<u>HSBC submission to the BCBS consultative document – Sound Practices: Implications of fintech development for banks and bank supervisors</u>

HSBC welcomes the opportunity to the Basel Committee on Banking Supervision' consultation, "Sounds Practices: Implications of fintech development for banks and bank supervisors" (the consultation). The HSBC Group is one of the world's largest banking and financial services organisations. Headquartered in London, HSBC operates through an international network of around 6,000 offices in 67 countries and territories in Europe, Asia, the Middle East and Africa, North America and Latin America. We serve more than 47 million customers worldwide through four global businesses: Retail Banking and Wealth Management, Commercial Banking, Global Banking and Markets, and Global Private Banking.

Executive summary

For many years, banks have been the driving force of technological innovation in financial services. Well-known examples include the invention of the ATM, online and mobile banking and the introduction of biometrics. More recently, FinTech innovation has expanded rapidly, encompassing Distributed Ledger Technology, Cloud Computing, Artificial Intelligence/ Machine Learning, open APIs and RegTech.

Alongside new technologies come new business models and many of these concepts have been developed in partnership with FinTech businesses. The term 'FinTech' is broad and has in the past tended to describe financial technology start-ups seeking to disrupt and disintermediate incumbent banking models. Today the approach is much more one of collaboration and partnership as banks and FinTechs realise the mutual benefit this generates, particularly the sharing of expertise and the ability to quickly scale-up a solution. HSBC's approach to working with FinTechs is usually to help develop a specific proposition with a view to becoming a customer, though we have made certain strategic investments where we feel strongly that we can help to shape and direct the underlying technology.

There is a great deal of interest from policy makers in FinTech, both in the EU and other regions and at the international level, not only regarding the breadth of the industry and the speed at which developments occur but the global nature of much of the technology. This presents challenges for both the industry and policy makers when examining appropriate regulatory frameworks and has led to a somewhat fragmented approach. HSBC believes the following should be considered by policy makers, regulators and supervisors when considering solutions:

- **Define "FinTech**" – this is important for the development of an appropriate regulatory framework. A single definition should be agreed by policy makers and industry.
- **Risks and opportunities –** part of the process of identifying and quantifying the risks of FinTech should also include an analysis of the benefits and opportunities, not least as these may offset certain risks.
- **Principles-based regulation –** regulatory frameworks should be forward-looking and technology-neutral, in addition to being holistic in approach. We would support a gap analysis being undertaken to identify where existing legislation needs wider application and/or bolstering.
- **Global harmonisation –** FinTech solutions will require globally harmonised regulation and standards to reach scale, requiring cross-border regulatory collaboration.
- **End-user trust –** the industry and policy makers need to work together better to persuade consumers of the benefits of FinTech.

Observation 1: The nature and the scope of banking risks as traditionally understood may significantly change over time with the growing adoption of FinTech, in the form of both new technologies and business models. While these changes may result in new risks, they can also open up new opportunities for consumers, banks, the banking system and bank supervisors.

Recommendation 1: Banks and bank supervisors should consider how they balance ensuring the safety and soundness of the banking system with minimising the risk of inadvertently inhibiting beneficial innovation in the financial sector. Such a balanced approach would promote the safety and soundness of banks, financial stability, consumer protection and compliance with applicable laws and regulations, including anti-money laundering and countering financing of terrorism (AML/CFT) regulations, without unnecessarily hampering beneficial innovations in financial services, including those aimed at financial inclusion.

HSBC response

HSBC fully supports the suggested approach by the BCBS to focus on creating a regulatory and supervisory framework that balances proportionate regulation and encourages positive innovation. We believe there are a number of factors that should be considered when approaching this:

