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Submitted electronically

Ms. Jennifer Piorko Mitchell
Office of the Corporate Secretary
Financial Industry Regulatory Authority
1735 K Street, NW
Washington, DC 20006-1506

Re: Special Notice on Financial Technology Innovation

Dear Ms. Mitchell:

Fidelity Investments ("Fidelity")[1] appreciates the opportunity to provide comments on the Financial Industry Regulatory Authority's ("FINRA's") *Special Notice on Financial Technology Innovation in the Broker-Dealer Industry*.[2]

INTRODUCTION & SUMMARY

Fidelity offers its insights as an investor in, and creator and developer of, fintech products and services on behalf of our customers, retirement plan participants and institutional clients.[3] A technology focus permeates practically every corner of our firm, from experimenting with new and emerging technologies to developing best in class and innovative products and services for our clients. Specifically, Fidelity is an innovator in a wide array of such fintech areas as data aggregation, digital advisory products, planning and guidance tools, student loans, social media and virtual assistants.[4]

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[1] Fidelity is a leading provider of investment management, retirement planning, portfolio guidance, brokerage, benefits outsourcing, and other financial products and services to more than 27 million individuals, institutions, and financial intermediaries with more than $7 trillion in assets under administration. Our goal is to make financial expertise broadly accessible and effective in helping people live the lives they want to lead.

[2] *See Special Notice*, *Financial Technology Innovation* (July 30, 2018), available at http://www.finra.org/sites/default/files/Special-Notice-073018.pdf (the "Notice").

[3] *See, e.g.*, *Fidelity's Subramaniam: We're a Tech Company That Happens to be in Finance*, at https://www.wealthmanagement.com/technology/fidelitys-subramaniam-were-tech-company-happens-be-finance; Kate Rooney, *72-year-old Fidelity bets on the future with blockchain, virtual reality and AI*, https://www.cnbc.com/2018/09/28/fidelity-the-tech-company.html. *See also* Fidelity Labs, at www.fidelitylabs.com.

[4] *See, e.g.*, *Fidelity Go®*, at *https://dpcs.fidelity.com/prgw/dpcs/dma/*; *Fidelity Estate Planner*, at www.fidelity.com/calculators-tools/fidelity-estate-planner; *Fidelity Student Debt Tool*, at www.fidelity.com/labs/student-loans/#/; *Fidelity Virtual Assistant*, at https://www.fidelity.com/retirement-guidance/overview.

The *Notice* describes FINRA's innovation outreach initiatives including issuing several investor alerts, starting a fintech industry committee and hosting symposiums and roundtables. Fidelity is very supportive of these efforts and FINRA's request for comments. We recommend continued vigilance in understanding how fintech is being developed and used in the financial services industry. Further, we recommend that FINRA continue to evaluate how securities regulations impact member firms' ability to develop and launch technology applications designed to benefit the investing public.

As discussed in more detail below, Fidelity recommends specifically that FINRA:

- Encourage member firms to implement and use application programming interfaces ("APIs") to improve data aggregation and promote adoption of appropriate security standards for the accessing, handling and use of financial account data accessible by third-parties;

- Further understand the scope of artificial intelligence technologies and bring together interested member firms to discuss how supervisory rules can be developed in this area;

- Evaluate the adoption of a limited pilot using one FINRA rule set to determine whether member firms, and perhaps vendors, can effectively use a machine-readable rulebook;

- Revise specific FINRA rules and regulations to reflect changes in technology by:

    - Streamlining regulatory requirements to provide member firms with the ability to more rapidly obtain public feedback when developing and testing new concepts;

    - Allowing member firms and associated personnel to more broadly use social media to interact with, and provide more helpful communications to, investors;

    - Revising FINRA's requirements to allow for remote supervisory inspections to facilitate evolving technology and workforce arrangements;

    - Eliminating "wet" signature requirements and allow for electronic signing and notarization of documents; and

    - Working with the Securities and Exchange Commission ("SEC") to revise the broker-dealer recordkeeping requirements to a technology neutral standard.

Each of these comments is discussed in more detail below.

