Asia Securities Industry & Financial Markets Association

Best Practices for Effective Development of Fintech

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[Herbert Smith Freehills logo]
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The rapid evolution and development of Fintech is dramatically changing the face of the financial services industry, and offers the potential for increased productivity and efficiencies in the way financial services are delivered. It has also challenged policymakers worldwide as they develop regulatory responses that strike a balance between promoting innovation, maintaining the resiliency of the financial system and ensuring consumers are protected. Further, the explosive emergence of 'big data' and artificial intelligence has amplified concerns around data privacy and cybersecurity.

With these issues in mind, ASIFMA has formulated a set of ten best practices to guide regulators in the Asia region as they seek to support the development of Fintech to better serve consumers, businesses and investors.

Best Practice 1: Support the development and adoption of responsible, safe and secure Fintech products and services, by facilitating dialogue between Fintech participants, financial institutions and policymakers.

Best Practice 2: Work with the industry to explore Regtech solutions to create more efficient and effective regulatory supervision and reporting mechanisms.

Best Practice 3: If required, develop regulatory policies that strike an appropriate balance between innovation, safety, and consumer protection.

Best Practice 4: Ensure consistent regulatory standards are applied to all market participants.

Best Practice 5: Ensure inter-agency cooperation to promote consistency nationally across different sectors impacted by Fintech such as banking, securities, insurance and telecommunications.

Best Practice 6: Enhance cross-border cooperation with other regulators to promote use of best practices, recognition agreements and harmonisation of laws and regulatory requirements.

Best Practice 7: Support industry-driven interoperability.

Best Practice 8: Provide a clear framework and guidelines to allow for cross-border transmission of data for processing and storage.
Best Practice 9: Ensure laws support technological developments.

Best Practice 10: Promote cybersecurity and data security in a globally interconnected financial system.

Introduction

According to market data consolidated by the Board of the International Organisation of Securities Commissions ("IOSCO") in its report on the evolution of Fintech, investors poured US$19 billion into Fintech in 2016, and start-ups continue to proliferate. As noted in IOSCO’s report, Fintech evolution is “taking place in the context of various global trends, including but not limited to the growth of computing power enabling analysis of ever larger data sets, broader accessibility of goods and services, and disintermediation and re-intermediation. These trends in turn are happening against the backdrop of demographic and generational changes”.

Some of the more notable developments include the emergence of online alternative financing platforms such as Peer-to-Peer ("P2P") lending or equity crowdfunding ("ECF"), aimed at bringing together firms and individuals looking for capital and others that have money to lend, invest or donate. Online investment and trading platforms have also evolved significantly, driven by various factors, including changing investor demands and the speed of technological developments. There has also been a rise in the use of robo-advisers providing largely automated portfolio management, strategies and services for investors. Distributed ledger technologies ("DLT"), including blockchain technologies and shared ledgers, are also being tested in several countries for a wide variety of financial operations, including the settlement of interbank payments, the verification and reconciling of trade finance invoices, and the execution, enforcement and verification of the performance of contracts. There have also been developments in the field of big data analytics and artificial intelligence, regulatory technologies (Regtech), and cybersecurity and cloud-based technologies.

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2 Ibid, chapter 1.2.
3 Ibid, chapter 2.
5 Ibid, chapter 3.2 (iii).
6 For example, MAS also partnered with a consortium of financial institutions, R3, to develop a research and development centre and a centre of excellence, to create and conduct experiments to inform and encourage the adopt of DLT. One such experiment is a proof-of-concept project to conduct interbank payments using blockchain technology: MAS Press Release, 16 November 2016, http://www.mas.gov.sg/News-and-Publications/Media-Releases/2016/MAS-experimenting-with-Blockchain-Technology.aspx
To foster the development of Fintech, regulators in Asia have introduced various initiatives. In Hong Kong, the Hong Kong Monetary Authority ("HKMA") and the Securities and Futures Commission have set up a Fintech Facilitation Office, as well as a Fintech Contact Point and a Fintech Advisory Group. There have also been various government initiatives introduced to provide financial support to Fintech start-ups and financial institutions, including the Cyberport incubator, a key platform to support the development of Fintech companies as they pursue innovative approaches to payments or online trading platforms and P2P lending.\(^7\) The HKMA has also commissioned the Applied Science and Technology Research Institute to conduct a detailed study of DLT, pursuant to which a White Paper was issued in November 2016.\(^8\)

