would only affect firms whose use of covered technology is actually determined to place the interests of the firm ahead of investors, meaning certain aspects of the proposed conflicts rules would only have an impact on small entities to the extent that the entities' use of covered technologies places their interests ahead of investors.

Regarding the third alternative, we determined to use a combination of performance and design standards. Although the proposed conflicts rules would require firms to undertake certain

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<sup>369</sup> See *supra* section I.B.

<sup>370</sup> See *id.*

functions relating to the elimination or neutralization of the effect of certain conflicts of interest and requires firms to adopt, implement, and, in the case of broker-dealers, maintain, certain policies and procedures reasonably designed to achieve compliance with the requirement to eliminate, or neutralize the effect of, certain conflicts of interest,<sup>371</sup> the proposed conflicts rules would allow firms a broad range of flexibility in complying with these requirements. For example, as described in detail in section II.A.2.e., firms have flexibility in determining whether to eliminate a conflict of interest or neutralize the effect of the conflict. Similarly, in light of the broad range of covered technology and investor interactions, the proposed conflicts rules provide firms with flexibility in their evaluation of any use or reasonably foreseeable potential use by the firm or its associated person of a covered technology and flexibility in their determination of whether any such conflict of interest places or results in placing the firm's or its associated person's interest ahead of investors' interests. We believe that flexibility is appropriate, but also believe that certain of the design standards in the proposed conflicts rules and proposed recordkeeping amendments are necessary to, among other things, facilitate the Commission's examination and enforcement capabilities by creating records staff can use to assess compliance with the requirements of the proposed conflicts rules, and to help facilitate assessment by firm compliance staff of such compliance.

#### **H. Solicitation of Comments**

We encourage written comments on the matters discussed in this IRFA. We solicit comment on the number of small entities subject to the proposed conflicts rules and the proposed amendments to rule 204-2 and rules 17a-3 and 17a-4, as well as the potential impacts discussed

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<sup>371</sup> See *supra* section II.

in this analysis; and whether the proposal could have an effect on small entities that has not been considered. We request that commenters describe the nature of any impact on small entities and provide empirical data to support the extent of such impact.

## **VI. CONSIDERATION OF IMPACT ON THE ECONOMY**

For purposes of the Small Business Regulatory Enforcement Fairness Act of 1996, or “SBREFA,”<sup>372</sup> we must advise OMB whether a proposed regulation constitutes a “major” rule. Under SBREFA, a rule is considered “major” where, if adopted, it results in or is likely to result in (i) an annual effect on the economy of \$100 million or more; (ii) a major increase in costs or prices for consumers or individual industries; or (iii) significant adverse effects on competition, investment or innovation.

We request comment on the potential impact of the proposed conflicts rules and proposed recordkeeping amendments on the economy on an annual basis. Commenters are requested to provide empirical data and other factual support for their views to the extent possible.

## **STATUTORY AUTHORITY**

The Commission is proposing new rule 240.151-2 under the Exchange Act under the authority set forth in section 15 of the Exchange Act (15 U.S.C. 78j). The Commission is proposing amendments to §§240.17a-3 and 17a-4 under the Exchange Act under the authority set forth in section 17 of the Exchange Act (15 U.S.C. 78q).

The Commission is proposing new rule 211(h)(2)-4 under the Advisers Act under the authority set forth in section 211 of the Investment Advisers Act (15 U.S.C. 80b-11(a) and (h)). The Commission is proposing amendments to rule 204-2 under the Advisers Act under the

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<sup>372</sup> Pub. L. 104-121, Title II, 110 Stat. 857 (1996) (codified in various sections of 5 U.S.C., 15 U.S.C., and as a note to 5 U.S.C. 601).

authority set forth in sections 204 and 211 of the Investment Advisers Act (15 U.S.C. 80b-4 and 80b-11).

### **List of Subjects in 17 CFR Parts 240 and 275**

Brokers, Reporting and recordkeeping requirements; Securities.

