



NASAA

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Vanessa A. Countryman
Secretary
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

Re: File No. S7-10-21: Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology to Develop and Provide Investment Advice

Dear Ms. Countryman:

On behalf of the North American Securities Administrators Association, Inc. (“NASAA”),¹ I am writing in response to U.S. Securities and Exchange Commission (“SEC” or the “Commission”) Release No. 34-92766, *Request for Information and Comments on Broker-Dealer and Investment Adviser Digital Engagement Practices, Related Tools and Methods, and Regulatory Considerations and Potential Approaches; Information and Comments on Investment Adviser Use of Technology to Develop and Provide Investment Advice* (the “Request”).²

NASAA commends the Commission for taking up these topics and working towards a regulatory landscape that ensures technological advances in brokerage and investment advice do not leave investor protection considerations behind. NASAA and our members are keenly interested in digital engagement practices (“DEPs”) and technology-based investment advice because our mission is to protect investors, particularly the retail investors to whom many of these

¹ Organized in 1919, NASAA is the oldest international organization devoted to investor protection. NASAA’s membership consists of the securities administrators in the 50 states, the District of Columbia, Canada, Mexico, Puerto Rico, and the U.S. Virgin Islands. NASAA is the voice of securities agencies responsible for grass-roots investor protection and efficient capital formation.

² The Request is available at <https://www.sec.gov/rules/other/2021/34-92766.pdf>.

innovations are targeted. While we believe DEPs and technology-based investment advice can benefit investors, they cannot be allowed to operate outside of existing regulatory safeguards, and they should not be allowed to encourage poor investment practices. Registrants should also be required to disclose the limits and potential conflicts of these innovations to their customers. As it now stands, NASAA is concerned that certain DEPs and advice technologies do not meet these basic requirements.³

I. Digital Engagement Practices

1. Existing Regulations Cover Most DEP Practices and Features.

The Request expresses concerns about the challenges of regulating fast-moving technological developments effectively. NASAA recognizes that in some instances regulation may need to “catch up” with the latest innovations in how firms operate and engage with clients.

For the most part, however, NASAA believes that existing rules, regulations, and principles are broad enough to address *most* DEP tools and market practices. For example, the principles behind what constitutes a recommendation and the standards of conduct for broker-dealers and investment advisers are already developed. In our view, these principles apply regardless of whether a recommendation comes from a person, an algorithm, or some other technology. NASAA does not share the view that technological innovations fundamentally change the relationship between investor and registrant. Rather, existing regulatory concepts should be interpreted in ways that apply to new technologies. To the extent gaps are identified, the Commission should act to curtail practices that allow registrants to interact with investors without applying and observing appropriate standards of care. Regulatory guardrails for broker-dealers and investment advisers, including limitations on the types of products and investment vehicles available to certain investors, exist to benefit investors and restrain bad actors. Allowing technological innovations to circumvent those guardrails will result in investor harm.

2. Registrants Owe Duties to Investors to Whom They Provide Trading Tools.

While DEPs may encourage new and younger investors to participate in the capital markets, NASAA believes that firms who attract retail investors to an application or platform where they are provided with trading tools have a corresponding responsibility to provide education on sound investing practices. Conversely, firms should be understood to be acting against the interests of their customers generally where they craft DEPs or develop technologies that, by design or effect, encourage investors to make poor trading decisions or form bad investment habits.⁴ Investor education needs to become a top priority for firms who attract

³ While NASAA appreciates the opportunity to submit comments at this stage of the Commission’s deliberations, we share the concern expressed by others that a 30-day comment period is insufficient. Some of the questions posed require substantial study and review. We accordingly urge the Commission to engage in further efforts to collect feedback, and we look forward to further engaging with the Commission on these issues.

⁴ See David Ingram, *Designed to Distract: Stock App Robinhood Nudges Users to Take Risks*, NBC News (Sept. 12, 2019), available at <https://www.nbcnews.com/tech/tech-news/confetti-push-notifications-stock-app->

customers through DEPs, and special considerations must be made to ensure that customers are trading of their own accord, as opposed to trading in response to psychological or behavioral prompts designed to induce customers to interact with an application or platform.

3. *DEPs That Encourage Trading Should Be Deemed Recommendations.*

Several of the DEPs discussed in the Request, if used correctly, could provide benefits to investors. Applications or platforms that provide up-to-date information about the price of securities in an investor's portfolio, or that aggregate news about those companies, can augment investor education and awareness. On the other hand, DEPs designed primarily to increase interaction with an application or platform, or to encourage frequent trading, are problematic. Features such as alerts and top investment lists, especially when foisted onto investors through frequent push notifications, can prompt irrational trading decisions by triggering a false sense of urgency, a sense of excitement, or a "fear of missing out."

