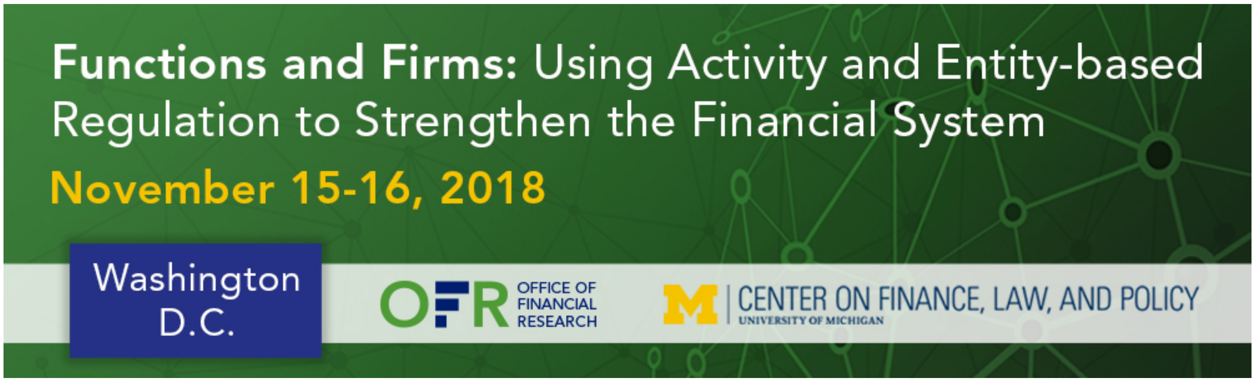

Functions and Firms: Using Activity- and Entity-Based Regulation to Strengthen the Financial System

Office of Financial Research-University of Michigan Center on Finance, Law, and Policy
Fourth Annual Financial Stability Conference

November 15-16, 2018
U.S. Department of Treasury

For the fourth consecutive year, the Office of Financial Research (OFR) and The University of Michigan Center on Finance, Law, and Policy co-hosted a conference addressing timely issues in financial markets. The 2018 conference focused on an activities-based approach to financial stability risk monitoring and supervision. This document summarizes the main themes from each of the conference's six panels.

The conference brought together regulators, policymakers, lawyers, economists, financial market participants, investors, financial technology companies, and experts on data science, cybersecurity, and finance to address the following questions:

- How should regulators pursue an activities-based approach to promoting financial stability?
- How can the U.S. regulatory structure adapt to this approach, particularly given the potential risks presented by financial technology and emerging financial products?
- What kind of data do regulators need to be able to access for an activities-based approach to be effective and efficient?
- In addressing these challenges, what can we learn from other countries, industries, and academic disciplines?

FDIC Chairman Jelena McWilliams delivered a keynote address to begin the conference. Her written remarks are available in the Appendix, and the full video of her remarks is available here.

In addition, OFR Acting Director Ken Phelan and Michael Barr, Dean of the Gerald R. Ford School of Public Policy at the University of Michigan, participated in a keynote conversation hosted by David Wessel of the Brookings Institution. The participants explored questions about tailoring post-crisis financial regulations, the utility of financial stability reporting by OFR and other government agencies, and emerging risks in the financial system. Video of the keynote conversation is available here.

Panel 1: How Should Our Existing Regulatory Structure Be Applied to Support an Activities-Based Approach?

Panel Description: During the 2008-09 financial crisis, individual regulators did not always have the information or authorities they needed to supervise the financial sector. One solution was the creation of the Financial Stability Oversight Council (FSOC) to facilitate regulatory coordination and information sharing. Ten years later, are our existing laws adequate for activities-based financial stability risk monitoring and regulation? Are there still gaps? Are there regulatory overlaps that create risks or inefficiencies? How should the system be adapted to implement an effective activities-based approach?

