INVESTMENT ADVISER PERSPECTIVES:

DIGITAL ADVICE ROUNDTABLE

Supplementary Materials

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Tab 1

IM Guidance Update

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ROBO-ADVISERS

Automated advisers, which are often colloquially referred to as "robo-advisers," represent a fast-growing trend within the investment advisory industry, and have the potential to give retail investors more affordable access to investment advisory services as well as change the competitive landscape in the market for investment advice.[1] While many robo-advisers were initially geared towards millennials, their popularity has been expanding among all age groups and classes of investors.[2] Robo-advisers, which are typically registered investment advisers, use innovative technologies to provide discretionary asset management services to their clients[3] through online algorithmic-based programs.[4] A client that wishes to utilize a robo-adviser enters personal information and other data into an interactive, digital platform (*e.g.*, a website and/or mobile application). Based on such information, the robo-adviser generates a portfolio for the client and subsequently manages the client's account.

Robo-advisers operate under a wide variety of business models and provide a range of advisory services. For example, robo-advisers offer varying levels of human interaction to their clients. Some robo-advisers provide investment advice directly to the client with limited, if any, direct human interaction between the client and investment advisory personnel. For other robo-advisers, advice is provided by investment advisory personnel using the interactive platform to generate an investment plan that is discussed and refined with the client. Robo-advisers may also use a range of methods to collect information from their clients. For example, many robo-advisers rely solely on questionnaires of varying lengths to obtain information from their clients. Other robo-advisers obtain additional information through direct client contact or by allowing clients to provide information with regard to their other accounts.[5]

The Staff of the Division of Investment Management, in coordination with the Staff of the Office of Compliance Inspections and Examinations, has been monitoring and engaging with robo-advisers to evaluate how these advisers meet their obligations under the Investment Advisers Act of 1940 (the "Advisers Act"), given the unique challenges and opportunities presented by these programs. In addition, on November 14, 2016, the Commission held a Fintech Forum that included an informative panel on these programs.[6] Based on input at the Forum and the Staff's observations, the Staff believes that, depending on their business models and operations, robo-advisers should keep in mind certain unique considerations as they seek to meet their legal obligations under the Advisers Act. This Staff guidance offers suggestions for how robo-advisers may address some of these issues. The Staff recognizes that there may be a variety of means for a robo-adviser to meet its obligations to its clients under the Advisers Act, and that not all of the issues addressed in this guidance will be applicable to every robo-adviser.

This Staff guidance focuses on robo-advisers that provide services directly to clients over the internet. This guidance, however, may be helpful for other types of robo-advisers as well as other registered investment advisers.[7]

Potential Considerations under the Advisers Act

Robo-advisers, like all registered investment advisers, are subject to the substantive and fiduciary obligations of the Advisers Act.[8] Because robo-advisers rely on algorithms, provide advisory services over the internet, and may offer limited, if any, direct human interaction to their clients, their unique business models may raise certain considerations when seeking to comply with the Advisers Act. This guidance focuses on three distinct areas identified by the Staff, listed below, and provides suggestions on how robo-advisers may address them:

1. The substance and presentation of disclosures to clients about the robo-adviser and the investment advisory services it offers;

2. The obligation to obtain information from clients to support the robo-adviser's duty to provide suitable advice; and

3. The adoption and implementation of effective compliance programs reasonably designed to address particular concerns relevant to providing automated advice.

While this guidance focuses on the obligations of robo-advisers under the Advisers Act, robo-advisers should consider whether the organization and operation of their programs raise any issues under the other federal securities laws, including the Investment Company Act of 1940 (the "Investment Company Act"), and in particular Rule 3a-4 under that Act.[9] To the extent that a robo-adviser believes that its organization and operation raise unique facts or circumstances not addressed by Rule 3a-4, such adviser may wish to consider contacting the Staff for further guidance.

1. Substance and Presentation of Disclosures

The information a client receives from an investment adviser is critical to his or her ability to make informed decisions about engaging, and then managing the relationship with, the investment adviser.[10] As a fiduciary, an investment adviser has a duty to make full and fair disclosure of all material facts to, and to employ reasonable care to avoid misleading, clients.[11] The information provided must be sufficiently specific so that a client is able to understand the investment adviser's business practices and conflicts of interests.[12] Such information must be presented in a manner that clients are likely to read (if in writing) and understand.[13]

Particularly because client relationships with robo-advisers may occur with limited, if any, human interaction, robo-advisers should be mindful that the ability of a client to make an informed decision about whether to enter into, or continue, an investment advisory relationship may be dependent solely on a robo-adviser's electronic disclosures made via email, websites, mobile applications, and/or other electronic media.[14] Furthermore, given the unique aspects of their business models, including their reliance on algorithms and the internet as a means of providing advisory services, robo-advisers may wish to consider the most effective way to communicate to their clients the limitations, risks, and operational aspects of their advisory services. Accordingly, as discussed below, when designing its disclosures, it may be useful for a robo-adviser to consider how it explains its business model and the scope of the investment advisory services it provides, as well as how it presents material information to clients.

Explanation of Business Model

To address potential gaps in a client's understanding of how a robo-adviser provides its investment advice, the robo-adviser (like all registered investment advisers) should disclose, in addition to other required information,[15] information regarding its particular business practices and related risks.[16] Information a robo-adviser should consider providing includes:

- A statement that an algorithm is used to manage individual client accounts;
- A description of the algorithmic functions used to manage client accounts (*e.g.*, that the algorithm generates recommended portfolios; that individual client accounts are invested and rebalanced by the algorithm);
- A description of the assumptions and limitations of the algorithm used to manage client accounts (*e.g.*, if the algorithm is based on modern portfolio theory, a description of the assumptions behind and the limitations of that theory);

- A description of the particular risks inherent in the use of an algorithm to manage client accounts (*e.g.*, that the algorithm might rebalance client accounts without regard to market conditions or on a more frequent basis than the client might expect; that the algorithm may not address prolonged changes in market conditions);
- A description of any circumstances that might cause the robo-adviser to override the algorithm used to manage client accounts (*e.g.*, that the robo-adviser might halt trading or take other temporary defensive measures in stressed market conditions);
- A description of any involvement by a third party in the development, management, or ownership of the algorithm used to manage client accounts, including an explanation of any conflicts of interest such an arrangement may create (*e.g.*, if the third party offers the algorithm to the robo-adviser at a discount, but the algorithm directs clients into products from which the third party earns a fee);
- An explanation of any fees the client will be charged directly by the robo-adviser, and of any other costs that the client may bear either directly or indirectly (*e.g.*, fees or expenses clients may pay in connection with the advisory services provided, such as custodian or mutual fund expenses; brokerage and other transaction costs);
- An explanation of the degree of human involvement in the oversight and management of individual client accounts (*e.g.*, that investment advisory personnel oversee the algorithm but may not monitor each client's account);
- A description of how the robo-adviser uses the information gathered from a client to generate a recommended portfolio and any limitations (*e.g.*, if a questionnaire is used, that the responses to the questionnaire may be the sole basis for the robo-adviser's advice; if the robo-adviser has access to other client information or accounts, whether, and if so, how, that information is used in generating investment advice); and
- An explanation of how and when a client should update information he or she has provided to the robo-adviser.

Scope of Advisory Services

Robo-advisers, like all registered investment advisers, should consider the clarity of the descriptions of the investment advisory services they offer and use reasonable care to avoid creating a false implication or sense about the scope of those services which may materially mislead clients.[17] Robo-advisers should be careful not to mislead clients by implying, for example, that:

- The robo-adviser is providing a comprehensive financial plan if it is not in fact doing so (*e.g.*, if the robo-adviser does not take into consideration a client's tax situation or debt obligations, or if the investment advice is only targeted to meet a specific goal—such as paying for a large purchase or college tuition—without regard to the client's broader financial situation);
- A tax-loss harvesting service also provides comprehensive tax advice; or
- Information other than that collected by the questionnaire (*e.g.*, information concerning other client accounts held with the robo-adviser, its affiliates or third parties; information supplementally submitted by the client) is considered when generating investment recommendations if such information is not in fact considered.

Presentation of Disclosures

Robo-advisers may or may not make investment advisory personnel available to clients to highlight and explain important concepts. Clients may also be unlikely to read or understand disclosures that are dense and that are not in plain English. After reviewing the websites and disclosures of a number of robo-advisers, we have observed that robo-advisers utilize a variety of practices in providing important information to their clients. Because of robo-advisers' reliance on online disclosures to provide such information, there may be unique issues that arise when communicating key information, risks, and disclaimers.[18] We therefore remind robo-advisers to carefully consider whether their written disclosures are designed to be effective (*e.g.*, are not buried[19] or incomprehensible[20]). In particular, in presenting their disclosures, robo-advisers may wish to consider:

- Whether key disclosures are presented prior to the sign-up process so that information necessary to make an informed investment decision is available to clients before they engage, and make any investment with, the robo-adviser;
- Whether key disclosures are specially emphasized (*e.g.*, through design features such as pop-up boxes);

- Whether some disclosures should be accompanied by interactive text (*e.g.*, through design features such as tooltips[21]) or other means to provide additional details to clients who are seeking more information (*e.g.*, through a "Frequently Asked Questions" section); and
- Whether the presentation and formatting of disclosure made available on a mobile platform have been appropriately adapted for that platform.

2. Provision of Suitable Advice

An investment adviser's fiduciary duty includes an obligation to act in the best interests of its clients and to provide only suitable investment advice.[22] Consistent with these obligations, an investment adviser must make a reasonable determination that the investment advice provided is suitable for the client based on the client's financial situation and investment objectives.[23]

Reliance on Questionnaires to Gather Client Information

We have observed that robo-advisers may provide investment advice based primarily, if not solely, on client responses to online questionnaires. The questionnaires we have reviewed have varied with respect to length and the types of information requested. For example, some robo-advisers generate a recommended portfolio based upon a client's age, income and financial goals. Other robo-advisers may obtain through their questionnaires different or additional information such as investment horizon, risk tolerance, and/or living and other expenses when generating a recommended portfolio. We have also observed that some of these questionnaires are not designed to provide a client with the opportunity to give additional information or context concerning the client's selected responses. In addition, robo-advisers may not be designed so that advisory personnel may ask follow-up or clarifying questions about a client's responses, address inconsistencies in client responses, or provide a client with help when filling out the questionnaire. Given this limited interaction, when considering whether its questionnaire is designed to elicit sufficient information to support its suitability obligation, a robo-adviser may wish to consider factors such as:

- Whether the questions elicit sufficient information to allow the robo-adviser to conclude that its initial recommendations and ongoing investment advice are suitable and appropriate for that client based on his or her financial situation and investment objectives;[24]
- Whether the questions in the questionnaire are sufficiently clear and/or whether the questionnaire is designed to provide additional clarification or examples to clients when necessary (*e.g.*, through the use of design features, such as tool-tips or pop-up boxes); and

- Whether steps have been taken to address inconsistent client responses, such as:
  - Incorporating into the questionnaire design features to alert a client when his or her responses appear internally inconsistent and suggest that the client may wish to reconsider such responses; or
  - Implementing systems to automatically flag apparently inconsistent information provided by a client for review or follow-up by the robo-adviser.[25]

Client-Directed Changes in Investment Strategy

Many robo-advisers give clients the opportunity to select portfolios other than those that they have recommended.[26] Some robo-advisers do not, however, give a client the opportunity to consult with investment advisory personnel about how the client-selected portfolio relates to the client's stated investment objective and risk profile, and its suitability for that client. This may result in a client selecting a portfolio that the robo-adviser believes is not suitable for the investment objective and risk profile the robo-adviser has generated for the client based on his or her questionnaire responses. Thus, consistent with its obligation to act in its client's best interests, a robo-adviser should consider providing commentary as to why it believes particular portfolios may be more appropriate for a given investment objective and risk profile. In this regard, a robo-adviser may wish to consider whether pop-up boxes or other design features would be useful to alert a client of potential inconsistencies between the client's stated objective and the selected portfolio.

3. Effective Compliance Programs

Rule 206(4)-7 under the Advisers Act requires each registered investment adviser to establish an internal compliance program that addresses the adviser's performance of its fiduciary and substantive obligations under that Act. To comply with the rule, a registered investment adviser must adopt, implement, and annually review written policies and procedures that are reasonably designed to prevent violations of the Advisers Act and the rules thereunder, and that take into consideration the nature of the firm's operations and the risk exposures created by such operations.[27] A registered investment adviser must also designate a chief compliance officer who is competent and knowledgeable about the Advisers Act to be responsible for administering the written policies and procedures adopted.[28]

In developing its compliance program, a robo-adviser should be mindful of the unique aspects of its business model. For example, a robo-adviser's reliance on algorithms, the limited, if any, human interaction with clients, and the provision of advisory services over the internet may create or accentuate risk exposures for the robo-adviser that should be addressed through written policies and procedures.[29] Thus, in addition to adopting and implementing written policies and procedures that address issues relevant to traditional investment advisers,[30] robo-advisers should consider whether to adopt and implement written policies and procedures that address areas such as:

- The development, testing, and backtesting of the algorithmic code and the post-implementation monitoring of its performance[31] (*e.g.*, to ensure that the code is adequately tested before, and periodically after, it is integrated into the robo-advisers' platform; the code performs as represented;[32] and any modifications to the code would not adversely affect client accounts);
- The questionnaire eliciting sufficient information to allow the robo-adviser to conclude that its initial recommendations and ongoing investment advice are suitable and appropriate for that client based on his or her financial situation and investment objectives;
- The disclosure to clients of changes to the algorithmic code that may materially affect their portfolios;
- The appropriate oversight of any third party that develops, owns, or manages the algorithmic code or software modules utilized by the robo-adviser;
- The prevention and detection of, and response to, cybersecurity threats;[33]
- The use of social and other forms of electronic media in connection with the marketing of advisory services (*e.g.*, websites; Twitter; compensation of bloggers to publicize services; "refer-a-friend" programs);[34] and
- The protection of client accounts[35] and key advisory systems.[36]

Conclusion

Robo-advisers represent a fast-growing trend within the investment advisory industry, and have the potential to give retail investors more affordable access to investment advisory services. As registered investment advisers, robo-advisers should be mindful that they are subject to the fiduciary and other substantive requirements of the Advisers Act. This guidance is intended to provide suggestions to such advisers as they seek to meet their obligations under that Act. As the investment advisory industry continues to innovate and develop new ways to provide advisory services to clients, the Staff will monitor these innovations and implement safeguards, as necessary, to help facilitate such developments and protect investors.

Endnotes

1 *See, e.g.*, Andrew Meola, *The Fintech Report 2016: Financial Industry Trends and Investment,* Business Insider (Dec. 14, 2016), *available at:* http://www.businessinsider.com/the-fintech-report-2016-financial-industry-trends-and-investment-2016-12?r=UK&IR=T; Marlene Y. Satter, Robo-Advisors Will Disrupt Market: Study, Benefitspro.com (Aug. 8, 2016), *available at:* http://www.benefitspro.com/2016/08/08/robo-advisors-will-disrupt-market-study; Sarah Kocianski, *Robo-Advisor Report: Market Share, Returns and Key Growth Drivers*, Business Insider (June 9, 2016), *available at:* http://www.businessinsider.com/the-robo-advising-report-market-forecasts-key-growth-drivers-and-how-automated-asset-management-will-change-the-advisory-industry-2016-6.

2 *See, e.g.*, Richard Eisenberg, *Robo-Advisers: Not Just for Millennials Anymore?* (Dec. 6, 2016), *available at:* http://www.forbes.com/sites/nextavenue/2016/12/06/robo-advisers-not-just-for-millennials-anymore/.

3 For purposes of this guidance, the term "client" also includes "prospective client."

4 For purposes of this guidance, the term "robo-adviser" includes both the registered investment adviser and any automated investment advisory program it offers.

5 We also note that some robo-advisers operate as stand-alone companies, while others are business units of larger, traditional investment advisers. Furthermore, some robo-advisers enable clients to access their services directly. Other robo-advisers are offered as digital portfolio management tools by traditional advisers that view these programs as components of their existing advisory practices.

6 *See generally* Fintech Forum, SEC (Nov. 14, 2016), *available at:* https://www.sec.gov/spotlight/fintech ("Fintech Forum"). An unofficial transcript of the November 14, 2016 Fintech Forum is *available at:* https://www.sec.gov/spotlight/fintech/transcript-111416.pdf ("Forum Transcript").

The increasing use of digital advice tools has also been the focus of other regulators and certain international bodies. *See, e.g., Update to the Report on the IOSCO Automated Advice Tools Survey*, International Organization of the Securities Commissions (Dec. 2016), *available at:* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD552.pdf; Report on Digital Investment Advice, FINRA (March, 2016), *available at:* http://www.finra.org/sites/default/files/digital-investment-advice-report.pdf; *Regulating Digital Financial Product Advice*, Australian Securities

& Investments Commission (March 21, 2016), *available at:* http://asic.gov.au/regulatory-resources/find-a-document/consultation-papers/cp-254-regulating-digital-financial-product-advice/.

7 *See generally* Forum Transcript, *supra* note 6, at 38 (Bo Lu, Co-Founder and CEO of Future Advisor at Blackrock) ("Digital advice actually underpins a whole spectrum of delivery models. And there will be places where . . . you'll have an almost exclusively digital relationship, and places where you'll have what appears to the end user an almost exclusively human-based relationship, underpinned by digital [advice] that the client never knew about.").

8 As SEC-registered investment advisers, robo-advisers are subject to all of the requirements of the Advisers Act, including the requirement that they provide advice consistent with the fiduciary duty they owe to their clients. A general overview of the regulatory requirements of the Advisers Act can be found at https://www.sec.gov/divisions/investment/advoverview.htm. This guidance focuses on certain issues that robo-advisers should consider due to the nature of their business model.

9 *See* Rule 3a-4 under the Investment Company Act (creating a non-exclusive safe-harbor from the definition of "investment company" for advisory programs that meet Rule 3a-4's requirements). *See also* Status of Investment Advisory Programs under the Investment Company Act of 1940, Investment Company Act Release No. 21260 (July 27, 1995) (discussing circumstances in which an investment advisory program may be considered an investment company).

10 *See* Amendments to Form ADV, Advisers Act Release No. 3060 (July 28, 2010) ("Amendments to Form ADV Adopting Release"). *See also* Advisers Act Rule 204-3(b) (requiring delivery of a brochure before or at the time an adviser enters into an investment advisory contract with a client). An adviser's disclosure responsibilities are broad and delivery of the adviser's brochure alone may not fully satisfy the adviser's disclosure obligations. *See* Instruction 3 of General Instructions for Part 2 of Form ADV; Advisers Act Rule 204-3(f) (delivery of a brochure or brochure supplement does not relieve an adviser of any other disclosure obligations it has to its advisory clients).

11 *See* SEC v. Capital Gains Research Bureau, Inc., et al., 375 U.S. 180, 186, 194 (1963). *See also* H. R. Rep. No. 85, 73d Cong., 1st Sess. 2; General Instruction 3 to Part 2 of Form ADV.

12 *See* Amendments to Form ADV Adopting Release, *supra* note 10, at n. 28. *See also* Staff of the U.S. Securities and Exchange Commission, Study on Investment Advisers and Broker-Dealers As Required by Section 913 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, n. 531 (Jan. 2011) (the "Study"), *available at:* www.sec.gov/news/studies/2011/913studyfinal.pdf; Instruction 3 of General Instructions for Part 2 of Form ADV.

13 Amendments to Form ADV Adopting Release, *supra* note 10. *See also* In the Matter of Arlene W. Hughes d/b/a E. W. Hughes & Company, Securities Exchange Act Release No. 4048 (Feb. 18, 1947).

14 Robo-advisers should also be mindful to make disclosures in plain English. *See generally* Instruction 2 of General Instructions for Part 2 of Form ADV (providing guidance on drafting in plain English); Amendments to Form ADV Adopting Release, *supra* note 10. *See also* A Plain English Handbook, SEC Office of Investor Education and Assistance (August 1998), *available at:* https://www.sec.gov/pdf/handbook.pdf.

15 *See supra* note 10.

16 *See* Amendments to Form ADV Adopting Release, *supra* note 10 ("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 generally* Forum Transcript, *supra* note 6, at 71 (Mark Goines, Vice Chairman of Personal Capital) ("[T]he other area that I think is really important for us. . . [is] making sure . . . that the accountability to the clients is clear and that that's fully disclosed.").

17 *See, e.g.*, In the Matter of T. Rowe Price and Associates, Inc., Advisers Act Release No. 658 (Jan. 16, 1979) (settled action) (a registered investment adviser "willfully violated Section 206 of the Investment Advisers Act of 1940 in that it failed to adequately and accurately disclose in certain promotional literature and otherwise to actual and prospective . . . clients the amount of individualized treatment provided to each . . . account and the extent to which investment decisions for . . . accounts would be made and implemented based upon 'model portfolios.'").

18 In other contexts, the Staff has taken the position that a relevant factor to consider when determining if potentially confusing disclosures are misleading is whether such disclosures are individually highlighted and explained during an in-person meeting. *See, e.g.*, Heitman Capital Management, LLC, SEC Staff No-Action Letter (Feb. 12, 2007) (addressing the use of certain hedge clauses in certain advisory contracts).

19 Under the "buried facts" doctrine, a court would consider disclosure to be false and misleading if its overall significance is obscured because material information is "buried," for example in a footnote or appendix. *See* Commission Guidance on the Use of Company Web Sites, Investment Company Act Release No. 28351 (Aug. 1, 2008) at n. 68.

20 *See generally id.*

21 A tooltip allows additional information to be shown in a text box when a mouse cursor hovers over a particular item on a web page.

22 Status of Investment Advisory Programs under the Investment Company Act of 1940, Investment Company Act Release No. 22579 (Mar. 24, 1997) at text accompanying n.32 ("Investment advisers under the Advisers Act owe their clients the duty to provide only suitable investment advice, whether or not the advice is provided to clients through an investment advisory program. To fulfill this suitability obligation, an investment adviser must make a reasonable determination that the investment advice provided is suitable for the client based on the client's financial situation and investment objectives.") ("Rule 3a-4 Adopting Release"), *citing to* Suitability of Investment Advice Provided by Investment Advisers, Advisers Act Release No. 1406 (Mar. 16, 1994) ("Suitability Rule Proposing Release") (proposing a rule under Section 206(4) of the Advisers Act that would expressly require advisers to give clients only suitable advice; the rule would have codified existing suitability obligations of advisers). *See also* The Study, *supra* note 12, at 22, 27. We note that the Commission has brought a number of enforcement actions against investment advisers for failing to provide suitable investment advice. *See, e.g.*, In re David A. King and King Capital Corp., Advisers Act Release No. 1391 (Nov. 9, 1993) (investment adviser recommended investments in a risky pool of first, second and third mortgages to retirees and others of limited means); In re George Sein Lin, Advisers Act Release No. 1174 (June 19, 1989) (investment adviser with discretionary investment authority invested funds of clients desiring low-risk investments in uncovered option contracts and utilized margin brokerage accounts); In re

Westmark Financial Services, Corp., Advisers Act Release No. 1117 (May 16, 1988) (financial planner recommended speculative equipment leasing partnerships to unsophisticated investors with modest incomes); In re Shearson, Hammill & Co., 42 SEC 811 (1965) (sections 206(1) and (2) violated when adviser recommended investments unsuitable to child and widow).

23 *See* Rule 3a-4 Adopting Release, *supra* note 22, at text accompanying n.32. *See also* The Study, *supra* note 12, at 27; Suitability Rule Proposing Release, *supra* note 22.

24 *See generally* Forum Transcript, *supra* note 6, at 66 (Mark Goines, Vice Chairman of Personal Capital) ("[Does the robo-adviser] have enough of an understanding of the client to be able to apply the algorithm, or is the algorithm actually collecting enough data to actually apply its applied rules effectively? . . . We have to be very careful that the algorithms are very good but that the inputs are robust, so that we really truly understand the client before we apply it. . . . [A]lgorithms with minimal input run the risk of not fully understanding the client.").

25 For example, a client could indicate that he or she wants a conservative strategy, but would like to invest primarily in high-yield bonds. Similarly, an elderly client may indicate a long-term investment time horizon.

26 For example, some robo-advisers allow a client to adjust his or her portfolio away from the strategy the adviser has recommended — including by allowing the client to adjust a slider or risk score to select a portfolio that is more or less aggressive than the portfolio recommended by the robo-adviser.

27 Compliance Programs of Investment Companies and Investment Advisers, Advisers Act Release No. 2204 (Dec. 17, 2003) at n.10 and n. 17 and accompanying text ("Adopting Release to Rule 206(4)-7") ("Each adviser, in designing its policies and procedures, should first identify conflicts and other compliance factors creating risk exposure for the firm and its clients in light of the firm's particular operations, and then design policies and procedures that address those risks"). The Commission has generally stated that these policies and procedures should cover at a minimum (to the extent they are applicable to the adviser), such areas as portfolio management processes, trading practices, proprietary trading, personal trading activities of supervised persons, disclosure requirements, custody, maintenance of books and records, marketing and cash solicitation activities, valuation, privacy concerns and business continuity plans. *See id*. at nn.17-22 and accompanying text (setting forth a detailed list of areas where the Commission expects registered investment advisers to adopt policies and procedures).

28 *Id*. at n.73 and accompanying text.

29 *See supra* note 27 and accompanying text.

30 *See id*.

31 *See generally* Forum Transcript, *supra* note 6, at 59 (Jim Allen, Head of Capital Markets Policy Group, CFA Institute) ("[Many CFA Institute members believe] the biggest risk in the Fintech space is . . . flaws in the algorithms behind these technologies.").

32 *See, e.g.*, In the Matter of AXA Rosenberg Group, LLC, et al., Advisers Act Release No. 3149 (Feb. 3, 2011) (settled action) (In a settled administrative proceeding, the Commission found that two affiliated investment advisers that used a quantitative investment model in managing client accounts breached their fiduciary obligations to their clients by concealing and delaying to fix a material error in the model. One of the investment advisers was also found to have failed to adopt and implement policies and procedures reasonably designed to ensure that it did not make false and misleading statements to clients and investors, including failing to ensure that the model performed as represented, in violation of antifraud provisions of the Advisers Act).

33 *See, e.g.*, Cybersecurity Guidance, IM Guidance Update No. 2015-02, April 2015. *See also* Adviser Business Continuity and Transition Plans, Advisers Act Release No. 4439 (June 28, 2016) at n. 77 and accompanying text ("An adviser generally should consider and address as relevant the operational and other risks related to cyber-attacks").

34 *See, e.g.*, Advisers Act Rule 206(4)-1 (addressing advertisements by investment advisers and prohibiting client testimonials); Advisers Act Rule 206(4)-3 (making cash payments to solicitors by registered investment advisers unlawful unless certain conditions are met); Guidance on the Testimonial Rule and Social Media, IM Guidance Update No. 2014-04, March 2014.

35 *See, e.g.*, Advisers Act Rule 206(4)-2 (addressing custody of funds or securities of clients by investment advisers). *See also* Staff Responses to Questions About the Custody Rule, Question II.6. (Sept. 1, 2013) *available at:* http://www.sec.gov/divisions/investment/custody_faq_030510.htm (an investment adviser is deemed

to have custody of client assets if the adviser is provided password access to an account and such access provides the adviser with the ability to withdraw funds or securities or transfer them to an account not in the client's name at a qualified custodian).

36 *See, e.g.*, Adopting Release to Rule 206(4)-7, *supra* note 27, at n. 22 ("We believe that an adviser's fiduciary obligation to its clients includes the obligation to take steps to protect the clients' interests from being placed at risk as a result of the adviser's inability to provide advisory services.").

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Tab 2

Investor.gov

U.S. SECURITIES AND EXCHANGE COMMISSION

INVESTOR BULLETIN: ROBO-ADVISERS

02/23/2017

The last few years have seen the growth in availability and popularity of automated digital investment advisory programs (often called "robo-advisers"). These programs allow individual investors to create and manage their investment accounts through a web portal or mobile application, sometimes with little or no interaction with a human being with the potential benefit of lower costs than traditional investment advisory programs. The SEC's Office of Investor Education and Advocacy is issuing this Investor Bulletin to educate investors about these programs, and to help investors using robo-advisers to make informed decisions in meeting their investment goals.

What is a Robo-Adviser?

The term "robo-adviser" generally refers to an automated digital investment advisory program. In most cases, the robo-adviser collects information regarding your financial goals, investment horizon, income and other assets, and risk tolerance by asking you to complete an online questionnaire. Based on that information, it creates and manages an investment portfolio for you. Robo-advisers often seek to offer investment advice for lower costs and fees than traditional advisory programs, and in some cases require lower account minimums than traditional investment advisers. The services provided, approaches to investing, and features of robo-advisers vary widely. You can find information about these topics in the adviser's Form ADV Part 1 and Part 2 brochure (https://investor.gov/news-alerts/investor-bulletins/investor-bulletin-form-adv-investment-adviser-brochure-brochure-suppl).

