

LETTER OF COMMENT

WHITE PAPER ON RESPONSIBLE INNOVATION

U.S. Office of Comptroller of the Currency

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I appreciate the opportunity to offer comments regarding the Office of the Comptroller of the Currency's White Paper, *Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective*, published on March 31, 2016.

My response reflects my varied experience in the public, private, nonprofit and academic sectors. I was a Deputy Comptroller of the Currency myself and led the agency's original unit dedicated to consumer protection. I am also a former U.S. Senate staff member and long-time consultant on consumer financial regulatory matters. I am now CEO of Jo Ann Barefoot Group LLC, host of the podcast series *Barefoot Innovation*, and am a Senior Fellow in the Mossavar-Rahmani Center for Business and Government in the Harvard University Kennedy School of Government, where I am writing a book on consumer financial innovation and regulation. My experience also includes serving for three years on the Consumer Advisory Board of the Consumer Financial Protection Bureau and on nonprofit boards focused on consumer financial health. My background includes decades of working with consumer financial protection regulation as a policymaker, regulator, volunteer leader, and advisor to industry regarding implementation. My comments are solely my own.

The OCC is to be commended establishing its Responsible Innovation Task Force and for the resulting White Paper. I view this initiative as a critical step in equipping the OCC, national banks, and the larger financial community to address the enormous opportunities and challenges arising out of financial technology.

The White Paper is innovative in itself, in two ways.

First, it articulates a regulatory stance that seeks proactively to foster responsible financial innovation while also managing emerging risks, rather than simply reacting to risk.

Second, the White Paper reflects a crucial recognition that the pace and scale of technology innovation will necessitate creation of nontraditional regulatory strategies, including expanded dialogue with the industry and others and an embrace of continuous, fluid learning. The OCC's willingness to adopt new, more nimble regulatory approaches is a welcome development.

My letter will:

- Offer my perspective on the central role of innovation in consumer finance today
- Respond to the questions posed by the White Paper

- Urge you to consider the potential for this initiative to lead toward a transformation in both finance and financial regulation.

The importance of financial innovation

Innovative financial technology, or “fintech,” is deeply disrupting financial products and business models. Importantly, this innovation is more “tech” than “fin,” in the sense that it is being fueled by enormous technology trends that are impacting finance as one sub-segment of much broader changes. This fact tends to cause participants in the financial sector to underestimate the magnitude and speed of change underway, because much of it is developing beyond their traditional field of vision. The driving trends include “big data,” artificial intelligence, natural voice innovation, blockchains and distributed ledger technology, and mobile technology. Each of these trends is enormous and fast-evolving in itself, driven in part by the exponential expansion of computing power posited by “Moore’s Law,” which held since at least the 1970’s. Furthermore, these technologies are converging, creating potential for unexpectedly sharp and sudden change.

Current regulatory structures are designed to address linear, rather than exponential, change. The OCC is wise to explore new ways to identify the likely impacts of these transformations and develop strategies to optimize their effects, both good and ill.

In my view, the most important aspect of the OCC’s White Paper is that it explicitly embraces the need for regulators to recognize the upside potential of innovation and avoid throttling it. For consumers, ***these technologies have the potential to solve all the problems people face in managing their financial lives other than insufficient money.*** Most such problems arise from the interplay between consumers’ own limitations – for instance, lack of financial education, inattention to financial matters, and the human tendency to spend too much and save too little – and the fact that financial products are inherently complex (and are not, to most people, interesting). This combination leaves consumers vulnerable to difficulties ranging from choosing suboptimal financial products, to mismanaging their money, to being exploited by predatory providers.