DISCUSSION

I. Data Aggregation

FINRA invites comment reflecting the increased use of data aggregation services in the financial services industry. Fidelity has a unique perspective to share[5] as FINRA considers how it can support fintech innovation without adversely affecting investor protection or market integrity. Fidelity is on all sides of the data aggregation issue: we are an aggregator of data for third parties;[6] we are a significant source of data for aggregators acting on behalf of our mutual customers; and we offer a data aggregation service for our retail customers and retirement plan participants.[7] We believe that this perspective provides a thorough understanding of the benefits of financial data aggregation and also of the very real cybersecurity and privacy risks that current data aggregation industry practices create.[8]

The current cybersecurity environment has significantly changed and presents real challenges for current data aggregation practices that rely on consumers providing their financial institution's log-in credentials (*i.e.*, username and password) to third parties. These third parties, typically data aggregators, then almost always employ a practice known as "screen scraping."[9]

There are two very significant consumer data security problem that arise from screen scraping. First, under basic security practices, consumers should not be required to share their private log-in credentials to access a third-party service. Doing so creates cybersecurity, identity theft and data security risks for the consumer, as well as for their financial institution. Because

[5] A fuller statement of these views was expressed in *Testimony of Stuart Rubinstein, President, Fidelity Wealth Technologies & Head of Data Aggregation,* Before the U.S. Senate Committee on Banking Housing, and Urban Affairs, Hearing entitled "Fintech: Examining Digitization, Data, and Technology," dated Sept. 18, 2018.

[6] Financial advisors can use *eMoney Advisor*, a Fidelity-owned business that provides account aggregation services along with software that helps them provide financial advice to their clients.

[7] Fidelity offers its *FullView®* service to retail customers through Fidelity.com and to retirement plan participants through NetBenefits.com. Fidelity *FullView* provides a snapshot of customers' net worth in a simple format with an ability to do budgeting and financial planning.

[8] Financial data aggregation in this context refers to services that, with customers' consent, collect financial information from their various bank, brokerage and retirement accounts, along with other sources, to be displayed and processed in an aggregated view. An example of this kind of service might be a budgeting and planning smartphone app. Consumers use third party applications that leverage data aggregation because they value tools to help manage financial planning, budgeting, tax preparation and other services.

[9] Screen scraping involves the use of computerized "bots" to log-in to financial institution websites, mobile apps, or other applications as if they are the consumer. Once the bots access the site or app, they "scrape" customer data from various screens to then be presented on the aggregator's site or app on a consolidated basis along with information scraped and collected from other sources.

consumers go directly to data aggregators or their commercial clients,[10] and not to their financial institution, the financial institution cannot know whether the activity has been directly authorized by the consumer or alternatively that the credentials are being used for illicit or criminal purposes.

Second, screen scraping may result in access to data fields far beyond the scope of the service that a third party may offer to the consumer, including personally identifiable information ("PII") about consumers and in some cases the PII of their dependents.[11] Collection of information beyond what is needed for the aggregation service chosen by the consumer can create unnecessary risk for consumers and the financial institutions that are tasked with protecting their systems and clients' assets.[12]

In considering the challenges described above, Fidelity developed the following five principles that we believe should guide both those responsible for data and policymakers in creating better data sharing solutions:

- **Consumers have the right to access their own financial data and provide that data to third parties**. As a provider of aggregation services ourselves, we know that consumers value these products, and the demand for aggregation is likely to increase. We also believe that the concept of access is broad enough to encompass security, transparency and cybersecurity protections for consumers.

- **Data access and sharing should be done in a safe, secure and transparent manner**. While we strongly support consumer access, the security of data, consumer assets and financial institution systems is a primary concern.

- **Consumers should provide affirmative consent and instruction to financial institutions to share their data with third parties**. Rather than trust that third parties who use consumer log-in credentials to access a financial institution's website are authorized, consumers should tell financial institutions which third parties have permission to access their financial data. This eliminates the potential that unauthorized access using credentials is mistaken for authorized access.

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[10] An example of a commercial client of an aggregator might be an investment advisor or other financial institution that has hired the aggregator for data aggregation services.

[11] For example, if a consumer provides his or her log-in credentials to a budgeting app, that app potentially has access to sensitive personal information like customer dates of birth and dependent names and dates of birth, all of which might be data that financial institutions might use to verify customer identities online or over the phone.

