A Framework for FinTech

National Economic Council

January 2017

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I. Introduction

Innovations in financial technology (fintech) have the potential to fundamentally change the financial services industry and the wider economy. While still early in its evolution, fintech can, for example, promote financial inclusion, expand access to capital for individuals and small businesses, and more broadly reshape how society interacts with financial services. As fintech continues to evolve, stakeholders in this ecosystem – including government and the private sector – must actively participate in its development to ensure growth that maximizes value for the consumer and for the system in a safe and sustainable manner.

Over the past eight years, this Administration has significantly increased opportunities for entrepreneurs and made the United States one of the most innovation-friendly countries in the world.[1] Examples of this work include establishing the Open Data Initiative, which unlocked over 200,000 government datasets as raw material for entrepreneurial innovation, the America Invent Act, which makes the U.S. patent system more efficient and responsive to innovators, and the Jumpstart Our Business Startups (JOBS) Act of 2012, which helps small businesses and emerging companies raise capital.[2]

Consistent with this broader body of work, this Administration has demonstrated a forward-leaning approach to fintech. Executive agencies across the government – including the Department of Commerce (Commerce), the Small Business Administration (SBA), the Department of State (State), the Department of the Treasury (Treasury), the U.S. Agency for International Development (USAID), and others – have engaged with stakeholders across the industry through events, Requests for Information (RFIs), whitepapers, technical assistance and research, and informal outreach and conversations, to better understand the industry and determine the appropriate role for government in fintech development.

At the White House FinTech Summit in June 2016, Cabinet Secretaries and senior officials from across the Administration engaged with stakeholders about the potential for fintech to help further myriad policy goals, including small business access to capital, financial inclusion and health, domestic growth, and international development. At the same event, industry and other stakeholders conveyed the need for a framework that articulates the U.S. government's perspective on fintech.

This document sets forth Administration policy objectives that reflect widely-shared values and practical expectations for the financial services sector and the U.S. government entities that interact with the sector. It then provides ten overarching principles that constitute a framework policymakers and regulators can use to think about, engage with, and assess the fintech ecosystem in order to meet these policy objectives. Similarly, industry and other stakeholders can use the

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[1] "FACT SHEET: Celebrating President Obama's Top 10 Actions to Advance Entrepreneurship, and Announcing New Steps to Build on These Successes," The White House, Nov. 30, 2016, https://www.whitehouse.gov/the-press-office/2016/11/30/fact-sheet-celebrating-president-obamas-top-10-actions-advance. See also, "FACT SHEET: Harnessing the Possibilities of Science, Technology, and Innovation," The White House, Oct. 13, 2016, https://www.whitehouse.gov/the-press-office/2016/10/13/fact-sheet-harnessing-possibilities-science-technology-and-innovation.
[2] "FACT SHEET: Harnessing the Possibilities of Science, Technology, and Innovation," The White House.

framework to understand how they can contribute to a well-functioning and inclusive financial system, and to examine their products and services against articulated principles.

This whitepaper is both a product of ongoing public-private cooperation and a roadmap for future collaboration. As the fintech ecosystem continues to evolve, this statement of principles should serve as a resource to guide the development of smart, pragmatic, and innovative cross-sector engagement.

II. Background

Technological innovations continue to transform how we work, socialize, share information, and otherwise interact with the people and the world around us. This transformation brings enormous opportunities across many industries, including in financial services. Although innovative technology, such as the ATM and electronic trading, has long been a part of financial services, the combination of a post-financial crisis regulatory environment and an exponential increase in technological innovation – including the rapid proliferation of technologies like smartphones, artificial intelligence, and big data analytics – has drastically impacted the way the financial services industry operates. This context makes it easier for technology start-ups to enter the financial services industry and offer products and services directly to consumers and businesses, including incumbent financial institutions. Additionally, traditional financial institutions are increasingly investing resources in innovation. Policymakers and regulators must consistently endeavor to understand these new technologies in order to support innovation in furtherance of important policy objectives. They must also work collaboratively with fintech innovators to mitigate potential risks.