Fintech innovations can address all these difficulties. Innovators are creating:

- Easy and effortless savings, budgeting and bill-paying
- Products that smooth volatility in income and expenses
- Text and voice-based financial coaching
- Affordable “robo-investing” advice
- New data-driven ways to fine-tune loan underwriting, especially to serve consumers who have “thin” or no credit files or complex credit histories
- Instant payments and reconciliation that removes the need to rely on cash services for people on tight budgets
- Cost-free ways to move money, including micropayments
- Ability to serve people in multiple languages
- Services that use humor, playfulness, and behavioral science techniques like rewards to make financial management engaging and fun
- Financial products that have vastly more simple and transparent terms and pricing
- Smart, interactive voice-based services that make financial tasks easier

- Services that proactively urge consumers toward desirable actions, which are especially helpful to people who are not sure what questions to ask or where to ask them
- New and engaging ways to deliver financial literacy education, or to avoid even needing it
- Vastly improved technology for meeting anti-money laundering objectives, cutting costs and raising effectiveness while reducing unintended harm to innocent people
- High-tech restructuring of legacy IT systems through innovations like blockchains, enabling massive reduction in the cost of providing financial services

Again, these services are converging with each other, and most are converging in the most significant innovation of all --the mobile phone. Smart mobile technology is the most democratizing force in the financial history of the world. It is rapidly enabling universal, affordable, convenient, and profitable services for almost everyone on earth. Importantly, lower-income and minority consumers are disproportionately high users of mobile phones, including for financial tasks, largely because they have traditionally had less ready access to PC-based banking and broadband. Today, millions of people who are difficult to serve profitably through traditional brick-and-mortar branches are suddenly desirable financial services customers, due to the low-cost delivery channel in the smart phone, combined, as noted above, with new kinds of data analytics for more accurate risk evaluation.

However, it is the nature of all innovation to create new problems while solving old ones. The fintech changes underway will raise many novel or intensified risks to consumers, in areas like privacy, data security, fairness in new uses of data, contraction of traditional bank branch systems, and transition difficulties.

This intertwining of high potential benefit and risk creates great challenges for regulators. Again, the initiative the OCC has undertaken will be invaluable to finding the right mix of regulatory strategies.

RESPONSES TO QUESTIONS POSED BY THE WHITE PAPER

This section addresses the questions posed in the White Paper, in an altered sequence.

Question 9: Issues the OCC should consider regarding innovation

I believe the innovation disrupting finance is the most critical force facing the banking industry and its regulators (and consumers). Critical factors that the OCC should consider in its innovation initiatives include these:

- *Speed.* The technology trends driving financial innovation are, again, developing at an exponential rate and are also converging. This means change will be occurring too fast to manage through traditional regulatory mechanisms. New ones will have to be developed.
- *Interagency coordination.* The magnitude and velocity of change underway will make it essential that the bank regulatory agencies – and other regulatory bodies – develop highly effective ways to coordinate with each other and assure consistency where it is needed. The complexity of the U.S. agency is unusual in comparison to other countries and will increasingly create challenges.

- *Permanent uncertainty.* Factors like rapid change and the fragmented U.S. regulatory structure will create a state of permanent regulatory uncertainty for the industry. Despite their best efforts, regulators will find it impossible to keep up with kaleidoscopic transformation and to produce quick, clear, consistent, stable regulatory responses and guidance. There will, therefore, be a widening gap between new industry practices and regulatory clarity, probably permanently.

Speaking as a former regulator myself, I believe supervisory agencies often underestimate the degree to which regulatory uncertainty deters desirable behavior by banks (an example is expanding service to underserved consumers). I urge the agencies to place a high priority on limiting regulatory uncertainty and, where that is impossible, on increasing industry confidence that well-intended and “responsible” innovation undertaken under unclear standards will not be penalized.

- *Defining responsible innovation.* One key to meeting these challenges will be to rely increasingly on principles-based regulation, since rules-based approaches will be particularly prone to falling behind the industry’s innovation. However, the OCC should strive to offer principles clear enough that banks can apply them, assiduously and in good faith, with confidence that their actions will produce little or no regulatory risk. In other words, principles should be clear enough actually to be followed.

In that vein, the OCC should move over time to articulate principles that will amplify the definition of responsible innovation contained in the White Paper.