Fintech has been primed as a key priority by the Singapore government, and there has been a series of initiatives undertaken by the Monetary Authority of Singapore ("MAS") to nurture the Fintech sector. In addition to setting up a Fintech & Innovation Group within its organisation to develop regulatory policies and development strategies to facilitate the use of innovative technology, the MAS has also established a Fintech office to serve as a “one-stop virtual entity” for Fintech businesses to seek advice on various Fintech and technology-related government grants and schemes. The MAS has also created a Financial Sector Technology & Innovation ("FSTI") scheme to be used for setting up innovation labs, catalysing the development of innovative solutions by financial institutions, and building industry-wide technology infrastructure for the delivery of new and integrated services – FSTI is currently in the process of creating a national Know-Your-Client utility.\(^9\)

Korea has also introduced various initiatives to assist Fintech firms in developing innovative financial services. In January 2016, the Korea Financial Services Commission ("FSC") outlined its Financial Policy Roadmap\(^10\) ("Roadmap") which included the introduction of several technology investment funds. In the Roadmap, the FSC set out their plans to continue policy efforts that will help the crowdfunding system take root as a viable fundraising channel for start-ups and venture companies, and to realign the role of policy banks (such as the Korea Development Bank) to provide loans and state-backed guarantees for start-ups and small medium enterprises in accordance with their growth cycle. The Roadmap also stated that the FSC would continue reforming their financial supervisory practices and regulatory requirements to encourage more private initiatives in the financial sector.

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\(^7\) 2016-2017 Budget speech by the Financial Secretary for the Hong Kong government, [http://www.budget.gov.hk/2016/eng/speech.html](http://www.budget.gov.hk/2016/eng/speech.html)


The Financial Services Agency ("FSA") in Japan has established a Fintech support desk, and a Panel of Experts to promote the development of Fintech start-ups. The FSA has introduced several amendments to its Banking Act to relax rules on investing in financial ventures, which allow banks to buy stakes of up to 100% in non-finance related firms. Japan has also introduced various amendments to its Payment Services Act that implement registration requirements for virtual currencies exchanges, including those based outside of Japan that provide services to customers in Japan.

In Australia, the Australian Securities & Investments Commission ("ASIC") has also created an Innovation Hub to assist Fintech start-ups developing innovative products or services to navigate the Australian regulatory system. Through the hub, eligible businesses can request to receive informal guidance from ASIC on the licensing process and key regulatory issues that should be considered as firms set up their business. ASIC, through the Innovation Hub, addresses innovation issues with a coordinated approach through its Innovation Hub Taskforces, and meets regularly with international equivalents to discuss innovation developments and policy proposals.

Following the United Kingdom’s proposal of its 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 introduced are aimed at creating 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”, regulatory sandboxes have the potential to help society enjoy the benefits of innovative Fintech offerings, while mitigating the risks the public is exposed to. However, we note that there are differences amongst the different sandbox regimes, for example regarding eligibility criteria, permitted timeframe for testing and termination arrangements.

ASIC was the first jurisdiction to release class waivers to allow Fintech businesses to test certain specified services without holding an Australian financial services or credit licence. ASIC’s fintech licensing exemption allows eligible businesses to test specified services for up to 12 months with up to 100 retail clients, provided that they also meet certain consumer protection conditions and notify ASIC before they commence the business.

