Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective
Preface by the Comptroller of the Currency

Innovation has been a hallmark of the national banking system since its founding in 1863 by President Lincoln. That innovative spirit has been especially evident in recent decades as national banks and federal savings associations have led the way in developing and adapting products, services, and technology to meet the changing needs of their customers.

While banks continue to innovate, rapid and dramatic advances in financial technology (fintech) are beginning to disrupt the way traditional banks do business. As the prudential regulator of the federal banking system, we want national banks and federal savings associations to thrive in this environment and to continue fulfilling their vital role of providing financial services to consumers, businesses, and their communities.

Our diverse system of banks has many advantages in developing and adapting financial innovations. Federally chartered institutions have stable funding sources, capital, and extensive customer relationships. They also have a long history of risk management that has led to enhanced information security capabilities, mature credit modeling and underwriting processes, and compliance programs that help protect consumers. These capabilities lay a foundation for innovation in the 21st century, and are major reasons the federal banking system still serves as a source of strength for the nation after 153 years.

At the Office of the Comptroller of the Currency (OCC), we are making certain that institutions with federal charters have a regulatory framework that is receptive to responsible innovation along with the supervision that supports it.

Innovation holds much promise. Technology, for example, can promote financial inclusion by expanding services to the underserved. It can provide more control and better tools for families to save, borrow, and manage their financial affairs. It can help companies and institutions scale operations efficiently to compete in the marketplace, and it can make business and consumer transactions faster and safer.

Innovation is not free from risk, but when managed appropriately, risk should not impede progress. Indeed, effective risk management is essential to responsible innovation. Banks and regulators must strike the right balance between risk and innovation.

This paper describes the OCC’s vision for responsible innovation in the federal banking system and discusses the principles that will guide the development of our framework for evaluating new and innovative financial products and services. We welcome your feedback.

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– Comptroller of the Currency
Thomas J. Curry
OCC Innovation Initiative

In August 2015, Comptroller of the Currency Thomas J. Curry announced an initiative to develop a comprehensive framework to improve the OCC’s ability to identify and understand trends and innovations in the financial services industry, as well as the evolving needs of consumers of financial services. This framework is intended to improve how the OCC evaluates innovative products, services, and processes that require regulatory approval and identifies potential risks associated with them. Even when approval of an innovation is not necessary, enhancing the agency’s understanding will enable it to be a more effective resource to institutions, particularly community banks and thrifts, interested in innovation. The framework also will help clarify lines of communication between the agency and the industry regarding emerging technology and new products, services, and processes.

As part of that initiative, the OCC formed a team of policy experts, examiners, lawyers, and other agency staff members to gain a better understanding of emerging technology and new approaches in financial services and then use that information to design the OCC’s framework for evaluating financial innovation. To obtain a broad perspective, the team met with a variety of groups to discuss the changes in the financial services industry and the opportunities and challenges for banks to participate fully in this evolving landscape. These discussions included bankers from community, midsize, and large banks; innovators in various fields; consumer groups; academics; other regulators; and OCC employees.

Some common themes emerged from these meetings as well as from other research the OCC team conducted. For example, many participants, including both banks and nonbanks, suggested that the “rules of the road” governing the development of innovative products and services are unclear. Banks, particularly smaller ones, also expressed uncertainty about the OCC’s expectations regarding partnerships with nonbanks and third parties. Many nonbanks also indicated a desire to understand regulatory requirements and the supervisory environment as they seek to expand their relationships with banks.

Opportunities and Challenges for National Banks and Federal Savings Associations

The financial services industry in the United States is undergoing rapid technological change aimed at meeting evolving consumer and business expectations and needs. Mobile payment services and mobile wallets are changing the way consumers make retail payments. New distributed ledger technology has the potential to transform how transactions are processed and settled. New technology services offer the prospect of a banking relationship that exists only on a smartphone, tablet, or personal computer. Marketplace lending has the potential to change how loans are underwritten and funded. In addition, automated systems are competing with traditional financial advisors, and crowdfunding sites are raising equity capital for new and existing companies.

