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The Challenges of Financial Innovation

I am pleased to be here with you today in your new headquarters building. I am also grateful for the many courtesies extended to me since my arrival in your country. Over the years, the CBRC and the OCC have built a strong working relationship. I look forward to continuing to build on that tradition, and I also look forward to working with Chairman Liu. Today, I would like to share a few thoughts on an issue that is always challenging for banking supervisors: how to supervise and manage risks posed by new and innovative financial products.

Innovation has long been a feature of banking and financial market activity. Many banking products that are now core features of the U.S. financial system, such as variable rate loans and mortgage-backed securities, were innovations not long ago. Innovation is a characteristic of the U.S. banking system that has brought significant benefits to our economy, and banks' ability to innovate is a trait that I admire. Although innovation is an expected and desirable element of competitive banking markets, the rapid pace of innovation in recent years has created enormous challenges for the OCC and for other regulators.

The essence of these challenges is to identify and supervise the risks posed by new products without imposing restrictions that may unnecessarily hamper innovation. If we impede innovation we would make our banking system less effective than it otherwise could be. Any innovation is, by definition, something new, and I suspect that many of you are like me: we tend to be less comfortable with new things, and more comfortable with things that we know well. Unfamiliar products can at first seem to be a burden to supervise and regulate, since we may not have all of the information and expertise necessary to assess the risks of these new products. Some new products and activities that the OCC has had to assess include securitization, structured financial products, and new kinds of mortgages sometimes referred to as alternative mortgage products. We believe that we need to understand such new products and activities before we can formulate good supervisory policy. That often means we have to learn quickly, because U.S. banking laws and regulations permit banks to engage in a broad range of activities, and innovation is rapid.

Drivers of Financial Innovation

In competitive banking markets, bank actions are largely motivated by the desire of bank shareholders for greater profits. Obviously, profits can rise when revenues increase – which can be the result of providing products that better suit the demands of customers – or when costs decrease. It follows that the innovations we see in banking markets may be driven either by attempts to provide more desirable products to customers, thereby increasing revenues, or by attempts to decrease costs.

Consider an example of an effort to increase revenue by providing a new type of product: innovations in home mortgages. Mortgages have long been a core product for U.S. banks. However, as the price of housing increased in the United States, so did the size of mortgages, which in turn became less affordable for many borrowers. As a result, some customers wanted loans with more affordable features that would make purchasing a house more affordable.   To satisfy this demand, bankers introduced variations of the traditional mortgage product. One innovation was to offer loans with a longer term – for example, 40 years instead of the traditional 30 – which made the corresponding monthly payments smaller. Another was the development of mortgage products where a borrower would make lower initial monthly payments based on a low interest rate for some initial period of time, typically two or three years, with those lower initial payments offset by a significant increase in monthly payments at the end of that period. The assumption is that at the later time when the monthly payments increase, the borrower would either have higher income or be able to refinance the mortgage. While these new product designs enabled borrowers to obtain bigger mortgages and buy the more expensive homes they wanted, they also introduced new risks for banks and borrowers – specifically, the risk of non-payment when higher monthly payments are required in later years.

The second driver I mentioned for financial innovation is cost reduction. There are many examples of this, such as reductions from improvements in payments processing, or reductions resulting from new ways to deliver financial services electronically to customers. However, regulatory restrictions and requirements are also a cost, and some innovations are aimed at avoiding or reducing <u>that</u> cost. This last type of innovation is not necessarily bad, because such innovations may simply be a response to regulations that have become outdated, showing us where we may need to change aspects of the regulatory system.

Consider securitization, where the bank originates loans, groups them in a pool, and issues securities backed by the payments on the loans. There are legitimate economic motives for securitization. But many believe that the rapid adoption and growth of this innovation has also been driven by the recognition that for certain relatively safe assets – such as traditional home mortgages – the required bank regulatory capital is probably too high compared to other assets. Holding mortgage assets on the balance sheet was less profitable for banks, once consideration was given to those regulatory capital requirements. Securitization developed in part to provide a way for banks to conduct this business without needing to hold the regulatory capital that would otherwise be required if they kept the mortgages on their balance sheets.