Speakers:

- Brent McIntosh, General Counsel, U.S. Department of Treasury (moderator)
- Anat Admati, George G.C. Parker Professor of Finance and Economics at Stanford University Graduate School of Business, Stanford University
- Robert J. Jackson, Jr., Commissioner, U.S. Securities & Exchange Commission
- Jeremy Kress, Assistant Professor of Business Law, University of Michigan Stephen M. Ross School of Business
- Margaret Tahyar, Partner, Davis Polk & Wardwell

Summary:

The panelists agreed that an appropriately structured activities-based approach could help mitigate systemic risk. For example, Commissioner Jackson commented that a properly configured activities-based approach could enhance financial stability because activities themselves propagate risk. Professor Kress noted that activities-based regulation is uniquely capable of addressing systemic correlations among firms—such as in the savings and loan crisis—because an activities-based approach reaches market-wide, rather than to just a handful of systemic institutions. Likewise, Professor Kress asserted that activities-based regulation could prevent firms from shifting activities to less-regulated legal entities, as occurred during the 2008 financial crisis.

Some panelists suggested specific activities that the FSOC and its member agencies should focus on regulating. Professor Admati and Ms.Tahyar both recommended that FSOC consider risks in leveraged lending. Ms. Tahyar also suggested mortgages and student loans as other potential areas of focus. Some panelists urged greater focus on the activities of private funds. For example, Commissioner Jackson recommended that OFR enhance its use of hedge fund data collected on Form PF. In addition, Professor Admati urged FSOC to strengthen its money market mutual fund proposal from 2012.

Some panelists, however, expressed skepticism that an approach that focused exclusively on activities could succeed in the United States. Ms. Tahyar observed that the U.S. regulatory system is extremely fragmented. Professor Kress commented that regulatory gaps (in areas such as insurance, hedge funds, and fintech) and overlaps (in mortgages, derivatives, and securities) could complicate efforts to enact and enforce uniform activities-based rules throughout the financial system. He stated that in many instances, no regulator has jurisdiction to oversee financial entities engaged in specific activities, and thus, entity-based designation was necessary to reach some market participants. Commissioner Jackson observed that, for an activities-based approach to succeed, agencies need entity-based supervision powers to detect, supervise, and enforce with respect to potentially risky activities. Furthermore, Professor Kress cautioned that FSOC can only recommend activities-based rules: it may not implement such rules directly, and member agencies might resist adopting activities-based rules at FSOC's urging. Professor Admati observed that market participants could undermine an activities-based approach by recharacterizing or restructuring transactions to escape applicable regulations.

Finally, some panelists proposed reforms to the U.S. regulatory framework to improve activities-based regulation. For example, Ms. Tahyar and Professor Kress agreed that creating a single financial stability regulator—similar to the Australian and other "multi-peaked" regulatory models—would reduce jurisdictional fragmentation and enhance the efficacy of an activities-based approach.

Watch the full video of Panel 1 here.

Panel 2: What is the Role of Firm-Based Regulation?

Panel Description: With a focus on an activities-based approach to financial stability risk monitoring and regulation, what is the role of firm-based financial stability regulation? What tools do regulators have to identify and address financial stability risks in a firm-specific manner?

Speakers:

- Matthew Reed, Chief Counsel, U.S. Office of Financial Research (moderator)
- Dan Schwarcz, Professor of Law, University of Minnesota Law School
- Joanne Medero, Managing Director & Head of the U.S. Public Policy Group, Blackrock
- Kathryn Judge, Professor of Law, Columbia University

Summary:

Some panelists stated that, if designed appropriately, firm-based regulation could meaningfully complement an activities-based approach. For example, Professor Schwarcz asserted that firm-based regulation is critical because a purely activities-based approach, on its own, cannot prevent systemic insolvencies. In Professor Schwarcz's view, activities-based regulation ignores interrelationships among a firm's activities—such as AIG's credit default swaps and securities lending—whereas an entity-based approach is inherently focused on the cumulative impact of all of a firm's activities. Professor Judge added that firm-based regulation could be particularly appropriate where there is the potential for the federal government to provide emergency assistance to individual financial entities.