Many of these innovations are taking place outside the banking industry, often in unregulated or lightly regulated fintech companies. Fintech companies are growing rapidly in number, and they are attracting increasing investment. In 2015, the number of fintech companies in the United States and United Kingdom increased to more than 4,000, and investment in fintech companies since 2010 has surpassed $24 billion worldwide.

Demographic changes also are influencing customer needs and expectations in dramatic ways. One of the most important changes in the United States involves the millennial generation, which includes nearly

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80 million people. Millennials have the majority of their financial lives ahead of them, and they have demonstrated great receptivity to technical innovation in financial services.4

National banks and federal savings associations are seizing the opportunities and meeting these challenges in different ways. Some are working in their own laboratories and technology incubators to develop innovative ways to improve services and make their operations more efficient. Others are combining forces through consortia and other collaborative arrangements to share the cost of developing and acquiring new technologies. Some banks are investing in fintech firms or new financial technology, and a growing number of banks are partnering with leading fintech companies and startups to develop the applications of tomorrow—applications that could eventually be revolutionary in their own ways.

In today’s financial services environment, banks and fintech companies have different advantages when it comes to innovation. Banks have large and often loyal customer bases that contribute to diverse and stable funding that most fintech companies do not have. Banks also have capital that enables them to deal with losses and continue serving their customers throughout the fluctuations of an economic cycle. Banks often have extensive customer information, networks of physical locations, access to the payment system, and sophisticated underwriting, modeling, and risk management capabilities. Many banks benefit from name recognition, well-established marketing functions, and enterprise-wide compliance frameworks. They also have experience operating in complex regulatory environments.

Fintech companies and other nonbank innovators have their own advantages. Start-ups with few investors and one or two big ideas often can sometimes move faster than larger and more established organizations. They can focus their energy and resources on a single opportunity. Start-ups do not have legacy technology systems or large brick-and-mortar infrastructures that can be costly to maintain or change. Nonbank innovators also may have specialized technical knowledge, experience, and skills with respect to emerging technology and trends.

By employing their respective advantages, banks and nonbank innovators can benefit from collaboration. Through strategic and prudent collaboration, banks can gain access to new technologies, and nonbank innovators can gain access to funding sources and large customer bases.

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The OCC Perspective on Responsible Innovation

The OCC’s mission is to ensure that national banks and federal savings associations operate in a safe and sound manner, provide fair access to financial services, treat customers fairly, and comply with applicable laws and regulations. Supporting a financial system that innovates responsibly is central to the OCC’s mission.

Definition of Responsible Innovation

While innovation has many meanings, the OCC defines responsible innovation to mean:

The use of new or improved financial products, services, and processes to meet the evolving needs of consumers, businesses, and communities in a manner that is consistent with sound risk management and is aligned with the bank’s overall business strategy.

This definition recognizes the importance of banks’ receptivity to new ideas, products, and operational approaches to succeed in meeting the needs of consumers, businesses, and communities in the rapidly changing financial environment.

The definition also emphasizes effective risk management and corporate governance. As we learned in the financial crisis, not all innovation is positive. The financial crisis was fueled in part by innovations such as option adjustable rate mortgages, structured investment vehicles, and a variety of complex securities that ultimately resulted in significant losses for financial institutions and their customers and threatened the entire financial system. The OCC will support innovation that is consistent with safety and soundness, compliant with applicable laws and regulations, and protective of consumers’ rights.