While robo-advisers have similarities to traditional investment advisory programs, there are also differences. Before making a decision about whether to invest through a robo-adviser, or in deciding which robo-adviser might be best for you, you should do your own research. Make sure the robo-adviser and the investment portfolio it puts together for you are a good match for your investment needs and goals, and that you understand the potential costs, risks, and benefits of using that particular robo-adviser. Below we've highlighted some issues you may want to consider in making these important decisions.

What Level of Interaction with a Person is Important to You?

The amount of human interaction available to you may vary from one robo-adviser to another. Some robo-advisers may offer the opportunity to contact an investment professional to discuss your investment needs (this hybrid of both automated and personal advice is sometimes referred to as "bionic" advice). Other robo-advisers may only make technical support staff available, which will limit you to relying on the information on their websites or other sources you find to address your questions about investing.

If a robo-adviser does make an investment professional available to you, the format and amount of the interaction may also vary. For example, a person may be available by email but not by phone, or available only for a limited number of in-person meetings. In some cases, a robo-adviser may offer access to a person only for accounts that meet a certain minimum account size. Still other robo-advisers may offer limited, if any, involvement of an investment professional in the creation and management of a client's account.

Unlike a traditional investment adviser, there may be no initial or subsequent conversation with a person to gather information about you and your personal financial needs. However, the robo-adviser may be able to offer you lower costs and fees by limiting the expense associated with a human adviser's time.

As with any adviser, it is very important you take the time to learn about the robo-adviser's services, including the level of interaction with a person, and find out answers to any questions you may have. Here are a few questions to consider:

- *How much human interaction is important to you? Would you like to be able to ask a person questions about your investments, the investment strategy being used, and potential risks? Would you like to be able to speak with a person during market events, such as periods of exceptional volatility or downturns? Do you prefer being able to talk in person or on a phone, or is electronic communication fine with you?*

- *What is your level of financial literacy, especially when it comes to investing? Your ability to ask a person questions about investing (for example, about the robo-adviser's investment strategy) may be limited and you may need to rely almost entirely on the robo-adviser's online disclosures or other sources of information that you find on your own. Are you comfortable using online resources?*

- *As with a traditional adviser, you may be interested in how often you will have contact with the robo-adviser. For example, how often does the robo-adviser follow-up with clients to confirm any changes that would affect their investment choices? Would you have to contact the robo-adviser with any updates to your financial situation?*

What Information is the Robo-Adviser Using to Create a Recommendation?

A robo-adviser uses information you provide to create a recommendation. As a result, a robo-adviser's recommendation is limited by the information it requests and receives from you, typically through an online questionnaire. It is important to keep in mind that some robo-advisers may obtain and consider only limited information about you. In addition, as with traditional advisers, in many cases the burden to update this information will fall on you. Here are a few questions to consider:

- *Would you use the robo-adviser for a specific financial goal (for example, retirement, buying a home, or investing for your children's education), or to meet your overall financial needs more broadly? Does the robo-adviser's recommendation take into account your purpose in using the robo-adviser?*

- *Does the robo-adviser's recommendation take into account relevant personal financial information, given your goal? For example, does the robo-adviser ask for information about high interest credit card debt or student loans you may have? Does it take into account your bank and savings accounts? Does it take into account your real estate holdings, such as your home, or other investments such as retirement accounts? Does it take into account other assets that you have?*

- *How does the robo-adviser take into account your tolerance for risk? How you respond to the robo-adviser's questions about risk can affect what portfolio the robo-adviser recommends. In addition to the initial makeup of your portfolio, how does your risk tolerance impact how the robo-adviser might rebalance your portfolio (for example, in the event of a market decline)?*

What is the Robo-Adviser's Approach to Investing?

Different robo-advisers have different approaches to investing, including different investment styles and different products offered. Some have several pre-determined portfolios of investments that they will recommend for you that you may or may not be able to customize. Some robo-advisers focus solely on a limited range of investment products, such as broad-based exchange-traded funds, or ETFs.

> ***Exchange-Traded Funds***
> *Many robo-advisers utilize ETFs. ETFs have unique characteristics that may make them more suitable for certain investors and less suitable for others. To learn more about ETFs, including how they differ from mutual funds, read our Investor Bulletin: Exchange-Traded Funds (ETFs)* (https://www.investor.gov/news-alerts/investor-bulletins/investor-bulletin-exchange-traded-funds-etfs)*. Also, certain robo-advisers may use hypothetical performance for newer ETFs in their marketing materials. To learn more about performance claims, read our Investor Bulletin: Performance Claims* (https://www.investor.gov/news-alerts/investor-bulletins/investor-bulletin-performance-claims).

Some robo-advisers may recommend emerging market funds or invest in smaller companies, which could be more volatile or potentially less liquid (https://investor.gov/additional-resources/general-resources/glossary/liquidity-or-marketability). The investment style of the robo-adviser can make a big difference in the asset allocation of your portfolio. In addition, some robo-advisers have additional features that can affect returns on your investment. Also, in some cases robo-advisers may not have been tested under stressed market conditions.

You should take the time to understand how the robo-adviser develops a portfolio recommendation, and what pieces of information it uses – or does not use – in developing the portfolio. Here a few questions to consider:

- *Does the robo-adviser offer a limited range of investment products, such as only ETFs? Are the investment products utilized by the robo-adviser appropriate for your goals?*

- *Does the robo-adviser only offer certain limited portfolios within those investment products? How many different portfolios could your money possibly be invested in? What portfolio does the robo-adviser recommend for you and why?*

- *What type of accounts does the robo-adviser manage? For example, does the robo-adviser manage individual retirement accounts (IRAs)* (https://investor.gov/introduction-investing/retirement-plans/self-directed-plans-individual-retirement-accounts-iras)*? Taxable accounts? 401(k) accounts* (https://investor.gov/introduction-investing/retirement-plans/employer-sponsored-plans/traditional-roth-401k-plans) *or college savings plans* (https://investor.gov/additional-resources/general-resources/publications-research/info-sheets/introduction-529-plans)*?*

- *How does the robo-adviser handle volatility? For example, does the robo-adviser have the ability to freeze sales (not let you sell your investments for cash for a certain period of time)?*

- *How often is your account rebalanced? Rebalancing can have tax implications, depending on the type of account. What would trigger a change in the asset allocation or investment categories of your portfolio?*

> ***Tax Loss Harvesting***
> *Does the robo-adviser utilize tax loss harvesting? Tax loss harvesting involves selling investments that have experienced losses in your account, which may result in tax implications. The value of tax loss harvesting can depend on your particular tax situation in a given year. It also may implicate rules against wash sales (https://investor.gov/additional-resources/general-resources/glossary/wash-sales). Make sure you understand the tax implications of any sales, and consider whether you may wish to consult a tax adviser. For more information about wash sales, read IRS Publication 550, Investment Income and Expenses (Including Capital Gains and Losses) (https://www.irs.gov/pub/irs-pdf/p550.pdf).*

What Fees and Costs Will the Robo-Adviser Charge?

Fees and other costs (https://investor.gov/additional-resources/news-alerts/alerts-bulletins/updated-investor-bulletin-how-fees-expenses-affect) can greatly impact your return on investment. One of the main benefits of a robo-adviser can be lower fees and costs – so it is very important that you understand what you would be charged. A robo-adviser may offer lower-cost investment advice, but if the robo-adviser utilizes investment products with high costs, your total overall costs could still be high. It's important to understand your *total* costs.

Also, in some cases, a robo-adviser may offer services that are not significantly different from services you could obtain through a traditional investment advisory program or through investing in a product such as a target date retirement fund (https://www.investor.gov/news-alerts/investor-bulletins/target-date-retirement-funds). It is worth considering whether one product or service can offer what you need at a lower overall cost than another. Here are a few questions to consider:

- *What fees would you be charged directly by the robo-adviser? Are there any other costs (e.g., brokerage fees, management fees for ETFs purchased for your account) that you would pay directly or indirectly?*

- *How is the robo-adviser compensated? Does the way it is compensated create any conflicts of interest with you, the investor? For example, is the robo-adviser paid to offer particular products or does it offer only products with which it is affiliated (e.g., mutual funds sponsored by the robo-adviser or its affiliates)?*

- *Are there penalties or fees if you want to withdraw your investment, or transfer or close your account? Liquidating an account may have tax implications for you as well.*

- *Does the amount you are charged depend on how much money you invest?*

- *Can the costs and fees change over time?*

- *Does the robo-adviser pay a referral or marketing fee, or other incentives for finding new clients? Robo-advisers may use different marketing techniques, such as paying money to others or providing discounted fees for making client referrals. You should understand if a robo-adviser has that kind of feature, even if you are not paying a fee yourself.*

Licensing and Registration – How Do You Find More Information?

Firms that provide advisory services in the U.S. are typically registered (http://www.adviserinfo.sec.gov/IAPD/Content/Search/iapd_Search.aspx) as investment advisers with either the SEC or one or more state securities authorities. Although the services that they provide are automated, robo-advisers in the U.S. must comply with the securities laws applicable to SEC or state-registered investment advisers. Use the SEC's Investment Adviser Public Disclosure (IAPD) (http://www.adviserinfo.sec.gov/IAPD/Default.aspx) database, which is available on Investor.gov (http://www.investor.gov/), to research the background, including registration or license status and disciplinary history, of any individual or firm recommending an investment. In addition, a firm that provides robo-adviser services may be affiliated with a broker (/additional-resources/general-resources/glossary/broker) that can execute the robo-adviser's recommendations by buying and selling specific securities for your account. You can research that broker using the Investment Adviser Public Disclosure (IAPD) (http://www.adviserinfo.sec.gov/IAPD/Default.aspx) database as well, which is again available on Investor.gov (http://www.investor.gov/).

Finally, like traditional investment advisers, robo-advisers are also required to file a Form ADV (https://www.sec.gov/answers/formadv.htm). Robo-advisers may also offer certain information about their advisory business on their websites or in communications with clients. Check the robo-adviser's website regularly to see if there is any updated information.

Additional Information

Investor Alert: Automated Investment Tools (https://www.investor.gov/news-alerts/investor-alerts/investor-alert-automated-investment-tools)

Ask a question or report a problem (https://www.sec.gov/complaint/question.shtml) concerning your investments, your investment account or a financial professional. Report possible securities fraud (http://www.sec.gov/complaint/tipscomplaint.shtml).

Visit Investor.gov (http://www.investor.gov/), the SEC's website for individual investors.

Receive Investor Alerts and Bulletins from the Office of Investor Education and Advocacy ("OIEA") by email (http://www.sec.gov/news/press/subscribe_updates.htm) or RSS feed (http://www.sec.gov/rss/investor/alertsandbulletins.xml). Follow OIEA on Twitter (http://www.twitter.com/SEC_Investor_Ed) @SEC_Investor_Ed. Like OIEA on Facebook (http://www.facebook.com/secinvestoreducation) at facebook.com/secinvestoreducation.

IN LESS TIME THAN IT TAKES TO READ THIS WEB PAGE . . .

You can check out the background of an investment professional using Investor.gov. It's a great first step toward protecting your money. Learn about an investment professional's background, registration status, and more.

Tab 3

Morgan Lewis

LAWFLASH

SEC WEIGHS IN ON ROBO-ADVISERS: DISCLOSURE, SUITABILITY, AND COMPLIANCE OBLIGATIONS

March 14, 2017

AUTHORS AND CONTACTS

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The SEC's Guidance recognizes that robo-advisers are fiduciaries, and provides suggestions on how they can meet the substantive requirements of the Investment Advisers Act of 1940.

On February 23, 2017, the US Securities and Exchange Commission's (SEC's) Division of Investment Management (IM) released IM Guidance Update 2017-02 (Guidance),[1] which focuses on "robo-advisers," or investment advisers that use technology to provide discretionary asset management services to clients through online algorithmic-based programs. The Guidance focuses on three key areas: disclosure, suitability, and compliance programs. It highlights various considerations that robo-advisers should keep in mind as they seek to meet their legal obligations under the Investment Advisers Act of 1940 (Advisers Act).

The Guidance focuses on robo-advisers that provide services directly to clients online, but the SEC staff notes that it may be helpful for other types of robo-advisers as well as other registered investment advisers that use algorithms or digital tools when formulating advice or monitoring client accounts. The Guidance was released simultaneously with an Investor Bulletin issued by the SEC's Office of Investor Education and Advocacy, which aims to educate individual investors about robo-advisers and help them decide whether to use robo-advisers to meet their investment goals.[2]

The Guidance follows on the heels of increased SEC activity around fintech and digital investment advice. On November 14, 2016, the SEC held a Fintech Forum that included a panel discussion about digital investment advice. More recently, on January 12, 2017, the SEC's Office of Compliance Inspections and Examinations (OCIE) released its Examination Priorities for 2017 (the Examination Priorities), which noted that this year OCIE will examine both robo-advisers that primarily interact with their clients online and advisers and broker-dealers that leverage automated investing functions as one component of a service model that provides access to human financial professionals.[3]

OUR PERSPECTIVE

- The Guidance confirms that robo-advisers registered with the SEC are subject to both the substantive requirements and the fiduciary obligations of the Advisers Act, even in the case of robo-advisers with more limited business models. This should eliminate any uncertainty, raised by some critics, as to whether robo-advisers are able to meet fiduciary standards and whether the existing regulatory framework is flexible enough to accommodate the robo-adviser business model.
- The SEC staff takes a flexible, rather than one-size-fits-all, approach, emphasizing that robo-advisers have a wide variety of business models and offer a range of advisory services, and consequently may have a "variety of means" to meet their regulatory obligations. In doing so, the SEC staff validates the concept that robo-advisers may define and limit the scope of the advisory services they provide.
- In the area of suitability and client profiling, the Guidance clarifies that there is no quantitative test as to the minimum number of questions or list of factors that a robo-adviser must consider in order to build an appropriate client profile and provide an investment recommendation. Rather, the robo-adviser must collect sufficient information to conclude that its initial recommendations and ongoing advice are suitable and appropriate for a particular client based on the client's financial situation and investment objectives, presumably as such concepts are applied in the context of the robo-adviser's business.
- The Guidance does not substantively address how robo-advisers may meet their obligations under Investment Company Act Rule 3a-4, which provides discretionary investment advisory programs with a nonexclusive safe harbor from the definition of an "investment company" (e.g., a mutual fund). However, the SEC staff did remind robo-advisers to consider their obligations under Rule 3a-4 and other federal securities laws, and it encouraged robo-advisers to contact the SEC staff for further guidance if they believe that their organizations and operations raise unique facts or circumstances "not addressed" by Rule 3a-4.
- A number of the SEC staff's disclosure recommendations relate to the use of algorithms by robo-advisers. While we understand the SEC staff's emphasis here, the concept of an "algorithm" is very broad, and disclosure regarding the use of technology has not historically been a topic of SEC guidance. We note that the use of algorithms is arguably not any more significant for digital advisers than for traditional advisers, which have long relied on technology in formulating and delivering investment advice. One might just as well question whether the failure to use technology to develop investment advice should be disclosed as a material risk in today's world. Disclosure regarding the use and limitations of algorithms should, in any event, depend on whether the use of such algorithms is material to the investment adviser's decisionmaking process.
- We expect that the recommendations in the Guidance will be incorporated into OCIE's exam module for robo-advisers. Because the SEC staff's views are offered in the form of recommendations that firms might consider, we would hope that the OCIE exam staff will not apply each of the recommendations to all robo-advisers and cite for deficiencies any adviser who does not follow all of the SEC staff's recommendations. In this regard, firms may wish to consider the SEC staff's recommendations and, as part of their annual Rule 206(4)-7 reviews or Form ADV annual updating amendments, document which of the recommendations in the Guidance they adopt and the rationale for why the other recommendations were determined to be inapplicable to their business models.
- While the recommendations in the Guidance are thoughtful and provide useful suggestions for robo-advisers, the SEC staff's recommendations are not legal obligations and do not represent the views of the Commission. It is important to recognize that the SEC staff's disclosure recommendations do not have the force of law and do not necessarily give rise to disclosure obligations under Advisers Act Section 206 or Form ADV. For instance, a number of the disclosure areas referenced by the SEC staff relate to business practices that are not required to be disclosed by Section 206 or Form ADV unless they present material conflicts of interest. Consequently, while it is certainly a matter of best practices for robo-advisers and other advisers that use automated investment tools to consider these topics when formulating disclosures, the failure to address any of the SEC staff's points should not be viewed as a per

- se breach of fiduciary duty under Advisers Act Section 206.

SUBSTANCE OF DISCLOSURES

The SEC staff observes that because client relationships with robo-advisers may occur with limited, if any, human interaction, a client's decision about whether to enter into or continue an investment advisory relationship may depend solely on disclosures that are delivered through electronic media. This, combined with the prominent role that technology plays in determining and delivering investment advice, led the SEC staff to suggest that robo-advisers should be thoughtful about the most effective way to explain their business models and the scope of advisory services they provide, as well as the associated risks and limitations. Below is a list of the SEC staff's recommendations with respect to disclosures, accompanied by our observations:

Methodology and Services	- That an algorithm is used to manage individual client accounts. *Most every investment adviser relies on technology to some degree to manage individual client accounts. Accordingly, we believe the SEC staff's recommendations were likely designed to address situations where algorithms actually generate investment recommendations or decisions.* - How algorithmic functions are used to manage client accounts. *It seems reasonable that advisers who use hundreds of algorithmic and other technology functions to manage accounts would not be expected to disclose each algorithm and its use in managing client accounts, unless it were material to an adviser's investment recommendations.* - The assumptions and limitations the algorithm used to manage client accounts. *Note that robo-advisers should only be required to disclose to clients the material assumptions and limitations of an algorithm. Many if not all of these assumptions and limitations may already be disclosed through the robo-adviser's website and user interface, to the extent they include a discussion of the firm's investment methodology.* - The degree of human involvement in the oversight and management of individual client accounts. - How and when a client should update information he or she has provided to the robo-adviser.
Risks and Limitations	- The particular risks inherent in the use of an algorithm to manage client accounts (e.g., that the algorithm might rebalance client accounts without regard to market conditions or more frequently than the client might expect). *Note that robo-advisers routinely rebalance client portfolios based on parameters that are unrelated to market conditions. The parameters, which should be referenced in the adviser's disclosure, are generally established*

	by the adviser and implemented by the algorithm. › The particular circumstances that might cause the robo-adviser to override the algorithm used to manage client accounts (e.g., that the robo-adviser might halt trading or take other temporary defensive measures in stressed market conditions). *Although there has been substantial confusion in the robo-adviser space over this point, robo-advisers do not "halt trading" in securities. Rather, they exercise their discretion as to when to place orders on behalf of client accounts. Robo-advisers should consider whether their disclosures clearly explain their brokerage practices, including in the context of stressed market conditions, but robo-advisers are no different from any other discretionary investment adviser that has the ability to determine when to trade on behalf of client accounts.* › How the robo-adviser uses information gathered from a client to generate a recommended portfolio, and any limitations. *Traditional and robo-advisers both rely on static questionnaires that form the primary, if not sole, basis for the adviser's investment recommendations. From a suitability perspective, we continue to recommend that robo-advisers document the basis on which they have made the determination to select particular factors or questions that they incorporate into their online questionnaires, particularly if such questionnaires are very limited in nature. Ideally, the use of particular factors or questions is tied to a particular investment rationale.*
Conffiicts	› Any involvement by a third party in the development, management, or ownership of the algorithm used to manage client accounts, including an explanation of any conflicts of interest that such an arrangement may create. *In addressing this disclosure point, firms that rely on private-label solutions should consider the extent to which third-party robo-advisers are involved in their digital offerings. If the third-party robo-advisers are actively involved in providing investment advisory services and dictating the investment options for client accounts (which may include their own proprietary products), firms should consider the conflicts of interest that this presents.*
Costs	› Any fees that the client will be charged directly by the robo-adviser and any other costs that the client may bear either directly or indirectly. *This disclosure is already expressly required under Form ADV.*

The SEC staff further observes that robo-advisers should take care to avoid creating a "false implication" about the scope of the services they provide. The SEC staff notes that a robo-adviser could mislead clients by implying, for example, that (i) it is offering a comprehensive financial plan, where the robo-adviser's advice is only targeted to meet a specific financial goal; (ii) a tax-loss harvesting service also provides comprehensive tax advice; or (iii) the algorithm considers information outside of a questionnaire when generating investment recommendations, if such information is not actually considered.

PRESENTATION OF DISCLOSURES

The Guidance also takes a pragmatic approach of reminding robo-advisers to consider whether their disclosures are "effective"—meaning that they are not buried or incomprehensible. In particular, the SEC staff recommends that robo-advisers consider the following:

Timely	Whether key disclosures are presented prior to the sign-up process so that information necessary to make an informed investment decision is available to clients before they engage or make investments with the robo-adviser.
Prominent	Whether key disclosures are specially emphasized (through design features such as pop-up boxes).
Comprehensive	Whether disclosures are accompanied by interactive text or other means to provide additional details to clients who are seeking more information (e.g., through tool-tips or FAQs).
Adapted	Whether alternate channels are considered in presenting and formatting disclosures (e.g., disclosures made on a mobile platform are appropriately adapted).

Given the emphasis on the content and placement of disclosures, we would recommend that robo-advisers revisit the disclosures contained in their Forms ADV and user interfaces.

PROVIDING SUITABLE ADVICE

The Guidance also reinforces the principle that as fiduciaries, robo-advisers have an obligation to make a reasonable determination that the investment advice they provide is suitable for a client based on the client's financial situation and investment objectives.

The SEC staff observes that many robo-advisers provide investment advice based primarily, if not solely, on client responses to online questionnaires. According to the SEC staff, in addition to varying in length and the types of information sought, many of the questionnaires do not provide clients the opportunity to give additional information or context about their responses. Consequently, the SEC staff recommends that robo-advisers take their suitability obligations into account when designing questionnaires, and consider the following:

Sufficiency	Whether the questions elicit sufficient information to allow the robo-adviser to conclude that its initial recommendations and ongoing investment advice are suitable and appropriate for that client based on his or her financial situation and investment objectives. *We note that we assume the SEC staff is interpreting the concept of "financial*

	situation and investment objectives" within the context of a robo-adviser business. For example, most robo-advisers rely on goals-based wealth management, which does not require a client to define an investment objective for each account, and information about a client's financial situation may be limited to retirement savings or annual income.
Clarity	Whether the questions are sufficiently clear and the questionnaire is designed to provide additional clarification or examples to clients when necessary (e.g., through interactive text, pop-up boxes, or FAQs).
Consistency	Whether steps have been taken to address inconsistent client responses, such as design features that alert clients when their responses appear internally inconsistent and suggest that the clients may wish to reconsider their responses; and systems that automatically flag apparently inconsistent information provided by clients for review or follow-up by the robo-adviser.

IMPLEMENTATION OF AN EFFECTIVE COMPLIANCE PROGRAM

The Guidance also emphasizes that a robo-adviser's internal compliance program, as required by Advisers Act Rule 206(4)-7, should address the unique aspects of the robo business model. These include the robo-adviser's reliance on algorithms, limited human interaction with clients, and provision of online advisory services. As a result, robo-advisers should consider whether to adopt and implement written policies and procedures that address the following:

Testing	The development, testing, and back testing of the algorithm, and postimplementation monitoring of the algorithm's performance, in order to ensure that › the algorithm is adequately tested before, and periodically after, it is integrated into the robo-adviser's platform; › the algorithm performs as represented; and › any modifications to the code would not adversely affect client accounts.
Suitability	The design and content of questionnaires and consideration of how the information the robo-adviser obtains from clients support the suitability of initial recommendations and ongoing investment advice.
Algorithm Modiflcations	Disclosure to clients of changes to the algorithmic code that may materially affect their portfolios. *We note that the materiality threshold is critical here. There may be a whole range of "changes," including those resulting from routine maintenance, testing, and system enhancements that might not materially affect the management of client portfolios. Disclosure should not be viewed as an impediment to enhancing or correcting code.*

Oversight	Appropriate oversight of any third party that develops, owns, or manages the algorithm or software modules. *This concept should be incorporated into the robo-adviser's vendor management and, depending on the relationship with the third party, supervisory procedures.*
Cybersecurity and Privacy	Prevention and detection of, and response to, cybersecurity threats, and protection of client accounts and key advisory systems.
Marketing	Use of social and other forms of electronic media in connection with the marketing of advisory services (e.g., websites, Twitter, compensation of bloggers to publicize services, and "refer a friend" programs).

INVESTOR BULLETIN

The Investor Bulletin concentrates on a number of considerations retail investors should take into account when deciding whether to invest with a robo-adviser. These include the following:

- The level of interaction that an investor will have with a robo-adviser, and how the form and amount of this interaction will differ from what the investor would experience with a traditional adviser.
- The extent of the robo-adviser's consideration of the investor's personal financial circumstances, and whether the investor's investment objectives are goal specific.
- How the robo-adviser develops portfolio and investment recommendations, and the limitations associated with the robo-adviser's approach to investing.
- The use of tax-loss harvesting and its value and application to the investor's particular tax circumstances.
- The total fees and costs associated with investing through the robo-adviser.

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If you have any questions or would like more information on the issues discussed in this LawFlash, please contact the authors, Jennifer L. Klass, Steven W. Stone, Katy Gordon, Monica L. Parry, and Eric L. Perelman, or any of the following Morgan Lewis lawyers:

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[1] US Securities and Exchange Commission, Division of Investment Management, "Robo-Advisers," IM Guidance Update No. 2017-02 (Feb. 2017).

[2] US Securities and Exchange Commission, Office of Investor Education and Advocacy, Investor Bulletin: Robo-Advisers (Feb. 23, 2017).

[3] According to the Examination Priorities, examinations of such entities will focus on their compliance programs (including compliance practices for overseeing algorithms that generate investment advisory recommendations), marketing, the formulation of investment recommendations, data protection, and disclosures relating to conflicts of interest.

Tab 4

NATIONAL EXAM PROGRAM
OFFICE OF COMPLIANCE INSPECTIONS AND EXAMINATIONS

EXAMINATION PRIORITIES FOR 2017

I. INTRODUCTION

This document identifies selected 2017 examination priorities of the Office of Compliance Inspections and Examinations ("OCIE," "we," or "our") of the Securities and Exchange Commission ("SEC" or "Commission"). In general, the priorities reflect certain practices, products, and services that OCIE perceives to present potentially heightened risk to investors and/or the integrity of the U.S. capital markets.[1]

OCIE serves as the "eyes and ears" of the SEC. We conduct examinations of regulated entities to promote compliance, prevent fraud, identify risk, and inform policy.[2] We selected our 2017 examination priorities in consultation with the Commissioners, senior staff from the SEC's regional offices, the SEC's policy-making divisions, the enforcement division, the SEC's Investor Advocate, and our fellow regulators.

Our 2017 priorities are organized around three thematic areas:

1. Examining matters of importance to retail investors;
2. Focusing on risks specific to elderly and retiring investors; and
3. Assessing market-wide risks.

With the objectives of being data-driven and risk-based, we have incorporated data analytics into the vast majority of our examination initiatives to identify industry practices and/or registrants that appear to have elevated risk profiles.

II. PROTECTING RETAIL INVESTORS

Retail investors face an evolving set of choices when determining how to invest their money. At the same time, the financial services industry continues to offer an ever widening array of information, advice, products,

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1 This document was prepared by SEC staff, and the views expressed herein are those of OCIE. The Commission has expressed no view on this document's contents. It is not legal advice; it is not intended to, does not, and may not be relied upon to create any rights, substantive or procedural, enforceable at law by any party in any matter civil or criminal.

2 The population of registered entities that OCIE oversees consists of more than 4,000 broker-dealers (including approximately 162,000 branch offices and 640,000 registered representatives), more than 12,000 investment advisers (with nearly $67 trillion in assets under management), approximately 850 fund complexes (representing close to 11,000 mutual funds and exchange-traded funds), more than 400 transfer agents and over 650 municipal advisors. In addition, OCIE has oversight responsibility for 20 national securities exchanges, the Financial Industry Regulatory Authority (FINRA), the Municipal Securities Rulemaking Board (MSRB), the Securities Investor Protection Corporation (SIPC), eight clearing agencies, and the Public Company Accounting Oversight Board (PCAOB). The Dodd-Frank Wall Street Reform and Consumer Protection Act increased OCIE's responsibilities to include security-based swap dealers, security-based swap data repositories, major security-based swap participants, and securities-based swap execution facilities. Additionally, the Jumpstart Our Business Act expanded OCIE's responsibilities to include oversight of crowdfunding portals.

and services for retail investors in response to their financial needs. We are pursuing a variety of examination initiatives to assess potential risks to retail investors that arise in the increasingly complex investment landscape.