Some panelists, however, expressed concern about firm-based regulation. Ms. Medero cautioned that firm-based systemic risk regulation is inappropriate for the asset management sector. In particular, Ms. Medero stated that asset management firms are unlikely to propagate systemic risk, and firm-based regulations are therefore ill-suited to the asset management business model. Professor Judge stated that firm-based regulation tends to overemphasize on-balance sheet risks, while activities-based regulation facilitates a broader, more dynamic assessment of systemic risks. Ms. Medero opined that assets under management is a misleading systemic risk indicator for asset management firms. In contrast, she asserted, product- and activities-based regulation is well suited to mitigate systemic risks in the asset management sector.

Finally, panelists offered suggestions for identifying firm-specific financial stability risks. For example, Professor Schwarcz opined that firm-based designations should focus on insurance companies because insurers have propagated systemic risks, and the current state-based insurance regulatory regime is insufficient to address these concerns. In addition, Professors Judge and Schwarcz noted that activities- and entity-based approaches can be mutually reinforcing. Professor Judge commented that, by taking an activities-based approach, regulators may be better positioned to identify firms where risk is concentrated. Conversely, according to Professor Schwarcz, firm-based supervision provides regulators a unique vantage point through which to identify potentially risky activities.

Watch the full video of Panel 2 here.

Panel 3: Do Regulators Have the Data They Need to Promote Financial Stability?

Panel Description: To identify potential risks to our interconnected financial system, regulators need access to extensive financial data on a wide variety of firms and markets. How should financial data be collected, analyzed, and presented to enable regulators to identify and address risks? How can regulators' data collections minimize the burdens on market participants? Can financial technology ("RegTech") provide solutions?

Speakers:

- HV Jagadish, Bernard A Galler Collegiate Professor of Electrical Engineering and Computer Science, University of Michigan (moderator)
- Andreas Lehnert, Director, Division of Financial Stability, Federal Reserve Board of Governors
- Annette Nazareth, Partner, Davis Polk & Wardwell
- Debra Stone, Managing Director & Head of Regulatory Affairs –Corporate, JPMorgan Chase & Co.
- Mark Flood, Research Principal, U.S. Office of Financial Research

Summary:

Many panelists commended improvements in data collection, standardization, and analysis since the financial crisis. For example, Ms. Stone praised OFR's development of the Legal Entity Identifier (LEI) standard and recommended mandatory use of the LEI whenever legal identification is required. Mr. Lehnert commented that regulators are learning to make good policy with improved, but imperfect, data. Professor Jagadish added that his research group has developed techniques for extrapolating non-random missing data from incomplete data sets. Ms. Stone commented that financial institutions support this post-crisis data monitoring effort, as long as the data collections reinforce effective oversight of safety, soundness, and financial stability.

Many of the panelists, however, remarked that more could be done to enhance data usability and reduce regulatory burden. For example, Ms. Nazareth and Ms. Stone urged domestic and international regulators to coordinate effectively and improve the quality and coherence of the data they collect. Ms. Stone suggested developing a "report once" framework to reduce the costs of building infrastructure for multiple reporting formats. Mr. Flood noted that data requirements are state contingent—i.e., regulators' data needs vary depending on the condition of the financial system—so regulators need to consider what data to collect and monitor both during normal times and in crisis. Mr. Lehnert added that regulators need to improve their dynamic capacity, so that they do not build an information collection system that becomes obsolete as the financial sector evolves.

Panelists also suggested specific techniques that regulators should use to leverage existing data. For example, Mr. Flood recommended that regulators enhance their use of network analysis to evaluate how risks spread throughout the system, as in the London Whale episode. In addition, Professor Jagadish commented that where regulators are prohibited from publicly disclosing data by law, they could develop and release synthetic, algorithmically-created data, which would empower the academic community to further analyze financial stability issues.

Watch the full video of Panel 3 here.

Panel 4: What Can We Learn from Financial Regulators Outside the United States?

Panel Description: The U.S. financial system is inextricably connected with financial systems from around the world. How have non-U.S. regulators approached this question of regulating financial activities in an interconnected world? What helpful lessons can we draw from their experiences? How can we ensure that enhanced regulation in one country does not simply result in risks moving to less-regulated jurisdictions?

