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Basel Committee on Banking Supervision  
c/o Bank for International Settlements  
Centralbahnplatz 4051  
Basel  
Switzerland

**RE: GFMA/TCH Response to BCBS Fintech Consultative Document**

The Global Financial Markets Association and The Clearing House (the Associations)<sup>1</sup> are pleased to provide these comments in response to the Basel Committee’s consultation *Sound Practices: Implications of fintech developments for banks and bank supervisors*.<sup>2</sup> The Associations agree with the Basel Committee that the pace of technological change continually accelerates, bringing both new potential benefits and risks into the banking system.

The consultation addresses many areas where regulators and market participants should focus. This consultation reflects the perspective of supervisors in different jurisdictions in viewing fintech developments as an “emerging risk” for banks and the overall financial systems in those jurisdictions, as well as the perspective that supervisory responses to emerging risks must be balanced against the present and potential benefits provided by these developments. We believe this consultation and similar requests for information by supervisors in local jurisdictions provide an extremely important tool for supervisors to gather information and perspectives on these risks and benefits.

In addition, supervisors have a foundational need to modernize their staffing and training models to better understand the holistic developments in banking and financial services—including the rapid technological

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<sup>1</sup> The Global Financial Markets Association (GFMA) brings together three of the world’s leading financial trade associations to address the increasingly important global regulatory agenda and to promote coordinated advocacy efforts. The Association for Financial Markets in Europe (AFME) in London, Brussels and Frankfurt, the Asia Securities Industry & Financial Markets Association (ASIFMA) in Hong Kong and the Securities Industry and Financial Markets Association (SIFMA) in New York and Washington are, respectively, the European, Asian and North American members of GFMA. For more information, visit <http://www.gfma.org>.

The Clearing House is a banking association and payments company that is owned by the largest commercial banks and dates back to 1853. The Clearing House Association L.L.C. is a nonpartisan organization that engages in research, analysis, advocacy and litigation focused on financial regulation that supports a safe, sound and competitive banking system. Its affiliate, The Clearing House Payments Company L.L.C., owns and operates core payments system infrastructure in the United States and is currently working to modernize that infrastructure by building a new, ubiquitous, real-time payment system. The Payments Company is the only private-sector ACH and wire operator in the United States, clearing and settling nearly \$2 trillion in U.S. dollar payments each day, representing half of all commercial ACH and wire volume.

<sup>2</sup> <http://www.bis.org/bcbs/publ/d415.pdf>

changes occurring outside of the banking system. We believe that it is important for supervisors to have a fulsome understanding of the ‘totality of the forces’ at play in their assessment of these emerging risks.

Moreover, unless supervisors seek out specialized talent that can truly assess and understand the risks and benefits of new technologies or new financial product networks and ecosystems—such as public cloud and distributed ledger technologies—then policy, licensing, and supervision and enforcement decisions will not be appropriately tailored to the risks and benefits, and in fact may not mitigate those risks at all.

Building on these foundational needs, this letter first highlights several general principles to guide regulators’ approach to financial innovation, and following that, addresses the consultation’s specific recommendations. As explained below, regulators should be attuned to the latest fintech innovations and, using that knowledge, strive to create a technology-agnostic regulatory framework that encourages innovation balanced with prudent risk management. We also believe that regulators should focus on the activity level, not the entity level, such that a fintech firm and an incumbent would be subject to the same regulation for the same activity, and the regulation would change depending on the activity undertaken and the risk to the consumer and system. They should then address any gaps and new risks posed by fintech innovation through technology-agnostic measures made with the benefit of public comment.

#### *Regulators Should Study, Promote and Support Continued Innovation*

Innovation has been a core driver of success in the banking industry for decades—from the implementation of computerized records, to the invention and broad use of automated teller machines, as well as the development of sophisticated mobile applications by banks—technology has been used by banks to improve their customers’ experiences, lower their costs, and enhance their responsiveness to regulators and supervisors. New technology promises to augment these benefits, and will be aided by a regulatory approach that does not limit the capabilities of the technology, but rather shapes its adoption and use by banks to ensure that safety and soundness and consumer protection needs are met. Indeed, in many cases technology is focused on achieving those two objectives, which we believe the regulatory environment should encourage.

#### *Regulators Should Take Advantage of the Flexibility of Existing Regulatory Frameworks*

We recommend that the baseline assumption for regulators regarding fintech and emerging technologies should be that they can operate within existing regulatory frameworks, to the extent that these activities fall within the scope of the banks’ charters. Many fintech initiatives currently being explored by the industry are not fundamentally different from current market activity and firm operations, but are best understood as the addition of new technology to augment existing processes, which are governed by a corresponding regulatory framework.