- **Electronic Investment Advice**. Investors are increasingly able to obtain investment advice through automated or digital platforms. We will examine registered investment advisers and broker-dealers that offer such services, including "robo-advisers" that primarily interact with clients online and firms that utilize automation as a component of their services while also offering clients access to financial professionals. Examinations will likely focus on registrants' compliance programs, marketing, formulation of investment recommendations, data protection, and disclosures relating to conflicts of interest. We will also review firms' compliance practices for overseeing algorithms that generate recommendations.

- **Wrap Fee Programs**. We will expand our focus on registered investment advisers and broker-dealers associated with wrap fee programs, which charge investors a single bundled fee for advisory and brokerage services. We will likely review whether investment advisers are acting in a manner consistent with their fiduciary duty and whether they are meeting their contractual obligations to clients. Areas of interest may include wrap account suitability, effectiveness of disclosures, conflicts of interest, and brokerage practices, including best execution and trading away.

- **Exchange-Traded Funds ("ETFs")**. We will continue to examine ETFs, reviewing for compliance with applicable exemptive relief granted under the Securities Exchange Act of 1934 and the Investment Company Act of 1940 and with other regulatory requirements, as well as review ETFs' unit creation and redemption processes. We will also focus on sales practices and disclosures involving ETFs and the suitability of broker-dealers' recommendations to purchase ETFs with niche strategies.

- **Never-Before Examined Investment Advisers**. We are expanding our Never-Before Examined Adviser initiative[3] to include focused, risk-based examinations of newly registered advisers as well as of selected advisers that have been registered for a longer period but have never been examined by OCIE.

- **Recidivist Representatives and their Employers**. We will continue to use our analytic capabilities to identify individuals with a track record of misconduct and examine the investment advisers that employ them.[4] For example, we will assess the compliance oversight and controls of investment advisers that have employed such individuals, including those who have been subject to a regulatory action or barred from associating with a broker-dealer.

- **Multi-Branch Advisers**. We will continue to focus on registered investment advisers that provide advisory services from multiple locations.[5] The use of a branch office model can pose unique risks

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3 *See* OCIE's Letter to Never-Before Examined Investment Advisers, February 20, 2014, http://www.sec.gov/about/offices/ocie/nbe-final-letter-022014.pdf.

4 *See* OCIE Risk Alert, "Examinations of Supervision Practices at Registered Investment Advisers," Sept. 12, 2016, https://www.sec.gov/ocie/announcement/ocie-2016-risk-alert-supervision-registered-investment-advisers.pdf.

5 *See* OCIE Risk Alert, "Multi-Branch Adviser Initiative," Dec. 12, 2016, https://www.sec.gov/ocie/announcement/risk-alert-multi-branch-adviser-initiative.pdf.

and challenges to advisers, particularly in the design and implementation of a compliance program and the oversight of advisory services provided at branch offices.

- **Share Class Selection**. We will continue reviewing conflicts of interest and other factors that may affect registrants' recommendations to invest, or remain invested, in particular share classes of mutual funds.[6] For example, we will identify and assess conflicts that certain investment advisory personnel may have, such as those who also are registered representatives of a broker-dealer, which may influence recommendations in favor of share classes that have higher loads or distribution fees. We will also assess the formulation of investment recommendations and the management of client portfolios.

III. FOCUSING ON SENIOR INVESTORS AND RETIREMENT INVESTMENTS

As the U.S. population ages and investors become more dependent than ever on their own investments for retirement income, we are devoting increased attention to issues affecting senior investors and those investing for retirement.

- **ReTIRE**. We will continue our multi-year ReTIRE initiative, focusing on investment advisers and broker-dealers along with the services they offer to investors with retirement accounts.[7] This year, these examinations will likely focus on, among other things, registrants' recommendations and sales of variable insurance products as well as the sales and management of target date funds. We will also assess controls surrounding cross-transactions, particularly with respect to fixed income securities.

- **Public Pension Advisers**. Pension plans of states, municipalities, and other government entities hold a large amount of U.S. investors' retirement assets. We will examine investment advisers to these entities to assess how they are managing conflicts of interest and fulfilling their fiduciary duty. We will also review other risks specific to these advisers, including pay-to-play and undisclosed gifts and entertainment practices.

- **Senior Investors**. Today's Americans are more reliant on returns from their investment portfolios to fund their retirement compared to previous generations. We will evaluate how firms manage their interactions with senior investors, including their ability to identify financial exploitation of seniors. Examinations will likely focus on registrants' supervisory programs and controls relating to products and services directed at senior investors.

IV. ASSESSING MARKET-WIDE RISKS

As part of the SEC's mission to maintain fair, orderly, and efficient markets, we will examine for structural risks and trends that may involve multiple firms or entire industries. In 2017, we will focus on the following initiatives:

- **Money Market Funds**. In 2014, the SEC adopted amendments to rules governing money market funds to make structural and operational reforms to address redemption risks in money market funds,

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6 *See* OCIE Risk Alert, "OCIE's 2016 Share Class Initiative," July 13, 2016, https://www.sec.gov/ocie/announcement/ocie-risk-alert-2016-share-class-initiative.pdf.

7 *See* OCIE Risk Alert, "Retirement-Targeted Industry Reviews and Examinations Initiative," June 22, 2015, http://www.sec.gov/about/offices/ocie/retirement-targeted-industry-reviews-and-examinations-initiative.pdf.

while preserving the benefits of the funds for remaining investors.[8] We will examine money market funds for compliance with these rule amendments, which became effective in October 2016. Examinations will likely include assessments of the boards' oversight of the funds' compliance with these new amendments as well as review of compliance policies and procedures relating to stress testing and funds' periodic reporting of information to the Commission.

- **Payment for Order Flow**. We will examine select broker-dealers, such as market-makers and those that serve primarily retail customers, to assess how they are complying with their duty of best execution when routing customer orders for execution.

- **Clearing Agencies**. We will continue to conduct annual examinations of clearing agencies designated systemically important and for which the Commission is the supervisory agency pursuant to the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act. Areas for review will be determined through a risk-based approach in collaboration with the Division of Trading and Markets and other regulators, as applicable. Once compliance is required, the staff will examine for compliance with the Commission's Standards for Covered Clearing Agencies.[9]

- **FINRA**. We will enhance our oversight of FINRA, consistent with our aim to protect investors and the integrity of our markets. In addition to continuing to conduct inspections of FINRA's operations and regulatory programs, we will focus resources on assessing the quality of FINRA's examinations of individual broker-dealers.

- **Regulation Systems Compliance and Integrity ("SCI")**. We will continue to examine SCI entities to evaluate whether they have established, maintained, and enforced written policies and procedures reasonably designed to ensure their systems have levels of capacity, integrity, resiliency, availability, and security adequate to maintain operational capacity and promote maintenance of fair and orderly markets, and that they operate in a manner compliant with the Exchange Act.[10] OCIE will also review, among other things, controls relating to how systems record the time of transactions or events, how they synchronize with other systems, as well as collection, analysis, and dissemination of market data. Examinations will also assess entities' enterprise risk management, including whether these programs cover appropriate business units, subsidiaries, and related interconnected infrastructure.

- **Cybersecurity.** In 2017, we will continue our initiative to examine for cybersecurity compliance procedures and controls, including testing the implementation of those procedures and controls.

- **National Securities Exchanges**. We will continue to conduct risk-based inspections of the national securities exchanges. These inspections will focus on selected operational and regulatory programs.

- **Anti-Money Laundering ("AML")**. Money laundering and terrorist financing continue to be risk areas that are considered in our examination program. We will continue to examine broker-dealers to assess whether AML programs are tailored to the specific risks that a firm faces, including whether

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8 *See* Money Market Fund Reform; Amendments to Form PF, Release No. 33-9616 (July 23, 2014), https://www.sec.gov/rules/final/2014/33-9616.pdf.

9 *See* Standards for Covered Clearing Agencies, Release No. 34-78961 (adopted Sept. 28, 2016), https://www.sec.gov/rules/final/2016/34-78961.pdf (compliance date April 11, 2017).

10 *See* Regulation Systems Compliance and Integrity, Release No. 34-37639, (November 19, 2014), http://www.sec.gov/rules/final/2014/34-73639.pdf.

broker-dealers consider and adapt their programs, as appropriate, to current money laundering and terrorist financing risks. We will also review how broker-dealers are monitoring for suspicious activity at the firm, in light of the risks presented, and the effectiveness of independent testing. We will also continue to assess broker-dealers' compliance with suspicious activity report ("SAR") requirements and the timeliness and completeness of SARs filed.

V. OTHER INITIATIVES

In addition to examinations related to the themes described above, we expect to allocate examination resources to other priorities, including:

- **Municipal Advisors**. We will continue to conduct examinations of municipal advisors to evaluate their compliance with SEC and Municipal Securities Rulemaking Board rules. This initiative will continue to include industry outreach and education.[11]

- **Transfer Agents**. In addition to our examinations of transfer agents' timely turnaround of items and transfers, recordkeeping and record retention, and safeguarding of funds and securities, we will examine transfer agents that service microcap issuers, focusing on detecting issuers that may be engaging in unregistered, non-exempt offerings of securities.

- **Private Fund Advisers**. We will continue to examine private fund advisers, focusing on conflicts of interest and disclosure of conflicts as well as actions that appear to benefit the adviser at the expense of investors.

VI. CONCLUSION

This description of OCIE priorities is not exhaustive. While we expect to allocate significant resources throughout 2017 to the examination issues described herein, our staff will also conduct examinations focused on risks, issues, and policy matters that arise from market developments, new information learned from examinations or other sources, including tips, complaints, and referrals, and coordination with other regulators, as well as regulatory developments.

OCIE welcomes comments and suggestions regarding how we can better fulfill our mission to promote compliance, prevent fraud, monitor risk, and inform SEC policy. If you suspect or observe activity that may violate the federal securities laws or otherwise operates to harm investors, please notify SEC Staff at http://www.sec.gov/complaint/info_tipscomplaint.shtml.

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[11] *See* OCIE's Industry Letter for the Municipal Advisor Examination Initiative, August 19, 2014, https://www.sec.gov/about/offices/ocie/muni-advisor-letter-081914.pdf.

Tab 5

SEC Electronic Investment Advice Initiative
Redacted Information Request
(September 2017)

General Background

1. For the Examination Period, a list of all employees, contractors, interns, third-party consultants, senior advisers, partners, officers and/or directors and their respective titles, group or functional area (e.g., portfolio management, trading, information technology, software development, accounting), office location, and hire date. Also provide an organization chart of each group or functional area within the Adviser illustrating the reporting structure.

2. All versions of any Terms of Use applicable to the Adviser's website/mobile application that were in effect during the Examination Period.

3. A list of any sub-advisers. If applicable, copies of agreements with such sub-advisers.

4. Names and locations of all affiliated and unaffiliated service providers and the services they perform. Include agreements underlying these arrangements. For this item, the Adviser may exclude basic clerical support services.

5. Names of all platforms used by the Adviser to provide electronic investment advice ("robo-advisory services"). For each, indicate:

    (a) proprietary or non-proprietary (e.g., White-Label)

    (b) accessible via website, mobile application, or both

    (c) whether users/clients must complete a questionnaire

    (d) whether it employs cognitive computing (e.g., artificial intelligence, machine learning)

    (e) whether it includes human communication (e.g., financial planner)

    (f) whether it employs gamification and, if so, for what purpose

    (g) if non-proprietary: adviser-facing, client/user-facing, or both

    (h) if non-proprietary: manufacturer's name

    (i) if non-proprietary: whether the Adviser also uses turnkey services offered by the platform

6. Names of all FinTech/robo-advisory tools used by the Adviser, excluding platforms disclosed in response to Item 5 (e.g., for account aggregation, data aggregation, data analytics/business intelligence). Also include the manufacturer's name and the tool's purpose.

7. Provide the information below for all robo-advisory client accounts as of [DATE]. The preferred format for this information is in Excel.

    (a) inception date, account number, client name and address, and market value;

    (b) client's date of birth;

    (c) whether the client is a related person, affiliated person, or a proprietary account;

    (d) type of account (e.g., individual, joint, IRA, 401(k), trust);

(e) platform used;

(f) account custodian and location;

(g) whether or not the Adviser has discretionary authority;

(h) whether the Adviser, an officer, an employee, or an affiliate acts as trustee, co-trustee, or successor trustee or has full power of attorney for the account;

(i) client risk tolerance level or code;

(j) current net worth and income of the client;

(k) account portfolio manager(s), if applicable;

(l) whether the client pays a performance fee; and

(m) for clients obtained during the Examination Period, provide name(s) of person(s) who solicited or otherwise helped to obtain the client, if any.

8. To the extent the Adviser provides robo-advisory services to accounts not included in response to Item 7, please provide for those accounts, the same information that is requested in Item 7.

9. If applicable, a list of clients that utilized the Adviser's automated platform and subsequently converted their accounts to traditional (non-automated) advised accounts at the Adviser.

10. If applicable, a list of clients that have traditional/non-automated advised accounts at the Adviser and also have one or more accounts that are managed by the Adviser's automated platform.

11. Provide the information below for all advisory clients' accounts that closed during the Examination Period. The preferred format for this information is in Excel.

(a) inception date

(b) closing date

(c) account number

(d) client's name

(e) client's date of birth

(f) whether the client is a related person, affiliated person, or a proprietary account;

(g) type of account (e.g., individual, joint, IRA, 401(k), trust);

(h) platform used

(i) whether or not the Adviser had discretionary authority;

(j) client risk tolerance level or code; and

(k) client address.

Compliance Oversight

12. All compliance policies and procedures that currently are in effect for the Adviser. In responding to this request, the Adviser also should include any procedures related to the development, testing, maintenance, and monitoring of any systems and algorithms. If material amendments were made to the policies and procedures during the Examination Period, provide details on the amendments and when they became effective. Please note that subsequent items in this Request Letter may ask for policies and procedures that are covered by the documents produced in response to this item. For those items, you may refer back to this request item and specify where the information can be found.

13. List any third-party resources used to support the Adviser's compliance function. Provide copies of any reports or reviews conducted by external compliance consultants during the Examination Period.

14. An explanation of the role of compliance in connection with the testing and monitoring of risk assessment models and investment/asset allocation algorithms. Indicate whether compliance is engaged at the onset of system design, and describe compliance's role on an ongoing basis, as well as note whether compliance has representation on any committees or design groups that are responsible for investment models or investment/allocation algorithms. In connection with this request item, provide a flow chart that illustrates the Adviser's software development lifecycle, and indicate the various points where compliance interacts with the process.

15. An organizational chart(s) illustrating any software development teams and stating the specific roles and responsibilities of the participants on such teams. In connection with this item, identify the project leaders and provide a brief description of their respective projects. List software development areas/projects that do not collaborate with the compliance department.

16. Documentation regarding any reviews conducted of the Adviser's policies and procedures, including annual and interim reports, internal control analyses, and forensic or transactional tests. As part of your response, provide any reports/documentation to evidence the Adviser's annual compliance reviews performed pursuant to Rule 206(4)-7 of the Advisers Act for the Examination Period. If included in the Adviser's annual review process, provide a copy of the most recent risk matrix evidencing the assessment and categorization of various risks identified by the compliance function. The Adviser's response also should address any corrective or remedial actions undertaken with respect to any findings.

17. A list and description of automated reports, including any exception reports, used in connection with the compliance function's monitoring of any algorithms employed in providing the Advisor's investment services.

18. A log and description of any tests conducted by the Adviser during the Examination Period to determine how systems performed or would have performed under various operating environments (e.g., periods of market volatility, high volumes of client driven activity). Include any policies and procedures that support such testing. Indicate any tests results that were escalated for further assessment.

19. A log of any instances when the Adviser suspended trading. Include any instances when the Adviser breached its internal trading thresholds/limits/parameters, established clearing firm limits, or both.

20. A list of any internal audits, including the subject and the date of each review, conducted during the Examination Period. Include a summary of each audit's scope and any related findings.

21. A list of trade errors made during the Examination Period. The Adviser's response to this item should include any trading, portfolio management or algorithmic-based errors and should briefly state how each error was made and resolved.

22. Policies and procedures addressing how compliance evaluates the suitability of specific investments or allocations relative to information provided by the client. Any compliance reviews conducted to evaluate various criteria used by the Adviser in its selection of specific securities/investment products. Any exception reports used by the Adviser to track drift in actual investment allocations from expected allocations **relative** to an account's assigned risk score.

23. Any policies and procedures (e.g., compliance manual, standard operating procedures) that address the Adviser's use of social media. Indicate whether such policies/procedures address the activities of existing clients to the extent that the Adviser has incentivized such clients to attract new clients.

24. Indicate whether the Adviser or any of its affiliates or supervised persons has access to the logins and/or passwords of any of its clients' or prospective clients' ("users") brokerage accounts or other financial accounts, or had access to such information at any time during the client onboarding process. If so, provide a list of such accounts, as well as any policies and procedures and supporting internal controls relating to this practice.

25. A list of client and user complaints received during the Examination Period. Also, the Adviser's operating definition of a client and/or user complaint, as well as any supporting policies and procedures governing the receipt, monitoring and disposition of client/user correspondence and/or complaints.

26. Any correspondence with the staff of the Commission or other regulatory agencies, including foreign agencies/governments.

Portfolio Management and Brokerage Practices

27. A list of any proprietary securities or products of affiliates that are or were used or recommended by the Adviser in connection with its investment advisory services. Also, indicate the amount of compensation received by the Adviser and/or affiliates in connection with the use of these securities and products. Provide copies of any agreements related to these arrangements.

28. A list of any investment products or services offered by an unaffiliated entity that are or were used or recommended by the Adviser and for which the Adviser receives or received compensation other than its advisory fee, whether directly or indirectly. Describe the investment product and nature of the compensation. Also, provide copies of any written agreements relating to these arrangements.

29. A list of investment portfolio model(s) offered by the Adviser. For each model, include a description of the model relating to the strategy employed, the type and number of securities included, the general range of asset class/security weightings, the risk level assigned to the model, and any other significant characteristics that distinguish the model. If applicable, indicate the index against which the model is benchmarked.

30. For each of the investment strategies/portfolio models offered by the Adviser, provide copies of any research or analysis performed by the Adviser in order to determine the type of client (as defined by factors such as risk tolerance and investment objective) that is best suited for it.

31. A list of the data fields that must be completed during the onboarding process to become an advisory client. Specifically, identify any data fields that are used to assess and determine client risk tolerances, financial goals/objectives, and the initial investment recommendation. If amendments were made to such data fields during the Examination Period, describe the changes and indicate when they became effective and the extent to which compliance was involved in the process. If applicable, identify the data fields that provide clients with the option to select from pre-populated responses, and list those responses accordingly.

32. A copy of the model/formula used to determine the risk rating/tolerance for each client account.

33. Indicate whether clients are permitted to transfer into their accounts shares of securities that they currently own and/or whether they may impose account restrictions, including those related to the selection of recommended investment products. If applicable, indicate the types of transfers and/or restrictions that are permitted.

34. A list of the data fields that a client may update (once onboarded) that could result in changes to client risk tolerances, financial goals, and/or investment recommendations. Also, indicate how frequently clients are able to make such changes, how the Adviser is made aware of any such changes, when any changes would become effective/be implemented, and whether the Adviser may prompt clients to initiate these updates. If

the Adviser may prompt clients to initiate updates, indicate the general frequency of such prompts (e.g., ad hoc, based on client-specific events, periodically, annually). In connection with monitoring a client's objective, include any procedures of the Adviser that address stale or incomplete account information.

35. In addition to client data referenced above, list or identify any non-client specific key assumptions and/or factors that are included in the Adviser's investment model(s) for the purpose of determining client risk tolerances, financial goals, and investment recommendations (e.g., short or long term interest rates, relevant index returns, income tax rates).

36. A list of any data fields used in generating exception reports designed to identify circumstances when data fields completed by clients/users may be inconsistent with one another or a specific model selection (e.g., client/user indicates a low risk tolerance with an aggressive investment strategy). Indicate whether these exceptions are communicated to the client/user automatically through the Adviser's system (e.g., via an alert, confirm, or prompt box; an email; a text message), or if advisory personnel are prompted to evaluate and initiate corrective action.

37. If not already provided in response to an earlier item, a list and sample copies of any reports, including exception reports, used to review client portfolios for consistency with portfolio investment restrictions and objectives, risk tolerances, and investment model parameters.

38. If not already provided in response to an earlier item, a list and sample copies of any reports, including exception reports that the Adviser generates to evaluate the adequacy of its investment models or to otherwise ensure that the models are functioning in a manner consistent with representations made to clients/users.

39. A list of online questions users/clients must answer so that the Adviser can make its initial and/or on-going suitability assessment(s). If only a subset of the questions that users/clients are asked to answer is required to make such assessments, also provide a list of all questions posed to users/clients.

40. Sample copies of user/client reports and/or output screens generated for each step of the investment process. This item should include, for example, reports/screens pertaining to client risk tolerances, financial goal/objectives, investment recommendations, portfolio transactions, portfolio holdings including asset allocation, performance returns, and client billing, among others. Specify the frequency with which these are provided to clients. During fieldwork, the staff may request a demonstration of and/or "experiential access" to the user/client interface supporting these processes (i.e., website and/or mobile application).

41. With respect to the platform(s) employed by the Adviser for assessing user/client risk and implementing and managing a client's investment program, briefly describe any production code changes effected during the Examination Period for risk modeling and portfolio management (e.g., rebalancing, tax loss harvesting, target allocation weights).

42. Copies of any policies and procedures in effect during the Examination Period relating to the Adviser's use of a tax loss harvesting strategy.

43. Copies of any policies and procedures in effect during the Examination Period relating to the rebalancing of client portfolios, including the frequency of and factors that may trigger it.

44. Copies of any policies and procedures, scripts and/or talking points in effect during the Examination Period that pertain to client communications by advisory or client servicing personnel regarding the management of accounts. This request item relates to communications by phone, email, instant messaging, chats, etc.

45. Copies of any specific policies and procedures that address steps taken in the event of various types of market dislocations/events (e.g., Brexit, Flash Crash, Prevailing SRO Circuit Breakers and Trading Halts). Include any protocols that outline instances where the Adviser would suspend trading on behalf of client accounts, as well as how such suspension would be communicated to clients. This response should address any gates imposed by the Adviser that could impact a client's ability to effect withdrawals from or

liquidations of his/her account(s). If any suspensions have ever occurred, provide details regarding each such suspension.

46. Description of methodologies and systems used to calculate account performance and how such performance is communicated to the client.

47. Describe how clients are notified of any wash sales or capital losses in their accounts.

48. A list of any wrap-fee platforms used or sponsored by the Adviser. If applicable, provide any agreements and disclosure documents relating to these programs.

Marketing & Advertising

49. A list of all advertising mechanisms (e.g, websites, mobile applications, podcasts, search engine advertisements, mainstream media) used to solicit or inform users or clients, including blogs and social media sites (e.g., Facebook, Twitter, LinkedIn). If applicable, describe any compensation arrangements with third-parties.

50. List and describe any marketing programs in place that compensate individuals or entities for client referrals. The Adviser's response should address, among other items, programs that compensate: (a) clients or users with gifts, products, or fee discounts; (b) solicitors, as defined by the cash solicitation rule under the Advisers Act; and (c) bloggers or other entities, whether or not pursuant to an affiliate marketing or co-registration program.

51. If not available on the Adviser's website/mobile application, all pitch books, pamphlets, brochures, videos and any other promotional and/or marketing materials furnished to clients and/or users regarding the Adviser's robo-advisory services.

52. If the Adviser's website/mobile application includes a section for users, clients, investors, or advisory representatives that only is accessible with a username and password, please establish a temporary username and password for the staff's use during the examination and include them with your response.

Cybersecurity

53. A copy of the Adviser's policies and procedures addressing the protection of customer/client/user records and information, including those that are designed to secure customer/client/user documents and information; protect against anticipated threats to customer/client/user information; and protect against unauthorized access to customer/client/user accounts or information for the Examination Period. Please note that subsequent items in this Request Letter may ask for policies and procedures that are covered by the documents produced in response to this item. For those items, you may refer back to this request item and specify where the information can be found.

54. A copy of the Adviser's policies, procedures, and standards that are designed to ensure that unauthorized persons do not access the Adviser's network resources and devices or to restrict access according to job functions (e.g., access control policy, acceptable use policy, administrative management of systems, corporate information security policy). If applicable, provide a copy of the Adviser's last internal audit that covered access rights and controls.

55. A copy of the Adviser's policies, procedures, and standards related to login attempts, failures, lockouts, and unlocks or resets for each perimeter-facing system. Please indicate how these policies are enforced.

56. A list of any instances during the Examination Period when system users had access to systems in contravention of the Adviser's policies or practices (e.g., employees changing roles within or leaving the Adviser). Please include the date(s) and a brief description of the instance(s) and any remediation efforts undertaken in response.

57. A copy of the Adviser’s policies, procedures, and standards related to verification of the authenticity of a customer/client request to transfer funds externally. If no such written policies, procedures, or standards exist, describe the process the Adviser follows to verify the authenticity of fund transfer requests and list the individuals and/or departments involved in the approval process.

58. A list of all third-party vendors that facilitated the mitigation of cybersecurity risks by means related to access controls, data loss prevention, and management of Personally Identifiable Information (“PII”) during the Examination Period. Include a brief description of the services each vendor provided to the Adviser.

59. A copy of the Adviser’s policies, procedures, and standards relating to the selection and supervision of third-party vendors, including protocols ensuring that such vendors only have access to those systems specified in any governing agreement.

60. A copy of the Adviser’s written business continuity of operations plan that addresses mitigation of the effects of a cybersecurity incident and/or recovery from such an incident, if such a plan exists. If the Adviser maintains a separate written cybersecurity incident response policy, provide a copy of the policy and indicate the date it most recently was updated.

61. A list of all cyber incidents. Identify the amount of actual client losses associated with each cyber incident, including the amount reimbursed by the Adviser.

In addition to the documents noted above, please have the following documents available for review at the onset of the fieldwork portion of the examination:

62. A list of all cybersecurity assessments conducted during the Examination Period, including penetration testing and vulnerability scans, conducted by the Adviser or on behalf of the Adviser by third-parties. Also provide a copy of the results of the most recent tests and scans.

63. Separate lists of the systems or applications for which the Adviser uses or does not use multi-factor authentication for employee and customer/client access. Provide any policies and procedures that address the Adviser’s deployment and management of multi-factor authentication processes.

64. A copy of the Adviser’s policies and procedures related to enterprise data loss prevention. Also, provide a list of the systems, utilities, and tools used to prevent, detect, and monitor data loss as it relates to PII and access to customer/client accounts. Indicate whether the systems are proprietary, managed by a third party, or commercial off-the-shelf products.

65. A copy of the Adviser’s policies and procedures relating to monitoring data exfiltration (i.e., unauthorized copying/transfer/distribution/retrieval of sensitive information), including PII, either internally or externally through email, physical media, hard copy, web-based file transfer programs, or via other electronic means. If the Adviser maintains documentation of this monitoring, include a copy of the most recent report. Also, include any policies that address how these incidents are reported internally or externally.

66. A list of all third-party vendors with access to the Adviser’s network or data. Include a brief description of the service (or type of service) the vendor provides to the Adviser.

STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

ERIC T. SCHNEIDERMAN
ATTORNEY GENERAL

DIVISION OF ECONOMIC JUSTICE
INVESTOR PROTECTION BUREAU

September 21, 2017

[redacted]

CONFIDENTIAL

Via Electronic and Overnight Mail

[redacted]

Re: Request for Information Regarding [redacted]

To Whom It May Concern:

The Investor Protection Bureau of the Office of the New York State Attorney General (the "OAG") is inquiring about robo-advisory products on the market. To that end, we would appreciate you taking the time to meet with us to provide an overview of [redacted] business (the "Business"). We would like to discuss the following topics:

- The Business generally (e.g., development and size of the Business, products and services, fees, and internal controls and monitoring).
- The level of human advisor involvement in the Business (e.g., identification of the tasks that human advisors perform throughout the course of the investing relationship).
- Controls, if any, maintained by the Business to identify investors for whom the service is or may not be appropriate (e.g., investors with little or no savings, investors who may require investment products not offered by the Business, etc.).
- Payments and/or gifts from or to third-parties (including any revenue-sharing arrangements) in connection with the Business. Please describe the nature of any such relationships and state whether and how these relationships are disclosed to investors.

