Regulatory Sandboxes

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ABSTRACT

"Fintech" has become an increasingly important part of the financial landscape over the last decade, but financial regulation remains a barrier to entry for many fintech innovations. In a highly anticipated report, the U.S. Treasury Department recently recommended the adoption of a "regulatory sandbox" intended to ease these barriers. A regulatory sandbox allows fintech startups to conduct a limited test of their products with fewer regulatory constraints, less risk of regulatory enforcement action, and ongoing guidance from regulators—and versions of the sandbox are becoming increasingly popular around the world. Despite their popularity, however, there has been almost no critical analysis of any regulatory sandbox model adopted to date. Notwithstanding that the Treasury Department has called for a regulatory sandbox to be implemented in the United States, this Article argues that the benefits and drawbacks associated with such a regulatory approach should be considered more fully before doing so.

It is perhaps too soon to come to any definitive conclusion about whether the merits of a fintech regulatory sandbox outweigh its disadvantages, but it is already evident that there are some pitfalls to be avoided in adopting such a regulatory structure. Given the possibility of political support for a U.S. regulatory sandbox, this Article draws on administrative-law literature relating to new governance theory and principles-based regulation, as well as financial-regulatory literature pertaining to consumer protection and financial stability, to offer suggestions on how such a sandbox might best be designed to avoid many of these pitfalls. It also tackles a design challenge that arises because of the United States' peculiarly fragmented financial regulatory architecture: for a regulatory sandbox to be valuable to firms operating in the United States, the sandbox must be designed to preempt enforcement actions by a range of federal and state regulatory actors. This Article, therefore, proposes a model whereby a committee of regulators will make decisions about whether to admit a firm to the regulatory sandbox and any relief granted will preempt enforcement actions by all federal and state financial regulators. A regulatory sandbox could serve as a pilot program for trialing this and other new approaches that could improve the regulation of financial innovation in the United States—this is perhaps the best argument that can be advanced for adopting a regulatory sandbox.

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INTRODUCTION

Regulatory sandboxes offer an environment in which fintech entrepreneurs can conduct limited tests of their innovations with fewer regulatory constraints, real customers, less risk of enforcement action, and ongoing guidance from regulators.[1] This latter expectation of ongoing regulatory engagement is what differentiates the regulatory sandbox from other regulatory waivers and exemptions—this, and the message that implementing a sandbox sends to the entrepreneurial community about a jurisdiction's openness to innovation. The United Kingdom's regulatory sandbox (adopted in 2016) has been credited with helping London become the foremost fintech hub in the world,[2] and other countries have hurriedly adopted their own versions in order to telegraph a welcome to fintech entrepreneurs. In a recent report, the U.S. Treasury Department joined other commentators in

1 *See* Dirk A. Zetzsche et al., *Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation*, 23 FORDHAM J. CORP. & FIN. L. 31, 45 (2017).

2 Jerry Brito, *Is the US Losing Its Global Competitive Edge in Fintech?*, COIN CTR. (Apr. 7, 2016), https://coincenter.org/entry/is-the-us-losing-its-global-competitive-edge-in-fintech [https://perma.cc/MKA8-2ELA].

calling for the adoption of a regulatory sandbox in the United States in order to bolster the global competitiveness of the U.S. fintech industry.[3] However, there has been almost no critical analysis of any regulatory sandbox model adopted anywhere in the world to date.[4] This Article argues that the United States should be much more deliberative. If any regulatory sandbox is adopted, it should be done with caution and designed with care.

This Article suggests reasons to be skeptical about the promotion of financial innovation as a regulatory goal (especially to the extent that such innovation impinges upon consumer protection and financial stability). As such, the adoption of any U.S. regulatory sandbox should be predicated on more than just vague paeans to innovation. Instead, this Article argues that the best reason that can be advanced for adopting a regulatory sandbox in the United States is as a trial for new regulatory approaches to coping with (rather than promoting) inevitable financial innovation. The sandbox can also serve as a forum for educating regulators on new technologies, and as a way of lowering regulatory barriers to entry to allow new tech firms to compete with the largest financial institutions. It is by no means certain that a regulatory sandbox should be adopted on these grounds, though—particularly if the sandbox turns out to be a deregulatory force threatening consumers and financial stability.

After reviewing this Article's arguments for caution with respect to special regulatory treatment for financial innovations, one might reasonably conclude that the United States should not adopt any regulatory sandbox at all. However, the adoption of a regulatory sandbox has the support of the Treasury Department, and could attract bipartisan support as a measure designed to support startups and entrepre-

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3 *See* U.S. DEP'T OF TREASURY, A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITIES: NONBANK FINANCIALS, FINTECH, AND INNOVATION 17, 168 (2018) [hereinafter TREASURY REPORT]; *see also* Mark Brnovich, *Regulatory Sandboxes Can Help States Advance Fintech*, AM. BANKER (Sept. 6, 2017), https://www.americanbanker.com/opinion/regulatory-sandboxes-can-help-states-advance-fintech [https://perma.cc/T6JC-DWHM]; Patrick McHenry, *CFPB's 'Project Catalyst' Failed. Fintech Deserves Better*, AM. BANKER (Apr. 25, 2017), https://www.americanbanker.com/opinion/cfpbs-project-catalyst-failed-fintech-deserves-better [https://perma.cc/6AF7-C5NX]; Nikolai Kuznetsov, *US Regulatory Environment Threatens the Rise of Fintech*, TECHCRUNCH (Feb. 16, 2017), https://techcrunch.com/2017/02/16/us-regulatory-environment-threatens-the-rise-of-fintech/ [https://perma.cc/W6WZ-QGZY]. Others, it should be noted, have poured cold water on expectations for a U.S. regulatory sandbox. *See* Michael J. Bologna, *Fed Official Dismisses 'Regulatory Sandboxes' for Fintech*, BLOOMBERG BNA: BANKING DAILY (Sept. 18, 2017).

4 Zetzsche et al., are an exception—they have provided an excellent survey of the different approaches to sandbox design that have been adopted around the world. *See* Zetzsche et al., *supra* note 1, at 64–77.

neurs and generate jobs, just as the Jumpstart Our Business Startups (JOBS) Act of 2012 did.[5] The JOBS Act has subsequently been criticized for the "speed with which it was enacted and the limited consideration of its potential impact."[6] In case the adoption of a U.S. regulatory sandbox becomes inevitable, this Article seeks to offer detailed design recommendations to ensure that any such sandbox is in the form best calculated to yield regulatory benefits and mitigate possible detrimental impacts.

In 2016, Republican Congressman Patrick McHenry introduced a bill to create a regulatory sandbox in the United States.[7] This very short bill did not fully grapple with many of the important design features of a U.S. regulatory sandbox,[8] though, and the Treasury Report is even more sparse in terms of details on how a U.S. regulatory sandbox should be structured. In an attempt to guard against the worst possible outcomes that could result from adopting a regulatory sandbox in the United States, this Article draws on financial regulatory literature pertaining to consumer protection and financial stability, as well as administrative law literature relating to new governance theory and principles-based regulation, to offer more detailed suggestions on how such a sandbox should be designed.

This Article argues that a regulatory sandbox is an application of new governance theory, in that the sandbox is "pragmatic, information- and experience-based, directed toward ongoing problem-solving, and built around highly participatory and carefully structured dialogue."[9] The legal scholarship on new governance, therefore, serves as a helpful theoretical foundation on which to make more concrete recommendations about how to structure a U.S. regulatory sandbox. This Article also argues that the regulatory sandbox is a form of principles-based regulation because firms participating in the sandbox will be given flexibility and discretion in adapting their innovation to comply with the enumerated goals of the sandbox regime.[10] Experience with

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5 *See* Jumpstart Our Business Startups (JOBS) Act of 2012, Pub. L. No. 112-106, 126 Stat. 306; *see also* Pete Kasperowicz, *House Approves JOBS Act in 390–23 Vote*, THE HILL (Mar. 8, 2012, 6:02 PM), http://thehill.com/blogs/floor-action/house/214979-house-passes-jobs-act-sends-to-senate [https://perma.cc/ZPU8-GTKC].

6 Michael D. Guttentag, *Protection from What? Investor Protection and The JOBS Act*, 13 U.C. DAVIS BUS. L.J. 207, 234 (2013).

7 H.R. 6118, 114th Cong. (2016).

8 *See infra* Part III.

9 Cristie Ford, *New Governance in the Teeth of Human Frailty: Lessons from Financial Regulation*, 2010 WIS. L. REV. 441, 445.

10 *See* Douglas W. Arner et al., *The Evolution of FinTech: A New Post-Crisis Paradigm?*, 47 GEO. J. INT'L L. 1271, 1311–12 (2016) [hereinafter Arner et al., *FinTech Evolution*].

principles-based regulatory regimes can therefore serve as another guide for regulatory-sandbox design. To be clear, this Article is not intended as a normative argument in favor of principles-based regulation or new governance approaches to financial regulation more generally.[11] Instead, it utilizes insights gleaned from the study of such regulatory approaches to provide suggestions about how to design a regulatory model that overcomes some of the challenges associated with regulating financial innovation.[12]

This Article's proposals with regard to sandbox design include the following. First, any legislation adopting a regulatory sandbox in the United States should clearly articulate guiding principles that evince a commitment to preserving consumer protection and financial stability. This Article also argues that, given the fractured financial regulatory architecture of the United States, the sandbox will need to be administered by a committee of financial regulators, but that once a decision to grant relief is made, day-to-day oversight of the sandbox should be delegated to the most suitable federal regulatory agency. This Article emphasizes that for the regulatory sandbox to avoid operating as a form of deregulation, significant resources will need to be committed to it. In return for those resources, regulators should expect to gain valuable insights into evolving new technologies. Finally, this Article argues that any legislation creating a sandbox should automatically sunset after a specified period in case enthusiasm for the new regulatory model has precluded sufficient consideration of its drawbacks and the resources needed to implement it properly. The sunset process will force a legislative reassessment of the regulatory-sandbox model, with the benefit of experience, before the practice can be continued (all individual sandbox trials should be designed to terminate before the sandbox model, as a whole, sunsets).

The remainder of this Article will proceed as follows: Part I will introduce the post-crisis wave of financial innovation known as "fintech" and discuss the regulatory barriers to entry that many fintech firms face and the regulatory strategies (including sandboxes) that have been proposed to address such barriers. Part II is the theoretical core of this Article. It considers normative arguments for and against the adoption of a special regulatory regime to address these barriers to entry and finds that the best—although not dispositive—argument that can be advanced for a regulatory sandbox is as a trial of new regulatory approaches to dealing with financial innovation. On

11 Ford notes that "new governance will not work everywhere." Ford, *supra* note 9, at 484.

12 *See infra* notes 208–12 and accompanying text.

the assumption that, notwithstanding the potential drawbacks of the regulatory sandbox, there may be sufficient bipartisan enthusiasm for implementing one in the United States, Part III provides suggestions for designing a U.S. version that is best calculated to promote the public interest. This includes principles to guide the sandbox, how to deal with preemption issues, the form of regulatory relief to be granted, the selection criteria used to determine eligibility for the regulatory sandbox, the ongoing administration of the sandbox, the length of the sandbox trial, and suggestions on how learning from the regulatory-sandbox experiment should be utilized by regulators. This Article concludes after Part IV offers a few thoughts on how the regulatory sandbox could also be used as a pilot program for other regulatory strategies.

I. FINTECH, BARRIERS TO ENTRY, AND SANDBOXES

On July 31, 2018, the U.S. Treasury Department released its fourth and final report pursuant to President Trump's Executive Order 13,772.[13] Entitled "A Financial System That Creates Economic Opportunities: Nonbank Financials, Fintech, and Innovation," the report specifically recommends that:

> [F]ederal and state financial regulators establish a unified solution that coordinates and expedites regulatory relief under applicable laws and regulations to permit meaningful experimentation for innovative products, services, and processes. Such efforts would form, in essence, a "regulatory sandbox" that can enhance and promote innovation.[14]

The report is an enthusiastic endorsement of regulatory sandboxes as a method for reducing barriers to entry for "fintech" innovation, going so far as to say that:

> Treasury will work with federal and state financial regulators to design such a solution in a timely manner. . . . If financial regulators are unable to address these objectives, however, Treasury recommends that Congress consider legislation to provide for a single process consistent with the principles set forth above, including preemption of state laws if necessary.[15]

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13 Press Release, U.S. Dep't of the Treasury, Treasury Releases Report on Nonbank Financials, Fintech, and Innovation (July 31, 2018), https://home.treasury.gov/news/press-releases/sm447 [https://perma.cc/95DV-H9K3].

14 TREASURY REPORT, *supra* note 3, at 168.

15 *Id.* at 169.

Notwithstanding the Treasury Report's preference for effecting a sandbox purely through regulatory cooperation, the Report does not provide any detail on how this could be achieved. This Article argues that no effective sandbox can be implemented in the United States without legislative changes. Furthermore, the Treasury Report contains little detail on how the sandbox should be administered, other than to say that "[t]he parameters of any regulatory sandbox should be designed with the participation of the private sector and contain appropriate metrics for testing, including sample size and development periods appropriate to these endeavors, to ensure the effectiveness of product and service development."[16]

In order to enable the rest of this Article to provide a more fulsome discussion of Treasury's proposal and to provide some concrete recommendations regarding the potential structure of a U.S. regulatory sandbox, this Part will provide background information on three central concepts: fintech, the regulatory barriers to entry that fintech innovation faces, and the regulatory sandbox models that have been adopted in some countries to alleviate these barriers to entry.

A. Fintech

The term "fintech" is popularly used to describe the slew of internet- and smartphone-enabled financial innovations that have risen to prominence since the Financial Crisis. Although many of these innovations share the characteristic of improving "customer user interfaces and the consumer experience,"[17] there is no definitive categorization of the products and services that qualify as "fintech." Different authors have identified different innovations as fitting under the fintech umbrella: Arner et al., for example, include crowdfunding, marketplace (also known as peer-to-peer) lending, roboadvisory services, internet and mobile communications payments, and infrastructure for derivatives and securities trading and settlement.[18] Brummer and Gorfine refer to innovative digital currencies, payment systems, finance and investment platforms, and big data analytics.[19] Philippon cites "[e]xamples of innovations that are central to FinTech today in-

16 *Id.*

17 Iris H-Y Chiu, *Fintech and Disruptive Business Models in Financial Products, Intermediation and Markets—Policy Implications for Financial Regulators*, 21 J. TECH. L. & POL'Y 55, 90 (2016).

18 *See* Arner et al., *FinTech Evolution*, *supra* note 10, at 1291–92.

19 *See* CHRIS BRUMMER & DANIEL GORFINE, CTR. FOR FIN. MKTS., FINTECH: BUILDING A 21ST-CENTURY REGULATOR'S TOOLKIT 2 (2014), http://assets1c.milkeninstitute.org/assets/Publication/Viewpoint/PDF/3.14-FinTech-Reg-Toolkit-NEW.pdf [https://perma.cc/DS6H-QSYT].

clud[ing] cryptocurrencies and the blockchain, new digital advisory and trading systems, artificial intelligence and machine learning, peer-to-peer lending, equity crowdfunding and mobile payment systems."[20]

The GAO has noted this trend of defining fintech as a collective of individual financial innovations, commenting that "[t]he [fintech] industry is generally described in terms of subsectors that have or are likely to have the greatest impact on financial services . . . ."[21] This Article does not attempt to provide any definitive categorization of what does and does not qualify as "fintech" (although it will engage with the related issue of which fintech innovations should qualify for special regulatory treatment if the United States ultimately adopts a regulatory sandbox).[22] Instead, this Article uses the term broadly to include all financial innovations that share the defining characteristic of reliance on internet technology (whether accessed via computer or smartphone), and it will focus on consumer-facing innovations over more complex wholesale innovations like high-frequency trading. The next Section begins by exploring some of the regulatory barriers to entry that these kinds of fintech innovations face in the United States, before the subsequent Section explores how a regulatory sandbox might address these barriers.

Of course, regulatory compliance is not the only barrier to entry that fintech innovation faces. Because financial services are credence goods, an established institution with a good reputation has an advantage over a startup. However, when established reputations become tarnished, that can provide an opportunity for new entrants—which is why the financial crisis helped birth the current fintech boom.[23] Also, the provision of some financial services is easier and better when the provider has a large group of customers and data points—incumbent institutions are at an advantage here as well.[24] And for any startup,

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20 Thomas Philippon, *The FinTech Opportunity* 2 (Nat'l Bureau of Econ. Research, Working Paper No. 22476, 2018), http://pages.stern.nyu.edu/~tphilipp/papers/FinTech.pdf [https://perma.cc/6G3Y-GCBA].

21 *Highlights of* U.S. GOV'T ACCOUNTABILITY OFF., GAO-17-806T, FINANCIAL TECHNOLOGY: INFORMATION ON SUBSECTORS AND REGULATORY OVERSIGHT (2017) (testimony before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate).

22 *See infra* Section III.C.

23 Douglas W. Arner et al., *FinTech, RegTech, and the Reconceptualization of Financial Regulation*, 37 Nw. J. INT'L. L. & BUS. 371, 381 (2017) [hereinafter Arner et al., *Reconceptualization*].

24 "In finance, having more data points has already enabled lenders to make better risk predictions. Better predictions drive better pricing for low-risk individuals, which attracts more customers. More customers mean more data." Rory Van Loo, *Making Innovation More Competitive: The Case of Fintech*, 65 UCLA L. REV. 232, 250 n.108 (2018) (citation omitted).

attracting funding can be challenging. Although these are not regulatory barriers to entry *per se*, if it is determined that promoting fintech startups is good public policy, regulation can assist in addressing these challenges. For example, being accepted into a regulatory sandbox can lend a startup firm credibility that makes it easier for the firm to attract customers and funding.[25] This Article focuses on regulatory barriers to entry, however.

B. Regulatory Barriers to Entry

When discussing regulatory barriers to entry for fintech innovation, it is important to understand that financial regulation is never entirely exogenous to the development of a financial product or service. Because "finance is legally constructed" and "does not stand outside the law,"[26] the existing legal environment will shape—and often form a constitutive part of—the fintech products and services that can be offered. Although a few fintech innovations, like Bitcoin, have been expressly designed to operate in the interstices of the law and avoid regulation,[27] many other fintech entrepreneurs (including Bitcoin-related businesses like Coinbase) are instead designing their businesses to operate within the regulated environment.[28] There are a number of reasons for this preference. First, financial regulation is so pervasive that it is difficult to avoid it entirely, and sanctions for failing to comply with financial regulation can be weighty (as many virtual-currency entrepreneurs have found out to their detriment).[29] Second, financial services are credence goods,[30] and many noncompliant firms will eventually have to bring their business into compliance with regulations in order to inspire sufficient confidence and trust to attract customers and obtain funding. Because it may prove difficult to adapt a business model adopted in ignorance of the existing laws,

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25 *See* FIN. CONDUCT AUTH., REGULATORY SANDBOX 5 (Nov. 2015), https://www.fca.org.uk/publication/research/regulatory-sandbox.pdf [https://perma.cc/XH4E-SXWF].

26 Katharina Pistor, *A Legal Theory of Finance*, 41 J. COMP. ECON. 315, 315 (2013).

27 EUROPEAN CENT. BANK, VIRTUAL CURRENCY SCHEMES 22 (2012). For a discussion of the law's inability to prevent individuals from using virtual currencies to carry out transactions, see Hilary J. Allen, *$=€=Bitcoin?*, 76 MD. L. REV. 877, 900–01 (2017).

28 Coinbase applied for New York State's so-called "bitlicense," which was awarded in January 2017. Michael del Castillo, *Bitcoin Exchange Coinbase Receives New York BitLicense*, COINDESK (Jan. 17, 2017, 6:00 PM), https://www.coindesk.com/bitcoin-exchange-coinbase-receives-bitlicense/ [https://perma.cc/NJ5K-CNVR].