We believe that using this approach to derive the regulatory response to emerging technologies is consistent with the historical experience of the industry in recent decades. Existing regulations have accommodated—and in some cases augmented—major transformations of industry technology and the automation of many industry processes. The implementation of call centers and the shift to digital record-keeping are some examples of technological changes that have been accommodated by targeted rule changes.<sup>3</sup> This approach can fully succeed only when regulators review their existing frameworks to ensure they are technology-agnostic.

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<sup>3</sup> See [https://www.theclearinghouse.org/-/media/action%20line/documents/volume%20vii/20161201\\_tch\\_ey\\_fintech\\_paper.pdf](https://www.theclearinghouse.org/-/media/action%20line/documents/volume%20vii/20161201_tch_ey_fintech_paper.pdf) at 26.

While fintech is offering a range of new capabilities and products to firms, it should be understood in the context of a long pattern of the adoption of technologies by banks and securities firms. The last 30 years have seen the adoption of dramatically new market structures, new technology-supported trading models, new ways of interacting with retail clients through the internet, and new products and services built on these innovations. Like these past changes, many of the today's emerging technologies and key fintech innovations will normalize and become business as usual for banks and securities firms. Many issues that firms will face as they adopt new technologies can be resolved through contracts and private law.

### *Regulation Should Be Technology-Agnostic*

Supervisors should ensure that any existing, new and/or modified regulations are technology-agnostic. Regulators are looking at fintech and its applications in markets at a time when the technology and the technology providers that support it are developing rapidly. Given the ongoing changes in the technology landscape, regulation needs to be designed to allow for substitutability of technology, so regulations do not lock in any one provider or technology configuration. Regulation should not result in the market being locked into vertically integrated technology monopolies. This will maximize the ability of firms to innovate in a safe and sound manner, and help ensure that regulations are 'future proof.'

Ensuring a technology-agnostic regulatory framework requires supervisors to understand new financial innovation developments and review their existing regulations for consistency with those developments. Over time, regulations that seemed technology-agnostic when created may turn out to hamper adoption of technologies that were not believed possible at that time. For example, in the securities context, both books and records-keeping obligations and physical control requirements were presumed technologically neutral when adopted decades ago but now may delay adoption of digital ledger technology that might track securities ownership more securely and efficiently. Supervisors should be alert for such opportunities to revise existing regulations. For example, amendments to U.S. Commodity Futures Trading Commission (CFTC) Rule 1.31 removed the specific Write Once, Read Many (WORM) requirements for data storage in favor of a technology-agnostic approach.<sup>4</sup>

The European Banking Authority's (EBA) *Consultation Paper on Draft Recommendations on Cloud Outsourcing* takes a similar approach, proposing a risk based approach to Cloud, which allows for a technology-neutral approach to its guidance and future proofing for institutions.<sup>5</sup>

Of course, at some time in the future, additional regulatory focus may be needed in a particular area on the basis of, for example, consumer protection risks raised by a specific financial technology (e.g., additional privacy and cybersecurity concerns created by data aggregators). Our point is that any regulation should target the marginal risk created by the technology, not pick the winners and the losers or slow future innovation by targeting the technology itself.

Regulators should be open to changing rules to recognize the capabilities of new technologies. For example, the U.S. state of Delaware has launched a process to update corporate law to recognize the unique features of blockchain technology, including amending Delaware's General Corporation Law to

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<sup>4</sup> <http://www.cftc.gov/idc/groups/public/@lrfederalregister/documents/file/2017-01148a.pdf>

<sup>5</sup> <https://www.eba.europa.eu/documents/10180/1848359/Draft+Recommendation+on+outsourcing+to+Cloud+Service+%28EBA-CP-2017-06%29.pdf>

allow issuance of distributed ledger shares.<sup>6</sup> Similarly, the adoption of smart contracts will provide regulators with an opportunity to revisit rules around segregation of duties to reflect the new capabilities of this technology.

It is also important for regulators to recognize areas where a lack of clear guidance is holding back innovation or the adoption of new technologies. As firms look to implement technologies whose scope and capabilities were not foreseen in earlier regulations (such as artificial intelligence), guidance and a willingness to revisit existing rules as necessary will help support innovation and remove impediments to the use of new technologies. Similar issues will also be necessary as banks look to adopt cloud technology. Industry dialogue and close engagement between regulators and banks will help identify these areas where regulatory uncertainty is a barrier to adoption.

When adopting regulations to focus on increased risks created by financial innovation, the regulations should target the risks rather than a specific type of entity adopting the new technology. Any regulation should reflect whether the activity is low or high risk. The type of entity undertaking the activity, or the status of the entity as subject to prudential regulation and supervision, should not determine the regulation. In this way, a fintech firm and an incumbent would be subject to the same regulation for the same activity (regardless of the specific technology used), and the regulation would change depending on the activity undertaken and the risk to the consumer and system.

Similarly, regulators and supervisors should focus on overseeing specific market activities, not limiting their oversight by the types of entities that carry them out. As technology developments allow firms other than traditionally structured and chartered banks and brokerage firms to engage in financial services activities (such as consumer lending), regulators should continue to oversee these activities regardless of the type of entity that carries them out.