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There have also been different agreements signed between securities regulators to promote cooperation and collaboration on Fintech initiatives. For example, Hong Kong, Singapore, China and Korea have announced the introduction of bilateral “Fintech bridges” with the United Kingdom to help UK firms and investors access the Asian market, and to attract Asian companies to the UK. Singapore has also signed a number of Fintech cooperation agreements with other countries, including Australia, Switzerland, Korea and France. ASIC has also signed Fintech cooperation agreements with a number of other regulators, including the Ontario Securities Commission, and Capital Markets Authority, Kenya. These agreements provide for information sharing, and may also enable each regulator to refer Fintech companies for another regulator's Fintech assistance programmes, and vice versa.

However, there remain a number of challenges confronting the development of Fintech, including cybersecurity risks, difficulties of scale for Fintech companies who have to navigate differing regulatory landscapes, and regulatory uncertainty. To address these challenges, we set out below ten 'best practices' for regulators, to facilitate the development of Fintech.

The Best Practices

Best Practice 1: Support the development and adoption of responsible, safe and secure Fintech products and services, by facilitating dialogue between Fintech participants and financial institutions and policymakers.

Given the accelerated pace in technological advancement, it is important that regulators regularly engage in cross-sector dialogue with Fintech companies and financial institutions. Such engagement will allow regulators to better understand the industry landscape, including new product and technological developments and trends. Where there has been rapid innovation, for example in relation to the use of automated analytics and algorithms in retail trading and investment, regulators will need to stay ahead of the curve to understand and assess the technology and algorithms driving the trading and advice.\(^{13}\)

Regular dialogue will also allow regulators and the industry to identify opportunities and risks at an early stage of product/service development. Where common issues or concerns are identified, parties should work towards finding workable and consistent solutions.

Some Fintech companies are not traditional financial services entities and have not previously been subject to licensing and registration requirements. In other cases, a tailored regulatory framework may not exist for new products or services, such as P2P lending, and Fintech companies must comply with

existing rules and legislation. \footnote{Ibid, p. 67.} Collaboration and dialogue between regulators and both start-ups and established financial institutions will assist in their understanding of the relevant regulatory requirements and supervisory environment.

We support the steps taken by Asian regulators to better understand new financial technologies and their implications for existing policies, including the following:

- Establishing dedicated Fintech offices, contact points and hubs;
- Establishing 'regulatory sandboxes', where businesses may test products in an environment with certain regulatory flexibilities (albeit for a limited duration); and
- Setting up labs and accelerator programmes to explore whether certain new technologies can assist the regulator itself in better achieving its regulatory objectives.

Regulators may also want to consider steps to improve financial literacy and investor education, given that a lot of the new Fintech products and services are being used by retail (rather than professional or institutional) investors.

**Best Practice 2: Work with the industry to explore Regtech solutions to create more efficient and effective regulatory supervision and reporting mechanisms.**

Regtech has the potential to provide configurable, reliable and cost-effective solutions in the regulatory arena. 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, "Know Your Customer" ("KYC") procedures and systematic and global checks on anti-money laundering and sanctions. A major advantage offered by Regtech is that it enables the storage and analysis of massive and complicated data, and it has the potential to integrate and simplify compliance monitoring activities.

To take full advantage of Regtech solutions, collaboration and dialogue between regulatory bodies are crucial. Regulators should seek to leverage the experience of other regulators in using new technologies to access and process the increased volume of available data, thereby helping them to achieve their regulatory objectives such as promoting investor protection, market fairness and financial stability. Regulators may also explore new compliance software and surveillance tools, which are being developed to monitor and detect suspicious transactions. It is also important that regulators demonstrate...
technological use cases and show how technology can be applied to tackle a specific regulation. By working more closely with start-ups and consulting firms, this will also enable solutions to be certified.

**Best Practice 3: If required, develop regulatory policies that strike an appropriate balance between innovation, safety, and consumer protection.**

The development and deployment of most innovative technologies will not require new regulation. In such cases when an innovation or new business model challenges existing regulatory frameworks and new policies are required, regulators should formulate principles-based guidelines, that allow Fintech players to develop new or improved products/services that meet the needs of consumers whilst at the same time advancing regulatory objectives of investor protection, market fairness and integrity and financial stability. Given that certain technologies are still emerging, it is important that regulation is designed with sufficient flexibility, as opposed to being overly-prescriptive. A one-size-fits-all approach to policy-making is not conducive to technological innovation. Regulating the risk rather than the entity is an important principle. The regulation should reflect whether the activity is low or high risk and the type of entity undertaking the activity 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 but the regulation would change depending on the activity undertaken and the risk to the consumer and system.