- *Obsolescence of compliance and risk models.* Rapid change and permanent uncertainty will require the emergence of new risk management models at national banks. This is especially true for compliance models addressing consumer regulations and anti-money laundering. These areas have, in general, been regulated for decades with great technical detail – in other words, great certainty – and have evolved around a norm of waiting for government rules and then implementing them. This has fostered an environment where, if no rule exists, banks tend to assume there are no regulatory issues. While that tendency has changed somewhat since the financial crisis, the traditional model still prevails. In encouraging “responsible innovation,” the OCC should explicitly guide national banks to strengthen their processes and cultures, so as to enable them to think through issues for themselves, even before they get clear regulatory guidance.
- *Growth of the non-bank sector.* The OCC should consider the risk that obsolete and/or unclear regulation of the banking sector could cause a major realignment of the financial industry, with more activity – and also more innovation – shifting into the non-bank arena. As evidenced in the financial crisis, nonbank and “shadow banking” activities can produce systemic risks that are somewhat opaque to the bank regulators charged with assuring a sound financial system. If banks are barred from engaging in activities that could raise regulatory concerns, those activities will likely evolve outside the banking system, where they will have even less regulatory scrutiny. The bank regulators could find themselves

increasingly overseeing a sector that represents a shrinking share of the marketplace, and supervising companies that are not innovating, while others are. This could lead to both system instability and decline of traditional financial institutions.

- *National strategy of fintech leadership.* While it is beyond the scope of the OCC and its White Paper, these challenges should be part of a larger conversation about the U.S. regulation potentially undermining the global competitiveness of the American fintech innovation sector, in relation to countries like the United Kingdom that have simpler and more avowedly pro-innovation processes.

Question #1: Challenges of community banks

Community banks face particular challenges in adapting to innovation, due to both new technology itself and also to regulation. These difficulties will exacerbate others that impact smaller institutions, many of which serve markets that are not growing and that have declining and aging customer bases.

In general, community banks have advantages over most nonbank innovators, including in ease of customer acquisition and availability of low-cost and stable funding in the form of insured deposits. On the other hand, they have disadvantages, particularly in being truly innovative. This argues for a regulatory strategy that facilitates the two sectors being able to work together, under ground rules that protect customers and the financial system.

I recommend that the OCC focus on the following issues regarding them.

- *Actively seek to foster partnering between community banks and innovators.* Very few small institutions have the resources and skills to create competitive innovation themselves. To compete, they must be able to partner with innovative companies that are world-class in areas like building great “user experience” – UX – and developing sound use of alternative data. Clearly regulators (and banks) must carefully manage risks of such partnerships, including to customer data security and privacy and in fair treatment of customers. Regulatory efforts should concentrate on how best to manage these risk without making it difficult or nearly impossible to pursue them. This challenge will require both streamlining and standardizing requirements and assuring that they are clear. A role of an OCC innovation team might be to develop and publicize some sound models.
- *Streamline rules to address innovation.* Community banks will benefit disproportionately from system-wide efforts to update regulations to address innovation, simply because they carry a disproportionate burden in meeting them. As innovation changes banking practices, regulators should systematically ask whether rules designed for older systems could be reduced or eliminated.
- *Foster “RegTech” solutions that reduce costs.* Many innovators are working on so-called RegTech approaches that leverage new technology to make compliance simpler, faster, and less expensive. Ideally, these should be matched over time with the government’s own

RegTech efforts to write regulations that are conducive to high tech monitoring – saving expense for both industry and regulators alike. These kinds of steps could be taken with regard to consumer protection regulation, while the OCC could main traditional compliance systems regarding safety and soundness. This point is discussed further below but is, again, especially salient for community banks.

- *Fourth, expand safe harbors and consider a low-risk alternative regulatory regime.* Innovation will enable community banks to adopt innovation that is demonstrably good for customers, due to products being simple, transparent and clearly producing the promised results as evidenced by high-tech monitoring of outcomes. The OCC should strive to open safe harbors with streamlined compliance requirements for companies that can demonstrate such performance. See more on this below.

Question 6: Helping community banks address innovation in strategic planning

In addition to the steps suggested below on providing overall resources for the industry, I urge the OCC to issue guidance that all national banks should specifically address technology innovation in their strategic planning, and that this should address the risks of *both* unwise innovation and also of failing to innovate.