The term "fintech" has been defined in many ways. This paper uses the term broadly to encompass a wide spectrum of technological innovations which impact a broad range of financial activities, including payments, investment management, capital raising, deposits and lending, insurance, regulatory compliance, and other activities in the financial services space. These innovations include, for example, mobile payment solutions for consumers and merchants, online marketplace lending, algorithmic savings and investment tools, virtual currency, biometric digital customer identification and authentication, and automated mid- and back-office enterprise functions, such as the use of algorithms, big data, artificial intelligence, and link analytics.

The United States remains the global leader in fintech as measured by total investments.[3] However, the U.S. leadership position in fintech should not be taken for granted. The U.S. government should continue to develop a policy strategy that helps advance the sector, achieve other policy outcomes where financial services play an integral role, protect consumers, and

[3] See e.g., "Recent Trends in U.S. Services Trade: 2016 Annual Report," The United States International Trade Commission, Oct. 2016, at 72, https://www.usitc.gov/publications/332/pub4643.pdf; "Global Fintech Investment Growth Continues in 2016 Driven by Europe and Asia, Accenture Study Finds," Accenture, Apr. 13, 2016, https://newsroom.accenture.com/news/global-fintech-investment-growth-continues-in-2016-driven-by-europe-and-asia-accenture-study-finds.htm.

maintain a robust competitive advantage in the technology and financial services sectors to promote broad-based economic growth at home and abroad.

III. Policy Objectives for Financial Services

The U.S. government and the private sector should work together to encourage innovation that has the potential to yield greater public benefit across the economy; supporting smart fintech growth is one way to do so.

This section sets forth policy objectives for which financial services play an integral role.

Foster Positive Financial Services Innovation and Entrepreneurship

This Administration committed significant resources to promote innovation and entrepreneurship as pillars of economic prosperity at home and abroad. At the 2016 Global Entrepreneurship Summit, President Obama articulated the benefits of innovation and entrepreneurship to society as advancing discovery, learning, and economic growth. He described the entrepreneurial spirit as "[t]hat ability to turn an idea into reality – a new venture, a small business – that creates good-paying jobs, that puts rising economies on the path to prosperity, and empowers people to come together and tackle our most pressing global problems, from climate change to poverty."[4] Fintech has the potential to be a clear manifestation of that entrepreneurial spirit.

The U.S. government, therefore, maintains a forward-leaning posture to promoting entrepreneurship and responsible innovation in financial services. Departments, agencies, and independent regulators have used a variety of tools to promote fintech innovation, including the Office of the Comptroller of the Currency's (OCC) Responsible Innovation initiative, the Consumer Financial Protection Bureau's (CFPB) Project Catalyst, the Securities and Exchange Commission's (SEC) Fintech Working Group, Commerce's Open for Innovation events, and Treasury and USAID's Financial Inclusion Forums. In addition, Treasury convened leading technology companies and hosted the first-ever finance Datapalooza with more than 100 representatives of fintech firms and financial services companies, and co-sponsored the MyMoneyAppUp Challenge – one of the first federally-sponsored challenge competitions – to encourage the public to develop and pitch concepts for new mobile apps geared to helping consumers make informed financial decisions and improve their financial health. Treasury also established the Financial Empowerment Innovation Fund in 2014 to support the development and evaluation of new strategies to expand access to financial services and improve financial decision-making skills. These examples represent just a few of the many ways that federal agencies have worked to understand, promote, and harness the potential of fintech to benefit consumers, protect the financial system, and strengthen the economy.

[4] "Remarks by the President at Global Entrepreneurship Summit and Conversation with Mark Zuckerberg and Entrepreneurs," The White House, https://www.whitehouse.gov/the-press-office/2016/06/25/remarks-president-global-entrepreneurship-summit-and-conversation-mark.

This Administration is proud of the hard work undertaken by federal agencies to support innovation and engage with the fintech industry, while also recognizing that there is more work to do. Policymakers and regulators should continue engaging with the private sector to foster innovation in fintech while protecting consumers, businesses, and the financial system.

