Workshop 5
Implications of fintech[1]

Chair: Mr Ong Chong Tee (Deputy Managing Director (Financial Supervision), Monetary Authority of Singapore)

What is fintech?

Given the fluid nature of fintech developments, the Basel Committee on Banking Supervision has relied on the following definition as set out by the Financial Stability Board: "technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services".[2]

While the phenomenon of technical innovations that trigger changes in the banking sector is by no means new – consider automated teller machines, electronic payments and internet banking – the current pace of fintech innovation and adoption has created an environment in which disruption may happen more quickly than in the past, forcing incumbent banks to adjust faster to maintain customer relationships and market share.

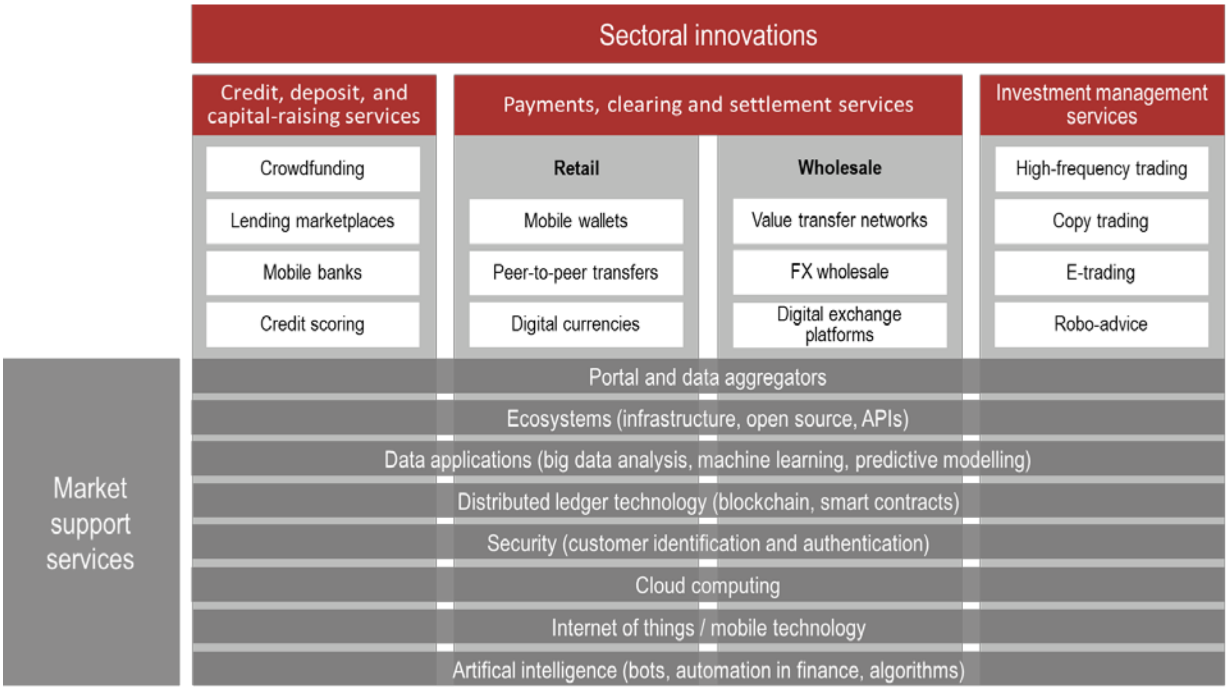
To provide a better sense of all that may be included within a broad definition of fintech, the Basel Committee has categorised fintech innovations into (i) a set of three product sectors that relate to core banking services (ie credit, deposit and capital-raising services; payments, clearing and settlement services; and investment management services) and (ii) a set of market support services that relate to innovations and new technologies that are not specific to the financial sector but also play a significant role in fintech developments (see Graph 1).

1 Basel Committee on Banking Supervision, *Implications of fintech developments for banks and bank supervisors*, February 2018, www.bis.org/bcbs/publ/d431.pdf.

2 Financial Stability Board, *Financial Stability Implications from FinTech, Supervisory and Regulatory Issues that Merit Authorities; Attention*, 27 June 2017, www.fsb.org/wp-content/uploads/R270617.pdf.

Sectors of innovative services

Graph 1



Source: BCBS.

Forward-looking scenarios for fintech

If fintech does result in material change to the banking industry, such change could take a variety of forms. At one end of the spectrum, incumbent banks could continue to dominate the banking sector by providing added benefit to customers via improvements made possible by technological innovations. At the other end of the spectrum, incumbent banks may find themselves significantly displaced by new, more nimble market entrants that are quicker to adopt fintech innovations which meet customers' needs.