[12] FINRA also helpfully described these issues in a recently published *Investor Alert*, "Know Before You Share: Be Mindful of Data Aggregation Risks" (Mar. 2018), at http://www.finra.org/investors/alerts/know-you-share-be-mindful-data-aggregation-risks.

- **Third parties should access the minimum amount of financial data they need to provide the service for which the consumer provided access**. There should be a tight nexus between the service provided and the information collected by third party aggregators. For example, if a consumer signs up for a tax planning service that leverages aggregation, that service should only access the information needed for tax planning.

- **Consumers should be able to monitor who has access to their data, and access should be easily revocable by the consumer**. We believe data sharing and permissioning should be an iterative process, with consumers engaged continuously.[13]

Fidelity believes that embracing these principles will better protect consumers, aggregators and financial institutions, and facilitate more efficient data sharing practices.

Although the risks and challenges of the current system are serious, Fidelity believes there are steps financial institutions and aggregators can take together to improve the data sharing ecosystem. These technologies involve the implementation and use of APIs,[14] which are provided by the financial institution to aggregators and other third parties. An API works in conjunction with an authentication process that is handled by the financial institution. There are authentication processes, for example "open authorization" ("OAuth"), which do not involve the sharing of account access credentials with third parties. Consumers who want their data aggregated sign into their accounts on the financial institution's website and provide authorization for third party aggregators to access their financial data. The financial institution and the data aggregator then manage that connection through secure, encrypted tokens that are provisioned for the specific connection.

We believe that there are several compelling consumer and data security benefits for moving to APIs. First, APIs keep log-in credentials private and secure by eliminating the need for consumers to share log-in credentials with third parties. This reduces the cyber, identity and personal data security risks that exist when a consumer shares private log-in details with a third party. Second, it puts consumers in the driver's seat in giving them greater transparency and control of their data by allowing consumers to provide unequivocal consent and instruction to share their data with third parties.

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[13] Moreover, many consumers believe revoking access is as easy as deleting an app from their phone—this is not the case. Consumers should be able easily to instruct their financial institution to revoke access when they no longer want or need the aggregation-based service.

[14] In November 2017, Fidelity announced its own API solution for data sharing called *Fidelity Access*[SM]. *Fidelity Access* will allow Fidelity customers to provide third parties access to customer data through a secure connection without providing log-in credentials. *Fidelity Access* will include a control center, where customers can grant, monitor and revoke account access at any time. We have been working closely with aggregators and other third parties on adoption of this solution. Of note, *eMoney Advisor*, a Fidelity company, offers its own aggregation service and is committed to working with other financial institutions that offer APIs.

Third, it allows financial institutions and aggregators to agree on what data should be shared and avoid over-scraping.[15] Fourth, it eliminates the need to reconfigure aggregators' systems every time a consumer changes his or her username or password or the financial institution updates its webpage. Fifth, it removes the traffic-intensive screen scraping activity from financial institutions' web sites and other digital properties, returning that capacity to the individual consumers for whom those sites were created.[16] Finally, it enables consumers to monitor the ongoing access and instruct their financial institution to revoke the consent if desired.

Despite the general consensus that the status quo is untenable and the industry should move to safer data sharing technologies, there are roadblocks that prevent wider adoption of APIs and other solutions. These challenges include (1) getting firms to adopt new technologies where existing practices have been the norm for decades; (2) the cost incurred in moving to safer technologies like APIs;[17] and (3) challenges surrounding apportioning liability, specifically with third party aggregators who want to limit their potential exposure in the event that financial data is illicitly obtained from them. Fidelity believes that firms who obtain and handle data for their customers should assume full responsibility to protect that data from unauthorized use.

While we applaud FINRA for publishing an *Investor Alert* that explains data aggregation and highlights the current risks of credential sharing for investors, Fidelity recommends that FINRA work with the financial services industry and data aggregators to promote adoption of APIs for use with data aggregation. FINRA should also work with the financial services industry to emphasize the adoption of appropriate security standards for the accessing, handling and use of customer data that has been accessed by third parties from member firms.