By way of example, the Securities Commission of Malaysia introduced a regulatory framework for P2P lending in 2016, and in 2015, Malaysia became the first country in the Association of Southeast Asian Nations ("ASEAN") to introduce a regulatory framework for ECF. Platform operations are regulated as recognised market operators and the framework allows the regulator the flexibility to continuously reassess and redefine the regulatory framework to accommodate the introduction of new products and structures.

In Korea, ECF platforms are regulated as intermediaries and subject to less stringent licensing rules, and to lower business conduct and prudential regulation compared to existing intermediaries.15 As described above, several regulators have also established regulatory sandboxes.

It is also critical to ensure that adequate transparency is maintained to keep industry players and consumers informed of regulatory expectations and requirements. For example, in relation to robo-advice, a number of jurisdictions have taken the following steps:

- Provided guidance regarding how they expect the automated advice industry to grow;

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15 Ibid, p. 68.
• Made clarifications regarding how the existing framework applies to automated advice; and
• Issued advice and recommendations on best practices for both providers and consumers of automated advice.¹⁶

In the context of social trading and investing platforms, certain regulators have also issued clarifications and alerts that, among other things, clarify a platform’s licensing status and highlight the risks posed by certain types of social trading.¹⁷

Principles should also be tech-neutral in the sense that they should focus on specific activities, instead of the technology itself, so as not to constrain further development or alternative uses of a given technology.

**Best Practice 4: Ensure consistent regulatory standards are applied to all market participants.**

Competition is increasing in the Fintech sector. In 2015, the Economist estimated that there were over 4,000 active Fintech start-ups, and more than a dozen were valued at over $1 billion. McKinsey estimates that new entrants will increasingly battle for customers with incumbents over the next decade, with the top five banking businesses (i.e. consumer finance, mortgages, lending, retail payments, and wealth management) at risk of losing between 20% and 60% of their profits by 2025.¹⁸ Regulators have a role to play in ensuring a level playing field between existing incumbents and new entrants.

Incumbents and new entrants want to be able to innovate. Firms are working by themselves, in partnership or investing in others. In some markets the regulation on incumbents makes it difficult for them to innovate as easily as new entrants. Both incumbents and new entrants need the regulatory space to explore and test new ideas. Equally, when a product, service, platform or provider touches a consumer or poses a risk to the system then incumbents and new entrants should have the same regulations applied to them.

KYC requirements and Anti-Money Laundering ("AML") requirements are examples of regulation that should be equally applied to incumbents and new entrants. Both are key to protecting the financial system. There may, however, be opportunities to streamline requirements to the benefit of all. In this space, AML/KYC utilities are being explored so that information used by many can be pooled and used by all. Identify verification through national numbers, identification cards or biometrics is also seeking to streamline the process.

¹⁶ Ibid, pp. 35-36.
¹⁷ Ibid, p.36.
¹⁸ [https://itif.org/publications/2016/10/18/policy-principles-Fintech](https://itif.org/publications/2016/10/18/policy-principles-Fintech)
Privacy and security are two other areas where regulations should be applied equally. Consumers need to have the confidence that their information is being protected by incumbents and new entrants. Only with this confidence will consumers be willing to utilise Fintech innovations. Regulators also need to be assured that privacy and security is being managed well by firms if innovations are going to receive approval.

**Best Practice 5: Ensure inter-agency cooperation to promote consistency nationally across different sectors impacted by Fintech such as banking, securities, insurance and telecommunication.**

We encourage local regulators to formulate a protocol for cross-agency communication to ensure that a clear, consistent and coordinated approach is adopted towards Fintech companies and initiatives. For example, Insurtech companies may have to obtain licences and regulatory approvals from more than one regulator, and different regulators may apply different standards and approaches towards Fintech. As many products and services are delivered via the internet or mobile devices, the telecommunications regulator can 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.