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- Evaluation of fund/investment performance, including frequency of adjustments made to the roster of funds/investments offered by the Business.

- The use of the Business by third-party investment advisors.

I will reach out to you in the coming days to schedule a time for us to meet. In the meantime, if you have any questions regarding this letter, please do not hesitate to call me at 212-416-6356.

The OAG appreciates your cooperation with this inquiry and requests that you treat this matter as confidential.

Very truly yours,

[redacted]

Assistant Attorney General

Tab 6

Report on Digital Investment Advice

MARCH 2016

A REPORT FROM **THE FINANCIAL INDUSTRY REGULATORY AUTHORITY**

Contents

Introduction

Technology has long played a central role in financial services innovation. It continues to do so today as many firms in the securities industry introduce new digital investment advice tools to assist in developing and managing investment portfolios. FINRA undertook a review of selected digital investment advice tools to assess these developments.

The observations and practices in this report are drawn from FINRA's discussions with a range of financial services firms that provide or use digital investment advice tools, vendors and foreign securities regulators as well our regulatory experience. This report uses the term "financial services firms" to include both broker-dealers and investment advisers. The rules discussed in this report apply to broker-dealers. The effective practices we discuss are specifically intended for FINRA-registered firms, but may be valuable to financial professionals generally.[1]

The adoption of digital investment advice tools has stimulated discussions about the role of financial professionals and the evolving relationship between financial intermediaries and their clients. What role will financial professionals play in conjunction with digital services in providing investment advice? To what degree will investors rely primarily on digital investment advice? How well can software know a client? Can the skill, knowledge and service provided by well-trained and ethical financial professionals be incorporated in software? Can that software provide sound personal advice, especially for clients with more complex advice needs?

Without venturing to answer these questions, what is clear is that the role technology plays in supporting investment advice to clients will increase at many securities firms.[2] With that in mind, FINRA issues this report to remind broker-dealers of their obligations under FINRA rules as well as to share effective practices related to digital investment advice, including with respect to technology management, portfolio development and conflicts of interest mitigation. The report also raises considerations for investors in evaluating investment advice derived entirely or in part from digital investment advice tools.

This report does not create any new legal requirements or change any existing broker-dealer regulatory obligations. Throughout the report, we identify practices that we believe firms should consider and tailor to their business model.

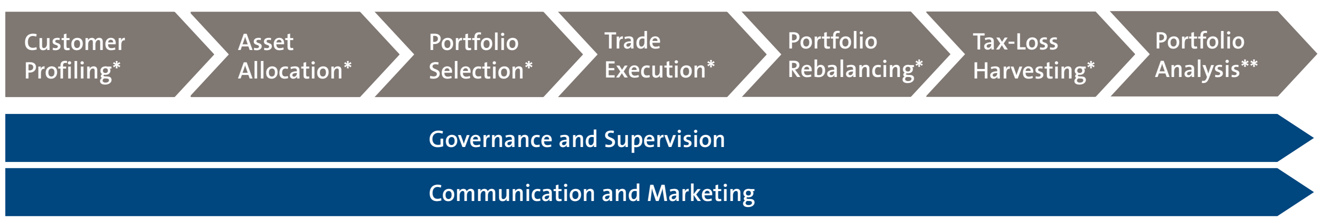
Questions/Further Information

Inquiries regarding this report may be directed to Daniel M. Sibears, Executive Vice President, Regulatory Operations/Shared Services, at (202) 728 6911; or Steven Polansky, Senior Director, Regulatory Operations/Shared Services, at (202) 728 8331.

A Note on Terminology

As used here, digital investment advice tools (also referred to as digital advice tools) support one or more of the following core activities in managing an investor's portfolio: customer profiling, asset allocation, portfolio selection, trade execution, portfolio rebalancing, tax-loss harvesting[3] and portfolio analysis. These investment advice tools can be broken down into two groups: tools that financial professionals use, referred to here as "financial professional-facing" tools, and tools that clients use, referred to here as "client-facing" tools. Client-facing tools that incorporate the first six activities—customer profiling through tax-loss harvesting—are frequently referred to as "robo advisors" or "robos."[4]

Figure 1: Investment advice value chain



* Functionally typical in financial professional- and client-facing digital investment advice tools
** Functionally typical in financial professional-facing tools only

A Brief History of Digital Investment Advice

Financial professionals have used digital investment advice tools for years. These tools help financial professionals at each point in the value chain described above, for example, to develop an investor profile, to prepare proposals and sales materials, to develop an asset allocation or to recommend specific securities to an investor. Those recommendations may be for individual securities, a customized portfolio or a pre-packaged portfolio for investors with a given profile. In addition, digital tools can help develop recommendations to rebalance investors' portfolios on a periodic basis or to support tax-loss harvesting. The tools financial professionals use may be developed by their firms, acquired from third-party vendors by their firm or, in some cases, acquired by the financial professionals themselves.

In the late 1990s, the landscape of investment tools available directly to investors began to expand. Some firms started to make asset allocation tools available online. The landscape expanded further in 2005, when NASD Interpretative Material (IM) 2210-6 became effective, allowing broker-dealers to make "investment analysis tools" available to investors. FINRA defined an investment analysis tool to be an "interactive technological tool that produces simulations and statistical analyses that present the likelihood of various investment outcomes if certain investments are made or certain investment strategies or styles are undertaken."[5]

Following the 2008 financial crisis, a number of new entrants began offering a wide range of digital financial tools directly to consumers, including investment advice tools. Many of these firms had their roots in the technology industry and brought new perspectives on the role of technology in financial services. The client-facing digital investment tools these firms developed offer aspects of the functionality previously only available to financial professionals. The degree of human involvement in client-facing tools varies substantially. Some firms rely on a purely digital interaction with clients while others provide optional or mandatory access to a financial professional.

In many cases, securities industry participants are responding with digital investment advice strategies of their own. Some participants are developing or acquiring client-facing investment advice tools while others are developing or acquiring financial professional-facing tools to enhance their ability to serve clients and compete more effectively. Some of these latter tools include advanced analytic tools—*e.g.*, to assess customer risk tolerance or portfolio risk—and in some cases presentation interfaces that enable the financial professional to present information to clients online. Vendors frequently position these tools as providing the basis for financial professionals to conduct more in-depth, sophisticated discussions with their client.

Governance and Supervision

Governance and supervision of investment recommendations are recurring topics of FINRA guidance and are equally relevant to digital investment advice tools. We focus here on governance and supervision in two areas: 1) the algorithms that drive digital investment tools; and 2) the construction of client portfolios, including potential conflicts of interest that may arise in those portfolios.

Algorithms

Algorithms are core components of digital investment advice tools. They use various financial models and assumptions to translate data inputs into suggested actions at each step of the advice value chain. The methodology by which the algorithm translates inputs into outputs should reflect a firm's approach to a particular task, *e.g.*, profiling an investor, rebalancing an account or performing tax-loss harvesting. If an algorithm is poorly designed for its task or not correctly coded, it may produce results that deviate systematically from the intended output and that adversely affect many investors.

For this reason, it is essential that firms effectively govern and supervise the algorithms they use in digital-advice tools. At the most basic level, firms should assess whether an algorithm is consistent with the firm's investment and analytic approaches. For example, a number of client-facing digital investment advice tools are based on precepts from Modern Portfolio Theory[6] and use a passive, index-based approach to investing based on the risk tolerance of the client, while others incorporate active management of investment portfolios. Not surprisingly, the outputs and investment advice from algorithms developed based on these approaches are likely to be different.

Even when client-facing digital advice tools take a similar approach to investing, implementation of methods for specific investing tasks, for example asset allocation, may produce very different results. Cerulli Associates compared the asset allocation for a notional 27-year-old investing for retirement across seven client-facing digital advice tools. Equity allocations ranged as high as 90 percent and as low as 51 percent; fixed income allocations ranged from 10 percent to 40 percent. (*See* Figure 2.) A *Wall Street Journal* analysis found similar disparities.[7, 8]

Figure 2: Asset allocation model comparison[9]

Asset Class	Digital Adviser A	Digital Adviser B	Digital Adviser C	Digital Adviser A	Digital Adviser D	Digital Adviser E	Digital Adviser F
Equity	90.1%	72.0%	51.0%	84.0%	60.0%	69.0%	72.2%
Domestic	42.1%	37.0%	26.0%	34.0%	30.0%	47.0%	28.9%
U.S. total stocks	16.2%	22.0%		34.0%		47.0%	13.0%
U.S. large-cap	16.2%		8.0%		19.0%		13.0%
U.S. mid-cap	5.2%						
U.S. small-cap	4.5%		18.0%		11.0%		2.9%
Dividend stocks		15.0%					
Foreign	48.0%	35.0%	25.0%	50.0%	30.0%	22.0%	43.3%
Emerging markets	10.5%	16.0%	13.0%	25.0%	9.0%	9.0%	17.0%
Developed markets	37.5%	19.0%	12.0%	25.0%	21.0%	13.0%	26.3%
Fixed income	10.1%	13.0%	40.0%	10.0%	21.5%	11.0%	15.0%
Developed markets bonds			15.0%		2.5%		4.1%
U.S. bonds	4.9%	6.0%	25.0%	10.0%	12.0%		10.9%
International bonds	3.6%						
Emerging markets bonds	1.6%	7.0%			7.0%		
Other	0.0%	15.0%	9.0%	6.0%	10.0%	16.0%	12.8%
Real estate		15.0%	9.0%	6.0%	5.0%		12.8%
Currencies						2.0%	
Gold & precious metals					5.0%		
Commodities						14.0%	
Cash					8.5%	4.0%	

Asset Allocation Models for a 27-Year-Old Investing for Retirement, September 2015

Source: Cerulli Associates

Note: Columns may not total to 100% due to rounding.

These examples highlight the importance of firms 1) understanding the methodological approaches embedded in the algorithms they use, including the assumptions underlying the potential scenarios on expected returns, and the biases or preferences that exist in those approaches and 2) assessing whether these methodological approaches reflect a firm's desired approach. These considerations apply both to the internal development of digital advice tools and third-party digital advice tools that firms acquire or private-label.

A look at two other areas of digital investment advice—customer risk tolerance assessment and portfolio analysis—reinforces the need for broker-dealers to establish and implement effective governance and supervision of their digital investment advice tools. FINRA reviewed several tools designed to help financial professionals understand investors' risk tolerance. In some cases, these tools also analyze the alignment of investors' portfolios with their risk tolerance and propose conforming changes to bring the portfolio into alignment. These tools vary considerably in approach to these tasks. (*See Observations on Practices* beginning on page 6 for a discussion of some of these approaches.) Good governance involves understanding if the approach to assessing customer risk tolerance is consistent with the firm's approach.

FINRA also reviewed tools to help financial professionals and their clients understand the impact of potential shocks to clients' portfolios, for example from an oil price fall, a global recession or a geo-political crisis. Careful governance would include understanding the analytic approaches that are used in these tools, including the assumptions that are made, about the impact of the shock events on the correlations in various asset price movements, among other things.

Developing an understanding of the algorithms a tool uses would also include understanding the circumstances in which their use may be inappropriate. For example, applying a tax-loss harvesting algorithm to one account of a married client where both spouses have multiple investment accounts may be detrimental. Without a full view of the couple's portfolio, the algorithm may generate unusable realized losses.

Principles and Effective Practices: Governance and Supervision of Algorithms

Digital investment advice tools are dependent on the data and algorithms that produce the tools' output. Therefore, an effective governance and supervisory framework can be important to ensuring that the resulting advice is consistent with the securities laws and FINRA rules. Such a framework could include:

- **Initial reviews**
  - assessing whether the methodology a tool uses, including any related assumptions, is well-suited to the task;
  - understanding the data inputs that will be used; and
  - testing the output to assess whether it conforms with a firm's expectations.
- **Ongoing reviews**
  - assessing whether the models a tool uses remain appropriate as market and other conditions evolve;
  - testing the output of the tool on a regular basis to ensure that it is performing as intended; and
  - identifying individuals who are responsible for supervising the tool.

FINRA reinforces that a registered representative using a digital advice tool to help develop a recommendation must comply with requirements of the suitability rule and cannot rely on the tool as a substitute for the requisite knowledge about the securities or customer necessary to make a suitable recommendation.

Broker-dealers are required to supervise the types of business in which they engage. As a component of this supervision, broker-dealers should consider the nature of the advice provided, and to the extent this advice derives from digital investment advice tools, review of these tools would be useful.

In addition to the effective practices discussed above, firms should be able to address such other questions as: 1) Are the methodologies tested by independent third parties? 2) Can the firm explain to regulators how the tool works and how it complies with regulatory requirements? 3) Is there exception reporting to identify situations where a tool's output deviates from what might be expected and, if so, what are the parameters that trigger such reporting?

In the context of a financial professional-facing system, the following questions are also relevant: 1) What training or testing does the firm require before a financial professional may use the tool? 2) What discretion does the financial professional have regarding testing different scenarios and assumptions? 3) Does the firm review financial professionals' recommendations that are inconsistent with the tool's output?

Observations on Practices

Based on FINRA's observations,[10] a number of entities use some form of an investment policy committee to 1) oversee the development and implementation of algorithms; 2) participate in the due diligence on third-party tools; or 3) evaluate scenarios used in firms' portfolio analysis tools. Depending on the entity, this group may be part of the broker-dealer or an affiliated entity.

For example, one firm allows registered representatives to use financial professional-facing digital advice tools, but requires all such tools to undergo an in-depth vetting and approval process. The result is that the firm permits most registered representatives to use only two firm-approved digital advice tools. The approval process for these tools includes a rigorous review by both compliance and technology staff. This review covers internal testing and vendor testing of the software to ensure that elements such as questionnaire scoring and results perform as expected. Also, these tools are incorporated into the firm's technology architecture and are protected by requirements for user entitlements and vetted to function within the firm's internal browser as added protection from cyberattacks. The tools are tested daily as part of the firm's "ready for business" testing.[11]

While some firms prohibit registered representatives from using digital investment advice tools without the firm's prior review and approval, others do not. We observed a firm that, in addition to allowing registered representatives to use certain pre-approved tools, also allows registered representatives to add tools that are not reviewed by the firm. The absence of a process to review such tools raises concerns about a firm's ability to adequately supervise the activities of registered representatives who use these tools, and is not consistent with the effective governance and supervision practices described above.

Client Portfolio Construction and Monitoring, and Conflicts of Interest

In addition to their role with respect to algorithms, firms should also establish governance and supervision structures and processes for the portfolios digital investment tools may present to users. Many of these tools match investors to a pre-packaged portfolio of securities based on their profile, *i.e.*, investors with a conservative profile are placed in a conservative investment portfolio and investors with an aggressive profile are placed in an aggressive portfolio. Among the firms FINRA reviewed, most establish between five and eight investor profiles, although some firms have significantly more. In this context, the decision about the characteristics that make a portfolio suitable for a given investor profile is extremely important. (We discuss this in the *Investor Profiling* section beginning on page 8.)

The construction of portfolios may raise concerns about conflicts of interest. In the context of retail brokerage services, two categories of conflicts are particularly relevant to digital investment advice: employee vs. client and firm vs. client conflicts.[12] Purely digital client-facing tools eliminate the first of these conflicts because financial professionals are not involved in the advice process. Hybrid digital platforms—those that include a role for a financial professional in providing advice—may face these conflicts, depending on the incentive structure for the financial professional. Firm vs. client conflicts, however, may remain present for both financial professional- and client-facing digital advice tools, for example if a firm offers products or services from an affiliate or receives payments or other benefits from providers of the products or services.

Principles and Effective Practices:
Governance and Supervision of Portfolios and Conflicts of Interest

An effective practice for firms is to establish governance and supervisory mechanisms for the portfolios that a firm's digital investment advice tool may propose. This mechanism would:

- determine the characteristics—*e.g.*, return, diversification, credit risk and liquidity risk—of a portfolio for a given investor profile;
- establish criteria for including securities in the firm's portfolios (these can include, for example, fees, index tracking error, liquidity risk and credit risk);
- select the securities that are appropriate for each portfolio (or if this is done by an algorithm, oversee the development and implementation of that algorithm as discussed above);
- monitor pre-packaged portfolios to assess whether their performance and risk characteristics, such as volatility, are appropriate for the type of investors to which they are offered; and
- identify and mitigate conflicts of interest that may result from including particular securities in a portfolio.

The review mechanism should include staff who are independent of the business, and who can advise on both overall portfolio investment strategy and the selection of individual securities.

Observations on Practices

As with the oversight of algorithms, the broker-dealers and other firms with which FINRA spoke typically use an investment policy committee, or equivalent body, to construct and review both the customer profiles and pre-packaged portfolios that may be offered to clients through digital investment advice tools. In some cases, the members of the committee sit in an affiliated legal entity while in others they sit within the entity. Many client-facing digital advice tools use Exchange-Traded Funds (ETFs) in creating their portfolios, and common criteria for their selection include cost, index tracking error, liquidity and bid-ask spreads.

Approaches to managing conflicts of interest that arise from security selection vary. Some financial services firms offering client-facing digital advice tools seek to avoid conflicts by not offering proprietary or affiliated funds or funds that provide revenue-sharing payments. Others follow a vet and disclose approach. Some of the principles that underlie FINRA Rule 2214 are applicable to conflicts that may arise in connection with a digital investment advice tool. Specifically, broker-dealers should disclose if the digital advice tool favors certain securities and, if so, explain the reason for the selectivity and state, if applicable, that other investments not considered may have characteristics, such as cost structure, similar or superior to those being analyzed.

Investor Profiling

Understanding a customer's investment objectives and the specific facts and circumstances of the customer's finances—developing an investor profile—is essential to providing sound investment advice. FINRA believes that core principles regarding customer profiling apply regardless of whether that advice comes from a financial professional or an algorithm.

Principles and Effective Practices: Customer Profiling

Customer profiling functionality is a critical component of digital advice tools because it drives recommendations to customers. Effective practices for customer profiling include:

- identifying the key elements of information necessary to profile a customer accurately;[13]
- assessing both a customers' risk capacity and risk willingness;[14]
- resolving contradictory or inconsistent responses in a customer profiling questionnaire;
- assessing whether investing (as opposed to saving or paying off debt) is appropriate for an individual;
- contacting customers periodically to determine if their profile has changed; and
- establishing appropriate governance and supervisory mechanisms for the customer profiling tool (addressed in the *Governance and Supervision* section beginning on page 3).

Customer Profiling Information Requirements

A key question in developing a customer profile is: What information is necessary to build a customer profile with sufficient information to make a sound investment recommendation? FINRA has defined the necessary minimum body of information that broker-dealers are required to collect in its know your customer and suitability rules. FINRA Rule 2090 (Know Your Customer) requires broker-dealers to use reasonable diligence to know the essential facts concerning a customer at account opening and thereafter. When making a recommendation, FINRA Rule 2111 (Suitability) requires a broker-dealer to use reasonable diligence to obtain and analyze a customer's investment profile, which includes, but is not limited to, "the customer's age, other investments, financial situation and needs, tax status, investment objectives, investment experience, investment time horizon, liquidity needs, risk tolerance, and any other information the customer may disclose to the member or associated person in connection with such recommendation." The suitability rule also notes that "the level of importance of each factor may vary depending on the facts and circumstances of the particular case."

As a general matter, the financial professional-facing tools FINRA observed could be used to gather a broad range of information about a customer. Some tools enable the financial professional to include information about a customer's overall portfolio rather than a single account, information about a spouse's account, retirement income—*e.g.*, Social Security and pension—and more detailed information about a client's financial condition, *e.g.*, about expenses. Most fundamentally, though, financial professionals can ask the client questions to gather supplementary information and develop a nuanced understanding of the client's needs. The effectiveness is, of course, driven significantly by the skill of the financial professional.

By contrast, client-facing digital advice tools rely on a discrete set of questions to develop a customer profile. The tools FINRA reviewed seek answers to between four and twelve questions, generally falling into five broad categories: personal information, financial information, investment objective, time horizon and risk tolerance. (*See* Appendix for a sample of questions three client-facing digital advisers asked at the time of FINRA's review.)

Customer-specific Suitability in a Digital Investment Advice Context

There are several areas of concern regarding digital advice tools, including whether they are designed to 1) collect and sufficiently analyze all of the required information about customers to make a suitability determination; 2) resolve conflicting responses to customer profile questionnaires; and 3) match customers' investment profiles to suitable securities or investment strategies. While many of these concerns can be resolved through interaction with a financial professional, the following questions may help assess whether a tool's output meets the customer-specific suitability obligation:

- Does the tool seek to obtain all of the required investment profile factors?
- If not, has the firm established a reasonable basis to believe that the particular factor is not necessary?
- How does the tool handle conflicting responses to customer profile questions?
- What are the criteria, assumptions and limitations for determining that a security or investment strategy is suitable for a customer?
- Does the tool favor any particular securities and, if yes, what is the basis for such treatment?
- Does the tool consider concentration levels and, if so, at what levels (*e.g.*, particular securities, class of securities, industry sector)?

Assessing Risk Tolerance

Risk tolerance is an important consideration in developing a customer profile and an investment recommendation. Risk tolerance can be considered along at least two dimensions: risk capacity and risk willingness. FINRA-regulated broker-dealers are obligated to consider both in assessing a customer's risk tolerance.[15] Risk capacity measures an investor's ability to take risk or absorb loss. This can be a function of an investor's time horizon, liquidity needs, investment objectives and financial situation. For example, a 25-year-old customer opening an account for the purpose of retirement likely has a greater risk capacity than a 25-year-old investing to finance graduate school education in three years.

Separately, a customer's risk willingness measures the customer's attitude towards risk. For example, a customer who is willing to absorb a potential 20 percent loss over one year in return for a higher upside potential has a higher risk willingness than a customer focused on principal protection. Problems can arise when risk willingness exceeds risk capacity.

Observations on Practices

FINRA observed firms taking a wide range of approaches to assessing a customer's risk tolerance. We focus here on two approaches: 1) those that seek to measure risk willingness and 2) those that measure risk in a portfolio in relation to the investor's risk tolerance.

There are a variety of approaches to assessing an investor's risk willingness. At the most basic level, some firms ask investors to self-assess by selecting from pre-set ratings, typically ranging from "conservative" to "aggressive."

Some approaches to assess risk willingness are scenario based and may draw on an investor's actual experience. For example, one client-facing digital advice tool asks the following questions: "Have you ever lost 20% or more of your investments in one year?" (Yes/No) followed by, for a yes answer, "In the year I lost 20% of my investments, I: a) sold everything; b) sold some; c) did nothing; d) reallocated my investments; or e) bought more."

Other approaches ask the investor to respond to hypothetical questions. One digital investment advice tool presents investors with questions regarding the amount of money they would be willing to risk to achieve a certain gain. Investors can use a slider bar to adjust the potential loss and gain to the level they are comfortable with. A different risk assessment tool asks the user to select a mix of two securities along a hypothetical budget line. The tool asks the user to make these selections multiple times for different budget lines and then aggregates the users' responses to assess various attributes of the user's risk tolerance.

Some of the vendors that offer risk tolerance assessment tools combine them with portfolio analysis tools. One vendor's tool, for example, evaluates the alignment between a customer's risk tolerance and the securities holdings in their portfolio.

Still other vendors offer tools that allow financial professionals to select from a variety of scenarios to perform "what if" risk analysis on their clients' accounts. Examples of these "what if" scenarios include emerging markets experiencing a hard landing, the Chinese economy slowing down or the U.S. credit rating being downgraded.

Contradictory or Inconsistent Answers

In the course of answering customer profiling questions, a customer may provide contradictory responses, which firms should seek to reconcile. This can be done through discussions with the customer or, in a purely digital environment, by making a customer aware of contradictory responses and asking additional questions to resolve the inconsistency.

FINRA observed firms that averaged contradictory responses or that used the more conservative of the contradictory responses. Averaging is a poor practice, as it can result in a customer being placed in a portfolio that exceeds his or her risk tolerance. If a firm does not reconcile the customer response, taking the more conservative response is a better approach than averaging because it reduces the chance of unacceptable losses. However, even with this approach, the customer could end up with a portfolio that does not reflect their desired risk.

Invest, Save or Pay Off Debt?

A threshold question for individuals considering opening an investment account is whether investing is an appropriate step. In some cases, they may be better served by paying off debt or saving.

An effective practice is for firms to develop a sufficient understanding of a client's financial situation to make clients aware when investing may not be appropriate for them, and FINRA observed some firms that do this. One of those firms serves a mass market client base with investable assets ranging between \$5,000 and \$100,000. This firm asks potential clients about their monthly net income—*i.e.*, income after expenses—to help determine if investing is an appropriate option. Another firm serves a generally more affluent client base and uses questions about investor time horizon and risk tolerance to determine if a client's profile is too conservative to invest. In addition, while not directly addressing the question of whether an individual should be investing, a third firm's frequently asked questions urge customers to maintain sufficient savings to cover at least six months' worth of expenses.

Modifying Customer Profiles

FINRA-regulated broker-dealers are required to maintain essential information about their customers pursuant to FINRA Rule 2090. As firms develop their digital strategies, some may opt to allow customers to modify their profiles online. If investors frequently change their profile, an effective practice is for broker-dealers to contact the investor to understand why the investor is making these changes.

Appropriateness of Digital Advice[16]

An effective practice is for firms to ask questions that would determine if an individual's advice needs cannot adequately be met solely through a digital approach. For example, a purely digital tool might not have the capability to provide a client who wishes to manage multiple investment accounts and multiple investment objectives on an integrated basis. In those instances, the client could be referred to a financial professional as part of the advice process.

Rebalancing

Rebalancing an investment portfolio is necessary to maintain a target asset allocation over time. Rebalancing becomes necessary as the composition of an investment portfolio naturally drifts away from its intended target or when the target itself changes. Drift occurs when the constituent securities in a portfolio perform differently, which can lead to over or under weighting asset classes. This could arise, for example, through market volatility in a particular asset class or security.

Principles and Effective Practices: Rebalancing

Effective practices for automatic rebalancing include:

- explicitly establishing customer intent that the automatic rebalancing should occur;
- apprising the customer of the potential cost and tax implications of the rebalancing;
- disclosing to customers how the rebalancing works, including:
  - if the firm uses drift thresholds,[17] disclosing what the thresholds are and whether the thresholds vary by asset class;
  - if rebalancing is scheduled, disclosing whether rebalancing occurs monthly, quarterly or annually;
- developing policies and procedures that define how the tool will act in the event of a major market movement; and
- developing methods that minimize the tax impact of rebalancing.

One method to rebalance a portfolio uses customer cash flows. A digital advice tool may use multiple sources to rebalance a portfolio, including deposits, dividends, reinvestments or even withdrawals. Typically, a firm would use investment inflows and outflows to restore the target allocation of the investment portfolio; the firm uses customer contributions to purchase under-weighted asset classes and withdrawals from over-weighted asset classes. Generally, using dividends and reinvestments to rebalance a target allocation is effective when portfolio drift is minimal within an account since dividends and reinvestments would typically not be large relative to the size of the position.

In cases where cash inflows and outflows are insufficient to attain the target allocation, some digital advice tools may simply reallocate assets already within an account to achieve the targeted weightings. Reallocating assets invested in an account would typically involve the purchase and sale of assets, potentially exposing a customer to commissions and, in a taxable account, capital gains or losses.

The triggers for rebalancing vary among the client-facing tools FINRA reviewed. One firm uses a bright line threshold of 3 percent portfolio drift to initiate a rebalancing. Portfolio drift is monitored daily. By contrast, another firm's investment management committee determines the allowable drift on an *ad hoc* basis in response to market events. Similarly, two other firms monitor customer portfolios and periodically rebalance them as needed, but without stating specific drift parameters.

Depending on threshold limits and the frequency with which it conducts a rebalancing review, a digital tool could execute numerous rebalancing trades. The following questions may help assess rebalancing issues that could arise:

- Does the tool permit automatic rebalancing?
- What are the triggers for a portfolio rebalancing by the tool?
- How often does rebalancing occur?
- Does the rebalancing include the possibility of adding or removing a particular security, thereby requiring another customer-specific suitability analysis?
- Would the rebalancing result in excessive commissions or lead to adverse tax treatment?

Training

Training and education are crucial for individuals who use digital investment advice tools. Some of the financial professional-facing tools FINRA observed can deliver sophisticated analytics, but using them effectively and communicating with clients about their output is dependent on the financial professional understanding the assumptions that go into the analytics and the potential limitations on the results.

Principles and Effective Practices: Training

Effective practices include training financial professionals on:

- the permitted use of digital investment advice tools;
- the key assumptions and limitations of individual tools; and
- when use of a tool may not be appropriate for a client.