II. Supervision in the Context of Artificial Intelligence

FINRA states in the *Notice* that it "seeks to better understand the challenges or issues that broker-dealers may face in deploying artificial intelligence tools." The *Notice* also asks "what challenges, if any, do firms face as they seek to develop artificial intelligence tools – including

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[15] Consumers' interaction with broker-dealers often includes sensitive data, for example, pending orders for securities transactions; pending exercises of employee stock awards; transactions for dependents in college savings 529 plans; and transactions in health savings plans. Over scraping of data could result in sensitive data being scraped by third parties, which may not meet the expectations of consumers.

[16] The volume and timing of data calls by aggregation services on securities firms' websites, particularly during times of market stress or volatility, is an issue that FINRA should take note of considering its interest in ensuring that investors can obtain access to see their financial accounts and to conduct trades. *See* FINRA *Investor Alert,* "Guidance to Investors Regarding Stock Volatility and On-line Trading," at http://www.finra.org/investors/guidance-investors-regarding-stock-volatility-and-line-trading.

[17] We are sensitive to this increased cost which is why we provide *Fidelity Access* to third parties free of charge.

chat bots and RPA tools – and comply with the applicable FINRA requirements, including those noted above related to supervision?"[18]

The term "artificial intelligence" ("AI") is not defined in the *Notice*, and it is referenced in the text as encompassing machine learning, natural language processing, robotic process automation and chat bots. Each of these areas mentioned in the *Notice* has a distinct meaning beyond being labelled under the catch-all term -- artificial intelligence.[19] We recommend that FINRA take additional time to study and understand more thoroughly the different types of processes and algorithmic methodologies that are being developed and used in the financial services industry before embarking upon an effort to seek comment on and develop a regulatory framework in this area.

As an example of the complexity of use cases in this area, consider the many types of technologies that can be deployed in using chat bots with customers. A natural language-based search engine could be employed to allow customers to type in full sentences, and the chat bot then delivers relevant results based on those inputs after analyzing the sentence structure. Alternatively, a chat bot might be employed using machine learning algorithms that use a logic tree that compares a customer's inputted sentence to an expanding database of answers. Even further, a chat bot might be programmed to understand continuously a customer's digital actions and then deliver relevant and tailored responses based on these many different inputs. In each of these examples, different technologies and approaches are used to provide helpful services to customers and any approach to supervision should be informed of the actual processes in use rather than in the abstract.[20] Firms employing these technologies would develop different and tailored approaches to handling the data, the algorithms, the inputs and the outputs under FINRA's review, supervision and recordkeeping obligations.

Accordingly, FINRA should work first with outside experts to identify and understand the various types and kinds of technologies in this space. With this background, FINRA should then organize industry roundtables to discuss its findings with member firms and hear how member firms are approaching these technologies under the regulations. Following those steps,

[18] *Notice,* at p.7.

[19] FINRA points out that there is no universally agreed upon definition of AI, and it quotes the Financial Stability Board's definition: "(t)he application of computation tools to address tasks traditionally requiring human sophistication." *Notice,* at note 10. Others have developed an even shorter definition of artificial intelligence: "those systems that can sense, comprehend and learn." *See* Paul Daugherty and Jim Wilson, HUMAN + MACHINE: REIMAGINING WORK IN THE AGE OF AI (2018).

[20] Varied use cases are also being developed for internal surveillance operations within financial services firms and by third-party vendors. Similar study and analysis should be done regarding the approaches to building these systems before any regulatory changes or approaches are developed. *See FINRA, Technology Based Innovations for Regulatory Compliance ("RegTech") in the Securities Industry* (Sept. 2018), at http://www.finra.org/sites/default/files/2018_RegTech_Report.pdf.

FINRA should work with the industry to consider whether changes to supervision, review and recordkeeping regulations are warranted.

III. Development of a Taxonomy-Based Machine-Readable Rulebook

FINRA seeks comment on whether it should develop a taxonomy-based machine-readable rulebook. This type of rulebook would be "structured in a way that is more easily processed by a computer and, therefore less time-consuming and costly for review by a firm's compliance staff."[21] FINRA mentions that other U.S. regulators such as the Commodity Futures Trading Commission ("CFTC") have publicly indicated that they may consider developing this type of rulebook, and the UK Financial Conduct Authority and the Bank of England have launched an initiative to digitize their rulebooks.

