



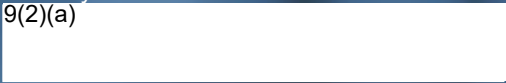
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Regulation of FinTech: Jurisdiction Analysis

Report for use by New Zealand Treasury

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EXECUTIVE SUMMARY

Regulating FinTech

FinTech is big business and helps solve real world problems from savings to transacting in a digital world. Regulation must encourage and allow innovation and flexibility, while continuing to protect both individuals and the integrity of the whole financial system.

For the purposes of this Report, FinTech is defined as *“technology-enabled innovation in financial services that could result in new business models, applications, processes, or products with associated material effect on provision of financial services”*.

The nature of FinTech businesses means that there are numerous legal frameworks that apply in respect of their business. In addition to financial services regulations, businesses must also navigate other relevant regulated areas such as AML/CFT, data storage, privacy and IP.

Technology also makes it easier for FinTech businesses to cross borders easily. This means, however, that in addition to domestic regulation, they will also need to navigate a new set of laws and rules in each new overseas jurisdiction they enter.

Prudential versus conduct regulation

In the context of FinTech, prudential and conduct regulation tools and methodologies often cohabit within sandboxes, innovation hubs and new rule making. In many of the jurisdictions surveyed in this Report, there has been a focus on conduct regulation. In our view, however, the two must be examined together and changes evolved in a coherent and consistent manner. The background to this Report is in the review of prudential regulation in New Zealand. We have, therefore, turned the analysis back to prudential matters where we are able to do so.

Options for New Zealand

This Report identifies and surveys a number of common approaches for the regulation of FinTech globally. It also identifies that, of the jurisdictions assessed, most have moved towards a technology-neutral approach that regulate types of activities rather than specific institutions or models of delivery.


In developing options for New Zealand, it will be important to consider the costs and benefits of each in how they address the specific objectives.

Although not a comprehensive analysis, we have identified **four key approaches** to FinTech regulation:

- **Adjusting the perimeter of prudential regulation**

One approach to regulating FinTech is to adjust **who** is subject to prudential regulation and **how** they are treated.

Regulatory oversight can be adjusted to deal with the risks that are most relevant to New Zealand.



An approach to FinTech could include either or both of the following:

- **Broadening the perimeter**

This may be achieved by expanding the types of activities that are regulated, for example by amending existing provisions to become technology-neutral in order to deal with FinTech businesses that are not provided by traditionally regulated market participants. This may, of course, increase unintended capture and necessitate additional resources to provide guidance or exemptions.

In some areas, such as the regulation of virtual assets (from cryptocurrencies to security tokens), imposing clear and well-judged regulation may help robust and well-run businesses to flourish.

Any attempt to capture new activities must, however, ensure it is addressing risks in the least restrictive way necessary to mitigate costs of supervision and costs of compliance for businesses.

- **Narrowing the perimeter**

FinTech businesses already meet considerable compliance obstacles, for example complying with strict AML/CFT rules. Regulators could revisit in some cases whether existing rules are overly restrictive for certain FinTech businesses and create disproportionate costs to the risks that are posed.


Regulators may also consider whether different **levels** of regulatory compliance may be appropriate, rather than a binary (all or nothing) approach. For example, Australia allows the creation of digital banks with restricted licences that do not require the same level of capital. Reduction in compliance, however, may result in under-regulation.

Flexibility is, therefore, key. Regulators are likely to benefit from the power and discretion to “call in” or “exempt out” activities and businesses.

- **Regulatory sandboxes**

In some respects, a sandbox is simply an example of narrowing the regulatory perimeter to dis-apply more onerous rules in certain cases. It is the creation of an alternative reality, where FinTech businesses can test the worth of their ideas more cost-efficiently and with fewer restrictions, and where regulators can experiment with prudential and conduct settings which may later evolve into the broader market. Regulators can gain experience with FinTech business models and understand risks, using this knowledge to produce guidance or publish exemptions in respect of the wider regulatory regime.

Sandboxes are also clearly being used as marketing tools in the race to be the destination of choice for smart FinTech businesses. In addition, they serve networking and knowledge-sharing purposes (where they cross over with innovation hubs, incubators and accelerators, as discussed below).



In a small and (relatively) lightly regulated jurisdiction such as New Zealand, where access to law makers and regulators is (relatively) straightforward, the need for a formal sandbox may be less. However, it is a tool which is available and should be considered carefully for New Zealand.

In designing the sandbox, global best practice suggests that flexibility is key, and that it should be open to a cross section of businesses, both start-ups and incumbents, that trial periods should extend as long as it remains beneficial for the parties, and processes should be in place for regulators and businesses to access as much data as they need for decision making and planning purposes.

- **Innovation hubs, incubators and accelerators**

Innovation hubs, incubators and accelerators recognise that it can be difficult to grow new businesses or evolve new financial products, given a range of head winds from availability of capital through to the complexity of legal and regulatory arrangements for financial services businesses.

Access to information, services, mentors, capital, advisers and other necessary items is key to allowing FinTech to achieve its promise.

New Zealand already has some of these elements in place, but can afford to consider the best practices globally as there is little downside regulatory risk in helping people, in particular, understand and comply with regulation.

- **Cooperation agreements**

Given New Zealand is a small market and the ease with which technology allows FinTech products and services to cross borders, it is important that New Zealand engage with international bodies and other countries to make these trans-jurisdictional interactions possible and subject to consistently good quality regulation. Accordingly, participation in institutions such as GIFN and cooperation agreements with key trading partners appear to be obvious next steps for New Zealand to consider.

The country studies

Each of these approaches is illustrated by the specific country studies which follow in this Report. We also draw out, where applicable, other approaches to FinTech including assistance in raising capital, incentive programmes, open banking initiatives (e.g. development of API standards and protocols) and specific guidance or changes in relation to cryptocurrencies and other virtual assets.

The countries surveyed are:

- **Australia**
- **The United Kingdom**

- 
- **Ireland**
 - **Canada**
 - **Hong Kong**
 - **Singapore**
 - **Estonia**

This is not intended to be globally comprehensive. A full analysis of a wider or an alternative selection of jurisdictions would increase the complexity and scope of the Report. However, we do take note of some key FinTech developments within other jurisdictions or across jurisdictions that are not the direct focus of this Report.

Next steps

We welcome the Treasury's pro-active approach in its consideration of the ways in which good regulation can lead to good outcome for both FinTech business and their customers.

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GLOSSARY

AI	Artificial intelligence
AML/CFT Act	<i>Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (NZ)</i>
API	Application programming interface
ASIC	Australian Securities and Investment Commission
B2B	Business to business
DIA	Department of Internal Affairs (NZ)
DLT	Distributed ledger technology
FATF	Financial Action Task Force
FA Act	<i>Financial Advisers Act 2008 (NZ)</i>
FMA	Financial Markets Authority (NZ)
FMCA	<i>Financial Markets Conduct Act 2013 (NZ)</i>
FMS Act	<i>Financial Markets Supervisors Act 2011 (NZ)</i>
FSLAA	<i>Financial Services Legislation Amendment Act 2019 (NZ)</i>
FSP Act	<i>Financial Service Providers (Registration and Dispute Resolution) Act 2008 (NZ)</i>
FSPR	Financial service providers register (NZ)
ICO	Initial Coin Offering
IPS Act	<i>Insurance (Prudential Supervision) Act 2010 (NZ)</i>
KYC	Know your customer
MBIE	Ministry of Business Innovation and Employment
P2P	Peer-to-peer (e.g. peer-to-peer lending)
RBNZ	Reserve Bank of New Zealand
RBNZ Act	<i>Reserve Bank of New Zealand Act 1989 (NZ)</i>

1 BACKGROUND AND APPROACH

1.1 Purpose and background information

The Treasury and Reserve Bank have established a joint team (**Review Team**) to undertake Phase 2 of a review of the Reserve Bank of New Zealand Act 1989 (the **Review**).

The Review is being structured around three public consultations. The first consultation was completed between November 2018 and January 2019. The consultation paper focused on structural issues: objectives, governance, deposit protection, the regulatory perimeter, and the potential separation of the Reserve Bank's prudential regulation function. The second consultation will last two months, and begin in June 2019. The consultation paper will focus on more technical topics, such as the legal framework for prudential regulation, supervision and enforcement, and coordination.

A notable theme from submissions on the first consultation paper was the need for any reforms to ensure that the RBNZ Act was sufficiently flexible to adapt to new FinTech delivery models, and potential changes in market structure. That feedback has come from both a financial stability perspective (FinTech as a risk), and a competition/market development perspective (FinTech as an opportunity). Given the weight of feedback, there is a clear need to give this matter a meaningful degree of attention. The Independent Expert Advisory Panel for the Review has also emphasised that expectation during Panel meetings.


1.2 Specific questions

At a general level, the Review Team must ensure that any policy development remains cognisant of basic principles of good regulation. Primarily this involves ensuring any regulatory tools are technology neutral, and providing the Reserve Bank with the ability to scan the horizon and intervene when needed. The Review Team has asked us to produce a background paper (this **Report**) that covers the following matters:

- 1 The key issues or complexities associated with the prudential regulation of FinTech;
- 2 The approaches that international regulators have taken to respond to those issues (e.g. sandboxes, graduated licensing regimes, and Innovation Hubs); and
- 3 Features of the New Zealand context that would impact on how various responses might translate into New Zealand's regulatory system.

The international regulatory regimes that have been initially selected as most relevant for the purposes of this Report are:

- Australia;
- United Kingdom and Ireland (including any incidental EU regulation);
- Canada;

- 
- Hong Kong;
 - Singapore; and
 - Estonia.

1.3 Approach and limitations to this Report

The scope of this Report is to provide a high level study of the above. We begin by summarising some of the key complexities of FinTech and potential responses by New Zealand. These conclusions are also drawn from the assessments of the identified jurisdictions, which themselves are high level summaries of their treatment of FinTech.

We have considered a variety of sources in producing this Report including market surveys, government policy statements, guidance and publications from financial supervisors, academic and legal commentary, and other primary and secondary sources.

Given the wide cross-section of products and services that fall under FinTech and the timeline for this work, the scope of the Report does not account for all of the specific actions that different jurisdictions have taken in respect of the FinTech industry. Accordingly, this Report focuses on the general regulatory regime and high-level policy objectives of each jurisdiction, and does not assess the specific legislative obstacles or gaps.

This Report is not intended to be legal advice to any person and should not be relied upon as legal advice in relation to any jurisdictions. We are New Zealand lawyers and statements or summaries in relation to the law of any other jurisdiction are necessarily impressionistic and have not been verified or checked with local counsel.

1.4 Selection of jurisdictions


The selection of jurisdictions for this Report is primarily based on countries which we understand to be (a) proactive in regulating FinTech and (b) which share (in most cases) a relatively similar set of cultural and jurisprudential norms with New Zealand. These countries may offer frameworks and elements which are easier to implement in New Zealand.

We included Estonia because it is widely recognised in FinTech (and other tech) circles as a leader in adopting new technologies at a national level.

We omitted the United States on the basis that its scale, federal system and multiplicity of overlapping regulators made it complex to draw meaningful comparisons to New Zealand.

This selection does, however, bring limitations. In particular:

- the jurisdictions identified in this Report generally take a positive view to FinTech. Accordingly, the regimes generally follow a tech-neutral approach and we do not capture jurisdictions that have sought to be more restrictive; and

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- the lack of diversity by reference to other jurisdictions such as the United States, Latin America and civil law European countries (outside of Estonia) does not capture the widest possible range of distinct approaches.

A full analysis of a wider or an alternative selection of jurisdictions would increase the complexity and scope of the Report. However, we do take note of some key FinTech developments within other jurisdictions or across jurisdictions that are not the direct focus of this Report in section 11. In this case, the selection of items is not intended to be comprehensive but rather to take note of some particularly interesting actions or approaches that we have come across in our research.



2 INTRODUCTION TO REGULATION OF FINTECH

2.1 What is FinTech and why is it important

Financial technology (**FinTech**) has many definitions. For the purposes of this Report, FinTech is defined as “technology-enabled innovation in financial services that could result in new business models, applications, processes, or products with associated material effect on provision of financial services”.¹

In this Report, where helpful to do so, we have also adopted RBNZ’s division of FinTech into the following broad categories:²

- Distributed Ledger Technology (**DLT**) and blockchain;
- Cryptocurrency;
- Application Programming Interfaces (**APIs**);
- Big Data and Artificial Intelligence (**AI**);
- Digital platforms encompassing peer-to-peer (**P2P**) activities; and
- Other developments, not included in the above.

Each category creates its own distinct regulatory requirements. Accordingly, the categories often require their own specific regulatory treatment. Where appropriate, this Report references how these categories have been dealt with in the relevant jurisdictions.

FinTech is a key growth sector. Global investment into FinTech companies for 2018 reached \$US111.8 billion, more than doubling the investment from 2017, with significant growth expected heading into the future as the industry continues to mature.³


These new products and services seek to be more accessible and flexible to meet the modern demands of customers and create efficiency in business operations. Accordingly, FinTech is seen as a disruptor to existing financial services and products and often operates within the same context as more traditional financial service businesses. This means FinTech will interact with a variety of regulatory frameworks:

- FinTech business are generally subject to the same or similar frameworks of financial law as traditional businesses, e.g. banking, securities, financial advice, and AML/CFT;
- Like traditional businesses, FinTech businesses will also follow general legislation such as the rules of corporate governance and commercial law;
- The innovative and digital nature of FinTech means FinTech businesses will have more direct interaction with intellectual property, privacy and data protection; and

¹ Financial Stability Board *Financial Stability Implications from FinTech: Supervisory and Regulatory Issues that Merit Authorities’ Attention* (27 June 2017) at [2.1].

² Reserve Bank of New Zealand (**RBNZ**) *Bulletin Vol. 81 No. 12* (November 2018) at 4.

³ KPMG *The Pulse of FinTech 2018: Biannual global analysis of investment in fintech* (13 February 2019) at 3.

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- The focus on accessibility and expansion across borders associated with digital offerings means that FinTech will often also fall within the regulatory frameworks of international jurisdictions. This is especially true of start-ups which are often international from inception.

In order to promote innovation and capture the growth of the industry, a clear and future-proof regulatory regime is needed that will build confidence and encourage businesses to participate and compete against existing incumbents, as well as allow established businesses to develop new products and services to meet the contemporary demands of customers. Alongside this, supporting activities are important to assist such businesses in understanding any new law as well as how international frameworks might affect them.

Where there is not adequate regulation or guidance, participants in the industry may have to operate with uncertainty in a grey-zone or are otherwise dissuaded from participation.

2.2 Prudential vs conduct regulation

Prudential regulation aims to ensure that institutions adequately manage both their own financial risks and the risks they collectively pose to the financial system.

Conduct regulation focuses on behaviours and outcomes in financial markets. Conduct regulation aims to ensure that consumers are adequately informed and that regulated entities act fairly, transparently, and with integrity.

Traditionally, the tools for prudential regulation have included examples such as capital requirements, liquidity requirements, governance requirements and risk management procedures. These were used to deal with financial institutions such as banks and insurers which were typically associated with creating market risks and generate negative externalities and moral hazards.

As is discussed below, some of the key issues of FinTech are that the financial activities, traditionally provided by banks and insurers, which were sought to be prudentially regulated, are increasingly shifting to traditionally unregulated institutions (e.g. P2P), and that the new models FinTech provide create new prudential concerns such as the use and vulnerability of data. Accordingly, new prudential tools to address these are needed and may include actions such as adjusting the regulatory perimeters.