29 Virtual-currency entrepreneurs who have flouted anti-money-laundering and other regulations have been met with serious consequences. John L. Douglas, *New Wine into Old Bottles: Fintech Meets the Bank Regulatory World*, 20 N.C. BANKING INST. 17, 62–63 (2016).

30 Chiu, *supra* note 17, at 74.

Douglas argues that "[b]y understanding and complying with the applicable regulations at the beginning, these fintech start-ups will have a competitive advantage over competitors that do not take such initiatives."[31] It is not surprising, then, that many fintech businesses have eschewed the "regulatory entrepreneurship" strategy adopted by startups like Uber and AirBnB, whereby a firm starts a business of questionable legality and then engages in political pressure to change the law to accommodate that business.[32]

Notwithstanding the benefits of regulatory compliance for a provider of fintech products or services, such compliance remains a daunting prospect. The regulatory burden, however, will not be equally forbidding to all firms. Although the paradigmatic fintech firm is a scrappy startup, emanating from the tech rather than the finance world and unused to operating in a highly regulated environment, many established financial institutions are now heavily involved in fintech. Large financial conglomerates like JPMorgan and Goldman Sachs are devoting significant resources to fintech development,[33] and smaller banks like CBW Bank are also experimenting with fintech products and services.[34] Although this Article does not engage with the fraught definitional issue of which of these firms and their innovations are disruptive[35] (after all, "identifying a business innovation as disruptive or not, according to business theory, does not settle the question of what to do about it as a policy matter"),[36] it does recognize that regulatory barriers to entry have different impacts on different firms, depending on their size and the degree to which they are already regulated.

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31 Douglas, *supra* note 29, at 64.

32 Elizabeth Pollman & Jordan M. Barry, *Regulatory Entrepreneurship*, 90 S. CAL. L. REV. 383, 392 (2017). Pollman and Barry also note that it is harder (and more expensive) to lobby to change federal laws than local or state laws. *Id.* at 419–20. This may also make the regulatory entrepreneurship approach less appealing in the fintech context because much of finance is federally regulated.

33 *See* Van Loo, *supra* note 24.

34 Nathaniel Popper, *Small Bank in Kansas Is a Financial Testing Ground*, N.Y. TIMES (Dec. 13, 2014, 11:33 AM), https://dealbook.nytimes.com/2014/12/13/small-bank-in-kansas-is-a-financial-testing-ground/ [https://perma.cc/GU7V-56S4].

35 Christensen has famously defined disruptive innovation as "tak[ing] root initially in simple applications at the bottom of a market and then relentlessly mov[ing] up market, eventually displacing established competitors." *Disruptive Innovation*, CLAYTON CHRISTENSEN, http://www.claytonchristensen.com/key-concepts/ [https://perma.cc/77UP-N3Q2]. For a discussion of the controversy over the use of the term "disruption," see Eric Biber et al., *Regulating Business Innovation as Policy Disruption: From the Model T to Airbnb*, 70 VAND. L. REV. 1561, 1568–69 (2017).

36 Biber et al., *supra* note 35, at 1576.

Unsurprisingly, financial regulation is likely to pose a bigger hurdle for hitherto unregulated startups than it will for firms that are already subject to financial regulation.[37] Although these startups may have the advantage of developing their businesses without needing physical branches or significant amounts of capital investment, providing a financial product or service will require the founders to grapple with a highly regulated environment with which they often have limited experience.[38] Many fintech startups will face a daunting investment of time and money in these efforts before they can even start to market their product or service, whereas regulated financial institutions have already done much of the time-consuming and expensive work of figuring out which regulations apply to them, and which licenses and authorizations their lines of business require. Federal banking law also preempts many state regulations, a benefit that is available to chartered banks but not to fintech startups.

By way of example, a mobile payments startup would quite possibly satisfy the definition of a "money transmitter" under the Bank Secrecy Act,[39] and thus be subject to various registration, reporting, and recordkeeping requirements designed to address money laundering.[40] A mobile payments startup is also likely to be subject to state money-transmitter laws: as such, it would need to have money-transmitter licenses in all 48 states that require them.[41] While the popular mobile payment service Venmo is offered by tech giant PayPal, and is thus able to utilize PayPal's existing licenses,[42] one practitioner has estimated that obtaining and complying with the necessary state-based

37 *See* Nathaniel Popper, *Silicon Valley Tried to Upend Banks. Now It Works With Them.*, N.Y. TIMES, Feb. 23, 2017, at B1.

38 *See* BRUMMER & GORFINE, *supra* note 19, at 5; Van Loo, *supra* note 24, at 9.

39 *See* 31 C.F.R. § 1010.100 (ff)(5) (2017); 31 C.F.R. § 1022.210 (2011). ApplePay, however, was able to structure its business model to avoid falling within the definition of "money transmitter" or "money-services business," and thus, it is not required to comply with anti-money-laundering regulation. *See* Samuel Rubenfeld, *Apple Pay Faces Lighter Compliance than Paypal, Google*, WALL STREET J. (Oct. 20, 2014, 5:45 AM), https://blogs.wsj.com/riskandcompliance/2014/10/20/why-apple-pay-faces-lighter-compliance-than-paypal-google/ [https://perma.cc/89LG-V7PS].

40 Venmo, a prominent mobile-payments service, has come under scrutiny for the inadequacy of its anti-money-laundering compliance program. Jameson McRae, *Venmo Is Under Scrutiny of the FTC After Investigation of Their AML Program*, LINKEDIN (Apr. 29, 2016), https://www.linkedin.com/pulse/venmo-under-scrutiny-ftc-after-investigation-aml-program-mcrae [https://perma.cc/UT8B-2VWJ].

41 Van Loo, *supra* note 24, at 243–44. "[W]hile requirements vary from state to state, [these licenses] typically include some form of minimum net worth, maintenance of a bond, annual audits, examinations by regulators, recordkeeping, AML programs, and a list of permissible investments for funds received and held." Douglas, *supra* note 29, at 43–44.

42 "Venmo is a service of PayPal, Inc., a licensed provider of money transfer services. All

money-transmitter licenses could take a new fintech startup years and cost millions of dollars[43] (regulated banks, on the other hand, are not required to obtain money-transmitter licenses to effect payment services).[44] A mobile-payments startup would also run the risk that banking regulators might consider it an unregulated deposit-taking institution because the startup would need to accept funds from consumers with a promise to return them on demand in order to provide its services.[45] To avoid sanctions from banking regulators, mobile-payments providers have often entered into carefully structured and well-disclosed relationships with regulated banks that *are* permitted to take deposits.[46]

Marketplace lenders also want to avoid being seen as engaging in the business of banking which is why marketplace lenders like Prosper and LendingClub arrange for loans to be made by regulated banks with which they have relationships. The marketplace-lending firm then purchases the loan from the bank using funds provided by investors.[47] Although an investor's right to repayment is tied to the receipt of repayments from the ultimate borrowers, it takes the legal form of an unsecured note issued by the marketplace lending firm.[48] The result is that this structure implicates the securities laws,[49] as well as a raft of consumer protection laws. Regulated banks, on the other hand, are authorized to accept deposits, which increases the pool of capital available to lend without implicating the securities laws. Regulated banks also are able to avoid state usury laws through preemption structures that are not available to nonbanks.

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money transmission is provided by PayPal, Inc. pursuant to PayPal, Inc.'s licenses." *Paypal State Licenses*, PAYPAL, https://venmo.com/legal/us-licenses/ [https://perma.cc/25RN-YBKK].

43 Douglas, *supra* note 29, at 46.

44 Van Loo, *supra* note 24, at 243.

45 *Id.*

46 Douglas, *supra* note 29, at 25–26.

47 *See* Eric C. Chaffee & Geoffrey C. Rapp, *Regulating Online Peer-to-Peer Lending in the Aftermath of Dodd-Frank: In Search of an Evolving Regulatory Regime for an Evolving Industry*, 69 WASH. & LEE L. REV. 485, 493 (2012); *see also* Kathryn Judge, *The Future of Direct Finance: The Diverging Paths of Peer-to-Peer Lending and Kickstarter*, 50 WAKE FOREST L. REV. 603, 618 (2015).

48 *See* Chaffee & Rapp, *supra* note 47, at 493.

49 "The U.S. Securities and Exchange Commission ('SEC') has determined that the notes issued by these peer-to-peer lenders to their funding sources are securities under the federal securities laws." Douglas, *supra* note 29, at 38. LendingClub had to suspend business in 2008, in order to bring itself into compliance with these laws. Nav Athwal, *Fintech Startups Navigate Legal Gray Areas to Build Billion-Dollar Companies*, TECHCRUNCH (Apr. 19, 2015), https://techcrunch.com/2015/04/19/fintech-startups-navigate-legal-gray-areas-to-build-billion-dollar-companies [https://perma.cc/JMV6-KNL7].

The foregoing paragraphs are by no means a definitive catalogue of the laws and rules by which the providers of fintech products and services must abide; different business models pose their own unique regulatory challenges. These paragraphs do make clear, however, that regulated banks have a competitive advantage in addressing many regulatory challenges. Anecdotal evidence suggests that some fintech startups have considered obtaining bank charters to capitalize on banks' ability to avoid many of these regulatory difficulties—but most ultimately conclude that doing so "require[s] more time and money than is available to even the most successful start-ups."[50] The ultimate result has been an increasing number of partnerships between fintech startups and established banks.[51] As Van Loo puts it, "fintech startups . . . generally partner with rather than compete against banks."[52] However, even partnering with a regulated bank can raise unexpected regulatory issues. Fintech firms that do not provide financial services themselves, but instead create products and services that they provide to regulated financial services firms, may find themselves subject to regulatory scrutiny because of their relationship with a regulated financial institution.[53]

Of course, the impact of financial regulation is not felt solely by startups. A common criticism of regulation is that it stifles innovation (albeit unevenly) by *all* affected firms.[54] Ongoing compliance costs faced by regulated firms may divert resources that might otherwise have been dedicated to innovation (although this is less of a concern for large financial institutions, which are well placed to absorb compliance costs because of economies of scale).[55] Innovation may also be limited by outright prohibitions on some activities by regulated firms, or by uncertainty about whether activities are permitted—such uncer-

50 Popper, *supra* note 37. Banks are subject to "[l]icensing, capital requirements, community reinvestment obligations, truth in lending, truth in savings, equal credit opportunity and an almost endless list of other statutes and regulations [that] can become part of an organization's life." Douglas, *supra* note 29, at 25.

51 Popper, *supra* note 37. For example, marketplace lenders often use "a bank to originate the loan [which], it has been thought, permit[s] the marketplace lender as subsequent purchase [sic] to rely on the originating bank's ability to export its interest rate and its status as a chartered bank." Douglas, *supra* note 29, at 37.

52 Van Loo, *supra* note 24, at 234.

53 Douglas, *supra* note 29, at 59–60 (stating that "the agencies view the Bank Service Corporation Act as giving them the authority to examine third parties that are providing functions for the internal operations of the bank").

54 *See* Saule T. Omarova, *License to Deal: Mandatory Approval of Complex Financial Products*, 90 WASH. U. L. REV. 63, 92, 98, 135 (2012) [hereinafter Omarova, *License to Deal*].

55 *See* Chris Brummer & Yesha Yadav, *Fintech and the Innovation Trilemma*, 107 GEO. L.J. 235, 247–48 (2019).

tainty "may discourage innovators from entering a market, or make it difficult for them to develop suitable products or attract sufficient investment or other support."[56] In light of the potential for existing regulation to hinder fintech innovation by regulated entities as well as startups, the following Section will consider extant and proposed regulatory sandboxes—as well as other regulatory models—designed to facilitate a more lenient regulatory approach to fintech products and services.

C. *Sandboxes and Other Proposals*

New strategies have been proposed around the world to address the regulatory barriers to entry that fintech innovation currently faces. Most prominently, the United Kingdom adopted a regulatory sandbox for fintech in 2016, and Australia, Bahrain, Brunei, Canada, Hong Kong, Indonesia, Malaysia, Mauritius, the Netherlands, Singapore, Switzerland, Thailand, and the United Arab Emirates have followed suit in adopting some form of regulatory sandbox model.[57] While models vary by jurisdiction, broadly speaking, firms permitted to take advantage of a regulatory sandbox will be able to test their products with real customers in an environment that is not subject to the full panoply of rules that apply to regulated financial firms.[58] Regulators will typically provide guidance as part of the regulatory sandbox model, with the intention of creating a collaborative relationship between regulator and regulated firm.[59] The regulatory sandbox can also be considered a form of principles-based regulation because it lifts some of the more concrete regulatory burdens from sandbox participants by affording flexibility in satisfying the regulatory goals of the sandbox.[60]

The adoption of a more principles-based approach to regulating early-stage financial innovations would be a significant departure for the U.S. financial regulatory agencies. Unlike the United Kingdom, which was an early adopter of principles-based regulation for the financial industry,[61] the United States usually favors a more rules-based

56 Policy on No-Action Letters; Information Collection, 81 Fed. Reg. 8,686, 8,692 (Feb. 22, 2016).

57 Zetzsche et al., *supra* note 1, at 64–66.

58 *Id.* at 64.

59 *Id.* at 78.

60 *See* discussion *infra* Section II.A.

61 *See* Julia Black et al., *Making a Success of Principles-Based Regulation*, 1 LAW & FIN. MKT. REV. 191, 191 (2007).

approach to financial regulation.[62] This inclination of U.S. financial regulation towards rules-based strategies is just one of the hurdles that may render the adoption of a regulatory sandbox more challenging in the United States than in other jurisdictions. For example, while the existing financial regulatory environment in the United Kingdom was such that no changes needed to be made to U.K. legislation to facilitate the regulatory sandbox,[63] as Part III of this Article explores, new legislation would be needed to create a workable regulatory sandbox in the United States.

In the absence of any legislative change, some U.S. financial regulatory agencies have implemented, or are planning to implement, initiatives to promote innovation (for example, the Commodity Futures Trading Commission's "LabCFTC"[64] and the Office of the Comptroller of the Currency's "Office of Innovation").[65] However, these initiatives do not anticipate the provision of regulatory relief and, therefore, do not qualify as regulatory sandboxes. The OCC's proposal for a special type of licensing regime for fintech firms (colloquially referred to as the "fintech charter"), is also very different in structure to a regulatory sandbox.[66] From a fintech firm's perspective, the most

62 Not all U.S. financial regulation is rules-based, though. The CFTC characterizes its approach as principles-based. U.S. DEP'T OF TREASURY, BLUEPRINT FOR A MODERNIZED FINANCIAL REGULATORY STRUCTURE 11 (2008). The CFPB is also experimenting with principles-based regulation. Manley Williams & Nadav Ariel, *Trending: A Principles-Based Approach to US Financial Regs*, Law360 (Mar. 24, 2015, 12:45 PM), http://www.law360.com/articles/527473/the-british-financial-regulatory-principles-are-coming [https://perma.cc/PW6B-UZ8Q].

63 Instead, the regulatory sandbox was designed to work within the boundaries of existing law (in particular, to comply with EU law that provides an overlay of supranational financial regulation—at least until Brexit is complete). FINANCIAL CONDUCT AUTHORITY, *supra* note 25, at 17.

64 Press Release, Commodity Futures Trading Comm'n, CFTC Launches LabCFTC as Major FinTech Initiative (May 17, 2017), www.cftc.gov/PressRoom/PressReleases/pr7558-17 [https://perma.cc/4XJD-F5HX].

65 In October 2016, the OCC announced plans to implement its framework for responsible innovation, including the establishment of an Office of Innovation to serve as the central point of contact and clearinghouse for requests and information related to innovation. The office also will conduct outreach and provide technical assistance and other resources for banks and non-banks on regulatory expectations and principles. OFFICE OF THE COMPTROLLER OF THE CURRENCY, EXPLORING SPECIAL PURPOSE NATIONAL BANK CHARTERS FOR FINTECH COMPANIES 3 (Dec. 2016) (footnote omitted), https://www.occ.gov/topics/responsible-innovation/comments/special-purpose-national-bank-charters-for-fintech.pdf [https://perma.cc/CE9X-385Q].

66 In December 2016, the OCC published a white paper entitled "Exploring Special Purpose National Bank Charters for Fintech Companies," in which it indicated the agency's belief that "it may be in the public interest" to "consider granting a special purpose national bank charter to a fintech company." *Id.* at 2. On July 31, 2018, the OCC announced that it would begin accepting applications for such charters. Press Release, Office of the Comptroller of the Currency, OCC Begins Accepting National Bank Charter Applications from Financial Technology

significant benefit associated with the OCC's fintech charter would be that the application of many state laws to the firm would be preempted (just as the application of many state laws to national banks is already preempted).[67] However, because the OCC plans to regulate chartered fintech firms like banks—"to impose capital requirements and ask firms to submit financial inclusion plans in the spirit of the Community Reinvestment Act, as well as resolution plans"[68]—the time and costs associated with complying with this type of regulation may prove prohibitive for many startups.[69]

Perhaps the closest analogue to a regulatory sandbox presently existing in the United States is the Consumer Financial Protection Bureau's "Project Catalyst," which "lets innovative financial firms apply for 'no-action letters.'"[70] However, only one firm so far has sought a no-action letter from the CFPB in connection with Project Catalyst[71]—perhaps because the "substantial consumer benefit" hurdle required to obtain a no-action letter is too high for most firms,[72] or perhaps because such no-action letters provide startup firms with insufficient certainty that they will be able to avoid enforcement actions by other regulatory agencies.[73] To address this latter concern,[74] Republican Congressman Patrick McHenry introduced a bill in late 2016 titled the "Financial Services Innovation Act of 2016."[75] This bill at-

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Companies, https://www.occ.treas.gov/news-issuances/news-releases/2018/nr-occ-2018-74.html [https://perma.cc/RP99-3FJ4].

67 *See* Lawrence D. Kaplan et al., *The OCC's Proposed Fintech Charter: If It Walks Like a Bank and Quacks Like a Bank, It's a Bank*, 134 BANKING L.J. 192, 195 (2017).

68 Lalita Clozel, *State Banking Regulators Sue OCC Over Fintech Charter*, CREDIT UNION J. (Apr. 26, 2017, 10:34 AM), https://www.cujournal.com/news/state-banking-regulators-sue-occ-over-fintech-charter [https://perma.cc/9UET-TP9A].

69 *See* Gregory Roberts, *OCC Fintech Charter May Be a Poor Fit for Fintechs*, BNA (Feb. 2, 2017), https://www.bna.com/occ-fintech-charter-n57982083191 [https://perma.cc/FY9M-A9HF]. For a thorough discussion of the applicable regulation, see Kaplan et al., *supra* note 67.

70 Van Loo, *supra* note 24, at 260.

71 *See* Press Release, Consumer Fin. Prot. Bureau, CFPB Announces First No-Action Letter to Upstart Network (Sept. 14, 2017), https://www.consumerfinance.gov/about-us/newsroom/cfpb-announces-first-no-action-letter-upstart-network/ [https://perma.cc/A44C-GJLW].

72 *See* Brian Knight, *Could the CFPB Create Its Own Regulatory Sandbox?*, FINREGRAG (July 17, 2017), https://finregrag.com/could-the-cfpb-create-its-own-regulatory-sandbox-888b19077f44 [https://perma.cc/6YAV-TP8K]. In Section VI.A(4) of its Policy on No-Action Letters, 81 Fed. Reg. 8,686, 8,693 (Feb. 22, 2016), the CFPB makes clear that a request for such a No-Action Letter must include "[a]n explanation of how the product is likely to provide substantial benefit to consumers differently from the present marketplace, and suggested metrics for evaluating whether such benefits are realized."

73 *See* McHenry, *supra* note 3.