Speakers

- Susan Baker, Deputy Director, International Planning & Outreach, Office of Complex Financial Institutions, Federal Deposit Insurance Corporation (moderator)
- Tuomas Peltonen, Deputy Head, European Systemic Risk Board Secretariat
- Monica Kowal, VP Compliance, Wealth Management, Insurance, Innovation, Technology and Shared Services, TD Bank Group
- Jacqueline Mesa, Senior Vice President of Global Policy, Futures Industry Association
- David Zaring, Associate Professor of Legal Studies & Business Ethics, University of Pennsylvania

Summary:

Many panelists highlighted global and regional regulatory trends toward activities-based regulation in recent years. For example, Ms. Mesa asserted that stronger preferences for activities-based approaches among domestic and regional regulators spurred international standard-setting bodies IOSCO and the FSB to incorporate these approaches in their nonbank, noninsurer recommendations in 2015. Professor Zaring similarly noted that broader trends favoring activities-based approaches pushed 2017 and 2018 IAIS proposals regarding insurance regulation away from a firm-based focus and toward more holistic measures. More specifically, Ms. Kowal pointed out that the global shift towards activities-based approaches has nudged Canadian policy in that direction.

Panelists concentrated on the importance of cross-jurisdictional cooperation in achieving global regulatory coherence and efficacy. Ms. Mesa praised the efforts of IOSCO and FSB as encouraging examples of such cooperation. Ms. Baker mentioned global efforts to facilitate cross-border resolution as a similar example. Ms. Baker also suggested that despite recent geopolitical fragmentation, significant enthusiasm still exists among financial regulators to learn from and communicate with their peers in other jurisdictions.

With respect to cross-jurisdictional learning, some panelists commented that a jurisdiction's unique regulatory structure might affect the substantive regulatory approach that it chooses to implement. For example, Mr. Peltonen discussed Dutch regulators' recent success in addressing nonbank mortgage lending by imposing a loan-to-value eligibility cap on borrowers; however, he acknowledged that such an approach might not be legally available in other European countries due to limited regulatory toolkits. Ms. Kowal discussed the division of regulatory functions in Canada, where federal authorities have a wide regulatory purview but provincial governments have sole responsibility for regulating capital markets. She opined that this division has generally worked well, but she noted the potential danger that regulatory fragmentation can pose if not aligned to a jurisdiction's norms and historical characteristics. Ms. Kowal further noted that a shared sense of pragmatism alleviates potential frictions between federal and provincial regulators in Canada and that similar shared norms would be helpful in the U.S. state-federal model.

Finally, panelists generally agreed that entity- and activities-based approaches are both useful regulatory tools in most jurisdictions. Mr. Peltonen indicated that neither of the approaches is without flaws, and regulators should consider both. Professor Zaring argued that neither approach is inherently regulatory or deregulatory, and that the substance of regulations is more important than the regulatory approach.

Watch the full video of Panel 4 here.

Panel 5: What are the Emergent (Risky) Properties of the Financial System, and How Might Activities-Based Macroprudential Regulation Address Them?

Panel Description: Traditional microprudential regulation is firm-based, by definition. But macroprudential regulation is not necessarily activities-based, nor is activities-based regulation necessarily macroprudential. This panel will explore the special challenges of applying activities-based regulation to systemic threats and macroprudential monitoring. How can we define and measure activities to support monitoring in a consistent and comparable fashion across the system? When do fine-grained interactions among financial activities generate systemic problems, through concentrated exposures, feedback loops, or operational bottlenecks? How might regulators exploit network models and granular data on financial transactions and positions to understand and respond to emerging systemic problems within an activities-based framework?

Speakers

- Michael Wellman, Lynn A. Conway Collegiate Professor of Computer Science & Engineering, University of Michigan (moderator)
- Jill Cetina, Vice President in Banking Supervision, Federal Reserve Bank of Dallas
- Brian Knight, Director of the Program on Financial Regulation, Mercatus Center, George Mason University
- Serafin Martinez-Jaramillo, Senior Financial Researcher, Financial Stability General Directorate, Banco de México
- Jennifer Neville, Assistant Professor of Computer Science and Statistics, Purdue University

Summary:

At the outset, some panelists identified areas where activities-based regulation could address macroprudential risks. For example, Ms. Cetina focused on what she deemed the "plumbing" of the financial system: payment processing systems, central counterparties, and information technology systems. She raised concerns that problems in these areas could lead to broader systemic disruption, and regulators should therefore enhance their data collection efforts in these areas.