The Basel Committee has explored the following set of scenarios, which are not necessarily mutually exclusive or comprehensive, that may come about as a result of fintech innovations.

- Scenario 1: "The better bank" – Incumbent banks digitise and modernise themselves to retain customer relationships and core banking services, leveraging enabling technologies to change their current business models.
- Scenario 2: "The new bank" – Incumbent banks fail to thrive in the face of technology-enabled disruption and are replaced by new, technology-driven banks that offer full service "built for digital" banking platforms.
- Scenario 3: "The distributed bank" – Incumbent banks manage to survive, but new businesses emerge to provide specialised niche services without necessarily competing with incumbents to control the entirety of customer relationships.
- Scenario 4: "The relegated bank" – Incumbent banks become commoditised service providers and cede the direct customer relationship to other financial services providers such as fintech companies.

- Scenario 5: "The disintermediated bank" – Incumbent banks are displaced from customer financial transactions by more agile platforms and technologies that better suit customer needs.

Supervisory implications for banks and banking systems

Based on its analyses of the scenarios by which fintech could reshape the banking sector, the Basel Committee has developed the following set of implications that arise from potential outcomes, together with considerations for supervisors when addressing any changes that may result.

Implication 1: The nature and scope of banking risks as traditionally understood may significantly change over time with the growing adoption of fintech, in the form of new technologies that can affect bank business models. While these developments may give rise to new and additional risks, they may also open up new opportunities for consumers and banks.

Consideration 1: While bank supervisors must remain focused on ensuring the safety and soundness of the banking system, they should be vigilant for opportunities to enhance both safety and soundness and financial stability while monitoring for current practices that might unduly or unintentionally hamper beneficial innovations in the financial industry.

Implication 2: 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.

Consideration 2: Safety and soundness and financial stability can be enhanced by the implementation of supervisory programmes to ensure that banks have effective governance structures and risk management processes that appropriately identify, manage and monitor risks arising from the use of fintech, including associated new business models applications, processes or products. These structures and processes may include:

• Robust strategic and business planning processes that allow banks to adapt their business strategies to take into account the potential impact new technologies and market entrants may have on their revenue

• Staff development processes that ensure that bank personnel have the appropriate awareness and capability to manage fintech risks

• Sound new product approval and change management processes to appropriately address changes not only in technology, but also in business activities

• Risk management processes in line with the portions of the Basel Committee's *Principles for sound management of operational risk* (PSMOR) that are relevant to fintech developments

• Processes for monitoring and reviewing new products, services or delivery channels for compliance with applicable regulatory requirements, including, as appropriate, those related to consumer protection, data protection and anti-money laundering and countering the financing of terrorism (AML/CFT).

Implication 3: Banks, service providers and other fintech firms are increasingly adopting and leveraging advanced technologies to deliver innovative financial products and services, such as artificial intelligence (AI), machine learning (ML), advanced data analytics, distributed ledger technology (DLT), cloud computing and application programming interfaces (APIs). While these innovative technologies present opportunities, they may also pose new sources of risk.

Consideration 3: Banks relying on these innovative technologies should ensure they have effective IT and other risk management processes and control environments that effectively address new sources of risk. Bank supervisors, for their part, could enhance safety and soundness by ensuring that banks adopt such risk management processes and control environments.

Implication 4: Banks are increasingly relying on third-party service providers for operational support of technology-based financial services. As a result, the delivery of these services has become more modular and commoditised. The primary drivers of outsourcing are cost reduction, operational flexibility and increased security and operational resilience. While operations can be outsourced, the risks and liabilities associated with those operations remain with the banks.

Consideration 4: Safety and soundness and financial stability can be enhanced by implementation of supervisory programmes to ensure that banks have appropriate risk management practices and processes over any operation outsourced to or supported by a third party, including fintech firms, and that controls over outsourced services are maintained to the same standard as those applied to operations that the bank itself conducts. Relevant practices and processes include due diligence, operational risk management, ongoing monitoring and appropriate execution of contracts with third-party service providers that set out the responsibilities of each party, agreed service levels and audit rights.

Implication 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, cyber-security, consumer protection, fostering competition and compliance with AML/CFT.