Some firms may argue that trading on their applications or platforms is self-directed, and therefore not subject to regulatory safeguards including registrant standards of conduct. That argument must be challenged directly. Applications or platforms that encourage trading through prompts and "nudges" are making recommendations, even if they are limited to recommendations simply to trade. DEPs that constantly pull their customers' attention serve only to urge those customers repeatedly to consider whether they should trade, for whatever reason offered by the DEP feature. A reasonable person can recognize these prompts as calls to action. Conversely, it is not reasonable to accept that anything but an individualized recommendation to purchase or sell a particular security qualifies as a recommendation.

To assist with compliance and to protect investors, the Commission should provide further guidance as to when DEP-based communications constitute recommendations.⁵ 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. Likewise, any rulemaking in this area should be principles-based rather than prescriptive. For instance, the Commission could clarify that DEPs that are "reasonably designed" to affect investor behavior, or that have the effect of doing so, qualify as recommendations. NASAA does not believe that an investor makes an independent investment decision in a non-discretionary or self-directed account when the application or platform on which that account sits encourages the investor to act.

[robinhood-nudges-investors-toward-risk-n1053071](#) ("Rather than directing users to adopt a coherent strategy, the app pushes riskier options like individual stocks and cryptocurrencies").

⁵ See *NASD Notice to Members 01-23* (Apr. 2001) (outlining recommendations as a call to action in a case-by-case inquiry); *Frequently Asked Questions on Regulation Best Interest*, SEC (Jan. 10, 2020) (discussing permitted communications with new and existing clients and the "call to action" framework).

NASAA also has concerns with “ideas presented at order placement and other curated lists or features.”⁶ These features also constitute advice or recommendations. Securities should not be marketed and sold to investors as add-on purchases like bags of candy at the check-out stand. . In our view, there is no place for broker-dealers, much less for investment advisers, to encourage investors to engage in impulse buying.

Relatedly, NASAA has reservations about copy trading practices. Suggestions to copy the purchases and sales of particular traders or “influencer’s”⁷ are calls to action either by design or effect and should therefore be deemed recommendations. The use of social media tools that, for instance, notify a customer as to “what your friends have recently purchased” also have the potential to amplify a herd mentality in making financial decisions.⁸ The Commission should be particularly worried about this dynamic from a market structure perspective because practices such as meme trading have been shown to be disruptive, and registrants who facilitate copy trading could become sources of market risk and instability.

Gamification of trading applications and platforms can exacerbate the concerns noted above. Research suggests that certain applications, such as social media sites and video games, are designed to produce dopamine responses.⁹ By using features such as confetti, scratch-off style graphics, and awards systems, certain firms are encouraging investors to make trades that may not be in their best interests and would conversely serve the interests of the broker-dealer.¹⁰ Gamification can put investors into emotional states where thought processes may be clouded, which can lead to poor investment decisions.¹¹

⁶ Release at 7.

⁷ See *Social Media Influencers, Customer Acquisition, and Related Information Protection*, FINRA (Sept. 2021), available at <https://www.finra.org/rules-guidance/guidance/targeted-examination-letters/social-media-influencers-customer-acquisition-related-information-protection>. Influencers claim an exemption to registering as broker-dealers or investment advisers by dispensing financial advice through the “publisher’s exclusion,” Investment Advisers Act of 1940, § 202(a)(11)(D). While the publisher’s exclusion may apply to circulated material, influencers partnering with an application or platform to advertise copy trades should not be permitted. This activity would fall well within the realm of providing trade recommendations or financial advice.

⁸ See Eric Tham, *Social Media Impact on Household Investors and Their Stock Markets Participation*, Think Forward Initiative (Aug. 2018), available at <https://born05-thinkforward-initiative-axaxzmkc.netdna-ssl.com/development/downloads/Tham-technical-report.pdf>.

⁹ See Burhan R. et al., *Neurotransmitter Dopamine (DA) and its Role in the Development of Social Media Addiction*, *Journal of Neurology & Neurophysiology* (Nov. 2020).

¹⁰ Certain broker-dealers who offer zero commission brokerage services to retail investor earn revenue through payment for order flow arrangements. See 17 C.F.R. § 240.10b-10 (defining payment for order flow as “any monetary payment, service, property, or other benefit that results in remuneration, compensation, or consideration to a broker-dealer in return for the routing of customer orders”). Such a business model is profitable only to the extent that customers trade, and the only interest of a broker-dealer offering such an arrangement is to maximize customer trading.