### **Text of Proposed Rules and Form Amendments**

For the reasons set out in the preamble, the SEC proposes to amend title 17, chapter II of the Code of Federal Regulations as follows:

### **PART 240 — GENERAL RULES AND REGULATIONS, SECURITIES EXCHANGE ACT OF 1934**

1. The authority citation for part 240 is amended to read, in part, as follows:

**Authority:** 15 U.S.C. 77c, 77d, 77g, 77j, 77s, 77z-2, 77z-3, 77eee, 77ggg, 77nnn, 77sss, 77ttt, 78c, 78c-3, 78c-5, 78d, 78e, 78f, 78g, 78i, 78j, 78j-1, 78j-4, 78k, 78k-1, 78l, 78m, 78n, 78n-1, 78o, 78o-4, 78o-10, 78p, 78q, 78q-1, 78s, 78u-5, 78w, 78x, 78dd, 78ll, 78mm, 80a-20, 80a-23, 80a-29, 80a-37, 80b-3, 80b-4, 80b-11, 7201 *et seq.*, and 8302; 7 U.S.C. 2(c)(2)(E); 12 U.S.C.5221(e)(3); 18 U.S.C. 1350; and Pub. L. 111-203, 939A, 124 Stat.1376 (2010); and Pub. L. 112-106, sec. 503 and 602, 126 Stat. 326 (2012), unless otherwise noted

\* \* \* \* \*

2. Add § 240.151-2 to read as follows:

### **§ 240.151-2 Prohibition against conflicts associated with investor interactions employing covered technology.**

(a) *Definitions.* For purposes of this section:

*Conflict of interest* exists when a broker or dealer uses a covered technology that takes into consideration an interest of the broker or dealer, or a natural person who is an associated person of a broker or dealer.

*Covered technology* means an analytical, technological, or computational function, algorithm, model, correlation matrix, or similar method or process that optimizes for, predicts, guides, forecasts, or directs investment-related behaviors or outcomes.

*Investor* means a natural person, or the legal representative of such natural person, who seeks to receive or receives services primarily for personal, family or household purposes.

*Investor interaction* means engaging or communicating with an investor, including by exercising discretion with respect to an investor's account; providing information to an investor; or soliciting an investor; except that the term does not apply to interactions solely for purposes of meeting legal or regulatory obligations or providing clerical, ministerial, or general administrative support.

(b) *Elimination or neutralization of the effect of conflicts of interest.* A broker or dealer must:

(1) Evaluate any use or reasonably foreseeable potential use of a covered technology by the broker or dealer, or a natural person who is an associated person of a broker or dealer, in any investor interaction to identify any conflict of interest associated with that use or potential use (including by testing each such covered technology prior to its implementation or material modification, and periodically thereafter, to determine whether the use of such covered technology is associated with a conflict of interest);

(2) Determine if any conflict of interest identified pursuant to paragraph (b)(1) of this section places or results in placing the interest of the broker or dealer, or a natural person who is an associated person of a broker or dealer ahead of the interests of investors; and

(3) Eliminate, or neutralize the effect of, any conflict of interest (other than conflicts of interest that exist solely because the broker or dealer seeks to open a new investor account) determined pursuant to paragraph (b)(2) of this section to result in an investor interaction that places the interest of the broker or dealer, or a natural person who is an associated person of a broker or dealer, ahead of the interests of investors, promptly after the broker or dealer determines, or reasonably should have determined, that the conflict of interest placed the interests of the broker or dealer, or a natural person who is an associated person of a broker or dealer, ahead of the interests of investors.

(c) *Policies and procedures.* A broker or dealer that is subject to paragraph (b) of this section and that has any investor interaction using covered technology must adopt, implement, and maintain written policies and procedures reasonably designed to achieve compliance with paragraph (b) of this section, including:

(1) A written description of the process for evaluating any use or reasonably foreseeable potential use of a covered technology in any investor interaction pursuant to paragraph (b)(1) of this section and a written description of any material features of, including any conflicts of interest associated with the use of, any covered technology used in any investor interaction prior to such covered technology's implementation or material modification, which must be updated periodically;

(2) A written description of the process for determining whether any conflict of interest identified pursuant to paragraph (b)(1) of this section results in an investor interaction that places

the interest of the broker or dealer, or a natural person who is an associated person of a broker or dealer ahead of the interests of investors;

(3) A written description of the process for determining how to eliminate, or neutralize the effect of, any conflicts of interest determined pursuant to paragraph (b)(2) of this section to result in an investor interaction that places the interest of the broker or dealer or a natural person who is an associated person of a broker or dealer ahead of the interests of investors; and

(4) A review and written documentation of that review, no less frequently than annually, of the adequacy of the policies and procedures established pursuant to this section and the effectiveness of their implementation as well as a review of the written descriptions established pursuant to this section.

