The role of sectoral regulators and other state actors in formulating novel and alternative pro-competition mechanisms in fintech

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ABSTRACT

Motivated by an economic agenda, state actors are using methods other than traditional regulation to attract fintech business to their jurisdiction and to promote competition in digital markets. These mechanisms include visa schemes for fintech talent, research and development incentives, and schemes for accessing the finance crucially needed by fintech entrepreneurs to grow and scale up. The hand-holding role of regulators supporting fintech innovators on their journey including the regulatory sandbox global phenomenon is also examined. Newer developments demonstrate how regulators are increasingly creative in directly challenging fintech entrepreneurs to innovate for the public good with digital sandboxes, hackthons and datasprints. However, regulatory agencies have a delicate balancing act and ought to calibrate their competition promotion agenda to ensure appropriate treatment of varied market actors including BigTechs in a platform economy. This debate furthers discussion around the complex evolving and future goals of both fintech competition policy and financial regulation.

KEYWORDS: fintech, regulatory sandbox, fintech regulation, fintech competition; digital markets
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I. INTRODUCTION

The convergence of finance and technological innovation continues to provide exciting opportunities for innovators, investors and consumers in the Fourth Industrial Revolution as digital markets both develop and evolve. A vast array of new fintech services and refashioned business models have come to market including challenger neo banks, robo-advisors, crowdfunding platforms, digital wallet services and virtual currencies along with associated business to business (B2B) services. Developing continue apace such as the rise of the decentralised finance (DeFi) ecosystem using distributed ledger technologies (DLT) infrastructure to transform and further disintermediate financial services. The benefits are immense. Fintech businesses can create efficiencies, boost competition and bring down costs for market entry. Alternative finance providers enable low-cost access to digital finance and banking benefitting financial inclusion for the unbanked and underbanked population. Increased competition can also benefit consumers of disintermediated financial services who benefit from reduced switching and transaction costs as well as ease of use. While the COVID-19 pandemic accelerated fintech market penetration, often relevant markets cannot yet be characterised as established or stable. Access to data and capital are key as is the need to be able to navigate a complex and transitioning regulatory landscape. Although it is impossible to predict how competition in digital markets will evolve, policy discourse often refers to the potential for a ‘barbell’ market comprising a small number of large players and large numbers of smaller players. In the digital economy start-ups can enter markets with low entry costs while less agile incumbents may struggle to adapt. Traditional financial institutions with legacy systems on the other hand may struggle to adapt their offerings to the fintech era. There are veritable minnows who want to innovate as small start-ups and other fintechs who want to scale up. Meanwhile there are tech giants whose dominance across multiple spheres seems unstoppable, making it difficult for challenger firms to make headway.

In this global digital environment, the pace of technological innovation and the speed of states to appropriately calibrate the business and regulatory environment places domestic and global competitive pressure on the fintech ecosystem. In a time of exponential and rapid change many countries have consciously set out to provide an enabling environment for fintechs to incentivise innovation and growth while promoting market confidence. Traditionally regulators have been gatekeepers to market entry. However, there is now a common sentiment among governments and regulators that they should also be nurturers of would-be participants in these fledgling markets so as to contribute to effective fintech competition and growth. Behind this is an economic imperative. Fintech activities have huge potential to drive gross domestic product

(GDP) growth, inward investment and cross-border trade. Accordingly, this chapter probes innovative methods that qualify as novel or non-traditional that are being employed by state actors in a bid to boost fintech market participation with the overarching objective of encouraging disruptive innovation and economic growth. Not to put too fine a point on it, to realise the value proposition that fintech implies as a force for positive market disruption, state actors across the globe have been bending over backwards to lend their support to intending fintech disruptors, stepping outside traditional perceptions of the role of regulators, and their expected relationships with their regulatory subjects. The associated upending of the traditional vertical regulatory relationship in favour of a less hierarchical one which focuses beyond the ‘rulebook’ is what makes it so fascinating for observers of fintech markets and regulation to study.

