Global Financial Institutions
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International Comparative FinTech Overview

How the FinTech regulatory environment compares around the world

What is the policy stance towards regulation of FinTech by authorities (e.g. technology neutral)?

Australia	The regulatory policy stance towards FinTech is to encourage FinTech to grow, and not to stifle it through heavy-handed regulation. The Government is committed to establishing Australia as a FinTech hub through: ▪ Increased investment into STEM research and entrepreneurial businesses; ▪ Providing licensing exemptions for eligible entities through Australin Securities and Investments Commission's (ASIC) regulatory sandbox; and ▪ Working with the Australian Prudential Regulation Authority (APRA) to reduce barriers for new FinTech entrants into the banking sector.
Germany	The German regulator BaFin takes the approach that regulation must be applied equally to traditional business models and innovative forms of delivery of financial services. Generally, BaFin is open to look at FinTech business models and has created a dedicated section on its webpage with detailed information on how regulation applies to several different "archetypes" of FinTech business models. BaFin actively scans the market, attends conferences and is open to discussions with the FinTech scene and is prepared to expand their information offering to new business models as and when the need arises. Moreover, BaFin has created an "interdisciplinary" working group from BaFin's three sectors (banking, investment services and insurance supervision) to deal with licensing queries in a quick and unbureaucratic manner.
Hong Kong	The Hong Kong government and regulators have adopted a technologically neutral position towards regulation of FinTech. The Securities and Futures Commission (SFC) has indicated it is open to licensed corporations and new entrants deploying technologies that "achieve the right results under Hong Kong's rules and standards." The Hong Kong Monetary Authority (HKMA) and the Office of the Commissioner of Insurance take a similar policy stance of applying the rules broadly and fairly without singling out new technologies. The current regulatory approach is to

	apply the existing legal and regulatory framework to established and emerging Fintech business models.
Japan	The primary financial regulator in Japan, the Financial Services Agency (FSA), is working out new approaches for the promotion of FinTech in Japan, including new regulations related to Open API, bank investments in FinTech ventures, crowdfunding and virtual currency, as well as relaxation of requirements under existing financial regulations in order to accommodate new technologies. The FSA launched a FinTech Support Desk and various FinTech related committees to promote Japan as a financial centre / FinTech hub.
Singapore	The Singapore financial regulator, the Monetary Authority of Singapore (MAS) has indicated that regulation should not front-run innovation as introducing regulation prematurely would stifle innovation. Instead, the regulatory approach should be to balance the risks posed by new technologies in a proportionate manner (e.g. regulation will come in when the risks posed by the new technology becomes material or crosses a threshold). The MAS has also launched various FinTech initiatives to promote Singapore as a financial centre / FinTech hub (see below).
UK	HM Treasury's Regulatory Innovation Plan of April 2017 explains that a key aim of government policy is to ensure support for the development of new business models and disruptive technologies, that break down barriers to entry and boost productivity. In the light of Brexit, encouraging innovation in financial services is said to be an even higher priority. The UK Government aims to create the right regulatory environment to ensure that innovative firms can compete and grow. Regulation is to be proportionate and promote innovation, rather than limit it.
US	FinTech is generally regulated in the U.S. at the federal and state level. Overall, the policy stance towards regulating FinTech is to promote innovation, particularly under the new Presidential Administration, while ensuring that consumers and other members of the general public continue to receive the same traditional protections under the law.

What licensing requirements apply and whether they differ from conventional financial services?

Australia	Licensing requirements do not differ from conventional financial services. However, to encourage and support new FinTech businesses in their start-up phase, the following concessions have been provided: ▪ A regulatory sandbox (refer below); ▪ A widening of the crowdsource funding framework and eligibility to participate in crowdsource funding; ▪ Regulatory guidance specific to robo-advice; ▪ An Innovation Hub established within ASIC (the regulator) to assist FinTech businesses to navigate through the regulatory requirements.

