Kevin Stiroh: Emerging issues for risk managers

Introductory remarks by Mr Kevin Stiroh, Executive Vice President of the Financial Institution Supervision Group of the Federal Reserve Bank of New York, at the GARP Global Risk Forum Federal Reserve Bank of New York, New York City, 7 November 2019.

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Introduction

Good morning and welcome to the GARP Global Risk Forum. The Federal Reserve Bank of New York has been collaborating with GARP on this forum for a decade and it is always a pleasure to participate. This discussion provides real-time insight into critical issues at the center of the practice of risk management.

A quick scan of today's agenda highlights a number of topics of obvious importance—operational resilience, cyclical aspects of risk management, technology and big data. We are all thinking about these issues, and I look forward to your insights.

I'd like to briefly discuss two topics where I expect risk managers will increase their focus in coming years—climate change and the cultural aspects of digital transformation. Both issues reflect potentially transformative trends for the economy and the financial system, and I believe they will take an increasing share of your bandwidth over the next decade. In both cases, the relevant questions from a supervisors' perspective are: what new risks are introduced? How do firms manage them? And how do supervisors view them?

Before proceeding, I will emphasize that I am speaking for myself and these views do not necessarily reflect those of the Federal Reserve Bank of New York or the Federal Reserve System.

Climate

The U.S. economy has experienced more than $500 billion in direct losses over the last five years due to climate and weather-related events.[1] In addition, climate change has significant consequences for the U.S. economy and financial sector through slowing productivity growth, asset revaluations and sectoral reallocations of business activity.[2]

For these climate-related risks, a new lexicon has emerged. *Physical risk* is the potential for losses as climate-related changes disrupt business operations, destroy capital and interrupt economic activity. *Transition risk* is the potential for losses resulting from a shift toward a lower-carbon economy as policy, consumer sentiment and technological innovations impact the value of certain assets and liabilities. These effects will be felt across business sectors and asset classes, and on the strategies, operations and balance sheets of financial firms.

Risk managers must be aware of these risks and develop the tools needed to identify, monitor and manage them appropriately. Physical and transition risks may manifest through traditional risk stripes such as credit, market, operational, legal and reputational risk, but today's tools are not necessarily well-suited for the unique challenges associated with climate change. Let me mention three of these challenges.

First, climate change is a long-term issue where actions today are likely to have an impact over many decades. This exceeds the typical life span of a bank exposure, as well as the typical

control and planning horizon of a financial institution. Risk management tools, models and scenarios are not designed to capture the long-term nature of climate-related risks.[3] Nonetheless, real impacts are already being felt and we must develop the tools to assess and manage them.

Second, climate change is complex—the impacts are uncertain, non-linear and hard-to-predict. Trusted credit models, for example, may prove less useful if the historical patterns of the frequency and severity of weather-related shocks become a poor guide to the distribution of future losses. Asset prices may move sharply, and unpredictably, as consensus views change and future impacts are priced today. Moreover, transition risks may stem from second-order, indirect effects like the impact on supply chains, sectoral shifts or worker productivity, which are inherently difficult to model and predict.

Third, we face significant data gaps. Climate change is a global phenomenon, but risks should be assessed locally, which requires new data such as asset-specific, geo-spatial data. Borrower-specific analysis requires data, for example, on asset utilization and climate effects for particular industries at particular locations. Such granular data is currently limited and requires significant resources to acquire and process, but greater transparency about the physical location of assets will allow institutions to better assess exposures to at-risk borrowers or to specific geographic risks.

As supervisors, we can consider climate-related risks in terms of both microprudential and macroprudential objectives. To be clear, in my view, supervisors should take a risk management perspective, not a social engineering one. It is beyond our mandate to advocate or provide incentives for a particular transition path. Rather, supervisors should focus on the risks that emerge along the path decided by the public at large and their elected governments. Supervisors can use our tools to ensure financial institutions are prepared for and resilient to all types of relevant risks, including climate-related events.

To do this, we must continue to invest in research to better understand the economic and financial impact of climate-related events. For example, on Friday, the Federal Reserve Bank of San Francisco will host a conference on the economics of climate change. We can also continue to follow closely and learn from the approaches taken by other central banks, including the use of scenario analysis, stress testing and supervisory expectations to encourage institutions to factor climate risk into their risk management practices. Finally, we can seek to strengthen the data and modeling capabilities we need to assess climate-related risks as part of our forward-looking, data-driven supervision.

Given the far-reaching impact of climate risk on the structure of the economy and the financial sector, I am confident that risk managers will respond appropriately and firms will continue to build resilience to all risks. GARP, for example, is exploring this and has recently surveyed its members to better understand professional needs for “sustainability, climate risk, and ESG integration.”[4] I am interested to hear from all of you about how your institutions are developing tools and practices to integrate climate risk into your risk management frameworks.