74 *See id.*

75 H.R. 6118, 114th Cong. (2016).

tempted to create a true fintech regulatory sandbox in the United States, designed to largely preempt enforcement actions by regulatory agencies and states against participating firms.[76]

More specifically, McHenry's bill required each of the enumerated federal regulatory agencies to form a "Financial Services Innovation Office" or "FSIO,"[77] and then permitted firms to submit a petition to an agency's FSIO for regulatory relief.[78] As part of the application process, a firm would have to "submit an alternative compliance strategy that proposes a method to comply with the agency regulation or Federal statutory requirement" and "demonstrate that under the alternative compliance strategy, the financial innovation[] (A) would serve the public interest; (B) improves access to financial products or services; and (C) does not present systemic risk to the United States financial system and promotes consumer protection."[79] Successful applicants would then be directed to enter into an "enforceable compliance agreement" with the relevant agency's FSIO, a contractual agreement "which shall include the terms under which the covered person may develop or offer the approved financial innovation to the public and any requirements of the covered person and any agency with respect to the financial innovation."[80] If a firm entered into such an enforceable compliance agreement with an agency's FSIO, other agencies and States would largely be barred from bringing any enforcement actions against that firm.[81] The FSIOs were also directed to provide support to approved firms to assist them in understanding and complying with relevant financial regulation.[82]

McHenry's 2016 bill was not passed, but if a future Congress seriously deliberates about implementing a regulatory sandbox in the United States, McHenry's bill can serve as a starting point for a discussion of how to design that sandbox. However, McHenry's bill

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76 *Id.* § 8(d).

77 *Id.* § 4. The agencies covered by the bill's requirement are the Board of Governors of the Federal Reserve System, the Bureau of Consumer Financial Protection, the Commodity Futures Trading Commission, the Department of Housing and Urban Development, the Department of the Treasury, the Farm Credit Administration, the Federal Deposit Insurance Corporation, the Federal Housing Finance Agency, the Federal Trade Commission, the National Credit Union Administration Board, the Office of the Comptroller of the Currency, and the Securities and Exchange Commission. *Id.* § 2(2).

78 *Id.* § 6(a).

79 *Id.* § 6(b).

80 *Id.* § 8(a).

81 *See id.* § 8(d).

82 *Id.* § 4(c)(2).

should only be a starting point;[83] it is also instructive to look at the experience of countries that have already introduced regulatory sandboxes.

In May of 2016, the United Kingdom's Financial Conduct Authority or "FCA," the agency primarily responsible for consumer protection, integrity, and competition within the U.K. financial markets,[84] launched the first fintech regulatory sandbox. The FCA describes its sandbox as "a 'safe space' in which businesses can test innovative products, services, business models, and delivery mechanisms while ensuring that consumers are appropriately protected."[85] This "safe space" is available to participating firms only for a six-month period, after which they are regulated like any other financial firm.[86]

Under the umbrella of the regulatory sandbox, there are three mechanisms utilized by the FCA to provide regulatory relief for fintech startups. First, restricted authorizations can be granted for new firms who wish to test their financial products and services without the full cost and delay that would accompany an application for full authorization[87] (the FCA did explore allowing sandbox firms to operate without any authorization at all, but concluded that legislative changes would be needed in order to do so).[88] Second, the FCA provides individual guidance to sandbox firms as to how it will interpret the application of regulatory requirements to new technology, which is likely to be particularly helpful given that the regulations in question "pre-date smartphones, let alone blockchain or biometric identifiers."[89] Finally, the FCA can grant waivers or "no enforcement action" letters in some circumstances.[90] Although commonly used in U.S. administrative law

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83 The limitations of McHenry's bill are discussed in more detail *infra* Part III.

84 Financial Services and Markets Act, 2000, c. 8, § 1B(3) (U.K.).

85 Press Release, Fin. Conduct Auth., Financial Conduct Authority's Regulatory Sandbox Opens to Applications (May 9, 2016), https://www.fca.org.uk/news/press-releases/financial-conduct-authority's-regulatory-sandbox-opens-applications [https://perma.cc/5J54-V6W6].

86 Innovate Finance, *Innovate Finance Hosts Regulatory Sandbox Q&A with the FCA*, *Innovate Finance*, MEDIUM (Jan. 6, 2017), https://medium.com/@InnFin/innovate-finance-hosts-regulatory-sandbox-q-a-with-the-fca-39f83a897c00 [https://perma.cc/57R4-95LX].

87 "They still need to apply for authorisation and meet threshold conditions, but critically only for the limited purposes of the sandbox test. So the authorisation tests should be easier to meet and the costs and time to get the test up-and-running reduced." Christopher Woolard, Director of Strategy & Competition, Financial Conduct Authority, Speech at the Innovate Finance Global Summit (May 9, 2016), https://www.fca.org.uk/news/speeches/innovate-finance-global-summit [https://perma.cc/6W82-CQMV].

88 *Id.*

89 *Id.*

90 FIN. CONDUCT AUTH., REGULATORY SANDBOX, https://www.fca.org.uk/firms/regulatory-sandbox [https://perma.cc/L8MC-LQ9H]. The FCA has a preexisting power under Section

practice (for example, by the SEC),[91] these "no enforcement action" letters are a new regulatory tool for the FCA.[92]

The FCA does not require fintech firms to participate in the regulatory sandbox, nor does it proactively seek out suitable candidates. Instead, firms who wish to participate are required to submit an application form to the FCA.[93] Firms that are granted a restricted authorization following this application process will only be permitted to test their products with a limited pool of consumers—not to market them to consumers generally.[94] This is the tradeoff for a cheaper, more cost-effective authorization process.[95] However, firms with restricted authorizations will still be subject to some consumer protection provisions:[96] sandbox firms must abide by consumer protection policies agreed upfront with the regulators, and have a "fair exit strategy for consumers."[97] These restricted authorizations have proved reasonably popular; the FCA received 69 applications to join its first cohort of sandbox firms, and accepted 24 of these (although only 18 firms were ready to begin testing their innovations as part of the first cohort).[98] Many were startups, but systemically important institutions HSBC and Lloyds were also among the firms accepted.[99] For the second cohort, the FCA received applications from 77 firms and accepted 31, 24 of which were ready to begin testing.[100] For the third cohort, the FCA received 61 applications and accepted 18, including a submission from

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138A of FSMA to waive or modify the application of its own rules (but not EU or national law). FINANCIAL CONDUCT AUTHORITY, *supra* note 25, at 9. In circumstances where waivers cannot be granted (and where individual guidance is not appropriate), the FCA has indicated that it may sometimes issue "no enforcement action" letters that "aim to give firms comfort that as long as they deal with [the FCA] openly, keep to the agreed testing parameters and treat customers fairly, [the FCA] accept[s] that unexpected issues may arise and will not take disciplinary action." Woolard, *supra* note 87.

91 *See generally* Thomas P. Lemke, *The SEC No-Action Letter Process*, 42 BUS. LAW. 1019 (1987) (discussing the SEC's practice of issuing no-action letters).

92 Woolard, *supra* note 87.

93 For a detailed discussion of the application process, see *infra* Section III.C.

94 Woolard, *supra* note 87.

95 *Id.*

96 *Id.*

97 *Id.*

98 FIN. CONDUCT AUTH., REGULATORY SANDBOX - COHORT 1, https://www.fca.org.uk/firms/regulatory-sandbox/cohort-1 [https://perma.cc/EG6S-RP6W].

99 Press Release, Fin. Conduct Auth., Financial Conduct Authority Unveils Successful Sandbox Firms on the Second Anniversary of Project Innovate (Nov. 7, 2016), https://www.fca.org.uk/news/press-releases/financial-conduct-authority-unveils-successful-sandbox-firms-second-anniversary [https://perma.cc/C5LF-YNRB].

100 FIN. CONDUCT AUTH., REGULATORY SANDBOX - COHORT 2, https://www.fca.org.uk/firms/regulatory-sandbox/cohort-2 [https://perma.cc/46ZM-MBJW].

the systemically important institution Barclays.[101] For the fourth cohort, 29 firms were selected from 69 applications.[102]

Australia takes a somewhat different approach to its regulatory sandbox: the Australian Securities and Investments Commission ("ASIC")[103] relied on existing legislative authority to implement rules allowing fintech startups meeting the sandbox-eligibility criteria to take advantage of a new "fintech licensing exemption."[104] Unlike the FCA's restricted authorizations, which still require sandbox firms to apply to the FCA for an authorization (although the process is quicker and cheaper than applying for a full authorization), ASIC's fintech-licensing exemption allows fintech startups to entirely avoid applying for any license for a twelve-month period,[105] after which time the firm will be expected to comply with the full force of the financial-regulatory regime.[106] So long as startups meet the eligibility criteria for the fintech-licensing exemption, there is no application process at all: all that is required is notification to ASIC of the intention to rely on the exemption and the provision of certain information.[107]

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101 Press Release, Fin. Conduct Auth., FCA Reveals Next Round of Successful Firms in Its Regulatory Sandbox (Dec. 6, 2017), https://www.fca.org.uk/news/press-releases/fca-reveals-next-round-successful-firms-its-regulatory-sandbox [https://perma.cc/C8YF-9RQY].

102 Press Release, Fin. Conduct Auth., FCA Reveals the Fourth Round of Successful Firms in Its Regulatory Sandbox (Aug. 24, 2018), https://www.fca.org.uk/news/press-releases/fca-reveals-fourth-round-successful-firms-its-regulatory-sandbox [https://perma.cc/C6R5-3JQH].

103 "ASIC is Australia's integrated corporate, markets, financial services and consumer credit regulator." *Our Role*, AUSTL. SEC. & INV. COMM'N, http://www.asic.gov.au/about-asic/what-we-do/our-role/ [https://perma.cc/G6HW-797R].

104 *See ASIC Corporations (Concept Validation Licensing Exemption) Instrument 2016/1175*, AUSTL. SEC. & INV. COMM'N, https://www.legislation.gov.au/Details/F2017C00003 [https://perma.cc/QSQ4-RVBY]; *ASIC Credit (Concept Validation Licensing Exemption) Instrument 2016/1176*, AUSTL. SEC. & INV. COMM'N, https://www.legislation.gov.au/Details/F2016L01992 [https://perma.cc/PD9J-AECY].

105 Given the strong relationship between the FCA and ASIC, it is somewhat surprising that the form of regulatory sandbox relief offered by ASIC is very different from the one developed by the FCA. There are a number of plausible explanations for the differing approaches, though. It has been suggested that ASIC doubts its own ability to assess (as the FCA is required to do) whether a proposal is sufficiently innovative to qualify for the sandbox, and so prefers an exemption that is available to all firms, not just those who can demonstrate innovation. Zetzsche et al., *supra* note 1, at 70. Also, ASIC is not constrained by EU law, and therefore had more flexibility than the FCA in granting waivers.

106 *Regulatory Guide 257: Testing Fintech Products and Services Without Holding an AFS or Credit Licence*, AUSTL. SEC. & INV. COMM'N 20 (2017), https://download.asic.gov.au/media/4420907/rg257-published-23-august-2017.pdf [https://perma.cc/9B28-G9X5] [hereinafter *Regulatory Guide 257*]. ASIC may, upon application, consider extending the availability of the licensing exemption beyond 12 months. *Id.* at 32.

107 *Id.* at 90.

Despite this seeming facility, only six firms have taken advantage of ASIC's fintech-licensing exemption to date.[108] This limited utilization may be because the exemption is only available to firms advising on, or dealing in, a limited universe of specified products.[109] In addition to these constraints, there are limits on the number of retail clients and their exposure to the sandbox products, and firms relying on the exemption must make specified disclosures and maintain adequate insurance coverage and a dispute resolution system.[110] Finally, ASIC has indicated that there are circumstances in which it might revoke the availability of its fintech-licensing exemption. These include "concerns about poor conduct while relying on the exemption; . . . failure to meet one or more of the conditions of relief; or . . . previous misconduct" and "[where] businesses are not innovative and/or do not use technology."[111]

All of these features may make ASIC's sandbox less palatable for fintech firms, but they reflect a clear desire on ASIC's behalf to ensure that consumer protections are not abandoned in the name of promoting fintech innovation (although legislation is currently pending in Australia that, if enacted, would do away with some of these requirements and thus expand the availability of the regulatory sandbox).[112]

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108 *See Entities Using the Fintech Licensing Exemption*, AUSTL. SEC. & INV. COMM'N, http://asic.gov.au/for-business/your-business/innovation-hub/regulatory-sandbox/entities-using-the-fintech-licensing-exemption/ [https://perma.cc/P3UR-B9K3]. One possible explanation for this lack of interest may be that "ASIC's long standing and highly accepted practice of relief orders . . . reduces the need for a sandbox." Zetzsche et al., *supra* note 1, at 90.

109 ASIC's fintech-licensing exemption is only available to firms advising-on or dealing-in certain specified products, including listed stocks, government bonds, simple managed investment schemes, deposit products, some general insurance products, and payment products issued by authorized deposit-taking institutions. *See Regulatory Guide 257*, *supra* note 106, at 17. The exemption also authorizes a firm to act as an intermediary or provide credit assistance for small consumer credit contracts falling within specified parameters. *See id.* at 18. Importantly, though, the exemption does not authorize the issuing of financial products or the provision of credit. *See id.* at 17–19. Complex, illiquid, and long-term financial products are also excluded from the fintech-licensing exemption. *See id.* at 19–20. If the fintech-licensing exemption is unavailable to an Australian fintech firm, it can also rely on individualized regulatory relief granted by ASIC, or otherwise attempt to fit within an existing exemption to the law. *See id.* at 4. Provision of individualized regulatory relief bears more similarities to the FCA's sandbox approach, although unlike the FCA, ASIC has not yet published any criteria to indicate which firms might be eligible for such individualized relief. It appears that no firm has yet applied to ASIC for this type of relief. *See* James Eyers, *ASIC Broadens Scope of Fintech Regulatory "Sandbox,"* AUSTL. FIN. REV. (Dec. 15, 2016, 4:29 PM), https://www.afr.com/business/banking-and-finance/asic-broadens-scope-of-fintech-regulatory-sandbox-20161215-gtbkdm [https://perma.cc/Z62G-YF6B].

110 *See Regulatory Guide 257*, *supra* note 106, at 27.

111 *Id.* at 16–17.

112 "The proposed exemption extends the scope of the ASIC's fintech licensing exemption in a number of areas, including the testing period, caps and limits on eligible products and ser-

Any regulatory sandbox introduced in the United States will also have to grapple with how to balance competing public policy objectives, an issue considered in more detail in the next Part.

II. Is a New Mode of Regulation Warranted?

The previous Section concluded with a largely descriptive narrative of different proposals for implementing regulatory sandboxes. This Part takes a normative approach, and considers whether the adoption of a new, more lenient (yet more resource-intensive) regulatory approach to fintech products and services is warranted as a matter of public policy. In order to contextualize this discussion, this Part will first survey some of the administrative law scholarship that discusses how regulation can best cope with complex and evolving innovations. While this does not purport to be an exhaustive summary of such scholarship, it does draw out some key points that are helpful in evaluating the desirability of different approaches to regulating financial innovation.

A. Possible Approaches to Regulating Financial Innovation

Regulation is sometimes thought of as a top-down, command-and-control exercise, where regulators impose rules and enforce compliance without any kind of iterative dialogue with the industry they regulate.[113] As the regulatory state has expanded to cover increasingly complex activities, however, scholars and policymakers have begun to identify and implement new types of regulatory approaches that view regulation as more of a partnership between regulator and regulated entity.[114] The theoretical umbrella term for these new approaches is "new governance," a paradigm that "views regulation as a reflexive, iterative, and dialogical process and 'identifies ongoing deliberation as the most legitimate and most effective mechanism for making decisions in complex organizational structures.'"[115] Instead of forcing regulated entities to act in the public interest against their will, the new

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vices, and the number of times a business can make use of the sandbox . . . ." Austl. Sec. & Inv. Comm'n, Consultation Paper 297: Retaining ASIC's Fintech Licensing Exemption 11 (Dec. 2017), https://asic.gov.au/media/4570456/cp297-published-12-december-2017.pdf [https://perma.cc/HB5P-8YPP].

113 Ford describes this regulatory paradigm as characterized by "over-reliance on rigid rule-making processes and centralized decision-making structures . . . ." Ford, *supra* note 9, at 476.

114 *See* Saule T. Omarova, *Wall Street as Community of Fate: Toward Financial Industry Self-Regulation*, 159 U. Pa. L. Rev. 411, 427 (2011) [hereinafter Omarova, *Community of Fate*].

115 *Id.* (quoting Cristie L. Ford, *New Governance, Compliance, and Principles-Based Securities Regulation*, 45 Am. Bus. L.J. 1, 27–28 (2008)).

governance paradigm seeks to involve and harness regulated entities in a public-private partnership for a defined public good.[116] However, new governance does not rely entirely on private-sector altruism. For this type of partnership to work, there need to be consequences for private actors who do not hold up their end of the bargain. As Ayres and Braithwaite have said, "[r]egulatory agencies will be able to speak more softly when they are perceived as carrying big sticks."[117]

The adoption of principles-based regulation is a practical application of new governance thinking,[118] in the sense that there are consequences for failure to comply with the elaborated principles,[119] but "more focus is given to the spirit of a regulation rather than solely following the rules and procedures by the letter 'box ticking.'"[120] Principles-based regulation is often popular with regulated entities because of the associated flexibility and lower cost of compliance (although, as will be discussed shortly, flexibility comes with its own costs).[121] As for regulators, their hope is that principles-based regulation will remain relevant as technology evolves, making it more difficult for market participants to use unanticipated innovations to exploit the loopholes that would be inevitable in a more precise rule.[122]

Principles-based regulation is also designed to engender a more collaborative relationship between regulators and regulated entities, ideally creating a private-sector culture of compliance that requires less oversight by regulators,[123] which can be particularly helpful when complex innovations defy regulators' understanding. However, devolution of responsibility to industry—in the absence of the firm boundaries and sanctions that would be found in a rules-based regime—can sometimes have deregulatory consequences.[124] The U.K. Financial

116 *See* Omarova, *Community of Fate*, *supra* note 114, at 428.

117 IAN AYRES & JOHN BRAITHWAITE, RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE 6 (1992).

118 *See* Donald C. Langevoort, *The SEC, Retail Investors, and the Institutionalization of the Securities Markets*, 95 VA. L. REV. 1025, 1032 (2009); Ford, *supra* note 9, at 456.

119 "The term 'principles' can be used simply to refer to general rules, or also to suggest that these rules are implicitly higher in the implicit or explicit hierarchy of norms than more detailed rules: they express the fundamental obligations that all should observe." Black et al., *supra* note 61, at 192.

120 Arner et al., *FinTech Evolution*, *supra* note 10, at 1311–12.

121 Black et al., *supra* note 61, at 193; BRUMMER & GORFINE, *supra* note 19, at 7.

122 Black et al., *supra* note 61, at 193.

123 *See id.* at 195.

124 *See* Omarova, *Community of Fate*, *supra* note 114, at 423; Arner et al., *Reconceptualization*, *supra* note 23, at 387–88.

Services Authority ("FSA"), for example, was generally lauded for deploying a principles-based approach until the Financial Crisis occurred—thereafter, it was criticized for having been too "light touch," amongst other things.[125] To avoid operating as deregulation, any principles-based regime must clearly delineate well-crafted principles to serve as regulatory goals,[126] and there must be real consequences for the financial industry for failing to uphold these principles.[127]

In addition to its deregulatory potential, critics of principles-based regulation have also raised other concerns about this regulatory approach—particularly objections as to the legitimacy of principles-based regimes. There is always the risk that enforcement actions for breaching high-level principles will be made with the benefit of hindsight, perhaps informally and without transparency, and perhaps in response to political pressure following a scandal.[128] In addition, regulatory guidance disseminated in a principles-based regime can "become[] rule-based regulation by the back door,"[129] and many administrative law scholars are highly critical of the democratic deficit associated with regulatory approaches that are neither transparent nor subject to the usual administrative law safeguards.[130]

However, while principles-based regulation clearly has its flaws, the benefits of a principles-based approach arguably outweigh its drawbacks when dealing with early-stage innovations that are not yet fully understood.[131] As Wu notes, when technology is evolving too quickly for traditional administrative rulemaking processes to keep up, regulators can either quickly implement some kind of informal regulation, or leave the activity unregulated.[132] In some instances, fi-

125 FIN. SERVS. AUTH., THE TURNER REVIEW: A REGULATORY RESPONSE TO THE GLOBAL BANKING CRISIS 86–88 (Mar. 2009), http://www.fsa.gov.uk/pubs/other/turner_review.pdf [https://perma.cc/JH6S-96ZN] [hereinafter TURNER REVIEW]. The FSA was subsequently abolished in 2013 and was replaced by the Financial Conduct Authority ("FCA").