The panelists then explored strategies for improving financial regulators' information-gathering techniques. Mr. Martinez-Jaramillo discussed Mexico's data collection practices, explaining that after the country's financial crisis in 1994, Mexico simplified its financial information gathering process by delegating it entirely to a single agency. According to Mr. Martinez-Jaramillo, this streamlining allowed Mexico to detect and address domestic banks overexposed to foreign parent company liability. Other panelists focused on the need to increase information sharing among domestic and international regulatory authorities. For example, Ms. Cetina remarked that the U.S. has made considerable progress in collecting credit default swap and tri-party repo data, but more needs to be done in the areas of securities lending and bilateral repo.

Panelists explored the role of advanced technologies in financial market data collection. For example, Professor Neville discussed the role that machine learning has played in her research, describing its ability to predict behavior and map trends. She and Professor Wellman both indicated that artificial intelligence is sufficiently advanced that it can identify key areas where risk might spread and can reliably account for complex variables such as firms' levels of strategic aggressiveness. Professor Neville cautioned, however, that regulators making decisions based on machine learning must have a requisite level of understanding of the quality of the inputs into their algorithms. Without this understanding, she warned, regulators run the risk of magnifying systemic risks.

Finally, some panelists reinforced arguments in favor of an activities-based regulatory approach. For example, Mr. Knight pointed to PayPal and Square as examples of firms that defy conventional justifications for an entities-based approach: these nonbank companies offer many bank-like products, yet face far different regulatory treatment. Mr. Knight argued that this divergent treatment leads to inefficiencies because firms must adhere to a patchwork of state regulations. Mr. Knight concluded that an entities-based approach could address these concerns by broadening the entities it covers, but an activities-based approach would be a simpler, more efficient, and forward-looking alternative.

Watch the full video of Panel 5 here.

Panel 6: Where are Our Blind Spots and Gaps?

Panel Description: How should an activities-based approach address potential risks posed by financial activity that takes place outside of regulated financial institutions? How should regulators monitor financial activities performed by nonbanks, including emerging FinTech companies? How should regulators balance the goals of promoting financial stability as well as promoting market-driven innovation? What can we learn from other industries about "known unknowns" and "unknown unknowns"?

Speakers

- Greg Ip, Chief Economics Commentator, Wall Street Journal (moderator)
- H. Rodgin Cohen, Senior Chairman, Sullivan & Cromwell LLP
- Amy Friend, Director, FinRegLab
- Mary Miller, Senior Fellow, Johns Hopkins University's 21st Century Cities Initiative
- Alex Pollock, Distinguished Senior Fellow, Financial Markets, R Street

Panelists identified several blind spots in financial markets that could create systemic risks. For example, Mr. Pollock pointed to Fannie Mae and Freddie Mac as systemically important. Several panelists also discussed fintech as a potential source of systemic risk. For instance, Ms. Friend observed that most fintech companies are relatively small, but they could collectively pose systemic risks if many such companies adopt similar business models. In addition, Mr. Cohen warned that regulatory ring-fencing—where international jurisdictions regulate to protect their own financial institutions—could impede economic growth and create risks. Mr. Cohen also mentioned leveraged lending as a potential source of systemic risk.

Further, panelists identified some nonfinancial risks that might destabilize financial markets. Panelists mentioned conflicts in the Middle East in the 1970s and the September 11th attacks as historical examples of nonfinancial shocks. In addition, some panelists discussed whether climate change poses a systemic risk. Ms. Friend expressed concern that although nonfinancial institutions are a possible blind spot, FSOC is not well-equipped under its current statutory authority to coordinate among nonfinancial regulatory bodies to address these concerns.