It is also an effective practice to assess the adequacy of any training by third-party vendors.

Observations on Firm Practices

Most firms require financial professionals to participate in a training program before they are permitted to use a digital investment advice tool. This training varies from tool-specific training to training embedded in a firm's standard suitability training. In addition, some firms offer *ad hoc* training at the request of a financial professional.

Third-party vendors of digital investment advice tools often play a role in training staff on their tools. The vendors with which FINRA spoke typically offer one-on-one introductory training sessions with financial professionals to ensure they understand how to use the tool and how to position the output for customers. Some vendors also offer live training events once or twice a week for financial professionals, for example, to learn more about the methodology that supports a tool. In addition, some vendors offer *ad hoc* or follow-up training, although sometimes this is available only on a paid basis.

Lessons for Investors

The use of digital investment advice tools adds nuances to the questions investors should ask and information investors should obtain and understand in opening and maintaining an investment account. We elaborate on some of those considerations here.

Sound investment advice rests on a robust understanding of an individual investor's particular needs and circumstances. Investors should evaluate whether their financial services firm gathers sufficient information and asks sufficient questions to understand their needs and risk tolerance, and whether these factors are reflected in the advice they receive. If an investor believes that relevant information is not being taken into consideration, the investor should raise this with the financial services firm before making investment decisions.

Investors should be aware that the advice they receive about allocating assets and building a portfolio depends significantly on the investment approach embodied in the algorithms and underlying assumptions used by a digital advice tool. To the degree possible, investors should familiarize themselves with the investment approach and key assumptions so that they understand how recommendations for securities and asset allocations are derived.

Since conflicts of interest may exist in the investment advice they receive, investors should evaluate whether those conflicts compromise the objectivity of that advice. Digital investment advice tools do not necessarily eliminate conflicts of interest. Conflicts could include, for example, commission payments and other incentives for a registered representative in a financial professional-facing context, and revenue sharing or sale of proprietary or affiliated products for a firm in a client-facing context.

As with any account, investors should understand the specific services they will receive and their cost. In this regard, investors should inquire about all costs associated with the services offered or provided, including costs generated from third parties, such as mutual fund management fees.

Since some accounts offer features such as rebalancing and tax-loss harvesting, investors should understand how these services will be performed. If an investor's account will be automatically rebalanced, investors should know whether this will occur based on a time schedule, *e.g.*, quarterly; based on a trigger such as portfolio drift, *e.g.*, if part of the account is more than five percent out of balance; or some other method. Investors should be aware of what safeguards, if any, exist if there are sudden, sharp market movements such as those that occurred during the May 2010 Flash Crash. Rebalancing may also generate expenses or tax liabilities, so investors should inquire into the financial consequences of this activity.

Conclusion

Digital investment advice tools will likely play an increasingly important role in wealth management, and investor protection should be a paramount objective as firms develop their digital investment advice capabilities. Firms need to establish and maintain an investor protection foundation that accounts for the considerations raised by digital investment advice. One key element of that foundation is understanding customer needs. Another is using tools with sound methodological groundings, and a third is understanding those tools' limitations. FINRA trusts that the effective practices outlined in this document will help firms advance investor protection objectives in their use of digital investment advice tools.

Appendix

Comparison of Customer Profiling Questions at Three Client-Facing Digital Advisers[18]

Digital Advice | **TOOL 1**	Digital Advice | **TOOL 2**	Digital Advice | **TOOL 3**
1. I'm saving in this account because • I want to prepare for retirement. • I'm saving for major upcoming expenses (education, health-bills, etc.). • I'm saving for something special (vacation, new car, etc.). • I need a rainy day fund for emergencies. • I am retired or want income for expenses. • I want to build long-term wealth.	**1. What are you looking for in a financial advisor?** • I'd like to create a diversified investment portfolio. • I'd like to save money on my taxes. • I'd like someone to completely manage my investments, so that I don't have to. • I'd like to match or beat the performance of the markets.	1. I am ____ years old and am Not Retired/Retired.
2. I have ____ understanding of stocks, bonds and ETFs. • no • some • good • extensive	**2. What is your current age?** • ____ years	2. My annual income is_____.

Digital Advice | **TOOL 1**	Digital Advice | **TOOL 2**	Digital Advice | **TOOL 3**
3. When I hear "risk" related to my finances, ____ • I worry I could be left with nothing. • I understand that it's an inherent part of the investing process. • I see opportunity for great returns. • I think of the thrill of investing.	**3. What is your annual pre-tax income?**	**3. I am not new/new to investing.**
4. Have you ever lost 20% or more of your investments in one year? • Yes • No	**4. Which of the following best describes your household?** • Single income, no dependents • Single income, at least one dependent • Dual income, no dependents • Dual income, at least one dependent • Retired or financially independent	**4. Select your first goal to begin:** • Safety Net • Retirement • General Investing
5. In the year I lost 20% of my investments, I ____ • sold everything. • sold some. • did nothing. • reallocated my investments. • bought more.	**5. What is the total value of your cash and liquid investments?**	

Digital Advice | **TOOL 1**	Digital Advice | **TOOL 2**	Digital Advice | **TOOL 3**
6. When it comes to making important financial decision ... • I try to avoid making decisions. • I reluctantly make decisions. • I confidently make decisions and don't look back.	**6. When deciding how to invest your money, which do you care about more?** • Maximizing gains • Minimizing losses • Both equally	
7. I am _____ years old.	**7. The global stock market is often volatile. If your entire investment portfolio lost 10% of its value in a month during a market decline, what would you do?** • Sell all of your investments • Sell some • Keep all • Buy more	
8. My initial investment is ______.		
9. One year from now I would be comfortable with my initial investment fluctuating between _____ and _____.		
10. I plan to save an additional _____ per month.		
11. I need the money starting in _____ years for _____ years or rest of life.		
12. Which account type would you like to open?		

Endnotes

1. Many FINRA-registered broker-dealers are also registered as investment advisers.

2. The Aite Group projects that global spending on digital wealth management initiatives will triple, rising from $4 billion in 2015 to $12 billion by 2019. *See* Aite Group, *Wealth Management Incumbents' Digital Strategies*, Sophie Louvel Schmitt; November 2015; p. 4.

3. Tax-loss harvesting is a method to reduce capital gains tax exposure by selling one or more securities that can generate tax losses to offset capital gains. Typically, securities that are sold are replaced with securities that provide similar market exposure.

4. There is no standard definition of the activities that a "robo advisor" performs, but the tools FINRA reviewed performed these activities.

5. The material in IM 2210-6 has been substantially incorporated in FINRA Rule 2214. FINRA conditioned the offering of these tools on a firm making certain specified disclosures. *See* FINRA Rule 2214.

6. Modern Portfolio Theory was introduced by Professor Harry Markowitz in a March 1952 *The Journal of Finance* article titled "Portfolio Selection."

7. *See* "Putting Robo Advisors to the Test," *The Wall Street Journal*, April 24, 2015.

8. These examples relate to client-facing tools, but the same type of disparities could occur in financial professional-facing tools.

9. Cerulli's analysis was completed in September 2015. Since then, firms may have changed their asset allocation models, added asset classes or subtracted asset classes. To make a side-by-side comparison, Cerulli grouped the investment vehicles recommended as closely as possible to the classes identified in the chart. For example, if the digital adviser uses a Real Estate Investment Trust (REIT) ETF, the percent allocated to that ETF will be represented in the Real Estate asset class. This does not mean other digital advisers do not have exposure to Real Estate: They may be obtaining their exposure through equity investment vehicles. Refer to *The Cerulli Report: Direct Firms and Digital Advice Providers* for a more detailed description of the methodology used to compare firms.

10. FINRA conducted its review in 2015. Firms' practices may have changed since that time.

11. Ready-for-business testing refers to testing the firm does each morning to ensure that its systems are operating correctly.

12. Firm vs. client and employee vs. client conflicts exist when the incentive structures for the firm or employee may compromise the objectivity of recommendations clients receive. For further discussion *see* FINRA's *Report on Conflicts of Interest*.

13. This is an obligation for broker-dealers pursuant to FINRA Rule 2111.

14. This is an obligation for broker-dealers pursuant to FINRA Rule 2111.

15. *See* FINRA Rule 2111 (Suitability) and FINRA *Regulatory Notice 11-25*, p. 4.

16. For a discussion about the application of a fiduciary standard to client-facing digital advice, *see* speech by SEC Commissioner Kara M. Stein, *Surfing the Wave: Technology, Innovation, and Competition*, Remarks at Harvard Law School's Fidelity Guest Lecture Series, November 9, 2015.

17. "Drift threshold" refers to the allowable divergence from an asset allocation. When the drift threshold is exceeded, the portfolio will be rebalanced to bring it back in line with the target asset allocation.

18. These questions may have changed since FINRA's review.

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Tab 7

Investor Alert: Automated Investment Tools

May 8, 2015

The SEC's Office of Investor Education and Advocacy (OIEA) and the Financial Industry Regulatory Authority, Inc. (FINRA) are issuing this alert to provide investors with a general overview of automated investment tools.

At the swipe of a fingertip on a mobile device or the click of a mouse on a desktop computer, investors can access a broad range of automated investment tools. These tools range from personal financial planning tools (such as online calculators) to portfolio selection or asset optimization services (such as services that provide recommendations on how to allocate your 401(k) or brokerage account) to online investment management programs (such as robo-advisors that select and manage investment portfolios).

Many financial professionals have used automated investment tools for decades to help customers build and manage their investment portfolios, and a growing number of these tools are now available directly to investors from a variety of sources. While automated investment tools may offer clear benefits—including low cost, ease of use, and broad access—it is important to understand their risks and limitations before using them. Investors should be wary of tools that promise better portfolio performance.

Automated Investment Tool Tips

Consider the following five tips before using any automated investment tool:

1. Understand any terms and conditions.

Review all relevant disclosures for an automated investment tool. Understand any terms and conditions, such as the fees and expenses associated with using the tool or with selling or purchasing investments. Find out how you can terminate any agreement or relationship, and how long it may take to cash out any investments if you decide to stop using the tool. If anything is unclear or you need additional information, directly contact the automated tool sponsor.

Ask an automated investment tool sponsor whether it receives any form of compensation for offering, recommending, or selling certain services or investments.

2. Consider the tool's limitations, including any key assumptions.

One type of automated tool called an investment analysis tool provided by registered securities firms and individuals must describe the criteria and methodology used, including the tool's limitations and key assumptions. Be aware that an automated tool may rely on assumptions that could be incorrect or do not apply to your individual situation. For example, an automated investment tool may be programmed to use economic assumptions that will not react to shifts in the market. If the automated tool assumes that interest rates will remain low but, instead, interest rates rise, the tool's output will be flawed.

In addition, an automated investment tool, like other investment programs, may be programmed to consider limited options. For example, an automated investment tool may only consider investments offered by an affiliated firm.

3. Recognize that the automated tool's output directly depends on what information it seeks from you and what information you provide.

Which questions the tool asks and how they are framed may limit or influence the information you provide, which in turn directly impacts the output that an automated investment tool generates. If any of the questions are unclear or you do not understand why the information is being sought, ask the tool sponsor. Be aware that a tool may ask questions that are over-generalized, ambiguous, misleading, or designed to fit you into the tool's predetermined options.

In addition, be very careful when inputting your answers or information. If you make a mistake, the resulting output may not be right for you.

4. Be aware that an automated tool's output may not be right for your financial needs or goals.

An automated investment tool may not assess all of your particular circumstances, such as your age, financial situation and needs, investment experience, other holdings, tax situation, willingness to risk losing your investment money for potentially higher investment returns, time horizon for investing, need for cash, and investment goals. Consequently, some tools may suggest investments (including asset-allocation models) that may not be right for you.

For example, an automated investment tool may estimate a time horizon for your investments based only on your age, but not take into account that you need some of your investment money back in a few years to buy a new home. In addition, automated tools typically do not take into account that your financial goals may change.

If the automated investment tool does not allow you to interact with an actual person, consider that you may lose the value that human judgment and oversight, or more personalized service, may add to the process.

5. Safeguard your personal information.

Be aware that an automated tool sponsor may be collecting your personal information for purposes unrelated to the tool. Understand when and with whom your personal information may be shared. If you have questions that are not answered in the tool's privacy policy, contact the tool's sponsor for more information.

Also, look out for phishing and other scams designed to trick you into revealing personal financial information. Unless you are accessing an account that you established, do not provide bank or brokerage account numbers, passwords, PINs, credit card information, Social Security numbers, or other personally identifiable information.

When using investment tools online, take these steps to protect your personal financial information:

- Do not provide payment information if the address bar of the website indicates that the web address begins with “http” (instead of “https”).
- Pick a “strong” password, keep it secure, and change it regularly.
- Password-protect mobile devices that are linked to investment tools or accounts.
- Avoid accessing investment tools or accounts on a shared computer or through an unsecure wireless connection.

For more online security tips, read Investor Bulletin: Protecting Your Online Brokerage Accounts from Fraud and “Phishing” and Other Online Identity Theft Scams: Don’t Take the Bait .

While automated investment tools are programmed to generate outputs based on preset options, it is up to you to decide whether and when to rely on these tools in making your investment decisions.

For More Information

Check the SEC’s Investment Adviser Public Disclosure (IAPD) database or FINRA’s BrokerCheck to research the background, including registration or license status and disciplinary history, of any individual or firm offering, recommending, or selling an investment.

Receive the latest Investor Alerts and Bulletins from OIEA by email or RSS feed. Visit Investor.gov, the SEC’s website for individual investors. Like OIEA on Facebook at www.facebook.com/secinvestoreducation. Follow OIEA on Twitter @SEC_Investor_Ed.

Ask a question or call the SEC at (800) 732-0330 (or 1-202-551-6551 from outside of the U.S.).

The Office of Investor Education and Advocacy has provided this information as a service to investors. It is neither a legal interpretation nor a statement of SEC policy. If you have questions concerning the meaning or application of a particular law or rule, please consult with an attorney who specializes in securities law.

Modified: May 8, 2015

Tab 8

POLICY STATEMENT

ROBO-ADVISERS AND STATE INVESTMENT ADVISER REGISTRATION

"Robo-advisers" have emerged in the investment advisory marketplace as a purported low-cost, low-hassle alternative to traditional investment advisers and broker-dealers, employing asset-allocation models and algorithms to invest client portfolios, typically in exchange-traded funds.[1] Robo-advisers market themselves to persons who might desire professional investment services without the need for human relationships or large account sizes. One well-known research firm has predicted that assets under management at robo-advisers will jump 2,500% by 2020, to $489 billion.[2]

The mandate of the Massachusetts Securities Division (the "Division") is investor protection. To serve this mandate, the Division is tasked with ensuring that all investment advisers meet the fiduciary obligations they assume when they provide investment advice for compensation. This policy statement is intended as guidance to robo-advisers seeking registration in the Commonwealth.[4]

As set out below, it is the position of the Division that fully automated robo-advisers, as currently structured, may be inherently unable to carry out the fiduciary obligations of a state-registered investment adviser.

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[1] Exchange-traded funds are themselves touted as a low-cost alternative to traditional investments such as stocks, bonds, and mutual funds.

[2] CERULLI ASSOCIATES, *Retail Direct Firms and Digital Advice Providers 2015: Addressing Millennials, the Mass Market, and Robo Advice* (2015).

[4] Persons who engage in the business of providing investment advice for compensation are generally considered "investment advisers" under the Massachusetts Uniform Securities Act and the Investment Advisers Act of 1940 (hereinafter "Advisers Act"). MASS. GEN. LAWS ch. 110A, § 401(m) (2011); 15 U.S.C. § 80b-2(a)(11) (2015). Providers of investment advice to Massachusetts clients must register with and be regulated by the Commonwealth of Massachusetts or the U.S. Securities and Exchange Commission (hereinafter "SEC") unless otherwise exempt or excluded. Most of the robo-advisers popular today are registered with the SEC either as large investment advisers, as internet advisers, or as multi-state advisers. Advisers with regulatory assets under management of $100 million or more are required to register with the SEC. Advisers operating exclusively over interactive websites and advisers operating under the laws of fifteen or more states can opt to register with the SEC. Exemptions from Prohibition on Commission Registration, 17 C.F.R. § 275.203A-2 (2011). This policy statement is not intended to apply to federally registered investment advisers.

The Duties of an Investment Adviser

As the term implies, "robo-advisers" are investment advisers. All investment advisers, including robo-advisers, owe the fiduciary duties of loyalty and care to their current and prospective investment advisory clients.[6] These duties originate generally in judicial interpretations of the Advisers Act, the common law, and Blue Sky laws,[7] and are central to the investment advisory profession, as they embody the principle that a professional who earns a living by managing other people's money must do so with care and loyalty to those people:

> An adviser's relationship with its clients is fundamentally one of "trust and confidence." This flows from the fact that clients consent to having the adviser act on their behalf, making the clients vulnerable to the adviser. The law provides some measure of protection for clients in light of that vulnerability by imposing on advisers fiduciary duties owed to their clients.[8]

Traditional Investment Advice

A traditional[9] investment adviser representative will usually:

1) Meet with and gather information from clients as part of a due diligence process,

2) provide personalized investment advice to clients with an eye to the information gathered,

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[6] SEC Staff, *Study on Investment Advisers and Broker-Dealers, As Required by Section 913 of the Dodd-Frank Wall Street Reform and Consumer Protection Act*, at 36 (January 2011) ("Under the Advisers Act, an adviser is a fiduciary. This fiduciary standard applies to the investment adviser's entire relationship with its clients and prospective clients, imposes upon investment advisers the "affirmative duty of 'utmost good faith, and full and fair disclosure of all material facts,' as well as an affirmative obligation to 'employ reasonable care to avoid misleading'" their clients and prospective clients." (quoting SEC v. Capital Gains Research Bureau, Inc., 375 U.S. 180, 191-192 (1962)).

[7] *Id.* at 1-4.

[8] Lorna A. Schnase, *An Investment Adviser's Fiduciary Duty*, at 1 (Aug. 1, 2010), http://www.thefiduciaryinstitute.org/wp-content/uploads/2013/02/lornaschnaseFiduciary-Duty-Paper.pdf.

[9] There is nothing in the law that precludes internet-based advisers from complying with the law in the way that follows. Likewise, there is nothing in the law guaranteeing that human contact will discharge an adviser's fiduciary duty.

3) use that information to make appropriate[10] investment decisions on clients' behalf, and

4) act in the best interests of his or her clients, unless otherwise disclosed.

Perhaps the primary reason that individual investors hire investment professionals is to gain access to professionally personalized investment advice. A client may understand his or her own financial situation and objectives, but may lack the time or expertise to invest accordingly, and so hires a professional to do so for a fee or other compensation. The professional investment adviser agrees to use his or her expertise to manage the client's investments in accordance with the client's financial situation and objectives, and takes on a fiduciary duty to manage the client's investments carefully and loyally. If the professional fails to discharge this duty, he or she may be liable to the client and to securities regulators.

Fully Automated Investment Advice

The term "robo-adviser" has been applied to advisers that are fully automated and to advisers that utilize asset allocation algorithms in combination with human services. The concerns raised in this policy statement apply primarily to fully automated robo-advisers, but each adviser must be evaluated on a case-by-case basis. Fully automated robo-advisers usually:

1) do not meet with or conduct significant (or any) due diligence on a client,

2) provide investment advice that is minimally personalized,

3) may fail to meet the high standard of care that is imposed on the appropriateness of investment advisers' investment decision-making,[11] and

4) specifically decline the obligation to act in a client's best interests.

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[10] Robert E. Plaze, Strook & Strook & Lavan LLP, *Regulation of Investment Advisers by the U.S. Securities and Exchange Commission*, at 14 (February 2006), http://www.stroock.com/siteFiles/PAFile120.pdf (providing that the SEC, for example, has stated that "[a]dvisers owe their clients a duty to provide only suitable investment advice. This duty generally requires an adviser to make a reasonable inquiry into the client's financial situation, investment experience and investment objectives, and to make a reasonable determination that the advice is suitable in light of the client's situation, experience and objectives.") The Division expects investment advisers to provide advice under standards at least as high as these.

[11] Melanie L. Fein, *Robo-Advisers: A Closer Look*, 7 Banking & Insurance eJournal 174 (2015).

Currently, robo-advisers and traditional advisers shoulder the same fiduciary duty.[12] However, robo-advisers tend to differ from traditional investment advisers in the services that they actually provide. As a result, commentators[13] and regulators[14] have questioned whether and to what extent robo-advisers can be investment advisers and therefore fiduciaries. The SEC and the Financial Industry Regulatory Authority have jointly cautioned investors that:

> an automated tool may rely on assumptions that could be incorrect or do not apply to your individual situation … An automated investment tool may not assess all of your particular circumstances, such as your age, financial situation and needs, investment experience, other holdings, tax situation, willingness to risk losing your investment money for potentially higher investment returns, time horizon for investing, need for cash, and investment goals. Consequently, some tools may suggest investments (including asset-allocation models) that may not be right for you.[15]

Fully Automated Robo-Advisers – Due Diligence

Robo-advisers in the Commonwealth cannot fully satisfy their fiduciary obligations if they fail to perform the initial and ongoing due diligence necessary to act in the best interests of their clients. Specifically, robo-advisers' failure to conduct due diligence, as well as robo-advisers' depersonalized structure, may render them unable to provide adequately personalized investment advice and make appropriate investment decisions.

Robo-advisers provide any internet user with access to an automated investment tool that allocates the user's liquid resources, commonly among exchange-traded funds, using only the answers that the user provides in response

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[12] The duty borne by a robo-adviser may change in the future based on the manner in which automated investment advice is regulated.

[13] Blaine F. Aikin, *Duty of Due Care and Robo-Advisers*, INVESTMENT NEWS, Oct. 11, 2015, http://www.investmentnews.com/article/20151011/FREE/310119994/duty-of-due-care-and-robo-advisers; Editorial, *Can robo-advisers be fiduciaries?*, March 20, 2016, http://www.investmentnews.com/article/20160320/FREE/303209998/can-robo-advisers-be-fiduciaries.

[14] Kara M. Stein, Commissioner, SEC, Remarks at Harvard Law School's Fidelity Guest Lecture Series: Surfing the Wave: Technology, Innovation, and Competition (Nov. 9, 2015).

[15] SEC's Office of Investor Education and Advocacy and the Financial Industry Regulatory Authority, Inc., *Investor Alert: Automated Investment Tools*, May 8, 2015, https://www.sec.gov/oiea/investor-alerts-bulletins/autolistingtoolshtm.html.

to a brief questionnaire completed at the initial stage of the onboarding process.[16] In this way, robo-advisers gather some information from prospective clients, but may not gather sufficient information to enable them to discharge their fiduciary duties by providing personalized and appropriate investment advice.

For example, robo-advisers typically do not conduct due diligence on assets held outside of a client's account or inquire about this information from clients. Rather, the robo-advisers will require the client to agree that he or she is responsible for any assets outside the account. Robo-advisers attempt to disclaim this due diligence duty by stating that they do not provide financial planning or wealth management services.[18] However, assets held outside of a client's account directly impact the client's total financial picture and, accordingly, the investment adviser's ability to personalize advice and make appropriate investment decisions.

Similarly, robo-advisers often leave it to the client to provide essential updates about changes to the client's financial situation, needs, and objectives.[19] Robo-advisers often disclaim any ongoing duty to inquire about these questions in the agreements that clients are required to sign, and frequently decline to conduct periodic reviews of client accounts. Changes to a client's financial or personal situation could broadly affect the appropriateness of investment decisions made by the adviser and the extent to which decisions are personalized.

In addition, since robo-advisers' information-gathering process commonly consists in a brief online questionnaire, there may be regulatory concerns that the adviser is unable to determine independently the identity of the user (at the outset or at any time after), whether that user is a senior citizen, a person with diminished capacity, a child, or otherwise; nor do robo-advisers otherwise take any steps to verify that the information provided by clients is accurate – instead relying on the information initially provided by the client as true and valid. This practice also raises serious concerns about a robo-adviser's ability to spot clients with diminished capacity or clients who may not understand their financial picture sufficiently to provide accurate answers to the questions asked.

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[16] *See* Fein, *supra* note 11 (noting that one commentator refers to this questionnaire as a "personality quiz.")

[18] When asked by the Enforcement Section of the Division whether they provide investment advice in light of a client's total financial picture, certain robo-advisers responded that they do not because they do not provide "financial planning."

[19] Traditional investment advisers sometimes contractually require the client to provide such essential updates. This practice, standing alone, is not necessarily a violation of fiduciary duty.

Nor do robo-advisers typically take any steps to determine that their services are appropriate for a given client. For example, there may be a client with specific tax, distribution, and income needs for whom a portfolio of various exchange-traded funds may not be appropriate. The robo-adviser leaves it to the client to determine that the automated investment service is appropriate for his or her needs. It is up to the client to "self-select" out of the service.

In part because robo-advisers may not provide the personalized and appropriate investment advice that is a hallmark of traditional investment advisory services, commentators have questioned whether robo-advisers should be thought of as broker-dealers,[20]or could be accurately likened to mutual funds.[21]

Fully Automated Robo-Advisers – Fiduciary Duty and Disclaimers

Robo-advisers attempt to avoid the issues raised by the structure of their automated investment services, discussed above, by specifically disclaiming various duties in customer agreements and elsewhere. These disclaimers are typically embedded in a lengthy electronic client agreement that must be "signed" by the client before services can be provided. But robo-advisers cannot act as fiduciaries as required under the law in the Commonwealth while, at the same time, disavowing their central fiduciary obligations.

For example, one client agreement of a popular robo-adviser states that that the client is responsible for determining that investments are in the best interests of his or her financial needs, whereas an investor meeting with a traditional human adviser would assume that the adviser would make, or help to make, that determination.

Another agreement requires the client to agree that he or she understands the robo-adviser's sole obligation is to manage the client's account in accordance with the plan the client opts into, and, in addition, that the client has not engaged the robo-adviser to provide any individual financial planning services. However, an investor meeting with a traditional human adviser would likely assume that the adviser would be obligated to manage the client's account(s) in accordance with his or her stated and discussed investment needs and wants. Moreover, such investor would likely assume that the adviser would make reasonable efforts to

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[20] *Can Robo-Advisors Really Be Fiduciaries?*, THINKADVISOR, Nov. 30, 2015, http://www.thinkadvisor.com/2015/11/30/can-robo-advisors-really-be-fiduciaries.

[21] *See* Fein, *supra* note 11 (observing that a mutual fund, like the automated tools offered by robo-advisers, offers clients the ability to diversify their investment resources by participating in a given asset-allocation).

become aware of the investor's financial planning needs, to the extent that such needs are relevant to the adviser's investment decision-making.

Still other client agreements require the client to agree that he or she has not engaged the robo-adviser to provide any services beyond the automated investment tool that the client is responsible for updating and understanding. As noted, an investor would have historically been safe to assume that an investment adviser would not disclaim any and all knowledge of the investor's needs for financial or other services beyond the information directly input into a client questionnaire.

Many robo-advisory agreements go so far as to require indemnification by the client for any account losses. Such indemnification agreements have not been commonplace in human advisory relationships and may come as a surprise to current robo-advisory clients.

Fully Automated Robo-Advisers – Effectiveness of Disclaimers

Registered robo-advisers hold themselves out to the public as fiduciaries, while elsewhere disavowing their fiduciary obligations in written disclaimers. These disclaimers, of the investment adviser's duties to conduct due diligence, render personalized investment advice, and make investment decisions appropriate for the particular client, turn the fiduciary relationship on its head, and the robo-adviser's corresponding failure to satisfy its fiduciary obligations strikes at the core of its advisory relationship with the client. For state-registered investment advisers, this failure cannot be cured by written disclaimers in client agreements.

To be clear, federal law does allow federally registered investment advisers to alter their default fiduciary relationships with their clients. For example, the Advisers Act and the SEC permit registered investment advisers to disclaim aspects of their default fiduciary duty of loyalty, so long as the adviser obtains effective consent from the client.[22] Ordinarily, investment advisers cannot maintain an undisclosed conflict of interest while charging a client for investment advice. However, many large investment advisers are structured in ways that create such conflicts. Instead of avoiding these conflicts, the adviser discloses them to its clients, and, at least in theory, the client gives informed consent to the conflict.

Many fully automated robo-advisers appear implicitly to take the position that the fiduciary duty of care (including the requirement to provide personalized

[22] *See, e.g.*, Advisers Act, 17 C.F.R. § 275.206(3).

and appropriate investment advice) can be significantly disclaimed with the written consent of the client.[23] However, a complete and blanket disclaimer of any fiduciary relationship would be ineffective. For the same reason, while the nature of a client's contractual relationship with an adviser can, to an extent, be narrowed by written agreement, the Division will not permit the core fiduciary relationship to be eliminated.

