



May 31, 2016

Thomas J. Curry
Comptroller of the Currency
Office of the Comptroller of the Currency
400 7th Street S.W., #3E
Washington, D.C. 20024

**Re: Comments on Supporting Responsible Innovation
In The Federal Banking System: An OCC Perspective**

Dear Mr. Curry:

Microsoft Corporation ("Microsoft") welcomes and supports the Office of the Comptroller of the Currency's (OCC) initiative to drive responsible innovation in the Federal banking system. We are living in an era in which technology is evolving rapidly. With this rapid change new business models are emerging. In particular, the availability of hyperscale cloud computing and ultrafast communications links has been transformational. Today, more computing power is available to more people more inexpensively than ever before.

The resulting innovation in the financial services sector has been impressive and continues at an extraordinary pace. From Internet banks to payments companies to lending platforms, a range of new entrants has transformed the market. At the same time, existing financial institutions are working to embrace new technologies in their operations and to match the convenience and innovation of the newcomers. We are just at the beginning of this transformation – new technologies, such as blockchain, hold the potential to revolutionize how banks interact with each other and their customers, enabling even faster payments and more verifiable records of transactions and positions.

As the OCC has recognized, it is important that this wave of innovation be encouraged, not stifled. At the same time, the OCC and other regulators are rightly concerned about safety and soundness of institutions as they experiment with new products and services, as well as ensuring that consumers and end customers are protected. Layered on top of this is the ever-present need for security in a world where cyberattacks remain all too frequent, as demonstrated most dramatically by the recent episodes involving SWIFT.

Several trade associations to which Microsoft belongs, including the Electronic Transactions Association and the Chamber of Digital Commerce, have submitted comments on this

consultation, addressing many key points. Nonetheless, we wanted to submit our own comments to provide additional thinking about (1) the impact and role of cloud computing on financial innovation; (2) the importance of regulatory cooperation, including with state and foreign regulators; and (3) the need for broad consultation, including with technology service providers.

Cloud Computing. Cloud computing lies at the heart of the innovation revolution in financial services. With the advent of hyperscale cloud computing, companies have access to infrastructure involving millions of servers. By way of example, Microsoft operates over 100 data centers worldwide, with over one million servers, and serving over one billion customers worldwide (when accounting for enterprise and consumer services combined). Our experience running hyperscale cloud has given us deep expertise in the technological needs of customers and partners, including financial institutions and fintech startups.

Hyperscale cloud computing is a standardized service. It brings massive benefits to customers in terms of continual investment and innovation in security, privacy, confidentiality and availability to address new and evolving threat vectors. The hyperscale cloud model provides predictability (the service, commercial terms, controls and processes are the same for all customers), efficiency, agility and lower overall costs of ownership and management of the service. This provides a different risk assurance, oversight and ongoing management profile as compared to traditional outsourcers or on-premises servers.

As the OCC and other regulators consider how to promote innovative financial services based on the cloud, we encourage them to adopt a risk-based and proportionate approach to governance, particularly when considering the obligations of the underlying technology provider. There continues to be a need for more clarity about how banks can use cloud services consistent with existing outsourcing guidance, which in turn will promote innovation, and this is an area where the OCC can help lead, in conjunction with other regulators as described below.

In addition, hyperscale cloud computing helps democratize the availability of financial services. In particular, it enables small to medium sized financial institutions that lack the deep pockets of major banks to offer innovative services without compromising risk assurance and governance for financial institutions. It also helps provide access to financial services to unbanked and underserved populations. For example, Microsoft worked with Temenos to use the cloud reduce the cost of microfinance lending by 90%, bringing banking to 10 million people in just two years.¹

Regulatory Cooperation. The OCC's consultation discusses the importance of cooperation among the Federal regulatory agencies. We urge the OCC to extend that cooperation to encompass state regulators – including both state banking and state money services businesses

¹ See <https://www.microsoft.com/en-us/enterprise/microsoftcloud/temenos.aspx>.