There is scope for prudential regulation to address the new methods of delivery and underlying business models that may have systemic implications and financial stability risks. Some examples include:


- the standards on what data should be accessible to businesses and, subsequently, how it may be collected and used;
- errors or disruptions in algorithms used in AI or robo-advice;
- the security of offerings that rely on digital networks;
- the market distorting effects of AML/CFT and the proportionate application of regulation; and
- the use of RegTech to assist with regulation of FinTech.

Prudential regulation needs to be balanced to meet its objective. The table below reflects Treasury's identified attributes and indicators of best practice regulation.

Growth compatible	Economic objectives are given appropriate weightings relative to other specified objectives, including factors contributing to higher living standards.
Proportional	The burden of rules and their enforcement should be proportional to the issues being addressed and the expected benefits of the regulation.
Flexible, durable	Regulated entities have scope to adopt cost efficient and innovative approaches to meeting legal obligations. The regulatory system has the capacity to evolve in response to changing circumstances (such as market disruptions).
Certain, predictable	Regulated entities have certainty about their legal rights and obligations. The regulatory regime provides predictability over time.
Transparent, accountable	The development, implementation, and enforcement of rules are transparent (clear and easily understood by all those affected).
Capable regulators	The regulator has the people and systems necessary to operate an efficient and effective regulatory regime.

2.3 Complexities associated with the regulation of FinTech

While the nature of FinTech poses its own legal complexities, it is important to recognise that many of the obstacles to regulation derive from external social, economic, and technological factors (amongst others).



According to an American academic, William Magnuson:⁴

... [F]intech raises a number of red flags related to systemic risk: fintech firms are particularly vulnerable to adverse shocks, they have multiple pathways for those shocks to spread to other actors, they present significant informational asymmetries, and their market is growing. All of these elements indicate that fintech could potentially serve as a catalyst for wider losses in cases of extreme events, some of which may be predictable and others of which may not.

Accordingly, the complexities associated with the regulation of FinTech can be broken down into two categories, **legal** and **non-legal**, detailed below.

Regulators must also have a strong understanding of FinTech products and services in order to regulate them. Without this, it is difficult to set strategic and policy goals. For example, legislators must balance the factors in respect of 'FinTech as a risk' and 'FinTech as an opportunity'.

2.3.1 Legal issues

Legal issues for consideration include:

- **Interaction with general legislation:** Because FinTech businesses provide substantial similar activities to traditional businesses, FinTech will interact with numerous regulatory aspects, both inside and outside of financial legislation frameworks. There is a need to ensure regulation across the board is either tech-neutral or appropriately addresses FinTech as intended.
- **FinTech challenges specific legislation:** While general financial legislation must be kept up to date e.g. licensing and registration, along with other legislation, FinTech is a pressure point for other regulatory aspects which need greater reform. In particular, areas such as AML/CFT, data protection, and privacy, are areas that have needed to be specifically addressed and have attracted multilateral attention. The Report discusses some of these specific challenges and measures in section 11. In addition, the role of FinTech has replaced traditional institutions, and developments such as P2P and cryptocurrency have gone outside the role of traditional banks and insurers, which are regulated, and brings these associated financial activities outside the traditional perimeter of prudential regulation.
- **Uncertainty around FinTech:** Uncertainty on how particular FinTech functions and uncertainty in predicting what future FinTech will take the form of makes it difficult to ensure that FinTech is adequately covered under legislation, even under a technology-neutral approach.
- **Alignment with other jurisdictions:** FinTech often operates cross-border. Regulators need to decide how they will regulate FinTech business that operate from New Zealand or into New Zealand. Where possible, it may be beneficial to align domestic regulation with other jurisdictions to lower the barriers to entry for businesses but also reduce the complexity for regulators and supervisors to share information and conduct their own duties. On the other hand, there may be a preference to depart from other jurisdictions in some cases. Accordingly, there are policy decisions that each jurisdiction will judge that depend on their own objectives and existing regulatory frameworks. While international alignment is desirable, such differences make alignment or mutual recognition especially difficult.

⁴ William Magnuson "Regulating Fintech" (2018) 71 Vanderbilt Law Review 1167 at 1204.

- **Vulnerability of FinTech:** The digital nature of many products makes them more vulnerable to cyber risks. Regulators need to ensure that adequate regulations are in place to ensure that data is stored and protected to a satisfactory standard.
- **Practical implementation of regulation:** once it is identified that certain FinTech activities should be regulated, there is also a question on how to implement it. It may be that traditional regulatory approaches are inappropriate to dealing with FinTech. For example, where a digital business relies on an international customer base and needs to complete AML/CFT, how can it quickly manage customer due diligence processes where receiving physical documentation for verification could take weeks. In these circumstances, 'regulatory technology' or RegTech can play a key part and integrate the same underlying technologies that FinTech businesses rely on. For example, DLT can be used as a means of digital identification, or as a means of tracking payments in P2P business.

2.3.2 Non-legal issues

Examples of some non-legal considerations include:

- **Balance of promoting and regulating FinTech:** At a high-level, legislators will need to assess the extent it wishes to promote FinTech. Regulators may wish to create less or more restrictive rules, depending on whether certain activities are intended to be promoted or discouraged. It should also consider what the regulatory environment will mean on aspects of retaining fair competition between FinTech and traditional businesses. Amongst these considerations, it should be noted that many FinTech businesses are start-ups and SMEs, for which the same level of regulation may be inappropriate e.g. capital requirements of banks.
- **Perception of FinTech:** The uncertainty around the implications of some products may create reluctance in the market. This is particularly true where there is silence or a lack of guidance by the regulators in respect of a product to provide it with legitimacy. In the case of Cryptocurrency, DLT and virtual assets, there may be examples of banks 'de-risking' and not providing banking access for businesses dealing with cryptocurrency and other digital assets.
- **Infrastructure to support FinTech:** In order for FinTech to succeed, supportive policy and programmes need to be put in place to allow the businesses and the market to develop (sometimes along with regulatory change):
 - **Access to funding and other incentives:** Many FinTech businesses are start-ups that require capital to launch and test their products. Other incentives such as tax offsets and R&D credit make it easier for FinTech businesses to establish.
 - **Access to talent:** FinTech businesses need access to skilled talent, especially with FinTech becoming increasingly complex and involving the use of AI. Markets need to attract skilled workers to develop FinTech products.
 - **Adequate digital infrastructure:** FinTech businesses need technical infrastructure such as high speed broadband. It also needs access to data and consumer information so that FinTech businesses can make informed decisions on developing its products.

- **Access to support:** It is not enough that a market exists and that regulation is in place, FinTech businesses need assistance to understand how the regulation works and how to enter and operate in the market (especially in relation to internationalisation). Hubs and clusters can assist by bringing expertise together to share knowledge, resources and collaborate.

2.4 The FinTech policy “Trilemma”

Academics Brummer and Yadav have usefully expressed this confluence of issues (and others) as complicating the already difficult enterprise of overseeing and regulating financial innovation:⁵

... [T]he task of regulating financial innovation comprises a policy trilemma (“Trilemma”). Specifically, when seeking to provide (i) clear rules, (ii) maintain market integrity, and (iii) encourage financial innovation, regulators are able to achieve, at best, two out of the three objectives. For example, if regulators prioritize market safety and clear rulemaking, they necessarily must do so through broad prohibitions, likely inhibiting financial innovation. Alternatively, if regulators wish to encourage innovation and provide rules clarity, they must do so in ways that ultimately provide simple, low intensity regulatory frameworks, increasing risks to market integrity. Finally, if regulators look to promote innovation and market integrity, they will have to do so through a complex matrix of rules and exemptions, heightening the difficulties of compliance, international coordination and enforcement.

The solution, the writers consider, is that regulators can better deal with the special opportunities and risks of FinTech by using new strategies which are focussed on:

- domestic agency co-operation;
- international standard setting; and
- better private self-governance of emerging technologies.

In this way, and through “regulatory experimentation”, “... the Trilemma’s risk of market instability and rules complexity can be hedged and more efficiently mitigated”.⁶


2.5 Multiple layers of regulation

While this Report focuses on the prudential regulation of FinTech at a country level, therefore, there are multiple layers of potential regulatory action which are relevant:

- **Multilateral organisations**, examples include; the Financial Stability Board (**FSB**) which is an international body that monitors and makes recommendations about the global financial system. It does so by coordinating national financial authorities and international standard-setting bodies as they work toward developing strong regulatory, supervisory and other financial sector policies; the Global Financial Innovation Network (**GFIN**) which intends to create a ‘global sandbox’ for FinTech; and, the Financial Action Task Force (**FATF**) which, along with various regional blocs,

⁵ Chris Brummer and Yesha Yadav “FinTech and the Innovation Trilemma” (2019) 107 Georgetown Law Journal (2019) 235 at 242.

⁶ Brummer and Yadav, above n 5, at 297.



discusses and negotiates how states must implement regulation in relation to AML/CFT, and the EU which legislates directives for Member States;

- **Bilateral agreements**, for example, cooperation agreements and mutual recognition arrangements between countries may set agreed standards for certain activities;
- **Country**, which may include both state and regional regulation and involve a number of regulators; and
- **Industry**, for example, the approach to the development of APIs for open banking in New Zealand has been to give industry participants the first opportunity to develop industry-led regulation and standards, before or in lieu of government intervention.

Regulators should ensure that engagement is made across the different levels to get proper insight of the entire FinTech sector and to tailor regulation to meet the needs of the different stakeholders.

This Report highlights some of the activity of multilateral organisations and private industry in section 11.

2.6 Different approaches

Alternatively, we can consider different *approaches* to regulation (as opposed to layers). For example, according to Zetzsche, Buckley, Barberis and Arner: ⁷

We see four approaches [to FinTech regulation] and frame these as doing nothing (which could be a restrictive or a permissive approach, depending on context), cautious permissiveness through flexibility and forbearance (under which existing rules are relaxed in specific contexts), restricted experimentation (for example, sandboxes or piloting), and regulatory development (in which new regulations are developed to cover new activities and entrants).

Under this matrix, for example, New Zealand's approach to much FinTech regulation would be perhaps be characterised as a mix of doing nothing (on the basis that existing regulation is relatively light in relevant areas), flexibility and forbearance (through generous exemption powers for regulators) and some regulatory development (for example, implementation of specific licensing regimes for equity crowdfunding and P2P lending).

2.7 Four key approaches to FinTech regulation


Many of the countries examined by this Report have taken common approaches to regulate FinTech. Where appropriate, the general approaches are outlined here and the specific details of any such approach is discussed under the respective jurisdiction.

Although not a comprehensive analysis, we have identified **four key approaches** to FinTech regulation:

2.7.1 Adjusting the perimeter of prudential regulation

As discussed, FinTech has often relied on new models and institutions that were not caught under the traditional prudential regimes, but which often pose the same types of risks. Different states have dealt

⁷ Dirk Zetzsche, Ross Buckley, Janos Barberis and Douglas Arner "Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation" (2017) 23 Fordham Journal of Corporate & Financial Law 31 at 35.



with this in various ways for example, shifting focus from regulating identified institutions to regulating types of activities and providing regulators with declaratory powers to bring in businesses that fall outside of the regulatory perimeter.

More generally, there is a practice of adjusting the perimeter of prudential regulation to include different activities or aspects that were not traditionally seen to require regulation. This may also include adopting a technology-neutral approach which aims to ensure that similar activities are regulated and to prevent distortion in the market environment and provide a level playing field.

Once the scope of prudential regulation is set, regulators may use other secondary tools such as sandboxes, innovation hubs, and cooperation agreements (see below) to tailor and build understanding and compliance with the regime. On the other hand, where the exact scope and objective of prudential regulation is not yet set, these tools provide an opportunity for regulators to engage with the industry to better understand the risks and identify the objective level of regulation.

2.7.2 Regulatory sandboxes

A sandbox is a regulatory mechanism that allows the development and testing of FinTech in a controlled environment, for a trial period, without the usual licensing requirements and under minimal legal requirements.

The sandbox generally allows FinTech businesses to develop its product in a live environment and to interact with regulators to gain a better understanding its regulatory requirements.

The precise details and requirements of each sandbox however will depend on its design as decided under the local jurisdiction.

There is an open question, however, whether all regulatory sandbox programmes are driven by need or whether there is an element of FOMO (fear of missing out) where jurisdictions are simply competing to position themselves as the jurisdiction of choice for global businesses which could establish themselves anywhere.⁸

In addition to the sandboxes discussed in this report under the respective jurisdictions, the European Supervisory Authorities have published a joint report into the sandboxes available throughout the EU.⁹

2.7.3 Innovation hubs, incubators and accelerators

These are organisations or programmes designed to facilitate innovation and growth of FinTech. They primarily do this by connecting subject matter experts, regulators and other industry participants to work together. In particular, these structures may:

⁸ See, for example, Iris Chiu “A Rational Regulatory Strategy for Governing Financial Innovation” (2017) 8 European Journal of Risk Regulation 743 at 746, “*The regulatory sandbox is being copied in other leading financial jurisdictions. However, we should not be too quick to think that this regulatory approach has become a “gold standard”. The quick “copying” and adaptation by other regulators can merely be due to a fear of being left behind*”.

⁹ See, for example, European Securities and Markets Authority (ESMA), European Banking Authority (EBA) and European Insurance and Occupational Pensions Authority (EIOPA) *Fintech: Regulatory sandboxes and innovation hubs* (7 January 2019).

- 
- allow its participants to share knowledge and build a better understanding of FinTech, including helping FinTech businesses navigate regulatory frameworks and helping regulators to learn about new FinTech developments;
 - assist FinTech businesses to access funding through grants or by matching them with interested investors;
 - provide coaching to FinTech businesses to grow and develop their business models;
 - provide a workspace and collaborative environment to start-ups that were either unavailable or not practical within the rigid structure of a large company; and
 - provide access to specific data, technology or software that a business would not normally be able to access

2.7.4 Cooperation agreements

Cooperation agreements are arrangements between countries/regulators to work together to enhance mutual understanding of regulatory issues, identify market developments and trends, promote innovation within the FinTech ecosystem, assist with necessary enforcement, and to assist FinTech companies with entering the respective markets.

The level of mutual recognition and extent of information sharing will depend on the specific agreement, but generally the goal is to support compliance with the respective country's regulatory framework by:

- identifying a contact person to assist with transition into a new market;
- assisting with understanding the jurisdiction's regulatory framework;
- assisting with pre-authorisation applications e.g. licencing and registrations;
- providing support with subject experts; and
- assisting with ongoing regulatory compliance.

Each of these themes is illustrated by the specific country studies which follow. We also draw out, where applicable, other approaches to FinTech including assistance in raising capital, incentive programmes, open banking initiatives (e.g. development of API standards and protocols) and specific guidance or changes in relation to cryptocurrencies and other virtual assets.

3 NEW ZEALAND'S APPROACH TO FINTECH

Key points:

- New Zealand can benefit from its small size and open market by providing an attractive environment to develop new products. However New Zealand needs to better signal its commitment and engagement to FinTech to compete with other small open markets such as Singapore or Estonia which are currently more proactive.
- New Zealand does not yet have Government led sandboxes or innovation hubs to engage with businesses.
- New Zealand heavily relies on international engagement and needs to engage more deeply with other countries to align with them and provide greater ease of access to exporters and investors.

New Zealand is generally considered to be an open economy that is easy to do business in. New Zealand was ranked 1st in the world for Ease of Doing Business by the World Bank's 2018 Report and is also ranked in Transparency International's Anti-Corruption Perceptions Index 2018 as the 2nd least corrupt country in the world.