Promote Safe, Affordable, and Fair Access to Capital

Access to safe and affordable capital enables individuals and businesses to assert greater control over their financial affairs and supports economic growth. Nonetheless, such access remains a challenge for many creditworthy individuals and businesses. The difference between responsible capital sought and capital extended can prevent important investments that could contribute significantly to economic opportunity, financial security, and growth. Small business access to capital is a prime example. Despite serving as a critical part of the U.S. economy, small businesses generally have limited access to capital and other vital resources that help entrepreneurs grow their businesses. Recent research suggests that more than 70% of small businesses seek loans of less than $250,000, but banks, despite increased small business lending since the financial crisis, remain hesitant to lend this credit.[5] Similarly, creditworthy individual borrowers may have trouble accessing the affordable credit they need to buy a home or make other important investments. Even in those instances where businesses or consumers are able to access capital, they may need help managing their money in a way that helps ensure financial security.

The financial services industry, including fintech, can play an important role in serving creditworthy borrowers and businesses in need of capital. Marketplace lenders, crowdfunding platforms,[6] and other innovations can improve access to safe, affordable, and fair capital to help individuals and small businesses take control of their finances while supporting sustainable economic growth. This Administration recognizes the importance of using innovative platforms to provide access to capital while also ensuring adequate protections. For example, in 2016, Treasury published a whitepaper entitled *Opportunities and Challenges in Online Marketplace Lending*. The whitepaper was the product of significant engagement with the private sector. It recognized the potential for marketplace lenders to expand access to capital and proposed six recommendations to public and private sector participants for providing such access safely.

Innovators and government should continue working together to ensure that America's entrepreneurs, small businesses, and families have safe and sustainable access to capital.

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[5] Karen Mills and Brayden McCarthy, *The State of Small Business Lending: Innovation and Technology and the Implications for Regulation*, Harvard Business School Working Paper Series, Dec. 14, 2016, at 12, 24, http://www.hbs.edu/faculty/Publication%20Files/17-042_30393d52-3c61-41cb-a78a-ebbe3e040e55.pdf.
[6] "The American Jobs Act: Fueling Innovation and Entrepreneurship," The White House, Sept. 9, 2011, https://www.whitehouse.gov/blog/2011/09/09/american-jobs-act-fueling-innovation-and-entrepreneurship.

Strengthen Financial Inclusion & Health in the United States and Abroad

According to the 2015 Federal Deposit Insurance Corporation (FDIC) National Survey of Unbanked and Underbanked Households, approximately nine million households (or seven percent) in the United States do not have any bank account (unbanked),[7] while another 24.4 million (19.9 percent) have a bank account but still rely on alternative financial services like payday lending (underbanked).[8] Some of these alternative providers can be extremely costly, and even predatory, charging consumers exorbitant fees just to access their own money. These costs have a disproportionate impact on lower and middle-income individuals and families.[9] In developing countries, lack of access to financial services is even more severe. According to the World Bank, an estimated two billion adults are unbanked worldwide.[10]

One important means of international financial inclusion and economic development is cross-border payments (remittances) from individuals residing in developed countries to those in developing countries. According to the World Bank, such remittances totaled nearly $432 billion in 2015.[11] Technological innovation for remittances can help ensure faster delivery of money at a lower cost. It also can help to authenticate transactions, ensure that money transacts safely between the intended parties, and help detect, disrupt, and prevent illicit funds from traveling through the global financial system. Beyond remittances, innovation in financial services can help bring efficiency and transparency to financing for development projects, and help budding entrepreneurs build and grow businesses.

Moving money across borders can be a complicated and expensive process, especially when stakeholders perceive the dual objectives of financial inclusion and national security to be at odds. Rather, financial inclusion and national security objectives are mutually reinforcing, as both require including more people in the regulated financial sector, while preventing illicit activity. Financial services providers and government authorities can work together to use technology to support these complementary goals.