Fully Automated Robo-Advisers – State Registration

It is the position of the Division 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. Until regulators have determined the proper regulatory framework for automated investment advice, robo-advisers seeking state registration in the Commonwealth will be evaluated under the foregoing guidance on a case-by-case basis.

Updated: April 1, 2016.

[23] This legal question concerns the nature of the investment advisory fiduciary relationship, and is not governed by statute or rule.

Tab 9

POLICY STATEMENT

STATE-REGISTERED INVESTMENT ADVISERS' USE OF THIRD-PARTY ROBO-ADVISERS

Robo-advisers have experienced a significant growth in popularity in the financial services industry, based in large part upon their perceived simplicity, their ease of accessibility, and their ability to service investment advisory clients who may not have sufficient assets to establish a relationship with a traditional investment adviser. The Massachusetts Securities Division (the "Division") recently issued a policy statement outlining the way in which it will evaluate robo-advisers seeking to register as investment advisers with the Commonwealth of Massachusetts.[1] In the course of conducting examinations and reviewing applications for registration for investment advisers, the Division continues to monitor these developing trends. In doing so, the Division has noted an increasing number of state-registered investment advisers that work in conjunction with third-party robo-advisers to provide concurrent investment advisory services to their clients. In light of these industry developments, the Division issues this Regulatory Guidance to provide its state-registered investment advisers who establish concurrent or sub-advisory relationships with third-party robo-advisors with guidelines on how to best comply with the Massachusetts Uniform Securities Act and meet the fiduciary duties owed to their clients.

I. Disclosure under the Massachusetts Uniform Securities Act

To the extent that a state-registered investment adviser utilizes a third-party robo-adviser's services to provide asset-allocation and trading functions to clients, the state-registered investment adviser, at a minimum:

- Must clearly identify any third-party robo-advisers with which it contracts; must use phraseology that clearly indicates that the third party is a robo-adviser or otherwise utilizes algorithms or equivalent methods in the course of providing automated portfolio management services; and must detail the services provided by each third-party robo-adviser;
- If applicable, must inform clients that investment advisory services could be obtained directly from the third-party robo-adviser;
- Must detail the ways in which it provides value to the client for its fees, in light of the fiduciary duty it owes to the client;
- Must detail the services that it cannot provide to the client, in light of the fiduciary duty it owes to the client;
- If applicable, must clarify that the third-party robo-adviser may limit the investment products available to the client (such as exchange-traded funds, for example); and
- Must use unique, distinguishable, and plain-English language to describe its and the third-party robo-adviser's services, whether drafted by the state-registered investment adviser or by a compliance consultant.

[1] *See* Policy Statement: Robo-Advisers and State Investment Adviser Registration, issued April 1, 2016 (accessible at http://www.sec.state.ma.us/sct/sctpdf/Policy-Statement--Robo-Advisers-and-State-Investment-Adviser-Registration.pdf).

Identification of Third-Party Robo-Advisers and Explanation of their Services

The state-registered investment adviser must clearly identify the robo-advisers with which it contracts to allow them to provide concurrent investment advisory services to the client. In doing so, the state-registered investment adviser should identify the entity as a robo-adviser or should use other phraseology that clearly indicates that the third party is an entity that utilizes algorithms or equivalent methods in the course of providing automated portfolio management services. This identification should also include the factors considered by the state-registered investment adviser in choosing to affiliate with the robo-adviser, which should include, but are not limited to, the following:

- An explanation as to why the state-registered investment adviser chose to affiliate with the specific robo-adviser as opposed to other third-party affiliations it may have considered;
- Any conflicts that may result from the state-registered investment adviser's affiliation with the robo-adviser;
- Any additional fees that may be incurred by the client due to the state-registered investment adviser's affiliation with the robo-adviser;
- The benefits the state-registered investment adviser believes its clients will receive from its partnership with the robo-adviser; and
- Any disadvantages the state-registered investment adviser believes its clients may incur because of its partnership with the robo-adviser.

Furthermore, the state-registered investment adviser should provide a detailed explanation as to the services provided by the third-party robo-adviser. The state-registered investment adviser should make the client fully aware of the existence of such affiliation: in no situation should the client learn of the arrangement only after entering into an investment management agreement with the state-registered investment adviser.

Notification that Clients Could Receive Services Directly from Third-Party Robo-Adviser

If applicable, the state-registered investment adviser must also inform clients that they would be able to receive investment advisory services directly from the third-party robo-adviser without using any of the services provided by, or paying any additional fees to, the state-registered investment adviser.

Description of Value Provided to Client by State-Registered Investment Adviser

In light of the state-registered investment adviser's fiduciary duty to its clients, the state-registered investment adviser must clarify the ways in which it provides value to the client for the fees it collects over and above the value provided by the third-party robo-adviser. For example, the state-registered investment adviser may provide value to the advisory relationship by working with the client to establish financial goals and practices; by providing comprehensive and ongoing financial planning and investment monitoring services for the client; by continuously re-evaluating the client's financial portfolio; and/or by other methods that the state-registered investment adviser must clearly explain. In outlining these services, the state-registered investment adviser should distinguish the services it provides from those offered by the third-party robo-adviser in order to demonstrate the value of the state-registered investment adviser's services.

Identification of Services State-Registered Investment Adviser Cannot Provide to Client

When a state-registered investment adviser utilizes a third-party robo-adviser's services, in light of its fiduciary duty to its clients, it must specifically identify the services it cannot provide to the client. The state-registered investment adviser must make a clear distinction to the client in explaining the services that it offers to the client, and the services offered to the client by third-party robo-advisers with which it may be affiliated or have a contractual arrangement. Depending on the specifics of that relationship, the state-registered investment adviser needs to identify the limitations in its use of the third-party robo-adviser's platform or as entity that does not provide asset-allocation and trading services to the client. Therefore, for instance, if the state-registered investment adviser will have no ability to access, select, change or customize the portfolio structure or investment products at the third-party robo-adviser, it must also make that clear to the client through appropriate disclosure.

Limitation of Available Investment Products to the Client

The state-registered investment adviser must also make clear to the client that the third-party robo-adviser, if applicable, may be limited in the type of investment products it offers to the client. Currently, most robo-advisers primarily utilize exchange-traded funds as the main investment vehicle for their clients. The state-registered investment adviser must be educated regarding the investment products utilized by the third-party robo-advisers to which they direct their clients, and will best meet their fiduciary role by working with their clients to help them understand the impact of using a third-party robo-adviser with a limited universe of investment products. If a state-registered investment adviser does not believe a third-party robo-adviser offers appropriate investment vehicles for a client (for example, in a situation where a client's portfolio requires investments other than the exchange-traded funds primarily offered by robo-advisers), the state-registered investment adviser's fiduciary duty to the client requires it to advise the client as such, and to act accordingly.

Use of Unique, Distinguishable and Plain-English Language

The Division also recognizes that many state-registered investment advisers utilize the services of compliance consultants to aid in providing required disclosures. To the extent a state-registered investment adviser utilizes a compliance consultant, the Division will continue to place the burden upon the state-registered investment adviser to ensure that the language used to describe the state-registered investment adviser's business practices is sufficiently specific to its advisory practice. A state-registered investment adviser's disclosure documents must be distinguishable from those used by other state-registered investment advisers: the Division will not accept "cookie-cutter" disclosure language that does not adequately provide information pertaining specifically to that state-registered investment adviser, nor will it accept language that is not clear to the reader.

II. Fees under the Massachusetts Uniform Securities Act

State-registered investment advisers must be cognizant of complying with the fiduciary duty they owe to their clients in light of directing those clients to third-party robo-advisers pertain to the fees charged to those clients. The Division's regulations make clear that it is a dishonest or unethical practice for a state-registered investment adviser to charge "…an advisory fee that is unreasonable in light of the fees charged by other investment advisers providing essentially the same services."[2]

Beyond this regulatory prohibition, excessive fees can considerably hinder a client's financial growth, and clients have increasingly become aware of the importance of fee disclosure. Furthermore, inherent in the investment adviser's fiduciary duty is for it to operate in a fashion that minimizes fees. As such, a state-registered investment adviser's fiduciary duty requires not only that it not charge excessive fees, but also that it consider its fees in light of the services provided by third parties. This requirement takes on additional importance in a situation where both a state-registered investment adviser and a third-party robo-adviser are each charging the client a separate fee.

Therefore, in reviewing initial applications made by investment advisers seeking registration with the Commonwealth, as well as in examining state-registered investment advisers, the Division will review all fees charged to a client to determine whether the state-registered investment adviser's fees are excessive. In order to allow for that review, the state-registered investment adviser must clearly disclose to the client all of its own fees as well as all fees charged by the third-party robo-adviser. Furthermore, the Division will review the state-registered investment adviser's fees with regard to (1) the state-registered investment adviser's level of services to the client; (2) other fees charged to the client by a third-party robo-adviser; and (3) fees charged by other state-registered investment advisers utilizing similar affiliations with a third-party robo-adviser. In such a review, state-registered investment advisers must demonstrate to the Division why it charges its fees, as well as how it earns the fee. Such a demonstration should focus on the specific value the state-registered investment adviser provides to the client, whether due to the state-registered investment adviser's specialized knowledge with regard to investment products, the client's individual personal circumstances, and/or for some other reason that the state-registered investment adviser must clearly identify.

[2] 950 MASS. CODE REGS. 12.205(9)(c)10.

Tab 10

Morgan Lewis

THE EVOLUTION OF ADVICE:
DIGITAL INVESTMENT ADVISERS AS FIDUCIARIES

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The Evolution of Advice: Digital Investment Advisers as Fiduciaries

The landscape for investment advice is shifting, and an innovative model has emerged that combines technology and investment expertise to deliver high-quality advice at a lower cost than traditional investment advisory services. Digital or so-called "robo" advisers that use algorithms and technology to offer discretionary investment advice through managed accounts are growing in popularity.[1] The emergence of digital advice is particularly significant for investors who were not previously able to access any advice because of the minimum balances required by other service models, but investors at every level of wealth have been drawn to the value, accessibility and transparency offered by digital advice.

Many industry participants have commented on the transformative potential of digital investment advice. Of particular note, the Chair of the US Securities and Exchange Commission ("SEC" or "Commission") observed that digital investment advice holds the "positive potential to give retail investors broader, and more affordable, access to our markets."[2] Other commentators have questioned whether digital advisers can meet the standards to which they are subject as fiduciaries under the Investment Advisers Act of 1940, as amended ("Advisers Act"), or whether it is necessary to consider new standards.[3] Although such questions are fair given the rapid growth of digital advice and the importance of ensuring that retail investors have access to high-quality investment advice, these critics tend to proceed from misconceptions about the application of fiduciary standards, the current regulatory framework for investment advisers, and the actual services provided by digital advisers.

This White Paper explores the application of fiduciary standards to digital advisers. It concludes that fiduciary standards, such as those incorporated into the Advisers Act, are flexible principles that

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[1] A recent survey of the industry found that the top five digital advisers were currently providing investment management services in the United States to nearly $45 billion in combined assets under management. Alessandra Malito and Ellie Zhu, "Top 5 Robo-Advisers by AUM," InvestmentNews (Feb. 25, 2016), *available at* http://www.investmentnews.com/article/20160225/FREE/160229960/top-5-robo-advisers-by-aum; *see also* A.T. Kearney, *Robo-Advisory Services Study* (June 2015), *available at* https://www.atkearney.com/financial-institutions/robo-advisory-services-study (projecting that digital advisers' market share will rise to more than $2 trillion in assets under management by 2020).

[2] Mary Jo White, Chair, US Securities and Exchange Commission, Keynote Address at the SEC-Rock Center on Corporate Governance Silicon Valley Initiative (Mar. 31, 2016), *available at* https://www.sec.gov/news/speech/chair-white-silicon-valley-initiative-3-31-16.html.

[3] *See* Massachusetts Securities Division, 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 Securities Division, Policy Statement: State-Registered Investment Advisers' Use of Third-Party Robo-Advisers (July 14, 2016), *available at* https://www.sec.state.ma.us/sct/sctpdf/Policy-Statement-State-Registered-Investment-Advisers-Use-of-Third-Party-Robo-Advisers.pdf; Melanie L. Fein, *Robo-Advisors: A Closer Look* (June 30, 2015), pp. 22-23, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2658701; Melanie L. Fein, *FINRA's Report on Robo-Advisors: Fiduciary Implications* (Apr. 1, 2016), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2768295.

digital advisers and their nondigital counterparts (traditional advisers) are equally capable of satisfying. Investors benefit from this regulatory flexibility, which encourages innovation and permits the development of more varied services. Indeed, the Advisers Act already accommodates investment advisers with a wide variety of business models, investment strategies, and services. This White Paper also explains that the products and services offered by digital advisers are not unique, but instead are technologically enhanced versions of advisory programs and services that have long been subject to this flexible regulatory framework. Finally, this White Paper discusses the innovative and powerful ways that digital advisers can more effectively serve their clients, including by harnessing the efficiencies of technology and insights from behavioral finance.

DRIVERS BEHIND THE GROWTH OF DIGITAL ADVICE

Americans find themselves in the midst of what commentators have termed a "retirement savings crisis."[4] On the one hand, they are increasingly responsible for managing their own retirement savings because of the disappearance of defined benefit plans, deteriorating confidence in the long-term viability of the Social Security system, and concern that Social Security payments will provide insufficient retirement income.[5] Only 21% of American workers today reportedly are confident that they will have enough money for a comfortable retirement,[6] and participation in employee savings plans is at historic lows.[7] Moreover, more than half of current households approaching retirement have no savings, and a large proportion of those with savings do not have enough to maintain their standard of living in retirement.[8] On the other hand, many investors who would benefit from professional advice are not able to meet the high account minimums that often accompany access to financial advisors.[9]

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[4] "America's Coming Retirement Crisis," Bloomberg News (May 13, 2015), *available at* http://www.bloomberg.com/view/articles/2015-05-13/providing-for-a-secure-retirement.

[5] In 1998, more than half of the Fortune 500 offered new hires a defined benefit plan for retirement; in 2013, only 7% of those companies offered such plans. Brendan McFarland, *Retirement in Transition for the Fortune 500: 1998 to 2013*, Willis Towers Watson (Sept. 3, 2014), *available at* https://www.towerswatson.com/en/Insights/Newsletters/Americas/Insider/2014/retirement-in-transition-for-the-fortune-500-1998-to-2013.

[6] Twenty-six percent of such workers report having saved less than $1,000 for retirement, and a further 38% have saved less than $50,000. Ruth Helman et al., *The 2016 Retirement Confidence Survey: Worker Confidence Stable, Retiree Confidence Continues to Increase*, Employee Benefit Research Institute Issue Brief No. 422 (Mar. 2016), *available at* https://www.ebri.org/pdf/briefspdf/EBRI_IB_422.Mar16.RCS.pdf.

[7] The Bureau of Labor Statistics has found that close to 20% of low-wage or part-time workers with access to defined benefit pension plans and defined contribution retirement plans elect to participate in such plans; in companies with less than 50 workers, the participation rate is 34%. US Department of Labor, Bureau of Labor Statistics, *National Compensation Survey: Employee Benefits in the United States, March 2016* (July 2016), *available at* http://www.bls.gov/news.release/archives/ebs2_07222016.pdf.

[8] US Government Accountability Office, *Most Households Approaching Retirement Have Low Savings* (pub. avail. June 2, 2015), *available at* http://www.gao.gov/assets/680/670153.pdf.

[9] A recent report by Cerulli Associates noted that only 8% of advisers will accept clients with less than $100,000 in assets and that only 29% of advisers target investors with assets in the $100,000 to $500,000 range. *See* Michael S. Fischer, "Can Digital Advice Fill Advisor Gap for Small Investors?" ThinkAdvisor (June 20, 2016), *available at* http://www.thinkadvisor.com/2016/06/20/can-digital-advice-fill-advisor-gap-for-small-inve.

Against this backdrop it is not surprising that there is tremendous hunger among the investing public for accessible, low-cost, and reliable advice. While some investors may still seek the services of a traditional adviser – and have sufficient assets to qualify for those services – others seek a different sort of advisory experience, at a different price point, to help them navigate the complexity of saving for retirement and other financial milestones. The availability of digital advice promotes the important policy objective of expanding access to retirement advice to a growing segment of underserved and undersaved Americans.

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At the same time, the growing awareness of the importance of fees in driving investment outcomes has led both investors and digital advisers to focus on the benefits of exchange-traded funds ("ETFs").[10] The maturation and growth of the ETF market over the last two decades has produced a broad range of products covering different asset classes, markets, styles, and geographies.[11] ETFs, which are traded intraday and are offered without the sales loads and internal distribution costs that can drive up expense ratios in other investment products, are a transparent, low-cost, and tax-efficient investment option. In addition, the passive index bias that is prevalent in the ETF market fits well with the diversification tenets of Modern Portfolio Theory. The use of passive ETFs allows digital advisers to create and manage inexpensive, broadly diversified global portfolios correlated to particular risk and return characteristics.

The growth of digital advice has also been accelerated by advances in technology that allow for a more personalized, efficient and seamless user experience. This appeals to the growing number of consumers who expect their financial providers to keep pace with the user experiences offered by other consumer services and who are comfortable relying on digital solutions to help manage their financial lives.[12] Banks and financial services firms are capitalizing on this trend by developing

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[10] *See* Tom Anderson, "Millennials prefer ETFs, and it's all about cost," CNBC (Sept. 15, 2016), *available at* http://www.cnbc.com/2016/09/15/a-millennial-money-move-boomers-would-be-wise-to-adopt.html (citing to Schwab's 2016 ETF Investor Survey (*available at* https://aboutschwab.com/images/uploads/inline/2016_ETF_Investor_Study_deck_0916-L9TS.pdf), which noted that both individual investors and registered investment advisers prioritize low expense ratios and total cost when choosing an ETF).

[11] Investment Company Institute, *2016 Investment Company Fact Book*, at 61 (May 4, 2016), *available at* https://www.ici.org/pdf/2016_factbook.pdf.

[12] A recent survey found that among affluent and high net worth investors, 64% expect their future wealth management relationships to be digital, and for those under the age of 40, 82% expect a digital relationship. A further 69% would be inclined to leave a wealth management firm if a digital component was not integrated into a wealth manager's offering. Taj Vakta and Sumit Chugh, *Self-Service in Wealth Management: Remaining Competitive in a Fast-Changing World*, Capgemini (2014), *available at* https://www.capgemini.com/resource-file-access/resource/pdf/self-service_in_wealth_management_whitepaper_2014.pdf. A separate survey by Wells Fargo/Gallup in May 2016 found that 54% of investors would trust advice from an adviser that has "good" applications and digital investing tools more than advice delivered by a less technologically savvy adviser. Wells Fargo/Gallup, *Investor and Retirement Optimism Index Q2 2016* (July 19, 2006), *available at* http://mms.businesswire.com/media/20160719005353/en/535372/5/3571706cInfographics_WF-Gallup_Investor_and_Retirement_Optimism_Index_2Q_2016_en+%281%29.jpg?download=1.

digital advice solutions designed to attract new clients and provide a broader range of services to existing clients.[13] Like digital advisers, these traditional advisers also recognize that such solutions appeal to the investing needs and expectations of a previously underserved segment of the investing public.[14]

DIGITAL ADVICE IS FIDUCIARY ADVICE

Critics of digital advice often focus on the fact that digital advisers differ from traditional advisers because there is no (or limited) human interaction.[15] However, the fact that digital advisers do not interface with their clients in the same way as traditional advisers does not mean that they are not fiduciaries to their clients, or that they cannot fulfill the fiduciary standards that govern an investment advisory relationship. Critics who suggest otherwise often misunderstand the source – and thus the contours – of an investment adviser's fiduciary duties.[16]

Fiduciary duties are imposed on investment advisers "by operation of law because of the nature of the relationship between the two parties."[17] This is made enforceable by Section 206 of the Advisers Act, which applies to all firms meeting the Advisers Act's "definition of investment adviser, whether registered with the Commission, a state securities authority, *or not at all*."[18] Investment

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[13] *See* Falguni Desai, "The Great FinTech Robo Advisor Race," Forbes (July 31, 2016), *available at* http://www.forbes.com/sites/falgunidesai/2016/07/31/the-great-fintech-robo-adviser-race/#267c5eee3812 (noting that "perhaps no other sub-sector of the fintech arena has received as much institutional and retail interest" as digital advisers, resulting in a number of strategic acquisitions or product launches by large financial services incumbents); *see also* Chris Flood, "Industry heavyweights put faith in robo-advisers," Financial Times (Sept. 11, 2016), *available at* http://www.ft.com/cms/s/0/ba0ea8e4-652a-11e6-8310-ecf0bddad227.html#axzz4KBEp73mY.

[14] Julie Verhage, "Morgan Stanley Analyst Says Robo Advisers Are One of the Major Threats to the Industry," BloombergMarkets (July 13, 2016), *available at* http://www.bloomberg.com/news/articles/2016-07-13/morgan-stanley-analyst-says-robo-advisers-are-one-of-the-major-threats-to-the-industry (noting that the wealth management industry has sought to meet the growing digital expectations of the investing public through strategic acquisitions, partnerships, or the pairing of human and digital capabilities).

[15] *See* Massachusetts Securities Division, Policy Statement: Robo-Advisers and State Investment Adviser Registration, and Fein, *Robo-Advisors: A Closer Look, supra* note 3.

[16] *See, e.g.*, Fein, *Robo-Advisors: A Closer Look supra* note 3, at 16 (implying that the "prevailing standard of care" for a registered investment adviser fiduciary is the Uniform Prudent Investor Act).

[17] Staff of the Investment Adviser Regulation Office, Division of Investment Management, US Securities and Exchange Commission, *Regulation of Investment Advisers by the U.S. Securities and Exchange Commission* at 23 (Mar. 2013), *available at* https://www.sec.gov/about/offices/oia/oia_investman/rplaze-042012.pdf (citing *Arleen W. Hughes*, Exchange Act Rel. No. 4048 (Feb. 18, 1948), *affd sub nom. Hughes v. SEC*, 174 F.2d 969 (May 9, 1949)). The Department of Labor's ("DOL") new Fiduciary Rule explicitly recognizes that digital advisers are fiduciaries, and holds them responsible for providing investment advice to retirement plans and retirement plan participants consistent with the obligations of a "fiduciary" under the Employee Retirement Income Security Act of 1974 ("ERISA"). *See Best Interest Contract Exemption,* 81 Fed. Reg. 21,002, 21,012 (Apr. 8, 2016). We describe the DOL's Fiduciary Rule, and its treatment of digital advisers, in greater detail later in this White Paper.

[18] Division of Investment Management, US Securities and Exchange Commission, "General Information on the Regulation of Investment Advisers," *available at* https://www.sec.gov/divisions/investment/iaregulation/memoia.htm (last accessed Oct. 5, 2016) (emphasis

advisers, including digital advisers, have an affirmative duty to act with the utmost good faith, to make full and fair disclosure of all material facts, and to employ reasonable care to avoid misleading clients.[19] Sections 206(1) and (2) of the Advisers Act make it unlawful for an investment adviser "to employ any device, scheme, or artifice to defraud any client or prospective client" or to "engage in any transaction, practice, or course of business which operates as a fraud or deceit upon any client or prospective client."[20]

The concepts of fraud in Sections 206(1) and (2) are based on common law principles[21] and include a duty of loyalty and a duty of care. The duty of loyalty refers to the obligation to act loyally for the client's benefit, which requires that the adviser place the client's interests ahead of its own.[22] The duty of care refers to the obligation to act with the care, competence, and diligence that would normally be exercised by a fiduciary in similar circumstances.[23]

As noted above, the Supreme Court has interpreted Sections 206(1) and (2) as establishing a federal fiduciary standard for investment advisers.[24] Accordingly, it is an accepted legal principle that investment advisers, particularly advisers that are managing client assets on a discretionary basis, are fiduciaries.[25] Below we explain the source and parameters of an investment adviser's fiduciary duties, and discuss how these duties – the duty of care and the duty of loyalty – apply to the contours of the digital advisory relationship.

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added).

[19] *SEC v. Capital Gains Research Bureau, Inc.,* 375 U.S. 180, 194-95 (1963). *See also Santa Fe Indus., Inc. v. Green*, 430 U.S. 462, 471 n.11 (1977) (noting that "Congress intended the Investment Advisers Act to establish federal fiduciary standards for investment advisers").

[20] Advisers Act § 206(1) and (2).

[21] *See, e.g., In re Brandt, Kelly & Simmons, LLC & Kenneth G. Brandt*, SEC Administrative Proceeding File No. 3-11672 (Sept. 21, 2004) (alleging that respondent "willfully violated Sections 206(1) and 206(2) of the Advisers Act, *which incorporate common law principles of fiduciary duties*" (emphasis added)).

[22] *See* Restatement (Third) of Agency § 8.01 (2006) ("An agent has a fiduciary duty to act loyally for the principal's benefit in all matters connected with the agency relationship."); § 8.01, cmt. b ("Although an agent's interests are often concurrent with those of the principal, the general fiduciary principle requires that the agent subordinate the agent's interest to those of the principal and place the principal's interests first as to matters connected with the agency relationship."); *see also* Restatement (Third) of Trusts § 78(1) (2007) ("Except as otherwise provided in the terms of the trust, a trustee has a duty to administer the trust solely in the interest of the beneficiaries, or solely in furtherance of its charitable purposes.")

[23] *See* Restatement (Third) of Agency § 8.08 ("[A]n agent has a duty to the principal to act with the care, competence, and diligence normally exercised by agents in similar circumstances."); *see also* Restatement (Third) of Trusts § 77 (noting that a trustee has a duty to act with the exercise of "reasonable care, skill, and caution").

[24] *Capital Gains Research Bureau*, 375 U.S. 180 at 191–92; *see also Transamerica Mortg. Advisors, Inc. v. Lewis*, 444 U.S. 11, 17 (1979) ("As we have previously recognized, § 206 establishes 'federal fiduciary standards' to govern the conduct of investment advisers. Indeed, the Act's legislative history leaves no doubt that Congress intended to impose enforceable fiduciary obligations." (citations omitted)).

[25] Staff of the US Securities and Exchange Commission, Study on Investment Advisers and Broker-Dealers, at 22 (Jan. 2011), *available at* https://www.sec.gov/news/studies/2011/913studyfinal.pdf (noting that "[u]nder the Advisers Act, an adviser is a fiduciary").

THE FIDUCIARY STANDARD OF CARE IS DEFINED BY THE SCOPE OF THE RELATIONSHIP

Commentators who assert that digital advisers cannot meet the standard of care required of an investment adviser proceed from a fundamental misconception that there is a single standard of care that applies to all investment advisory relationships. In fact, the opposite is true. Under both common law and the Advisers Act, the applicable standard of care may be defined by contract, and the concepts of reasonable care and skill that are at the heart of any standard of care necessarily must be judged in relation to the scope of services agreed to by the client.[26]

Under common law, the standard of care an agent owes to a principal varies depending on the parties' agreement and the scope of their relationship.[27] An agent also owes to the principal a duty of care, which requires the agent to act with the care, competence, and diligence agents would normally exercise under similar circumstances.[28] However, the agent and principal may agree to raise or lower the duty of care by contract.[29] Even under trust law, which imposes higher obligations on trustees than exist under agency law, the scope of fiduciary duties is subject to the terms of the trust. A principal component of the common law duty of care is the requirement that a trustee act prudently in light of the purposes, terms, and other circumstances of the trust.[30] The duty of prudence encompasses the duty to exercise reasonable care and skill and to "act with a degree of caution suitable to the particular trust and its objectives, circumstances, and overall plan of administration."[31] While the trustee and beneficiary cannot agree to waive the trustee's fiduciary obligations under the duties of loyalty and care in their entirety,[32] trust law, especially trust fiduciary law, is default law that can be modified by the terms of the trust.[33] Thus, the trustee and

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[26] *See* Tamar Frankel, Arthur Laby & Ann Taylor Schwing, *Regulation of Money Managers: Mutual Funds and Advisers* § 16.02 (Dec. 2015) ("There is no single standard of care by which all transactions and relationships are measured. The relevant standard of care depends on multiple factors depending on the personal characteristics of the individuals, the terms of their arrangements, and the reasonable expectations of the clients, as well as the SEC Rules concerned among others with the impact of advisers on the markets.")

[27] *See* Restatement (Third) of Agency § 8.01 cmt. c ("Fiduciary obligation, although a general concept, is not monolithic in its operation. In particular, an agent's fiduciary duties to the principal vary depending on the parties' agreement and the scope of the parties' relationship.")

[28] *See id.* at § 8.08, *supra* note 23.