Fidelity recommends that FINRA first study how the UK effort regarding digitization is being used and adopted, perhaps by interviewing some of the UK firms that could benefit from this development. FINRA should also consider whether principles-based rules would transfer appropriately to machine-readable code, and how they could be implemented. It is one thing to develop machine-readable code for proscriptive rules; it may be challenging to develop code that carries out general principles-based rules and interpretations.

If FINRA determines that this effort is worthwhile, it might consider adopting a controlled pilot using one of its rule sets to determine whether member firms, and perhaps vendors, would use the machine-readable code to develop applications. FINRA's Communications with the Public rules might be a first candidate, as they combine both principles-based and proscriptive rules sets. Developing machine-readable code for these rules may allow member firms and third-party vendors to code systems that could assist in the scanning and review of advertising and marketing content for compliance with regulations. With rule revisions or new rules, these systems might automatically update to include the new code. An alternative rule set for a pilot might be FINRA's Trade Reporting rules. With coded reporting rules, it may be possible for firms to develop automated reporting systems that can update automatically with rule revisions and new rules and that interact automatically with FINRA's Trade Reporting Facility.[22]

Finally, FINRA might consider seeking input from a group of interested member firms on a pilot project to determine whether the effort would be cost effective for firms. We also recommend that FINRA work with other regulators, including the SEC, MSRB and CFTC, to automate their corresponding rules in a similar format and coding and to develop common rule definitions. This would alleviate compatibility concerns regarding adoption of the machine-readable code.

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[21] *Notice*, at p.8.

[22] *See* Trade Reporting Facility (TRF), at http://www.finra.org/industry/trf.

IV. General Request for Comments on Facilitating Innovation

FINRA's *Notice* also "welcomes comments that can help identify where [its] rules or administrative processes could be modified to better support fintech innovation without adversely affecting investor protection or market integrity."[23] Fidelity appreciates FINRA's open request, and we believe, as discussed below, that there are a number of important areas regarding rules and processes that could be improved to facilitate innovation by member firms while continuing to protect investors.

A. Further Modernize FINRA's Communications Regulations

1. Address Firms' Ability to Launch New Products and Services: *Test and Learn*

In our continuing effort to be responsive to clients' and consumers' needs, Fidelity is embracing innovative techniques when developing new ideas and concepts that could result in the launch of new products or services. These techniques involve organizing working teams who are focused on understanding the needs and desires of clients and consumers, developing ideas that respond to those needs and desires and building prototypes that can be tested and experimented with the public ("testers" or "focus groups").

Oftentimes the experimentation can take the form of co-development, where public testers interact with the firm's designers to provide real-time input and feedback. Designers can then revise their work and re-present it to focus groups for additional input. Once the design process has yielded a sufficiently useful concept or idea, it may then be prepared for broader testing with the public. This design and development process involves groups of workers in teams within the firm who interact and collaborate extensively with one and another.[24]

FINRA's rules that involve the review, supervision and filing of public communications come into play when new concepts and ideas are being designed, developed and tested. With each round of testing materials, such as prototypes, surveys and other communications material that describes the new concept or idea, member firms must first subject that material to a compliance review and typically must obtain registered principal approval before sharing the material publicly.[25] Thus, when teams are developing content for testing with the public, they must halt the process of testing and co-development in order to ensure that any revisions are reviewed and approved through compliance.

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[23] *Notice,* at p.4.

[24] This approach to design and development typically involves "Agile" processes. *See, e.g.,* Jeff Sutherland, THE ART OF DOING TWICE THE WORK IN HALF THE TIME—CO-CREATOR OF SCRUM (2014). Also, see footnote 31 below regarding use by these workers of interactive workplace tools.

[25] *See generally* FINRA Rules 2210 and 3110 and interpretations and notices.

Fidelity recommends that FINRA work with member firms to understand these design and development techniques for new concepts and ideas and take a fresh look at the communications with the public and supervision rules. This work should have a goal of helping firms move forward the design, development and testing of concepts and ideas so that they can determine in a timely manner whether to launch products and services in the marketplace for the benefit of clients and the investing public. This effort is of great significance as the investing public has come to expect that the financial services industry will provide them with up-to-date, best in class tools and investing products and services in a timely manner.