Germany	Licensing requirements do not differ from conventional financial services and no "sandbox" or similar feature is available for FinTech companies. Under BaFin's information leaflets, FinTechs are likely to require licenses as follows: ▪ Innovative payment services typically require a license under the German laws implementing the EU payment Services Directive, unless an exemption for technical services providers apply; ▪ Crowdinvesting platforms may require banking or investment services or fund management licenses, depending on their business model; ▪ Crowdlending models limiting themselves to intermediation may only require a "small licence" under the Industrial Code for loan intermediation; ▪ Robo advice and automated trading or social trading including portfolio administration based on robo advice typically requires an investment services license, unless completely based on investment funds, in which case a "small license" under the Industrial Code might be sufficient; ▪ Since virtual currencies are viewed as financial instruments, dealing, intermediation including trading platforms which deal in virtual currencies will require an investment services license.
Hong Kong	FinTech businesses are subject to the same licensing, regulatory supervision and ongoing legal and compliance obligations applicable to conventional providers of financial services. In the e-payments space, the *Payment Systems and Stored Value Facilities Ordinance* recently created a licensing framework for issuers and operators of Stored Value Facilities (SVFs). The HKMA is responsible for licensing and supervising SVFs in Hong Kong and ensuring they are sufficiently liquid to meet their payment obligations. Under this regime, the HKMA is empowered to decide whether an SVF licence should be granted; conduct ongoing supervision of licensees; and conduct investigation and impose sanctions on licensees where appropriate.
Japan	There is no specific licensing regime for FinTech which is different from the one for conventional financial services.
Singapore	There is no specific licensing regime for FinTech in general. As FinTech encompasses a broad range of activities, the existing regulatory framework (which is technology-agnostic) will regulate the different FinTech business generally depending on the exact activities carried out by such FinTech businesses, e.g. securities crowdfunding is regulated under the Securities and Futures Act (SFA) whereas cross-border remittances are currently regulated under the Money-Changing and Remittance Business Act. However to cater to the changes in the industry and to address novel business, the MAS has embarked on various initiatives / consultations to enhance the existing regimes: ▪ FinTech Regulatory Sandbox. For novel businesses not already existing in the market (and which may not necessarily fit into the existing regulatory regimes), the MAS has introduced the "FinTech regulatory sandbox" in which the MAS will consider and calibrate the appropriate licensing requirements depending on the business; ▪ CrowdfundingFor crowdfunding, the MAS has consulted the industry and issued FAQs to confirm that securities crowdfunding would fall within the MAS licensing regime under the SFA (e.g. very generally equity-based crowdfunding would require a capital markets services

	licence for dealing in securities) but if such business falls within certain restricted conditions such as it is aimed only at accredited or institutional investors, these platforms may be subject to slightly "relaxed" requirements such as lower base capital requirements, no security deposit to be held by the MAS and lower operational risk requirements, and they may avail themselves to certain exemptions from prospectus registration requirements. Where lending-based / rewards-based crowdfunding activities fall outside the existing SFA regime, the licensing requirements do not apply however the MAS has issued also FAQs on lending-based crowdfunding to clarify the applicable restrictions / requirements); ▪ Robo-advice / digital financial advice / insurance. The MAS has recently issued a few licences to robo-advisers and depending on the nature of their business, some may be regulated as fund managers whereas others may be financial advisers. The MAS will also be issuing guidelines on the governance, supervision and management of algorithms for roboadvisers. For insurers / web aggregator platform, MAS plans to facilitate insurers offering the full suite of life insurance products online without advice and will be issuing guidance on the safeguards to be put in place for online distribution of life insurance products; ▪ Payments framework. The MAS is revamping the framework for regulating payments, to appropriately address cross-border remittances, currency conversion, virtual currency intermediation services and operation of any payment platforms, or payment communication platforms, among others. The MAS has issued a consultation paper on this but has yet to release its feedback on this so the developments on this are still in fairly preliminary stages.
UK	FinTech businesses are subject to the same authorisation and supervision requirements as for all firms (for example, the need to meet and continue to satisfy the statutory "Threshold Conditions" governing matters including suitability and resources). However, the FCA's "Project Innovate" seeks to engage with new firms or business lines and to remove unnecessary obstacles to innovation. Applicant firms receive "timely and frank feedback" on their proposals. A key element of Project Innovate is the "Innovation Hub" which to date has assisted over 300 businesses to place innovative products and services on the market. The Hub also has a forward looking role to identify new technologies and areas where regulation needs to change to permit innovation in the consumer interest. Firms admitted to the Hub receive dedicated supervisory support, for their first year of business.
US	FinTech businesses are generally subject to the same regulation as other more traditional businesses. However, some federal agencies and states have created particular licenses and registrations to address unique needs of certain FinTech industries. For example, the Office of Comptroller (OCC) of the Currency, which regulates national banks, recently created a "FinTech charter. "However, the enactment of this charter was promptly challenged by the Conference of State Bank Supervisors (CSBS), which alleged that the issuing of the FinTech charter by the OCC exceeded its authority.