Guiding Principles for the OCC’s Approach to Responsible Innovation

The agency has formulated eight principles to guide the development of its framework for understanding and evaluating innovative products, services, and processes that OCC-regulated banks may offer or perform. These principles call for the OCC to:

1. Support responsible innovation.
2. Foster an internal culture receptive to responsible innovation.
3. Leverage agency experience and expertise.
4. Encourage responsible innovation that provides fair access to financial services and fair treatment of consumers.
5. Further safe and sound operations through effective risk management.
6. Encourage banks of all sizes to integrate responsible innovation into their strategic planning.
7. Promote ongoing dialogue through formal outreach.
8. Collaborate with other regulators.

Each principle is discussed below more fully.

1. Support responsible innovation.

To support responsible innovation, the OCC is considering various reforms to improve its process for understanding and evaluating innovative financial products, services, and processes. The goal is an improved process that will provide a clear path for banks and other stakeholders to seek the agency’s views and guidance. To meet its goal, the OCC is exploring changes to coordinate decision making more effectively within the OCC and expedite review whenever possible, while ensuring a thoughtful assessment of associated risks.

Currently, banks and nonbanks use a variety of formal and informal entry points to communicate with the OCC. For example, a bank interested in an innovative process to speed payments may approach its examiners with a proposal, request a legal opinion from the OCC, file any required application with the appropriate licensing office, or contact one of the agency’s experts on credit, compliance, payments,
cybersecurity, or modeling. While providing flexibility, the current process can result in some inconsistencies and inefficiencies.

To address this concern, one possible approach is to create a centralized office on innovation. The office could serve as a forum to vet ideas before a bank or nonbank makes a formal request or launches an innovative product or service. Other responsibilities could include holding meetings with interested stakeholders and appropriate OCC officials and coordinating among OCC examiners and experts to identify supervisory, policy, legal or precedent-setting issues, or concerns early in the process. To maintain an ongoing understanding of financial industry innovation, the office also could hold regular meetings with fintech innovators. In addition, the office could develop educational materials on innovation for banks and OCC personnel.

Alternatively, the OCC could adopt a less formal process where an existing unit within the OCC assumes the responsibility as the agency’s central point of contact on innovation. That unit could be responsible for ensuring appropriate OCC staff and experts are involved early when considering innovative proposals by banks and nonbanks.

To be effective, the improved process should clarify agency expectations. Banks and nonbanks suggested a need for more guidance, particularly with respect to third-party relationships, including partnerships between banks and nonbanks.

To clarify these expectations and promote better understanding of the regulatory regime, the OCC will evaluate existing guidance on new product development and third-party risk management and assess whether additional guidance is appropriate to address the needs of banks and their customers in the rapidly changing environment.

To expedite decision making, the OCC is evaluating whether it can streamline some of its licensing procedures, where appropriate, or develop new procedures where existing procedures may not work for certain innovative activities.

Another idea touted by banks and nonbanks is to allow banks to test or pilot new products and services on a small scale before committing significant bank resources to a full rollout. Such a program could entail board approval and appropriate limitations that would protect consumers and would not involve giving banks a safe harbor from consumer laws and regulations during the testing phase of a new product. By analogy, the OCC recently issued guidance permitting banks to offer loans that exceed supervisory loan-to-value limits in communities targeted for revitalization under certain circumstances. Although that guidance did not involve technological innovation, the OCC recognized that supporting long-term community revitalization could benefit from innovative lending programs.

2. Foster an internal culture receptive to responsible innovation.

A key component of a successful framework is an agency culture that is receptive to responsible innovation. When researching this project, the OCC gathered perspectives from OCC-supervised institutions and others in the financial services industry and conducted focus groups with agency employees. Many employees shared an interest in a culture that is more receptive to responsible innovation. The common perceptions about the agency that emerged from those discussions include 1) a low risk tolerance for innovative products and services; 2) a deliberate and extended vetting process that can discourage innovation inadvertently; 3) a need for increased awareness and education; and 4) a desire by employees for additional expert resources and easier access to those resources.