Providing a uniform approach will better assist Fintech start-ups with developing their strategies and navigating the regulatory landscape, and regulators, government agencies and ministries can also benefit from sharing experiences and know-how. For example, the MAS has set up a Fintech Office that looks at reviewing, aligning and enhancing Fintech-related funding schemes across government agencies, and also proposing cross-agency strategies, policies and schemes in industry infrastructure, talent development and manpower requirements, and business competitiveness. Hong Kong has also created a cross-regulatory collaboration group established at the level of the Financial Services and Treasury Bureau. Representatives of the Fintech offices of Hong Kong’s three regulatory bodies are part of this collaboration group. Similarly, in Japan, a new Working Group of the Financial System Council, which is the advisory body of the Financial Services Agency, has been formed.
Best Practice 6: Enhance cross-border cooperation with other regulators to promote use of best practices, recognition agreements and harmonisation of laws and regulatory requirements.

Fintech transcends jurisdictional borders, and therefore cross-border cooperation amongst regulators is critical. As there are no overall international standards, best practices should be shared so regulators can learn from others. Recognition agreements can also allow Fintech firms to more easily cross borders to pursue opportunities. The agreement between the MAS and the UK Financial Conduct Authority and another agreement between Australia and Singapore allows for recognition. International harmonisation of laws and regulatory requirements would be ideal where possible. This may need to begin sector by sector, such as banking, securities and insurance. Regulators can make use of existing cross-border cooperation channels, or establish new formal collaborative initiatives. Regulators do, and should continue to, enter into memorandums of understanding with a view to sharing information around regulatory implications and technology developments.

We support regulators' efforts to provide flexible regulation and policies but there is the risk that divergent regulatory approaches may emerge. We therefore consider that any new policies aimed at Fintech innovation should be harmonised with policies in other jurisdictions to mitigate the risk of regulatory arbitrage and/or conflicting rules that stifle the development of innovative products and services. In this regard, we note that most Asian countries, as well as Australia, are signatories to the IOSCO Multilateral Memorandum of Understanding, which gives commitment among over 100 securities regulators to provide each other with mutual assistance and cooperation, and there may be potential to leverage on existing channels for the sharing of information.

Best Practice 7: Support industry-driven interoperability.

Financial services companies will generally implement technological changes in parallel with legacy systems, rather than overhauling their entire infrastructures. Regulators should support interoperability among the systems of all current market participants, which will lead to lower compliance costs and minimise potential disruption to the market. Data standardisation and harmonised definitions could allow financial regulators to make efficiency improvements by allowing for the sharing of information amongst market participants.

For example, the International Technical Committee for Blockchain Standards ("ISO/TC 307") is currently working on developing international standards to support the roll-out of blockchain technology, as led by

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Standards Australia. The committee includes a cross section of industry experts, consumer associations, along with government and non-government representatives, who will be looking at the standardisation of blockchains and DLT to support interoperability and data interchange among users, applications and systems. Various study group streams, including smart contracts, identity and use cases, have also been created.

**Best Practice 8: Provide a clear framework and guidelines to allow for cross-border transmission of data for processing and storage.**

Digital data is core to Fintech and that data needs to be able to continue to cross borders for processing and storage. Firms use global and regional data centres and private and public clouds to process and store data. This is done to utilise efficiencies, reduce costs and allow for 24 hour processing. In addition, information is better protected through the concentration of highly-skilled and hard to find experts in high-tech facilities in low risk locations. Business continuity is also better assured if information is stored and processed in different locations as facilities and personnel can provide back-up during natural disasters.

Some countries would like to see data kept on-shore believing that it better protects privacy and security and allows for greater accessibility. This is not the case. Multiple entry points enhance rather than reduce the risk of data breaches. Accessibility to data can also be achieved in agreed timeframes if the data is offshore particularly if linked to a licence to operate. Allowing firms to utilise regional and global data centres as well as the cloud provides particular benefits to smaller firms and supports innovation. Smaller firms are able to access technology and innovations that would otherwise be out of their reach given the costs of investment and maintenance.