In this effort, FINRA should work with member firms to evaluate how the communications and supervision rules impact the design and development process. As an example, if a member firm is developing a new prototype of a tool for the screening of mutual funds or securities, with each round of revisions and mock-ups of the new screener, the material would go through a compliance review (under the general and specific Communications Rule standards), registered principal sign-off and, if the content involves mutual funds, filing with FINRA. This process slows down the development and testing process especially if, for example, the firm is trying to test iterative graphical or user designs or interfaces with focus groups and not the substance of the fund or securities information in the tool.[26] With fewer testing rounds, it may be less likely that the design can be well optimized for users or that innovative approaches can come to light.

FINRA should consider how it can allow firms to subject these projects to a rationalized review and supervision process. One approach, for example, could be to allow firms to subject concepts, ideas and prototypes only to the general standards of the Public Communications rules and to a principles-based supervisory review, and not to specific content standards and pre-approval requirements.[27] Ensuring that testers and focus groups understand their role in helping with the development of new concepts would be an important requirement, and one that could be handled by ensuring that there are prominent disclosures or a *beta* test agreement from the firm explaining the purpose of the communications.[28]

Once the concept or idea is developed into an actual product or service and finalized for use with the public, the firm would subject the material to the more rigorous content review and supervisory sign-off. Fidelity believes that such an approach could greatly enhance member firms' ability to test new product and service concepts or ideas and thus benefiting the investing

[26] Further, in this example, with a FINRA filing, typically within 10 days of first use, the FINRA staff may review material that has already been substantially revised and forward along comments to the firm that are obsolete.

[27] *See* FINRA Rule 2210(d)(1) (*Communications Rules -- General Standards*). It would also be helpful if FINRA could work with the SEC to develop a corresponding reasonable approach to recordkeeping requirements regarding the material developed and used in testing.

[28] Firms could additionally disclose that certain elements or functions may be in draft or incomplete form and that the testers or focus groups should not rely on the material for actual decisions or actions and that the purpose of testing is to provide important feedback to the firm for use in developing a final product or service.

public.

2. Further Allow for Social Media and Interactive Communications

FINRA recently issued interpretive guidance on digital communications, including social networking websites, which was a good first step in helping more useful information being distributed by firms to investors and the public.[29] FINRA's rules and regulatory interpretations had previously led to associated persons avoiding using social media to communicate, except in the most personal circumstances not relating to their work. The guidance now helps the public to hear from individuals in their role as employees on important topics such as human-interest articles, charitable events and employment opportunities. We strongly recommend, however, that FINRA re-engage with member firms to discuss additional interpretations that will be helpful for investors. With this re-engagement, we recommend that FINRA focus on two important areas.

First, FINRA should revise its interpretation carving out communications from FINRA Rule 2210 to include content focused on public policy issues, financial literacy initiatives and information related to economic issues, like planning for life events and the importance of saving for retirement. A possible means to structure this exception to the communications regulations is to interpret content that does not relate to specific products and services of the member firm as being available to be shared. This change will allow associates to share prudent messages that are designed to educate and enlighten investors and the public. We believe that it is in the best interest of the investing public for the broad distribution of this type of educational content.[30]

Second, we recommend that FINRA undertake a fundamental review of its approach to regulating member firms' social media and interactive communications. Before the last major revision to the Public Communications rules, FINRA included "public appearance" as one of the defined terms. Public appearances, which included participating in interactive electronic forums, were excluded from the pre-approval and filing requirements under FINRA regulations and subject to principles-based supervision. As FINRA examines this area more closely, it should consider revisiting the concept of public appearances and interactive communications in the context of social media and text messaging. Further, FINRA should start a dialogue with firms on how they might use training and "red flags" escalation policies to implement programs with registered employees to help ensure that interactive communications activity is appropriately handled.

[29] *See* Regulatory Notice 17-18 (April 2017).

[30] A substantial impact from FINRA regulations in this area is that most associated persons typically avoid using or interacting through social media and interactive platforms for anything other than personal matters. This can inhibit the development by consumers of trusting, personal relationships with financial services firms through their desired communications tools.