In this regard, we support recent policymakers' statements, such as from the European Commission that policies should be "*[t]echnology-neutral to ensure that the same activity is subject to the same regulation irrespective of the way the service is delivered, so that innovation is enabled and level-playing field preserved*"; from the European Securities and Markets Authority that "*[w]hat should be regulated is the provision of a service or an activity independent of the form of the firm providing this service or activity. The aim should be to regulate and supervise entities providing the same type of service on an equal foot*"; and from the European Parliament that regulatory approaches should follow this principle, among others: "*Same services and same risks: the same rules should apply, regardless of the type of legal entity concerned or its location in the Union; [and] Technology neutrality*".<sup>789</sup>

The application of existing requirements to new entrants—irrespective of business model, type of entity or type of license—should ensure that the risks of a new entrant's business activities are fully addressed and monitored. The idea of 'same service, same rules' should be applied to secure consistent standards and fair competition. This is particularly important for standards on cybersecurity, AML/CFT, data protection and consumer protection. Regulatory arbitrage must be avoided and the development of a level playing field is essential. Regulators should monitor the evolving landscape of firms conducting financial services activities, with an aim to identify potential gaps in each regulator's jurisdiction.

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<sup>6</sup> <https://corpgov.law.harvard.edu/2017/03/16/delaware-blockchain-initiative-transforming-the-foundational-infrastructure-of-corporate-finance/>

<sup>7</sup> [https://ec.europa.eu/info/sites/info/files/2017-fintech-consultation-document\\_en\\_0.pdf](https://ec.europa.eu/info/sites/info/files/2017-fintech-consultation-document_en_0.pdf)

<sup>8</sup> <https://www.esma.europa.eu/press-news/esma-news/esma-responds-commission-consultation-fintech>

<sup>9</sup> <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2017-0211+0+DOC+PDF+V0//EN>

### *The Need for a Long-Term Perspective on Fintech Regulation*

Regulators should take the time to study new technologies and observe how new technologies develop and affect banks and other market participants, including those fintech entities not supervised by the regulators. This will allow for the most appropriate regulatory response, be it through regulatory guidance, amendments to existing regulations, or the introduction of new regulations. It will also minimize the risk of hampering innovation and help prevent other unintended consequences.

At some point, fintech will become effectively business as usual, so supervisors should consider the longer-term horizon when developing new regulatory strategies. This would include a focus on issues such as licensing, which will become more prominent as these technologies spread and mature. We provide additional perspective and recommendations on effective approaches to licensing later in this letter. As regulators take a long-term perspective on the impacts of fintech and emerging technologies, they should also recognize the limits created by existing regulatory frameworks. Some issues will arise that will need to be resolved through the broader policy making process outside regulatory rulemaking, through changes to legislation or legal frameworks.

Regulators should also bear in mind the evolving relationship between established banks and securities firms and new fintech firms. Fintech innovation does not exclusively occur outside of incumbent banks. Rather, incumbent banks are often an enabler of developing technologies, which help create value for the broader economy. Innovation may occur through in-house development, as well as investment in and partnership with technology firms and innovators. We see great potential in fintech innovation to improve the safety and soundness of incumbent firms through improved operational and cost efficiencies. Fintech innovation also allows banks to generate revenues through partnerships.

As banks develop and implement new technologies for existing capabilities, such as market infrastructure to clear and settle securities, they must address diverse and very important risks related to migration of capabilities to these new technologies and ensuring their continued resilience. While supervisors should focus on understanding migration and resiliency risks and helping the industry adopt a common understanding for best managing these risks, the regulatory frameworks that have developed over the prior decades are well suited to guide banks and bank supervisors to manage the risks of adopting new technologies now, as in the past with innovative developments in market infrastructure.

### *Regulatory Coordination Will Be Increasingly Important as Technology Advances*

We are very encouraged to see recommendations in the report promoting closer coordination between regulators, both within countries and internationally. We believe that there is a great opportunity for harmonization among regulators in their approaches to emerging technologies. These opportunities extend beyond rules to the development of common definitions for issues related to emerging technologies, which currently vary among regulators and firms.

Some recommendations in this report may be directed to bodies responsible for authorization and supervision of individual banks, while others may be more relevant to system-wide oversight. Still others may be directed outside of the traditional bank regulatory sphere. This exemplifies the importance of coordination inside and outside of the traditional bank regulatory bodies.

In addition, regulatory coordination is important to help prevent a race to the bottom, where regulators compete to make theirs the jurisdiction of choice for new technologies by compromising on essential customer protection, risk management, and market oversight regulations and standards.