- **"FinTech" –** a consistent definition of FinTech should be adopted in order to establish an appropriate regulatory framework. FinTech applies to both start-ups and incumbents across financial services and embraces an array of different business models, technologies and applications. In this regard, HSBC recommends using the FSB definition[1], which will assist in the adoption of a risk-based approach to regulation and help avoid the creation of a two-tier regulatory regime.
- **Benefits vs risks –** there has been a tendency to focus on the risks FinTech poses, which has served to somewhat obscure the benefits and opportunities these technologies provide to customers, regulators, supervisors and the financial services industry – from open APIs to AML/CTF activities to regulatory reporting. We welcome the BCBS recognition that these should be taken into account when considering regulatory frameworks for FinTech.
- **Principles-based, 'smarter' regulation –** for the most part, existing legislation already provides a robust regulatory framework for an industry that is currently at a very nascent stage of development and is almost continuously evolving. As the BCBS observations and recommendations mention, regulatory frameworks must be forward-looking and have the flexibility to adapt to new technologies and business models and associated regulatory risks and opportunities. A holistic approach will also be required, encompassing not only prudential concerns but also areas such as conduct, data protection, cyber security and consumer protection. HSBC believes a gap analysis of existing relevant regulation, standards and rules should be undertaken to enable this. It would also provide a strong foundation for the adoption of a technology-neutral approach, ensuring certain activities are regulated in the same manner regardless of who is undertaking them. This will provide the optimal route to encouraging innovation while ensuring a fair and safe financial services sector.
- **Global, harmonised approach –** for most FinTech solutions to reach true scale they will need to be globally interoperable, which will require global, harmonised regulation, industry standards and defined best practice. This will require cross-border collaboration, cooperation and coordination between regulators and supervisors (both financial and non-financial) and industry to develop a consistent regulatory approach that balances further innovation and competition with security and stability. This will capture new technological developments involving multiple different parties and create a level playing-field, reducing the risk of regulatory arbitrage and subsequently denting consumer confidence.
- **End-user awareness, understanding and trust –** end-users, particularly consumers, will ultimately determine the success of any particular technology. Industry, policy makers and regulators should work in partnership to do more to increase consumer confidence regarding safety, security, reliability and convenience.

Observation 2: For banks, the key risks associated with the emergence of FinTech include strategic risk, operational risk, cyber-risk and compliance risk. These risks were identified for both incumbent banks and new FinTech entrants into the financial industry.

Recommendation 2: Banks should ensure that they have effective governance structures and risk management processes in order to identify, manage and monitor risks associated with the use of enabling technologies and the emergence of new business models and entrants into the banking system brought about by FinTech developments. These structures and processes should include:

- robust strategic and business planning processes that allow banks to adapt revenue and profitability plans in view of the potential impact of new technologies and market entrants;

[1] http://www.fsb.org/wp-content/uploads/R270617.pdf, p.7: "FinTech is defined as technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services."

- sound new product approval and change management processes to appropriately address changes not only in technology, but also in business processes;
- implementation of the Basel Committee's Principles for sound management of operational risk (PSMOR) with due consideration to FinTech developments; and
- monitoring and reviewing of compliance with applicable regulatory requirements, including those related to consumer protection, data protection and AML/CFT when introducing new products, services or channels.

HSBC response

While we of course agree that it is important for banks to ensure their structures and processes continue to be effective in monitoring and managing risks associated with FinTech, HSBC already has in place well developed governance structures and risk management processes and regularly reviews these to ensure they are fit for purpose.

We agree with the risks identified by the BCBS. One of the significant contributing factors to these risks is regulatory divergence across jurisdictions, which makes it difficult to set Group policies for certain technologies. This remains a considerable challenge for technology risk, in particular Cloud Computing and we would welcome the BCBS working with the industry to consider how greater regulatory harmonisation in this area might be achieved. Similarly, data restrictions contribute to an inability to both develop comprehensive data lakes and share information, for example in relation to AML and CTF activities.

We also recommend regulators and supervisors bear in mind that FinTech can also mitigate these risks. Upgrading legacy infrastructure systems, such as IT and data systems, with cloud computing and data lakes makes them more robust and more reliable. Cloud technology is now as secure as in-house computing and allows firms to outsource tasks to the Cloud rapidly and at low cost. This in turn enables the application of newly-developing technologies such as AI, Machine Learning and Big Data analytics to provide more effective outcomes. Indeed it could be argued that a lack of investment in innovative technologies increases risk across the financial system.

PSDII also brings with it liability risk, as determining liability for data breaches could in practice become very complicated, especially if consumers are seen to be disadvantaged. Other risks include credit and liquidity risk, such as FinTech firms becoming members of payment systems, creating exposures to counterparties and potentially resulting in liquidity risk if they cannot manage the positions properly, resulting in gridlock in the systems.