Although there is consensus across states on the need to attract and foster fintech innovation, there is no manual for how that should be achieved. Rather, state actors are innovating versatile policy initiatives with a view to attract fintech innovators. Regulators, realising that the national interest in securing fintech turf is at stake, have looked at what their international counterparts have been doing, while others have also been cultivating original tools in service of a pro-Fintech agenda in their own right. The position taken here is that state actors are generally to be lauded for their efforts to promote competition and market entry. These measures can, however, pose countervailing policy challenges and outcomes in the round may not be fair or transparent. Moreover, it is contended that, consistent with the evolution of market conditions, a re-evaluation of appropriate regulatory strategies is called for.

The nature of competition goals and their role in policy stances in relation to fintech markets is introduced in Section II which discusses competition and fintech markets and the role of the state before moving to discuss the economic rationale behind pro-innovation tools being pioneered by state actors. Section III moves to explore how crucial elements of fintech infrastructure—access to data and interoperability of systems; access to talent; assistance with the cost of research and development and protection of intellectual property; and access to finance—are being bolstered to help the fintech ecosystem develop and mature. Section IV examines how regulators’ provision of fintech supports such as incubators and sandboxes fare as alternative competition promotion mechanisms. It also discusses initiatives that helping market entrants to navigate the regulatory environment. Section V makes the case for a more nuanced and integrated policy approach on competition promotion to be adopted by regulators as fintech markets become more established.

II. THE ROLE OF THE STATE IN COMPETITION PROMOTION

When exploring novel and pro-competition mechanisms in fintech, it is relevant to consider how and why they exist, both in the early stages of fintech, and as fintech markets begin to mature. The world has reached ‘fintech 4.0’, characterised by digitalisation, BigTech and the platform economy with its predomination of digital finance platforms. Although technology transcends geographic borders and fuels globalisation, regulatory and other barriers to entry (including access to finance and labour) influence choice of location for fintech businesses at start-up and scale-up phases. Evidence suggests that alternative finance markets globally are most developed

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in two jurisdictional groups: first, countries with well-developed finance systems such as Singapore, the United Kingdom and the United States; and secondly, countries that have consciously set out to become attractive hubs for alternative finance such as Estonia, and Lithuania.

The level of future innovation and number of competitors is not capable of being mapped out, in part because the capacity for innovation and ease of entry by large players to a whole milieu of upstream and downstream markets defies ready prediction. There are different views on the prognosis for technological innovation. As one commentator puts it:

Are we living in a period of technology exhaustion, where there are too few big breakthroughs and competition is being fought out through small incremental improvements to old ideas? Or are we on the brink of accelerating change, where technical advances on a number of fronts are about to unleash giant new digital markets?

The true picture may lie somewhere in the middle. In competition terms, the state of existing relevant markets is uneven and fintech markets across jurisdictions do not offer anything approximating a level playing field in terms of barriers to market entry.

Regulation functions to establish trust which propels product and market expansion. By contrast, lack of bespoke regulatory frameworks and resultant legal uncertainty inhibit stable market development and encourage regulatory arbitrage. Encouraging competition when regulatory frameworks lag behind is a tricky business. Buckley et al see any threat of a race to the bottom as being trumped by the ‘dire need of more competition.’ This is complex territory. Questions of appropriate regulatory approach to fintech activities are not the direct focus of this chapter but the push-pull regulatory tension between supporting a burgeoning industry and regulating it forms a salient part of the calculations being made by state actors taking initiatives to promote competition.