With a relatively small population made up of a broad demographic used to being early adopters of new solutions as well as having regulators whom are easy to engage with, New Zealand can be a great testing ground for new products before launching into larger markets.


The Reserve Bank of New Zealand (**RBNZ**) has kept a close eye on the development of FinTech and implication for the Reserve Bank's responsibilities as the prudential regulator of banking, insurance and financial market infrastructures. The Reserve Bank has engaged the industry and the public through speeches, the publication of bulletin articles and analytical notes on FinTech generally or specific developments such as cryptocurrencies and central bank digital currencies, and by including relevant contents in its Financial Stability Report. The ongoing Currency Cycle Transformation Programme is informed by developments in FinTech, including digital currency developments.

In this section, we briefly outline aspects of New Zealand's current approach to regulating FinTech for the purpose of making educated comparisons to the other jurisdictions considered in the following sections of this Report.

3.1 General regulatory framework

New Zealand generally does not distinguish FinTech from other financial services and so the same legal frameworks apply across the board. However, most of our financial services legislation is very recent and, for example, the Financial Markets Conduct Act 2013 (**FMCA**) for example has an express purpose to promote innovation and flexibility in the financial markets.

There are a number of frameworks that apply in respect of the different subsectors of the financial industry. Accordingly, New Zealand has a range of legislation and regulations that are maintained by different authorities. For example the banking, non-bank deposit taker (**NBDT**) and insurance sectors are



regulated by the RBNZ, financial markets and financial advice are dealt with by the Financial Markets Authority (**FMA**), and the Department of Internal Affairs (**DIA**) has a role in relation to AML/CFT. These bodies create prudential regulation but also have authority to create and enforce other conduct regulation. Ministry of Justice (**MoJ**), with the support of other organisations including the Ministry of Business Innovation and Employment (**MBIE**) and Treasury, are also involved in creating prudential regulation. The prudential regimes and regulatory approaches that will apply to FinTech need to therefore be considered in relation to the relevant subsectors.

All financial services business which have a place of business in New Zealand or provide licensed financial services are required to be registered on the Financial Service Providers Register (**FSPR**) under the Financial Service Providers (Registration and Dispute Resolution) Act 2008 (**FSP Act**) and to join an approved dispute resolution scheme if it provides services to retail clients in New Zealand. Those which are a financial institution and provide designated activities will also be a reporting entity with obligations under the Anti-Money Laundering and Countering of Financing of Terrorism Act 2009 (**AML/CFT Act**).

Certain businesses, including those which provide funds management, discretionary management services, P2P lending, equity crowd funding and derivatives issuance, are also required to be licensed under Part 6 of the FMCA.

Banks are registered and NBDTs are licensed by RBNZ under the RBNZ Act and NBDT Act, respectively. NBDTs are also supervised by private financial markets supervisors to ensure compliance with offers of debt securities

These regulators have a range of powers that generally allow them to:

- impose requirements on businesses through registration/licence conditions;
- declare classes or specific persons to be designated as subject to the legislation;
- grant exemptions; and
- publish guidance on the application of the relevant frameworks and how they must be complied with.

3.2 Specific FinTech measures

Recent New Zealand financial services legislation has been drafted to be technology-neutral (for example, the Financial Service Legislation Amendment Act 2019, (**FSLAA**)) which will permit robo-advice, currently provided under a specific FMA exemption. At times, however, legislators have taken specific steps to accommodate for FinTech where necessary. For example, the FMCA introduced a tailored regulatory regime for equity crowd funding and peer-to-peer lending.

3.2.1 Regulatory perimeter

With certain exceptions (e.g. licensing for P2P lending and equity crowdfunding, and a new technology-neutral regime for regulation of robo-advice), there have not yet been significant changes to the regulatory perimeter to address issues specific to FinTech in New Zealand.

3.2.2 No sandbox

The FMA has previously considered the benefits of developing a regulatory sandbox approach, but its current view is that New Zealand's legislation and the principled approach of regulators is sufficiently flexible that no specific sandbox is needed.¹⁰ This view has been shared to date by the RBNZ.¹¹

3.2.3 Innovation hubs and accelerators

There are no Government led innovation hubs or accelerators specific to FinTech. However, there are a number of initiatives that can provide support to FinTech businesses. For example:

- State-owned Kiwibank along with private sector participants founded and sponsors a Fintech Accelerator Programme, which provides a working environment and start-up capital for new businesses to develop in the FinTech sector;¹²
- Callaghan Innovation is a Government innovation agency that helps with general technology and product development, and can assist with experts and R&D funding; and
- In addition, there are a number of other government agencies that provide different support services for businesses including New Zealand Trade and Enterprise, MBIE, Te Puni Kōkiri, and the Ministry of Foreign Affairs and Trade.

There are, in addition, examples of initiatives run by the private sector that promote FinTech. For example:

- The New Zealand Financial Technology Innovation Association (**FinTechNZ**) is a FinTech industry working group. It is funded by its members who comes from across the FinTech sector and include financial services providers, technology innovators, investor groups, government regulators, and financial educators;¹³
- The FinTech Regulatory Roundtable is an ongoing series of panel discussions led by subject experts on developments to the industry and regulatory requirements. Previous roundtables have included discussion on topics such as Open Banking; and
- There are a number of additional private sector incubators that support start-ups and established businesses and accelerators.

3.2.4 Co-operation agreements

New Zealand regulators are not (yet) members of the GFIN, nor are we aware of any other steps to join FinTech specific international arrangements.

¹⁰ Financial Markets Authority *Briefing for the incoming Minister of Commerce and Consumer Affairs* (2 November 2017) at 11.

¹¹ Fiennes T "The Reserve Bank, cyber security and the regulatory framework", a speech delivered to the Future of Financial Services (10th annual) conference in Auckland. <https://www.rbnz.govt.nz/research-and-publications/speeches/2017/speech-2017-07-19>.

¹² Lightning Lab <<https://www.lightninglab.co.nz/programmes/fintech2019/>>.

¹³ FinTechNZ <<https://fintechnz.org.nz/>>.

3.2.5 Access to capital and incentives

Callaghan Innovation (see above) provides researching funding through grants and repayable loans to innovative New Zealand businesses, including in the FinTech space.

The Government has also launched a new system of research and development tax credits which will be available to FinTech businesses.

As noted above, the FMCA has a stated purpose to promote innovation and flexibility in the financial markets. The equity crowd funding and P2P lending platforms established under the FMCA allows companies to raise up to \$2 million in any 12-month period from retail investors without meeting full regulatory requirements of an initial public offer. This is arguably a world-leading regime.

The Taxation (Research and Development Tax Credits) Bill passed on 2 May 2019 and amends the Income Tax Act 2007 and the Tax Administration Act 1994 to introduce a research and development tax credit to incentivise businesses to perform research and development.

3.2.6 Banking and APIs

Open banking has been a key focus for the current Government.

Payments NZ is also trialling APIs with banks and third parties that will enable accredited third parties to make retail payments on behalf of their customers and to establish common standards that banks and providers can use to share customer data.¹⁴

Summary of some New Zealand initiatives

Public Sector	Private Sector
<ul style="list-style-type: none">• There are no Government led innovation hubs or accelerators specific to FinTech.• State-owned Kiwibank along with private sector participants founded and sponsors a Fintech Accelerator Programme, which provides a working environment and start-up capital for new businesses to develop in the FinTech sector• Callaghan Innovation is a Government innovation agency that helps with general technology and product development, and can assist with experts and R&D funding.• In addition, there are a number of other government agencies that provide different support services for businesses including New Zealand Trade and Enterprise, MBIE, Te Puni Kōkiri, and the Ministry of Foreign Affairs and Trade.	<ul style="list-style-type: none">• The New Zealand Financial Technology Innovation Association (FinTechNZ) is a FinTech industry working group. It is funded by its members who comes from across the FinTech sector and include financial services providers, technology innovators, investor groups, government regulators, and financial educators.• There are a number of additional incubators that support startups and established businesses including Icehouse.

¹⁴ PaymentsNZ “API workstream” <<https://www.paymentsnz.co.nz/our-work/payments-direction/api-workstream/>>.



3.3 New Zealand's FinTech complexities and competencies

As discussed in section 2.3 of this Report, there are a number of legal and non-legal complexities in relation to the regulation of FinTech. Some of New Zealand's particular complexities, and competencies to address those, are detailed below.

3.3.1 Complexities

While a technology-neutral approach may help to mitigate against obsolescence of, legislators often cannot foresee the precise nature of future FinTech products. Therefore, legislation still often struggles to fully capture the intricacies of these products and how FinTech businesses operate. This leads to situations where FinTech may be caught under a number of, and sometimes conflicting, provisions. This creates operational uncertainty and sometimes means that FinTech businesses must operate in a grey-zone, for example:


- under the FMCA, there is uncertainty when digital tokens would fall under the classes of financial products and would be subject to disclosure obligations;
- under the AML/CFT Act, the financial activities that deem a person to be a reporting entity were developed 20 years ago to deal to the risks traditional financial institutions, and there is uncertainty as to the extent these activities may or should capture certain FinTech businesses.

A technology-neutral approach is needed. However, regulating in a technology-neutral context still raises issues:

- It is impossible to entirely account for every kind of future development in FinTech and new models will inevitably fall on the periphery or outside of the regulatory regime. Regulators need to have the agility to either expressly bring these businesses within the prudential regulatory regime or provide guidance on the existing regime's application.
- A technology-neutral approach should still respect the level of risk the regime seeks to address. Removing the distinction between FinTech and traditional products naturally extends the regulatory perimeter and may have unintended capture. In this situations, regulators need to retain the flexibility to provide exemptions or have discretion in the application of regulation. This could be done at a macro industry/activity level, e.g. through direct regulation, or at a micro level on a case-by-case basis e.g. tailored licensing conditions or individual exemptions.

In respect of the above, is important that responses are quick so as to not prolong uncertainty. This means that regulators will need to be well-resourced to address these points with the necessary expediency and expertise.

It is also important to note that while a technology-neutral approach seeks to treat the same types of financial activities similarly, regulators need to be aware of and respect the differences between traditional financial activities and FinTech which may need specific regulatory consideration. For example, the collection, use and protection of data is key for FinTech initiatives utilising big data and AI needs particular attention. Another example may be virtual asset service providers which do not have any standards on how they must hold these assets.



To the extent that prudential supervision is expanded more broadly to other financial activities, new legislation may also be required to provide regulatory authority to the relevant bodies.

PwC completed a survey on the New Zealand FinTech sector in 2017.¹⁵ Participants were asked to consider whether certain areas were a regulatory barrier to innovation in FinTech. 57% responded that AML/KYC was a barrier (compared to 48% of global respondents). Other barriers cited were Digital ID authentication, new business models, and data storage.

The lack of legislative or regulatory acknowledgment has resulted in unfavourable market treatment. This is also especially true for AML/CFT for example where legislative silence or regulatory acceptance of cryptocurrency-based businesses has created difficulty to maintain banking relationships with mainstream banks, which are reluctant to accept the risk in complying with their own obligations under the AML/CFT Act.

The FinTech accelerators and hubs in New Zealand are more tailored to suit smaller start-ups and ventures. Accordingly, there is a gap in New Zealand's support networks for established or larger businesses to obtain the detailed mentorship with regards to regulatory and market needed to develop their products. The alternatives are usually not fit for purpose, for example:

- partnering with large corporates provides often lacks the operational flexibility and regulatory understanding that is needed; and
- there is uncertainty about the types of support organisations that exist and what their specific activities are, what businesses they support and at what stage of its business model.

As noted by RBNZ in its Bulletin, there are a number of specific subsector developments in FinTech that may require a careful approach to prudential regulation. Two examples (amongst others identified in the Report) include:¹⁶

- open banking may also have implications for financial stability if it creates more customer churn resulting in weaker, more arms-length client relationships. The loss of customer loyalty may make deposits a less stable source of funding. This increases liquidity risk, while weaker customer ties could reduce the ability to cross-sell and diminish profitability, and could have implications for incumbents' ability to manage credit risk. While the system as a whole is not necessarily weakened, prudential standards may need to be adjusted, for example to treat deposits as less sticky to take weaker customer loyalty into account, or to tighten requirements on banks' estimation of credit risk and monitoring of provisioning; and
- if P2P insurance models emerged in New Zealand, the issue for the RBNZ could be whether the particular P2P insurance model/structure is considered to be a contract of insurance and therefore regulated, or not, as the case may be. To be captured under the Insurance (Prudential Supervision) Act 2010, the offering would need to fall within the definition of a contract of insurance, where there is acceptance of risk in return for a premium.

¹⁵ PwC *The FinTech survey 2017 Beyond blurred lines: Have Financial Services Institutions misread the innovation landscape?* at 12.

¹⁶ RBNZ, above n 2, at 27



3.3.2 Competencies

As discussed, New Zealand's small, diverse open market and approachable regulators makes it an attractive environment for doing business. Because New Zealand legislation does not restrict FinTech, conducting business is generally easy for FinTech businesses that offer products outside of New Zealand or that only deal with wholesale or qualifying investor clients (including financial services businesses, entities with net assets of more than \$5 million, government bodies, or investors with a sufficient level of experience and knowledge). Conducting regulated activities is more complex however and, as described below, is often difficult as businesses and supervisors are reluctant to engage with what can be ambiguous law.

Compared to other jurisdictions, New Zealand does not have developed rules in relation to data storage. This is in contrast to, for example, the EU which is subject to the General Data Protection Regulation (GDPR) and EU Data Location Requirements. However, FinTech businesses from New Zealand operating in the EU may need to comply with those regulations and raises the need for businesses to gain understanding of overseas regulatory regimes.

3.4 Potential responses

New Zealand does not have any government/supervisor led initiatives specific to FinTech. This is in contrast to the majority of jurisdictions assessed in this Report. These initiatives have been beneficial to both businesses, which benefit from gaining regulatory and commercial understanding, and regulators, which benefit from getting a better understanding on the nature and needs of FinTech.

Good regulation that addresses FinTech and encourages certainty and participation, in the first instance, requires that regulators have a full understanding of the particular complexities associated with FinTech and that regulation accurately captures FinTech as intended. Industry engagement with regulators should be encouraged.


3.4.1 Adjusting the perimeter of prudential regulation

Many jurisdictions have adopted a technology-neutral approach to legislation. This is important to prevent existing law from becoming obsolete as new technology and business models develop, as seen in Canada where focus on entity types rather than activities has left a competitive imbalance between business which are regulated and those which are not.

A technology-neutral and principled based approach however does lead to uncertainty in application where it is not clear how regulation would apply. In these circumstances, regulators need to be prepared to act quickly and either amend legislation or provide guidance on its application. As above, this requires regulators to proactively engage with the industry to understand what needs to be done to address this uncertainty.

New Zealand FinTech businesses, in particular, have noted AML/CFT legislation as a key challenge and should be a key focus for development.

As discussed, development of FinTech regulation also happens at a regional and multilateral level. FinTech and the underlying technology supporting FinTech is also relevant to industries outside just financial services. Accordingly, it should be noted that the regulation of FinTech should not simply be



siloes with the financial regulators, but should involve other government departments which may show or derive an interest in the sector or which can help to facilitate the necessary change. Other government departments that may be interested in the strategy in relation to FinTech may include, for example, the:

- Ministry of Foreign Affairs, for multilateral engagement;
- Ministry for Primary Industries on how business-to-business may be utilised to support exporters;
- Ministry of Education, New Zealand Immigration and MBIE on developing talent and business incentives.