Observation 3: Banks, service providers and FinTech firms are increasingly adopting and leveraging advanced technologies to deliver innovative financial products and services. These enabling technologies, such as artificial intelligence (AI)/machine learning (ML)/advanced data analytics, distributed ledger technology (DLT), cloud computing and application programming interfaces (APIs), present opportunities, but also pose their own inherent risks.

Recommendation 3: Banks should ensure they have effective IT and other risk management processes that address the risks of the new technologies and implement the effective control environments needed to properly support key innovations.

HSBC response

HSBC agrees that it is important to have effective IT and risk management processes in place that address the use of FinTech. We agree that there are both opportunities and risks associated with FinTech. And as mentioned in our response to Recommendation 2, we believe that FinTech can itself actually mitigate many of the risks mentioned by the BCBS.

There are many factors that contribute to risk management of FinTech, including the technology in question, how that technology is being deployed, where (business area and geographical location) the technology is being deployed and the purpose for which it is being deployed. There are also regulatory hurdles that we believe need to be addressed – we briefly outline challenges for Cloud and Distributed Ledger Technology (DLT):

- **Cloud computing:** HSBC is currently working in partnership with the three major Cloud Service Providers, targeting use cases involving very large data sets, including analysis to identify patterns to boost AML activities and running risk simulations across billions of transactions to better understand trading positions. A lack of regulatory harmonisation across jurisdictions presents significant challenges for both global banks and Cloud 'native' FinTech firms. The approach from regulators of treating cloud computing as third party outsourcing (and in some cases "material" outsourcing) also makes it difficult to adopt a proportionate and risk-based approach to due diligence. It would be beneficial for all stakeholders for outsourcing rules to be reviewed and adjusted to accommodate the use of Cloud in financial services on a global basis. As part of this process, regulators could work with banks and CSPs to develop international standards and detailed guidance covering the contracting of Cloud services and the deployment and service models.

- **Distributed Ledger Technology:** HSBC is involved in a number of initiatives involving DLT, which enable a streamlining of processes and the provision of a secure and consistent record of activity that can be easily verified. The central challenge is how to achieve scale using DLT in any given scenario, which largely centres on the governance of the technology. A framework of rules and requirements will need to be developed, for example creating an authorisation process for participants or to resolve disputes over fraud or error of a transaction. For banks, this will be particularly important for 'permission-based' systems. Identity verification and security of the network would also need to be addressed, so that banks know irrefutably who is participating in any transaction and that those transactions and the corresponding data are always secure. And the settlement finality conundrum will also need to be resolved. Industry consortia are already developing governance frameworks, some in partnership with regulators and this process will need to be expanded to ensure global interoperability.

Observation 4: Banks are increasingly partnering with and/or outsourcing operational support for technology-based financial services to third-party service providers, including FinTech firms, causing the delivery of financial services to become more modular and commoditised. While these partnerships can arise for a multitude of reasons, outsourcing typically occurs for reasons of cost-reduction, operational flexibility and/or increased security and operational resilience. While operations can be outsourced, the associated risks and liabilities for those operations and delivery of the financial services remain with the banks.

Recommendation 4: Banks should ensure they have appropriate processes for due diligence, risk management and ongoing monitoring of any operation outsourced to a third party, including FinTech firms. Contracts should outline the responsibilities of each party, agreed service levels and audit rights. Banks should maintain controls for outsourced services to the same standard as the operations conducted within the bank itself.

HSBC response

We agree with these recommendations. HSBC has robust processes for assessing and managing third party risk, including working with firms providing FinTech solutions. The assessment of risk is as much based upon the technology itself than the type of business per se. As mentioned in our response to Recommendation 3, HSBC would support a review of outsourcing rules in relation to Cloud Computing. Although recent work in this area by UK and EU regulators has been welcomed, this has been directed towards all forms of outsourcing. Current outsourcing rules when applied to Cloud Computing in financial services create difficulties in negotiating contracts with CSPs, particularly given the wide range of possible cloud models and the ongoing due diligence by banks of CSPs and their supply chain, particularly in terms of auditing and subcontracting.