Are there special regimes such as "sandboxes" for piloting and how do they operate?

Australia	ASIC's regulatory sandbox allows eligible FinTech businesses to: ▪ Test certain financial and credit services for up to 12 months without needing to apply for a financial services or credit licence; and ▪ Offer products and services to wholesale clients and a limited number of retail clients (up to 100 retail clients only), with appropriate monetary exposure limits in place. Due to its success, the Government is looking to enhance these exemptions - the Government is looking to: ▪ Extend the testing timeframe to 24 months; and ▪ Allowing businesses to test a broader range of financial products and credit services without a licence. These developments will mean increased competition and choice for consumers, and less regulatory burdens in developing new and innovative financial products for FinTech businesses. At the same time, businesses will continue to be subject to strict disclosure requirements and consumer protection obligations.
Germany	None. Under the current philosophy of BaFin and the Federal Ministry of Finance (the same regulation applies for everyone to create a level playing field), it is unlikely that a "Sandbox" regime would be established in Germany anytime soon.
Hong Kong	The HKMA established a Fintech Supervisory Sandbox (FSS) in 2016 to enable authorised institutions (AIs) to conduct live pilot testing of Fintech initiatives, such as biometric authentication, securities trading and Blockchain technology. The HKMA has not prescribed a specific application process or a list of supervisory requirements that it is potentially willing to relax during the testing period. Within the FSS, AIs will be able to conduct product trials involving actual banking facilities which are not subject to full compliance with the HKMA's regulatory / supervisory requirements, provided that: ▪ There are clear definitions of the scope and phases of the trial, the timing and the termination arrangements; ▪ Adequate measures are in place to protect the interests of customers during the trial; ▪ Appropriate risk management controls are in place to mitigate and address cyber security, system disruptions and other risks; and ▪ The relevant systems and processes are ready, and trials are closely monitored to ensure timely identification of issues and their prompt resolution.

Japan	No. There is no regulatory sandbox in Japan, although the FSA carefully follows the development of the regulatory sandbox in other countries.
Singapore	Yes, the MAS has launched the FinTech Regulatory Sandbox and based on publicly available information, there is currently one FinTech business operating within the sandbox. In brief, the sandbox will allow a FinTech business meeting the following evaluation criteria to commence business within a controlled environment (e.g. limited number of persons) with the regulatory support of the MAS by relaxing specific legal and regulatory requirements that the business would otherwise be subject to during the duration of the sandbox: ▪ The proposed financial service includes new or emerging technology, or uses existing technology in an innovative way; ▪ The proposed financial service addresses a problem, or brings benefits to consumers or the industry; ▪ The applicant has the intention and ability to deploy the proposed financial service in Singapore on a broader scale after exiting the sandbox. If there are exceptional reasons why the proposed financial service cannot be deployed in Singapore, for example it is not commercially viable to deploy in Singapore, the applicant should be prepared to continue contributing to Singapore in other ways, such as continuing the developmental efforts of the proposed financial service in Singapore; ▪ The test scenarios and expected outcomes of the sandbox experimentation should be clearly defined, and the sandbox entity should report to MAS on the test progress based on an agreed schedule; ▪ The appropriate boundary conditions should be clearly defined, for the sandbox to be meaningfully executed while sufficiently protecting the interests of consumers and maintaining the safety and soundness of the industry; ▪ Significant risks arising from the proposed financial service should be assessed and mitigated. For example, providing evidence of preliminary testing of the proposed financial service as part of the sandbox application, identifying the risks discovered from the preliminary testing and the proposal for mitigating the risks; and ▪ An acceptable exit and transition strategy should be clearly defined in the event that the proposed financial service has to be discontinued, or can proceed to be deployed on a broader scale after exiting the sandbox.
UK	Yes, the FCA has established a "Regulatory Sandbox" which opened for its first group of firms in May 2016. The Sandbox provide an environment where new and existing firms (whether regulated or not) can experiment without being subject to the usual regulatory consequences. A second group of participants will be announced shortly. As a reflection of its success, the industry through trade association, Innovate Finance, is being encouraged by the FCA to establish a "Virtual Sandbox," where firms could experiment in a virtual environment using their publicly available data. Sandbox firms are authorised with restrictions allowing them to test their ideas, but no more. This means that they only need satisfy the Threshold Conditions to the extent necessary for testing. Post-Brexit, UK regulators may have greater flexibility as they will not be bound by mandatory EU requirements. Unlike other areas of financial regulation, the rules governing the payments sector already allow for lighter touch regulation (e.g. through Small Authorised Payment Institutions). The FCA can also grant through the Sandbox "no enforcement letters",