Mr. Thomas J. Curry

May 31, 2016

Page 3

regulators – and foreign regulators as well. Many fintech entities are considered money services businesses or money transmitters, and thus are regulated in the U.S. on a state-by-state basis. This state level regulation poses complexities for fintech companies, as services offered online can be accessed from anywhere, as compared to services offered at traditional brick-and-mortar locations. As a result, new entrants often must become licensed everywhere – a multiyear process involving significant bonding requirements – before even being able to determine whether there is market demand for their services. Cooperation among regulators could help simplify this regulatory maze and make it more consistent, reducing time to market for new innovators.

Another way to increase innovation is to establish special regulatory regimes for testing new offerings. In the UK, the Financial Control Authority (FCA) has been moving forward with plans to implement a “regulatory sandbox” to increase the pace of financial services innovation. A regulatory sandbox provides a lighter regulatory regime, tailored to the risks of the new service, thereby allowing it to be tested to determine market demand and uptake before a full-scale rollout. This helps encourage innovation by enabling trials before incurring the costs and burdens of a full regulatory review. For this concept to work in the U.S., however, the OCC, other Federal regulators, and state regulators will need to cooperate in establishing regulatory sandboxes – particularly as many services will involve partnership between banks and fintech entities. By working with other Federal and state regulators, the OCC could employ regulatory sandboxes to promote innovation.

Another step the OCC could take is working with state regulators to harmonize outsourcing guidance related to cloud computing. Today, the lack of concrete outsourcing guidance from state regulatory agencies adds to the challenges of enabling entities regulated by them to take advantage of cloud computing. Enhancing cooperation with state regulators on outsourcing to hyperscale cloud providers would help drive needed clarity and harmonization that will drive uptake of cloud services.

In addition to regulatory cooperation within the U.S., we would encourage the OCC to work with its counterpart regulators in Europe and elsewhere. Regulators such as the FCA have been exploring fintech and blockchain technologies. Increasingly companies are offering new financial services both sides of the Atlantic, and enhanced regulator cooperation and coordination will help streamline the ability to launch such services. And regulators in the U.S. and Europe will learn a lot from the approaches each are taking to encouraging innovation and their experience on the ground with those approaches. We would note, in this vein, the need for greater harmonization of cloud guidance across the globe given that many financial institutions operate in multiple markets.

Broad Consultation. The OCC’s consultation seeks responses from both banks and non-banks. This makes sense, given that more and more banks regulated by the OCC will partner with fintech

Mr. Thomas J. Curry

May 31, 2016

Page 4

entities to offer new products and services. Yet increasingly technology service providers have a key role in enabling innovation for both banks and fintech entities. We see this in the move to the cloud, and the fact that many fintech companies are born and live in the cloud.

We welcome and support the opportunity greater dialogue with the OCC and with its Federal and state counterparts. For this reason, if the OCC establishes an Office on Innovation (which we strongly encourage), we urge that it be open to discussions with service providers whose technology underpins new solutions.² Technology service providers, including hyperscale cloud providers, can provide insight into the latest security technologies, middleware services, and other innovations and serve as a resource for regulators about the promise of new technologies and policy issues and risks they should consider in developing the regulatory framework. As part of this dialogue, we also welcome the opportunity to participate through industry forums and workshops sponsored by the OCC and other agencies.

We also welcome the OCC's proposal to have "go to" experts to help realize responsible innovation more quickly. Having experts to engage with on an ongoing basis can help facilitate learning and clarify obligations – in turn enabling both regulated entities and their technology providers to meet regulatory expectations about managing adoption of innovative technologies while maintaining appropriate risk assurance.

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Microsoft again appreciates the opportunity to provide comments on this consultation and looks forward to working with the OCC and other stakeholders to promote responsible innovation and enhance adoption of new technologies by banks and others. If you have any questions about these comments or would like to talk further, please do not hesitate to contact me at (425) 722-1504 or jasonalb@microsoft.com.

Respectfully submitted,

Jason Albert
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Microsoft Corporation

² We would also urge the OCC's counterpart agencies to establish similar offices to enhance coordination with banks, fintech entities, and technology service providers.