There is a need for greater proportionality and harmonisation in regulatory approaches across jurisdictions towards outsourcing for Cloud Computing, particularly when it is treated as "material" outsourcing that needs to be recorded or reported. HSBC would welcome working with the BCBS and others to develop a set of harmonised, international standards in this area.

Observation 5: FinTech developments are expected to raise issues that go beyond the scope of prudential supervision, as other public policy objectives may also be at stake, such as safeguarding data privacy, data and IT security, consumer protection, fostering competition and compliance with AML/CFT.

Recommendation 5: Bank supervisors should cooperate with other public authorities responsible for oversight of regulatory functions related to FinTech, such as conduct authorities, data protection authorities, competition authorities and financial intelligence units, with the objective of, where appropriate, developing standards and regulatory oversight of the provision of banking services, whether or not the service is provided by a bank or FinTech firms.

HSBC response
HSBC supports this approach, as there is an urgent need for a greater focus on ensuring a level playing field for regulation and supervision. While much of FinTech in these areas is actually reducing the risks identified by the BCBS, equally important is ensuring that, as GAFAs and other BigTech firms increasingly provide FinTech solutions to these risks, all providers are covered by the same legislative, regulatory and supervisory requirements. This will necessarily require coordination across multiple authorities, particularly between financial regulators and data protection bodies and working closely with the relevant industries to develop an effective framework. The factors outlined in our response to Recommendation 1 should be integral to this process.

Observation 6: While many FinTech firms and their products – in particular, businesses focused on lending and investing activities – are currently focused at the national or regional level, some FinTech firms already operate in multiple jurisdictions, especially in the payments and cross-border remittance businesses. The potential for these firms to expand their cross-border operations is high, especially in the area of wholesale payments.

Recommendation 6: Given the current and potential global growth of FinTech companies, international cooperation between supervisors is essential. Supervisors should coordinate supervisory activities for cross-border FinTech operations, where appropriate.

HSBC response
The importance of international regulatory and supervisory cooperation cannot be overstated. The cross-border nature of much of FinTech and the need for global interoperability in order to achieve the scale required to realise the benefits demands closer cooperation and coordination between international, regional and national authorities, not to mention the desire by all parties to also reduce the risk of regulatory arbitrage. The aim wherever possible would be to develop globally interoperable regulatory frameworks and standards. HSBC suggests this would best be achieved through a combination of coordination via supervisory colleges and international regulatory bodies such as the FSB and BCBS. In line with Recommendation 5, this activity must also involve all relevant non-financial services authorities such as data protection agencies and bodies like the Financial Action Taskforce.

As mentioned in our response to Recommendation 3, it is also vital that regulators, supervisors and financial institutions work closely together when developing these frameworks and standards. This not only establishes at an early stage shared goals but also the roles and responsibilities of each party. For example, there are a number of DLT projects underway around the world and regulators from different jurisdictions are working together and with industry on their development. DLT solutions require a network, which itself requires a governance body to set and enforce the rules of the network. Given the nature of the technology, invariably these rules must be global. Regulators and supervisors understandably want to ensure that these networks are fair, safe and secure but traditional methods of doing so, such as signing cooperation agreements amongst regulators across multiple jurisdictions, can slow global adoption. An alternative model could be to let international bodies such as SWIFT or a consortia of global banks develop the network rules in partnership with regulators. The regulator could then act as operate as a regulatory 'node' while the agreed body/consortia governs the framework. This would facilitate global adoption while enabling regulators to access data and monitor the operation of the network.

Observation 7: FinTech has the potential to change traditional banking business models, structures and operations. As the delivery of financial services becomes increasingly technology-driven, reassessment of current supervision models in response to these changes could help bank supervisors adapt to FinTech-related developments and ensure continued effective oversight and supervision of the banking system.

Recommendation 7: Bank supervisors should assess their current staffing and training models to ensure that the knowledge, skills and tools of their staff remain relevant and effective in supervising new technologies and innovative business models. Supervisors should also consider whether additional specialised skills are needed to complement existing expertise.