3.4.2 Sandboxes and innovation hubs

Sandboxes and innovation hubs are not necessarily essential to promote and regulate FinTech, the jurisdictions that have had the most success without them are those which have a particularly strong infrastructure that supports FinTech business, for example Estonia. Even then, these countries have considered the development of sandboxes and innovation hubs as a next step. The UK is an example of a country that has developed both strong infrastructure and FinTech initiatives and is widely held out to be one of the best jurisdictions for FinTech.

The key for sandboxes and innovation hubs is their design. Lessons from their implementation in other jurisdictions have highlighted several key points:

- Regulators need a flexible approach on what regulation and safeguards it will put in place that addresses the particular risks of a participant;
- Businesses need certainty in the criteria for how to enter programme and how it will run;
- Any criteria should not be too narrow, i.e. limited to certain businesses sizes or require a licence unless to do so would be relevant to the particular outcome of the initiative; and
- Information sharing should be open and easy. Regulators and businesses will need to collect and access as much information as they can to develop their objectives and share conclusions.

Once regulators are comfortable with their understanding of a specific type of FinTech it should ensure that the entire sector benefits from any regulatory change, not just those in the sandbox.

A key issue identified is how regulators can take advantage of the innovation and efficiencies that FinTech can bring to the financial system while at the same time being able to identify and respond to the risks FinTech poses. A sandbox allows regulators to work closely with businesses to identify the key regulatory limitations that each is facing in New Zealand's particular regulatory regime. While general complexities exist in respect of FinTech, it is often in the nuance of the rules that the regime's application creates uncertainty. As discussed, this interaction allows a better understanding of the risks and complexities and supports how regulators may respond either at a micro or macro level based on that experience.

Sandboxes therefore are useful for developing regulation in unknown circumstances. Innovation hubs meanwhile should be available to all businesses as a means to build their understanding of that regulatory framework and provide a forum to discuss where further development is needed.



3.4.3 Cross-border engagement

Trends in financial services are increasingly global and there is a need to prioritise cross-border solutions. Working with other overseas regulators will help to develop New Zealand's understanding of regulating FinTech and mutual recognition will help to bring other FinTech businesses to New Zealand.

Further, New Zealand's small market means FinTech businesses must internationalise to grow and need support for meeting international standards not just New Zealand's and, unlike the EU, New Zealand does not benefit from any sort of passporting regime that recognises cross-jurisdiction licensing (other than, to a limited degree, in relation to trans-Tasman offers of securities and under the new Asia Pacific Funds Passport regime).

Accordingly, it is particularly important for New Zealand to consider the use of cooperation agreements and multilateral participation, for example, by joining the GIFN. There is also opportunity for developing rules of e-commerce and FinTech in future trade and investment treaties.

3.5 Building a FinTech friendly environment

While New Zealand is an easy place to do business, it lacks the same incentives and access to talent that other financial hubs and countries have developed. Further policy and regulatory considerations should be considered on how New Zealand can attract talent, and provide incentive to both start-ups and larger incumbent financial businesses (in addition to sandboxes and innovation hubs). Examples of such projects may include:

- looking to promote a favourable economic environment for business with tax credits for R&D and FinTech businesses as well as funding opportunities to not only develop local industry but attract international business;
- developing physical clusters for tech businesses with high-spec infrastructure and hardware to bring relevant industry participants together; and
- investing in education and research programmes to develop technical skills as well as creating immigration opportunities for skilled workers overseas.

It is also important to note that attracting talent and FinTech investment to New Zealand is not simply about having a strong regime, but marketing it. While it may be argued that regulatory sandboxes, for example, are not essential based on New Zealand's existing regulatory approach, by establishing them it demonstrates an intent and openness to overseas investors. An investor might not fully understand how New Zealand's regulatory regime operates, but they may be encouraged if New Zealand has implemented sandboxes and innovation hubs, which signals an openness to investment.

4 AUSTRALIA'S APPROACH TO FINTECH

Key points:

- Australia demonstrates a strong commitment to developing FinTech with a number of initiatives in the form of sandboxes and innovation hubs.
- A unique aspect of Australia's prudential regime is its graduated response to certain types of FinTech, for example, its model of allowing digital banks to acquire restricted licences before being granted full a licence and permission to operate as a bank. Accordingly, Australia provides different boundaries of prudential perimeters to develop and operate.

The Australian Government in 2016 formally set out its policy agenda for FinTech, *Backing Australian FinTech*, which identified a key set of priorities to encourage growth in the FinTech sector.¹⁷ The objective is to create an environment for Australia's FinTech sector, for both home-grown and offshore innovators, that is both internationally competitive and can play a central role in aiding the positive transformation of the economy.

4.1 General regulatory framework

The Australian Prudential Regulation Authority (**APRA**) is an independent statutory authority that supervises institutions across banking, insurance and superannuation and promotes financial system stability in Australia.

More generally, under the *Corporations Act 2001* (Cth), businesses that carry on financial services business in Australia need to hold an Australian financial services licence or qualify for an exemption, and businesses that carry on consumer credit business will also need to hold an Australian credit licence.

ASIC has undertaken a review of Australia's market licensing regime.¹⁸ This review is divided into two tiers, the first which deals with traditional market models and the second tailored to regulation of specialised and emerging market venues.

AML/CFT obligations apply in respect of FinTech businesses which carry out a designated activity.


4.2 Specific FinTech measures

Australia has taken proactive steps to develop the FinTech sector reform the regulatory regime and tailor it to the needs of FinTech and the Government has established the FinTech Advisory Group to advise the Treasury on FinTech matters.¹⁹

¹⁷ The Australian Government *Backing Australian FinTech* (2016).

¹⁸ Australian Securities & Investments Commission (**ASIC**) "18-131MR ASIC revises licensing regime for domestic and overseas market operators" (4 May 2018) <<https://asic.gov.au/about-asic/news-centre/find-a-media-release/2018-releases/18-131mr-asic-revises-licensing-regime-for-domestic-and-overseas-market-operators/>>.

¹⁹ The Treasury "Backing Australian FinTech" <<https://fintech.treasury.gov.au/>>.



The new policy agenda has also been adopted by each of Australia's key market regulators to put in place programmes to promote FinTech. In particular, the Australian Securities and Investment Commission (**ASIC**) and the Australian Transaction Reports and Analysis Centre (**AUSTRAC**) have consulted on:

- launching innovation hubs to help FinTech start-ups on compliance matters;
- establishing and developing the regulatory sandbox for new financial services participants; and
- lowering licensing barriers for digital financial services participants.

ASIC is also engaging with industry participants in other FinTech areas, providing guidance on robo-advice, and closely watching any emerging technologies such as distributed ledgers and digital identity initiatives.

Regulators have also engaged heavily with the private sector to deliver tailored regulation that meets the needs of the industry. FinTech Australia, the financial services technology industry association, is a key contact point and provides policy submissions on FinTech and has also set out a policy reform paper, prepared for the Treasury that highlights the recommendations for reform in various subsectors of the industry.²⁰

4.2.1 Sandbox


ASIC established a FinTech licensing exemption in December 2016.²¹ A series of class orders issued by ASIC create a sandbox that allows FinTech businesses to test certain financial services, products and activities without needing to hold a licence. The sandbox however sets out certain eligibility criteria and imposes conditions on how the business may operate, for example, who can be dealt with, the types and value of products.

For a FinTech company to use the sandbox it must:

- plan to test for no more than 12 months (after which it will need to be licensed or rely on another exemption)
- not have more than 100 retail clients (unlimited wholesale clients), with each retail client limited to AUD\$1,000 for financial services and AUD\$25,000 for credit contracts;
- not be banned from providing financial services and must not have an existing licence;
- hold at least AUD\$1 million of public interest insurance and established the required dispute resolution mechanisms;
- have total customer exposure of more than AUD\$5 million;
- provide only certain types of products (providing advice or dealing in or distribution products); and
- for payment products, enter into an arrangement with an ADI to issue the payment product.

²⁰ FinTech Australia *Priorities for Reform of the Australian Financial Services Industry* (24 February 2016). See also FinTech Australia <<https://fintechaustralia.org.au/policy/>> which provides a number of submissions in respect of different policy areas.

²¹ See ASIC *Regulatory Guide 257* (23 August 2017).



In addition to the licensing exemption, ASIC has powers to provide both conditional and unconditional exemptions in order to provide the necessary flexibility and discretion for dealing with different types of products.²²

4.2.2 Innovation hub

ASIC's Innovation Hub assists FinTech start-ups developing innovative financial products or services to navigate Australia's regulatory system.²³ Through the Hub, eligible businesses can request to receive informal guidance from ASIC on the licensing process and key regulatory issues. This information is designed to help businesses understand their options and, if relevant, prepare their applications for licences or waivers from the law.

In order to receive support, the business must be a FinTech that:

- has not commenced operation under a licence from ASIC;
- is in the process of obtaining a licence from ASIC; or
- has been operating with a licence from ASIC for less than 12 months.

The business would also need to meet the following criteria:

- Innovation that is potentially ground-breaking;
- Innovation that provides a better outcome for investors and consumers; and
- Timing of business plan aligns with the advice it seeks.

The Innovation Hub also provides similar support for Regtech and has also launched a Regtech Liaison Forum that convenes quarterly to discuss potential developments in the sector.

Australia is also home to numerous other FinTech hubs and accelerators such as Stone & Chalk, Tyro FinTech Hub, Slingshot, River City Labs, Startmate, muru-D, iAccelerate, Cicada Innovations, Lakeba, York Butter Factory, Innovation Bay, PushStart, Tank Stream Labs, Fishburners, and Blue Chilli.


4.2.3 Crowd funding

In September 2017, the Corporations Amendment (Crowd-sourced Funding) Act 2017 (Cth) came into effect which establishes a regulatory framework for crowd-sourced equity funding (**CSEF**), reducing the regulatory barriers for investment in start-up businesses. The Act introduces several changes including:

- creating licensing obligations for persons listing CSEF offer for public companies; and
- providing licensing exemptions for secondary trading platforms.

²² ASIC *Regulatory Guide 51* (December 2009).

²³ ASIC "Innovation Hub" <<https://asic.gov.au/for-business/your-business/innovation-hub/>>.



A shortcoming of the CSEF regime is that being limited to unlisted public companies with less than AUD\$25 million in gross assets and annual revenue means 99.7% of companies are excluded and would not be able to raise capital through CSEF without changing its company structure.²⁴

4.2.4 Banking including API and P2P

APRA has been given powers over lenders who are not authorised deposit-taking institutions (ADI).²⁵ APRA, like RBNZ, prudentially regulates ADIs and has a mandate of financial stability. Amendments to Australia's legislation sought to allow APRA to respond to risks to financial stability arising from lending activities by non-ADI lenders, including P2P lending. APRA has recently published a letter warning that it will take stronger action if ADIs are not more diligent in identifying and mitigating risks before entering into funding arrangements with P2P lenders.²⁶

In February 2018, the Government published an independent review into open banking.²⁷ It recommends that that open banking be a multi-regulator initiative, led by the Australian Competition and Consumer Commission, but involving the Reserve Bank of Australia, APRA ASIC and Office of the Australian Information Commission. A Data Standards Body should be formed to establish open banking standards, and only accredited parties should be able to receive open banking data. Those parties should be able to receive all customer-provided information and transaction information through an API and free of charge. The review proposes that the industry be given 12 months to implement the proposals following the final government decision, and that it should apply to all banks.²⁸

Case Study: Volt Bank

APRA has also sought to revamp its approval process for banking licences. APRA rolled out a plan that would allow startups with \$3million in capital to qualify for a 'restricted' licence to become an ADI (previously a financial institution needed a minimum of \$50million order to call itself a bank). In May 2018, Volt Bank, which is 100% digital with no branches, was granted a licence with certain conditions such as not being able to take deposits of more than \$2million, or individual deposits of more than \$250,000. Earlier in 2019, Volt Bank was granted a full licence by APRA, allowing it to roll out savings and transactional accounts, term deposits, personal loans and home deposits. Other startups are following suit such as Xinja.

4.2.5 Cryptocurrency, DLT and virtual assets

Australia has swiftly updated its AML/CTF legislation to include cryptocurrencies within the regime to stay in line with FATF guidance on virtual assets. At this stage, Australia's AML/CFT regime application is limited to cryptocurrencies and exchanges that provide an intersection between crypto and the regulated


²⁴ Marina Nehme "Australia finally has crowd-sourced equity funding, but there's more to do" (26 March 2017) Crowdfund Vibe <<http://crowdfundvibe.com/australia-finally-has-crowd-sourced-equity-funding-but-theres-more-to-do/>>.

²⁵ Treasury Laws Amendment (Banking Measures No. 1) Act 2018 (Cth) <<https://www.legislation.gov.au/Details/C2018A00009>>.

²⁶ Australian Prudential Regulation Authority "Exposure to Third Party Lenders including Peer to Peer Lenders" (25 March 2019) <https://www.apra.gov.au/sites/default/files/letter_exposure_to_third_party_lenders_including_peer_to_peer_lenders.pdf>.

²⁷ The Australian Government *Review into Open Banking: customers, choice, convenience and confidence* (December 2017).

²⁸ RBNZ, above n 2, at 18.



financial market, i.e. where there is an on-ramp to fiat currency. This is expected to be updated to include all virtual assets in line with recent FATF recommendations.

4.2.6 Incentives

Australia has provided a number of incentives for investors, including tax off-sets and exemptions for investing in early stage innovation companies and for venture capital limited partnerships, and expenditure in R&D activities.²⁹

4.2.7 Cooperation agreements

Australia has signed a number of FinTech cooperation agreements with other jurisdictions to promote FinTech growth and, to date, includes agreements with Singapore, UK, Canada and Kenya.

The ASIC/MAS and ASIC/FCA agreements for example state that the regulators “*undertake to consider participating in joint innovation project on the application of key technologies such as digital and mobile payments, blockchain and distributed ledgers, big data, flexible platforms and other areas of new technologies*”. The agreements also cross-refer approved FinTech businesses that would like to expand into the other jurisdictions.

4.3 Lessons for New Zealand

Australia is enjoying a strong and growing FinTech industry. The *EY FinTech Australian Census 2018* identifies key factors that FinTechs have found beneficial, including:³⁰

- beneficial policy easing the costs and obstacles of doing business;
- access to capital, such as the introduction of equity crowdfunding and platforms to raise seed capital for start-ups;
- strong domestic demand for digital financial services; and
- strong support networks including hubs and accelerators, and confidence to internationalise quickly.

However, despite increasing regulatory support, the Census suggests that FinTech business are still experiencing some difficulties. In particular:

- R&D tax incentives need to be made more accessible, and the regulatory sandbox still needs to be more flexible; and
- while regulatory support is beneficial, other underlying factors such as a shortage of skilled talent with engineering and software expertise, make it difficult to produce products that increasingly require more technical aspects such as AI, and a lack of diversity.

²⁹ The Treasury “Tax incentives for early stage investors” <<https://treasury.gov.au/national-innovation-and-science-agenda/tax-incentives-for-early-stage-investors>>.

³⁰ Ernst & Young Australia *EY FinTech Australia Census 2018: Profiling and defining the fintech sector* (2018).

5 UNITED KINGDOM'S APPROACH TO FINTECH

Key points:

- The United Kingdom benefits from an established financial services hub that attracts skilled talent and promotes innovation. The United Kingdom goes further however and leads the world in providing support initiatives and incentives for FinTech.
- The United Kingdom also highlights the importance of developing international cooperation and alignment, recognising that FinTech cannot rely simply on domestic regulation.