**Best Practice 9: Ensure laws support technological developments.**

We recommend that governments review and update laws to ensure they allow for technological innovations to be introduced. Electronic signatures are, for example, often not accepted which limits the ability of firms to offer products digitally and means clients need to come to a physical location. Some regulations also hinder the electronic distribution of certain products, limiting the ability of firms to utilise digital distribution channels. Sometimes financial advice needs to be done face-to-face which works against a technological solution such as internet or mobile based conversations.

Identity verification also poses challenges. If customers are required to bring physical identity documents into a location it slows down processes. National identity numbers or cards, as adopted by India, can
allow for digital verification and more rapid digitisation. Voice biometrics can also be used to verify the identity of individuals.

Best Practice 10: Promote cybersecurity and data security in a globally interconnected financial system.

The future of Fintech and cybersecurity are also interlocked, as the advancements in Fintech have brought about new cybersecurity and data security risks. For many regulators and market participants, strengthening cybersecurity is one of their top priorities in their Fintech agenda. In order to help market participants navigate cybersecurity challenges and raise awareness of cybersecurity risks, several Asian market regulators such as Hong Kong, Singapore, India and Malaysia have developed, or are in the process of developing, cybersecurity frameworks and guidelines. The MAS has also established an Asia Pacific Regional Intelligence Centre\textsuperscript{20} to encourage the sharing of cybersecurity information among financial firms in the region, so as to mitigate threats. There have also been advancements in cybersecurity innovation, with various accelerator programs focusing on cybersecurity areas like fraud detection, cloud security, and encryption.

Regulators should continue their efforts to develop and adopt internationally accepted cybersecurity standards to minimise cybersecurity risks. Ensuring that cybersecurity regulations, for example in relation to data encryption standards, are harmonised will also assist international financial services firms who have to comply with potentially conflicting rules and regulations in multiple markets. Regulators should also continue to focus on regulatory cooperation and the sharing of cyber threat intelligence, so as to assist the financial industry in better monitoring cybersecurity threats as they evolve and develop.

\textsuperscript{20} \url{http://www.mas.gov.sg/News-and-Publications/Media-Releases/2016/FS-ISAC-and-MAS-Establish-APAC-Intelligence-Centre.aspx}
Conclusion

The rapid development of Fintech has not only led to vast opportunities for the financial services sector, but has also heralded a new spectrum of possible regulatory risks. To harness the full potential of Fintech, regulators should collaborate with stakeholders to support innovation. At the same time, a balance needs to be struck between developing the Fintech sector and maintaining adequate and proper safeguards against the possible risks brought about by Fintech in order to ensure the protection of consumers and the integrity of financial markets as a whole.

We hope that these best practices serve as a guide to assist regulators in thinking about, engaging with and assessing the Fintech ecosystem, in order to develop pragmatic and innovative cross-sector engagement for the betterment of the Fintech industry. Similarly, industry and other stakeholders will be able to refer to these best practices to understand how they can collaborate with regulators to orient products and services towards broader objectives that benefit consumers, markets and the economy.
About ASIFMA

ASIFMA is an independent, regional trade association with over 100 member firms comprising a diverse range of leading financial institutions from both the buy and sell side, including banks, asset managers, law firms and market infrastructure service providers. Together, we harness the shared interests of the financial industry to promote the development of liquid, deep and broad capital markets in Asia. ASIFMA advocates stable, innovative and competitive Asian capital markets that are necessary to support the region’s economic growth. We drive consensus, advocate solutions and effect change around key issues through the collective strength and clarity of one industry voice. Our many initiatives include consultations with regulators and exchanges, development of uniform industry standards, advocacy for enhanced markets through policy papers, and lowering the cost of doing business in the region. Through the GFMA alliance with SIFMA in the United States and AFME in Europe, ASIFMA also provides insights on global best practices and standards to benefit the region.

More information about ASIFMA can be found at: www.asifma.org.