¹¹ See Jesse Lenz, *Confessions of a Con Artist*, AARP (Sept. 2012), available at <https://www.aarp.org/money/scams-fraud/info-09-2012/confessions-of-a-con-artist.html> (stating that traditional and emerging frauds thrive on manipulating the victim’s emotions and putting them “under the ether,” which is described as a fuzzy state of agitated emotions prompting quick decisions over intelligent, logical thinking). See also Kircanski et al., *Emotional Arousal May Increase Susceptibility to Fraud in Older and Younger Adults*, *Journal*

Increased trading from gamification can also adversely impact investors' long-term outlooks and account performance. Generally, higher trading frequency for retail investors provides lower returns than investments in exchange-traded index funds and long-term investment strategies.¹² In general, NASAA believes applications and trading platforms should be designed to allow investors to interact with the market and trade at their discretion, not at the broker-dealer's prompting.

4. *Dark Patterns Should Be Prohibited and Chatbots Should Be Limited.*

While NASAA generally supports an approach that applies current regulations, rules and principles to developing technologies through guidance and interpretation, there are two places where we believe regulations should be promulgated. First, the use of "dark patterns" in investment applications and platforms should be prohibited.¹³ Investors derive no benefit from features that frustrate their intentions, whether that be closing an account, removing services, or making trades.¹⁴

Similarly, regulations should be promulgated to limit the use of chatbot functions. As fiduciaries, investment advisers must have an actual person available to answer client questions, provide advice, or offer guidance and explanations. Broker-dealers also should not be permitted to rely entirely on non-human customer service.¹⁵ While chatbots may be used to provide simple factual information – such as current stock prices, account values, or answers to general customer service questions – they should not be used to formulate or communicate advice or recommendations. Registrants who use chatbots should also be required to provide clear disclosures at the beginning of chat conversations that make clear that a customer is interacting with a technology that is able to answer a limited set of questions.

of Psychology and Aging Vol. 33m (2018) (discussing increased emotional conditions driving decision making factors leading to negative results and poorer outcomes for study participants).

¹² Brad M. Barber & Terrance Odean, *Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors*, 55 *The Journal of Finance* 2 (2000) (finding that frequent trading tends to underperform passive investing strategies).

¹³ The Request describes dark patterns as user interface design choices that are knowingly designed to confuse users, make it difficult for users to express their actual preferences, or manipulate users into taking certain actions. Request at 10.

¹⁴ The potential for dark patterns to influence trading decisions should be of particular concern for regulators. For example, if a registrant designed an application to favor purchases and discourage sales of the securities of an affiliated issuer, that registrant could engage in fraudulent manipulation of the value of those securities. If any such manipulative dark pattern was based in the application's coding, it could be difficult for regulators to identify. Further, as a matter of enforcement, it could be difficult to prove intent in dark pattern coding. For these reasons, it may be simpler to promulgate regulations that prohibit dark pattern features generally.

¹⁵ See Sergei Klebnikov and Antoine Gara, *20-Year-Old Robinhood Customer Dies by Suicide After Seeing a \$730,000 Negative Balance* (Jun. 17, 2020) available at <https://www.forbes.com/sites/sergeiklebnikov/2020/06/17/20-year-old-robinhood-customer-dies-by-suicide-after-seeing-a-730000-negative-balance/?sh=185c958d1638>. Mr. Kearns' case offers an extreme, but striking, example of chatbot misuse and the inability for investors to reach a financial professional. Even with a self-directed account, investors need to be able to reach persons who can explain interface issues and concerns.

II. Investment Advice Algorithms, Artificial Intelligence and Machine Learning

Robo-advisers can offer inexpensive investment options for retail investors. NASAA takes the position that investment advisers who use algorithms to generate investment recommendations need to have a deep understanding of the rules and processes underlying those algorithms in order to adequately understand the resulting recommendations. Fiduciary duties clearly apply to robo-advisers,¹⁶ but the varying degree of robo-adviser use requires further clarification. Investment advisers who oversee robo-advisers must be able to review and revise portfolios or intervene in transactions when necessary. At least one jurisdiction has taken the position that robo-advisers alone may be incapable of meeting the fiduciary duties of care and loyalty required of investment advisers.¹⁷ An investment adviser must be able to effectively respond to account performance issues and concerns with a robo-adviser's performance. Investment advisers must also be able to meaningfully track and understand how a robo-adviser is operating, and what inputs the system is relying upon, in order to rely upon machine-generated recommendations.