126 Well-designed regulatory principles should be flexible, prescribe qualitative rather than quantitative standards, have broad application, and make clear the purpose for including the principle as a regulatory goal. Black et al., *supra* note 61, at 192.

127 Omarova, *Community of Fate*, *supra* note 114, at 443. In contrast, in the lead up to the Crisis, the FSA made it clear that it was seeking to limit enforcement. "[T]he FSA sought to reassure the industry that the circumstances in which enforcement action would be taken on the basis of the Principles alone would be rare." Black et al., *supra* note 61, at 192. This approach ultimately had a deregulatory effect. TURNER REVIEW, *supra* note 125, at 86–88.

128 Black et al., *supra* note 61, at 199.

129 *Id.* at 198.

130 Tim Wu, *Agency Threats*, 60 DUKE L.J. 1841, 1847 (2011).

131 For a concise summary of the benefits and flaws of rules-based and principles-based regimes, see BRUMMER & GORFINE, *supra* note 19, at 7.

132 *See* Wu, *supra* note 130, at 1842; *see also* Ford, *supra* note 9, at 458.

nancial regulators may have preexisting authority to prevent a new financial product or service from being offered, which would give those regulators a third option—to ban it entirely—in addition to informal regulation and no regulation. However, a ban is a blunt instrument and may unnecessarily prevent the development of socially useful financial innovations. A principles-based regime gives regulatory agencies an umbrella framework under which to deploy informal regulatory strategies to deal more flexibly with new industry practices as they arise.

The principles underlying a principle-based regime are often adopted in a formal legislative or rulemaking process that lends some democratic accountability,[133] and then communications like agency speeches, testimony, press releases, warning letters, no-action letters, interpretative guidance, and private meetings can provide clarity as to the application of the principles to new activities as they arise.[134] Wu has characterized these types of informal or "soft" regulations as "threats," and they can certainly operate as such.[135] But they can also be part of a new-governance type of collaboration between the industry and the regulators—informal guidance that some scholars refer to as "exhortation."[136] Proponents of this type of informal regulation cite the iterative nature of feedback between regulators and industry, which allows for continuing refinement and improvement of the informal guidance and flexible regulatory approaches.[137]

Admittedly, flexibility is not always beneficial. Cortez has noted that "[f]lexibility and lengthy deliberation are only worthwhile [from the regulators' perspective] if they will significantly improve the quality of the agency's decision."[138] Waiting for perfect information before taking a formal regulatory position will often result in the maintenance of the regulatory status quo—an outcome that is likely to favor the industry[139]—even after there is a clear case for regulating an innovation with more concrete regulations that advance a well-delineated

133 *See* Wu, *supra* note 130, at 1851.

134 Wu notes that these methods of communications have long served as a form of soft regulation that has always been, to some degree, a key part of administrative practice. *See id.* at 1841, 1844.

135 *Id.*

136 Black et al., *supra* note 61, at 192.

137 *See* Charles F. Sabel & William H. Simon, *Minimalism and Experimentalism in the Administrative State*, 100 GEO. L.J. 53, 80 (2011).

138 Nathan Cortez, *Regulating Disruptive Innovation*, 29 BERKELEY TECH. L.J. 175, 202 (2014).

139 *See id.* at 202–04.

public interest.[140] Furthermore, even for industry participants, flexibility may not always be desirable. The tradeoff for flexibility is lack of regulatory certainty,[141] and markets for some innovations may not be able to develop without a clear regulatory signal (in the form of a rule, adjudication, or some other formal action) to users and investors that an innovation is permitted.[142] In these instances, industry may prefer more formal, detailed regulation.[143] Furthermore, if regulators in a principles-based regime respond to industry's desire for certainty by issuing voluminous informal guidance, then that can result in the same issues of ossification, inconsistency, and overcomplication that can plague more detailed, rules-based regimes.[144] A proliferation of enforcement actions can also create a common-law-type regime that denudes the principles-based regime of its flexibility and ease for industry participants.[145] Ultimately, formal regulation may become the preferable approach for both the regulator and the regulated entity.

The regulatory approach being used does not have to remain static over time, though. As Brummer and Gorfine have noted, principles-based regulation and rules-based regulation are two ends on a spectrum of possible regulatory approaches, and regulators can shift their strategies to incorporate elements of both as desirable.[146] When dealing with a new innovative technology, regulators could start by issuing informal guidance under the umbrella of a preexisting principles-based framework. By allowing startups to take a flexible approach to regulatory compliance, rather than investing limited startup funds on researching legal rules and how to comply with them, a principles-based approach could encourage innovation by such firms.[147] Then, to address the concerns articulated above about extended peri-

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140 *See id.* at 179, 181, 201.

141 *See* Wu, *supra* note 130, at 1849–50. Wu points out that early, poorly thought-out rulemaking will likely be attacked by judicial review and so perhaps will not provide the certainty we would ordinarily associate with rules-based regimes—and if such rules are instead left intact, the industry might have certainty but otherwise rue the rules. *Id.*; *see also* Black et al., *supra* note 61, at 196–97.

142 *See* Cortez, *supra* note 138, at 180; *see also supra* notes 26–31 and accompanying text (discussing the importance of regulatory compliance to financial innovators).

143 Cortez, *supra* note 138, at 204. This is particularly likely to be the case when the product being offered is a credence good, and thus its value takes time to become apparent. *Id.* at 180.

144 Black et al., *supra* note 61, at 197.

145 *Id.* at 203.

146 "On the rules end of the spectrum, regulation tends to be prescriptive and detailed, while on the principles end, regulation is communicated through broad, aspirational, and goal- or outcome-focused statements that depend on a range of facts and circumstances for compliance purposes." BRUMMER & GORFINE, *supra* note 19, at 6–7.

147 Arner et al., *FinTech Evolution*, *supra* note 10, at 1311–12.

ods of informal regulation, regulation of innovation could shift along the spectrum so that it becomes more rules-based as the innovation matures.[148]

Ultimately, starting with principles-based regulation and then shifting to rules-based regulation is likely to be a cost-effective regulatory approach because principles are relatively cheap to elaborate at first but become more expensive to administer over time as industry participants seek more and more guidance.[149] Once in a position to take a more definitive stance, regulators could propose a rule to block the new innovation entirely, if warranted (admittedly, this would require some artful drafting to avoid future regulatory arbitrage).[150] Alternatively, regulators could choose to remove all regulatory impediments, to allow the innovation to develop unhindered by any regulation.[151] If regulators wished to strike a middle course, they could permit the innovation but subject it to more formal rules. To answer any lingering uncertainty about whether such rules were appropriate, the rules could be designed to sunset on a particular future date.[152]

Sound theoretical arguments can therefore be advanced for utilizing a principles-based approach to regulating early-stage financial innovation. However, doing so would require significant changes to the U.S. financial regulatory system—even trialing a principles-based approach on a limited scale would require significant resources.[153] This begs the question, then, of whether the rise of fintech warrants changes to the U.S. regulatory approach. The next Section engages with this question.

B. Does Fintech Warrant a New Approach?

Jurisdictions that have, to date, adopted special regulatory regimes for fintech have cited the "promotion of innovation" as their

148 BRUMMER & GORFINE, *supra* note 19, at 7.

149 *See* Black et al., *supra* note 61, at 201.

150 *Cf.* Biber et al., *supra* note 35, at 1595–96, 1602.

151 *Cf. id.* at 1596.

152 Romano has noted that sunsetting is particularly useful when "the dynamic uncertainty of financial markets renders it impossible to foresee what financial innovations and correlative systemic risks will develop"; sunset legislation "must be reviewed and reapproved as a condition of their continued legal force." Roberta Romano, *For Diversity in the International Regulation of Financial Institutions: Critiquing and Recalibrating the Basel Architecture*, 31 YALE J. ON REG. 1, 43 (2014). Of course, sunsets are not the only method of limiting the time that a rule will be applicable: other "[o]ptions include mandatory deadlines, waiting periods, interim periods, [and] phases . . . ." Cortez, *supra* note 138, at 218.

153 *See infra* notes 334–43 and accompanying text.

primary justification for doing so,[154] and at least superficially, this sounds like a worthy regulatory goal. After all, innovation is often a positive force that is an engine for improvement and economic growth.[155] This Article, however, joins the chorus of voices cautioning that financial innovation should not be pursued uncritically as something that is inherently good.[156] More specifically, this Section considers whether the promotion of fintech innovation is a worthy regulatory goal that justifies the expenditure of resources and administrative restructuring necessary to implement a regulatory sandbox.

It is currently a subject of hot debate whether fintech is sufficiently different from preceding waves of financial innovation to warrant specialized regulatory attention. The FCA recently noted that amongst participants in its regulatory sandbox:

> [t]he majority of technology-use cases we have seen so far have been the new application of technologies to traditional products or services, as opposed to using technologies to cre-

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154 In the United Kingdom, the FCA has stated that "[t]hrough our Innovation Hub we want new and established businesses—both regulated and non-regulated—to be able to introduce innovative financial products and services to the market." FIN. CONDUCT AUTH., *Innovate and Innovation Hub* (Sept. 20, 2018), https://www.fca.org.uk/firms/innovate-innovation-hub [https://perma.cc/W2WX-HAE7]. In Australia, ASIC has also established an Innovation Hub to "assist[] fintech startups developing innovative financial products or services to navigate [Australia's] regulatory system." ASIC, *Innovation Hub*, http://asic.gov.au/for-business/your-business/innovation-hub/ [https://perma.cc/JGX3-W2AS]. The McHenry Bill was introduced in the United States "[t]o promote innovation in financial services, and for other purposes." H.R. 6118, 114th Cong. (2016).

155 Awrey suggests that this view of innovation has been influenced by Joseph Schumpeter's classic depiction of innovation as "Creative Destruction":

> The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers, goods, the new methods of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates. . . . The opening up of new markets, foreign and domestic, and the organizational development from the craft shop and factory to such concerns as U.S. Steel illustrate the same process of industrial mutation—if I may use the biological term—that incessantly revolutionizes the economic structure *from within*, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism.

Dan Awrey, *Complexity, Innovation, and the Regulation of Modern Financial Markets*, 2 HARV. BUS. L. REV. 235, 259 (2012) (quoting JOSEPH SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 82–83 (1975)).

156 *See, e.g.*, Simon Johnson & James Kwak, *Is Financial Innovation Good for the Economy?*, *in* 12 INNOVATION POLICY AND THE ECONOMY 1, 4 (Josh Lerner & Scott Stern eds., 2012) ("So in evaluating financial innovation, we need to think about whether it promotes beneficial financial intermediation or excessive and destructive financial intermediation. We cannot say that innovation is 'good' simply because there is a market for it."); *see also* Emilios Avgouleas, *Regulating Financial Innovation*, *in* THE OXFORD HANDBOOK OF FINANCIAL REGULATION 659, 663 (Niamh Moloney, Eil's Ferran & Jennifer Payne eds., 2015).

> ate entirely new products. For example, many firms propose the application of new technologies to reduce operational costs from traditional processes and pass this onto consumers through lower prices.[157]

Arner et al. have argued that in many instances, "the business models of FinTech companies are not radically different from their traditional counterparts. At most, the efficiency is driven by lower overhead costs or disintermediation."[158] Pasquale has also expressed skepticism about the revolutionary promise some see in disruptive, futurist fintech innovations.[159] In contrast, Brummer and Yadav contend that fintech's internet-enabled advances in efficiency (in terms of increasing speed and reducing cost), as well as disintermediation, are having a more seismic impact on the financial system.[160] However, debates about the impact of individual fintech innovations may ultimately be moot: Ford has used the metaphor of "'sedimentary' layers of innovation, each perhaps unremarkable on its own and not flashy in technological terms and yet, collectively, highly consequential,"[161] to convey that layer upon layer of even small incremental changes will, when combined, have a significant impact on the functioning of the financial system. It seems fair to say that fintech innovations will, in the aggregate, at least change the way that many financial products and services are delivered.

This begs the question, however, of whether such changes are likely to be sufficiently welfare-enhancing to be promoted as a matter of public policy. For the purpose of designing a regulatory response, it is less important to determine how "disruptive" or "seismic" the impact of fintech will be, and more important to raise questions about whether and when fintech is responding to genuine market needs, or instead is a form of rent seeking or regulatory arbitrage. This Section engages with these questions, before moving on to consider whether even fintech innovations that are responding to genuine market needs are desirable, recognizing that such innovations could have a detri-

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157 FCA, REGULATORY SANDBOXES LESSONS LEARNED REPORT 9 (Oct. 2017), https://www.fca.org.uk/publication/research-and-data/regulatory-sandbox-lessons-learned-report.pdf [https://perma.cc/NK3W-QB7Q].

158 Arner et al., *FinTech Evolution*, *supra* note 10, at 1315 (footnote omitted).

159 *Exploring the Fintech Landscape: Written Testimony Before the S. Comm. On Banking, Hous., & Urban Affairs*, 115th Cong. 3, 16 (2017) (statement of Frank Pasquale, Professor of Law, Univ. of Md.).

160 Brummer & Yadav, *supra* note 55, at 289–90.

161 CRISTIE FORD, INNOVATION AND THE STATE: FINANCE, REGULATION, AND JUSTICE 195 (2017).

mental impact on consumers, or even on the stability of the financial system as a whole.

The first question to ask when considering whether regulation should promote a fintech innovation is whether the innovation is responding to a real market need, or whether it has been developed only to generate fees for the firm that created the innovation.[162] Awrey has argued that, because most traditional forms of financial innovation cannot be protected by intellectual property law,[163] financial institutions have often made their innovations unnecessarily complicated in order to inhibit competitors seeking to provide cheaper, commoditized versions of the innovations.[164] If the only differentiating factor between an innovation and its predecessors is its increased complexity in achieving the same end, then there is no social benefit in promoting that innovation.

While many fintech startups were conceived with the goal of disrupting the provision of unnecessarily costly and complex financial services by established financial institutions, these startups are increasingly being acquired by existing financial institutions.[165] To the extent that the technology developed by these startups is ultimately deployed to entrench the market position of large established financial institutions, without any concomitant reduction in cost or increase in efficiency for customers, it will not address any real market need.[166] Furthermore, the startups themselves may face incentives that divert them from designing innovations to address consumer demand—for example, startups competing for venture capital funding may design their innovations to accommodate the latest fancy of the venture capital industry, rather than to satisfy any genuine market need.[167] In addition, fintech startups (as well as established financial institutions) are incentivized to render previous generations of their own innovations obsolete by repeatedly introducing new versions of those innovations that do not actually do anything markedly new from the previous version, as a way of extracting monopoly rents from the multiple versions before imitators have a chance to copy and compete.[168] Any innova-

162 Allen, *supra* note 27, at 216. For a discussion of supply-driven innovation, see Awrey, *supra* note 155, at 262–67.

163 Awrey, *supra* note 155, at 262–63.

164 *Id.* at 265.

165 *See* Van Loo, *supra* note 24, at 240, 246–47.

166 *See id.* at 247.

167 *See* Philippon, *supra* note 20, at 9.

168 *See* Awrey, *supra* note 155, at 263.

tion that is purely supply-driven benefits only the firm that develops or acquires it and does not enhance the public welfare.[169]

If such supply-driven innovations are designed to obscure the risks inherent in the innovation, they may go so far as to actively harm the people that use them.[170] Viewed through this lens, fintech's promise of increased access to financial services might seem less like a boon, and more like a way to increase rents at the expense of an expanding group of uninformed consumers. Similar concerns can be raised about innovations that are primarily designed to recreate functions already performed by regulated financial intermediaries while avoiding the relevant regulation (known as regulatory arbitrage)[171]—although if savings from avoiding costly regulation are passed-on to the end users of the innovation, then the innovation may be responding to a genuine market need.[172]

In one study, Buchak et al. considered the driving forces behind the increasing proportion of consumer loans being provided by fintech firms (as well as by nontechnologically driven, nonbank lenders).[173] They concluded that the desire to avoid banking regulation was primarily responsible for the rise of nonbank consumer lending, although technological innovation also played a role.[174] They also concluded that "non-fintech shadow banks offer lower interest rates than traditional banks, suggesting that they pass through a part of regulatory cost savings to customers. Fintech lenders, on the other hand, charge higher interest rates relative to traditional banks . . . ."[175] While this is only one study of one fintech sector, it does suggest that we should look at the promise of fintech innovation with a more critical eye, as it

169 *See id.* at 264; *see also* Philippon, *supra* note 20, at 9.

170 Allen, *supra* note 27, at 216–17.

171 Awrey, *supra* note 155, at 263. "Regulatory arbitrage exploits the gap between the economic substance of a transaction and its legal or regulatory treatment, taking advantage of the legal system's intrinsically limited ability to attach formal labels that track the economics of transactions with sufficient precision." Victor Fleischer, *Regulatory Arbitrage*, 89 TEX. L. REV. 227, 229 (2010).

172 Awrey notes that, according to the Modigliani and Miller theorem, demand for financial innovation is driven by a desire for "among other things, greater choice, lower costs, enhanced liquidity and more effective risk management." Awrey, *supra* note 155, at 260. Fintech can "enhance market efficiency by reducing transaction and financial intermediation costs." Zetzsche et al., *supra* note 1, at 36.

173 *See* Greg Buchak et al., *Fintech, Regulatory Arbitrage, and the Rise of Shadow Banking*, FED. RES. BANK OF PHILA. (Sept. 2017), https://philadelphiafed.org/-/media/bank-resources/supervision-and-regulation/events/2017/fintech/resources/fintech-regulatory-arbitrage-rise-shadow-banks.pdf?la=EN [https://perma.cc/CPP4-4LH2].

174 *See id.* at 5.

175 *Id.* at 4.

may in some circumstances operate primarily as a method of regulatory arbitrage designed to benefit the innovator.

Even where an innovation does respond to a market need, that should not be the end of the inquiry. Although there is much excitement about the potential for fintech to "provide new solutions to old problems, including financial exclusion, the quality of consumer decision-making, agency costs, and compliance costs,"[176] as a society, we should think more broadly about the impact of the innovation (especially if technological solutions foreclose consideration of more direct, nontechnological ways of addressing these old problems).[177] In particular, technological improvements may come at the price of a more complex and fragile financial system, or consumer harm.[178]

The likely impact of fintech on consumers and financial stability is only beginning to be explored. For example, although many see fintech as a disintermediating force, many fintech business models actually *add* intermediaries behind the scenes.[179] Will such business models make the financial system more fragile by increasing the length of the chain of intermediaries involved in a given transaction?[180] Many of these intermediaries are tech companies, who bear little resemblance to the financial institutions with which regulators are used to dealing.[181] This could be problematic because financial regulators may be ill-equipped to understand how the use of data by these tech companies may ultimately subject consumers to harm, including discrimination and privacy violations.[182] Regulators may also have difficulty grappling with the automation and delegation of decisionmaking to algorithms, which is a feature of many fintech business models, particularly as algorithms become more complex and capable of machine learning.[183] Such algorithms might harm consumers (for example, by relying on prohibited factors in making credit deci-

176 Zetzsche et al., *supra* note 1, at 36 (footnote omitted).

177 Pasquale, *supra* note 159, at 17–18.

178 "[B]eyond some point, the additional welfare benefit of providing ever more tailored combinations of risk, return and liquidity must become minimal." Adair Turner, Lecture at CASS Business School, *What Do Banks Do, What Should They Do and What Public Policies Are Needed to Ensure Best Results for the Real Economy?* 22 (Fin. Servs. Auth., 2010), http://www.fsa.gov.uk/pubs/speeches/at_17mar10.pdf [https://perma.cc/EQH7-WHG7].