Accordingly, we recommend a fresh look at this important area of communications to overcome frustrations that customers and clients of financial services firms experience when they cannot effectively communicate interactively with, and hear from, member firms' employees through third-party social media and communications platforms.[31]

B. Allow for Remote Inspections of Office Locations

Fidelity strongly supports FINRA's recent proposal[32] to allow firms to conduct remote supervisory inspections of certain office locations. FINRA proposed to amend Rule 3110 to add new Supplementary Material that will provide firms with the flexibility to conduct remote inspections of "qualifying offices" that meet specified criteria, in lieu of physical, on-site inspections currently required under the rule. We are hopeful for further progress in rulemaking and adoption of the proposal.

We appreciate FINRA's willingness to evolve its longstanding inspection requirements based on industry feedback regarding evolving technology and workforce arrangements. The proposal will be impactful and will offer substantial relief to firms even if the extensive "qualifying office" conditions are adopted as proposed. The proposal will most notably impact inspections of certain non-branch locations such as representatives' personal residences or offices of convenience that are exempt from branch registration. These types of locations continue to proliferate due to employee preference to work from home, firm acceptance of flexible work arrangements and increasing availability of technology that allows for remote work and supervision.

On-site inspections of offices with a limited number of registered representatives and limited supervisory functions result in disproportionate expenses and productivity loss due to travel and logistics, relative to the supervisory benefits realized. In fact, there is often very little, if anything, physically to review when conducting on-site inspections of these offices. The presence of filing cabinets containing required hardcopy records is no longer common place because business activities are generally conducted, and books and records are maintained, exclusively through a firm's electronic systems. These systems are subject to ongoing supervisory and surveillance reviews done through advanced technology. The resources currently used to conduct on-site inspections of certain locations could be better deployed reviewing higher risk activities.

[31] Not only is social media being used to communicate publicly but social collaboration tools are now a mainstay for productivity in the workplace. These tools allow employees who are located all over the globe to interact real-time with each other, including through interactive drafting of communications, collaborating via virtual white-boards/screens and video and chat rooms, each emulating employees who are physically working together. This proposed approach to communications should carry through to internal broker-dealer communications that involve interactive social interactions among associates in real-time.

[32] *See* Regulatory Notice 17-38 (Nov. 2017).

We believe that the proposal for remote inspections is a positive first step toward modernizing branch office and inspection requirements. We would also support a more comprehensive retrospective rule review of registration definitions and inspection requirements for branch offices and offices of supervisory jurisdiction for many of the same reasons noted above, including advances in technology used for remote access to firm systems and supervision of those activities.

C. Eliminate Manual Signature Requirements

FINRA recently sought approval from its Board of Governors[33] to propose amendments to Rule 4512(a)(3) on Customer Account Information to permit the use of electronic signatures for associated persons authorized to exercise discretion in a customer account and to eliminate the requirement for a manual "wet" signature. FINRA staff has indicated that allowing electronic signatures will provide increased flexibility without diminishing investor protection.

We applaud FINRA for taking this step in proposing to eliminate a manual wet signature requirement, and we encourage a more comprehensive review and elimination of all manual wet signature and related requirements in favor of allowing electronic signatures. We have advocated previously that FINRA should work with the SEC to eliminate requirements for manual signatures and notarizations, and to eliminate the need for other hardcopy records that prevent businesses from becoming completely digital. As examples, there are two routine registration and licensing form submissions that require a manual wet signature and/or notarization and that therefore must be executed manually through hardcopy records.

- Form U4. FINRA Rule 1010 on Electronic Filing Requirements for Uniform Forms requires every initial and transfer electronic Form U4 filing, and any amendments to the disclosure information, be based on a manually signed Form U4 to be retained as a required record. There is an exception from the manual signature requirement if the firm provides the individual with a copy of the filing and receives a written acknowledgement back that can be in electronic form.