Thus, this innovation may be viewed at least in part as a way for banks to avoid regulatory capital requirements on certain assets. Is this bad? Not necessarily. Securitization has many benefits. For example, it typically increases the flow of capital into the assets being securitized by making it feasible for a wider pool of investors to invest and assume risks in those assets. It has also helped banks become more diversified, by reducing concentrations of exposure to local markets. However, even though assets that have been securitized leave their balance sheets, banks typically retain some of the risk of the sold assets by providing credit enhancements to the securities backed by the assets. These risks involved in securitization are not always adequately covered by existing capital standards. As a result, banks engaged in securitization could be holding too little capital for the level of risk involved. Indeed, this concern has been one of the motivations for Basel II.

We see another example of financial innovation in structured financial products, such as collateralized debt obligations, that are customized to meet the needs of the borrower. These products have become an area of supervisory focus recently. Structured financial products build upon earlier innovations, such as securitization and derivative instruments, but push them a step further. It is likely that innovative structured products can play an important role in well developed capital markets and in the management of modern financial institutions. They may even help reduce bank risk. However, their increasing complexity should give us pause. As with any innovation, it is critical that banks fully understand the risks associated with the use or sale of these instruments, and understand their likely performance under stressful economic conditions. Because they are so complex and so new, I think we as regulators must take careful steps to ensure that banks have such an understanding.

These examples illustrate two other important facts about financial innovation. One is the role of new technology, which has indeed facilitated innovation. Securitization, for example, would not have been nearly as successful an innovation without the technological platforms to support it, including hardware, software, and financial modeling, many of which have become practical only in recent times.

The second fact is that competition causes successful innovations to spread. After securitization was introduced in the marketplace, banks widely recognized its economic benefits, and they were quick to join the ranks of securitizers. Indeed, markets almost always produce a rush to profitable new products, and this is something that we as regulators must factor into our thinking as we consider the impact of any innovation: while the new product may begin with only a few participants, it can quickly spread across the industry. Thus, regulators also must prepare for systemwide consequences resulting from innovative new products.

Supervising Innovative Financial Products

Regardless of the motivation or the specific underlying forces, financial innovation will be a continuing fact of our regulatory life. And, while I recognize the significant challenges it brings, innovation furthers financial and economic development. It is therefore reflected in one of the OCC's strategic goals: to ensure a flexible legal and regulatory framework that enables the national banking system to provide a full competitive array of financial services. At the OCC, we supervise nearly 2000 banks located throughout the United States. Many of these banks are very small, with operations that are relatively simple and generally contained within a narrow geographic area. But the OCC also supervises the largest, most complex, and most dynamic banks in the United States – and some would say the world – including Citibank, JPMorgan Chase, and Bank of America. Like other banks, these large U.S. institutions are driven by strong competitive pressures, and that in turn creates great incentives to innovate.

Financial innovations of the past 20 years certainly have contributed to the vibrant financial system that underlies the U.S. economy today. However, as I noted earlier, proper risk management of new products and activities is essential. We expect banks to have clearly defined processes for the internal prior approval of new products – that is, by appropriate levels of senior management within the bank – and to apply those processes consistently across the bank. Senior management and boards of directors are expected to understand and continually monitor risks arising from new products. They are also expected to ensure that the associated risk management and compliance functions are appropriate. Financial innovation may lead to new risks, requiring bank management to become more sophisticated in how they view and control these risks – because risk management must keep pace with risk taking. We also expect bank management to ensure that capital is adequate for the risks of new products. All of this reflects our view that while we expect our banks to take risks, we also expect them to manage those risks prudently. New products and services should not jeopardize the health of the bank.

To verify that there are proper controls, we expect our examination teams to understand the products as well. Our examination staff focuses on bank products and services considered to pose the greatest risk to the safety and soundness of the banks that conduct them. Activities by our examiners are part of the larger supervisory plan for each bank. Identifying the products and services on which our examiners should focus can be challenging, especially during these times of rapid product development and innovation.

As regulators, we also need to understand and respond to activities that may be adequately managed at the individual bank level, but might create risk to the system when the product is offered by many banks. That is, even if the product does not raise systemic concerns when offered by one bank, we can expect that successful innovations will spread quickly across the banking system, as I noted above. When that happens, a broader supervisory response may be warranted.

To address such systemwide concerns, the OCC frequently uses the tool of supervisory guidance. But when we issue guidance on new products, we face a significant supervisory challenge: how do we address the concerns raised by new activities without unduly restricting them? We want markets, not regulators, to determine which innovations are widely adopted. But as regulators, we also are responsible for the condition of banks and the health of the banking system. How do we strike the right balance between these goals? I believe that, in addition to informed observation and intelligent analysis, much of the answer lies in consultation and communication.