179 *See* Judge, *supra* note 47, at 605–06.

180 *See* Kathryn Judge, *Fragmentation Nodes: A Study in Financial Innovation, Complexity, and Systemic Risk*, 64 STAN. L. REV. 657 (2012).

181 *See* Brummer & Yadav, *supra* note 55, at 239.

182 *See* Pasquale, *supra* note 159, at 3–4.

183 *See* Brummer & Yadav, *supra* note 55, at 275.

sions),[184] or negatively impact financial stability (for example, if a fintech product provides "robo-advice" to customers about their investment options,[185] it could ultimately increase the correlation of the performance of different asset classes in a panic).[186] These are only a few of the concerns that one can envision about the impact that fintech innovations will have on consumers and financial stability, and more such concerns will undoubtedly come to light as the technology progresses. Unfortunately, however, the regulatory goals of consumer protection and financial stability may be losing salience as memories of the financial crisis fade,[187] and in this context, some jurisdictions may be choosing to loosen regulatory protections for strategic reasons.

Zetzsche et al. have argued that one of the primary reasons countries around the world have adopted regulatory sandboxes is for their "signaling" function:[188] implementing such a regime communicates a commitment to promoting fintech innovation, which might give a jurisdiction an advantage in attracting financial services business to its shores—with the extra tax revenue, employment, and bragging rights that increased international competitiveness entails. However, it is very difficult to determine whether a signaling effect has had or will have a real impact on competitiveness, or to make a conclusive argument about whether any benefits of increased competitiveness arising from adopting a sandbox outweigh sacrifices made by lowering regulatory standards in terms of consumer protection and financial stabil-

184 *See* 15 U.S.C. § 1691 (2012). "Once one piece of software has inferred that a person is a bad credit risk, a shirking worker, or a marginal consumer, that attribute may appear with decision-making clout in other systems all over the economy." Pasquale, *supra* note 159, at 6.

185 The term "robo advisor" is popularly used to describe "an automated investment service . . . which competes with financial advisors by claiming to offer equally good, if not better, financial advice and service at a lower price." Tom Baker & Benedict Dellaert, *Regulating Robo Advice Across the Financial Services Industry*, 103 IOWA L. REV. 713, 719 (2018).

186 [T]he potential solvency and systemic risks posed by hundreds of thousands, or even millions, of consumers choosing their financial products based on the same or similar models are sufficiently large and different in kind from those traditionally posed by consumer financial product intermediaries to justify regulatory attention on those grounds alone.

Id. at 732.

187 Following the financial crisis, many felt that financial innovation needed to be subordinated to the goals of consumer protection and financial stability, and that attitude was reflected in the Dodd-Frank legislation enacted in the wake of that crisis. Brummer & Yadav, *supra* note 55, at 261–62. However, Coffee has noted that "[a]fter the financial crisis passes and some semblance of 'normalcy' returns," it is harder to maintain enthusiasm for financial regulatory protections. John C. Coffee, Jr., *The Political Economy of Dodd-Frank: Why Financial Reform Tends to Be Frustrated and Systemic Risk Perpetuated*, 97 CORNELL L. REV. 1019, 1023 (2012).

188 Zetzsche et al., *supra* note 1, at 93.

ity.[189] This is especially the case when these new fintech regulatory regimes are only a few years old, and there are no data available on which to base empirical arguments about competitiveness and the costs of the new regulatory regimes.[190]

What is more certain at this stage is that large, established firms do not require regulatory dispensation to encourage fintech innovation. Regulation can certainly serve as a barrier to entry for startups in the United States, who must navigate and comply with overlapping rules from numerous states and federal regulators, but established banks have charters that preempt the application of many of the aforesaid rules.[191] These banks do still have to comply with significant amounts of regulation, but large financial institutions in particular already have substantial regulatory compliance teams, as well as strong client relationships and significant amounts of capital that put them at an advantage in innovating new products.[192] The largest institutions are also able to utilize their economic resources and access to regulators to influence the creation and enforcement of financial regulation to their benefit—which may help them to block the entry of insurgent competitors.[193] Tech giants like Google, Amazon, Apple, and Facebook may not yet have acquired bank charters or developed financial regulatory compliance teams, but they certainly have significant resources and political clout (which they have already started to exercise on financial services regulation).[194] None of these large, es-

189 Ford notes that "[r]egulatory competition for innovative financial work between London and New York has often been blamed for a general lowering of regulatory standards in the lead-up to the financial crisis." FORD, *supra* note 161, at 198. Langevoort commented in a related context that "[t]here is little more that one can say about [such a trade-off] beyond the desirability of being candid about it." Langevoort, *supra* note 118, at 1078.

190 FINANCIAL CONDUCT AUTHORITY, *supra* note 157, at 8.

191 Douglas, *supra* note 29, at 37.

192 Philippon notes that "The key advantage of incumbents is their customer base, their ability to forecast the evolution of the industry, and their knowledge of existing regulations." Philippon, *supra* note 20, at 15. Zetzsche et al. note that "large incumbent licensed enterprises" also have significantly more bargaining power with regulators than startup firms. Zetzsche et al., *supra* note 1, at 97.

193 *See* Arthur E. Wilmarth, Jr., *A Two-Tiered System of Regulation is Needed to Preserve the Viability of Community Banks and Reduce the Risks of Megabanks*, 2015 MICH. ST. L. REV. 249, 335 (2015).

194 Amazon, Apple, Google, Intuit, Stripe, and Paypal have already formed a lobbying group called "Financial Innovation Now," which is "working to modernize the way consumers and businesses manage money and conduct commerce. We believe that technological transformation will make financial services more accessible, safe and affordable for everyone, and we promote policies that enable these innovations." FINANCIAL INNOVATION NOW, *About Financial Innovation Now*, https://financialinnovationnow.org [https://perma.cc/L88Z-7CTC].

tablished firms need any regulatory dispensations to encourage the growth of fintech.

Justifications for special fintech regulatory regimes are more persuasive if such regimes are tailored towards reducing regulatory barriers to entry for small fintech startups.[195] Philippon has argued that, to the extent that fintech innovations have been underwhelming to date, that might be attributable to the difficulties startups face in implementing transformative ideas in a financial system populated by entrenched incumbents.[196] Distributed ledger technology, for example, has emerged as something that could be truly transformative for settlement of payments and asset transfers,[197] but startups seeking to implement this technology face stiff competition from consortiums of large banks seeking to use this technology to make incremental improvements to their existing payment and settlement systems, and thus further cement their dominant market position.[198] Reducing regulatory barriers to entry for fintech startups might allow for more welfare-enhancing applications of the distributed ledger and other fintech technologies, although such a result is by no means guaranteed.

Reducing regulatory barriers to entry could also give those startups a theoretical chance of eroding the market share of some of the most systemically important financial institutions ("SIFIs").[199] These SIFIs are viewed as "too big to fail," in the sense that market participants (including the firms themselves) believe that governments will not allow the financial system and broader economy to be crippled by

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195 "[I]f regulators view FinTech innovation as a positive development for consumers and markets, then they will need to look for ways to engage with smaller companies and assist them in their compliance efforts." BRUMMER & GORFINE, *supra* note 19, at 6. Biber et al. have argued that regulators should consider whether existing rules "favor existing business models over innovative business models," noting that "[i]f existing rules cannot be interpreted in a neutral way . . . it may be necessary to rethink the regulatory regime." Biber et al., *supra* note 35, at 1608–09.

196 *See* Philippon, *supra* note 20, at 15.

197 *See* Allen, *supra* note 27, at 933.

198 *Id.* at 932–33.

199 Metrics for determining the systemic importance of financial institutions vary by context, but often include:

> the size of [the firm]; availability of substitute providers for any critical products and services offered by [the firm]; interconnectedness of [the firm] with the banking or financial system; extent to which [the firm] contributes to the complexity of the financial system; and extent of the cross-border activities of [the firm].

Order Approving the Acquisition of a Savings Association and Nonbanking Subsidiaries, FRB Order No. 2012-2, 28–29 (Feb. 14, 2012), https://www.federalreserve.gov/newsevents/pressreleases/files/order20120214.pdf [https://perma.cc/H9DF-UETZ].

the failure of such large and interconnected entities.[200] As such, SIFIs are incentivized to take greater risks, knowing that they will reap the benefits of any bets that pay off, while the cost of significant failures will be borne by the government (and thus, indirectly, by society at large) in the form of a bailout. If a successful fintech startup were to outcompete an existing SIFI in a particular market sector, though, that could theoretically cause that SIFI to shrink. As an institution becomes smaller, its importance to the financial system becomes less obvious, and thus, the availability of any implicit government guarantee becomes less reliable—and the institution's risk-taking incentives become less perverse. Even if a successful fintech startup does not succeed in reducing the size of an existing SIFI, it could nonetheless lessen the systemic importance of that firm by standing ready to provide substitute services in the event of SIFI failure (if institutions can fail and others can step into the breach to provide services necessary for the growth of the broader economy, then the government is less likely to bail out those institutions). Therefore, it would be ideal if more fintech startups were able to challenge the largest, established players in the financial industry. However, one should not be overly sanguine about the prospects of fintech startups eroding the systemic importance of SIFIs because such institutions enjoy numerous advantages over fintech startups beyond regulatory barriers to entry.[201] This, like many of the other arguments in favor of special regulatory treatment for fintech discussed in this Section, is equivocal at best.

Perhaps the best argument that can be made in favor of adopting a sandbox responds to the reality that the extant financial regulatory system has often stumbled when dealing with past financial innovations,[202] and regulators might benefit from trialing a new approach on a small scale. Financial innovation provides numerous challenges for regulators attempting to keep tabs on all the moving parts of the financial system. The primary challenge is informational—regulators may not even be aware of new financial products and ways of effecting services, let alone understand all of their complexities and interconnections with other products and services.[203] When regulators do not fully understand financial products and services, it is easier for the providers of such products and services to design them in such a way

200 *See* SIMON JOHNSON & JAMES KWAK, 13 BANKERS: THE WALL STREET TAKEOVER AND THE NEXT FINANCIAL MELTDOWN 184 (2010).

201 *See supra* note 192 and accompanying text.

202 *See* Avgouleas, *supra* note 156.

203 *See* Hilary J. Allen, *A New Philosophy for Financial Stability Regulation*, 45 LOY. U. CHI. L.J. 173, 209 (2013).

as to avoid the letter (but violate the spirit) of regulations that aim to protect consumers or financial stability.[204] Such regulatory arbitrage can be particularly successful in a system of multiple financial regulators with potentially overlapping jurisdiction, where it is not always clear which of these regulators should regulate a new product or service—providers of products and services sometimes take advantage of this uncertainty to structure a product to avoid the jurisdiction of the most stringent regulator.[205] Finally, if regulators come to rely on the providers of complex financial products and services for explanations about how they work, the result may be that regulation ultimately comes to reflect the worldview of the financial industry, rather than the objectives of society as a whole (this phenomenon is often referred to as "cognitive capture").[206]

As the remainder of this Article will explore in detail, trialing a new regulatory regime for fintech—in the form of a regulatory sandbox—could yield lessons about ways to respond to all of these challenges, ultimately helping U.S. financial regulators to cope with financial innovation beyond fintech.[207] This is perhaps the best argument that can be advanced for adopting a regulatory sandbox in the United States.

III. A U.S. REGULATORY SANDBOX: A PROPOSAL

A. *Guiding Principles*

Given that a regulatory sandbox is a form of principles-based regulation, it is crucial that the principles or regulatory goals that will guide the administration of the sandbox be clearly articulated. The Financial Stability Board[208] has noted that, around the world, when

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204 *See* Awrey, *supra* note 155, at 251–52, 255–56 (discussing how opacity in the financial markets, fragmented regulatory regimes, and burdensome regulations "open the door to regulatory arbitrage").

205 For a discussion of how functionally-equivalent "shadow banking" activities evolved to take advantage of the different types of regulatory regimes available in the United States, see MICHAEL S. BARR ET AL., FINANCIAL REGULATION: LAW AND POLICY 23–29 (2016).

206 Allen, *supra* note 203, at 199.

207 *See, e.g.*, BRUMMER & GORFINE, *supra* note 19, at 11 ("By engaging companies as they develop their business models, regulators can create a positive feedback loop with market participants that help both make wiser decisions."); Ford, *supra* note 9, at 459 ("In order to stay relevant and informed about fast-moving industry practice, to keep regulation sufficiently flexible, and to avoid inhibiting productive innovation, regulators need to establish open and perpetual communication lines with industry.").

208 The Financial Stability Board is an international body that "promotes international financial stability . . . by coordinating national financial authorities and international standard-setting bodies as they work toward developing strong regulatory, supervisory and other financial

financial regulators are creating sandboxes, "the policy objectives pursued are mostly consumer and investor protection, market integrity, financial inclusion and promoting innovation or competition."[209] For example, the United Kingdom's FCA adopted its regulatory sandbox in order to "promote competition by supporting disruptive innovation,"[210] but is very clear that the promotion of innovation must be accompanied by sufficient consumer protection safeguards.[211] In its Regulatory Guide 257, ASIC also makes it clear that the goal of the Australian regulatory sandbox is to facilitate innovation, and similarly notes that its commitment to promoting innovation needs to be balanced with efforts to ensure that "new products and services are regulated in an appropriate way that promotes investor and financial consumer trust and confidence."[212] ASIC also notes that the promotion of innovation must be balanced against the regulatory objective of ensuring that "markets operate in a fair and efficient way."[213]

Notwithstanding the questions raised in this Article about the promotion of innovation as a regulatory goal,[214] it seems clear that if the United States adopts a regulatory sandbox, it will do so for the express purpose of promoting innovation—the Treasury Report states that any regulatory sandbox adopted should "[p]romote the adoption and growth of innovation and technological transformation in financial services . . . ."[215] Consumer protection should act as a guiding principle for a U.S. regulatory sandbox as well, though, as should the promotion of financial stability. While the Financial Stability Board has noted that "stability was not often cited as an objective for recent or planned regulatory reforms with regard to FinTech,"[216] the rise of fintech could impact financial stability,[217] and so regulators administering a sandbox in the United States should give serious consideration to the financial stability-related aspects of fintech. Fortunately, there is hope that incorporating financial stability elements into a U.S.

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sector policies." *About the FSB*, FIN. STABILITY BD., http://www.fsb.org/about/ [https://perma.cc/86WF-7PRD].

209 FIN. STABILITY BD., FINANCIAL STABILITY IMPLICATIONS FROM FINTECH: SUPERVISORY AND REGULATORY ISSUES THAT MERIT AUTHORITIES' ATTENTION 4–5 (June 27, 2017).

210 FINANCIAL CONDUCT AUTHORITY, *supra* note 25, at 5.

211 *See id.* at 9–10.

212 *Regulatory Guide 257*, *supra* note 106, at 4.

213 *Id.*

214 *See supra* notes 154–57 and accompanying text.

215 TREASURY REPORT, *supra* note 3, at 168.

216 FINANCIAL STABILITY BOARD, *supra* note 209, at 5.

217 *See id.* at 3–4; *see also* William Magnuson, *Regulating Fintech*, 71 VAND. L. REV. 1167, 1170 (2018) (arguing fintech will pose its own systematic risks).

regulatory sandbox would be politically feasible: Representative McHenry's 2016 regulatory sandbox bill expressly referred to financial stability concerns, requiring any applicant to demonstrate that "the financial innovation . . . does not present systemic risk to the United States financial system . . . ."[218]

These three guiding principles for a U.S. regulatory sandbox (promotion of innovation, consumer protection, and financial stability) should be articulated in the legislation creating the sandbox—in both Australia and the United Kingdom, the sandbox goals have only been disseminated in informal guidance documents published on the regulators' websites, which could undermine their legitimacy.[219] To further ensure the legitimacy of the U.S. sandbox regime, there should be a formal process in place that requires the regulators administering the sandbox to assess whether the sandbox is meeting its stated goals, which will in turn allow for more detailed external assessment of the sandboxes as a form of regulation in a broad sense.[220] Although it is likely that regulators will need to refine this new form of regulation in light of experience and adapt it to grapple with new types of innovation, there should be some form of accountability to ensure that they do so in a manner that is faithful to the principles that the sandbox is designed to achieve.

B. Who Will Administer It?

Any proposal for a U.S. regulatory sandbox would need to respond to the ways that the U.S. legal system differs from the Australian and U.K. legal systems. The regulatory sandboxes implemented in these countries are not troubled by the federalism concerns that complicate financial regulation in the United States, because the United Kingdom does not have a federal system, and while Australia does have a federal system, corporate and financial laws there are administered at the federal (rather than state) level.[221] In addition, both the

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218 H.R. 6118, 114th Cong. § 6(b)(2)(C) (2016).

219 For a discussion of legitimacy concerns associated with informal regulation, see *supra* notes 131–33 and accompanying text.

220 Sabel and Simon note that the ability to assess compliance with regulatory goals is a key element of a new-governance approach. *See* Sabel & Simon, *supra* note 137, at 79. Sabel and Simon prefer the term "experimentalism," but recognize that the regulatory approach they describe "bears a strong resemblance to what others call 'new governance' or 'responsive regulation.'" *Id.* at 55.

221 The most important statute in this area is the *Corporations Act 2001* (Austl.). For a survey of financial regulatory bodies in each of these jurisdictions, compare EDWARD V. MURPHY, CONG. RESEARCH SERV., R43087, WHO REGULATES WHOM AND HOW? AN OVERVIEW OF U.S. FINANCIAL REGULATORY POLICY FOR BANKING AND SECURITIES MARKETS (2015), with

United Kingdom and Australia have fewer financial regulatory agencies than the United States, which makes it easier to coordinate regulatory relief.[222] For example, in Australia, any provider of a financial service is generally required to obtain an Australian financial services license, and providers of credit need to apply for an Australian credit license—but both licenses are obtainable from the same regulatory body, ASIC.[223] ASIC was, therefore, able to single-handedly craft a fintech-licensing exemption.[224] In the United Kingdom, the FCA anticipates that sandbox options for some firms will have to be agreed upon in consultation with the United Kingdom's Prudential Regulation Authority.[225] However, it is easier to carve out a sandbox space from the oversight of just two regulators than it is to manage the overlapping jurisdictions of the multiple U.S. federal regulatory agencies—not to mention the state regulatory authorities that may also have jurisdiction over a fintech firm.

To illustrate how complicated the U.S. regulatory environment can be, consider the example of a hypothetical "robo-advisor" startup designed to provide consumers with comprehensive advice about, and facilitate the purchase of, suitable financial products and services. To the extent that the startup provides investment advice and securities brokerage services, then it would be regulated by the SEC and FINRA (a self-regulatory organization overseen by the SEC).[226] If it also recommends and facilitates the purchase of banking products, then this could potentially implicate regulation by the Federal Reserve, the OCC, and the FDIC at the federal level, as well as regulation by state banking supervisors.[227] Insurance products pose unique regulatory challenges, as there is no federal insurance regulator—instead, by virtue of the McCarran-Ferguson Act, insurance is very

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RESERVE BANK OF AUSTL., COUNCIL OF FINANCIAL REGULATORS ANNUAL REPORT – 2002: AUSTRALIA'S FINANCIAL REGULATORY FRAMEWORK, https://www.rba.gov.au/publications/annual-reports/cfr/2002/aus-fin-reg-frmwk.html [https://perma.cc/UR2X-LQCY], and *UK Regulators, Government and Other Bodies*, FIN. CONDUCT AUTHORITY, https://www.fca.org.uk/about/uk-regulators-government-other-bodies [https://perma.cc/92QX-KFR3].