London is a key financial hub and the United Kingdom (**UK**) has one of the most FinTech friendly regimes in the world. In 2015, FinTech investment in the UK grew to £524 million, almost half of all European investment.³¹ The Government's vision is for UK financial services to be the most competitive and innovative in the world, supplementing existing services with greater choice and value for customers.³²

In 2015, the Government announced its 2015 Productivity Plan that departments would be required to work with regulators to public innovation plans, reflecting the Government's aim to ensure that UK supports the development of new business models and disruptive technologies. In April 2017, HM Treasury published the follow-up *Regulatory Innovation Plan* that covers the work of the financial services regulators: Financial Conduct Authority (**FCA**), Payment Systems Regulator (**PSR**), Prudential Regulation Authority (**PRA**) and the Bank of England (**BoE**).

The UK was an early adopter of FinTech, with projects now having run for a number of years. The UK can provide a strong baseline to understand what works from the trials that it has completed. It is unclear, however, what the effects of a potential Brexit may mean for the UK's ability to compete with Europe. Accordingly, Europe, including Ireland, has begun setting up its own initiatives aimed at tackling the UK in a post-Brexit FinTech market.³³

5.1 General regulatory framework

5.1.1 United Kingdom


The BoE prudentially regulates and supervises financial service firms through the PRA. The PRA is responsible for supervising around 1,500 banks, building societies, credit unions, insurers and major investment firms. The PRA provides a rulebook that contains provisions made by the PRA that apply to PRA-authorised firms.³⁴ This parallels with the European Union for which the European Banking Authority

³¹ Ernst & Young LLP *UK FinTech On the cutting edge: An evaluation of the international FinTech sector* (2016).

³² HM Treasury *Regulatory Innovation Plan* (April 2017) at 5.

³³ See, for example, European Commission (**EC**) *Consultation Document on FinTech* (2017) and EBA "EBA publishes a Discussion Paper on its approach to FinTech" (4 August 2017) <<https://eba.europa.eu/-/eba-publishes-a-discussion-paper-on-its-approach-to-fintech>>.

³⁴ <http://www.prarulebook.co.uk/>



provides a single rulebook that offers a set of harmonised prudential rules which institutions throughout the EU must respect.³⁵

There is no specific regulatory framework for FinTech businesses in the UK. FinTech businesses will fall within the existing frameworks and need to obtain authorisation from the FCA or other regulators if they carry on certain regulated activities in the UK and are not otherwise exempted. These businesses will be subject to the relevant legislation and any detailed guidelines published by the responsible financial regulators.

Accordingly, there may at times be complexity surrounding whether specific FinTech falls within the existing categories of regulated activities. Due to the UK's objective to become a leader in FinTech however, the regulators and other policy-makers are especially motivated to providing guidance and updating regulation as necessary to stay aligned with the understanding of the industry.

There is no bespoke authorisation regime for FinTech banks in the UK, and the regulatory standards which apply are the same as apply to any other form of banking. However, the New Bank Start-up Unit is a joint initiative from the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA).³⁶ Any firm that wants to be a bank must be authorised to do this by the PRA. The PRA will only agree to authorise a firm if the FCA is also content for it to be authorised. PRA and FCA provide proportionate and transparent authorisation processes to help firms, including those with technology innovative business models, engage with and understand regulatory requirements while ensuring standards remain rigorous.

Six firms with business models focused on providing banking services to customers digitally have already been authorised as banks since 2015. A further 16 FinTech firms are at pre-application or live application stage, compared with 26 non-FinTech firms. These range from firms proposing digital/app-based banking services, firms using Open Banking legislation to provide customers with aggregated information across accounts, to firms looking to use distributed ledger technology or work in crypto-assets.


5.1.2 European Union

In addition, European Union (EU) Member States may currently rely on 'passporting' rights. That is once a business obtains a licence in one EU Member State, it can provide those services in all Member States and would not need to be authorised. It is not yet clear whether all of these rights will be lost with Brexit. (We discuss EU regulators in more detail below in the Ireland section at 6).

The original Markets in Financial Instruments Directive (MiFID I) was introduced on 1 November 2007 to set out EU regulation in respect of securities and financial markets. On 3 January 2018 it was replaced by a revised package of rules, collectively known as MiFID II. MiFID II governs the provision of investment services in financial instruments. It applies to investment firms, wealth managers, broker dealers, product manufacturers and credit institutions authorised to carry out MiFID activities.

³⁵ <https://eba.europa.eu/regulation-and-policy/single-rulebook>

³⁶ PRA "New Bank Start-up Unit: What you need to know from the UK's financial regulators" (July 2018); <https://www.bankofengland.co.uk/prudential-regulation/new-bank-start-up-unit>



With the wide array of far reaching new requirements that it imposes in respect of such matters as pre-trade transparency, transaction reporting, product governance, best execution, inducements, the implementation of MiFID II is a major challenge for the financial industry.

See, further, sections 11.4 and 11.5.

5.1.3 Brexit

It has been reported that uncertainty over Brexit has led to financial services firms moving USD1 trillion of assets away from London to the European Union, in order to protect clients and investors.³⁷

5.2 Specific FinTech measures

5.2.1 Sandbox

The UK was the first country to establish a regulatory sandbox for FinTech. The FCA's first plans were published in November 2015 and the sandbox was formally launched in May 2016. FCA has also sought to develop virtual sandboxes that allows firms to experiment in a virtual environment without entering the real market.

In addition to providing firms with support and a testing environment, the sandbox also offers tools such as restricted authorisation, individual guidance, informal steers, waivers and no enforcement action letters.

The criteria for which businesses are selected include:

- carrying out or supporting financial services business in the UK;
- genuinely innovative;
- identifiable consumer benefit;
- need for sandbox testing; and
- ready for testing.

To join, businesses must also have a significant UK presence, have a UK bank account, and acquire a restricted authorisation if it provides any regulated activities (restricted authorisation is not available for firms that need a banking licence).

In October 2017, the FCA reported back on lessons it learned from its regulatory sandbox.³⁸ Some of the key takeaways include:

- the sandbox increased regulatory certainty and continuous dialogue with regulators during the process enabled business to develop more rigorous policies;

³⁷ Madhvi Mavadiya "How The Brexit Vote Could Affect Fintech And Diversity In London" (16 January 2019) Forbes <<https://www.forbes.com/sites/madhvimavadiya/2019/01/16/how-the-brexit-vote-could-affect-fintech-and-diversity-in-london/#7ad1ab7a35b8>>.

³⁸ Financial Conduct Authority (FCA) *Regulatory sandbox lessons learned report* (October 2017).

- for businesses that are not yet authorised, this helped firms to more easily and quickly attain funding;
- the sandbox cannot address all the challenges that FinTech businesses may face, for example, access to banking services and de-risking;
- acquiring customers is difficult for smaller businesses that enter testing without a well-established customer base. Partnerships between large firms and start-ups in the sandbox has generally been successful;
- it may be difficult for businesses to obtain customers' transactional information for analysis. This can be developed with the implementation of PSD2 (see below); and
- businesses looking to test in the sandbox must meet the relevant condition for authorisation for the activities they want to conduct. This is sometimes difficult for FinTech companies that do not fall within traditional business models. Accordingly, it may be difficult to be authorised and enter the sandbox.

More recently, the FCA has championed the launch of the new 'Global Sandbox' established within the GFIN (see to section 11.1).

5.2.2 Innovation hub

In October 2014, the FCA launched 'Project Innovate' to encourage and support innovation in financial services.³⁹ Key aspects of Project Innovate include:

- a dedicated team and contact for innovator businesses;
- help for these businesses to understand the regulatory framework and how it applies to them;
- assistance in preparing and making an application for authorisation, to ensure the business understands our regulatory regime and what it means for them; and
- a dedicated contact for up to a year after an innovator business is authorised.

Through international engagement the Innovation Hub supports the FCA's competition objective by promoting the UK as a centre for innovation in financial services. It does this by facilitating:

- the entry of innovative overseas firms to the UK, thereby increasing innovation and competition in UK financial services markets; and
- the expansion of UK-based innovative firms into overseas markets, making them potentially more sustainable challengers in the UK.

This is supported by the UK's numerous cooperation agreements

The BoE in 2018 also established its own FinTech hub to consider the policy implications of Fintech and, in particular, looks at the use of DLT and cryptocurrency.⁴⁰

³⁹ FCA "FCA Innovate" <<https://www.fca.org.uk/firms/fca-innovate>>.

⁴⁰ Bank of England (BoE) "Digital currencies" <<https://www.bankofengland.co.uk/research/digital-currencies>>.

5.2.3 Cooperation agreements

The UK has established cooperation agreements with Australia, Singapore, Hong Kong, Canada, Japan, South Korea, and China.

5.2.4 Incentives

In addition to a simple regulatory regime, the UK provides a number of incentives including tax relief of investments, R&D tax credits of up to 230% for certain companies with fewer than 500 employees and a Patent Box Scheme which allows companies to apply a lower rate of Corporation Tax to profits earned from patented inventions

More generally, the UK has been highly successful in incentivising and attracting FinTech firms because of its liberal corporate law and financial regulatory frameworks, London's network benefits as a financial hub and the skilled human capital the city attracts. The UK is also active in ensuring that the digital infrastructure is maintained to a high standard e.g. providing high-speed broadband.

5.2.5 Banking and APIs

In January 2016, the European Commission issued the Payment Services Directive 2 (**PSD2**) which required Member States to establish legislation that gives third parties access to their customers' authorised bank account data. PSD2 helps to enable small businesses to share their banking data with trusted, non-bank third parties via APIs. In the UK, the Competition and Markets Authority formed a group to create the Open Banking Standard, a common set of specifications that banks must follow, addressing the technical rules and security aspects of data-sharing via APIs. The nine largest UK banks were required to publish write-access APIs in line with the standards by February 2018. Third parties will be required to register with the Open Banking Directory of Participants and meet the security requirements outlined in the standards, to provide payment services to the public. The FCA will regulate those registered.⁴¹

The Digital Economy Act 2017 extends the definition of payment system to allow HM Treasury to recognise non-interbank payment systems for oversight by the BoE. HM Treasury may designate a systematically important non-bank payment system to be supervised by the BoE.

5.2.6 Cryptocurrency, DLT and virtual assets

In 2017, the FCA completed consultations on the potential for future development of DLT.⁴² Additionally, the Cryptoassets Taskforce (involving HM Treasury, FCA and BoE) in October 2018 published its final report on the DLT and crypto sector.⁴³

The Government is developing a robust regulatory response which will address these risks by going significantly beyond the requirements set out in the EU Fifth Anti-Money Laundering Directive (5MLD), providing one of the most comprehensive responses globally to the use of cryptoassets for illicit activity.

⁴¹ RBNZ, above n 2, at 17.

⁴² FCA "FS17/4: Digital ledger technology" (15 December 2017) <<https://www.fca.org.uk/publications/feedback-statements/fs17-4-distributed-ledger-technology>>.

⁴³ HM Treasury, FCA and BoE *Cryptoassets Taskforce: final report* (October 2018).



5.3 Lessons for New Zealand

The success of the UK FinTech regime is largely driven by two factors, its proactive regulation of FinTech and its strong market environment that is attractive to businesses. Accordingly, the UK is able to address the legal and non-legal complexities associated with FinTech.

To the extent the UK is not able to control how FinTech is addressed by other jurisdictions, it benefits from passporting with the EU and by establishing cooperation agreements with other jurisdictions to minimise differences in regulatory treatment. UK therefore emphasises the importance of greater regionalisation.

6 IRELAND'S APPROACH TO FINTECH

Key points:

- Ireland has been relatively slow to provide implement specific initiatives for FinTech, but benefits from its membership in the EU and strong corporate incentives that support innovation.
- Ireland highlights the importance of factors other than prudential regulation in order to support the development of FinTech.

In 2015, the Irish government developed the International Financial Services 2020 Strategy (**IFS2020**), which sets out the government's strategy for developing the five year financial services sector plan.⁴⁴ The Strategic Advisory Group (**SAG**) was established to assist with developing this strategy. Enhancing FinTech through accelerators, funding and other means were identified as key actions.

The European Commission's FinTech Action Plan published in March 2018 also identifies an objective to make Europe's financial markets more integrated, safer and easier to access.⁴⁵ The plan will help the financial industry make use of the rapid advances in technology such as blockchain and other IT applications and strengthen cyber resilience.

6.1 General regulatory framework

6.1.1 Ireland

Ireland does not have a specific regulatory framework for FinTech businesses. FinTech businesses will be caught under the framework and require authorisation by the Central Bank of Ireland (**CBI**) (also the prudential regulator for Ireland) if they provide a regulated activity and are not otherwise exempted. In order to obtain authorisation, businesses need to be adequately capitalised, present a business plan, including detailed AML policies. EU passporting rights also apply. Accordingly to Enterprise Ireland and EY's Fintech Census, 71% of the FinTech sector is not required to be regulated by the CBI due to its subsector.⁴⁶

Within the European Union, the three European Supervisory Authorities (**ESAs**), the European Banking Authority (**EBA**), the European Securities and Markets Authority (**ESMA**), and the European Insurance and Occupational Pensions Authority (**EIOPA**) are also currently reviewing the different approaches taken in the EU with respect to facilitating innovation.

While national supervisory authorities remain in charge of supervising individual financial institutions, the objective of the ESAs is to improve the functioning of the internal market by ensuring appropriate, efficient and harmonised European regulation and supervision.

⁴⁴ Government of Ireland "International Financial Services 2020 Strategy" (24 April 2019) <<https://www.gov.ie/en/publication/209a77-ifs2020-strategy/>>.

⁴⁵ EC "FinTech Action plan: For a more competitive and innovative European financial sector" (8 March 2018) EUR-Lex <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0109>>.

⁴⁶ Ernst & Young *Ireland FinTech Census 2018* (2018) at 3.

6.1.2 European Union

See sections 5.1.2, 11.4, and 11.5.

6.2 Specific FinTech measures

FinTech has become a key focus of EU Member States. A number developments are being directed at a high level by the ESAs and have been actively consulting members on the best way forward. For example, the EBA has published a FinTech roadmap and launched an online knowledge hub.⁴⁷

6.2.1 Innovation hubs and sandboxes

Like other countries, CBI launched its Innovation Hub on 20 April 2018 to enable entities to contact CBI to assist with understanding the Irish regulatory framework.⁴⁸ However, Ireland does not yet have an operating sandbox for FinTech.

In January 2019, the ESAs published a joint report on regulatory sandboxes and innovation hubs in the EU.⁴⁹ It provides a comparative analysis of the innovation facilities established to date in the EU and sets out best practice regarding their design. A brief summary of some of the identified best practices include:

- Prior to the establishment, it is important to ensure any innovation facilitators are designed appropriately in light of the local market;
- Innovation facilitators need to be visible to market participants and have clear objectives and eligibility criteria; and
- Sandboxes should not be used simply as a mechanism to dispense with legal requirements. The same 'levers for proportionality' available to relevant authorities should be made available in the context of regulatory sandboxes and applied in the same way to firms outside the sandbox.

6.2.2 Incentives

Ireland provides a number of incentives to attract businesses. Some of these include:

- a low corporate tax rate of just 12.5%;
- a patent box regime with 6.25% effective tax rate on profits arising from certain types of IP;
- Enterprise Ireland provides funding for start-ups including FinTech through the Competitive Start Fund and high-potential start up.


6.3 Lessons for New Zealand

Ireland is still in the early stages of developing its regulatory approach to FinTech. The Fintech Census highlights that the four key challenges facing FinTech are market, rather than regulatory, factors. In particular:⁵⁰

⁴⁷ EBA *The EBA's FinTech Roadmap: Conclusions from the Consultation on the EBA's Approach to Financial Technology* (15 March 2018); EBA "FinTech Knowledge Hub" <<https://eba.europa.eu/financial-innovation-and-fintech/fintech-knowledge-hub>>.