Consultation and Communication with the Banking Industry

Consultation means engaging the banking industry and other third parties in discussions about new banking products and activities. This allows us to better understand what the risks might be, how they arise, what might be done about them, and what would be the impact of any action we might take. This improves our understanding of the potential economic consequences of any proposed action, such as the issuance of supervisory guidance.

Thus, the guidance we issue is based initially on extensive supervisory review and analysis of particular products at particular banks. This analysis may reveal the potential for significant risks if some activity is not properly controlled. Our examiners, analysts, and managers discuss any concerns and decide whether they need to be raised with the OCC's Executive Committee, which consists of me and the senior executives of the various parts of our agency. We use the supervisory information gathered as one factor in determining whether we need to issue guidance, or perhaps even take the stronger step of issuing regulations. In many cases, we work with other U.S. regulators as we consider these actions.

But since well intentioned but poorly designed guidance can have unintended consequences, we also generally consult and work with banks as we develop the guidance. Indeed, with larger, more significant issues, we also try to make the guidance development process more transparent by keeping the public informed through speeches and congressional testimony, which gives all interested parties an opportunity to hear the issues and to provide input on proposed guidance. We may also seek formal comments from banks, bank customers, community interest groups, and Congress, both positive and negative.

For example, last year we proposed for formal comment guidance that applied to bank concentrations in commercial real estate loans. The guidance called for enhanced risk management when concentrations exceeded certain thresholds, for example, when total commercial real estate loans exceed 300 percent of a bank's capital. In response to that proposal, the OCC received more than 1,600 comments, which were analyzed by my staff. We value these comments highly, and consider each one individually. This comment process is a vital avenue for banks and the public to make their opinions known. We receive most comments in written form, but we may also meet with bankers directly to give them another way to present their analysis of issues. For the commercial real estate guidance, many of our community bankers expressed their concerns in face-to-face meetings with me.

The input we receive is often very constructive, even if we do not agree with every comment. The comments and suggestions may highlight issues or concerns that had not been identified previously. I believe that this period of comment and review results in better guidance. The transparency of the process has the additional advantage of providing banks with early warning about potential regulatory actions. This allows banks to adjust their behavior to the new guidance or expectations over a period of time, rather than suddenly. This adjustment period is important, because abrupt regulatory changes can increase banks' costs of regulatory compliance without a corresponding increase in public benefits, even when those regulatory changes are fully justified and appropriate. Abrupt, unexpected changes also are more likely to have adverse, unexpected consequences.

Indeed, the need to avoid unexpected change highlights the value of clear and continual communication. With our recent commercial real estate guidance, for example, there was some misunderstanding of our intent in establishing thresholds for concentrations of commercial real estate loans. We meant these thresholds simply to be concentration levels that would require enhanced risk management. They were not meant to be hard limits or caps on a bank's ability to make additional commercial real estate loans exceeding the limits. But many bankers and others apparently interpreted them as hard limits, raising the possibility of a large, sudden, and unintended reduction in credit for commercial real estate. As we became aware of this misunderstanding, we were able to address it through various forms of communication to the industry as we finalized the guidance, and at this point I believe we have avoided the potential problem.

These key elements of our policy-making process – consultation and communication – are all the more important when we are dealing with innovations in banking. Together, they help give regulators the necessary understanding of new products and activities, and help avoid unexpected responses by banks and harmful effects on the financial system and the economy. In this way, we are better able to achieve the difficult balance of allowing innovation and evolution, while controlling risk and ensuring a safe, sound, and fair financial system.

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To summarize, financial innovation continues to drive the U.S. banking system and world financial markets to more sophisticated and efficient levels. We can expect this to continue, motivated by the usual factors of customer demand and a desire to reduce costs. At the OCC, our supervisory approach will continue to evolve in response to these developments, as we seek to ensure the safety, soundness, and fairness of banking in the United States. Our aim must be to permit desirable innovation without jeopardizing the health of our banking and financial system. As I have emphasized, I think consultation with the industry and the public, as well as clear communications from regulators, will continue to play a central role.

In closing, I should add that these challenges will be met most effectively through cooperation and coordination among banking supervisors. While each regulator faces certain challenges that are unique, other challenges are shared by all. The candid exchange of experiences and approaches is likely to make all of us more effective. That is one of the many reasons I have been pleased to be able to speak with you today. Thank you for your attention, and I look forward to continuing our dialogue in the future.