	individual guidance on the interpretation of relevant rules and waivers and modifications of rules always providing the relevant statutory grounds are made out. A number of potential safeguards are available to customers (e.g. requiring their consent and providing compensation). The lifecycle for a participant in the Sandbox would typically comprise: ▪ Submission of a proposal; ▪ FCA assessment against eligibility criteria; ▪ Agreement of testing approach; ▪ Testing and monitoring; ▪ A report and evaluation stage; and ▪ A decision by the business whether to offer the product or service outside the Sandbox.
US	We are not aware of any regulatory sandboxes in the U.S. that have been approved. The concept has been proposed through legislation and various regulators including the Federal Reserve, the Treasury Department and the SEC, but, to our knowledge, none have yet been approved. Due to the wide variety of regulators and the fact that a business entity may be subject to a multitude of both federal and state regulators (unlike other countries), it may be difficult for such a concept to be successfully implemented in the U.S.

Are there other derogations available to FinTech business from regulatory requirements (e.g. light touch capital rules)?

Australia	There are no other derogations, other than those described above in relation to the sandbox; crowdsource funding; assistance navigating regulations by ASIC. That said, the Government is looking to relax the 15% ownership cap for innovative new entrants and will lift the current prohibition on the use of the term "bank" for ADIs with less than $50M in capital.
Germany	None as regards capital. Crowdlending also raises a prospectus issue, but the law contains an express exemption from the prospectus requirement for "crowdfinancings" for smaller investments as follows: ▪ 1,000 EUR;

	▪ 10,000 EUR if the respective investor has disposable assets in excess of 100,000 EUR; ▪ Double the average monthly net income of the investor, limited to an investment of 10,000 EUR. The total number of investments issued by the same issuer must not exceed 2.5 million Euro in order to benefit from the above mentioned exemptions.
Hong Kong	None, other than specific relaxations offered on a case by case basis to eligible AIs within the FSS.
Japan	There are no specific derogations for FinTech.
Singapore	Yes, as discussed above, there are proposed relaxations of requirements for securities crowdfunding businesses satisfying certain prescribed conditions. For further details, please see the MAS' consultations, FAQs and guidelines on the same.
UK	Generally speaking, there are no specific derogations for FinTech except for those described in the context of the operation of the Sandbox. However, with a view to helping new banks to enter the market, the PRA has lowered the barriers to entry for banks arising from capital requirements which now increase more gradually as a business develops. Alternatively under a "mobilisation option" authorisation can be granted but with restrictions in place until more capital is secured.
US	We are not aware of any specific derogations to the laws applying to FinTech entities. However, licenses are being created, and statutes enacted, that are tailored to FinTech business. For example, the JOBS Act passed by Congress permits crowdfunding as a way to raise capital for new enterprises through the use of online portals.

What is the general environment for FinTech (e.g. talent availability, capital for investment, gov't programmes, taxation, customer willingness to use)?