### *Sandboxes*

Following the United Kingdom's proposed regulatory sandbox regime in November 2015, several countries in Asia, including Singapore, Hong Kong, Indonesia, Malaysia, China and Thailand have followed suit. The regulatory sandboxes that have been introduced aim to create an environment for businesses to test new products within certain parameters, and ultimately facilitate more innovation and competition. By providing a *"safe and conducive space to experiment...where the consequences of failure can be contained"*<sup>10</sup> regulatory sandboxes have the potential to help society enjoy the benefits of innovative fintech offerings, while mitigating risks to the public. However, we note that there are differences amongst the different sandbox regimes, for example regarding eligibility criteria, permitted timeframe for testing, and termination arrangements.

In contrast to technology firms and fintech start-ups outside the scope of traditional bank and securities regulation, existing financial services firms have extensive control processes around the introduction of new products, which make it challenging to carry out small scale pilots of new products and operating models. Sandboxes are particularly valuable venues for innovation for banks and securities firms, given the strong oversight and new product control requirements by which these firms are governed. Voluntary sandboxes that expedite the process for new product review and pilot launches on a small scale would allow banks to move through the cycle of experimentation and innovation more rapidly, minimizing risk to customers and the firm as a whole. Sandboxes also provide a valuable forum for established banks to work together with fintech start-ups on pilot projects.

Importantly, these sandboxes will best serve their purpose if there is wider participation, particularly among incumbents that can leverage their expertise and industry experience to help shape standards for developing technologies. Failing to do so may stymie the practical application of innovation solutions and increase implementation challenges.

Even where a jurisdiction elects not to adopt a sandbox approach, supervisors must take measures to enable banks to develop new innovative capabilities in a competitive and safe and sound manner. For instance, leading technology companies have adopted modern product development practices that use human-centered design and agile software development to build successful products through iterative pilots. These mechanisms enable a technology company to employ a limited pilot of a product in order to obtain feedback from customers and make changes to the product in light of that feedback. This creates an iterative feedback loop to obtain product-market fit before the technology institution invests in a costlier control structure to address risks that would apply when the product is released for general public consumption. In other words, leading technology companies do not overinvest prior to finding product-market fit, nor are they required to do so—a stark contrast to banks' requirements.

To compete on a level playing field with other technology companies, banks should not be required to deploy antiquated practices to develop innovations internally by requiring, for instance, expending funds

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<sup>10</sup> MAS Consultation Paper on the *"Fintech Regulatory Sandbox Guidelines"* (6 June 2016), <http://www.mas.gov.sg/~media/MAS/News%20and%20Publications/Consultation%20Papers/Consultation%20Paper%20on%20FinTech%20Regulatory%20Sandbox%20Guidelines.pdf>

to establish the same compliance and risk management infrastructure for a limited pilot program (e.g., 100-person pilot) as for a general capability release to the larger public (e.g., 60 million customers).

### *Bank Focus*

Many aspects of emerging technologies are occurring outside of the banking sector, or involve technologies that are not specific to banking but can be applied to a broad range of financial services business models (e.g., distributed ledgers, artificial intelligence, etc.). The report recognizes these blurring lines in Recommendations 5, 6, and 9, and we encourage regulators to look beyond specific business models to understand the regulatory and policy impacts of emerging technology. For example, the recent market activity around Initial Coin Offerings (ICOs) blurs the lines between securities, commodities, and banking regulation. Similarly, third party applications that allow customers to scrape information from their financial accounts raise data protection and other concerns both inside and outside of the bank regulatory perimeter.

### **Comments on Specific Recommendations**

#### ***Recommendation 1 - Balancing safety and soundness of the banking system with the risk of inhibiting beneficial innovation in the financial sector***

We note that in the Observation related to this Recommendation, 'banking risks' are equated with new technologies and business models—that the technology is the risk. We would argue that the nature and scope of banking risks have evolved because of new technologies and business models; the risk comes from how the technology is incorporated, and how the market responds. There must be a balance between prudential supervision against the risks of inhibiting useful innovation; and it is not axiomatic that bank activities related to fintech should result in additional capital requirements. A principles-based approach to regulation should be considered to allow firms to design risk management programs capable of adapting to the developing financial services landscape.

We also suggest that this Recommendation remove the reference to banks (i.e. “Banks and bank supervisors should consider how they balance”), as the recommendation is aimed at the mandate of regulatory agencies as opposed to the individual firms they oversee. Moreover, banks are aware of the opportunities, risks and complexities that fintech brings. If the goal is to induce positive change, we would suggest the Basel Committee focus more on national authorities than the banks themselves, helping them with global principles and guidance to modernize cultures, processes and overall frameworks.

We agree that the greater adoption of new technology by banks has the potential to create improvements in areas such as those listed in the consultation: financial inclusion for individuals and enterprises, tailored banking services, reduced transaction costs, improvements to financial stability and compliance with regulations. However, fintech should not be appropriated as the primary means for achieving these outcomes.