Competition law has an instrumental role to play in preventing market failures arising from cartels and abusive market practices by dominant market players. This holds relevance as BigTechs leverage their dominance into payment services and other fintech markets as TechFins. Furthermore, digital platforms may act as defensive gatekeepers guarding access to

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5 Cambridge Centre for Alternative Finance (n 1) 64.
6 Estonia punches well above its weight with 10 unicorns (business valued at more than $1 billion), one for every 130,000 of its population in comparison to one per 7 million in China: John Thornhill, ‘Plural Launches €250mn Entrepreneur-led Fund for European Tech Start-Ups’ Financial Times (London, 28 June 2022).
7 Lithuania has more regulated fintechs than any other EU Member State based on development of its licensing regime and has benefited from Brexit relocations.
8 See, eg Apple’s planned entry to the Buy Now, Pay Later merchant space: Ron Shevlin, ‘How Apple will Boost the Apple Card with Buy Now Pay Later’ Forbes (28 June 2022).
infrastructure for downstream market entry. The essential facilities doctrine may in certain circumstances act as a lever to require a dominant entity to provide access to an essential resource to enable market entry. However, competition law ‘only reacts to [a] particular kind of market failure.’ As the OECD notes, ‘[i]n general, competition policy focuses on cases where market power is durable, rather than a temporary reward for innovation that can be contested by a competitor with novel technologies.’ As such, while well suited for addressing abuses of a dominant position or collusion, competition law will typically not provide any basis for intervention in nascent and under-developed fintech markets. In short, once competition law rules have been complied with, a more general objective of facilitating market access and scaling lies beyond the classic concerns of competition law. This is in line with free market approach in open economies that allows markets to develop freely without state intervention subject to compliance with the law. That being the case, this chapter is interested in how the arrival of fintech has motivated regulators to seek to ensure positive competition participation outcomes for fintech freed from any requirement to first establish anti-competitive practices. Regulators, governments and trade promotion bodies are focused on maximising the potential for innovators to use technology and synergies to provide financial services, but also on nudges that make it attractive for them to explore doing so in their jurisdiction.

Global trade policies of states are aligned with fintech trade development goals to ensure a cohesive digital finance strategy. Bilateral and multilateral trade agreements can help to promote inter-jurisdictional trade and build up the fintech ecosystem. These trade agreements often contain provisions that help to promote market entry and digital trade, most notably through provisions surrounding data access and data transfer across borders. Fintech bridges typically involve some element of regulatory cooperation between jurisdictions. Both regulators and firms benefit from the exchange of information involved. Although they have become common in the broader fintech global landscape, fintech bridges lack a uniform definition. As described in the Kalifa Review:

Each fintech bridge is unique, but they typically allow access to events, meetings and networking opportunities, referrals to streamline regulatory approval, introductions to buyers, investors, trade associations and institutions, advice and one-to-one mentoring from fintech specialists and discounted “soft-landing pads”, grants or subsidies.

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15 The EU Commission is investigating whether Apple abused its dominant position by restricting third-party access to technology needed to develop rival mobile wallet solutions to Apple Pay on Apple devices: Javier Espinoza, ‘Apple charged by Brussels with abusing its market power in mobile payments’ Financial Times (London, 2 May 2022).

16 See, eg Case C-7/97 Oscar Bronner GmbH & Co KG v Mediaprint Zeitungs und Zeitschriftenverlag GmbH & Co KG.


18 OECD, Handbook on Competition Policy in the Digital Age (2022) 15.

19 See, eg Chapter 19 of the trade agreement between the United States, Mexico and Canada (USMCA) in force 1 July 2020.

20 As of 2021, the United Kingdom had fintech bridges with Australia, China, Hong Kong, Singapore and South Korea. See generally Lev Bromberg, Andrew Godwin and Ian Ramsay, ‘Cross-border Cooperation in Financial Regulation: Crossing the Fintech Bridge’ (2018) 13 Capital Markets Law Journal 59.

21 Sir Ron Kalifa, Kalifa Review of UK Fintech (HM Treasury) 38.
Free marketism is having inroads carved into it as state actors globally are pro-actively devising creative strategies to promote and support competition in fintech markets, and doing so in ways that go beyond the blunt tool of regulatory rules. As Drexl writes, ‘[t]he question is not only how to protect the free market economy against anti-competitive conduct of firms. Rather, the question is what can be done in order to promote the digital economy.’