222 *Id.*

223 *Regulatory Guide 257*, *supra* note 106, at 5–6.

224 *See id.*

225 FINANCIAL CONDUCT AUTHORITY, *supra* note 25, at 7.

226 STAFF OF THE INV. ADVISER REGULATION OFFICE, SEC. & EXCH. COMM'N, REGULATION OF INVESTMENT ADVISERS BY THE U.S. SECURITIES AND EXCHANGE COMMISSION 2, 21, 25 (2013).

227 *See* MARC LABONTE, CONG. RESEARCH SERV., R44918, WHO REGULATES WHOM? AN OVERVIEW OF THE U.S. FINANCIAL REGULATORY FRAMEWORK 8, 25 (2017).

much a state law concern.[228] Thus, state insurance supervisors from around the country could also have oversight over a robo-advising firm that recommends and brokers insurance products. Finally, if the robo-advising firm recommends and sells consumer financial products and services not caught by the categories above, the CFPB might also have the power to regulate the firm.[229] To address such regulatory overlap, there is a strong argument for reducing the number of regulatory agencies in the United States.[230] However, a significant restructuring of the U.S. regulatory system has consistently proved elusive.[231] We are thus left with the second best option of trying to identify an existing regulatory body that could operate a regulatory sandbox in the United States.

At the outset, it is worth noting that even though some state regulators have evinced an interest in establishing regulatory sandboxes,[232] state regulators are ill-suited to overseeing such a program. From a practical perspective, online financial services are regularly provided across state lines, but any regulatory sandbox adopted by an individual state (or even a small group of states jointly, as has been proposed in New England)[233] could only allow for severely limited experimentation within their borders. Arizona, for example, which became the first U.S. state to implement a fintech regulatory sandbox in March 2018,[234] has restricted sandbox testing to consumers resident in that state.[235] Problematically, state regulators also lack incentives to promote financial stability—a benefit that will accrue largely to persons outside of their state[236]—and financial stability should be a guiding principle for the regulatory sandbox.[237] This Article therefore argues

228 Daniel Schwarcz & Steven L. Schwarcz, *Regulating Systemic Risk in Insurance*, 81 U. CHI. L. REV. 1569, 1579 (2014).

229 *See* LABONTE, *supra* note 227, at 9. The CFPB could also have supervisory jurisdiction that overlaps the banking regulators in some circumstances.

230 Hilary J. Allen, *Putting the "Financial Stability" in Financial Stability Oversight Council*, 76 OHIO ST. L.J. 1087, 1138–39 (2015).

231 *See* John C. Coffee, Jr., *Competition Versus Consolidation: The Significance of Organizational Structure in Financial and Securities Regulation*, 50 BUS. LAW. 447, 447 (1995).

232 *See* Paul Sweeney, *Fintech Sandbox? States, OCC Mull Regulatory Options*, DEBANKED (May 2, 2017), http://debanked.com/2017/05/fintech-sandbox-states-occ-mull-regulatory-options/ [https://perma.cc/X58H-XXET].

233 *Id.*

234 Brenna Goth, *Arizona Becomes First Sandbox State for Fintech Products*, BNA (Mar. 22, 2018), https://www.bna.com/arizona-becomes-first-n57982090236/# [https://perma.cc/6SBH-DX99].

235 H.B. 2434, 53rd Leg., 2d Sess. (Ariz. 2018).

236 Schwarcz & Schwarcz, *supra* note 228, at 1628.

237 *See supra* notes 216–18 and accompanying text.

that any regulatory sandbox implemented in the United States should largely preempt the application of state regulation.[238] The McHenry bill took a similar approach, seeking to preempt enforcement actions by the States against firms that had entered into a sandbox arrangement with a federal regulator.[239] Importantly, though, the McHenry bill preserved enforcement authority for the States in limited circumstances:[240] given the track record of some federal regulators (particularly the OCC) in using their powers of preemption to the detriment of consumers and the public interest more broadly,[241] it would be wise to preserve some (very limited) rights for the States to seek information from, and bring enforcement actions against, firms participating in a federally administered regulatory sandbox.

Turning to the federal regulators who are potential candidates for operating such a regulatory sandbox, the OCC, SEC, and CFTC have all certainly expressed an interest in fintech, but primarily to the extent that it impacts their traditional focus on banking, securities, and commodity regulation, respectively.[242] Ideally, the regulator operating the regulatory sandbox would have a perspective and expertise that spans the full range of financial products and services available. This also militates against giving responsibility for the sandbox to the Federal Reserve because the Federal Reserve sometimes has a tendency to view all parts of the financial industry through "bank-tinted lenses."[243] The CFPB is one potential candidate, in that it oversees a wide variety of financial services and products, has shown interest in financial innovation, and has been at the forefront of trialing new regulatory approaches.[244] However, the CFPB is less than perfectly suited

238 In a similar vein, Brummer and Gorfine argue that when regulating fintech, "[i]f the need for local 'boots on the ground' is not compelling, then federal lawmakers may do well to consider preempting the states in order to promote efficient and uniform regulation." BRUMMER & GORFINE, *supra* note 19, at 13.

239 H.R. 6118, 114th Cong. § 8(d) (2016).

240 House Bill 6118 would have allowed States to bring an enforcement action against a sandbox firm if the relevant federal regulatory agency were found to have acted arbitrarily and capriciously, and the firm were found to have "substantially harmed consumers within such State." *Id.* § 8(d)(2).

241 For a comprehensive discussion of the use of preemption by the OCC (and other federal regulators), see Arthur E. Wilmarth, Jr., *The Dodd-Frank Act's Expansion of State Authority to Protect Consumers of Financial Services*, 36 J. CORP. L. 893, 916–19 (2011).

242 *See* Van Loo, *supra* note 24, at 258–60; *see also* Mary Jo White, Chair, U.S. Sec. & Exch. Comm'n, Opening Remarks at the Fintech Forum (Nov. 14, 2016) (transcript available at https://www.sec.gov/news/statement/white-opening-remarks-fintech-forum.html [https://perma.cc/7H5U-CMCA]); Press Release, *supra* note 64.

243 *See* Allen, *supra* note 230, at 1122.

244 *See* Van Loo, *supra* note 24, at 271–72.

to administering any regulatory sandbox because it does not have a mandate to pursue financial stability—and is currently mired in political turmoil.[245] Most important, locating the regulatory sandbox within the CFPB (or any other single U.S. regulatory agency) would limit the type of regulatory relief available to sandbox firms:[246] the CFPB's inability to provide exemptions from enforcement by other agencies has been cited as one of the reasons why its Project Catalyst has not been utilized.[247] Unless Congress were to give the CFBP the power to preempt enforcement actions by other agencies, which is unlikely to occur under an administration committed to limiting the CFPB's powers,[248] the CFPB would not be able to provide the regulatory relief necessary for a successful sandbox.

There is therefore no single existing agency well-suited to administering a U.S. sandbox. McHenry's bill proposed to address this by creating a Financial Services Innovation Office ("FSIO") at each regulatory agency and a FSIO Liaison Committee as a forum for coordination and cooperation between the various FSIOs.[249] However, this FSIO Liaison Committee falls short because it is not designed to rule on applications from potential sandbox firms. Instead, the bill anticipates that a firm will submit an application to only one agency's FSIO.[250] A successful applicant would then sign an "enforceable compliance agreement" with the agency they applied to, which would govern the firm's relationship with that agency (in lieu of generally applicable law).[251] If the firm's product or service could conceivably be regulated by multiple agencies, then the bill allows subsequent agen-

245 *See id.* at 260, 274.

246 Zetzsche et al. note that in Hong Kong, the "sandbox is limited to the respective regulators' jurisdiction . . . (where the HKMA only has regulatory authority over banks and banking activities)." Zetzsche et al., *supra* note 1, at 72.

247 *See* McHenry, *supra* note 3.

248 The CFPB was created to pursue an important mission, but its unaccountable structure and unduly broad regulatory powers have led to predictable regulatory abuses and excesses. . . . Treasury's recommendations include: making the Director of the CFPB removable at will by the President or, alternatively, restructuring the CFPB as an independent multi-member commission or board; funding the CFPB through the annual appropriations process; adopting reforms to ensure that regulated entities have adequate notice of CFPB interpretations of law before subjecting them to enforcement actions; and curbing abuses in investigations and enforcement actions.

U.S. DEP'T OF TREASURY, A FINANCIAL SYSTEM THAT CREATES ECONOMIC OPPORTUNITIES: BANKS AND CREDIT UNIONS 13–14 (2017).

249 H.R. 6118, 114th Cong. §§ 4, 5 (2016).

250 *Id.* § 6(a).

251 *See id.* § 8(a).

cies to join existing enforceable compliance agreements,[252] but this procedure nonetheless allows the first agency to set the terms of the enforceable compliance agreement. Furthermore, enforcement actions by agencies not party to the compliance agreement are effectively preempted.[253] A structure like this could lead to a race to the bottom, with startups consistently approaching the most lenient regulator to seek an enforceable compliance agreement, and regulators competing to be the most lenient so as to increase their regulatory turf.

Instead, decisions to grant regulatory sandbox relief should be made by a committee of regulators,[254] which would set the terms of the sandbox relief, including the parameters for testing (these parameters should include safeguards to protect consumers and financial stability).[255] The author is agnostic as to whether agencies should be required to form a FSIO (as the McHenry bill anticipated), or be permitted to develop their own internal processes for identifying personnel well-suited to serving on an interagency regulatory sandbox committee. However, it is necessary that someone with insurance expertise sit on the committee—a feature the McHenry bill does not require. This could be addressed by modeling the committee's membership structure on the Financial Stability Oversight Council ("FSOC"). An "independent member appointed by the President, by and with the advice and consent of the Senate, having insurance expertise" is a voting member of the FSOC, in addition to the Treasury Secretary and the heads of the Federal Reserve, the OCC, the FDIC, the CFPB, the SEC, the CFTC, the Federal Housing Finance Agency, and the National Credit Union Administration Board.[256] The FSOC also has two non-voting members with insurance expertise (the Director of the Federal Insurance Office, and a representative state insurance regulator).[257] In addition to the state insurance regulator, a state banking and a state securities regulator also serve as non-voting mem-

252 *Id.* § 8(c).

253 *Id.* § 8(d).

254 To minimize the amount of time that members of this committee need to devote to its deliberations, the committee could adopt the FCA model and consider applications for admission to the regulatory sandbox as a cohort, twice annually.

255 The FCA treats disclosure, compensation, and other consumer protection safeguards on a case-by-case basis, and also notes that the "testing should not cause risks to the financial system (i.e., scale of testing has to be limited)." FINANCIAL CONDUCT AUTHORITY, *supra* note 25, at 10.

256 12 U.S.C. § 5321(b)(1)(j) (2012).

257 *See id.* § 5321(b)(2).

bers of the FSOC.[258] The concerns that have been raised in this Article about preempting state law could perhaps be mitigated by including state voices (if not votes) in the deliberations on whether firms should be permitted to take advantage of a regulatory sandbox.

C. *Form of Relief*

Having established that a committee of regulators should determine which firms should be given special regulatory treatment, this Section considers the form of regulatory relief that successful applicants to the U.S. sandbox should receive. ASIC offers a full exemption from licensing requirements, the FCA offers more limited relief in the form of restricted authorizations (as well as waivers and no-enforcement letters), and the McHenry bill proposed enforceable compliance agreements that would be accompanied by waivers of agency rulemakings (to the extent that an agency had the power to do so).[259] All of these approaches have their merits: ASIC's approach avoids the costs and potential delay for sandbox firms associated with applying for and obtaining a restricted authorization or enforceable compliance agreement. However, a complete exemption potentially limits interaction, and thus information sharing, between regulators and sandbox firms. Subjecting firms to some form of ongoing regulatory dialogue (in the form of either a restricted authorization or an enforceable compliance agreement) encourages information sharing and has the added benefit of giving the firms practice in compliance that will be helpful if and when they scale up to a larger size.[260]

This Article, therefore, argues that the United States should not follow ASIC's example of providing a clean exemption. In any event, ASIC's approach would probably not be politically feasible in the United States. As previously discussed, fear of enforcement actions from overlapping regulatory agencies can disincentivize firms from seeking regulatory relief from a single agency, and the key attraction of a U.S. regulatory sandbox would likely be the certainty that its preemptive power provides.[261] In order to implement a clean exemption in the United States, the committee charged with administering the sandbox would need to have clear legislative authority to promulgate a standing rule that would preempt the application of *any* financial regulation, administered by *any* financial regulatory agency, to *all*

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258 *See id.*

259 *See* H.R. 6118, 114th Cong. § 4(d) (2016).

260 *See* Woolard, *supra* note 87.

261 *See supra* notes 246–48 and accompanying text.

firms that meet the availability criteria enumerated in the rule. Notwithstanding that the term "fintech" is both difficult to define and constantly evolving,[262] the committee would be required to decide—before promulgating the rule—which innovations would and would not qualify for the exemption. These criteria would likely be ripe for arbitrage, allowing firms to portray all manner of innovations as qualifying for the sandbox and thus eligible for a clean exemption from all financial regulation (other than the terms of the sandbox rule).[263] A complete—and easily arbitrageable—exemption could function as total preemption from each of the other agencies' regulatory authority, and opposition to such an approach (both from the agencies themselves, and from their supervising Congressional committees, all keen to protect their turf) could be insurmountable.

The preemptory effect of the sandbox would likely be somewhat more palatable if decisions to grant relief were made on a case-by-case basis, in a process overseen by a committee in which each agency participates. The sandbox might also be more acceptable to regulators if an alternative form of regulation (like a restricted authorization or enforceable compliance agreement) were applied to sandbox firms, instead of exempting sandbox firms from all regulation.[264] As such, the form of regulatory relief adopted in the United States would be more likely to resemble the FCA's restricted authorizations, or the McHenry bill's enforceable compliance agreements, than ASIC's fintech-licensing exemption. Requiring approval on a case-by-case basis would also promote the new-governance ideal of information sharing between regulated firms and regulators.[265]

D. Selection Criteria

If relief is to be granted on a case-by-case basis, some guidance should be published that gives an indication of the selection criteria that the committee will rely on in making such determinations. One proponent of regulatory sandboxes has argued that they are "like the scientific method: develop an idea, test it, and examine the new result.

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262 *See supra* notes 17–20 and accompanying text.

263 Regulatory arbitrage is a consequence of a legal system with generally applicable laws that purport to define, in advance, how the legal system will treat transactions that fit within the defined legal forms. Because the legal definition cannot precisely track the underlying economic relationship between the parties, gaps arise, and these gaps create opportunities.

See Fleischer, *supra* note 171, at 243.

264 *See supra* notes 259–60 and accompanying text.

265 *See* Ford, *supra* note 9, at 445.

If what develops is promising, find a way to build it on a larger scale."[266] However, it would be wrong to view sandboxes as a perfect experimental setting. In most jurisdictions, the very first stage of the regulatory sandbox process involves an unscientific selection of the firms that can use the sandbox (drawn from a pool of applicants that is itself potentially unrepresentative). This selection process warrants close attention, as the firms selected will inevitably skew the regulators' understanding of innovation and may, as a result, skew any rules of broader application made in response to observations from the sandbox.[267]

Furthermore, there are significant normative concerns about the ability of unelected regulatory bodies to pick winners amongst financial firms.[268] Acceptance into a regulatory sandbox lends a certain regulatory imprimatur to a participating firm, which may enable that firm to attract customers and investors that it may not otherwise have.[269] This is certainly one of the key benefits of the regulatory sandbox for startup firms,[270] but it raises reputational issues for the regulatory body in selecting participating firms.[271] Therefore, the committee should adopt formal criteria through notice-and-comment rulemaking for selecting sandbox firms, explaining how the selection criteria relate to the sandbox's overarching regulatory goals. Notwithstanding that regulators will require some flexibility in applying the selection criteria, this would provide greater certainty to applicants, while also providing a means for the regulator to justify (after the fact) its selection of any fintech firm that ultimately causes consumer or systemic

266 Jessica Rosenworcel, *Regulating the Digital Economy: Sandbox Thinking*, 34 DEMOCRACY J. (Fall 2014), http://democracyjournal.org/magazine/34/sandbox-thinking/ [https://perma.cc/XSY7-NMZS].

267 *See* Cristie Ford, *Financial Innovation and Flexible Regulation: Destabilizing the Regulatory State*, 18 N.C. BANKING INST. 27, 33 (2013) ("Innovation and regulation are in a reflexive relationship."); *see also* BRUMMER & GORFINE, *supra* note 19, at 10.

268 *See* Omarova, *License to Deal*, *supra* note 54, at 136.

269 *See* Woolard, *supra* note 87.

270 *Id.* One of the conditions of ASIC's fintech-licensing exemption is that firms relying on such exemption must disclose to consumers that they do not hold a license, are testing a product in reliance on the exemption, and that some of the usual consumer protections will not apply. *Regulatory Guide 257*, *supra* note 106, at 23. This can undermine this benefit and is perhaps another explanation for the lack of popularity of ASIC's exemption. *Id.*

271 *See* Chiu, *supra* note 17, at 75. It was concern about such reputational issues that caused the United States' SEC to eschew any merit regulation that might suggest that the agency approved a particular investment. *See* Wendy Gerwick Couture, *Price Fraud*, 63 BAYLOR L. REV. 1, 76–77 (2011) (discussing arguments against SEC merit regulation).

harm (and also offer some cover for a regulator in the event of a lawsuit by a rejected sandbox applicant).[272]

In developing the appropriate selection criteria for a U.S. sandbox, it is again instructive to look at the path taken by the FCA. The FCA accepts a new cohort approximately every six months from applications submitted on a relatively straightforward, three-page application form. These applications are judged based on the following sandbox eligibility criteria:

- genuine innovation
- benefit to consumers, either direct or indirect
- the idea is meant for the [domestic] financial services market
- a need for testing in the sandbox alongside the [regulator]
- readiness to test—in other words, being in a sufficiently advanced stage of preparation to mount a live test[273]

These selection criteria reflect the two main principles governing the FCA sandbox: the promotion of innovation and consumer benefit. This Article has called for the U.S. sandbox to also be governed by a third principle, that of financial stability,[274] and so selection criteria related to each of these principles will be considered in this Section, starting with criteria related to innovation.

Although the FCA is required to make determinations about a sandbox applicant's "genuine innovation," questions have been raised about the ability of financial regulators to make such a determination, "a task arguably far beyond their skill set."[275] For example, financial regulators may not have the expertise necessary to distinguish between purely supply-driven innovations, and innovations that meet a real market need. This Article, therefore, argues that the selection criteria for a U.S. regulatory sandbox should omit any references to "genuine innovation." Doing so would be an unusual, but not an unprecedented, approach to implementing a sandbox. For example, ASIC does not currently require an upfront demonstration of genuine innovation for a firm to be able to take advantage of the Australian fintech-licensing exemption.[276] McHenry's bill also did not require a demonstration of genuine innovation.[277]

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272 *See* Zetzsche et al., *supra* note 1, at 25 (discussing the risk of litigation).

273 Woolard, *supra* note 87.

274 *See supra* notes 216–18 and accompanying text.

275 Zetzsche et al., *supra* note 1, at 31, 69–70.

276 Although, ASIC does reserve the right to revoke the availability of its licensing exemption if it deems a product insufficiently innovative. *See Regulatory Guide 257*, *supra* note 106.

277 Instead, its criteria for regulatory relief would be met if the proposed innovation: "(A) would serve the public interest; (B) improves access to financial products or services; and

Where there is no innovation criterion for admission to the sandbox, the goal of promoting innovation is served by the very existence of the regulatory sandbox (instead of by the regulators selecting products and services they deem innovative); the selection criteria can instead be designed to serve the goals of promoting consumer welfare and financial stability (goals that are very much in the wheelhouse of financial regulators). However, there should also be practical selection criteria to help prevent the sandbox from becoming a repository for half-baked products and services that are no different from what is already available to the public. In this respect, the United States could borrow from the FCA and require the applicant to demonstrate "a need for testing in the sandbox alongside the [regulator]" and "readiness to test."[278] The more substantive selection criteria, however, should pertain to consumer protection and financial stability.