The OCC will evaluate its policies and processes, define roles and responsibilities with respect to evaluating innovation, identify and close knowledge and expertise gaps, and enhance communication within the agency and with outside stakeholders. The agency has taken several steps to foster a more receptive culture and to improve the awareness and knowledge of financial innovations. For example, the OCC has established a dedicated Payment Systems Policy Group that provides examination support,
training, and guidance to examiners and acts as a resource to OCC-supervised institutions on innovative and traditional payment structures. Additionally, the OCC has formed an internal working group on marketplace lending to monitor developments in that sector.

The agency will develop or augment existing training to reinforce the agency’s receptiveness to responsible innovation and develop additional expertise to evaluate the opportunities and risks related to specific types of innovation. The OCC is considering establishing dedicated internal Web pages describing resources and training opportunities on innovation for all employees.

3. Leverage agency experience and expertise.

The OCC will rely heavily on the breadth and depth of knowledge of existing staff in implementing its responsible innovation framework. The agency’s examiners, policy and compliance experts, legal staff, information technology professionals, and economists have a deep understanding of the financial system and a growing understanding of the emerging technology that can bring innovative products, services, and processes to businesses and consumers. The agency will continue to develop expertise in this important area.

Examiners are often the first and primary points of contact for banks considering new products or services, and they play a critical role in supporting responsible innovation. The OCC assigns a designated examiner or team of examiners to every institution under its supervision depending on its size and complexity. Examiners develop a robust understanding of each bank’s activities, business strategies and goals, and risk appetite. That knowledge guides the OCC’s supervisory strategy for that bank. The examiner also understands the local economy and the operating conditions in specific markets. As banks progress into new products or services, examiners can be important sources of information.

Ongoing communication with OCC examining staff provides the opportunity for banks to discuss the most recent trends and information that may affect the institution. These discussions include the introduction of new products, services, third-party relationships, changes in risk management or audit activities, and other planned corporate activities. These activities and ongoing dialogue help ensure effective supervision and early identification of evolving opportunities and risks. They also help resolve supervisory concerns as early as possible.

Industry stakeholders also benefit from the agency’s expertise in other areas. OCC compliance policy experts support agency examiners and assist the banks they supervise on issues related to a variety of consumer protection and banking laws, such as the Bank Secrecy Act (BSA). Community reinvestment experts advise supervised institutions on community development issues. The OCC’s Payments Systems Policy Group provides expertise in payments systems including traditional bank payments systems and distributed ledger technologies. Legal staff interprets banking laws and rules. Technology professionals help assess bank technology systems and cyber risks facing the industry. Economists provide expertise on modeling and quantitative analysis that assists in evaluating the effects of emerging technology and new programs and services and their implications for banking policy. All these experts play important roles in helping banks and nonbanks interested in innovation navigate the complex regulatory environment.

The OCC also will consider designating lead experts on responsible innovation who could support bank supervision and provide advice based on a broad view of innovation trends and developments across the federal banking system. The agency has an effective lead expert program in retail and commercial credit, compliance, bank information technology, asset management, and operational risk to support examiners and supervised banks.

In addition, the OCC will regularly evaluate whether it has the appropriate resources to supervise innovation within the federal banking system.
4. Encourage responsible innovation that provides fair access to financial services and fair treatment of consumers.

Responsible innovation among banks should help them fulfill their public purpose by promoting fair access to financial services and fair treatment of consumers. Current innovations in the financial industry hold great promise for increasing financial inclusion of underserved consumers, who represent more than 68 million people and spend more than $78 billion annually. Data suggest underserved communities are more likely to use mobile banking technology than fully banked communities. Social media use, in particular, appears disproportionately popular among demographic groups likely to be underserved, including young adults, low- and moderate-income consumers, and minorities compared with the population as a whole.