For example, while emerging technologies may allow existing or new financial firms to engage previously underbanked enterprises or individuals in new ways, financial inclusion is best addressed through other channels. Market participants themselves will continue to find innovative ways to engage new and underserved markets, and this process may be supported by specific regulatory initiatives or through existing regulations. An example of this is the EU Initiative for Financial Inclusion in 2015, which aims to increase access for finance to small and medium enterprises to increase competition.

## ***Recommendations 2 and 3 – Internal Risk Management and Controls***

As with any change in operating models, market structure, or products available, this recommendation is right to caution about the potential risks these changes may entail, and we welcome this recommendation that banks and other financial institutions should have robust risk management programs to understand and monitor these risks. Risk management practices and protocols are also key to ensuring that there is an effective control environment.

However, we feel that these recommendations are too specific in their treatment of the issue. They identify several important risk management practices, but the scope of these practices is inconsistent, ranging from broad corporate strategy planning to very specific issues related to AML compliance. In addition, there are many other risk management practices that firms have in place as they explore and adopt emerging technologies. We suggest that this Recommendation remain focused on broad risk management issues as new technologies are adopted.

In addition, regulators should recognize the many ways in which fintech and adoption of emerging technologies can actually reduce risks—such as through better aggregation and analysis of data through machine learning and AI, development of immutable records through blockchain/distributed ledgers, or more effective and efficient compliance and monitoring using natural language processing.

### *Distributed Ledger Technology (DLT)*

We support further efforts to understand the multiple uses, and associated potential benefits and risks of the application of DLT across the financial services, including but not limited to the payments and securities settlement space. Market participants are collaborating on several potential solutions that could be used by a broad network of participants. Regulators should continue to engage with market participants to understand the implications of such solutions to help inform their regulatory and supervisory decisions. Direct regulatory participation in pilot programs could help clarify the minimum controls for a DLT based system to be brought to market. This may include minimum standards on information security, and business and design controls.

### *Cloud*

The availability of cloud technologies provides clear benefits to firms of all sizes, and will play an important part in the modernization of bank infrastructures and business models. To date, there has been uncertainty around the application of existing outsourcing requirements to the cloud services business model that inhibits broader adoption and materialization of their benefits. We strongly support efforts by regulators to provide increased regulatory certainty in this area, such as the EBA's draft guidelines published in May 2017.<sup>11</sup> The AFME response to these guidelines further explores its members' views on effective approaches to increasing regulatory certainty around the adoption of cloud.<sup>12</sup> Regulatory clarity and harmonized standards will not only enable broader adoption by incumbent banks, but will enhance risk management practices for outsourcing across market players of all sizes and jurisdictions. We encourage regulators to collaborate with cloud service providers and financial institutions to address

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<sup>11</sup> <https://www.eba.europa.eu/-/eba-consults-on-its-guidance-for-the-use-of-cloud-computing>

<sup>12</sup> <https://www.afme.eu/globalassets/downloads/consultation-responses/afme-tao-eba-consultation-paper-on-draft-recommendations-on-cloud-outsourcing.pdf>

potential diverging interpretations of the application of regulatory requirements and to harmonize supervisory expectations.

#### ***Recommendation 4 – Third Party Risk Management***

The Associations note that the impetus for outsourcing goes beyond the development of fintech, and the trend to seek more efficient outsourcing methods has been ongoing for many years. We suggest focusing more clearly on key areas impacted by fintech—e.g. the use of cloud technologies and the controls in that regard.

While this recommendation correctly identifies the challenges banks and other financial institutions face in developing contracts with external technology providers and other fintech firms to support the development of new products and services using emerging technologies, we do not feel that the level of detail included in this recommendation is appropriate. The recommendation identifies several very specific provisions that banks should include in their contracts with external providers. While these are important considerations for inclusion in contracts, they are only a small subset of the provisions financial firms require in third party contracts. Given the broad range of provisions in these contracts, and substantial variance in which issues are most important in these contracts to a given firm, the third party, and the services they are providing, we strongly suggest that this recommendation be kept at a more general level for guidance purposes.

Detailed recommendations for third party risk management are best provided for specific services as they relate to a technology, such as the recent EBA recommendations for cloud service providers. As another example, banks are subject to existing Directives and Delegated Regulation within the EU that provide detailed requirements covering the proper selection, supervision and governance of external service providers to avoid undue additional operational risk.