In both developing and developed countries, technology is making it easier for people to access the financial system and take control of their money. Despite some important progress, however, improved access to the formal financial system by itself is not sufficient. Consumers also need tools to help manage their finances and improve their financial health. Whether storing money and transacting safely, paying off student debt while managing other expenses, preparing to purchase a home, saving for retirement, or managing cash flow, financial health impacts every demographic.

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[7] "2015 FDIC National Survey of Unbanked and Underbanked Households," Federal Deposit Insurance Corporation, updated Oct. 21, 2016, https://www.fdic.gov/householdsurvey/.

[8] *Id*.

[9] "Financial Inclusion in the United States," The White House Council of Economic Advisers, June 2016, at 2, https://www.whitehouse.gov/sites/default/files/docs/20160610_financial_inclusion_cea_issue_brief.pdf.

[10] Financial Inclusion Overview, The World Bank, updated Oct. 2, 2016, http://www.worldbank.org/en/topic/financialinclusion/overview.

[11] "Remittances to Developing Countries Edge Up Slightly in 2015," The World Bank, Apr. 13, 2016, http://www.worldbank.org/en/news/press-release/2016/04/13/remittances-to-developing-countries-edge-up-slightly-in-2015.

The U.S. government can play a critical role in fostering innovations to improve and safely expand financial services around the globe. Similarly, the financial services sector, including fintech, has a vital role to play in increasing financial inclusion and health.

Address Financial Stability Risks

New innovations in financial services have the potential to benefit the financial system by increasing transparency and reducing costs. However, there are also risks associated with new and untested technologies, as well as the use of existing technologies for new purposes. If left unmanaged, these risks could pose harm to the wider financial system. As the financial crisis demonstrated, systemic financial risks may arise in unexpected ways. While fintech represents only a small part of the wider financial services sector at present, policymakers, regulators, and industry should collaborate to identify and mitigate potential systemic risks as the industry grows. Part of that collaboration might include using new innovations to assist in risk management and regulatory functions. Nearly a decade after the worst financial crisis since the Great Depression, we must remain steadfast in our commitment to financial stability. The post-crisis environment coupled with the pace of innovation represents a unique opportunity to bring new tools and a new spirit of cross-sector collaboration to bear on this objective.

Further a 21st Century Financial Regulatory Framework

As the financial sector changes, policymakers and regulators must seek to understand the different benefits of and risks posed by fintech innovations. By building upon this Administration's public-private sector engagement, policymakers and regulators can do even more to enhance collaboration.

First, as policymakers and regulators engage with the fintech ecosystem, they should continue to rely on data-driven analysis to inform their work. For example, reflecting the Administration's commitment to sustained engagement, Treasury created an interagency working group on marketplace lending to share information, engage with industry participants and public interest groups, and evaluate where additional regulatory clarity could protect borrowers and investors. All relevant regulatory agencies participate with the recognition that regulatory clarity and consistency are critical to supporting a safe and innovative modern financial regulatory framework.

Second, policymakers and regulators should endeavor to develop and use tools that help them maintain flexibility as they engage with a rapidly changing industry. Tools like Treasury's RFI on marketplace lending, and the CFPB's Project Catalyst and No-Action Letter policy are good examples.

Third, policymakers and regulators should look across borders and levels of government for examples of how others are engaging with the fintech industry. In particular, the United Kingdom has developed an innovative policy strategy to improve the country's competitiveness as a global destination for fintech.[12] Additionally, Singapore established a fintech office within the Monetary Authority of Singapore — Singapore's central bank and financial regulatory authority — to foster fintech innovation and make Singapore an international hub for fintech.[13] While every practice will not fit every jurisdiction, sharing ideas and best practices can promote policy and regulatory harmonization, and help advance safe innovation worldwide.

Fintech also has a growing role in the policymaking and regulatory space, including by helping to strengthen the existing policy and regulatory architecture. The technology developed by the fintech sector has the potential to help both the private and public sectors monitor compliance with existing laws and regulations. Additionally, technology also might help policymakers and regulators think differently about the most efficient and effective ways to achieve desired policy and regulatory outcomes. It must also, however, include appropriate safeguards to protect consumers, institutions, and the financial system, as intended by existing laws and regulations. Policymakers and regulators should endeavor to work closely and openly with fintech innovators to think creatively about ways to achieve compliance goals.