Most banks have the same top two challenges: keeping up with technology innovation, and keeping up with changing regulation. While most think of the two as separate and even dissonant issues, they are actually deeply intertwined. This is partly because most of the problems banks face in both areas are rooted in the same places – in legacy IT systems, siloed organizational structures, and cultures, and in old product and profit models that are being made obsolete by technology and in some cases, by regulation as well. Responsible innovation that integrates the two realms will help solve both problems at once, including in cutting the costs of both.

The OCC should consider elevating strategic management of technology innovation to a central position in its expectations of banks, comparable to maintaining adequate capital and assuring sound management. Banks should be encouraged to modernize and integrate IT systems, train and hire the needed skills, and form strategic partnerships that will keep them competitive.

Questions 2, 4, 5, 7, 8: Creating an office of innovation; facilitating responsible innovation; guidance on responsible innovation; guidance for nonbank innovators; and outreach.

I have the following recommendations regarding organizing an innovation program and facilitating guidance and outreach.

Focus on culture change. The OCC should be commended for focusing its White Paper heavily on changing itself to address innovation. The White Paper's six principles reflect this wise approach, including the emphasis on culture. Regulatory efforts will fail unless the agency can adopt a culture that permeates all levels, and especially the field examiner forces. Again, the key to this culture shift is to embrace a balanced approach of simultaneously supporting responsible innovation and addressing risk. I recommend that the agency intensify efforts to use training, performance standards, recruiting criteria, and all other tools in a sustained effort to establish the needed culture and get it well-rooted. As

Comptroller Thomas Curry has noted, regulators are traditionally geared more toward seeing risk than opportunity.

Create a separate innovation unit. At the same time the OCC emphasizes agency-wide culture change, I also urge creation of a distinct office of innovation as a hub for exploring and fostering responsible innovation. It should act as an innovation accelerator for regulatory thinking and for educating the financial and innovation communities about responsible regulation. It should adopt techniques that have been developed in the technology world for fostering rapid innovation.

I suggest that the unit report to the Comptroller or his executive team. It should be structurally and physically segregated from the main flow of other work, partly because it will cross departmental lines and also because such innovation efforts rarely succeed if they are not separate enough to look at issues with a truly fresh perspective. At the same time, the unit should have robust communication lines with all the agency's departments and should actively seek to educate everyone on innovation and to foster an innovation culture. The U.K.'s Financial Conduct Authority Project Innovate and Innovation Hub are a partial model.

(It would be desirable if the other U.S. bank regulators also created offices of innovation and for these teams to form a working relationship or task force, to meet regularly, share learnings, and strive, as noted above, for consistency.)

The innovation team should emphasize direct interaction and immersion in fintech, as direct contact is by far the fastest way to learn this new field. This means, for one thing, that its staff should be cross-disciplinary, comprised of both veteran OCC personnel and technology experts recruited into it. I suggest a program of detailing people in and out of the unit. I also recommend leveraging the knowledge of millennials in staffing it.

The innovation unit's mandate should include:

- Learning about fintech and general technology innovation
- Monitoring ongoing change (people must do this full-time)
- Convening dialogue among regulators, banks, innovators, and other interested groups, such as consumer advocates
- Providing one-stop shop resources for innovators, including for banks and for nonbanks seeking to work with banks.

The innovation group should use all the tools normally applied to rapid learning, communication, and thought leadership, including issuing reports and studies and blogging, convening conferences, training and "office hours," and attending conferences of interested parties. These kinds of steps should aim for both internal and external audiences.

I recommend that the innovation unit visibly model technology culture, as opposed to regulatory culture, inside the OCC. This will help catch attention and thereby accelerate results.

Appoint a Chief Innovation Officer. I also recommend that the Comptroller appoint a Chief Innovation Officer, to lead the team and to lead outreach. Hiring technology people into government can be difficult, but might we worth trying.

Explore creation of a regulatory “sandbox.” Regulators today have begun so-called sandboxes or innovation experimentation laboratories to test innovation that can benefit consumers or meet other regulatory goals, especially if it raises potential conflicts with current regulation. I encourage the OCC to explore such a model, which can derive some learnings from the CFPB’s Project Catalyst and the U.K.’s new Sandbox program.