Innovation and Culture

It is no surprise to this audience that technological innovation, big data, and advanced analytics are transforming financial services. We can debate where we are on the maturity curve and what innovations are most likely to be transformative, but the direction of travel seems clear. I expect the afternoon session on “Technology, Big Data, and the Practice of Risk Management” will address core issues such as new approaches for model risk management in a world of widespread artificial intelligence; the inherent challenge of “explainability” and potential bias in algorithms; the strategic risks from new entrants; and the impact on human capital strategies.

I want to highlight a complementary, but different issue and focus on how firms manage these changes. More broadly, what type of corporate culture is needed to support a successful digital transformation?

Over the past five years, the New York Fed has emphasized the importance of a healthy culture to reduce misconduct risk. In addition, I think there is likely a link between a firm's culture and its ability to adapt to a changing environment, whether it is technological innovation, demographic change, new business models, or climate change. Firms need a culture that allows change and is resilient to these trends.

In discussions of the impact of technology on financial services, for example, one extreme view is that new fintech entrants—either smaller start-ups or big-tech firms—will leverage technology and a customer-centric approach to disrupt the industry and outcompete stagnant incumbents, fundamentally transforming the industrial organization of financial services. An alternative, equally extreme view, is that incumbent financial firms with established customer bases, scale, vast quantities of data, and experience working in a regulated environment will "disrupt themselves" and maintain their central position in finance. The most likely outcome, as is typically the case, is somewhere in the middle, but change seems inevitable.

If all firms face a strategic imperative to innovate and adapt, a relevant question is what types of firm-specific factors will determine success? Clearly, things like business model, technological expertise, and resources will matter. I think that firm culture will also matter.[5] And by culture, I mean the values and shared norms within a group that influence individual behavior, collective decision-making and outcomes.

As firms innovate and transform how financial services are provided, I expect we'll see the value of leadership from senior managers and boards as they outline the strategic case for change and exhibit the critical behaviors that promote it. I expect we'll see the value of innovative environments where employees speak up, both raising new ideas and questioning assumptions. I expect we'll see the value of cognitive diversity as firms tackle complex problems like a digital transformation from multiple perspectives. I expect we'll see the value of agility that facilitates product innovation, reprioritization, constructive partnerships, or the successful integration of financial market specialists and technologists. Finally, I expect we'll see the value of well-crafted incentives where employees are rewarded based on both "what" they do and "how" they do it.

More broadly, I think firms with high levels of "cultural capital" will be more likely to successfully implement a digital transformation in a sustainable, prudent and responsible manner.[6] This is a central question for risk managers and supervisors because the evidence suggests that most large-scale transformations fail.[7] Just like firms, investors and supervisors consider execution risk when assessing bank mergers, I expect more attention will focus on culture and the change management risks associated with innovation and digital transformation.

In my view, the official sector can facilitate this transition. The 2018 guidance on responsible innovation related to anti-money laundering and terrorist financing is a good example.[8] Supervisors can also press on the governance and change management framework to promote effective internal oversight. From our perspective, supervisors also need to be nimble and develop the necessary skills to assess innovation as firms transform.

While a firm's culture is not directly observable, I believe this will prove to be a critical part of any change initiative. Technological progress, innovation, and new models of competition are changing the financial industry and there will undoubtedly be winners and losers. Understanding all of the factors that drive successful transformations will be a critical insight for both risk managers and supervisors.

Conclusions

The financial sector is large, complex and constantly evolving due to a wide range of technological, business, and macro factors. Your job, and ours, is to be vigilant and open-minded in our thinking, constantly questioning our traditional assumptions and scanning the horizon to understand how the risk landscape is changing.

The topics covered at today's conference are some of the most important risks that the industry faces. Climate change and digital transformation are two powerful trends with the potential to fundamentally change financial services. We all need to be forward-looking and proactive in order to promote our ultimate goal of a safe and sound financial system that supports the sustainable provision of financial services and economic growth.

Thank you for your attention.

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3 Mark Carney, Breaking the Tragedy of the Horizon – Climate Change and Financial Stability, September 29, 2015.

4 Climate Risk Management at Financial Firms: Challenges and Opportunities, GARP Risk Institute, May 29, 2019; Climate Risk Management at Financial Firms: A Good Start, but More Work to Do, GARP Risk Institute, May 29, 2019.

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7 Leading Change: Why Transformation Efforts Fail, John P. Kotter, *Harvard Business Review*, January 2007 and How to Beat the Transformation Odds, McKinsey and Company, *Survey*, April 2015.

8 Joint Statement on Innovative Efforts to Combat Money Laundering and Terrorist Financing, Board of Governors of the Federal Reserve System, SR 18–10, December 3, 2018.