Before the FCA will admit a firm to its regulatory sandbox, it will ask whether "the innovation offer[s] a good prospect of identifiable benefit to consumers."[279] Such benefits are likely to take the form of reduced costs, increased efficiency, and wider access to financial products and services.[280] However, the committee should also consider at the application stage the potential for consumer detriment, as well as the potential for benefit. The potential for threats to financial stability should also be considered. As part of these deliberations, the commit-

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(C) does not present systemic risk to the United States financial system and promotes consumer protection." H.R. 6118, 114th Cong. § 6(b)(2) (2016).

278 Woolard, *supra* note 87.

279 FINANCIAL CONDUCT AUTHORITY, *supra* note 25, at 7.

280 The CFPB has described the potential for fintech to benefit consumers as follows:

> Some of the most exciting consumer-friendly innovations bring new products to those who had been locked out or underserved, whether or not they join the banking system. General-purpose reloadable prepaid cards and new forms of prepaid accounts provide the functionality to address people's fundamental financial needs. . . .
>
> New technologies can also open up new credit opportunities and more efficient ways to manage money and control spending. We see mobile technology and innovations in distribution making cost-effective financial services available in both urban and rural environments where traditional brick-and-mortar outlets may be uneconomical. Computer-enabled data mining can lead to better understanding of the financial patterns of the underserved—their inflows and outflows and how they find ways to manage the gaps. . . .
>
> But even beyond improved access, creative new tools can help working families better manage their finances. New product designs are empowering households to better anticipate and weather the inevitable income and expense shocks they face in an uncertain economy. Along with innovations that are starting to emerge from traditional account providers, we are now clear in our minds that many of these beneficial products will be FinTech products.

Richard Cordray, CFPB Director, Prepared Remarks at Money 20/20 2–3 (Oct. 23, 2016), https://www.consumerfinance.gov/about-us/newsroom/prepared-remarks-cfpb-director-richard-cordray-money-2020/ [https://perma.cc/X9NB-8KE4].

tee should consider what type of firm the applicant is, the type of customers the applicant plans to serve, and whether the innovation can be understood or is too complex to explain.

Looking in more detail at the applicant firms, the committee will certainly want to conduct background checks on firm directors, managers, and employees to assist them in determining the character and integrity of persons proposing to offer financial services. Ideally, an applicant firm would also have personnel with some experience dealing with regulated financial services, as well as with the specific technology that the firm proposes to use. The OCC, for example, has proposed that applicants for its fintech charter should be able to demonstrate that "some members of the organizing group, the proposed board of directors, and management . . . have experience in regulated financial services . . . ."[281] However, startup firms' general lack of regulatory experience is a key justification for implementing the regulatory sandbox in the first place—requiring such regulatory expertise could defeat the purpose of this new form of regulation. As such, the committee may ultimately decide to accept firms without such experience, if they believe that firm personnel can learn to function within a regulated environment during the testing period. Requirements for "a comprehensive proposed business plan, including the bank's financial projections, analysis of risk, and planned risk management systems and controls" (as proposed for the OCC's fintech charter)[282] could similarly prove prohibitive for a startup, and the committee may ultimately choose to be flexible in terms of the business planning documentation they require from applicants.

What is more clear-cut is that the committee should not accept innovations from financial institutions that have already been designated as systemically important (notwithstanding that HSBC and Lloyds were among the first cohort of the FCA's sandbox firms).[283] These institutions are already viewed as "too big to fail,"[284] and successful innovations could further entrench the importance of these in-

281 OFFICE OF THE COMPTROLLER OF THE CURRENCY, COMPTROLLER'S LICENSING MANUAL DRAFT SUPPLEMENT: EVALUATING CHARTER APPLICATIONS FROM FINANCIAL TECHNOLOGY COMPANIES 8 (Mar. 2017), https://www.occ.gov/publications/publications-by-type/licensing-manuals/file-pub-lm-fintech-licensing-manual-supplement.pdf [https://perma.cc/KR37-4YQH].

282 *Id.* at 9.

283 Admittedly, such exclusion could put the United States at a competitive disadvantage to the United Kingdom in terms of attracting fintech talent. For a discussion of competitiveness, see *supra* notes 188–89 and accompanying text.

284 *See supra* notes 199–201 and accompanying text.

stitutions and exacerbate their risk-taking incentives.[285] Regulatory authorities should therefore not invest their resources in assisting systemically important institutions (with significant resources of their own) with innovation. Instead, information about the innovation activities of such firms should be provided to regulators through extant supervisory channels. However, the committee may ultimately decide to allow smaller, regulated financial institutions to take advantage of the regulatory sandbox to trial new business lines if those institutions lack the advantages that the larger financial institutions have in terms of resources, large customer bases, and compliance infrastructure.[286]

Google, Amazon, Apple, and Facebook (and perhaps other tech giants to be determined) should also be excluded from the regulatory sandbox. Because failure of any of these firms might "result in consumers losing confidence in the digital world, businesses losing massive amounts of money, e-government initiatives becoming ineffective and even national security being put at stake," Packin has argued that these firms are already too big to fail.[287] This status would only be consolidated if these firms become critically important providers of financial services—which they seem to have ambition to do.[288] Given their diversified business models, a company like Google or Amazon providing bank-like services would be exposed to all of the sources of risk that traditional banks must manage, and also would have to manage all of the risks associated with their core businesses. A problem with any of these tech giants' core business lines could detrimentally affect confidence in that institution's ability to provide financial services, which would harm financial stability if the firm had become a sufficiently important provider of financial products and services.[289] While the provision of financial services by tech giants is an issue that legislators and regulators will likely have to grapple with irrespective of whether a regulatory sandbox is adopted, there is no need to exacerbate the issue by admitting such tech giants to any U.S. regulatory sandbox.

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285 *See* Allen, *supra* note 203, at 229–30.

286 *See supra* note 192 and accompanying text; *see also FinTech and Regulatory Sandboxes in the UK, Hong Kong and Singapore*, SIDLEY AUSTIN LLP (Sept. 6, 2017), https://www.sidley.com/en/insights/newsupdates/2017/09/fintech-and-regulatory-sandboxes [https://perma.cc/JE4Z-7Y5X] (discussing the interest of regulated firms in regulatory sandboxes).

287 Nizan Geslevich Packin, *Too-Big-To-Fail 2.0? Digital Service Providers as Cyber-Social Systems*, 93 IND. L.J. 1211, 1211–12 (2018).

288 *Id.* at 27.

289 *Cf.* Saule T. Omarova, *The Merchants of Wall Street: Banking, Commerce, and Commodities*, 98 MINN. L. REV. 265, 344 (2013) (discussing contagion and interconnection with a non-financial industry (commodities)).

Regulators administering sandboxes should also pay close attention to the types of clients an applicant firm proposes to serve. When fintech innovations are trialed using only a small group of retail consumers, those trials are unlikely to have much of a systemic impact[290] (although the regulator should be mindful of the potential systemic impact of the scaled-up version). Conversely, innovations intended to be used by wholesale customers (meaning they will be trialed by a small group of large financial institutions) could have an immediate systemic impact.[291] As such, the committee should be wary of admitting these latter types of innovations to the sandbox, notwithstanding that they are not tested on retail consumers and therefore raise fewer consumer protection concerns. When innovations *are* tested on retail consumers, regulators will need to be highly attentive throughout the process to ensure that the principle of consumer protection is being honored.

Finally, regulators administering the sandbox should refuse to accept any innovation that they are unable to comprehend. Not only are such innovations likely to perplex consumers, but increased complexity also poses problems for financial stability.[292] For example, some types of complexity can obfuscate the location of risk in the financial system, and consumers' lack of understanding about the risks they face can intensify panics.[293] So that the implementation of a sandbox does not exacerbate this march towards increasing complexity, the burden should fall on the sandbox applicant to explain why their innovation should be admitted to the sandbox, rather than forcing the regulator to admit a product to the sandbox unless they can clearly identify a problem with it.[294] As Ford notes, where the complexity of a system defies the ability of regulators to understand it, a collaborative new-governance approach to regulating that system may simply prove deregulatory[295]—a prophylactic approach, like a ban, may ultimately be the best way to promote the public interest, notwithstanding that it is a blunt instrument.[296] Refusing to accept inscrutable innovations

290 *See* Zetzsche et al., *supra* note 1, at 74–75.

291 *Id.*

292 *See* Allen, *supra* note 203, at 192–94.

293 Hilary J. Allen, *The Pathologies of Banking Business as Usual*, 17 U. PA. J. BUS. L. 861, 872–73 (2015).

294 *See* Allen, *supra* note 203, at 195.

295 "Without countervailing, independent-minded regulatory power to push back against self-interested industry conduct, the 'creep' may run downwards—to more risk, less transparency, less systemic stability, and less consumer protection." Ford, *supra* note 9, at 479.

296 "In such cases where the regulator can only wave the white flag and admit that an area of the financial markets exceeds its regulatory capacity, a logical response is to prohibit the

may also have the incidental benefit of discouraging firms from developing unnecessarily complex financial products and services in the first place.[297]

E. Ongoing Administration

This Article argues that decisions about whether to admit a firm to the regulatory sandbox should be made by a committee populated by members of the various financial regulatory agencies. Ongoing monitoring of a sandbox firm should be delegated to an individual agency, though, in the likely event that Congress does not allocate sufficient resources to the committee to fund ongoing interaction with sandbox firms. As such, when deciding whether to accept a particular firm into the regulatory sandbox, the committee must also decide which of the federal regulatory agencies is the best suited (in terms of subject-matter expertise and institutional resources) to take the lead on that particular firm's innovation.[298] That agency can then serve as a contact agency for the duration of the sandbox trial.

To guide each contact agency, the committee should adopt procedures that address questions about how the sandbox should be operated on a day-to-day basis. For example, how often should regulators engage with the regulated entity? Should there be a single regulatory point person for every sandbox firm, or should the firm engage with a broader group of regulatory personnel? What sanctions will be deployed for noncompliance? How should informal guidance be disseminated—should it be private and confidential, or should it be made publicly available and have precedential value? It is difficult to find publicly available information about how the FCA and ASIC are addressing these issues, and it is similarly difficult to find data about the resources they are devoting to their regulatory sandbox projects, and about the expertise of the individual regulators who are working with the fintech startups. Most probably, the FCA and ASIC are continuously making discreet, small adjustments to the contours of their regulatory sandboxes,[299] but given the increasing popularity of the regulatory sandbox model, a more open and critical debate about the operation of regulatory sandboxes is warranted. To help start this con-

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activity altogether." Eric J. Pan, *Understanding Financial Regulation*, 2012 UTAH L. REV. 1897, 1943.

297 *See* Allen, *supra* note 203, at 224.

298 The committee will also need to determine which body should serve as the contact agency for insurance-related innovations.

299 The FCA has noted that the form of its regulatory sandbox may need to be revised in light of experience. *See* FINANCIAL CONDUCT AUTHORITY, *supra* note 25, at 16.

versation, this Section offers some general thoughts about balancing competing mandates, necessary resources, and enforcement mechanisms.

This Article has argued that the regulatory sandbox is a type of principles-based regulation. However, principles-based regulation can be challenging for regulators to implement because regulators must continuously make judgment calls about whether private sector actions conform to the broad principles, recognizing that "there may be more than one means . . . through which to achieve a regulatory goal."[300] Such regimes have been undermined in the past when regulators have come to rely on the industry's judgment about how best to satisfy regulatory principles.[301] To avoid the regulatory sandbox becoming a tool for deregulation in this manner, the regulators implementing the sandbox must be committed to the goals of the regulatory sandbox. Unfortunately, the guiding principles for a U.S. regulatory sandbox that have been proposed in this Article can potentially conflict.

Of course, the promotion of innovation, financial stability, and consumer protection will not always conflict. For example, the sharing of information between regulator and firm will not only promote innovation by the sandbox firms (by allowing them to better understand the regulatory environment to which their innovation must conform),[302] but will also improve regulators' understanding of how new technologies might impact consumers and the stability of the financial system. By allowing sandbox firms to test their innovations in an environment with fewer regulatory burdens, the regulatory sandbox can potentially benefit consumers by allowing new innovations to flourish—new innovations that might have the potential to displace expensive existing products. It is also possible that lessening regulatory barriers to entry for startup firms will facilitate competition with more established financial institutions, potentially eroding the market share of "too big to fail" institutions and reducing the risks they pose to the financial system.[303] As such, there is no clear demarcation between regulatory approaches designed to promote innovation, financial stability, and consumer protection. Nonetheless, there are conflicts that can arise between the different goals: perhaps the most obvious is that when regulators limit the scope of testing and require safeguards in

300 *See* Ford, *supra* note 9, at 457.

301 *See id.* at 443, 472.

302 *See* Douglas, *supra* note 29, at 64.

303 *See supra* notes 199–201 and accompanying text; *see also* Van Loo, *supra* note 24, at 2–3.

order to protect consumers and financial stability, they are potentially restricting the scope of innovation by sandbox firms.

The author has previously argued (in a different context) that when regulatory mandates conflict, "the choice of primary mandate can be conceptualized as preferring one particular constituency to others . . . ."[304] A regulatory mandate to promote innovation is likely to benefit the innovator, and it may or may not benefit the wider public as well (depending on the innovation).[305] In contrast, the other goals of the regulatory sandbox are oriented primarily towards the public interest. The consumer-protection goal is concerned with the direct protection of individuals from unfair and misleading practices.[306] Financial stability is concerned with protecting the broader economy from disruptions to the financial system, and thus "is the normative regulatory goal designed to benefit the broadest group of people."[307] As such, when the committee designs the safeguards for the sandbox firm, and as the contact agency administers the sandbox, they should err on the side of protecting consumers and financial stability, even though doing so might inhibit innovation to some degree.[308]

As such, if it becomes clear to regulators as they observe a sandbox firm that the innovation has grown too complex to understand or may generate systemic risks by (for example) significantly increasing correlation among consumer investments,[309] then the sandbox trial should be terminated for that firm, even though doing so can curb innovation. Regulators will then know to be wary of the impact of similar innovations (within or outside of the sandbox) on financial stability going forward. Similarly, if it becomes apparent that consumers cannot fully grasp the risks associated with a financial product or service, or if consumers might otherwise be harmed—for example, if an algorithm is discriminating against a protected class in making credit

304 Hilary J. Allen, *The SEC as Financial Stability Regulator*, 43 J. CORP. L. 715, 731 (2018).

305 *Compare supra* note 176 and accompanying text (explaining that some innovation actually benefits the wider public because it "provide[s] new solutions to old problems, including financial exclusion, the quality of consumer decision-making, agency costs, and compliance costs" (quoting Zetzsche et al., *supra* note 1, at 36)), *with supra* note 169 and accompanying text (explaining that other innovation may not benefit the wider public because "[a]ny innovation that is purely supply-driven benefits only the firm that develops or acquires it and does not enhance the public welfare").

306 *See* Allen *supra* note 304, at 731.

307 *Id.*

308 To the extent that the goals of consumer protection and financial stability come into conflict, the author has previously argued that financial stability should take precedence. *See id.*

309 *See supra* notes 185–86 and accompanying text.

approval decisions,[310] or consumers are being "nudged" by an algorithm to choose inappropriate financial products and services,[311] then failing to comply with the objective of consumer protection should also be grounds for terminating the sandbox trial.

The possibility of termination of the trial should be made clear to sandbox firms to encourage adherence to the sandbox principles. While some sandbox firms may share the regulator's interest in protecting consumers (as new entrants to a financial industry that relies heavily on confidence and trust, they could be especially concerned with maintaining a positive public reputation and need little other incentive to avoid harming consumers),[312] others may be less inclined to do so in the absence of the threat of immediate adverse consequences for pursuing private goals (profits) at the expense of consumers.[313] Furthermore, without clearly delineated sanctions, sandbox firms would have "little incentive to preserve financial stability, because the benefits of such stability accrue to society as a whole and are hard for individual financial institutions to appropriate."[314]

In the interests of transparency and accountability, the possibility of such sanctions should be clearly articulated to the sandbox firms. Firms should have some way of seeking review of an enforcement decision to determine whether the relevant regulator deviated from normal processes, whether other sandbox firms are receiving more favorable treatment, or whether the firm is being penalized simply for being inconsistent with the practices of previous startups, rather than deviating from the guiding principles.[315] While many fintech startups in the United Kingdom appear to have accepted suboptimal uncertainty regarding the operation of their sandbox trials,[316] that does not

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310 "While data-driven algorithms may expedite credit assessments and reduce costs, they also carry the risk of disparate impact in credit outcomes and the potential for fair lending violations. Importantly, applicants do not have the opportunity to check and correct data potentially being used in underwriting decisions." U.S. DEP'T OF TREASURY, OPPORTUNITIES AND CHALLENGES IN ONLINE MARKETPLACE LENDING 1 (May 10, 2016), https://www.treasury.gov/connect/blog/Documents/Opportunities%20and%20Challenges%20in%20Online%20Marketplace%20Lending%20vRevised.pdf [https://perma.cc/BEN5-K3SQ].

311 "Notably, the same technology that empowers consumers to make decisions that serve their interests can also be used to steer them in ways that benefit others at their expense." *See* Cordray, *supra* note 280.

312 "[T]hose firms in a growing industry should be more sensitive to the risk of informal sanctions, such as bad publicity, than those firms in a mature one, especially when the service provided by the firm requires a high level of trust." Langevoort, *supra* note 118, at 1036.

313 Omarova, *Community of Fate*, *supra* note 114, at 445–46.

314 *See* Allen, *supra* note 203, at 184.

315 *See* Black et al., *supra* note 61, at 200.

316 The FCA has not published any guidance that would allow potential sandbox applicants

mean that the United States should emulate this approach. It may simply be that such firms have no alternative way to bring their products to market.[317] Another different, but still troubling, possibility is that sandbox firms might *prefer* uncertainty about sanctions—either because they view the absence of formal sanctions as a loophole they can exploit, or because they anticipate accommodating treatment from the regulator as part of the sandbox process.

Regulators involved in any principles-based regime—which anticipates "on-going dialogue" that develops "shared understandings"[318]—are particularly susceptible to cognitive capture,[319] whereby the regulators come to view the public interest as being synonymous with the interests of the regulated entities they oversee.[320] In a regulatory sandbox setting, for example, regulators might subconsciously come to elevate the needs of sandbox firms (perhaps under the guise of promoting innovation) over the public interest in financial stability and consumer protection. As this author has written previously, "[t]his type of capture doesn't necessarily evince any venal corruption of regulatory agencies—instead, merely by identifying with the financial industry (perhaps because they share social networks, or because they admire the industry's expertise), financial regulators sometimes take on the worldview of that industry."[321] The risk of cognitive capture in the FCA's sandbox regime is heightened because each firm will be allocated a dedicated case officer[322] and given "a high degree of bespoke engagement from [the FCA's] staff."[323] As Kwak has observed, "[r]elationships matter because we care about what other people think of us, in particular those people with whom we come into contact regularly," and thus the regulators who regularly interact with particular

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to know when the agency might exercise its right to stop the testing of an innovation. The U.K. sandbox seems to be popular, however—notwithstanding this lack of clarity. *See supra* notes 98–102 and accompanying text.

317 Cortez notes that the FDA's preapproval power gives it similar leverage. Cortez, *supra* note 138, at 225.

318 Black et al., *supra* note 61, at 203–04.

319 "Being more flexible, new governance methods may reflect the zeitgeist more forcefully . . . ." Ford, *supra* note 9, at 473.