I strongly recommend that such an approach be coordinated, if possible, on an interagency basis. Innovators hesitate to undertake initiatives like this unless they are confident that all the relevant agencies will share the same view of the outcomes.

If pursued on an interagency basis, the sandbox concept has the potential to tilt the entire fintech landscape toward pro-consumer innovation, by creating an easier regulatory path. Regulatory costs and uncertainties are arguably the primary deterrent to financial innovation, for both new capital and industry incumbents.

The sandbox concept is discussed further below.

ADOPTING A STRATEGIC VISION TO DEVELOP “REG-TECH” THAT MODERNIZES BOTH FINANCE AND FINANCIAL REGULATION

The disruption underway in finance is not only forcing new regulatory approaches; it is also enabling them. The necessity to change creates an opportunity to go beyond adapting current regulations to new issues, and instead to rethink fundamentally them for the digital age.

If we were starting today, it is doubtful we would build the regulatory system we have now. It has evolved through an accretion of legislation and rulemaking over decades and is still deeply rooted in pre-digital industry, regulatory, and technology models. Much of it is suboptimal in effectiveness. Most of it is inefficient for both government and industry (and therefore the industry’s customers). Some is actually counterproductive. Some is unable to reach new risks as they arise.

A grand, wholesale overhaul of such a system is politically and practically impossible. It is possible, however, to open a path that could change it over time.

I encourage the OCC and other policymakers to begin to envision a long-term strategy for creating a distinctly new regulatory approach tailored to a digital financial industry. The goal would be to begin to build a new, leaner regulatory regime for companies that meet certain criteria, and to oversee them through technology in ways that improve results and cut costs for both companies and their regulators

Such a vision could begin to be shaped through the following stages.

First, the OCC and other relevant regulators could create an interagency regulatory hub and sandbox-type program, as discussed above.

Second, the learnings from this experimentation could be funneled in two directions – both into feedback for innovators and industry, and into identification of regulatory barriers to desirable innovation. As these regulatory learnings accumulate, they should be used to update regulations and legislation incrementally for everyone, with a focus on making compliance easier through technology. In addition, they should be used to explore ways to create a streamlined system for regulating certain

companies if they adopted new models that both raise lesser regulatory concerns and are easily supervised through technology, or RegTech.

For example, the regulators might identify criteria that companies could meet to demonstrate that their business models and practices do not need the pervasive “policing” and other factors built into current regulatory systems. Possible criteria could be that the company’s product is highly transparent; that customers can easily understand its terms; that it contains no terms or pricing that are hidden or confusing, or that catch customers by surprise at later stages of the product; that the product performs as promised, including that customers overall are clearly using it well; and that this performance can be tracked electronically.

Companies that met such criteria might then be eligible to apply for admission to a simplified regulatory regime. Over time, such a system might increasingly apply to community banks, thus reducing their regulatory burdens.

This approach could begin to address the pressing issues arising out of innovation. As noted earlier, these include what control consumers should have over use of their data; how to allow desirable use of alternative data in underwriting; clarifying fair lending standards and Unfair and Deceptive Acts and Practices standards for use of alternative; how to use mobile technology to foster wider financial access and how this should relate to the Community Reinvestment Act; how to use new technology to modernized anti-money laundering techniques and regulation; and what innovation should be permitted and fostered for community banks.

Again, development of such a system could have the effect of fostering innovation that clearly performs well in serving consumers, by reducing regulatory burdens on companies that can demonstrate, through technology, that they are doing so. The “sandbox” could also create a first-ever tool for determining empirically what these effects actually are.

A RegTech approach should be applied only where it can be efficient and effective. Many aspects of traditional examinations, including for safety and soundness, would continue. Over time, however, the RegTech methods might produce methodologies that could be adapted for other regulatory purposes.

In conclusion, the OCC White Paper is an important initiative. As noted above, the United States faces challenges in retaining its global leadership in financial innovation as other countries increasingly offer regulatory environments that are more structurally simple and proactively supportive of innovation. The OCC’s White Paper can help move our regulatory system toward a modernized approach that can actively foster innovation and assure that it is pursued responsibly.