#### ***Recommendation 5 – Regulatory Coordination Across Public Authorities***

Effective coordination by regulators and supervisors to understand and oversee the emerging fintech landscape should not be limited to just partnerships with other regulatory agencies, but should be broadened to include dialogue and coordination with other stakeholders outside of the traditional bank regulatory agencies, such as industry associations, standards organizations and financial market infrastructures. The Recommendation might be amended to read “... *financial intelligence units, and other relevant industry stakeholder groups, with the objective of...*”

Fintech will create the need for coordination outside of the traditional banking regulatory sphere. Many products and services are delivered via the internet or mobile devices, so a telecommunications regulator may also have a role in fintech regulation. It is important that all relevant regulators are consulted in the development of policies that impact technology and that regulations are consistent nationally across different sectors. In addition, laws and regulations need to be consistent. Overarching information technology laws can, for example, have unintended and broad impacts on banking regulation. This can limit the ability of banking regulators to formulate policy that supports fintech and other innovations. One means to help avoid these pitfalls is to ensure that regulators regularly engage the industry and its representatives to ensure there is a common understanding of products and services, and how they are to be regulated.

Harmonization of requirements is required for security incident reporting obligations which differ from regulation to regulation, trigger different reporting obligations to different authorities, and result in complexity and administrative burden to market participants.

As another example, it will also be important for banking regulators to work closely with regulators such as those who watch over competition law and consumer protection. There are data privacy and competition law risks arising from information sharing, whether as an integral part of the new technology itself (such as in blockchain technology) or to facilitate fintech development. Where any data is shared amongst competitors, it is of course imperative to ensure that this cannot be construed as an exchange of competitively sensitive information. For example, information sharing concerns may arise if a future fintech product operating on blockchain technology was used to transmit detailed transactional information (such as customer, pricing and/or discounts, details about the transaction) to other members within the blockchain network.

Similarly, information sharing risks may arise in the context of large, shared databases maintained for the purposes of facilitating fintech developers or users. The risk is particularly high if the information that can be obtained is current, granular and detailed, such that a competitor with access to the database could gain insights into current or future marketing strategies of independent market participants. These are examples of issues upon which banking regulators may need to work with other regulatory bodies to ensure appropriate application of regulation to fintech products and services.

Furthermore, while some fintech firms may fall outside of the banking regulatory sphere, we believe it is important that regulators ensure fintech companies are subject to extensive data security requirements and also ensure that users of fintech (e.g., their consumer/customers) are subject to the same extensive set of protections that consumers and customers of banks currently enjoy.<sup>13</sup> This may fall within the purview of bank regulatory agencies, or could require the involvement of other national regulatory bodies.

Regulators should also look to identify areas where collaboration and coordination with the private sector and technology providers will be valuable in supporting the adoption of new technology. For example, the Monetary Authority of Singapore (MAS) has worked with technology providers and local and international banks to explore how the Singaporean Dollar can be connected to digital tokens through a distributed ledger.<sup>14</sup>

### ***Recommendation 6 – International Regulatory Coordination***

We are encouraged to see this recommendation, and support increased international cooperation between regulators on the regulation of fintech initiatives. Cross-border contracts and firms operating new technology initiatives in multiple markets internationally would be supported by more coordination and regulatory harmonization. This can be undertaken in several ways, including the creation of fintech regulatory bridges between the relevant authorities in jurisdictions. Our response discusses fintech bridges and other mechanisms for regulatory coordination in our comments on Recommendation 10 below.

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<sup>13</sup> For further discussion, see for example The Clearing House's "Ensuring Consistent Consumer Protection for Data Security: Major Banks vs. Alternative Payment Providers", available here:

<https://www.theclearinghouse.org/sitecore/content/tch/home/issues/articles/2015/08/20150816-tch-paper-on-data-security-protection-for-consumers>

<sup>14</sup> <http://www.mas.gov.sg/~media/ProjectUbin/Project%20Ubin%20%20SGD%20on%20Distributed%20Ledger.pdf>

The cooperation agreement signed in October 2017 between the Hong Kong Monetary Authority and the MAS to collaborate, including on a distributed ledger-based trade finance project, is an encouraging example of this kind of international regulatory coordination.<sup>15</sup>

It may be useful for "regulatory and supervisory colleges" to be set up to help develop regular dialogue between the regulators and the sharing of best practices and cross-border issues regarding fintech. Regulatory dialogue with foreign counterparts will also assist regulators in their assessment of potential regulatory gaps from new market players and technologies. The work of the International Organization of Securities Commissions around fintech is an example of this coordination.

### ***Recommendation 7 – Regulatory Skills, Knowledge, and Preparedness***

We are encouraged to see this recommendation, which we believe will encourage regulators and supervisors to develop the skills and capabilities to oversee and respond to the impacts of emerging technologies. Just as banks need to ensure their staff is conscious of the newest developments and risks stemming from technological innovation, regulators should do likewise. The increasing rate of adoption of innovative technologies will result in greater need for new skills and technological knowledge across all market participants. We consider the development of this same skill or knowledge-base by regulators equally important. Ongoing dialogue between regulators and market participants would greatly benefit this effort.