[29] *Id*. at cmt. b ("A contract may also, in appropriate circumstances, raise or lower the standard of performance to be expected of an agent . . . .").

[30] Restatement (Third) of Trusts § 90; *see also* Uniform Trust Code § 804 (Jan. 2013) ("A trustee shall administer the trust as a prudent person would, by considering the purposes, terms, distributional requirements, and other circumstances of the trust. In satisfying this standard, the trustee shall exercise reasonable care, skill, and caution.")

[31] *See* Restatement (Third) of Trusts § 77, cmt. b.

[32] *See* Arthur B. Laby, *The Fiduciary Obligation as the Adoption of Ends*, 56 Buff. L. Rev. 99, 119 (2008) (discussing the concept of waiver under trust law); *see also* Restatement (Third) of Trusts § 70 cmt. d ("Although a trustee's duties, like trustee powers, may be affected by the terms of the trust, the fiduciary duties of trusteeship are subject to minimum standards that require the trustee to act in good faith and in a manner consistent with the purposes of the trust and the interest of the beneficiaries.")

[33] *See* Restatement (Third) of Trusts § 76 cmt. b(1) ("Briefly stated, much of trust law, especially trust fiduciary law, is default law—but some is not.") The "Prudent Investor Rule," as described in the Restatement (Third) of Trusts, is a perfect example of default trust law. It requires that each investment of a trust account

beneficiary may agree to modify or relax the default obligations of prudence through the terms of the trust[34] so long as they do not "altogether dispense with the fundamental requirement that trustees not behave recklessly but act in good faith, with some suitable degree of care, and in a manner consistent with the terms and purposes of the trust and the interests of the beneficiaries."[35]

Consistent with the common law, an investment adviser may limit the scope of its relationship with a client. In fact, it is not uncommon for investment advisers of all types to limit the scope of their services and authority based on the nature of the advisory relationship with their clients. For example, many traditional advisers provide the following types of limited service offerings:

- Prepare financial plans that speak to clients' overall investment objectives and financial circumstances at a particular point in time, thus disclaiming the responsibility to update the information on an ongoing basis;
- Provide asset allocation services or recommend investment strategies by researching and monitoring managers or funds, yet disclaim responsibility for making the underlying investment decisions with respect to those investment strategies or funds;
- Provide advice in connection with particular transactions by providing transition assistance to institutional investors transferring assets from one investment manager to another, yet disclaim responsibility for selecting individual securities to be bought or sold;
- Provide discretionary investment management services for one segment of a client's overall investment portfolio, and simultaneously disclaim responsibility for the management of the client's remaining assets;
- Provide nondiscretionary investment advice that cannot be implemented without the prior consent of a client; or

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be the result of the exercise of reasonable care, skill, and caution in the context of the trust portfolio as a whole and as part of an overall investment strategy that incorporates risk and return objectives reasonably suitable to the trust. It also requires the trustee to diversify investments unless, under the circumstances, it is prudent not to do so, and to conform to fiduciary standards, act with prudence in deciding whether to delegate its authority, and incur costs that are reasonable and appropriate. The overall duty of care applies not only in making investments but also in monitoring and reviewing investments. *See id.* at § 90, *supra* note 30. The Prudent Investor Rule is one of many default laws governing a trustee's duties at common law that may be modified by the terms of the trust. *See* Uniform Prudent Investor Act § 1(b) (1995) ("The prudent investor rule, a default rule, may be expanded, restricted, eliminated, or otherwise altered by the provisions of a trust."); *see also* § 1 cmt. on Variation (noting that "[a]lmost all of the rules of trust law are default rules, that is, rules that the settlor may alter or abrogate. Subsection (b) carries forward this traditional attribute of trust law"). Consequently, the broad articulations of the default trust law, which includes the Prudent Investor Rule, would not apply or would be modified where the parties have made other arrangements.

[34] *See* Restatement (Third) of Trusts § 76 cmt. b(1) ("A trustee has both (i) a duty generally to comply with the terms of the trust and (ii) a duty to comply with the mandates of trust law except as permissibly modified by the terms of the trust. Because of this combination of duties, the fiduciary duties of trusteeship sometimes override or limit the effect of a trustee's duty to comply with trust provisions; conversely, the normal standards of trustee conduct prescribed by trust fiduciary law may, at least to some extent, be modified by the terms of the trust.")

[35] *Id.* at § 77 cmt. d(3).

- Provide pricing or evaluation services that are limited to judging the appropriate price of a particular security or basket of securities.

The SEC has long recognized that investment advisers come in many shapes and sizes.[36] Rather than creating a prescriptive regulatory regime based on each discrete business model, the SEC has created a flexible, principles-based regulatory regime focused on an investment adviser's fiduciary duty to "make full and fair disclosure" of all material facts, including conflicts of interest between the adviser and its clients and "any other material information that could affect the advisory relationship."[37] The SEC has generally viewed the negotiation of the terms of an advisory relationship to occur at arm's length, provided that the investment adviser has satisfied its disclosure obligations, including disclosure about the adviser's business, material conflicts of interest, disciplinary information, and other information, so that prospective clients can decide whether to enter into an advisory agreement with the adviser.[38]

DIGITAL ADVISERS SHOULD HAVE A REASONABLE BASIS FOR THEIR ADVICE

Although there is no comprehensive list of the obligations that flow from fiduciary duty under the Advisers Act, it seems clear that part of that duty is to ensure that an adviser has a reasonable basis for its advice.[39] One of the central themes advanced by critics of digital advisers is that they do not

[36] Staff of the US Securities and Exchange Commission, Study on Investment Advisers and Broker-Dealers,at 5 (Jan. 2011), *available at* https://www.sec.gov/news/studies/2011/913studyfinal.pdf (stating that "[i]nvestment advisers. . . offer a variety of services and products to their retail clients and customers, with the scope and terms of the relationship and the associated compensation reflecting the services and products offered"). *See also Investment Adviser Codes of Ethics*, Investment Advisers Act Rel. No. 2256 (July 9, 2004) (stating that "proposal left advisers with substantial flexibility to design individualized codes that would best fit the structure, size and nature of their advisory businesses"); *Compliance Programs of Investment Companies and Investment Advisers*, Investment Advisers Act Rel. No. 2204 (Dec. 17, 2003) ("Commenters agreed with our assessment that funds and advisers are too varied in their operations for the rules to impose of a single set of universally applicable required elements"); *Proxy Voting by Investment Advisers*, Investment Advisers Act Rel. No. 2106 (Jan. 31, 2003) ("Investment advisers registered with us are so varied that a 'one-size-fits-all' approach is unworkable").

[37] *See Amendments to Form ADV*, Investment Advisers Act Rel. No. 2711 (Mar. 3, 2008) (Mar. 14, 2008) [hereinafter, "Form ADV Proposing Release"] (*see* General Instruction No. 3 & n.148); *Amendments to Form ADV*, Investment Advisers Act Rel. No. 3060 (July 28, 2010) [hereinafter, "Form ADV Adopting Release"]. The Form ADV Proposing Release reflects the SEC's view that investment advisers should do more than simply identify a potential conflict of interest and should also explain generally how they address that conflict.

[38] The Advisers Act recognizes the arm's-length nature of the negotiation of an advisory relationship in not requiring that an investment advisory contract be in writing, or otherwise prescribing its terms, other than with respect to the receipt of performance compensation, assignment of the contract, and change in ownership where the adviser is a partnership. *See* Advisers Act § 205, 15 U.S.C. § 80b-5; *see also* Form ADV Adopting Release, *supra* note 37 ("[I]nvestors have the responsibility, based on disclosure they receive, for selecting their own advisers, negotiating their own fee arrangements, and evaluating their advisers' conflicts.")

[39] *See* Thomas P. Lemke & Gerald T. Lins, *Regulation of Investment Advisers* § 2.33 (Feb. 2016); *see also Regulation of Investment Advisers by the U.S. Securities and Exchange Commission, supra* note 17 at 23 (noting that one of the obligations that flow from an adviser's fiduciary duty is the duty to "have a reasonable, independent basis" for recommendations); *In re Alfred C. Rizzo*, Investment Advisers Act Rel. No. 897 (Jan. 11, 1984) ("As a registered investment adviser, Rizzo was required to have a reasonable basis for his investment advice.")

collect sufficient information to provide personalized investment advice and thus are not meeting their fiduciary obligations. We disagree. As discussed below, under established regulatory principles the information captured in the client-profiling process must be evaluated in relation to the nature of the advice that is provided. Accordingly, the critics' position appears to miss the mark in a number of ways.

The Advisers Act does not dictate the minimum amount of information that must be collected to make a reasonable determination that investment advice is appropriate for a client. In fact, unlike FINRA Rule 2111, the Advisers Act does not prescribe the amount or types of client profile information that are required to be collected in any respect. In 1994 the SEC proposed, but did not adopt, a suitability rule[40] that would have required investment advisers to conduct a reasonable inquiry into a client's financial situation, investment experience, and investment objectives before providing advice.[41] However, the proposing release makes clear that "the extent of the inquiry would turn on what is reasonable under the circumstances."[42] For instance, a "comprehensive financial plan" may, according to the proposing release, require extensive personal and financial information about a client, including current income, investments, assets and debts, marital status, insurance policies and financial goals. The implication is that an advisory program that is not offering comprehensive financial planning would not require the collection of such extensive information.

What is required to make a reasonable determination is a qualitative, rather than a quantitative, inquiry, and the type or amount of information relied upon by an adviser to make a recommendation may vary without compromising the advice. SEC Chair Mary Jo White, in public remarks addressing digital advisers, has acknowledged that "[j]ust like a conversation with a 'real person' about a client's financial goals, risk tolerances, and sophistication may be more or less robust, so too there is variation in the content and flexibility of information gathered by robo-advisors before advice is given."[43] Even the more prescriptive FINRA suitability rules provide broker-dealers with the flexibility to omit certain information from a customer profile if the broker-dealer determines that information would not be relevant to making a suitability determination in light of the applicable facts and circumstances.[44]

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40 *Suitability of Investment Advice Provided by Investment Advisers,* Investment Advisers Act Rel. No. 1406 (Mar. 16, 1994).

41 Although the SEC did not adopt the proposed rule, the Staff of the Division of Investment Management has taken the position that "the rule would have codified existing suitability obligations of advisers and, as a result, the proposed rule reflects the current obligation of advisers under the [Advisers] Act." *See Regulation of Investment Advisers by the U.S. Securities and Exchange Commission*, *supra* note 17 at 23 n.134.

42 *Supra* note 40.

43 Chair Mary Jo White, Keynote Address at the SEC-Rock Center on Corporate Governance Silicon Valley Initiative, *supra* note 2.

44 FINRA Rule 2111.04 ("The factors delineated in Rule 2111(a) regarding a customer's investment profile generally are relevant to a determination regarding whether a recommendation is suitable for a particular customer, although the level of importance of each factor may vary depending on the facts and circumstances of the particular case. A member or associated person shall use reasonable diligence to obtain and analyze all of the factors delineated in Rule 2111(a) *unless the member or associated person has a reasonable basis to believe, documented with specificity, that one or more of the factors are not relevant components of a customer's investment profile in light of the facts and circumstances of the particular case*." (emphasis

The appropriate question is therefore not how *much* information an adviser is collecting, but rather whether the information the adviser decides to collect is appropriate in relation to the nature of the advice that is provided.[45] It follows that where advisers, digital or otherwise, provide assistance with specific and identifiable investment goals such as college or retirement savings, they need not collect the same degree of information, or conduct comparable due diligence, to that which may be required for a more expansive investment strategy.

Further, digital advice must be understood in relation to its place in the market. Many clients who choose a digital adviser have affirmatively chosen *not* to enroll in a comprehensive financial planning or investment management service. Instead, these investors have opted for goal-based wealth management (e.g., accumulating for retirement, planning for college education, saving for a vacation home). Rather than lumping all assets together and managing them in relation to a particular benchmark, goal-based wealth management allows clients to create a separate "bucket" of assets for each goal and define an investment strategy that is unique to that particular goal. Investors continue to have the option of working with an investment adviser that will provide a more comprehensive solution that considers outside resources, debt, financial history, career, anticipated medical expenses and a myriad of other factors that could potentially influence the advice provided to an investor. But, they have to pay for those services. Critics who make the blanket assertion that digital advice is *per se* insufficient attempt to impose their own judgment about what is best for investors, rather than accepting the investing public's judgment of the services it wants, needs, and is willing to pay for. Such critics also presume – in the absence of any data - that traditional advisers always provide a full suite of services to these investors, although that is not necessarily the case. It cannot be good public policy to force investors to choose between no advice and expensive, bespoke advice.

Critics who make the blanket assertion that digital advice is per se insufficient attempt to impose their own judgment about what is best for investors, rather than accepting the investing public's judgment of the services it wants, needs, and is willing to pay for.

DIGITAL ADVISERS PRESENT COMPARATIVELY FEWER CONFLICTS OF INTEREST

One of the positive features of digital advisers from a fiduciary perspective is that they typically present fewer conflicts of interest. As fiduciaries, all advisers owe their clients a duty of loyalty.[46] At common law, this involves refraining from acting adversely or in competition with the interests of clients, and not using clients' property for the adviser's benefit or for that of a third party.[47] The duty of loyalty consists of the principles that advisers deal fairly with clients and prospective clients,

added).)

45 *See* FINRA, *Report on Digital Investment Advice* (Mar. 2016), *available at* https://www.finra.org/sites/default/files/digital-investment-advice-report.pdf ("A key question in developing a customer profile is: What information is necessary to build a customer profile with sufficient information to make a sound investment recommendation?")

46 *See* Restatement (Third) of Agency § 8.01 and Restatement (Third) of Trusts § 78(1), *supra* note 22.

47 Restatement (Third) of Agency § 8.01–8.05.

seek to avoid conflicts of interest, disclose all material facts for any actual or potential conflicts of interest that may affect the adviser's impartiality,[48] and not subrogate client interests to their own.[49] Consistent with the common law, the federal regulatory framework governing investment advisers is a disclosure-based regime that does not preclude an adviser from acting where there is an actual or potential conflict of interest, provided that full and fair disclosure is made to clients.[50]

By emphasizing transparent and straightforward fee structures, prevailing digital advice business models inherently minimize conflicts of interest associated with traditional investment advisers. Digital advisory offerings are typically comprised of ETFs that, in comparison to mutual funds, offer little room for revenue streams and payment shares that would otherwise create a conflict of interest for investment advisers (e.g., 12b-1 fees, subtransfer agent fees). The absence of such compensation factors means that comparatively fewer conflicts of interest are present even where digital advisers are affiliated with some of the ETFs that they recommend, and independent digital advisers reduce such conflicts even further. Moreover, digital advisory solutions eliminate the representative-level conflicts of interest typically present in the nondigital advisory context because there is little or no role for financial advisors who receive incentive-based compensation in an online offering. Accordingly, digital advisory solutions are less susceptible to the financial incentives that create conflicts of interest, disclosure, and sales practice and supervisory issues resulting from the compensation paid on accounts recommended and managed by financial advisors.[51]

Regulators have endorsed the position that the digital investment advice model eliminates many of the conflicts of interest presented by traditional advisers. DOL Secretary Thomas E. Perez has publicly remarked that digital investment advice platforms are able to provide fiduciary investment advice to lower balance investors, consistent with their best interests, at "significantly lower" fees than traditional advisers.[52] Moreover, the DOL itself, in its highly anticipated final regulations (the "Fiduciary Rule") expanding the definition of a fiduciary under ERISA, noted that "the marketplace

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[48] *See* Form ADV Adopting Release, *supra* note 37 ("An investment adviser must deal fairly with clients and prospective clients, seek to avoid conflicts with its clients and, at a minimum, make full disclosure of any material conflict or potential conflict." (citations omitted))

[49] *Proxy Voting by Investment Advisers*, *supra* note 36 ("Under the Advisers Act, however, an adviser is a fiduciary that owes each of its clients duties of care and loyalty with respect to all services undertaken on the client's behalf, including proxy voting…. To satisfy its duty of loyalty, the adviser must cast the proxy votes in a manner consistent with the best interest of its client and must not subrogate client interests to its own.")

[50] *See* Form ADV Adopting Release, *supra* note 48.

[51] FINRA, *Report on Digital Investment Advice*, *supra* note 45 (noting that purely digital client-facing tools eliminate conflicts between employees and clients because financial professionals are not involved in the advice process). The SEC and wealth-management industry have long recognized that sales-related incentives pose potential conflicts of interest for brokerage and advisory relationships. In 1995, then SEC Chairman Arthur Levitt convened a committee comprised of representatives from across the financial services industry to review compensation practices. In its report, the committee found that sales and other financial incentives relating to an investment adviser or representative's compensation present a key conflict of interest for brokers and investment managers. Daniel P. Tully, Thomas E. O'Hara, Warren E. Buffet, Raymond A. Mason, and Samuel L. Hayes III, *Report of the Committee on Compensation Practices* (Apr. 10, 1995), *available at* https://www.sec.gov/news/studies/bkrcomp.txt.

[52] Thomas E. Perez, Secretary of Labor, Statement Before the Health, Employment, Labor and Pensions Subcommittee, Committee on Education and the Workforce, U.S. House of Representatives (June 17, 2015).

for robo-advice is still evolving in ways that both appear to avoid conflicts of interest that would violate the prohibited transaction rules and minimize cost."[53]

The Fiduciary Rule broadly treats advice to retirement plans (including individual retirement accounts) and retirement plan participants on investments, the management of investments, and rollovers, transfers, or distributions as fiduciary investment advice subject to the ERISA prohibited transaction rules, which are designed to prohibit a fiduciary from using its fiduciary authority or responsibility to cause itself to be paid an additional fee.[54]

As a companion to the Fiduciary Rule, the DOL adopted the Best Interest Contract Exemption ("BICE").[55] The BICE permits advisers that provide fiduciary advice to continue to market and sell investments and investment programs for which they receive compensation, provided that certain conditions are met. These conditions generally require an adviser to, among other things, only give advice that is in the retirement investor's best interest, acknowledge to investors that it is acting as a fiduciary, and disclose important information relating to fees, compensation, and material conflicts of interest.[56]

A streamlined, or "light" version of the BICE ("BICE-Lite") is available to fiduciaries who are compensated only through fees that are a fixed percentage of a retirement investor's assets under management or that otherwise do not vary based on particular recommended investments ("level fee fiduciaries"). The DOL explicitly stated that digital advisers could qualify as level-fee fiduciaries. Digital advisers that receive nonlevel compensation, on the other hand, are excluded from the BICE altogether. The DOL reasoned that to provide an exemption for robo-advice providers that permits nonlevel compensation would "adversely affect the incentives currently shaping the market for robo-advice."[57]

DIGITAL ADVICE HAS LONG BEEN GOVERNED BY THE EXISTING REGULATORY FRAMEWORK

Digital advisers are a disruptive and competitive alternative to traditional advisers, but the advisory services they offer build upon the traditional advisory framework and its regulatory structure, rather than depart from it. The range of advisory services offered by digital advisers – from online asset allocation recommendations to discretionary managed accounts comprised of diversified portfolios of ETFs – follow well-worn regulatory paths governing the use of electronic media, the use of interactive websites to deliver advice, and the governance of separately managed account and wrap fee programs. Further, the history of these services underscore that the Advisers Act is a flexible and technologically neutral regulatory regime that has accommodated technological change, innovation in products and services, and evolving business models.

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[53] *Best Interest Contract Exemption, supra* note 17 at 21,058.

[54] *Definition of the Term "Fiduciary"; Conflict of Interest Rule – Retirement Investment Advice*, 81 Fed. Reg. 20,946 (Apr. 8, 2016), codified at 29 C.F.R. § 2510.3-21.

[55] *Best Interest Contract Exemption, supra* note 17 at 21,058, §I(c)(3).

[56] *Id.* at 21,020.

[57] *Supra* note 53.

In 1995, the SEC published its first interpretation on the use of electronic media to deliver regulatory communications. This release and the others that followed recognized the power of technology and, specifically, the electronic distribution of information, to "enhance the efficiency of the securities markets by allowing for the rapid dissemination of information to investors and financial markets in a more cost-efficient, widespread, and equitable manner than traditional paper-based methods."[58] In providing this guidance, however, the SEC also clearly established the principle that the securities laws are technologically neutral. The use of electronic media did not change the substantive provisions of the federal securities laws. In fact, the SEC specifically stated that the guidance set forth in the 1995 release "addresses only the procedural aspects under the federal securities laws of electronic delivery, and does not affect the rights and responsibilities of any party under the federal securities laws."[59] In the 1995 release and in a subsequent release in 1996 extending the same principles to the delivery of required communications under the Advisers Act, the SEC was clear that the "liability provisions of the federal securities laws apply equally to electronic and paper-based media."[60]

The SEC recognized the presence of digital advice and its compatibility with the framework of the Advisers Act when it adopted the so-called "Internet Investment Advisers Exemption" in 2002.[61] This exemption permits advisers that provide personalized investment advice exclusively through interactive websites[62] to register as investment advisers at the federal level without necessarily meeting the regulatory assets under management threshold that is typically required of an SEC registered adviser. In adopting the exemption, the SEC acknowledged that it had to create a new basis for registration that captured investment advisers that did not technically have regulatory assets under management (the exemption assumed a business model under which advisers were not providing continuous and regular supervisory services). However, the SEC never considered changing the substantive provisions of the Advisers Act to address internet advisers solely because they provide advice through an interactive website.

The Advisers Act is a flexible and technologically neutral regulatory regime that has accommodated technological change, innovation in products and services, and evolving business models.

58 *Use of Electronic Media for Delivery Purposes*, Securities Act Rel. No. 7233 (Oct. 6, 1995). It is interesting to note that many of these same sentiments regarding the promise of electronic delivery and the democratization of access to online information are today used to describe the benefits of digital investment advice.

59 *Id*. at 4.

60 *Id.*; *see also Use of Electronic Media by Broker-Dealers, Transfer Agents, and Investment Advisers for Delivery of Information,* Investment Advisers Act Rel. No. 1562 (May 9, 1996).

61 *Exemption for Certain Investment Advisers Operating Through the Internet*, Investment Advisers Act Rel. No. 2091 (Dec 12. 2002) (noting that internet advisers offer advisory programs in which "[c]lients visit these websites and answer online questions concerning their personal finances and investment goals. Thereafter, the adviser's computer-based application or algorithm processes and analyzes each client's response, and then transmits investment advice back to each client through the interactive website.")

62 Under the Internet Investment Advisers Exemption, internet advisers are permitted to provide advice through other means to a *de minimis* number of clients (less than 15 within a 12-month period). *See* Advisers Act Rule 203A-2(e)(1)(i).

Digital advisers generally manage client assets on a discretionary basis through separately managed account and wrap programs,[63] which are subject to a longstanding regulatory regime under Rule 3a-4 of the Investment Company Act of 1940 ("Company Act"). Rule 3a-4 provides advisers that manage discretionary investment advisory programs with a nonexclusive safe harbor from being classified as operating an investment company (or mutual fund), which therefore requires the advisers to comply with extensive compliance and reporting requirements under the Company Act.[64] Rule 3a-4 was designed to address programs where advisers seek "to provide the same or similar professional portfolio management services on a discretionary basis to a large number of advisory clients having relatively small amounts to invest."[65] Advisory programs that are organized and operated in accordance with the rule are not deemed to be *de facto* investment companies so long as they comply with a number of conditions designed to ensure that clients receive individualized treatment and there is no pooling of assets.

In a typical discretionary digital advice program, investors establish individual brokerage accounts to custody their assets, and the digital adviser selects and manages a portfolio of ETFs based on an asset allocation recommended by the adviser and selected by the client. Although many digital advisory services give clients the flexibility to change their asset allocation on a regular basis through a website or mobile application, the digital adviser retains the authority to manage the account based on the asset allocation parameters the client designates. This type of digital advisory service is not a radical departure from the norm. To the contrary, the wealth-management industry, which includes separately managed account and wrap fee programs, today accounts for $4.2 trillion in assets under management.[66]

Critics argue that digital advisers may be operating as unregistered investment companies because they do not meet two key provisions of the Rule 3a-4 safe harbor.[67] The first is that "each client's account in the program is managed on the basis of the client's financial situation and investment objectives and in accordance with any reasonable restrictions imposed by the client on the

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[63] A wrap fee program, as defined by the SEC's Glossary of Terms to Form ADV, is "any advisory program under which a specified fee or fees not based directly upon transactions in a client's account is charged for investment advisory services (which may include portfolio management or advice concerning the selection of other investment advisers) and the execution of client transactions."

[64] *Status of Investment Advisory Programs Under the Investment Company Act of 1940*, Investment Company Act Rel. No. 22579 [hereinafter, "Rule 3a-4 Adopting Release"] (Mar. 24, 1997). Note that Rule 3a-4 formalized a long line of no-action letters that went back to 1980 that included conditions on which the rule was ultimately based.

[65] *Id.*

[66] Money Management Institute, *MMI Reports Investment Advisory Solutions Assets Rose 1.6% to $4.2 Trillion in First Quarter* (June 20, 2016), *available at* http://www.mminst.org/press-releases/mmi-reports-investment-advisory-solutions-assets-rose-16-42-trillion-first-quarter.

[67] *See, e.g.*, Fein, *Robo-Advisors: A Closer Look, supra* note 3, at 16 (stating that "[r]obo-advisors may be acting as unregistered investment companies in violation of the Investment Company Act of 1940 and SEC regulations thereunder" and questioning whether they meet the requirements of Rule 3a-4 "to the extent they do not manage client accounts on the basis of each client's financial situation and clients do not have reasonable access to personnel who are available to consult with the client").

management of the account."[68] The second is that the "sponsor and personnel of the manager of the client's account who are knowledgeable about the account and its management are reasonably available to the client for consultation."[69] Leaving aside the question of whether any particular digital adviser needs to take advantage of the safe harbor provided by Rule 3a-4 based on the particular characteristics of its advisory programs – these critics tend to take a narrow view of the rule's conditions.

With respect to the first provision relating to individualized advice, it is important to understand that this requirement of Rule 3a-4 is not a suitability rule that requires advisers to collect specific information concerning the financial situation and investment objectives of each client, nor does the rule dictate the quantity of information that must be collected. Rather, the intent of this provision is to negate the inference that the discretionary managed account program is operating as a pooled investment company. In most cases, digital advisers do far more than simply provide online tools that allow self-directed investors to determine their own risk tolerance and investment preferences and then subscribe to a model portfolio designed for investors with similar preferences.[70] Moreover, in many respects, digital advisers permit far more customization than the traditional approach of simply giving clients the ability to impose reasonable restrictions on the management of their accounts by designating certain ticker or security limitations. Digital advisers offer many features and tools that a client or adviser may use to personalize portfolios, including financial planning tools to inform portfolio selection; portfolio allocations that clients may customize to their desired asset class mix; the ability to retain legacy positions; sophisticated, technology-driven portfolio rebalancing based on market changes, cash in-flows and out-flows, and risk parameters; and asset placement and tax-loss harvesting services. The result is that clients receive investment advice that is customized to their particular investment goals and needs.

Moreover, digital advisers are "reasonably available" to clients consistent with Rule 3a-4. In fact, they are arguably more available than traditional advisers. The requirement that the manager of the account be reasonably available for consultation is one of many factors that distinguish a separate account holder from a mutual fund investor. A mutual fund investor generally would not have access to the portfolio manager of the fund. But, Rule 3a-4 does not dictate how that access needs to be accomplished. Digital advisers typically provide their clients with around-the-clock access to a great deal of interactive real-time information about the holdings, performance and attributes of their accounts. In addition, this business model puts a premium on transparency – frankly, in a way that more traditional (nondigital) investment solutions do not. Digital advisers generally make a great deal of information about their investment philosophy and approach available to investors through articles, blogs and social media posts. Further, many digital advisers supplement their online offerings with telephone, email and chat features that allow clients to ask more specific questions about the management of their accounts in real time.

It is not surprising that the application of Rule 3a-4 looks different in the context of a digital offering, but that does not mean that digital advisers are operating unregistered investment companies. To the contrary, under digital offerings clients still receive the benefit of personalized advice and individualized treatment, and maintain all of the indicia of ownership of the ETFs and

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[68] 17 C.F.R. § 270.3a-4(a)(1).

[69] Id. at § 270.3a-4(a)(2)(iv).

[70] *Cf.* Fein, *Robo-Advisors: A Closer Look, supra* note 3 at 12.

other securities held in their accounts.

DIGITAL ADVICE IS HUMAN ADVICE, WITH CERTAIN UNIQUE ADVANTAGES

Digital advisers possess unique advantages that strengthen the fiduciary relationship and promote the delivery of sophisticated, consistent advice. Critics have sought to exaggerate the differences between traditional and digital advisers by characterizing digital advisers as "robots." As discussed below, this ignores the centrality of humans in providing digital advice, and the many advantages that digital advisers bring to the table that enable them to provide advisory services to clients in innovative and powerful ways.