Brick-and-mortar branches are a stabilizing force in low-income neighborhoods, and innovative technology should not be seen as a substitute for a physical presence in those communities. However, the OCC believes there is great potential for responsible innovation to broaden access to financial services by delivering more affordable products and services on suitable terms to unbanked, underbanked, and low- to moderate-income consumers. Examples of products cited by some that could help address unmet financial services needs of the unbanked and underbanked include

- online and mobile banking, saving, budgeting, and financial management tools.
- small dollar, unsecured consumer loans.
- small business loans.
- credit consolidation or refinancing of consumer or student loans.
- use of behavioral models to improve automated underwriting models that could expand the pool of eligible consumers.
- improved payment services.

Innovations in lending are not limited to digital services and could include new ways to extend credit or provide other types of financial services. Social responsibility funds, for example, can expand opportunities in affordable housing and community or economic development.

Innovation also can encourage fair access by spurring small business and community investment that improves services and provides community redevelopment resources. Small business investment funds can attract capital for start-ups and businesses located in low- and moderate-income communities. Mortgage- or asset-backed securities backed by Community Reinvestment Act-qualified investments can provide liquidity for loans that benefit low- and moderate-income individuals or small businesses. Tax credit programs can promote investment in renewable energy, historic preservation, economic development, and affordable housing.

To encourage responsible innovations that provide fair access to financial services and fair treatment, the OCC plans to share success stories describing how national banks and federal savings associations have innovated to increase access to unbanked and underbanked populations; to increase the speed, efficiency, effectiveness, and transparency of financial transactions; and to lend and invest in ways designed to address the credit needs of low- and moderate-income individuals and communities.

The OCC may also issue guidance on its expectations related to products and services designed to address the needs of low- to moderate-income individuals and communities and may encourage innovative approaches to financial inclusion by promoting awareness of other activities that could qualify for Community Reinvestment Act consideration.

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5. **Further safe and sound operations through effective risk management.**

Effective risk management and good corporate governance are fundamental for banks to develop new products, services, and processes successfully. The OCC’s framework must consider how national banks and federal savings associations identify and address risks resulting from emerging technology.

The OCC’s research found that banks, nonbanks, and bank customers believe that cyber risk is one of the most significant risks facing the financial industry as it implements new technologies. In addition, risk to customer data through data aggregation and third-party use is increasing. Innovating through in-house development, third-party collaboration, or business combinations also presents different risks that require effective corporate governance, due diligence, risk identification and measurement, and internal controls.

Banks of all sizes should ensure that effective corporate governance and risk management meet supervisory expectations when considering new products, services, and processes. This includes expectations described in OCC guidance related to strategic planning, evaluating new products and services, using models, operational risk, cybersecurity, and managing third-party relationships.

The OCC also will continue to improve its ability to understand and monitor emerging risks in the financial industry. Over the past several years, the OCC has improved its internal governance and risk identification capabilities through enhancements to the OCC’s National Risk Committee and several committees focused on particular risks such as credit, operational, and compliance. The National Risk Committee structure is designed to assess current and emerging risks and to communicate that information to examiners and banks. The National Risk Committee also publishes the OCC’s Semiannual Risk Perspective on current and emerging risks in the federal banking system. The OCC is considering ways to leverage the work of the National Risk Committee in its responsible innovation framework.

6. **Encourage banks of all sizes to integrate responsible innovation into their strategic planning.**

The agency’s framework for evaluating new and innovative financial products and services must consider how banks integrate innovation in their strategic planning processes. Sound strategic decisions are essential for any bank to achieve its business goals and successfully meet the needs of the consumers, businesses, and communities it serves.

A bank’s decision to offer innovative products and services should be consistent with the bank’s long-term business plan rather than following the latest fad or industry trend. Pursuit of emerging technology and other innovation should align with customer needs and the bank’s strategic plan as well as its risk management capabilities. A bank collaborating with a nonbank to offer innovative products and services should also consider whether such a partnership helps the bank achieve its strategic objectives.

When discussing innovation, banks are reminded that traditional strategic planning criteria such as those listed below still apply:

- Consistency with the bank’s corporate governance, business plan, and risk appetite.
- Realistic financial projections.