Maintain National Competitiveness

A robust financial system is integral to the economy because it enables the fundamental functions of economic activity, including connecting borrowers with savers, facilitating investments, processing payments, and the safekeeping of financial assets.[14] Moreover, the financial services industry facilitates and finances goods and services for the wider economy, supporting broader economic growth.[15]

In order for the U.S. financial system to remain competitive in the global economy, the United States must continue to prioritize consumer protection, safety, and soundness, while also continuing to lead in innovation. Such leadership requires fostering innovation in financial services, whether from incumbent institutions or fintech start-ups, while also protecting consumers and being mindful of other potential risks. It also includes supporting U.S.-based fintech companies in exporting their products and services, actively contributing to cross-border coordination efforts, and providing a strong, reliable environment for investment. Finally, maintaining our competitive advantage requires that we remain focused on our workforce. The growth of fintech will undoubtedly impact employees of the financial services sector in much the same way technological innovation has impacted other sectors of the economy. As fintech continues to develop, all stakeholders must be mindful of how we use this innovation to maintain

[12] "UK FinTech on the cutting edge: An evaluation of the international FinTech sector," Treasury of the United Kingdom and Ernst & Young, 2016, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/502995/UK_FinTech_-_On_the_cutting_edge_-_Full_Report.pdf.

[13] "New FinTech Office: A One-Stop Platform to Promote Singapore as a FinTech Hub," Monetary Authority of Singapore, Apr. 1, 2016, http://www.mas.gov.sg/News-and-Publications/Media-Releases/2016/New-FinTech-Office.aspx. See also the U.S. Government's strategic framework for economic engagement with the Association of Southeast Asian Nations (ASEAN) and the ASEAN Member States, including a Memorandum of Understanding that promotes fintech innovation. U.S. ASEAN Connect, https://www.usaid.gov/asia-regional/fact-sheets/us-asean-connect.

[14] See generally, The 2017 Economic Report of the President, The White House, Dec. 2016, at 349-421, https://www.whitehouse.gov/sites/default/files/docs/2017_economic_report_of_president.pdf.

[15] *Id*.

our leadership position in the world, which includes taking into account the impacts on our workforce.

IV. Statement of Principles

This statement of principles provides a framework for stakeholders in the fintech ecosystem to assess their role in contributing to the policy objectives outlined above. Further, these principles represent practical and actionable propositions to help the fintech ecosystem contribute to a well-functioning and inclusive financial system and to the economy as a whole.

1. **Think Broadly About the Financial Ecosystem**: Our economic well-being and national competitiveness require a safe, robust, and well-functioning financial services sector. To fortify and maintain such a sector, stakeholders must think broadly about the financial ecosystem and their role in it. The ecosystem has changed drastically in the years since the financial crisis. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 was the most sweeping set of financial reforms since the Great Depression. When coupled with the increasing pace of technological advancement, the change in financial services, like many industries, is undeniable. Fintech impacts the way we approach, deliver, and consume financial services. The conversation about fintech has evolved from one that pitted incumbent institutions against disruptors, to one that accepts the symbiotic relationship between the two, and stakeholders will continue refining the way society frames fintech and the changing nature of financial services. Therefore, incumbent institutions and new entrants alike should think broadly about this dynamic landscape as they work to ensure that their offerings add value for consumers, investors, and markets, and do so in a manner that is safe, transparent, and sustainable. Similarly, government actors should view their role as helping to create a thriving, sustainable financial services sector that includes new innovations and helps further other policy objectives.