- Form BD. The instructions on the Form BD Execution section indicate -- "This page must always be completed in full with original, manual signature and notarization." Even though the filing is submitted electronically, hardcopy records must be created, manually executed, imaged and electronically retained.[34]

There are other instances of industry forms and practices that require manual signatures, notarizations and signature guarantees. While these are not all required directly under FINRA rules, we encourage FINRA to promote forward thinking in this area by modernizing its own practices where applicable and work with the SEC and other regulators to also do the same.

[33] FINRA published a Board of Governors Meeting Update reflecting this item on July 16, 2018.

[34] This would put Form BD on parallel footing with SEC Form ADV, which can be executed electronically.

D. Replace WORM Storage Requirements

Fidelity requests that FINRA work with the SEC to amend the antiquated and burdensome broker-dealer write once, read many ("WORM") storage standard in SEC Rule 17a-4(f) and replace the current standard with a technology neutral, principles-based record retention standard. The 20+ year old technology-specific rules are obsolete and slowing adoption of innovative technology that firms and investors want to use. Of particular note, the recent U.S. Treasury report on *Non-Bank Financials, Fintech, and Innovation* identifies SEC Rule 17a-4 as an obstacle to innovation. The report specifically discusses the inability of financial institutions to use cloud-based data retention systems because of the WORM requirement.[35]

The WORM storage requirement was adopted by the SEC in 1997 and has not been substantively reviewed since 2003. In light of transformative advances in technology that have taken place in the last two decades, the SEC should continue to maintain a rigorous retention standard but adopt a flexible, technology neutral approach that will allow broker-dealers to choose the modern storage technology that best suits their business needs.

Adopting a principles-based, technology neutral standard would harmonize the SEC broker-dealer standard with existing SEC standards applicable to investment advisers, investment companies and transfer agents. In addition, in May 2017 the CFTC replaced its WORM storage requirement, which it adopted in 1999, to harmonize its standard with the SEC with a less prescriptive, principles-based approach. This divergence in regulation creates a competitive disadvantage for broker-dealers due to high expenses associated with WORM retention and an inability to adopt innovative technology for storage. This is magnified for multi-service firms that typically will retain non-broker-dealer records in WORM even when not required to do so because the SEC's requirements applicable to broker-dealers is a practical obstacle to implementing firm-wide data storage modernization.

The fixed and locked nature of WORM records make them inefficient for business continuity planning, cybersecurity defenses and post-disaster or cyber event recovery. WORM storage does not easily work with customer-facing communication systems typically used in customer support functions or with social media and interactive applications. Because of these limitations, broker-dealers must maintain multiple backup systems, in addition to WORM, and are restricted from utilizing modern risk, trading, and communication systems that create dynamic content.

Further, WORM records are not easily searchable and, as a result, even SEC and FINRA examiners typically do not request records in WORM format. Examiners instead request customized data pulls from the non-WORM systems where the information was originally created prior to its storage in WORM format. Modern, dynamic systems are incongruous with WORM storage. Accordingly, Fidelity supports the views expressed in a recent a rulemaking

[35] *See* U.S. Department of the Treasury, A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITIES – NONBANK FINANCIALS, FINTECH, AND INNOVATION, Report to President Donald J. Trump (July 2018), at pp.51-52.

petition and addendum filed by SIFMA,[36] and we encourage FINRA to consider these positions in its dialogue with the SEC.

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Fidelity appreciates the opportunity to provide feedback to FINRA on the *Special Notice on Financial Technology Innovation.* We would be happy to discuss these comments further in detail.

Sincerely yours,

/s/ Alexander C. Gavis

Alexander C. Gavis
SVP & Deputy General Counsel

Cc:

Mr. Robert Cook, President and Chief Executive Officer, FINRA
Mr. Robert Colby, Chief Legal Officer, FINRA
Mr. Thomas Selman, EVP Regulatory Policy and Legal Compliance Officer, FINRA
Mr. Joseph Price, SVP, Corporate Financing/Advertising Regulation, FINRA
Mr. Thomas Pappas, VP, Advertising Regulation, FINRA
Mr. Haime Workie, VP, Emerging Regulatory Issues, FINRA
Ms. Kavita Jain, Director, Emerging Regulatory Issues, FINRA

[36] SIFMA filed with the SEC a Petition for Rulemaking to Amend Exchange Act Rule 17a-4(f) (Nov. 2017) and Addendum (May 2018).