3. Amend § 240.17a-3 by adding paragraph (a)(36) to read as follows:

**§ 240.17a-3 Records to be made by certain exchange members, brokers and dealers.**

\* \* \* \* \*

(a) \* \* \*

\* \* \* \* \*

(36) All records required to be made and maintained pursuant to § 240.151-2, including:

(i) Written documentation of the evaluation conducted pursuant to § 240.151-2(b)(1),

including:

(A) A list or other record of all *covered technologies* used in *investor interactions* by the broker or dealer, including:

(1) The date on which each *covered technology* is first implemented, and each date on which any *covered technology* is materially modified; and



(2) The broker or dealer's evaluation of the intended as compared to the actual use and outcome of each *covered technology* in *investor interactions*.

(B) Documentation describing any testing of the *covered technology* in accordance with § 240.151-2(b)(1), including:

(1) The date on which testing was completed;

(2) The methods used to conduct the testing;

(3) Any actual or reasonably foreseeable potential *conflicts of interest* identified as a result of the testing;

(4) A description of any changes or modifications to the *covered technology* made as a result of the testing and the reason for those changes; and

(5) Any restrictions placed on the broker or dealer's use of the *covered technology* as a result of the testing.

(ii) Written documentation of each determination made pursuant to § 240.151-2(b)(2), including the rationale for such determination.

(iii) Written documentation of each elimination or neutralization made pursuant to § 240.151-2(b)(3).

(iv) The written policies and procedures prepared in accordance with § 240.151-2(c), including any written description and the date on which the policies and procedures were last reviewed.

(v) A record of any disclosures provided to each *investor* regarding the broker or dealer's use of *covered technologies*, including, if applicable, the date such disclosure was provided or updated.

(vi) A record of each instance in which a *covered technology* was altered, overridden, or disabled, the reason for such action, and the date thereof, including a record of all instances where an *investor* requested that a *covered technology* be altered or restricted in any manner.

(vii) For the purposes of this paragraph, the terms *covered technology*, *investor*, *investor interaction*, and *conflict of interest* have the same meanings as set forth in § 240.151-2.

4. Amend § 240.17a-4 by amending paragraph (a) to read as follows:

**§ 240.17a-4 Records to be preserved by certain exchange members, brokers and dealers.**

\* \* \* \* \*

(a) Every member, broker or dealer subject to § 240.17a-3 must preserve for a period of not less than six years, the first two years in an easily accessible place, all records required to be made pursuant to § 240.17a-3(a)(1) through (3), (5), (21), (22), and (36) and analogous records created pursuant to § 240.17a-3(e).

\* \* \* \* \*

**PART 275—RULES AND REGULATIONS, INVESTMENT ADVISERS ACT OF 1940**

5. The authority citation for part 275 continues to read, in part, as follows:

**Authority:** 15 U.S.C. 80b-2(a)(11)(G), 80b-2(a)(11)(H), 80b-2(a)(17), 80b-3, 80b-4, 80b-4a, 80b-6(4), 80b-6a, and 80b-11, unless otherwise noted.

\* \* \* \* \*

Section 275.204-2 is also issued under 15 U.S.C. 80b-6.

\* \* \* \* \*

6. Amend § 275.204-2 by:

a. Adding and reserving paragraphs (a)(20) through (23); and

b. Adding paragraph (a)(24).

The addition reads as follows:

**§ 275.204-2 Books and records to be maintained by investment advisers.**

(a) \* \* \*

(20)-(23) [Reserved]

(24) All records required to be made and maintained pursuant to § 275.211(h)(2)-4,

including:

(i) Written documentation of the evaluation conducted pursuant to § 275.211(h)(2)-

4(b)(1), including:

(A) A list or other record of all *covered technologies* used in *investor interactions* by the investment adviser, including:

(1) The date on which each *covered technology* is first implemented, and each date on which any *covered technology* is materially modified; and

(2) The investment adviser's evaluation of the intended as compared to the actual use and outcome of each *covered technology* in *investor interactions*.

(B) Documentation describing any testing of the *covered technology* in accordance with § 275.211(h)(2)-4(b)(1), including:

(1) The date on which testing was completed;

(2) The methods used to conduct the testing;

(3) Any actual or reasonably foreseeable potential *conflicts of interest* identified as a result of the testing;

(4) A description of any changes or modifications to the *covered technology* made as a result of the testing and the reason for those changes; and

(5) Any restrictions placed on the investment adviser's use of the *covered technology* as a result of the testing.

(ii) Written documentation of each determination made pursuant to § 275.211(h)(2)-4(b)(2), including the rationale for such determination.