2. **Start with the Consumer in Mind**: As the fintech industry continues to grow and evolve, fintech companies must put the consumer – including both individuals and institutional customers – first by seeking to provide products and services that are safe, transparent, and user-friendly. These products and services also must endeavor to enhance consumer choice and expand access to financial services. First, post-crisis financial reforms underscored the importance of consumer protection for both consumers and the market. Therefore, consumer protection should be a primary and motivating concern for products and services offered by fintech companies. Fintech companies should build products and services that take into account full compliance with consumer protection (and all relevant) laws and regulations from the outset. Further, they should start with and maintain robust compliance systems to ensure that, as they grow, consumer protection develops as a natural part of their products' DNA. This thinking also should go beyond mere compliance to help consumers build warranted trust in their financial services providers. Fintech offerings should be built to maximize consumers' understanding of the product or service, and to enhance consumer choice. While fintech companies often seek to add value by disintermediating or disrupting traditional financial services, this goal also might be achieved by appropriately partnering with incumbent

institutions or with each other. Products and services that are safe, transparent, user-friendly, and enhance choice will help ensure that consumers – whether individuals or institutions – derive maximum value.

3. **Promote Safe Financial Inclusion and Financial Health**: Fintech products and services should promote financial inclusion and financial health for consumers. Access to the financial system is insufficient as a stand-alone objective, especially if that access means that consumers face an increased risk of financial harm. Rather, increasing access to the financial system must be done safely so as to enhance overall financial health. Technologically-enabled products and services have the ability to provide broader access to basic financial services, expand access to credit to responsible borrowers, help consumers manage wealth, improve student loan financing, facilitate remittance payments, assist consumers in financial decision-making, and much more. The potential impact that fintech can have on the lives of financial consumers, including the underserved, is hard to overstate. Stakeholders in the fintech industry should aim to develop products and services that safely increase access to financial services and improve financial health. Likewise, government stakeholders should endeavor to work with the private sector to help accelerate the development of affordable and safe financial products at scale, both domestically and internationally.

4. **Recognize and Overcome Potential Technological Bias**: Big data, artificial intelligence, advanced analytics, and related technologies have the potential to create enormous new opportunities, including in financial services. The increasing ability to test assumptions and make data-driven decisions could allow financial services companies to expand financial services more equitably and efficiently. While fintech has the potential to make financial services more accessible to underserved populations and to increase efficiency in the sector, stakeholders should not assume that fintech companies and their underlying technology will do so in an unbiased way. Despite the potential for increased objectivity, algorithmic systems still rely on inputs and processes informed by the people who design them. Moreover, the information they create still may be subject to human interpretations. Therefore, the underlying algorithms and the decisions they prompt could contain systemic, historical, and cultural biases that potentially may impact consumers unfairly and inequitably. To ensure that fintech truly is a means to increasing safe and fair access to financial products and services, rather than a vehicle that perpetuates income disparities or racial and gender inequality, innovators should be proactive in assessing the quality of their data and the potential for bias or negative externalities in their development and use of technology. Similarly, government should partner with the private sector to develop and evaluate innovations that have the potential to mitigate bias in the provision of financial services. This collaboration could ensure fair access to the best available products and services to expand economic opportunity.[16]

5. **Maximize Transparency**: The importance of providing transparent financial products and services is one of the critical lessons learned from the 2008 financial crisis. When financial products became so complex and services so confusing that consumers, institutions, and regulators struggled to understand their structure or implications, the consequences were disastrous. As fintech companies invent and reinvent financial tools, they should seek to do

[16] See generally, "Big Risks, Big Opportunities: the Intersection of Big Data and Civil Rights," The White House, May 4, 2016, https://www.whitehouse.gov/blog/2016/05/04/big-risks-big-opportunities-intersection-big-data-and-civil-rights.

so in a way that is simple, clear, and transparent. Transparency should occur on several levels. Fintech companies must promote transparency with their customers. Transparency also is important when engaging with regulators or other appropriate authorities. Regulators and government officials should likewise be appropriately transparent about their practices and objectives, as it is important for policymakers and regulators to help industry better understand government's perspective. Policymakers and regulators should build on recent work and continue using tools like whitepapers, conferences and events, office hours, regulatory guidance, and other creative methods to educate stakeholders and promote transparency with the fintech industry. In addition to its general importance, transparency remains at the heart of balancing the mutually reinforcing goals of expanding access to the financial system and protecting the system from abuse. By performing appropriate customer due diligence and monitoring activity, financial services companies will be better able to provide tailored, customer-centric, and safe financial services while identifying potentially illicit actors and activities that could undermine the integrity of the financial system. Working together to promote transparency, the public and private sectors can have enormous impact on the efficiency and security of the financial system.