Regulator training models should ensure that staff stays knowledgeable of financial innovation occurring both inside and outside the regulated banking or broker-dealer sector. Fintech entities outside these closely supervised sectors often adopt new technologies more quickly and aggressively, and regulators must understand how these entities are using new technologies so that they can maintain a level playing field and identify risks those fintech entities pose to consumer protection and other concerns. In addition, regulators should stay abreast of technology developments happening beyond the financial services industry – such as in large technology providers (“BigTech”) –to understand the broader technology context the firms they supervise are operating in and to see models of future innovations that may be applied in their regulated markets.

Regulators should also ensure that sufficient resources are available to deliver speedy reviews and support responsible innovation. This will become increasingly important as new technology deployment cycles are likely to be much quicker in the future.

The UK Financial Conduct Authority’s (FCA) Innovate organization is an example of what this regulatory learning and engagement can look like, working with the industry on fintech to provide a forum for advice, education, and engagement with regulators. In the United States, the CFTC’s recently established LabCFTC initiative is another encouraging approach to developing understanding of emerging technology issues and engagement with the industry. The United States Securities and Exchange Commission (SEC) has recently formed a “Distributed Ledger Technology Working Group” with a stated objective to build expertise, identify emerging risk areas, and coordinate efforts among the SEC’s divisions and offices.<sup>16</sup>

### *Cybersecurity*

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<sup>15</sup> <http://www.hkma.gov.hk/eng/key-information/press-releases/2017/20171025-4.shtml>

<sup>16</sup> <https://www.sec.gov/spotlight/fintech>

We also propose that this recommendation include cybersecurity as an area where regulators should continue to enhance their staff and capabilities. As new technologies and reporting systems provide unprecedented amounts of information to regulators, securing this information and the sensitive customer and market information it includes will be critical.

The cyber resilience of the financial system requires a robust end-to-end security level across the complete financial services value chain. With increasing interconnectedness and IT interdependencies, a connected system is only as secure as its weakest link. The application of fintech in financial services must therefore follow the same established high security standards that incumbent financial services firms use. Regulators should actively engage with new and existing market participants, and cybersecurity practitioners, to understand emerging trends and address any potential regulatory gaps. A cybersecurity framework that encourages a risk-based approach, global coordination and sharing of cyber threat information is critical for the continued progress in cybersecurity programs across all market participants.

In addition, developing robust cyber security expertise will be essential for regulators as they look to develop partnerships with “regtech” providers; securing supervisory information and managing risks in such partnerships will be critical. As regulators themselves take advantage of emerging technologies to develop new models of aggregating and analyzing industry data, they will need to remain focused on the cybersecurity and data protection practices needed to secure this sensitive market and customer information. For example, the Consolidated Audit Trail system under development in the U.S. would be one of the world’s largest databases, pulling together an unprecedented volume of customer and market information. Regulators will also need to remain focused on identifying and securing the multiple entities that may touch sensitive information, and ensuring there are strong cybersecurity and data protection controls in place at each, to make sure there is not a “weakest link” left comparatively unsecured.

#### *Centers of Excellence*

We recommend regulators to develop Centers of Excellence (CoE) around fintech and regulation of emerging technologies to develop these skills and capabilities. Partnerships between CoEs would also allow regulators to learn from their shared expertise to develop rules best suited to local market conditions, as the report suggests in Recommendation 10.

#### ***Recommendation 8 – Use of New Technologies to Enhance Supervisory Processes***

The ambitious regulatory reform agenda implemented after the financial crisis has closed loopholes in the financial regulatory framework, but has also significantly increased compliance costs of banks. Successful application of regtech could make an important contribution to increasing the efficiency of banks, while improving their effective compliance with financial regulations.

Examples of areas in compliance that could benefit from regtech include the gathering and aggregation of data from financial services companies for capital and liquidity reporting, computer modelling and forecasting for stress testing and stress management, KYC procedures, and systematic and global checks on anti-money laundering and sanctions.

Although regtech and ‘suptech’ (supervisory technology) are still in their infancy, with no dominant or widely used solutions, their tremendous capabilities are clear, building on artificial intelligence and machine learning, big data, biometrics etc. For example, continuous automated reporting and monitoring of bank activities is now hypothetically feasible and could prove far more accurate than the current

painfully laborious sporadic sampling-based supervision (regular examinations, etc.). As the UK FCA is exploring, we could now conceive of regulation as a set of machine-readable rules, rather than printed rules that humans must transpose into the digital realm for every project.

As these technologies develop, we are encouraged by the opportunities for regulators to collaborate with the industry and technology providers to find new solutions to regulatory and supervisory challenges.

In the interim, we acknowledge that regulatory reform is not yet complete, which results in uncertainty about the exact reporting requirements and makes it harder for FIs to choose a particular compliance solution. As a result, banks would benefit from a coordinated industry-wide design and collaboration effort to set clear standards for regtech and suptech in the product development phase, with all relevant regulators providing clear guidelines on the product requirements. Regulators should also provide as much clarity as possible in a timely manner when communicating how compliance with particular regulations is required.