320 *See* Allen, *supra* note 203, at 199; *see also* Willem H. Buiter, *Central Banks and Financial Crises*, *in* MAINTAINING STABILITY IN A CHANGING FINANCIAL SYSTEM: A SYMPOSIUM SPONSORED BY THE FEDERAL RESERVE BANK OF KANSAS CITY 495, 601–02 (2008).

321 Allen, *supra* note 230, at 1102.

322 *See* Innovate Finance, *supra* note 86.

323 Woolard, *supra* note 87.

sandbox firm personnel are likely to become more favorably disposed to assisting them.[324]

Although a close relationship between regulator and regulated firm is likely to breed capture, the awkward reality is that many of the potential benefits of the regulatory sandbox can only be realized if such a close relationship exists. For example, such a relationship will allow regulators to have access to knowledge about cutting-edge technology that they might otherwise miss[325]—technology that might subsequently be used by other financial institutions to try to arbitrage regulations.[326] It will also allow regulators to begin to understand some of the new types of financial intermediaries that may become critical to the proper functioning of the financial system.[327] The Financial Stability Board has therefore promoted regulatory sandboxes as a way to "improve communication channels with the private sector . . . ."[328] A close relationship between regulator and sandbox firm will also give the regulator ample opportunity to assess the quality of management at the firm and provide opportunities for early intervention if necessary.[329] Finally, friendly interactions between regulator and regulated entity are also desirable if they promote a culture of compliance in line with new-governance thinking.[330]

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324 James Kwak, *Cultural Capture and the Financial Crisis*, *in* PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT 4, 89 (Daniel Carpenter & David. A. Moss eds., 2014).

325 *See* Arner et al., *FinTech Evolution*, *supra* note 10, at 1313; *see also* Sabel & Simon, *supra* note 137, at 82, 89 (discussing how more collaborative regulation "readily propagates relevant technical and organizational advances that may not circulate freely under bureaucratic or minimalist regulation").

326 *See* Caroline Binham, *UK Regulators Are the Most Fintech Friendly: Policymakers Take a Liberal View to Boost Innovation*, FIN. TIMES, Sept. 12, 2016 ("[R]egulators are watching the development of technology with a closer interest so they can stay abreast of the art of the possible, and be cognisant of the solutions that financial institutions are implementing to address the latest mandates." (quoting Brian White, Chief Operating Officer, RedOwl)).

327 Many expected that the fintech boom would reduce the need for intermediaries, however, that expectation has not been borne out. Even where fintech innovations have succeeded in removing some intermediaries from the financial sector, new intermediaries have often taken their place. Tom C.W. Lin, *Infinite Financial Intermediation*, 50 WAKE FOREST L. REV. 643, 654–55 (2015). "In many instances, the *dis*intermediated actors served as 'traditional gatekeepers that regulatory authorities have increasingly relied on (and regulated)' since the early 1900s." BRUMMER & GORFINE, *supra* note 19, at 5 (quoting Chris Brummer, *Disruptive Technology and Securities Regulation*, 84 FORDHAM L. REV. 977, 977 (2015)).

328 FINANCIAL STABILITY BOARD, *supra* note 209, at 3.

329 *See* Arner et al., *FinTech Evolution*, *supra* note 10, at 1314 (discussing that the FCA had the opportunity to "interact with and support innovative start-ups from a nascent stage").

330 Black et al., *supra* note 61, at 195.

A key challenge in designing a U.S. regulatory sandbox, then, is to find a way to maximize the benefits of close relationships between regulators and sandbox firms, but mitigate the potential for cognitive capture by instilling "sufficient confidence in [regulators'] own judgment and a healthy degree of skepticism about industry."[331] Regulatory expertise is vital to achieving this outcome; if a regulator lacks the technical expertise to properly parse and process the information provided by the sandbox firm, he or she will become increasingly reliant on the firm's interpretation of its product.[332] This is particularly likely to be the case with regulators who are used to overseeing traditional financial-services providers, but have no experience regulating the types of tech-startup firms likely to populate the sandboxes.[333] To be able to administer a regulatory sandbox, regulatory agencies will therefore need to hire some employees (preferably with private sector fintech experience) able to supervise the operation of fintech algorithms and assess the quality of the data used by those algorithms,[334] as well as employees able to make judgments about whether a firm's underlying information technology infrastructure is up to the task.[335] Regulators will also need employees who are able to assess the cybersecurity risks that a sandbox firm faces.[336] Thus, although principles-based regulation is sometimes considered "lighter touch" than rules-based approaches, it necessitates significant expenditure of resources.[337] Proponents of a U.S. regulatory sandbox should be cognizant of the potential cost of properly implementing the regulatory structure.[338]

In addition to ensuring that regulators have adequate resources, there are other design features that might mitigate creeping cognitive capture. For example, McDonnell and Schwarcz have proposed im-

331 Ford, *supra* note 9, at 474.

332 *See id.* at 473–74.

333 *See* Gary Stern, *Can Regulators Keep Up with Fintech?*, YALE INSIGHTS (Dec. 13, 2017), https://insights.som.yale.edu/insights/can-regulators-keep-up-with-fintech [https://perma.cc/5DC4-ZLQ3].

334 *See* Arner et al., *Reconceptualization*, *supra* note 23, at 403; Baker & Dellaert, *supra* note 185, at 715–16.

335 *See* Baker & Dellaert, *supra* note 185, at 735.

336 Financial regulators have already started to require financial institutions to address the risk of cyberattack as part of their risk management policies, so this should be expertise that the regulators are already developing. *See* Packin, *supra* note 287, at 1214.

337 *See* Ford, *supra* note 9, at 473–74.

338 To avoid diverting funding from other important financial regulatory missions, financial regulatory agencies that are subject to the congressional appropriations process (like the SEC and CFTC) should ideally be granted increased funding to enable them to properly discharge their role in administering a regulatory sandbox.

planting "regulatory contrarians" in regulatory agencies to force their colleagues to "(1) take an outsider perspective on their work, (2) consider the opposite outcome to which they are inclined to take, (3) interact during the decision-making process with persons with differing backgrounds and biases, and (4) publicly defend their positions."[339] A regulatory sandbox could be structured so that all regulatory personnel who interact with sandbox firms are subject to supervision by a contrarian that has no contact with the sandbox firms. This would allow a good working relationship to develop between individual regulators and sandbox-firm personnel (with all the benefits that entails), but those individual regulators would still be required to explain to their supervisor how the sandbox firm is serving the sandbox's articulated regulatory objectives. Indeed, employing regulatory contrarians in this manner can be salutary even if no cognitive capture is actually taking place, to address any damaging "perception of overly close ties between regulators and covered entities"[340] that might arise in a sandbox regime.

F. Trial Duration

A number of countries that have adopted regulatory sandboxes (including the United Kingdom and Australia) have limited the period of regulatory relief available to participating firms.[341] Other jurisdictions (such as Singapore and Hong Kong) have no automatic expiration date on their sandboxes.[342] From a new-governance perspective, this latter approach might be preferable, in that it allows for an ongoing relationship between regulator and regulated entity that may produce mutual trust and collaboration. However, there are numerous benefits that would accrue from limiting the duration of the sandbox trial. First, limiting the time period during which sandbox innovations are subject to lighter regulation limits potential negative deregulatory impacts on consumers and financial stability. A limited time period would also necessarily impose a limit on the amount of time and resources that regulators expend on a particular sandbox innovation. Furthermore, the prospect of future regulatory-compliance obligations after the sandbox trial terminates can serve as a disciplining force, causing sandbox firms to guide their innovation towards full

339 Brett McDonnell & Daniel Schwarcz, *Regulatory Contrarians*, 89 N.C. L. REV. 1629, 1648 (2011).

340 BRUMMER & GORFINE, *supra* note 19, at 12.

341 *See* Brummer & Yadav, *supra* note 55, at 291–94.

342 *Id.* at 76.

regulatory compliance in a way that they would not if the sandbox relief were available indefinitely. In addition, it may be difficult to evaluate the workings of fintech technology under the sanitized testing conditions provided by the regulatory sandbox,[343] and regulators should eventually have an opportunity to gauge the impact of a new financial innovation on the real financial markets. This Article, therefore, recommends that any sandbox adopted in the United States have a limited duration of no more than one year (this termination of individual trials is separate and apart from the sunsetting of the sandbox regime itself, which is discussed in the following Section). During their trial, sandbox firms should be making plans to comply fully with all applicable financial regulations at the end of this term.

To be clear, the contact agency should not terminate its relationship with the sandbox firm at the end of the sandbox trial. Dialogue, guidance, and information sharing remain just as important once the sandbox firm joins the ranks of other regulated financial institutions, and the hope is that the collaborative relationship between regulator and regulated entity that was fomented in the sandbox will persist in some form, even after the firm ceases to be able to take advantage of special regulatory relief. This means, however, that the protections against capture discussed in the previous Section will continue to be needed even after the sandbox trial terminates. The transition from a controlled testing environment to the real world will be a particularly vulnerable time; regulatory personnel who have expended significant time and resources on an innovation during its sandbox trial might incline towards lenient regulatory treatment for that innovation to assist it in gaining purchase in the broader financial markets. These personnel need to be supervised by regulatory contrarians with no stake in the individual innovations.

G. Follow-up

The new-governance paradigm does not see interaction and information sharing as ends in themselves. As Ford has explained, "[n]ew governance regulation . . . is regulation based on an iterative process between private-party experience and a regulator . . . ," but while "[l]earning by doing is the method, . . . it needs to be accompanied by actual mechanisms that make it possible for regulation to move."[344] For the regulatory sandbox to be an effective form of new-governance, then, regulatory practice should be revised in light of what the

343 *See id.* at 34–35.

344 Ford, *supra* note 9, at 445–46.

regulators have learned from sandbox firms (both within the sandbox, and after the firm transitions out of the sandbox). There should, therefore, be a process in place for each contact agency administering a sandbox to share the information it gleans from the process with the committee as a whole. The committee and the individual agencies can then use this information to consider whether reforms are necessary.[345] Reforms could be targeted at one or both of two different levels: the rules governing the sandbox itself might need to be revised, and there may also be grounds to revise broadly applicable regulations in light of what has been learned from sandbox firms.[346]

One potential concern here, though, is that such a process might be *too* iterative. Technology may move so quickly that continuous attempts to reflect technological changes in the law (whether in formal rules or informal guidance) may undermine certainty about the application of that law. Also, the fintech innovations being trialed in a regulatory sandbox may not be representative of how new fintech technologies are developing more generally (either because of the small size of the sample, or because the sample has been skewed by the selection criteria). It would be problematic if the sandbox or generally applicable rules were updated to reflect a skewed view of technological development—but it is also possible that regulation that reflects detailed knowledge about even a small subset of innovation might be better than regulation developed without *any* information gleaned from a regulatory sandbox. It would also be problematic if large financial institutions began to consistently acquire firms that have benefitted from the regulatory sandbox,[347] essentially acquiring research and development conducted at some public expense. However, the understanding that regulators gain from operating the regulatory sandbox (about new technologies and new types of intermediaries) might be sufficient return on the investment of regula-

345 [M]any countries have adopted a 'Regulatory Sandbox' based approach where the regulator works closely with emerging Fintech firms as well as existing financial services players in a relatively relaxed regulatory environment and gathers data from this sandbox to develop suitable regulations. The sandbox is an experimental environment where the regulator may tweak regulations, assess impact of regulatory changes and then use this data for final policy making.

DELOITTE, REGULATORY SANDBOX: MAKING INDIA A GLOBAL FINTECH HUB 6 (2017), https://www2.deloitte.com/content/dam/Deloitte/in/Documents/technology-media-telecommunications/in-tmt-fintech-regulatory-sandbox-web.pdf [https://perma.cc/7E5Q-7G2M].

346 *Id.*

347 In recent years, financial giants have demonstrated an increasing propensity to acquire fintech startups. *See* Arner et al., *FinTech Evolution*, *supra* note 10, at 1309.

tory resources to justify the sandbox—even if those resources ultimately also help the largest financial institutions.

These are thorny trade-offs with no easy answers. Ultimately, within a few years of adopting a U.S. regulatory sandbox, a review should be conducted to determine whether it is worthwhile to continue to devote significant amounts of resources to a U.S. regulatory sandbox (and a sandbox can only be properly administered with significant resources).[348] Such a review should also consider whether the administration of the sandbox is diverting the limited resources of financial regulators from more welfare-enhancing regulatory approaches.[349] Because the passage of time may drain the regulator's enthusiasm for upsetting a regulatory structure popular with the financial industry,[350] an automatic sunsetting provision should be incorporated into any legislation establishing a regulatory sandbox in the United States. That provision could provide that the regulatory sandbox will cease to be available, say, ten years from the date of enactment. At that point, policymakers would likely have had the opportunity to observe the effects of the sandbox in different economic conditions to determine whether the sandbox has had a detrimental deregulatory impact on consumers and financial stability—and to determine whether the sandbox has achieved its stated goal of promoting financial innovation. With the benefit of several years of regulating fintech innovation, regulators would also be in a better position to adopt a more rules-based regime for fintech.[351] However, if there were significant support for the continuing availability of the sandbox, Congress would have the option to legislate to extend the program.

IV. THE REGULATORY SANDBOX AS A SANDBOX FOR REGULATION

The rise of fintech poses many challenges for traditional forms of financial regulation,[352] and the implementation of a regulatory sand-

348 *See supra* notes 331–35 and accompanying text.

349 *See id.*

350 Cortez, *supra* note 138, at 204.

351 *See supra* notes 146–52 and accompanying text.

352 Arner et al. argue that we need a new type of "RegTech" to address the following developments:

> (1) postcrisis regulation changes requiring massive additional data disclosure from supervised entities; (2) developments in data science (for instance [artificial intelligence] and deep learning) that allow the structuring of unstructured data; (3) economic incentives for participants to minimize rapidly rising compliance costs; and (4) regulators' efforts to enhance the efficiency of supervisory tools to foster com-

box will not be the silver bullet that solves all of these.[353] Arner et al. have authored a number of articles that explore other "technological solutions to regulatory processes" designed to adapt financial regulation to technological developments,[354] and this Article does not restate their work on "RegTech." Instead, this Article concludes with a few thoughts about how the regulatory sandbox might allow regulators to experiment with new regulatory approaches that would otherwise not be implemented because of political obstacles. Although the current political climate is not ripe for an expansion of regulation, a regulatory sandbox could serve as a pilot program for certain regulatory strategies that could later be operationalized on a larger scale should political circumstances change.

One example of such a regulatory strategy, for which a sandbox could serve as a pilot program, would be a pre-approval regime for financial products. In 2012, Saule Omarova proposed the creation of a Financial Products Approval Commission ("FPAC") that would function as an equivalent to the FDA with the power to ban or conditionally approve new financial products.[355] The complexity of the financial system renders it fragile and susceptible to shocks,[356] and Omarova recognized that the march towards an even more complex system could only be slowed by a radical proposal designed to prevent certain risky products from ever entering the financial system.[357] However, Omarova's proposed FPAC butts up against normative political arguments that regulation should not be used to slow down innovation, and a general unwillingness to think critically about the costs of innovation[358]—Omarova recognized at the time that her proposal "may appear too radical and politically untenable . . . ."[359] However, some of the objections to the FPAC hampering innovation would be neutralized by embedding the product pre-approval process in a regulatory sandbox that *exists* to facilitate innovation. A regulatory sandbox could therefore serve as a small-scale trial of Omarova's proposal, and regulators might learn some lessons about screening financial innova-

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petition and uphold their mandates of financial stability (both macro and micro) and market integrity.

Arner et al., *Reconceptualization*, *supra* note 23, at 383 (footnotes omitted); *see* Zetzsche et al., *supra* note 1.

353 *See* Zetzsche et al., *supra* note 1, at 49–50.

354 Arner et al., *Reconceptualization*, *supra* note 23, at 373.

355 Omarova, *License to Deal*, *supra* note 54, at 68, 129.

356 Allen, *supra* note 203, at 872.

357 Omarova, *License to Deal*, *supra* note 54, at 66.

358 Ford, *supra* note 267, at 33–34.

359 Omarova, *License to Deal*, *supra* note 54, at 68.

tions that might be deployed on a larger scale—if a future crisis creates a supportive political environment for such an approach.[360]

A regulatory sandbox could also serve as a practice ground for other politically challenged reforms. For example, many commentators have decried the fragmentation of the U.S. financial regulatory architecture but have begrudgingly accepted that a significant restructuring is unlikely to ever eventuate. However, the structure of the regulatory sandbox proposed in this Article could serve as a template for how to at least improve regulatory coordination. If a process of committee-made decisionmaking implemented by individual agencies is effective in the sandbox context, it might be adopted on a larger scale in the right political climate, which might further the process of shifting towards a more desirable "twin peaks" financial regulatory architecture in the United States.[361]

In sum, just as regulatory sandboxes are designed to allow private firms to engage in "iterative learning—testing ideas and making quick adjustments based on experience,"[362] the regulatory sandbox can provide opportunities for the regulators themselves to test new ideas and make adjustments to regulatory approaches on a small scale in anticipation of a time when the political climate might make more feasible the adoption of these approaches on a larger scale.

CONCLUSION

This Article has argued that, in order to effect a regulatory sandbox in the United States, a committee of regulators must be empowered by legislation to select applicant firms to receive special regulatory treatment, and the special regulatory status conferred on such firms must preempt enforcement actions by individual federal financial regulatory agencies as well as by the States. The legislation should also clearly delineate the goals of the new regulatory sandbox—the promotion of innovation, consumer protection, and financial stability. Upon the enactment of this legislation, the first act of this committee of regulators should be to issue a notice of proposed rulemaking that addresses selection criteria for the sandbox, a process for determining which agency should be appointed as the contact agency for approved firms, and consequences for noncompliance with the sandbox principles. This proposed rulemaking should also estab-

360 *See* Coffee, supra note 187, at 1029 (discussing when there is likely to be increased support for financial regulation).

361 Allen, *supra* note 230, at 1140.

362 Rosenworcel, *supra* note 266.

lish information-sharing procedures between sandbox firms and their contact agencies, and between the contact agencies and the rest of the committee members.

This Article has enumerated these design principles for a U.S. regulatory sandbox but has not come to a definitive conclusion about whether such a sandbox is desirable from a normative perspective. Although this Article has advanced arguments for adopting a regulatory sandbox in the United States, it has also questioned whether those benefits justify the expenditure of resources and the lowering of regulatory standards that such a sandbox entails. Countries around the world are rushing to implement regulatory sandboxes,[363] though, and the Treasury Department's support for such regulatory model may render its adoption inevitable. As such, this Article's design recommendations are intended to mitigate the possible detrimental impacts of any sandbox that is adopted. While it may be worthwhile experimenting with a sandbox structure in the United States, that sandbox should be subject to a sunsetting provision that forces a legislative reassessment of the regulatory sandbox—with the benefit of experience—within a decade.

In the short term, there are reasons to believe that any negative consequences for consumer protection and financial stability will be circumscribed. If, like the FCA and ASIC, the United States limits the window during which sandbox firms are exempt from full regulatory oversight to twelve months or less, those firms will soon have to deal with full force of the regulatory regime (unless regulators decide, as a result of their experience with the innovation during the sandbox period, to create a more permanent exemption). This reduces the stakes of these regulatory sandbox projects. Because applications to participate in the sandbox will be decided on a case-by-case basis, the application process will also serve as a practical limiting factor on the scale of the sandbox. And there will certainly be benefits gained from operating a regulatory sandbox, even for a short period. Regulators can use the sandbox to trial new regulatory strategies, and even if the sandbox does not generate any prototypes for future regulatory solutions, regulators may nonetheless be able to glean valuable understanding of nascent technologies from their interactions with sandbox firms. The sandbox could also serve as a training ground for the next generation of financial regulators, who will certainly have to grapple

363 *See* Zetzsche et al., *supra* note 1, at 39–43.

with algorithms and technology infrastructure as fintech technologies are increasingly adopted by larger, established financial institutions.