HSBC response

As the BCBS mentions, regulators and supervisors are increasingly establishing specific units and divisions dedicated to FinTech issues. As FinTech grows and business models adapt accordingly, authorities will need to respond in kind. This is not an easy task given the demand for expertise across the different areas of FinTech and the fluidity of business models. It will be important for regulators and supervisors to work closely with the industry, for example creating training programmes, secondment opportunities and joint projects, all of which will provide commensurate benefits. These should be as much about the regulatory approach to FinTech sector as the technical aspects of different technologies.

Observation 8: The same technologies that offer efficiencies and opportunities for FinTech firms and banks, such as AI/ML/advanced data analytics, DLT, cloud computing and APIs, may also improve supervisory efficiency and effectiveness.

Recommendation 8: Supervisors should consider investigating and exploring the potential of new technologies to improve their methods and processes. Information on policies and practices should be shared among supervisors.

HSBC response

In the same manner that FinTech/RegTech solutions have the ability to reduce an array of risks and generate improvements in compliance and reporting for firms, so they have the potential to advance regulator and supervisor understanding of the activities of banks and other financial services firms. This is not just from making supervision more efficient but also because they increase supervisor understanding and monitoring of how financial services firms are using different technologies, such as AI/ML, DLT and data analytics. Regulators and supervisors should work with firms as part of this process, particularly those operating across multiple jurisdictions who will be able to provide insight from other parts of the world. Similarly, authorities should also use their own regional and global networks to share experiences.

Observation 9: Current bank regulatory, supervisory and licensing frameworks generally predate the technologies and new business models of FinTech firms. This may create the risk of unintended regulatory gaps when new business models move critical banking activities outside regulated environments or, conversely, result in unintended barriers to entry for new business models and entrants.

Recommendation 9: Supervisors should review their current regulatory, supervisory and licensing frameworks in light of new and evolving risks arising from innovative products and business models. Within applicable statutory authorities and jurisdictions, supervisors should consider whether these frameworks are sufficiently proportionate and adaptive to appropriately balance ensuring safety and soundness and consumer protection expectations with mitigating the risk of inadvertently raising barriers to entry for new firms or new business models.

HSBC response

On the whole, existing legislation already provides a robust regulatory framework for an industry that is currently at a very nascent stage of development and is almost continuously evolving. HSBC would support a gap analysis to determine the applicability of existing regulatory frameworks to FinTech solutions and where additional regulation may be required. This will ensure a principles-based, technology neutral approach to regulation, providing a level playing-field that will continue to encourage innovation and spur competition while ensuring appropriate scrutiny of business models that traditionally have been outside the scope of financial services regulators.

Observation 10: The common aim of jurisdictions is to strike the right balance between safeguarding financial stability and consumer protection while leaving room for innovation. Some agencies have put in place approaches to improve interaction with innovative financial players and to facilitate innovative technologies and business models in financial services (e.g. innovation hubs, accelerators, regulatory sandboxes and other forms of interaction) with distinct differences.

Recommendation 10: Supervisors should learn from each other's approaches and practices, and consider whether it would be appropriate to implement similar approaches or practices

HSBC response

There are over 20 regulatory sandboxes and innovation hubs around the world at various stages of development and all operating with different aims, rules and requirements. Regulatory sandboxes can be used as an alternative to the introduction of lighter touch regulation or the introduction of 'special licenses' for FinTech, avoiding a two-tier regulatory approach that can bring with it both market and consumer risks. The FinTech ecosystem, while thriving, is still evolving and regulatory sandboxes help regulators to improve their own knowledge by monitoring FinTech developments, streamline regulatory authorisation and guidance, adopt a more forward-looking approach to risk-assessment and employ targeted action where required.

In the UK, the Financial Conduct Authority (FCA) established the first regulatory sandbox, which allow firms of all sizes to "test innovative products, services, business models and delivery mechanisms in a live environment" within a framework of lower regulatory barriers. HSBC was part of the first cohort of applicants to the FCA sandbox that closed on 08 July 2016, entering into a partnership with FinTech firm Pariti to develop the HSBC SmartSave app, which encourages consumers to save as they spend.

HSBC would support greater cooperation between national sandboxes and hubs around the world, with the aim of creating a set of best practices for regulators. The FCA sandbox would appear to provide a strong model on which to build, including its international agreements via 'FinTech bridges'. These bridges build connections between National Competent Authorities to share ideas and knowledge and facilitate the movement of firms.