(iii) Written documentation of each elimination or neutralization made pursuant to § 275.211(h)(2)-4(b)(3).

(iv) The written policies and procedures prepared in accordance with § 275.211(h)(2)-4(c), including any written description and the date on which the policies and procedures were last reviewed.

(v) A record of any disclosures provided to each *investor* regarding the investment adviser's use of *covered technologies*, including, if applicable, the date such disclosure was provided or updated.

(vi) A record of each instance in which a *covered technology* was altered, overridden, or disabled, the reason for such action, and the date thereof, including a record of all instances where an investor requested that a *covered technology* be altered or restricted in any manner.

(vii) For the purposes of this paragraph, the terms *covered technology*, *investor*, *investor interaction*, and *conflict of interest* have the same meanings as set forth in § 275.211(h)(2)-4.

7. Add § 275.211(h)(2)-4 to read as follows:

**§ 275.211(h)(2)-4 Prohibition against conflicts associated with investor interactions employing covered technology.**

(a) *Definitions.* For purposes of this section:

*Conflict of interest* exists when an investment adviser uses a covered technology that takes into consideration an interest of the investment adviser, or a natural person who is a person associated with the investment adviser.

*Covered technology* means an analytical, technological, or computational function, algorithm, model, correlation matrix, or similar method or process that optimizes for, predicts, guides, forecasts, or directs investment-related behaviors or outcomes.

*Investor* means any prospective or current client of an investment adviser or any prospective or current investor in a pooled investment vehicle (as defined in §275.206(4)-8) advised by the investment adviser.

*Investor interaction* means engaging or communicating with an investor, including by exercising discretion with respect to an investor's account; providing information to an investor; or soliciting an investor; except that the term does not apply to interactions solely for purposes of meeting legal or regulatory obligations or providing clerical, ministerial, or general administrative support.

(b) *Elimination or neutralization of the effect of conflicts of interest.* An investment adviser that is registered or required to be registered under section 203 of the Act must:

(1) Evaluate any use or reasonably foreseeable potential use of a covered technology by the investment adviser, or a natural person who is a person associated with the investment adviser, in any investor interaction to identify any conflict of interest associated with that use or potential use (including by testing each such covered technology prior to its implementation or material modification, and periodically thereafter, to determine whether the use of such covered technology is associated with a conflict of interest);

(2) Determine if any conflict of interest identified pursuant to paragraph (b)(1) of this section places or results in placing the interest of the investment adviser, or a natural person who is a person associated with the investment adviser, ahead of the interests of investors; and

(3) Eliminate, or neutralize the effect of, any conflict of interest (other than conflicts of interest that exist solely because the investment adviser seeks to open a new client account) determined pursuant to paragraph (b)(2) of this section to result in an investor interaction that places the interest of the investment adviser, or a natural person who is a person associated with the investment adviser, ahead of the interests of investors, promptly after the investment adviser determines, or reasonably should have determined, that the conflict of interest placed the interests of the investment adviser, or a natural person who is a person associated with the investment adviser, ahead of the interests of investors.

(c) *Policies and procedures.* An investment adviser that is subject to paragraph (b) of this section and that has any investor interaction using covered technology must adopt and implement written policies and procedures reasonably designed to prevent violations of paragraph (b) of this section, including:

(1) A written description of the process for evaluating any use or reasonably foreseeable potential use of a covered technology in any investor interaction pursuant to paragraph (b)(1) of this section and a written description of any material features of, including any conflicts of interest associated with the use of, any covered technology used in any investor interaction prior to such covered technology's implementation or material modification, which must be updated periodically;

(2) A written description of the process for determining whether any conflict of interest identified pursuant to paragraph (b)(1) of this section results in an investor interaction that places

the interest of the investment adviser or a natural person who is a person associated with the investment adviser ahead of the interests of investors;

(3) A written description of the process for determining how to eliminate, or neutralize the effect of, any conflicts of interest determined pursuant to paragraph (b)(2) of this section to result in an investor interaction that places the interest of the investment adviser or natural person who is a person associated with the investment adviser ahead of the interests of investors; and

(4) A review and written documentation of that review, no less frequently than annually, of the adequacy of the policies and procedures established pursuant to this section and the effectiveness of their implementation as well as a review of the written descriptions established pursuant to this section.

By the Commission.

Dated: July 26, 2023.

**Vanessa A. Countryman,**

*Secretary.*