Digital advice presents strong advantages with respect to the consistency, precision, and predictability of advice.

First, the algorithms used by digital advisers are developed by humans, and are monitored and overseen by investment and technology professionals. Rather than take human judgment out of the equation, the skill and investment expertise of these professionals is reflected in the algorithms used to manage client accounts. Digital advisers thus leverage technology to make the value provided by talented portfolio managers and investment professionals available to the broadest universe of clients. Further, digital advice presents strong advantages with respect to the consistency, precision, and predictability of advice.[71] Unlike advice delivered exclusively by individual human financial advisors, digital advice can mitigate instances of distraction, fatigue, or human bias that can lead to negative client investment outcomes or costly trade errors.

Additionally, digital advice tools can be used to rebalance portfolios, conduct daily portfolio reviews and apply new investment insights across many different client accounts in a way that would not be economically or operationally feasible for individual human financial advisors. This promotes faster, smarter and more effective investment decisions, which can help client portfolios stay on track and within applicable risk thresholds and efficiently allocate even the smallest cash flows across their investment portfolio. Moreover, automated investing enables digital advisers to more effectively implement their compliance programs and meet regulatory obligations. In contrast to advice delivered through individual human financial advisors, which may be offered *ad-hoc*, by phone, or conducted without reliable documentation, digital advice enables the consistent application of investment methodologies and strategies to client accounts, providing transparency, improved recordkeeping, and ease of audit.[72]

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[71] *See, e.g.*, Thomas Philippon, *The FinTech Opportunity* at 18 (July 2015) *available at* http://pages.stern.nyu.edu/~tphilipp/papers/FinTech.pdf (noting that digital advice is likely to perform better, on average, than human advice, as empirical studies reveal that human advice is subject to behavioral biases, misconduct, and returns-chasing patterns that statistically result in negative investment outcomes).

[72] *Id*. (noting that algorithmic advice promotes ease of monitoring and predictability of investment decisions as compared to human advisers).

Second, humans are operationally present, and in certain instances supplement, digital advice. A number of digital advisers offer live customer support to assist clients and answer service-related questions. Some digital advisers offer a so-called "hybrid model" where clients have the ability to speak with live investment adviser representatives. Digital advisers also have the capability to communicate instantaneously through email, mobile applications and their web interfaces to clients at a scale that far surpasses what an individual human financial advisor would be able to accomplish. Such communication features can be used to provide real-time account data or tailored portfolio analysis to clients at intervals of their choosing. Whereas an individual human financial advisor may be unable to reach even a small subset of its clients in a timely manner, a digital adviser may provide important and personalized account updates to its clients on a real-time basis.

Whereas an individual human financial advisor may be unable to reach even a small subset of its clients in a timely manner, a digital adviser may provide important and personalized account updates to its clients on a real-time basis.

Finally, digital investment advice platforms are able to leverage behavioral finance insights to offer innovative services and account features in a timely and consistent way. Digital advisers may collect data and observations based on a client's online behavior (either individually or in the aggregate) and use the information to enhance the client experience and promote positive investment outcomes.[73] For instance, digital advisers may observe that investors who look at their accounts frequently are more inclined to rebalance their portfolios in the event of minor losses that result from normal intraday market movements. In this way, digital advisers are able to focus on the actual behavioral patterns of clients, and this observed behavior tends to offer insights that clients are not aware of or may not voice to their financial advisors. Digital advisers may leverage such observations to guide investors away from missteps that could lead to negative investment outcomes. In response to actions involving contributions to or transfers from advisory accounts, for example, digital advisers can provide personalized recommendations and reminders that promote positive financial behaviors. These communications may take the form of reinforcement of savings and guidance around transfers that may have undesirable tax consequences.[74]

CONCLUSION

Under established principles of fiduciary law, digital advisers are capable of fulfilling fiduciary standards that are consistent with the scope and nature of the advisory services they provide to clients. Rather than a radical departure, digital advice reflects the technological evolution of traditional advisory services and thus fits entirely within the existing regulatory framework governing investment advisers.

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[73] Brad M. Barber & Terrance Odean, "Trading is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors," *The Journal of Finance*, Vol. LV, No. 2 (Apr. 2000), *available at* https://faculty.haas.berkeley.edu/odean/Papers%20current%20versions/Individual_Investor_Performance_Final.pdf.

[74] *See* Brad M. Barber & Terrance Odean, "The Behavior of Individual Investors" (Sept. 2011), *available at* http://www.umass.edu/preferen/You%20Must%20Read%20This/Barber-Odean%202011.pdf.

Moreover, any meaningful discussion of digital advice should acknowledge that it offers the investing public a high-quality, transparent advisory product that entails a different blend of services, at a lower cost, than traditional advisers. Digital advice can help achieve the important policy objective of addressing the retirement crisis by providing advice that is accessible to individual investors – both financially and technologically. That includes investors who do not qualify for, or may not be able to afford, traditional advice. For such investors, the choice is not between traditional advice and digital advice. The choice is between digital advice and no advice. Digital advice that is offered in a responsible manner, consistent with applicable fiduciary standards and the existing regulatory requirements imposed by the Advisers Act, is the far better option.

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Tab 11

NATIONAL EXAM PROGRAM
RISK ALERT

By the Office of Compliance Inspections and Examinations ("OCIE")[1]

This Risk Alert provides a summary of observations from OCIE's examinations of registered broker-dealers, investment advisers, and investment companies conducted pursuant to the Cybersecurity Examination Initiative announced on September 15, 2015.

Volume VI, Issue 5 **August 7, 2017**

OBSERVATIONS FROM CYBERSECURITY EXAMINATIONS

I. Introduction

In OCIE's Cybersecurity 2 Initiative, National Examination Program staff examined 75 firms, including broker-dealers, investment advisers, and investment companies ("funds") registered with the SEC to assess industry practices and legal and compliance issues associated with cybersecurity preparedness.[2] The Cybersecurity 2 Initiative built upon prior cybersecurity examinations, particularly OCIE's 2014 Cybersecurity 1 Initiative.[3] However, the Cybersecurity 2 Initiative examinations involved more validation and testing of procedures and controls surrounding cybersecurity preparedness than was previously performed.

The examinations focused on the firms' written policies and procedures regarding cybersecurity, including validating and testing that such policies and procedures were implemented and followed. In addition, the staff sought to better understand how firms managed their cybersecurity preparedness by focusing on the following areas: (1) governance and risk assessment; (2) access rights and controls; (3) data loss prevention; (4) vendor management; (5) training; and (6) incident response.

In general, the staff observed increased cybersecurity preparedness since our 2014 Cybersecurity 1 Initiative. However, the staff also observed areas where compliance and oversight could be improved. This Risk Alert provides a summary of the staff's observations from the Cybersecurity 2 Initiative

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[1] The views expressed herein are those of the staff of OCIE, in coordination with other staff of the Securities and Exchange Commission ("SEC" or "Commission"). The Commission has expressed no view on the contents of this Risk Alert. This document was prepared by the SEC staff and is not legal advice.

[2] *See* OCIE, *Examination Priorities for 2015* (January 13, 2015) and *National Exam Program Risk Alert, OCIE's 2015 Cybersecurity Examination Initiative* (September 15, 2015). A few of the staff's observations discussed herein were previously discussed in a recent *National Exam Program Risk Alert, Cybersecurity: Ransomware Alert* (May 17, 2017).

[3] *See* OCIE, *OCIE Cybersecurity Initiative* (April 15, 2014) and *National Exam Program Risk Alert, Cybersecurity Examination Sweep Summary* (February 3, 2015). The staff examined a different population of firms in the Cybersecurity 2 Initiative than those that were examined in the Cybersecurity 1 Initiative.

examinations and highlights certain issues observed as well as certain policies and procedures that the staff believes may be effective.[4]

II. Summary of Examination Observations

Among the 75 firms examined, the staff noted an overall improvement in firms' awareness of cyber-related risks and the implementation of certain cybersecurity practices since the Cybersecurity 1 Initiative. Most notably, all broker-dealers, all funds, and nearly all advisers examined maintained cybersecurity-related written policies and procedures addressing the protection of customer/shareholder records and information. This contrasts with the staff's observations in the Cybersecurity 1 Initiative, in which comparatively fewer broker-dealers and advisers had adopted this type of written policies and procedures.

In the examinations, the staff observed:

- Nearly all broker-dealers and the vast majority of advisers and funds conducted periodic risk assessments of critical systems to identify cybersecurity threats, vulnerabilities, and the potential business consequences of a cyber incident.

- Nearly all broker-dealers and almost half of the advisers and funds conducted penetration tests and vulnerability scans on systems that the firms considered to be critical, although a number of firms did not appear to fully remediate some of the high risk observations that they discovered from these tests and scans during the review period.

- All firms utilized some form of system, utility, or tool to prevent, detect, and monitor data loss as it relates to personally identifiable information.

- All broker-dealers and nearly all advisers and funds had a process in place for ensuring regular system maintenance, including the installation of software patches to address security vulnerabilities. However, the staff observed that a few of the firms had a significant number of system patches that, according to the firms, included critical security updates that had not yet been installed.

- Information protection programs at the firms typically included relevant cyber-related topics, such as:

    - *Policies and procedures*. Nearly all firms' policies and procedures addressed cyber-related business continuity planning and Regulation S-P.[5] In addition, nearly all broker-dealers and

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[4] The examinations were conducted between September 2015 and June 2016 and generally covered the review period October 1, 2014 through September 30, 2015.

[5] *See* 17 C.F.R. Part 248, Subpart A—*Regulation S–P: Privacy of Consumer Financial Information and Safeguarding Personal Information*. *See also* *Disposal of Consumer Report Information*, Securities Exchange Act of 1934 ("Exchange Act") Release No. 50781, Investment Advisers Act of 1940 ("Advisers Act") Release No. 2332, Investment Company Act of 1940 ("Investment Company Act") Release No. 26685 (December 2, 2004), 69 Fed. Reg. 71321 (December 8, 2004) and *Privacy of Consumer Financial Information (Regulation S-P)*, Exchange Act Release No. 42974, Investment Company Act Release No. 24543, Advisers Act Release No. 1883 (June 22, 2000), 65 Fed. Reg. 40334 (June 29, 2000).

most advisers and funds had specific cybersecurity and Regulation S-ID[6] policies and procedures.

  - *Response plans.* Nearly all of the firms had plans for addressing access incidents. In addition, the vast majority of firms had plans for denial of service incidents and unauthorized intrusions. However, while the vast majority of broker-dealers maintained plans for data breach incidents and most had plans for notifying customers of material events, less than two-thirds of the advisers and funds appeared to maintain such plans.

- All broker-dealers and a large majority of advisers and funds maintained cybersecurity organizational charts and/or identified and described cybersecurity roles and responsibilities for the firms' workforce.

- The vast majority of broker-dealers and nearly two-thirds of the advisers and funds had authority from customers/shareholders to transfer funds to third party accounts.

  - Some of the broker-dealers did not appear to memorialize their processes into written supervisory procedures. Rather, these broker-dealers appeared to have informal practices for verifying customers' identities in order to proceed with requests to transfer funds.

  - All of the advisers and funds maintained policies, procedures, and standards related to verifying the authenticity of a customer/shareholder who was requesting to transfer funds.

- Almost all firms either conducted vendor risk assessments or required that vendors provide the firms with risk management and performance reports (i.e., internal and/or external audit reports) and security reviews or certification reports. While vendor risk assessments are typically conducted at the outset of a relationship, over half of the firms also required updating such risk assessments on at least an annual basis.

III. Issues Observed

The staff observed one or more issues in the vast majority of the Cybersecurity 2 Initiative examinations. Highlighted below are issues the staff believes firms would benefit from considering in order to assess and improve their policies, procedures, and practices.

- While, as noted above, all broker-dealers and funds, and nearly all advisers maintained written policies and procedures addressing cyber-related protection of customer/shareholder records and information, a majority of the firms' information protection policies and procedures appeared to have issues. Examples included:

  - *Policies and procedures were not reasonably tailored* because they provided employees with only general guidance, identified limited examples of safeguards for employees to consider, were very narrowly scoped, or were vague, as they did not articulate procedures for implementing the policies.

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[6] *See* 17 C.F.R. Part 248, Subpart C—*Regulation S–ID: Identity Theft Red Flags*. *See also* Identity Theft Red Flags Rules, Exchange Act Release No. 69359, Advisers Act Release No. 3582, Investment Company Act Release No. 30456 (April 10, 2013), 78 Fed. Reg. 23637 (April 19, 2013).

- *Firms did not appear to adhere to or enforce policies and procedures, or the policies and procedures did not reflect the firms' actual practices*, such as when the policies:

  - Required annual customer protection reviews; however, in practice, they were conducted less frequently.

  - Required ongoing reviews to determine whether supplemental security protocols were appropriate; however, such reviews were performed only annually, or not at all.

  - Created contradictory or confusing instructions for employees, such as policies regarding remote customer access that appeared to be inconsistent with those for investor fund transfers, making it unclear to employees whether certain activity was permissible.

  - Required all employees to complete cybersecurity awareness training; however, firms did not appear to ensure this occurred and take action concerning employees who did not complete the required training.

- The staff also observed Regulation S-P-related issues among firms that did not appear to adequately conduct system maintenance, such as the installation of software patches to address security vulnerabilities and other operational safeguards to protect customer records and information. Examples included:

  - *Stale Risk Assessments*. Using outdated operating systems that were no longer supported by security patches.

  - *Lack of Remediation Efforts*. High-risk findings from penetration tests or vulnerability scans that did not appear to be fully remediated in a timely manner.

IV. Elements of Robust Policies and Procedures[7]

During these examinations, the staff observed several elements that were included in the policies and procedures of firms that the staff believes had implemented robust controls. Firms may wish to consider the following elements as they could be useful in the implementation of cybersecurity-related policies and procedures.[8]

- *Maintenance of an inventory of data, information, and vendors*. Policies and procedures included a complete inventory of data and information, along with classifications of the risks,

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[7] This is not intended to be a comprehensive list of the elements of robust cybersecurity policies and procedures. The adequacy of supervisory, compliance, and other risk management policies and procedures can be determined only with reference to the profile of each specific firm and other facts and circumstances.

[8] Firms may also wish to consider the guidance and information issued by the SEC's Division of Investment Management and the cybersecurity issues discussed in Commission orders in settled enforcement proceedings. *See, e.g.*, *IM Guidance Update: Cybersecurity Guidance* (April 2015), *In re Morgan Stanley Smith Barney LLC*, Exchange Act Release No. 78021, Advisers Act Release No. 4415 (June 8, 2016), *In re R.T. Jones Capital Equities Management Inc.*, Advisers Act Release No. 4204 (September 22, 2015), and *In re Craig Scott Capital LLC*, Exchange Act Release No. 77595 (April 12, 2016).

vulnerabilities, data, business consequences, and information regarding each service provider and vendor, if applicable.

- *Detailed cybersecurity-related instructions*. Examples included:

  - Penetration tests – policies and procedures included specific information to review the effectiveness of security solutions.

  - Security monitoring and system auditing – policies and procedures regarding the firm's information security framework included details related to the appropriate testing methodologies.

  - Access rights – requests for access were tracked, and policies and procedures specifically addressed modification of access rights, such as for employee on-boarding, changing positions or responsibilities, or terminating employment.

  - Reporting – policies and procedures specified actions to undertake, including who to contact, if sensitive information was lost, stolen, or unintentionally disclosed/misdirected.

- *Maintenance of prescriptive schedules and processes for testing data integrity and vulnerabilities*. Examples included:

  - Vulnerability scans of core IT infrastructure were required to aid in identifying potential weaknesses in a firm's key systems, with prioritized action items for any concerns identified.

  - Patch management policies that included, among other things, the beta testing of a patch with a small number of users and servers before deploying it across the firm, an analysis of the problem the patch was designed to fix, the potential risk in applying the patch, and the method to use in applying the patch.

- *Established and enforced controls to access data and systems*. For example, the firms:

  - Implemented detailed "acceptable use" policies that specified employees' obligations when using the firm's networks and equipment.

  - Required and enforced restrictions and controls for mobile devices that connected to the firms' systems, such as passwords and software that encrypted communications.

  - Required third-party vendors to periodically provide logs of their activity on the firms' networks.

  - Required immediate termination of access for terminated employees and very prompt (typically same day) termination of access for employees that left voluntarily.

- *Mandatory employee training.* Information security training was mandatory for all employees at on-boarding and periodically thereafter, and firms instituted policies and procedures to ensure that employees completed the mandatory training.

- *Engaged senior management*. The policies and procedures were vetted and approved by senior management.

V. Conclusion

Cybersecurity remains one of the top compliance risks for financial firms.[9] As noted in OCIE's 2017 priorities, OCIE will continue to examine for cybersecurity compliance procedures and controls, including testing the implementation of those procedures and controls at firms.[10]

This Risk Alert is intended to highlight for firms the risks and issues that the staff identified during examinations of broker-dealers, investment advisers, and investment companies regarding cybersecurity preparedness. In addition, this Risk Alert describes factors that firms may consider to (1) assess their supervisory, compliance and/or other risk management systems related to cybersecurity risks, and (2) make any changes, as may be appropriate, to address or strengthen such systems. These factors are not exhaustive, nor will they constitute a safe harbor. Factors other than those described in this Risk Alert may be appropriate to consider, and some of the factors may not be applicable to a particular firm's business. While some of the factors discussed in this Risk Alert reflect existing regulatory requirements, they are not intended to alter such requirements. Moreover, future changes in laws or regulations may supersede some of the factors or issues raised herein. The adequacy of supervisory, compliance, and other risk management systems can be determined only with reference to the profile of each specific firm and other facts and circumstances.

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9 *See*, *e.g.*, Investment Adviser Association, ACA Compliance Group, and OMAM, *2016 Investment Management Compliance Testing Survey* (June 23, 2016), which synthesizes 730 adviser compliance professionals' responses to 94 compliance-related questions. Q94: 88% of advisers view cybersecurity, privacy, and identity theft as the hottest compliance topic for 2016.

10 OCIE, *Examination Priorities for 2017* (January 12, 2017).

Tab 12

IM Guidance Update

APRIL 2015 | No. 2015-02

CYBERSECURITY GUIDANCE

The Division has identified the cybersecurity of registered investment companies ("funds") and registered investment advisers ("advisers") as an important issue. Both funds and advisers increasingly use technology to conduct their business activities and need to protect confidential and sensitive information related to these activities from third parties, including information concerning fund investors and advisory clients. This guidance update highlights the importance of the issue and discusses a number of measures that funds and advisers may wish to consider when addressing cybersecurity risks. Because of the rapidly changing nature of cyber threats, the Division will continue to focus on cybersecurity and monitor events in this area.

Cyber attacks on a wide range of financial services firms highlight the need for firms to review their cybersecurity measures. Discussions concerning cybersecurity with fund boards and senior management at advisers during the course of the Division's senior level engagement and monitoring efforts also stressed this need, as did input from the Office of Compliance Inspections and Examinations' review of adviser cybersecurity practices.[1] In addition, the Cybersecurity Roundtable hosted by the Commission last spring highlighted the importance of cybersecurity and the issues and challenges it raises for the financial services sector.[2]

In the staff's view, there are a number of measures that funds and advisers may wish to consider in addressing cybersecurity risk, including the following, to the extent they are relevant:[3]

- Conduct a periodic assessment of: (1) the nature, sensitivity and location of information that the firm collects, processes and/or stores, and the technology systems it uses; (2) internal and external cybersecurity threats to and vulnerabilities of the firm's information and technology systems; (3) security controls and processes currently in place; (4) the impact should the information or technology systems become compromised; and (5) the effectiveness of the governance structure for the management of cybersecurity risk. An effective assessment would assist in identifying potential cybersecurity threats and vulnerabilities so as to better prioritize and mitigate risk.[4]

- Create a strategy that is designed to prevent, detect and respond to cybersecurity threats. Such a strategy could include: (1) controlling access to various systems and data via management of user credentials, authentication and authorization methods, firewalls and/or perimeter defenses, tiered access to sensitive information and network resources, network segregation, and system hardening;[5] (2) data encryption; (3) protecting against the loss or exfiltration of sensitive data by restricting the use of removable storage media and deploying software that monitors technology systems for unauthorized intrusions, the loss or exfiltration of sensitive data, or other unusual events;[6] (4) data backup and retrieval; and (5) the development of an incident response plan. Routine testing of strategies could also enhance the effectiveness of any strategy.

- Implement the strategy through written policies and procedures and training that provide guidance to officers and employees concerning applicable threats and measures to prevent, detect and respond to such threats, and that monitor compliance with cybersecurity policies and procedures. Firms may also wish to educate investors and clients about how to reduce their exposure to cyber security threats concerning their accounts.

In the staff's view, funds and advisers should identify their respective compliance obligations under the federal securities laws and take into account these obligations when assessing their ability to prevent, detect and respond to cyber attacks. Funds and advisers could also mitigate exposure to any compliance risk associated with cyber threats through compliance policies and procedures that are reasonably designed to prevent violations of the federal securities laws.[7] For example, the compliance program of a fund or an adviser could address cybersecurity risk as it relates to identity theft and data protection,[8] fraud,[9] and business continuity,[10] as well as other disruptions in service that could affect, for instance, a fund's ability to process shareholder transactions.[11] Accordingly, funds and advisers may wish to consider reviewing their operations and compliance programs and assess whether they have measures in place that are designed to mitigate their exposure to cybersecurity risk. Because funds and advisers are varied in their operations, they should tailor their compliance programs based on the nature and scope of their businesses. Additionally, because funds and advisers rely on a number of service providers in carrying out their operations, funds and advisers may also wish to consider assessing whether protective cybersecurity measures are in place at relevant service providers.[12]

The staff believes that funds and advisers will be better prepared if they consider the measures discussed herein based on their particular circumstances when planning to address cybersecurity and a rapid response capability. The staff also recognizes that it is not possible for a fund or adviser to anticipate and prevent every cyber attack. Appropriate planning to address cybersecurity and a rapid response capability may, nevertheless, assist funds and advisers in mitigating the impact of any such attacks and any related effects on fund investors and advisory clients, as well as complying with the federal securities laws.[13]

Endnotes

1 *See OCIE Cybersecurity Examination Sweep Summary*, OCIE, National Exam Program Risk Alert, Vol. IV, Issue 4 (Feb. 3, 2015), *available at* http://www.sec.gov/about/offices/ocie/cybersecurity-examination-sweep-summary.pdf (providing summary observations from the examinations of 57 broker-dealers and 49 advisers conducted under OCIE's Cybersecurity Initiative). *See also OCIE Cybersecurity Initiative*, OCIE, National Exam Program Risk Alert, Vol. IV, Issue 2 (Apr. 15, 2014), *available at* http://www.sec.gov/ocie/announcement/Cybersecurity-Risk-Alert--Appendix---4.15.14.pdf.

2 *See generally* Cybersecurity Roundtable, SEC, *available at* http://www.sec.gov/spotlight/cybersecurity-roundtable.shtml.

3 These suggested measures are not intended to be comprehensive and other measures may be better suited depending on the operations of a particular fund or adviser. Each fund or adviser should determine whether these or other measures need to be considered in connection with addressing cybersecurity risks.

4 Funds and advisers that are affiliated with other entities that share common networks should consider whether it may be appropriate to conduct an assessment of the entire corporate network.

5 System hardening refers to making technology systems less susceptible to unauthorized intrusions by removing all non-essential software programs and services, unnecessary usernames and logins and by ensuring that software is updated continuously.

6 Funds and advisers may also wish to consider implementing a mechanism to monitor for ongoing and new cyber threats by gathering information from outside resources, such as vendors, third-party contractors specializing in cybersecurity and technical standards, and topic-specific publications and conferences, as well as participating in the Financial Services—Information Sharing and Analysis Center (FS-ISAC). In addition, participating in information sharing organizations, such as FS-ISAC, would enable funds and advisers to share cyber threat information with other members in the financial services sector.

7 17 CFR 270.38a-1; 17 CFR 275.206(4)-7(a). *See also generally Compliance Programs of Investment Companies and Investment Advisers*, Investment Company Act Release No. 26299 (Dec. 17, 2003), *available at* www.sec.gov/rules/final/ia-2204.htm ("Compliance Programs") (requiring not only the adoption and implementation of written policies and procedures, but also an annual review for their adequacy and effectiveness of their implementation); *Questions Advisers Should Ask While Establishing or Reviewing Compliance Programs*, SEC Staff Report (May 2006), *available at* http://www.sec.gov/info/cco/adviser_compliance_questions.htm (last modified Feb. 5, 2009) (asking, among other things, whether an adviser's "electronic information systems, both internal and those supplied by third parties, effectively detect and prevent malicious intrusions from internal and external sources") ("Establishing or Reviewing Compliance Programs").

8 *See, e.g., Identity Theft Red Flag Rules*, Investment Advisers Act Release No. 3582 (Apr. 10, 2013), *available at* www.sec.gov/rules/final/2013/34-69359.pdf; *Privacy of Consumer Financial Information (Regulation S-P)*, Investment Advisers Act Release No. 1883 (June 22, 2000), *available at* http://www.sec.gov/rules/final/34-42974.htm. In formulating or reviewing their compliance programs, firms may also wish to consider, as appropriate, addressing the protection of commercial or market-sensitive information, the disclosure of which could adversely affect customers' interests. *See generally Information for Newly-Registered Investment Advisers*, SEC Staff Information Sheet, *available at* http://www.sec.gov/divisions/investment/advoverview.htm (last modified Nov. 23, 2010); Establishing or Reviewing Compliance Programs, *supra* note 7.

9 Fraudulent activity could result from cyber or data breaches from insiders, such as fund or advisory personnel, and funds and advisers may therefore wish to consider taking appropriate precautions concerning information security. *See, e.g.*, 17 CFR 270.17j-1; 17 CFR 275.204A-1. *See also generally Personal Investment Activities of Investment Company Personnel*, Investment Company Act Release No. 23958 (Aug. 24, 1999), *available at* http://www.sec.gov/rules/final/ia-1815.htm (stating that rule 17j-1 "prohibits fraudulent, deceptive or manipulative acts by fund personnel in connection with their personal transactions in securities held or to be acquired by the fund"); *Investment Adviser Codes of Ethics*, Investment Advisers Act Release No. 2256 (July 2, 2004), *available at* http://www.sec.gov/rules/final/ia-2256.htm (stating that rule 204A-1 will benefit advisers "by renewing their attention to their fiduciary and other legal obligations, and by increasing their vigilance against inappropriate behavior by employees").

10 *See* Compliance Programs, *supra* note 7, at n.22 (stating that an "an adviser's fiduciary obligation to its clients includes obligations to its clients from being placed at risk as a result of the adviser's inability to provide advisory services").

11 If a shareholder of an open-end fund initiated a transaction to redeem his or her shares in that fund and an ensuing cyber attack prevented the fund from processing and redeeming the shares, the fund may be in violation of section 22(e) of the Investment Company Act of 1940 ("Investment Company Act") and rule 22c-1 thereunder. Section 22(e) of the Investment Company Act generally prohibits an open-end fund from suspending the right of redemption or postponing the date of payment of redemption proceeds for more than seven days after tender of a security for redemption, whereas rule 22c-1 under the Investment Company Act generally requires an open-end fund selling, redeeming or repurchasing a redeemable security, to do so only at a price based on its net asset value next computed after receipt of a purchase order or redemption request. Cyber attacks could also prevent both funds and advisers from investing or managing assets in a manner consistent with each of their particular representations and/or contractual provisions.

12 For example, service providers may be given limited access to a fund's technology systems that may inadvertently enable unauthorized access to data held by the fund. Funds, as well as advisers, may wish to consider reviewing their contracts with their service providers to determine whether they sufficiently address technology issues and related responsibilities in the case of a cyber attack. Funds and advisers may also wish to consider assessing whether any insurance coverage related to cybersecurity risk is necessary or appropriate.

13 OCIE's Cybersecurity Initiative contained a sample list of requests for information, which included questions that tracked information outlined in the "Framework for Improving Critical Infrastructure Cybersecurity." *See* OCIE Cybersecurity Initiative, *supra* note 1. Funds and advisers may wish to consult this Framework when considering a strategy to mitigate exposure to cyber attacks. *See* National Institute of Standards and Technology, "Framework for Improving Critical Infrastructure Cybersecurity," (Feb. 12, 2014), *available at* http://www.nist.gov/cyberframework/upload/cybersecurity-framework-021214-final.pdf.

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