Finally, some panelists pointed to domestic politics and the U.S. financial regulatory structure as a potential blind spot. For example, Mr. Pollock suggested that domestic political dysfunction could be a source of systemic risk. In addition, some panelists suggested that politicization of financial regulation might create instabilities. Ms. Friend, for example, suggested that FSOC should be a purely independent agency to insulate FSOC from political influence. Mr. Pollack voiced similar views about OFR, suggesting that it would ideally be independent and apolitical. He posited that political forces could dissuade regulators from addressing certain risks.

Watch the full video of Panel 6 here.

Appendix: Keynote Remarks by FDIC Chairman Jelena McWilliams

I would like to thank the Office of Financial Research and the Michigan Center for Finance, Law, and Policy for the opportunity to speak with you today.

This conference is an excellent opportunity to discuss trends affecting financial services and how regulators should respond to those trends.

The Role of Banks in the Financial System

There is longstanding interest among policymakers and academics in how best to organize the regulation of financial services. The traditional U.S. regulatory model for financial services focuses on the legal entity, whether it is a bank, a broker-dealer, or an insurance company. Another school of thought is that since different legal entities sometimes provide similar financial products, the focus of regulation ought to be the products or activities themselves.

The FDIC – in its deposit insurance, supervision, and resolution functions – is an example of the legal entity model of financial regulation at work. As FDIC Chairman, my focus is to work within the regulatory structure we have and try to make it work as effectively and transparently as possible.

A vibrant banking sector that operates in a safe and sound manner and is fair to consumers is a strong support to a nation's economy. Banks play a number of important functions in our economy. In addition to providing a safe place for consumers to deposit cash and an avenue to access credit, banks also play a unique role with respect to their central role in the payments system. Bank depositors have the power to place and demand money, write checks, and access the payment system, including through wire transfers, all of which provide benefits to the financial system both in normal times and in times of stress. Deposit insurance preserves public confidence in banks' capacity and ability to meet deposit obligations, which in turn contributes to overall financial stability.

Over time, the traditional role of banks has evolved, and continues to evolve today. The financial services sector is always shifting in response to legal and regulatory changes, economic cycles, competition, and technological innovation. Many of these changes have brought great benefits to consumers – the democratization of finance; cheaper, more accessible services; and more efficient markets. At the same time, banking inherently comes with risk, and it's important to monitor what types of risk accompany changes in the industry.

Today, as in the past, developments in financial services force us to consider questions about how the traditional role of banks may evolve. For example, will the rise of non-bank companies providing new and technologically innovative financial products and services drive banking activities out of banks? If so, in what ways? How will the risks in the financial system change if there is a significant migration of activities to the nonbank sector?

The migration of traditional bank activities outside the banking system is not new. In fact, nonbank competition and innovation have always been a part of the financial landscape.

This competition has helped spur evolution in bank product offerings and delivery channels, as well as changes in policy, regulation, and supervision to address new and sometimes unforeseen risks. For example, money market mutual funds, introduced in the 1970s, proliferated in the high interest rate environment in the 1980s and resulted in a migration of cash away from insured savings accounts at banks into money market funds.

In response, legislative and regulatory reforms allowed banks to offer new products – bank money market deposit accounts and negotiable orders of withdrawal – and removed restrictions on interest rates. These changes leveled the competitive playing field for insured deposits, but led to other risks – namely, providing incentives for banks and thrifts to engage in higher-yielding, but risky, lending and investment activities. Today, money market mutual funds – with balances of $2.8 trillion and estimated insured bank deposits at $7.4 trillion – co-exist as important and convenient options for investors and savers.

While new competition always brings evolving opportunities and risks to the financial services landscape, regulators and industry participants need to ask whether this time is really different, given the rapid pace of innovation and the changing tastes and demands of consumers.

In other words, over time, what will it mean that I can get a mortgage while sitting at home in my pajamas? (And that may or may not have happened.) Financing a home purchase with a mortgage has traditionally been a significant life event and a major relationship "touchpoint" for banks with consumers, so how will that change? Similarly, how will the proliferation of alternative payment platforms affect banks' role in the payment system? How will consumers value the relationship with the bank or the payment app? Also, if transactions are out of regulators' purview, how can we ensure that consumers are treated fairly and that sensitive data is secure?