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• Adequate staff, both in number and expertise.
• Technology support.
• Consideration of all applicable risks, including reputation and compliance, and appropriate risk management systems and practices.
• Exit strategies.

7. Promote ongoing dialogue through formal outreach.
Outreach is a key component of encouraging and supporting responsible innovation, and the OCC intends to incorporate formal outreach into its framework. An ongoing dialogue with all stakeholders, including banks, nonbank innovators, and consumer groups, will enable the agency to

• stay abreast of current trends and developments, including new products, services, process improvements, and partnerships.
• understand the underlying reasons and customer needs that drive such developments.
• promote awareness and understanding of its expectations related to responsible innovation.
• identify opportunities to improve its ability to respond more quickly, efficiently, and effectively to inquiries regarding new products and services, including licensing requests.
• serve as a more effective resource to institutions interested in innovation.
• solicit feedback on how its actions encourage or impede responsible innovation.

As part of its ongoing outreach activities, the OCC plans to bring together banks, nonbanks, and other stakeholders through a forum and a variety of workshops and meetings to discuss responsible innovation in the financial industry. The agency also intends to host “innovator fairs” to bring together banks and nonbank innovators with OCC experts to discuss regulatory requirements and supervisory expectations in the financial services industry. In addition, the OCC will provide resources, information, and guidance through its Web sites, including OCC.gov and BankNet.gov, which may include links to future papers and other resources on responsible innovation for those who want to engage with the OCC.

8. Collaborate with other regulators.
Supervision of the financial services industry involves regulatory authorities at the state, federal, and international levels. Exchanging ideas and discussing innovation with other regulators are important to promote a common understanding and consistent application of laws, regulations, and guidance. Such collaborative supervision can support responsible innovation in the financial services industry.

The OCC will work with agencies like the Consumer Financial Protection Bureau (CFPB) on innovations promoted by or affecting banks subject to OCC and CFPB supervision. Because the missions of the CFPB, the OCC, and other bank regulatory agencies intersect and agencies share the goal of minimizing unnecessary regulatory burden, the agencies implemented a number of memorandums of understanding that describe how to interact and work with one another to supervise industry participants. Such coordination gives banks greater confidence that regulators who share responsibilities will consider innovative ideas consistently.

The banking agencies already collaborate successfully on a number of issues and could create additional workgroups to further that coordination and increase communication about this important topic. Collaboration on responsible innovation should include the following actions:

• Establish regular channels of communication.
• Identify information to share on an ongoing basis or upon request.
• Provide other agencies with such advance notice as is reasonably possible regarding upcoming innovation activities that may be of common interest.
• Use best efforts to avoid inconsistent communications with supervised entities.
Conclusion and Request for Comments

As the OCC continues to develop its framework to support responsible innovation in the federal banking system, it seeks feedback on all aspects of this paper. The OCC also solicits responses to the questions below. The OCC requests that respondents provide written comments on these questions and other topics presented in this paper by May 31, 2016. Submissions should be e-mailed to innovation@occ.treas.gov.

1. What challenges do community banks face with regard to emerging technology and financial innovation?
2. How can the OCC facilitate responsible innovation by institutions of all sizes?
3. How can the OCC enhance its process for monitoring and assessing innovation within the federal banking system?
4. How would establishing a centralized office of innovation within the OCC facilitate more open, timely, and ongoing dialogue regarding opportunities for responsible innovation?
5. How could the OCC provide guidance to nonbank innovators regarding its expectations for banks’ interactions and partnerships with such companies?
6. What additional tools and resources would help community bankers incorporate innovation into their strategic planning processes?
7. What additional guidance could support responsible innovation? How could the OCC revise existing guidance to promote responsible innovation?
8. What forms of outreach and information sharing venues are the most effective?
9. What should the OCC consider with respect to innovation?