Australia	There is a strong environment for FinTech businesses to grow including: ▪ Regulatory support The Government established an Innovation Hub, which helps FinTech businesses navigate the regulatory laws, including by providing

	informal guidance from regulatory advisers. ▪ Access to capital Government funds: there are various government grants for R&D and to support entrepreneurial businesses. Crowdfunding: the Government's latest crowd-sourced equity funding framework will provide a new funding source for eligible startups and businesses starting in September 2017. Venture capital: strong venture capital funding from companies such as Reinventure and H2 Ventures. Initial Public Offering: internationally competitive exit opportunity for FinTech companies (listing requirements in Australia require A$15M market capitalization versus USD$500M global market capitalization for NYSC and NASDAQ). ▪ Tax advantages There are a raft of concessions available for FinTech businesses (generally the concessions are targeted at business with an aggregate annual turnover of less than $2M), they include: – Lower company tax rate; and – Ability to deduct professional expenses (including cost of raising capital) incurred when starting a business. ▪ Talent The Government is committed to increasing local skills development in STEM research and entrepreneurial firms. Australia also has a strong track record of attracting quality overseas talent in the area of IT and STEM research. ▪ Receptiveness of the public Australians are early adaptors of FinTech products and services, including micro-investing product platform Acorns Grow Australia Limited.
Germany	A report commissioned by the Federal Ministry of Finance in March 2017 showed roughly 350 active FinTech companies in Germany. The report also confirmed high growth rates in all FinTech segments. The full market potential for FinTechs in German is estimated at 1.7 trillion EUR (380 billion in financings and 1.3 trillion in wealth management). Of this market, FinTechs are expected to catch relatively moderate EUR 58 billion in 2020, EUR 97 billion in 2025 and EUR 148 billion in 2035 (base case). Frankfurt is an ideally placed hub primarily for B2B business models. Recently a Fintech co-working space was inaugurated with government support. Various firms from the financial sector have created incubators, accelerators, labs and similar playgrounds to promote FinTech business models. Another center for FinTech activity is in Berlin, which is the "start-up capital" of Germany due to its dynamic and creative environment. Although not specifically targeted at FinTechs, a number of government-sponsored funds are available for seed and VC financing. Further

	founder financing at favourable rates is available from various government agencies although again not specifically targeted at FinTechs. The Federal Ministry for the Economy has created a new "FinTech Council" in March 2017 which comprises both representatives from FinTech companies and incumbents as well as regulators and authorities, which is principally a forum for dialogue. Overall, government sponsoring in Germany specifically targeted at FinTech companies is lagging behind other markets. FinTechs principally rely on the funding and assistance through business angels, incubators, seed and VC investors as well as (increasingly) on partnerships with banks, insurers and other financial sector companies.
Hong Kong	A report published in May 2017 entitled "The Future of FinTech in Hong Kong" by the Financial Services Development Council (FSDC), a government appointed cross-sector adviser, found as follows: ▪ Talent - the availability of tech talent in Hong Kong is high compared to the limited availability of entrepreneurial talent; the talent pipeline is supported by favourable immigration policies including an entrepreneur visa; ▪ Capital - government funding schemes provide around $5 billion, including co-investment with private venture capital firms on a matching basis. The seed funding market is small, but the increased focus and support from government is raising awareness; ▪ Policy - policies tend to be more government-led than regulatory-led. While Hong Kong is an easy place to set up a new business, the regulatory framework lacks clarity which might create a high barrier to entry for start ups; ▪ Demand - retail consumer adoption of FinTech products is high in Hong Kong, with small and medium sized enterprises also starting to embrace new FinTech solutions.
Japan	While one issue in FinTech in Japan has been a relatively limited pool of talent, the market has begun to use cooperation between banks / traditional financial institutions and FinTech ventures to overcome this issue. Traditional financial institutions have set up some FinTech funds, but generally speaking, there is not enough of venture capital to invest robustly in FinTech in Japan. There are no special tax measures to promote FinTech.
Singapore	Singapore's FinTech agenda includes creating a Smart Financial Centre and facilitating the infrastructure for an innovation ecosystem to adopt new technologies and has adopted a number of initiatives to achieve this purpose including: ▪ MAS formed a Financial Technology and Innovation Group (FTIG) within MAS to drive Smart Centre initiatives in Aug 2015; ▪ MAS and the National Research Foundation set up the FinTech Office on 3 May 2016 to serve as a one-stop virtual entity for all FinTech matters and to promote Singapore as a FinTech hub and its members are MAS, Economic Development Board of Singapore, Infocomm Investments Pte Ltd, Infocommunications and Media Development Authority, National Research Foundation, SPRING Singapore; ▪ There are various grants and schemes available for FinTech businesses including the Financial Sector Technology and Innovation (FSTI) in