Migration in Mortgage Activity

For some financial activities, migration outside the banking system is happening now. The most prominent example during the post-crisis period has been a substantial migration in mortgage origination and servicing from banks to nonbanks.

As with many banking activities and business lines, banks have long competed with nonbanks for mortgages. Going back to the earliest days of the American mortgage market, privately owned mortgage companies dominated local markets, often funding their loans through life insurance companies or, especially in more urban markets, through mutual savings banks. Indeed, for a time, nationally chartered commercial banks were actually prohibited from providing mortgage loans.[1]

Of course, that has changed, and both the availability of mortgage credit and the composition of the mortgage market have ebbed and flowed over time in response to crises and business cycles, legislative changes, and technology and innovation, among other

[1] The National Bank Act of 1864 prohibited national banks from making loans on real estate. These prohibitions remained in place until 1913. See, e.g, Robertson, Ross M., **The Comptroller and Bank Supervision**, 1995, page 65.

factors. In the last decade, banks have lost significant mortgage market share to nonbanks. For example, in 2009, nonbanks accounted for only 9 percent of the volume of mortgages originated by the top 25 originators, versus 44 percent in 2018. Five of the top 10 mortgage originators are now nonbank institutions, compared to just two in 2009. Additionally, one nonbank originator is now the largest retail originator, after being outside the top 10 in 2009.[2]

While mortgage origination activity has migrated to nonbanks, a portion of that risk remains with banks or could be transmitted back to the banking system through other channels. Bank lending to nonbank financial companies has increased from $56 billion in 2010 (when the data were first collected in the Call Report) to $376 billion in June 2018, a 571 percent increase. While it is uncertain the exact makeup of the obligors for this Call Report line item, supervisory experience has revealed that nonbank mortgage originators do receive funding from bank loans.

A similar migration pattern is evident in mortgage servicing. Nonbanks accounted for 41 percent of mortgage servicing rights held by the top 25 servicers in 2018 versus just 5 percent in 2009. Six of the top 10 mortgage servicers are now nonbanks, compared to just two a decade ago. This trend has been most notable among mortgages guaranteed by Ginnie Mae, where 60 percent of outstanding loans are now serviced by nonbanks.

Implications of Migration for Banks and Regulators

As we look at the migration of activity away from banks, regulators and policymakers should consider the risks and benefits. Part of that process is asking questions. What happens to the systemic risk in the financial system when banking activities migrate to nonbanks? Are prudential banking and market regulators adequately positioned to deal with such shifts? How much exposure do banks have to nonbanks engaged in traditional banking activities?

There also are positive aspects of migration – namely, increased consumer choice, positive consumer experiences, and potential for increased access to new innovations. On the subject of innovation, it's safe to assume that banks will want to keep pace with the new technology and services offered by nonbanks. And, as regulators, we should encourage banks to innovate, especially in ways that can improve the customer experience, lower transaction costs, increase credit availability, and expand access to the banking system.

This last point is particularly important to the FDIC: our latest survey shows that more than 8 million households do not have any relationship with the banking system. Another 24.2 million households are underbanked, meaning they have a bank account but also meet some of their financial services needs outside of the banking system. Innovation and technology may provide inroads to bring these households more into the banking system.

The FDIC is working to establish our own Office of Innovation. We are in the very early stages of scoping out this office and its mission, and we are looking at ways that the FDIC

[2] Based on Second Quarter 2009 and Second Quarter 2018 data from Inside Mortgage Finance Publications, Inc., www.insidemortgagefinance.com.

as a regulator can avoid getting in the way of beneficial innovations and technologies that will help our regulated entities stay competitive.

Innovation can introduce safe and reliable products and services that will provide Americans with more options to meet their financial needs. It is my goal that the FDIC lay the foundation for this next chapter of banking, encouraging innovation that meets consumer demand, promotes healthy and successful banks, and reduces compliance burdens.

Thank you.