⁴⁸ Central Bank of Ireland *Innovation Hub 2018 Update* (2018).

⁴⁹ ESMA, EBA and EIOPA, above n 9.

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- 54% of respondents saw attracting qualified or suitable talent as a key challenge;
 - 44%, building partnerships with established players;
 - 44%, international expansion; and
 - 44%, customer adoption.

⁵⁰ Ernst & Young, above n 46, at 3.

7 CANADA'S APPROACH TO FINTECH

Key points:

- Canada demonstrates the importance of a technology-neutral approach. Regulation of specific types of entities results in market distortion and subsequent regulatory work to bring other entities within scope.
- Overall, Canada is only recently making advancements in regulating FinTech, and it remains to be seen how successful its regulatory amendments will be.

While Canada has made technology-led innovation a priority, Canada has also taken a more cautious approach to regulation and may be behind its international peers when it comes to FinTech adoption.⁵¹

7.1 General regulatory framework

Canada does not have a single regulatory body either at a federal or provincial level. The Office of the Superintendent of Financial Institutions (**OSFI**) is an independent agency of the Government of Canada and is responsible for the prudential regulation and supervision of federally regulated financial institutions (**FRFIs**). Some of the other key regulators include that Department of Finance (**DoF**) and the Competition Bureau (**CB**).

Depending on the type of institution or the type product or service provided by the FinTech business, a number of regulatory bodies may have jurisdiction. For example, FRFIs must adhere to payment rules and standards established under the Bank Act and are subject to oversight by the OSFI. But, since OSFI regulates FRFIs and not the services that they provide, other entities that provide payment processing services, such as Fintech mobile payment providers, are not subject to OSFI oversight.

Generally speaking, FinTech businesses are subject to the same regulatory frameworks as traditional financial businesses operating in the areas. Overseas FinTech businesses may however face additional regulation, for example foreign banks cannot accept deposits of less than \$150,000.

7.2 Specific FinTech measures

In 2017, the CB completed a Market Study into Canada's FinTech sector.⁵² It made observations on the complexities arising in respect of FinTech such as KYC and identity verification, 'suitability' requirements of investments and regulatory fragmentation between jurisdictions. It also noted that barriers to entry are often not directly attributable to regulation. Such barriers include:

- transparency in pricing;
- financial literacy and trust; and

⁵¹ Competition Bureau (**CB**) *Technology-led Innovation in the Canadian Financial Services Sector: A Market Study* (December 2017) at 4.

⁵² CB, above n 51.

- costs and technical impediments of switching.

There are also general regulatory issues that must be dealt with, including:

- start-ups are subject to less onerous regulation than traditional institutions and incumbents, while Federally regulated financial institutions, for example, must maintain minimum levels of capital; and
- the starting point for regulation is often the type of entity that provides the service rather than the service itself. Two businesses offering a similar service may be under different regulatory regimes. For example, banks that provide funds transfer services are subject to registration and AML/CFT obligations but services such as PayPal are not.

The Market Study highlighted that Canada need to better promote Fintech and outlined 11 broad recommendations for financial sector regulatory authorities and policymakers to ensure future regulatory change creates space for innovation:

- 1 Regulation should be technology-neutral and device-agnostic;
- 2 Regulation should be principles-based
- 3 Regulation should be based on the function an entity carries out;
- 4 Regulation should be proportional to risk;
- 5 Regulators should harmonize regulation across geographic boundaries;
- 6 Policymakers should encourage collaboration throughout the sector;
- 7 Policymakers should identify a FinTech policy lead to facilitate development;
- 8 Regulators should promote greater access to core infrastructure and services;
- 9 Policymakers should embrace broader open access to systems and data through APIs;
- 10 Industry participants and regulators should explore the potential of digital identification verification; and
- 11 Policymakers should continue to review regulatory frameworks frequently.

The CB subsequently followed up on Canada's progress in FinTech.⁵³ While many of the recommendations are still being consulted on, some changes have been implemented. For example, in response to recommendation 3, DoF's Revised AML/CT regulations move towards a function-based approach by no longer regulating specified entities to any business that "deals in virtual currencies", and the Government of Canada amended the Bank Act to expand the scope of technology-related activities banks can participate in by not being restricted by virtue of being a bank.

⁵³ CB "Regulatory highlights following the Competition Bureau's Market Study" (26 September 2018) <<https://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04392.html>>.

7.2.2 Sandbox

The Canadian Securities Association (**CSA**) has been one of the more proactive organisations and recently introduced a regulatory sandbox to FinTech and particularly for cryptocurrency businesses whose activities trigger the application of securities laws e.g. online platforms, crowdfunding networks or businesses using distributed ledger technology (**DLT**).⁵⁴

The CSA Regulatory Sandbox is open to business models that are innovative from a Canadian market perspective. Applicants can range from start-ups to well established companies. Firms that want to apply should be ready to provide live environment testing, a business plan and a discussion of potential investor benefits (including how it will minimize investor risks).

7.2.3 Innovation hub

Ontario opened a new FinTech Accelerator Office in November 2018 to connect start-ups to businesses and provide support that will help grow the province's FinTech sector.⁵⁵ The Toronto Financial Services Alliance partnered with the Ontario Centres of Excellence and OneEleven to develop the FinTech Accelerator Office.

The Quebec government has also sought to invest C\$100 million over 5 years for the development of an AI 'super-cluster' in the Montreal area. Additionally, a number of other incubators and accelerators are emerging and Toronto in particular has led the way in building Canada's FinTech sector.⁵⁶

The Industrial Research Assistance Program (**IRAP**) offered by the National Research Council of Canada assist firms in developing technologies successfully commercialising them in a global marketplace by providing financial assistance, advisory services, and connecting SMEs with industry experts and potential business partners.

7.2.4 Cooperation agreements

Noting that overseas FinTech business may face additional regulation, Ontario has entered into cooperation agreements with regulators in Australia and the UK. Some of the Canadian provincial securities regulators have also entered into an arrangement with the Abu Dhabi authority on financial services regulation.

7.2.5 Incentives:

The Scientific Research and Experimental Development Program encourages research and development in Canada by providing tax incentives to qualifying non-Canadian and Canadian companies. Certain non-Canadian companies eligible to claim tax credit in respect of qualified expenditures.

The Government also provides funding and grants to cover the cost of hiring and training.⁵⁷

⁵⁴ Canadian Securities Administrators "CSA Regulatory Sandbox" <https://www.securities-administrators.ca/industry_resources.aspx?id=1588>.

⁵⁵ Toronto Finance International (**TFI**) <<https://tfi.ca/>>.

⁵⁶ TFI *Seizing the Opportunity: Building the Toronto Region into a Global FinTech Leader* (2019).

⁵⁷ Invest in Ontario "Incentive Programs and Services" <<https://www.investinontario.com/incentive-programs-and-services>>.



7.2.6 Cryptocurrency, DLT and virtual assets

In 2017 the CSA issued Staff Notice 46-307 “Cryptocurrency Offerings” that provides guidance with respect to the applicability of Canadian securities law to cryptocurrency activities.

7.3 Lessons for New Zealand

Canada has demonstrated that it is important not to legislate too narrowly, which may result in similar activities being treated differently (i.e. some businesses being regulated and others not, simply because of the type of entity) and can lead to flow on market effects such as unfair competition.

8 HONG KONG'S APPROACH TO FINTECH

Key points:

- Hong Kong demonstrates a key focus on building on its specific competencies as being a financial hub in the Asia-Pacific. Its strategy involves building its B2B offerings in the region and investing resources into areas that will have the greatest return.

Hong Kong has a world-class financial sector. A key focus is to develop its FinTech sector to be on par with its mainstream finance industry and use its advantage to establish a hub in the Asia-Pacific, attracting mainland Chinese FinTech and building business-to-business FinTech offerings.⁵⁸ Accordingly, observations of FinTech in Hong Kong suggest that development is less based on disruption but developing its existing capabilities and the delivery of its products.⁵⁹

In April 2015, the Government established the Steering Group on Financial Technology to advise on Hong Kong's development into a FinTech hub.⁶⁰ Regulators across Hong Kong have been receptive to developing their activities to meet the strategy to promote FinTech.⁶¹

8.1 General regulatory framework

There is no specific regulatory framework for FinTech and the wider regulatory framework of Hong Kong will apply as appropriate. FinTech businesses which carry out 'regulated activities' will need to be licensed by the Securities and Futures Commission (**SFC**) unless they fall within an exemption, and banks and deposit-taking companies will need to be authorised by the Hong Kong Monetary Authority (**HKMA**), which is also the prudential supervisor for Hong Kong..

8.2 Specific FinTech measures

The banking, securities and insurance regulators have all developed their own FinTech units, and the HKMA in particular has established the FinTech Facilitation Office (**FFO**).⁶² The Financial Services Development Council (**FSDC**), established in 2013 by the Hong Kong Special Administrative Region Government, also provides a cross-sectoral advisory body to engage the industry in formulating proposals to promote the further development of Hong Kong's financial services industry and to map out the strategic direction for the development and has increasingly.⁶³

⁵⁸ Financial Services Development Council (**FSDC**) *The Future of FinTech in Hong Kong* (May 2017) at 19.


⁵⁹ PwC *Hong Kong FinTech Survey 2017* (2017) at 1.

⁶⁰ Steering Group on Financial Technologies *Report of the Steering Group on Financial Technologies* (2016) at 5.

⁶¹ FSDC, above n 58.

⁶² FSDC, above n 58, at 18.

⁶³ FSDC <<http://www.fsd.org.hk/en>>.



In January 2019, the HKMA held a FinTech Roundtable with representatives of numerous central banks, regulatory authorities and international organizations, to reinforce collaboration between jurisdictions and ensure topics of mutual interest are discussed together.⁶⁴

8.2.1 Sandbox

Sandboxes have been established by each of the key financial regulators, for example:

- HKMA established a FinTech Supervisory Sandbox (**FSS**) in 2016.⁶⁵ Authorised institutions may conduct pilot trials without full compliance and the degree of supervisory flexibility is determined on a case-by-case basis by the HKMA. The Sandbox is largely targeted at banks rather than stored-value facility operators, start-ups or unregulated entities;
- SFC's sandbox (launched in September 2017) is available to both licensed corporations and start-up firms that intend to carry on a regulated activity under the SFO.⁶⁶ The SFC may impose licensing conditions on qualified firms, which may include limiting the types of clients which the firm may serve or the maximum exposure of each client, so as to limit the scope and boundary of the firm's business in regulated activities. Licensing conditions may in some cases require the firm to put in place appropriate compensation schemes for investors, or to submit to periodic supervisory audits by the SFC. Qualified firms may be placed under closer monitoring and supervision by the SFC when they operate in the Sandbox; and
- Insurance Authority's (**IA**) sandbox (launched in September 2017) is available for authorised insurers.⁶⁷ IA also considers an Insurtech initiative to be pilot run under the Sandbox to collect sufficient data to demonstrate to the IA that such Insurtech application can broadly meet relevant supervisory requirements arising from its codes and guidelines and other regulatory practices. Fast track processes are also available for applications of new insurers operating solely digital distribution channels.

Under FSS 2.0, the different sandboxes have been linked so that there is a single point of entry for pilot trials of cross-sector FinTech products.

8.2.2 Innovation hub

The FFO, together with the Hong Kong Applied Science and Technology Research Institute, has set up an innovation hub to push the development and adoption of FinTech and stakeholder collaboration towards that end.⁶⁸


⁶⁴ Hong Kong Monetary Authority (**HKMA**) "HKMA Holds High-level Fintech Roundtable" (9 January 2019) <<https://www.hkma.gov.hk/eng/key-information/press-releases/2019/20190109-3.shtml>>.

⁶⁵ Letter from Arthur Yuen (Deputy Chief Executive of HKMA) to the Chief Executives of all Authorized Institutions regarding the Fintech Supervisory Sandbox (FSS) (6 September 2016).

⁶⁶ Securities and Futures Commission (**SFC**) "Welcome to the Fintech Contact Point" (19 February 2019) <<https://www.sfc.hk/web/EN/sfc-fintech-contact-point/>>.

⁶⁷ Insurance Authority "Insurtech Corner" <https://www.ia.org.hk/en/aboutus/insurtech_corner.html>.

⁶⁸ Letter from Howard Lee (Senior Executive Director of HKMA) to the Chief Executives of all Authorized Institutions regarding the HKMA-ASTRI Fintech Innovation Hub (6 September 2016).



Also located in Hong Kong (and supported, managed and owned by the local government) is Cyberport, a large hub of digital technology firms including many involved in FinTech.⁶⁹

8.2.3 Banking

HKMA has authorised the establishment of virtual banks in Hong Kong. In addition to normal supervisory requirements for banks, virtual banks are subject to the additional requirements including the requirement to have a physical presence, have planned IT governance systems and provide a credible business plan, implement risk management activities and maintain adequate capital relative to these risks.⁷⁰

HKMA is also looking to facilitate so-called Smart Banking, and has put in place a Faster Payment System, connecting banks and stored-value-facility operators and enabling the almost-immediate transfer of funds anytime and anywhere.⁷¹

8.2.4 Cryptocurrency, DLT and virtual assets

Virtual assets in Hong Kong are only regulated where they can fall within the definition of a regulated financial instrument.⁷² For example, ICOs that involve tokens which fall within the definition of “Security” will be treated as a regulated activity and those involved in secondary or automated trading of virtual assets may already be subject to existing licensing and conduct requirements.⁷³ However the SFC does intend to expand regulatory coverage of virtual assets to portfolio management activities and platforms involving virtual assets.⁷⁴

HKMA has also commissioned Whitepapers on Distributed Ledger Technology in both 2016 and 2017.⁷⁵

8.2.5 Incentives

Various funding schemes, both new and existing, are available to those pursuing FinTech developments, such as the Innovation and the HK\$2 billion Technology Fund, the Innovation and Technology Venture Fund, and the Cyberport Macro Fund.⁷⁶ HK\$10 billion was allocated under the 2017-2018 budget for developing the tech sector.

⁶⁹ Cyberport “About Cyberport” <https://www.cyberport.hk/en/about_cyberport/about_overview/cyberport-fintech>.

⁷⁰ HKMA “Guideline on Authorization of Virtual Banks” (30 May 2018) <<https://www.hkma.gov.hk/eng/key-information/press-releases/2018/20180530-3.shtml>>.

⁷¹ HKMA “The Launch of Faster Payment System (FPS)” (17 September 2018) <<https://www.hkma.gov.hk/eng/key-information/press-releases/2018/20180917-3.shtml>>.


⁷² SFC “Statement on regulatory framework for virtual asset portfolios managers, fund distributors and trading platform operators” (1 November 2018) <<https://www.sfc.hk/web/EN/news-and-announcements/policy-statements-and-announcements/reg-framework-virtual-asset-portfolios-managers-fund-distributors-trading-platform-operators.html>>.

⁷³ SFC “Statement on initial coin offerings” (5 September 2017) <<https://www.sfc.hk/web/EN/news-and-announcements/policy-statements-and-announcements/statement-on-initial-coin-offerings.html>>.

⁷⁴ SFC, above n 72.

⁷⁵ Hong Kong Applied Science and Technology Research Institute *Whitepaper On Distributed Ledger Technology* (11 November 2016); HKMA *Whitepaper 2.0 on Distributed Ledger Technology* (25 October 2017).