***Recommendation 9 - Supervisory review of current regulatory, supervisory and licensing frameworks in light of new and evolving risks***

We support regulator-led assessments of developing technologies applied in financial services, and the evolving landscape of firms conducting financial services activities, with an aim to identify potential regulatory gaps in a regulator's respective jurisdiction. This is an important step to ensure consistent standards are applied across all entities, new and existing, and to protect consumers and the safety and soundness of the financial system. The application of existing requirements to new entrants—irrespective of business model, type of entity or type of license—should ensure that the risks of a new entrant's business activities are fully addressed and monitored. The idea of 'same service, same rules' should be applied to secure consistent standards and fair competition. We caution against soft touch regulation, as this may threaten market integrity and financial stability.

*Review of Licensing Frameworks*

An effective approach to regulation of licensing will be critical in maintaining a level playing field between banks and other firms. The ECB's September 2017 public consultation on licensing, to the extent that it intends to clarify the license application process for FinTechs, is an important initiative that aims to harmonize license applications across member states.<sup>17</sup> However, the guidelines are not proposed to be legally binding but aimed at introducing a harmonized approach for the assessment of license applications by each member state. The elements the consultation considers include: The assessment of IT risks, outsourcing, data governance, and capital, liquidity and solvency. We welcome the focus in making sure that licensing maintains a level playing field, and manages risk appropriately in the market. There have been consultations in the U.S. on chartering issues, to which GFMA member association SIFMA and TCH responded in early 2017.<sup>18</sup>

Additionally, regulators should develop licensing regimes which facilitate bank holding companies creating non-bank startup subsidiary companies within their corporate structure. Supporting the creation of these subsidiaries can provide banks with a venue for innovation and experimentation, while preserving the structure, controls and oversight of the broader enterprise through its holding company.

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<sup>17</sup> [https://www.bankingsupervision.europa.eu/legalframework/publiccons/html/licensing\\_and\\_fintech.en.html](https://www.bankingsupervision.europa.eu/legalframework/publiccons/html/licensing_and_fintech.en.html)

<sup>18</sup> See TCH/SIFMA response here: [https://www.theclearinghouse.org/-/media/tch/documents/tch%20weekly/2017/20170117\\_joint\\_trades\\_occ\\_fintech\\_charter\\_comment\\_letter.pdf?la=en](https://www.theclearinghouse.org/-/media/tch/documents/tch%20weekly/2017/20170117_joint_trades_occ_fintech_charter_comment_letter.pdf?la=en)

### ***Recommendation 10 – Supervisory Coordination and Emulation***

As the industry grapples with the impact of transformative technology, we support the efforts of regulators and supervisors to learn from each other. We encourage innovation in fintech bridges. The fintech bridge is an agreement that makes it easier for the UK and the other participating jurisdiction to invest in fintech, connects the UK to "priority export markets" and makes it easier for UK fintechs to scale. The idea is to reduce barriers to market entry and make it easier to share information about financial services innovations in each marketplace (including emerging trends and regulatory issues). The UK FCA and the MAS signed a co-operation agreement in 2016 to support innovative businesses, primarily to help innovators understand the regulatory frameworks in each authority's jurisdiction.

Similarly, the UK Government developed a fintech bridge to support the fintech sector, and has several fintech bridges in place including with Singapore, Republic of Korea, China and Hong Kong. The fintech bridge includes a co-operation agreement which enables the UK regulator to refer fintech firms to its international counterpart (and vice versa). Cooperation between regulatory jurisdictions should also include exploration of coordination of sandbox participation procedures to allow a firm to easily take part in multiple international sandboxes for a given pilot project, so cross-border firms can explore projects with an international scope. Coordination between sandboxes would help remove challenges firms face today due to different rules and requirement for sandboxes across jurisdictions. While harmonization of standards for sandboxes would be most efficient, passporting or memoranda of understanding would be helpful to firms as well.

However, we caution that while regulators should learn from each other's experiences in managing the impacts of emerging technologies, regulators should remain cautious in drawing on specific regulations implemented in other jurisdictions, and recognize where adoption of foreign regulatory approaches would be inappropriate in their home jurisdictions. As regulators look to learn from each other's new regulatory frameworks, they should bear in mind how these policy outcomes are shaped by existing legislative and regulatory frameworks, which may make them less applicable in other jurisdictions.

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We are pleased to submit these comments. Please contact Chris Killian ([ckillian@sifma.org](mailto:ckillian@sifma.org)) or Charles DeSimone ([cdesimone@sifma.org](mailto:cdesimone@sifma.org)) of GFMA, or John Court ([john.court@theclearinghouse.org](mailto:john.court@theclearinghouse.org)) of The Clearing House with additional questions or for more information.

Sincerely,



Allison Parent  
Executive Director  
Global Financial Markets Association



John Court  
Managing Director and Deputy General Counsel  
The Clearing House