6. **Strive for Interoperability and Harmonize Technical Standards**: As financial services continue to disintermediate and consumers seek increasingly personalized and flexible financial solutions, fintech companies and financial institutions should embed a presumption of interoperability and harmonized (or harmonizable) technical standards in their products and services. Doing so can reduce friction for consumers, helping the underserved and well-served alike connect different functions in their financial life. Interoperability and harmonization also can help industry entities coalesce around best practices and models that promote broad, shared objectives.[17] Additionally, industry and government authorities should be sufficiently engaged with one another as technologies and standards evolve, and be prepared to work collaboratively within their sectors and across sectors to ensure that standards foster innovation while mitigating potential risks.

7. **Build in Cybersecurity, Data Security, and Privacy Protections from the Start**: Given the proliferation of cybersecurity threats and the increasingly important role of big data, fintech companies must incorporate robust cybersecurity, data security, and privacy safeguards at the beginning of, and throughout, product and service lifecycles. As more entities gain access to larger amounts of personal and proprietary data, efforts to gain improper access to this information will increase and may become easier absent appropriate safeguards. Protecting consumer and institutional data, while also protecting the integrity of the financial services industry infrastructure, must be priorities for fintech companies large and small. To date, the financial services industry has set an example for other industries, working within industry and with government to proactively address cybersecurity, data security, and privacy concerns. Fintech companies should continue this important work and seek to improve upon this foundation.

8. **Increase Efficiency and Effectiveness in Financial Infrastructure**: Although consumer-facing innovations receive the majority of the current public attention around fintech, enterprise solutions and infrastructure innovations are equally critical to the evolution of

[17] Of course, any such cooperation assumes compliance with all existing legal and regulatory obligations.

financial services, as technology has made it easier for firms to reduce the costs of managing their operations. As enterprise and institutional innovations continue to develop, companies should keep in mind the goals of increasing efficiency, structural integrity and safety, transparency, access, and compliance. Whether faster payments, auditable processes, or compliance systems, these innovations have tremendous potential to positively impact the financial services sector.

9. **Protect Financial Stability**: Although the fintech sector is still relatively small by comparison to the broader financial services industry, fintech companies must be mindful of, and forward-thinking about, the potential risks financial technology could pose for financial stability. While new and untested innovations may increase efficiency and have economic benefits, they potentially could pose risks to the existing financial infrastructure and be detrimental to financial stability if their risks are not understood and proactively managed. Therefore, it remains critical for fintech companies to work with incumbent institutions, policymakers, and regulators to identify and mitigate potential risks to financial stability.

10. **Continue and Strengthen Cross-Sector Engagement**: Fintech companies, financial institutions, and government authorities should consistently engage with one another. Whether the company is a new entrant or a mature institution, it must seek to develop consistent and ongoing relationships with policymakers and regulators. Likewise, government authorities should seek to learn about product and industry developments directly from participants before problems emerge. Such engagement helps identify areas for collaboration and reduce regulatory uncertainty. Additionally, close collaboration potentially could accelerate innovation and commercialization by surfacing issues sooner or highlighting problems awaiting technological solutions. Such engagement has the potential to add value for consumers, industry, and the broader economy.

V. Conclusion

Fintech has tremendous potential to revolutionize access to financial services, improve the functioning of the financial system, and promote economic growth. For fintech to achieve its full potential, however, stakeholders must learn from the experiences of the financial crisis and collaborate to orient products and services toward broader objectives that benefit consumers, markets, and the economy. These principles should serve as a guide for such sustained engagement from all stakeholders.