Consideration 5: Where appropriate, safety and soundness and financial stability can be enhanced by bank supervisors communicating and coordinating with relevant regulators and public authorities, such as those charged with data protection, consumer protection, fair competition and national security, to ensure that banks using innovative technologies are complying with the relevant laws and regulations.

Implication 6: Many fintech firms, in particular those focused on lending and investing activities, currently operate at the regional or national level. However, some fintech firms, especially those engaged in payments (in particular, wholesale payments) and cross-border remittances, already operate in multiple jurisdictions and have high potential to expand their cross-border operations.

Consideration 6: Given the current and potential global growth of fintech firms, global safety and soundness can be enhanced by further supervisory coordination and information-sharing where appropriate for cross-border fintech that affects banks.

Implication 7: Fintech has the potential to change traditional banking business models, structures and operations, including the delivery of financial services. Such fintech-related changes may require bank supervisors to reassess their current supervisory models and resources in order to ensure continued effective oversight of the banking system.

Consideration 7: Safety and soundness could be enhanced by bank supervisors assessing their current staffing and training programmes to ensure that the knowledge, skills and tools of their staff remain relevant and effective in supervising the risks of new technologies and innovative business models. Supervisors may need to consider the addition of staff with specialised skills to complement existing expertise.

Implication 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 have the potential to improve supervisory efficiency and effectiveness.

Consideration 8: Safety and soundness and financial stability could be enhanced by supervisors investigating and exploring the potential of new technologies to improve their methods and processes, and they may wish to share with each other their practices and experiences.

Implication 9: Current bank regulatory, supervisory and licensing frameworks generally predate the emergence of technology-enabled innovation. In some jurisdictions, prudential authorities do not have a remit for firms that are not banks, and some services previously conducted by banks are now being provided by other firms that may not be regulated by bank supervisors.

Consideration 9: Where appropriate, a review by bank supervisors of their current supervisory frameworks in the light of new and evolving fintech risks could uncover ways in which elements of these frameworks could evolve in a manner that ensures appropriate oversight of banking activities while not unduly or unintentionally hampering beneficial innovation.

Implication 10: Supervisors in some jurisdictions have put in place initiatives to improve interaction with innovative financial players that could facilitate innovative technologies and business models for financial services, for example innovation hubs, accelerators and regulatory sandboxes.

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

Questions

The transition to any of the five scenarios described above is likely to take time, and is unlikely to be either linear or smooth. During this transition, not only will technology companies try to behave like banks, but banks will also try to behave more like technology companies (eg by developing more products and putting them out to market at an earlier stage). This will not only change how banks deal with customers, but also challenge how supervisors deal with banks if things go awry. Meanwhile, supervisors must be prepared to make difficult choices that aim to strike a balance between prudent regulation and promotion of fintech. At the international level, changes in the structure of financial services and how they are consumed may necessitate more cross-border supervisory cooperation and fine-tuning of internationally agreed standards.

Q1. Are there aspects of bank governance structures or risk management practices that are particularly well suited or insufficiently developed to enable banks to collaborate or compete with fintech companies? How might banks better adopt fintech innovations via governance and risk management controls and protocols?

Q2. Does fintech warrant significant changes to banks' management of relationships with and reliance on third-party service providers? What enhancements might be necessary to better ensure banks' appropriately manage the risks resultant from use of fintech-related third-party service providers?

Q3. What are the best channels by which bank supervisors might communicate and coordinate with other stakeholders in fintech issues (such as other authorities charged with financial regulation, data protection, consumer protection, fair competition and national security) to ensure policy consistency and to ensure that banks comply with laws and regulations and do not introduce new or unmanaged risks into the system by means of their adoption of fintech? Similarly, how might supervisors in different jurisdictions ensure better communication and collaboration on fintech matters?

Q4. What aspects of supervisory models or regulations may need to be revisited or fine-tuned in response to changes arising from fintech developments? Have there been successes or failures experienced to date that can be shared with regard to the supervision of banks' adoption of fintech?

Q5. Are there any emerging best practices with regard to attracting, developing and maintaining supervisory staff expertise on fintech issues?

Q6. What new technologies have shown the most promise for supervisors to adopt to enhance supervisory methods and practices? Does your agency have experience you can share regarding success or shortcomings in the implementation or use of emerging "suptech" innovations intended to facilitate more effective and efficient bank supervision?

Q7. Are there approaches that bank regulators and supervisors should consider to balance an inclination toward prudent regulation and supervision of the banking sector against a desire to not unduly or unintentionally hamper beneficial fintech innovations? What trade-offs have you had to make?