⁷⁶ FSDC, above n 58, at 18.



HKMA recently upgraded their FinTech Career Accelerator Scheme, working in conjunction with other Hong Kong institutions to offer talent building programs at various levels of career development, with the aim of augmenting the pool of talent available.⁷⁷

8.2.6 Cooperation agreements

HKMA has entered into cooperative arrangements with the supervisory authorities of many jurisdictions, including Singapore, Australia, Canada, the UK as well as a memorandum of understanding with 30 European Union or European Economic Area jurisdictions.⁷⁸

8.3 Lessons for New Zealand

There are two notable lessons from Hong Kong's approach to FinTech:

- It has a clearly defined strategy on what sector and market it wants to focus (B2B in Asia-Pacific), that builds on its existing capabilities and where it has a competitive advantage. Accordingly, it is investing resources in areas where it expects to see the most return; and
- In developing its sandboxes, Hong Kong has recognised the need for flexibility to ensure that the specific sandbox trials reflect the needs of the particular business and are regulated only to the extent that is necessary.

⁷⁷ HKMA “HKMA launches Fintech Career Accelerator Scheme 2.0 with its strategic partners” (31 January 2018) <<https://www.hkma.gov.hk/eng/key-information/press-releases/2018/20180131-8.shtml>>.

⁷⁸ HKMA “Supervisory Co-operation (5 March 2019) <<https://www.hkma.gov.hk/eng/key-functions/banking-stability/banking-policy-and-supervision/supervisory-co-operation.shtml>>.

9 SINGAPORE'S APPROACH TO FINTECH

Key points:

- Singapore benefits from offering extensive flexibility in its support. For example, its sandboxes are open to all entities, and the conditions of the sandbox are determined on a case-by-case basis.
- More broadly, Singapore demonstrates how a small country can promote a strong finance sector by actively participating and promoting innovation.

Singapore is a prominent international financial centre, with a heavy presence of the financial services industry. Singapore has sought to encourage innovation with its Smart Nation Initiative.⁷⁹ To drive pervasive adoption of digital and smart technologies throughout Singapore, the Initiative identifies key Strategic National Projects, which are key enablers in Singapore's Smart Nation drive.

9.1 General regulatory framework

There is no specific regulatory framework for FinTech, and different financial products or services may fit under different laws and be subject to different regulators based on their scope. FinTech businesses that carry on financial services are supervised by the Monetary Authority of Singapore (**MAS**), the central bank prudential regulatory authority of Singapore. Additionally, FinTech businesses that carry on moneylending or commodity trading will be subject to regulation by the Ministry of Law and International Enterprise Singapore respectively.

Unless an available exemption applies, FinTech businesses are required to comply with the relevant legal and regulatory requirements.

9.2 Specific FinTech measures

MAS has proactively approached FinTech and launched the Fintech & Innovation Group (**FIG**) in 2015 and maintains a Smart Financial Centre with a range of resources for FinTech.⁸⁰ FIG is responsible for developing policy in the financial sector to promote FinTech. Other initiatives include a dedicated FinTech Office, Standards, Productivity and Innovation Board (**SPRING**), which offers an Automation Support Package to help firms scale-up their automation efforts, a Data Analytics Group aimed at improving its use of data analytics, and the development of LATTICE80, an innovation cluster in Singapore's CBD.


9.2.1 Sandbox

MAS established a regulatory sandbox for FinTech in 2016.⁸¹ Rather than providing a constant benefit to entities within it, the exact regulatory relaxation available in any particular case will be determined by

⁷⁹ Smart Nation Singapore <<https://www.smartnation.sg/>>.

⁸⁰ Monetary Authority of Singapore (**MAS**) "Smart Financial Centre" (22 August 2016) <<http://www.mas.gov.sg/Singapore-Financial-Centre/Smart-Financial-Centre.aspx>>.

⁸¹ MAS *FinTech Regulatory Sandbox Guidelines* (November 2016) at [2.2].



MAS in the circumstances.⁸² This sandbox is not confined to financial institutions, and any interested company is able to apply.

In November 2018, MAS released a consultation paper and sought submissions on the idea of establishing an express sandbox, allowing firms that carry out particular familiar and low-risk regulated activities to access pre-defined sandboxes without the need for the current processes around tailoring an arrangement specifically to them.⁸³

9.2.2 Banking

Singapore has introduced new law around payment services to make licensing more specific, allowing regulation to be more targeted at salient risks around particular activities.⁸⁴

MAS has also been collaborating with the financial industry for a few years in Project Ubin, a multi-phase examination of how Distributed Ledger Technology may be able to be used to enhance payment systems, from which a number of successful developments in that area have already flowed.⁸⁵

9.2.3 Cryptocurrency, DLT and virtual assets

MAS takes the stance that cryptocurrencies are not, by virtue of their nature as such, subject to regulation. However, where the functions of a particular cryptocurrency leave it resembling a regulated product (such as shares) it will take on that character and fall within their ambit.⁸⁶ In making this assessment, MAS will look at the structure and characteristics of that cryptocurrency, including the rights attached to it.⁸⁷

Blockchain-based systems are also not regulated purely for being such, but tokens based on such may (as explained above) by their characteristics become so, which could flow through to other uses of them, such as secondary trading platforms or cross-border transmission and remittance, which may then require licensing.

9.2.4 Incentives

The Intellectual Property Office of Singapore has in place an initiative under which applications for FinTech-related patents are subject to an expedited process.

The Inland Revenue Authority of Singapore offers tax exemptions to qualifying start-ups and the Angel Investors Tax Deduction Scheme offers tax deductions for virtual capital and private equity funds for up to 10 years.

⁸² MAS, above n 81, at [2.3].


⁸³ MAS *Consultation Paper on Sandbox Express* (14 November 2018) at [1.3].

⁸⁴ MAS “‘Payment Services Bill’ - Second Reading Speech by Mr Ong Ye Kung, Minister For Education, On Behalf of Mr Tharman Shanmugaratnam, Deputy Prime Minister and Minister-In-Charge of The Monetary Authority of Singapore on 14 Jan 2019” (14 January 2019) <<http://www.mas.gov.sg/News-and-Publications/Speeches-and-Monetary-Policy-Statements/Speeches/2019/Payment-Services-Bill.aspx>>.

⁸⁵ MAS “Project Ubin: Central Bank Digital Money using Distributed Ledger Technology” (24 April 2019) <<http://www.mas.gov.sg/Singapore-Financial-Centre/Smart-Financial-Centre/Project-Ubin.aspx>>.

⁸⁶ MAS “MAS clarifies regulatory position on the offer of digital tokens in Singapore” (1 August 2017) <http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/MAS-clarifies-regulatory-position-on-the-offer-of-digital-tokens-in-Singapore.aspx?utm_source=rss&utm_medium=rss>.

⁸⁷ MAS *A Guide to Digital Token Offerings* (30 November 2018) at [2.2].



Tax and loan incentives under an Automation Support Package are also available to firms looking to deploy automation across their operations.⁸⁸

9.2.5 Cooperation agreements

MAS has so far signed numerous cooperation agreements around FinTech with similar bodies in other jurisdictions, including the UK's FCA, Australia's ASIC and Hong Kong's HKMA.⁸⁹ It is also a founding member of the ASEAN Financial Innovation Network, an organisation formed to foster collaboration between FinTech companies and financial institutions, which recently launched an online FinTech marketplace and sandbox platform aimed at allowing such firms to connect on a global scale and collaborate in associated experimentation.

In total, MAS has concluded 30 cooperation agreements with its international counterparts.⁹⁰

9.3 Lessons for New Zealand

Singapore has also adopted a flexible approach to designing its sandboxes. There are no limits to the number of firms, and is open to all firms including financial institutions, technology firms, and professional services firms partnering with or providing support to such a business. MAS may relax regulatory requirements on a case-by-case basis.

⁸⁸ Enterprise Singapore "Automation" <<https://www.enterprisesg.gov.sg/financial-assistance/grants/for-local-companies/enterprise-development-grant/innovation-and-productivity/automation>>.

⁸⁹ MAS "FinTech Co-operations" (4 April 2019) <<http://www.mas.gov.sg/Singapore-Financial-Centre/Smart-Financial-Centre/FinTech-Cooperations.aspx>>.

⁹⁰ MAS, above n 89.

10 ESTONIA'S APPROACH TO FINTECH

Key points:

- Estonia shows that regulatory sandboxes are not necessary (although still desired) to have a strong FinTech sector. Estonia benefits from developing a technology astute population and supportive tech environment to build its FinTech industry.
- On the other hand, Estonia highlights the inherent risks involved in digital technology and the need to provide strong cybersecurity safeguards.

Estonia is proud to be called 'the most advanced digital society in the world'.⁹¹ Not simply focused on FinTech, it has sought to implement digital aspects across the country and its citizens and this is shown by Estonia's history. In 1997, six years after Estonia gained independence and the collapse of the Soviet Union, electronic-governance was launched; e-tax came in 2000, and digital ID followed soon after in 2001. In 2005, i-voting was introduced and by 2008 Estonia began using blockchain technology, a year before it was used as a decentralised, distributed ledger for bitcoin, and began its e-health programme in the same year. These actions have led to substantial savings for the economy.

Most recently and introduced in 2014, e-residency is one of Estonia's progressive public sector developments towards an "information society", all of which have been fuelled by nascent technologies. In exchange for €100, a photograph and their fingerprints, applicants are issued with an identity card, a cryptographic key and a PIN code to access Estonia's national systems. E-residency aims to create a digital nation for all built on inclusion, transparency and legitimacy to empower citizens globally, and achieve worldwide digital and financial inclusion. Non-Estonians can apply for e-residency, also known as virtual residency, which gives some business benefits, including company formation, but not tax exemption. 94 per cent of applicants gain e-residency.


10.1 General regulatory framework

10.1.1 Estonia

The Estonia Financial Supervision and Resolution Authority (**Finantsinspektsioon**) is the key financial supervisor with authority over banks, insurance companies, insurance intermediaries, investment firms, fund managers, investment and pension funds, payment institutions, credit intermediaries and the securities market that all operate under activity licences granted by Finantsinspektsioon.

Its key role is to help to ensure the stability and service quality of companies providing financial services, and to support the trustworthiness of the Estonian financial system. Accordingly, some of the banks operating in Estonia come under the SSM of the European Central Bank. Those banks are supervised under the framework of a cooperation mechanism.

⁹¹ Matt Reynolds "Welcome to E-stonia, the world's most digitally advanced society" (20 October 2016) Wired <<https://www.wired.co.uk/article/digital-estonia>>.



Finantsinspektsioon is also part of the European Single Supervisory Mechanism (**SSM**) which has carried out capital supervision for most important banks and banking groups in Europe since November 2014. It is also part of the European Single Resolution Mechanism (**SRM**) and Single Resolution Board (**SRB**).

10.1.2 European Union

See sections 5.1.2, 11.4, and 11.5.

10.2 Specific FinTech measures

Estonia provides a favourable country for incorporation of start-ups. Profit is only taxed upon distribution and because of Estonia's digital infrastructure and its small but technology astute population, it makes for an excellent country to test products.

Entrepreneurs can establish companies online in Estonia within 15 minutes. No local director is required for those who set up a business via the e-residency program and can benefit from a business bank account opened seamlessly by Finnish fintech Holvi (owned by Spanish bank BBVA). A Start-up Visa also allows some start-up founders to live in Estonia for up to 5 years


The Government has sought to build the talent of its own population and, since 2012, has established that programming and robotics is taught in primary school and students are taught to build blockchain applications in some high schools.

Another of Finantsinspektsioon's roles is to implement Estonia's strategy of financial innovation and supports enterprises with the development of innovative technology by:

- direct contact with a specialist who is responsible for understanding the business model being developed and answering questions that arise;
- explaining relevant financial legislation;
- support the qualification of the offered service and guide the process of applying for an activity licence; and
- remove legal bottlenecks to the development and implementation of FinTech.

10.2.1 Cryptocurrency, DLT and virtual assets

As noted in RBNZ's reporting, LHV Bank in Estonia became the first bank in the world to experiment with programmable money (also called 'coloured coins'), by issuing Cryptographic Universal Blockchain Entered Receivables (**CUBERs**) each worth 100,000 euros. CUBER is a new type of certificate of deposit, which is cryptographically protected by being recorded in a bitcoin blockchain. Acquiring CUBERs means acquiring a claim against LHV Bank, of a value equal to the value of the CUBERs. The CUBER app is a smartphone application that acts as an electronic wallet. It allows the use of CUBERs for payment to other CUBER app users. This allows instant and free peer-to-peer euro transactions, as well as low-cost electronic payments for purchase of goods and services from merchants using the CUBER app. There is no need for CUBER app users to know that it uses bitcoins, as bitcoins are merely used as a data carrier and represents a claim in fiat currency against LHV Bank. CUBER can be acquired from LHV Bank or from other users. CUBER trading occurs without any third party intervention, and a



customer relationship with LHV Bank is only required if CUBERs are acquired from, or redeemed by, the LHV Bank.

10.2.2 Innovation hubs

There are a number of innovation hubs and accelerators operating in Estonia. Some examples include:

- FinanceEstonia is a public-private cluster initiative with the aim of establishing Estonia as a vibrant and innovative location for financial services; and
- Start-up Estonia, which was launched by the Government in 2015 to carry out training for start-ups, attract foreign investors and eliminate regulatory barriers.

10.2.3 Sandbox

To date, Estonia has not had a regulatory sandbox for FinTech. In a sense, the nature of Estonia already operates as one. The digital competence and attractive regulation mean that many of the benefits of a sandbox are already attainable under Estonia's normal framework.

The European Bank for Reconstruction and Development is, however, working with Estonia's Ministry of Finance on a project to support the creation of a regulatory sandbox in Estonia.⁹²

10.3 Lessons for New Zealand

The digitalisation of Estonia has come with problems. In 2007, the country suffered a massive cyber-attack that brought down most of its digital infrastructure. In the wake of the attack, Estonia became home to the NATO Cyber Defense Centre of Excellence, which conducts large-scale cyber defense drills. The government also created a data embassy in Luxembourg where it stores copies of all of its data.

Still, officials were forced to respond to more than 10,000 cyber incidents in Estonia in 2017. The country's top banking regulator recently warned online databases and programs like e-Residency have made Estonia vulnerable to dirty money and sanctions breaches.

A digital society therefore requires that measures are in place to mitigate the inherent vulnerabilities and it also requires an astute population that is educated in using FinTech on a day-to-day basis.

⁹² See Finextra "Estonia maps out plans to create regulatory sandbox" (19 February 2019) <<https://www.finextra.com/newsarticle/33405/estonia-maps-out-plans-to-create-regulatory-sandbox/wholesale>>.

11 OTHER APPROACHES

11.1 Global FinTech Innovation Network

The GFIN is a collaborative policy and knowledge sharing initiative aimed at advancing areas including financial integrity, consumer wellbeing and protection, financial inclusion, competition and financial stability through innovation in financial services, by sharing experiences, working jointly on emerging policy issues and facilitating responsible cross-border experimentation of new ideas.

The GFIN was formally launched in January 2019 by an international group of financial regulators and related organisations. It built upon the UK FCA's proposal to create a global sandbox.⁹³ 29 organisations have so far joined the network.

The GFIN was proposed after a consultation paper in August 2018.⁹⁴ The proposition of the GFIN was made in recognition that trends in financial services are increasingly global and there is a need to prioritise cross-border solutions. Following this consultation, GFIN finalised its Terms of Reference for Membership and Governance of the GFIN.⁹⁵ Its three primary functions are:

- To act as a network of regulators to collaborate and share experience of innovation in respective markets, including emerging technologies and business models, and to provide accessible regulatory contact information for firms;
- To provide a forum for joint RegTech work and collaborative knowledge sharing/lessons learned; and
- To provide firms with an environment in which to trial cross-border solutions.