Investment advisers must also disclose to their clients that a robo-adviser or third-party system is being used to manage a portfolio. This disclosure is necessary for investors to understand the relationship and to evaluate the value of the services the investment adviser is providing. While investment advisers are required to provide this information in Form ADV Item 4,¹⁸ the requirement should be more explicit in order to make it apparent to investors that something other than a human investment adviser representative ("IAR") is forming and implementing investment advice. There must also be a description of fees that explains what services, if any, IARs are providing to the investor beyond those services provided by the robo-adviser. The goal of such disclosures would be to ensure that investment advisers are not layering on fees for the services of IARs where the robo-adviser is providing virtually all services to the investor. NASAA believes that with appropriate disclosure, reasonable fees, and sufficient descriptions, investors will be able to make informed decisions when selecting an investment adviser.

¹⁶ Request at 51.

¹⁷ See *Massachusetts Policy Statement: Robo-Advisers and State Investment Adviser Registration* (Apr. 1, 2016), available at <https://www.sec.state.ma.us/sct/sctpdf/Policy-Statement--Robo-Advisers-and-State-Investment-Adviser-Registration.pdf> (Massachusetts takes the position that "fully automated robo-advisers, as they are typically structured, may be inherently unable to act as fiduciaries and perform the functions of a state-registered investment adviser."). See also *Massachusetts Policy Statement: State-Registered Investment Advisers' Use of Third-Party Robo-Advisers* (July 2016), available at <https://www.sec.state.ma.us/sct/sctpdf/Policy-Statement-State-Registered-Investment-Advisers-Use-of-Third-Party-Robo-Advisers.pdf> (Massachusetts states, among other requirements, that investment advisers utilizing third-party robo-advisers must disclose the use of the robo-adviser, explain services offered in conjunction with the robo-adviser, and charge fees reasonable to the services provided in conjunction with the robo-adviser. Failure to meet these obligations is a violation of the investment adviser's duties of care and loyalty.)

¹⁸ Form ADV, Uniform Application for Investment Adviser Registration, Part 2: Uniform Requirements for the Investment Adviser *Brochure and Brochure Supplements*, Item 4, available at <https://www.sec.gov/about/forms/formadv-part2.pdf>.

Cybersecurity and data privacy within the financial services industry also remain areas of concern for NASAA, especially with the expanded collection and use of investor data occasioned by technology-based investment advice services. In many cases, robo-advisers collect data and information from other platforms to feed into an algorithm. Guidelines should be instituted for the appropriate actions and recordkeeping requirements under Regulation S-P for firms employing these data collection practices. The information being collected and analyzed by robo-advisers or algorithmic traders includes personally identifiable information, and robo-advisers may make conclusions about the preferences or behavior of investors based on that information. This data should not be shared without investor consent, and should receive the same level of disclosure protection as information collected during the account opening process. Investors should be notified about how their data will be used, what measures are in place to safeguard that data from disclosure to other parties, and they should have the opportunity to opt out of the data sharing aspects of the technology.¹⁹

Finally, NASAA maintains that an investor's goals and objectives require a case-by-case review to determine risk appetite and the appropriate portfolio. We believe there is a potential for errors or sub-optimal service when an overemphasis is placed on an account opening questionnaire and automated client evaluation. By not allowing the client to ask questions or provide clarification, investment advisers may miss crucial details or information that could be necessary to act in the client's best interest. Removing the human element entirely could also lead to investors holding a poor mix of stocks based on confused answers to questionnaires, or failures to act on significant change in the investor's circumstances. Human review in order to open an account or engage in higher risk strategies should also be a necessary requirement regardless of the use of human IARs, robo-advisers, or algorithmic trading platforms.

III. Conclusion

NASAA supports the work of the Commission to protect investors while fostering technological innovation in investment services, and we thank you for the opportunity to comment on the Request. Should you have questions, please contact either the undersigned or NASAA's General Counsel, Vince Martinez, at [REDACTED].

Sincerely,



Melanie Senter Lubin
NASAA President and
Maryland Securities Commissioner

¹⁹ See Risk Alert: Investment Adviser and Broker-Dealer Compliance Issues Related to Regulation S-P – Privacy Notices and Safeguard Policies, SEC (Apr. 16, 2019), available at <https://www.sec.gov/files/OCIE-%20Risk%20Alert%20-%20Regulation%20S-P.pdf>.