	relation to which the MAS has committed S$225 million over the next five years for innovation centres, institutional level projects and industry wide projects; ▪ Launched LATTICE80, a dedicated physical space for FinTech dedicated physical space in the heart of Singapore financial district for FinTech start-ups to work, connect, and co-create with the financial industry and VC investors. MAS also launched the Looking Glass, an innovation lab to spur collaboration among MAS, financial institutions and start ups and facilitate consultations for startups by industry experts; ▪ Partnering the industry to use blockchain technology for interbank payments and has successfully concluded a proof-of-concept project to conduct domestic interbank payments; ▪ Creating an API economy by pushing financial institutions to develop and adopt APIs and for them to offer as many of them as possible to the community (see link).
UK	A report commissioned last year by HM Treasury entitled "UK FinTech - On the Cutting Edge" found as follows: ▪ Talent - that the UK had access to both a good pool of talent and exceptional financial expertise; ▪ Capital - that the availability of talent was good for "early stage investment although UK venture funds had less risk appetite than US equivalents; ▪ Policy - the UK had the most supportive regulatory environment (as described above); ▪ Demand - the concentration of financial services activity provided an excellent platform from which to provide FinTech solutions (e.g. trading regulatory, data etc.).
US	The general environment in the U.S. for FinTech is positive and innovation is being encouraged by both the government and business leaders. Major FinTech hubs in the U.S. include San Francisco / Silicon Valley, Chicago and New York. According to a recent study by Deloitte, FinTech venture capital deals in the U.S. in 2016 equaled approximately $6.2 billion.

What trends can be seen in the market?

Australia	▪ Continuous strong growth in the FinTech sector, especially in areas of digital payment, personal and business finance services, and financial infrastructure and data analysis; ▪ It is forecasted that the FinTech sector will grow at a compound annual growth rate of over 75% and reach $4.2B by 2020.

Germany	The trend looks promising. Compared to UK, where investments have somewhat stagnated recently, growth rates for FinTech investments are good and further growth is expected. Emerging themes are RegTech and Insurtech. Brexit may give the German FinTech market a further boost as many UK-based FinTech companies will have to reconsider their options. Relatively strict regulation in Germany with no sandbox or other relief as well as data protection and data security issues being taken more seriously than in other countries, also due to customer expectations may give German FinTechs more credibility compared to peers based in jurisdictions with a more relaxed legal environment.
Hong Kong	Research conducted by the Hong Kong Trade Development Council suggests that in recent years, there has been a surge of activity in areas such as information and communication technologies, Internet of things, data analytics, biotech, artificial intelligence and robotics, among others, with Fintech, healthcare and big data applications among the most popular sectors. The HKMA expects minimal disruption from FinTechs, with banks already leveraging on new technological solutions to reduce operating costs, improve efficiency and enhance customer experience. Given its relatively small consumer market, the FSDC predicts that Hong Kong will see more activity in the B2B rather than the B2C space, with Fintechs partnering with incumbents to improve their offerings rather than engaging with customers directly.
Japan	We are seeing clients using big data, blockchain technology, PFM and crowd funding. In addition, we see increasing cooperation between traditional financial institutions and FinTech ventures aiming to realize more effective operations (i.e. cost saving solutions) within traditional financial institutions.
Singapore	We are seeing clients using blockchain technology beyond wallets and exchanges but instead combining this with P2P lending / creating a P2P market place and setting up a VC fund to invest in startups on the platform.
UK	Although the UK was a "first mover" in terms of implementing FinTech policy initiatives other countries are catching up and closing the gap. As FinTech matures, some centres are becoming more specialised (Benelux with payments and Dublin with fund administration) which could pose a challenge to the UK's more diversified approach - although conversely this might be a strength. The trend in regulation is for increased competition and downward pressure on costs creating a demand for innovative solutions (e.g. in the provision of wealth management and payments).
US	We expect to see a continued partnering between government and the private sector to promote an atmosphere friendly to innovation in the FinTech space. We also expect to see more efforts by regulators to assert jurisdiction over certain types of "fintech" transactions, such as those involving cryptocurrencies, including bitcoins. For example, the CFTC has taken enforcement action against dealers who market cryptocurrencies on a leveraged basis to retail persons without obtaining the proper license.