Building on the idea of the global sandbox, a key workstream is cross-border testing which seeks to create an environment that allows businesses to simultaneously trial new technologies in multiple jurisdictions.

Businesses wishing to participate in this pilot phase must meet the application requirements of all the jurisdictions in which they would like to test. For example, a firm wishing to test in the UK, Australia and Hong Kong must independently meet the eligibility criteria, and/or other relevant standards, of the regulators in those jurisdictions. Each regulator will determine its own screening and safeguards are in place.

In parallel, a second workstream is in place for regulatory trials and lessons learnt, which provides a forum for regulators to discuss lessons learned from the trials and cross-border testing and develop best regulatory practice.

⁹³ FCA "Global Financial Innovation Network (GFIN)" (14 February 2019) <<https://www.fca.org.uk/firms/global-financial-innovation-network>>.

⁹⁴ GFIN *Consultation Document* (August 2018).

⁹⁵ GFIN *Terms of Reference for Membership and Governance of the Global Financial Innovation Network (GFIN)* (31 January 2019) at 1.

11.3 Financial Action Task Force

FATF is an inter-governmental body established in 1989 by the Ministers of its Member jurisdictions. The objectives of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.

In relation to FinTech, FATF has launched a new platform, *FATF FinTech and RegTech Initiative*, which works on aspects of FinTech and AML/CFT and a collection of sources on how FATF members have dealt with these issues in their home jurisdictions.⁹⁶

Virtual assets, including cryptocurrency and other tokens, as well as business involved in dealing with them, have been a key focus for FATF. Virtual assets have been especially problematic as they do not fit clearly within existing types of securities and the nature of these products means that business often is not domiciled in a single jurisdiction.

In October 2018, FATF committed to addressing the risks of virtual assets and updated the FATF Recommendations for how countries must regulate for virtual assets. It amended Recommendation 15 on New Technologies, stating that *“to manage and mitigate the risks emerging from virtual assets, countries should ensure that VASPs are regulated for AML/CFT purposes, and licensed or registered and subject to effective systems for monitoring and ensuring compliance with the relevant measures called for in the FATF Recommendations”*.⁹⁷ And, in February 2019, the FATF Plenary has finalised a new Interpretive Note on Recommendation 15 to clarify how countries must regulate virtual assets to meet their international obligations. This will be formally adopted in June 2019.⁹⁸

Accordingly, in order for New Zealand and other states to comply with their obligations under FATF, new regulation or clarification on how existing regulatory frameworks apply is needed.

11.4 European Union

As has been noted in the sections of this Report dealing with the United Kingdom, Ireland and Estonia, there are a number of initiatives and regulations that are being driven by the EU that Member States need to implement in their home jurisdictions.

Notable amongst these initiatives, the European Banking Authority (**EBA**) undertook a “FinTech mapping exercise” in 2017, which identified as areas for further analysis:⁹⁹

- authorisation and registration regimes and sandboxing/innovation hub approaches;

⁹⁶ Financial Action Task Force (**FATF**) “How is FATF engaging with FinTech and RegTech sectors?” <[<https://www.fatf-gafi.org/fintech-regtech/?hf=10&b=0&s=desc\(fatf_releasedate\)>](https://www.fatf-gafi.org/fintech-regtech/?hf=10&b=0&s=desc(fatf_releasedate))>.

⁹⁷ FATF “Outcomes FATF Plenary, 17-19 October 2018” (19 October 2018) <<http://www.fatf-gafi.org/publications/fatfgeneral/documents/outcomes-plenary-october-2018.html>>.

⁹⁸ FATF “Public Statement – Mitigating Risks from Virtual Assets” (22 February 2019) <<http://www.fatf-gafi.org/publications/fatfrecommendations/documents/regulation-virtual-assets-interpretive-note.html#One>>.

⁹⁹ See the discussion in Rolf Weber and Rainer Baisch “FinTech – Eligible Safeguards to Foster the Regulatory Framework” (2018) 33 Journal of International Banking Law and Regulation 335 at 339.

- prudential risks and opportunities for credit institutions, payment institutions and e-money institutions;
- impact of FinTech on business models;
- consumer protection and retail conduct of business issues; and
- impact of FinTech on AML/CFT.

Significantly, the revised Payment Services Directive (**PSD 2**) set up foundations for an EU-wide single market for payments to permit simple, efficient and secure cross-border electronic payments.¹⁰⁰

11.5 European Union - General Data Protection Regulation

Also of note for FinTech businesses is the General Data Protection Regulation (**GDPR**). GDPR was passed in April 2016 and sets out how user data must be treated by financial institutions and third-party providers. These new rules impact on any international organisation handling the personal data of anyone residing in the European Union.

Personal data must be handled for specified and explicit purposes. During the life cycle of data, the personal data cannot be further processed in ways that are incompatible with the initial purposes for which the data was collected. For example, personal data collected to perform a sale of goods contract cannot later be used for marketing, unless the person has specifically agreed to receiving promotional offers. Complying with GDPR may have a big impact on an organization's data management processes and where businesses place the data they collect on their users.

FinTech relies heavily on the collection and use of data, accordingly, complying with associated requirements is a key concern for many businesses, particularly given how severe the penalties can be for breaches.

11.6 France

The Autorité des Marchés Financiers has established a new regulatory framework under the Action Plan for Business Growth and Transformation (PACTE) to assist businesses dealing with virtual assets, other blockchain-related projects and ICOs. Firms such as crypto custodial services, brokers and dealers, in addition to crypto services such exchange operators and remittance providers may now opt in to be regulated under the regime which *guarantees* a right to have a bank account (businesses venturing into the virtual assets have often been denied by banks to open an account).¹⁰¹

11.7 United States

FinTech is big business in the United States and has been subject to a multiplicity of regulatory responses, both at the federal and state levels.

¹⁰⁰ See EC "Payment services (PSD 2) - Directive (EU) 2015/2366" <https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366_en>.

¹⁰¹ Coindesk "Bank's Can't snub Scrypto Startups Thanks to France's New Blockchain Law" <<https://www.coindesk.com/banks-cant-snob-crypto-startups-thanks-to-frances-new-blockchain-law>>



Worthy of some note are the following:

- The Securities and Exchange Commission's (**SEC**) Strategic Hub for Innovation and Financial Technology (FinHub) is designed to play an important role in facilitating the SEC's active engagement with innovators, developers, and entrepreneurs. In addition to being a resource for information about the SEC's views and actions in the FinTech space, FinHub is also a forum for engaging with SEC staff simply by clicking an "ENGAGE WITH FINHUB" button on their website.
- The SEC has also issued reports, enforcement notes and decisions, and framework guidance which has contributed to the global trend towards greater regulation of offers of digital assets.¹⁰²
- At a legislative level, the proposed Token Taxonomy Act in Congress, and proposed legislation at state level, also indicate that there is a desire to regulate digital assets.

11.8 Latin America

Latin America has taken to FinTech more recently than many, with the first FinTech law of the region being passed in Mexico only in 2018.¹⁰³ However, it has quickly taken root, with the number of FinTech start-ups having increased by 66% between 2017 and 2018,¹⁰⁴ and the record levels of FinTech investment in recent years are expected to continue rising.¹⁰⁵ There has not been uniform adoption, however, as 86% of FinTech activity is concentrated in just five jurisdictions, with Brazil and Mexico containing 33% and 23% respectively.¹⁰⁶

Certain characteristics of the region have made it an interesting example of how FinTech development can be influenced by its environment. A significant proportion of the population is unable to make use of traditional financial institutions, credit availability is generally limited, and the vast majority of companies are small in size, yet that mobile phones and other smart devices are common.¹⁰⁷ It is perhaps unsurprising, then, that more than half of the FinTech start-ups in the region are split between payment and remittances, lending, and enterprise financial management,¹⁰⁸ as the sector grows to fill these needs for less-traditional alternatives.

Examples of particular actions taken by these jurisdictions include:

- the Mexican FinTech law mentioned above, dealing with cryptocurrencies, crowdfunding, open banking and a regulatory sandbox;¹⁰⁹

¹⁰² For a view that the SEC's approach to regulation of digital assets has been harmful and a roadblock to financial innovation, see John Berlau "Cryptocurrency and the SEC's Limitless Power Grab" (11 April 2019) Competitive Enterprise Institute <<https://cei.org/content/cryptocurrency-and-secs-limitless-power-grab>>.

¹⁰³ Inter-America Development Bank (IDB) and Finnovista *FinTech Latin America 2018: Growth and Consolidation* (November 2018) at 122.

¹⁰⁴ IDB and Finnovista, above n 103, at 13.

¹⁰⁵ Boris Batine "How Latin America's fintech market could exceed \$150bn by 2021" (11 July 2018) FinTech Futures <<https://www.bankingtech.com/2018/07/how-latin-americas-fintech-market-could-exceed-150bn-by-2021/>>.

¹⁰⁶ IDB and Finnovista, above n 103, at 28.

¹⁰⁷ IDB and Finnovista, above n 103, at 16.

¹⁰⁸ IDB and Finnovista, above n 103, at 14.

¹⁰⁹ Batine, above n 105.

- new credit start-up rules from the Brazilian Central Bank allowing FinTech businesses to act as credit providers or lending platforms directly rather than having to have a bank as an intermediary;¹¹⁰ and
- Columbia's "Innovasfc", a FinTech space combining a regulatory sandbox, a FinTech hub and a RegTech model.¹¹¹

11.9 China

Mainland China is one of the largest and most established FinTech markets in the world. 40% of consumers in China are using FinTech for payments compared to 4% in Singapore, 35% are accessing FinTech-based insurance products compared with 2% in many Southeast Asian markets and more generally is moving forward to provide increasingly sophisticated FinTech offerings.¹¹² Accordingly, in mid-2015, China's State Council issued a new policy approach, based on building a comprehensive regulatory system to cover FinTech. The result is that China tends to take a micro-regulation approach in respect of particular areas of FinTech. For example, China has taken the steps of banning crypto-related commercial activities including mining.

11.10 South Korea

For what was for a time a surprisingly limited industry, FinTech in South Korea has more recently been growing at a significant pace, reaching 400 companies halfway through last year.¹¹³ It is now utilised by many of the large Korean technology companies and banks, significantly in the areas of payments and banking.¹¹⁴ In order to foster this ecosystem, a number of avenues have been pursued, including the following:

- A regulatory sandbox was launched on 1 April this year, with a particular focus on products that are innovative,¹¹⁵ for which 18 products have been approved and 87 are awaiting review.¹¹⁶
- Their first online-only bank launched in April 2017,¹¹⁷ while more recently the regulator has proposed to open up the banking system, currently only accessible to banks, to allow non-banks to operate within it.¹¹⁸

¹¹⁰ Batine, above n 105.

¹¹¹ IDB and Finnovista, above n 103, at 126.

¹¹² FSDC, above n 58, at 15.

¹¹³ James Ihn "The Future of Fintech in South Korea" (25 May 2018) Medium <<https://medium.com/qara/the-future-of-fintech-in-south-korea-37a0a1315742>>.

¹¹⁴ Varun Mittal "South Korean FinTech Landscape" (January 2019) ResearchGate <https://www.researchgate.net/publication/330701592_South_Korea_FinTech_Landscape> at 2.

¹¹⁵ Financial Services Commission (FSC) "Financial Regulatory Sandbox Launched" (1 April 2019) <<https://www.fsc.go.kr/downManager?bbsid=BBS0048&no=136400>>.

¹¹⁶ FSC "Additional Nine Financial Service Providers Designated As 'Innovative Financial Services' for FSC's Regulatory Sandbox" (2 May 2019) <<https://www.fsc.go.kr/downManager?bbsid=BBS0048&no=137884>>.

¹¹⁷ FSC "Korea's 1st Internet-Only Bank Open for Service" (3 April 2017) <<https://www.fsc.go.kr/downManager?bbsid=BBS0048&no=121592>>.

¹¹⁸ FSC "Banks' Financial Payment System to be Open to FinTech Firms" (25 February 2019) <<https://www.fsc.go.kr/downManager?bbsid=BBS0048&no=134768>>.

- Investment restrictions on financial companies, limiting them to investing only in other financial companies or those closely related to financial services, are to be amended to make clear that FinTech companies are so related.¹¹⁹
- More than 200 regulations that impact innovation in FinTech are to be reviewed.¹²⁰
- Numerous co-working spaces, to help develop networks, partnerships and general collaboration.¹²¹

11.11 Japan

Despite being one of the more advanced economies, Japan initially did not encounter the same level of development of FinTech as many of its peers.¹²² However, it has been recognised as something that could stimulate the wider economy,¹²³ and accordingly a number of measures have been taken encourage its rise. Japan is now even leading the pack in certain areas, such as the regulation of cryptocurrency exchanges (in which it was the first country to do so),¹²⁴

Others among these measures include the move towards a fully digitized personal identification and KYC processes around financial services,¹²⁵ as well as a cashless economy.¹²⁶ In relation to the latter, a number of Japanese banking organizations have come together to launch J Coin pay, a popular non-cryptocurrency digital wallet.¹²⁷ Their central bank has had a “FinTech Center” since 1 April 2016, aimed at providing a catalyst and hub for interaction between financial services and technological development,¹²⁸ and a “Panel of Experts” has been set up to foster the ecosystem necessary for FinTech start-ups to flourish.¹²⁹ The growing FinTech industry has also intersected with the wider push to establish Tokyo as a global financial centre, with a study group and task force set up specifically to work towards that.¹³⁰

¹¹⁹ FSC “FinTech Policy Direction” (16 January 2019) <<https://www.fsc.go.kr/downloadManager?bbsid=BBS0048&no=132933>>.

¹²⁰ FSC, above n 119.

¹²¹ Ihn, above n 113.

¹²² Financial Services Agency (FSA) “Establishment of ‘Panel of Experts on FinTech Start-ups’” (27 April 2016) <<https://www.fsa.go.jp/en/news/2016/20160427-1.html>>.

¹²³ Leika Kihara and Thomas Wilson “Fintech won’t threaten central banks, for now: Bank of Japan official” (4 October 2016) Reuters <<https://www.reuters.com/article/us-japan-economy-boj-fintech/fintech-wont-threaten-central-banks-for-now-bank-of-japan-official-idUSKCN1240S0>>.

¹²⁴ Taigia Uranaka “Japan grants cryptocurrency industry self-regulatory status” (24 October 2018) Reuters <<https://www.reuters.com/article/us-japan-cryptocurrency/japan-grants-cryptocurrency-industry-self-regulatory-status-idUSKCN1MY10W>>.

¹²⁵ Ministry of Economy, Trade and Industry (METI) *FinTech Vision: Summary* (8 May 2017) at 3.3.1-3.3.2.

¹²⁶ METI, above n 125, at 3.2.2.

¹²⁷ Melissa Adams “What is JCoin and why is it so popular in Japan?” (14 March 2019) Medium <<https://medium.com/cryptopay/what-is-jcoin-and-why-is-it-so-popular-in-japan-44d98f382083>>.

¹²⁸ Bank of Japan “Message from Governor Kuroda on the occasion of the establishment of the FinTech Center” (1 April 2016) <<https://www.boj.or.jp/en/paym/fintech/message.htm/>>.

¹²⁹ FSA, above n 122.

¹³⁰ METI, above n 125, at 3.5.2.

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