The underlying justification is a broad, economic ‘public interest’ goal, rather than narrower competition law-based concerns. There are two limbs to this economic agenda—direct market benefits and associated indirect economic benefits to the state. Fintech’s ascendancy ‘increases the set of viable arrangements for producing financial services’. Undoubtedly there are associated benefits for business and retail consumers. Fintech services make customer onboarding, payment services and the delivery of banking and other services more secure, more efficient, more frictionless and more cost-effective while revolutionising and expanding access to financial services markets. At a macro level, the economic benefits to the economy at large are at play in how State actors are playing their hand. States want their piece of the fintech action. This economic motivation is prodding States to be creative in adopting novel pro-competition and pro-innovation mechanisms that frequently lie outside the usual range of tools of a regulator.

Regulators are taking a broader view of their mandate. As the United States Treasury Department has observed, ‘[a] regulatory environment with largely binary outcomes — either approval or disapproval — may lack appropriate flexibility for dealing with innovations.’ The Securities and Exchange Commission (SEC) has for some time had an express role in promoting ‘efficiency, competition and capital formation’ that extends its traditional investor protection mandate. In the United Kingdom, the Financial Conduct Authority (FCA) not only possesses traditional market regulation functions, but its statutory dual mandate also acknowledges competition objectives including facilitating innovation and market entry. Other agencies who lack this formal mandate have sallied forth with a competition promotion approach on a less formal or de facto basis. Thus within a continuum of what this author has coined ‘opportunity-based regulation’, financial services regulators are playing ‘a critical part in actively nurturing and promoting competition in emerging and nascent FinTech markets, in addition to operating in the traditional regulatory space.’ This is evident in the rhetoric employed by these agencies as

23 Drexl (n 17) 43.
25 In 2020 the largest alternative finance regional market size was the United States and Canada, followed by the United Kingdom, Europe (excluding the United Kingdom), then Asia Pacific (excluding China), Latin America and the Caribbean (led by Brazil), Sub-Saharan Africa, China, and Middle East and North Africa (MENA): Cambridge Centre for Alternative Finance (n 1) 25.
26 ‘With FinTech, not only is the classic regulatory dilemma between a facilitatory approach and a regulatory approach at play, … an economic agenda is also a significant undercurrent at work’: Ahern (n 11) 347.
27 Broader questions of tensions between economic and other goals in this arena are turned to in Section V.
29 This was the effect of the National Securities Markets Improvement Act of 1996, § 106.
32 ibid 356.
they contribute to making their jurisdiction competitive on the world stage, thereby delivering economic growth. Malta’s Financial Service Authority expressly sets out to ‘strengthen confidence in the market and its institutions, thereby fostering a robust and dynamic FinTech sector in Malta.’ In the United Kingdom, the FCA sets out its ambition ‘to promote competition by supporting disruptive innovation… To remain Europe’s leading FinTech Hub, we have to ensure that we continue to be an attractive market with an appropriate regulatory framework.’

Supporting the establishment of the elements of a robust infrastructure for fintech is crucial to nurturing the fintech ecosystem and the ability for innovators and their businesses to flourish. We now move to examine what supports for fintech are being put in place.

III. BUILDING THE FINTECH INFRASTRUCTURE

A. Access to Data and Interoperability

We are living in a data economy which upends traditional models of production. As the raw material of FinTech markets big data is the foundation for the infrastructure of fintech. In this data-driven economy, the role of the state is changing. Digital IDs facilitate entirely digital onboarding by fintechs. Consequently, jurisdictions that have progressed this have a competitive advantage. In the EU, electronic identification (eID) under the Electronic IDentification, Authentication and Trust Services (eIDAS) Regulation facilitates digital banking and alternative finance services but needs further reform to enable fine-tuning. The United States currently lacks a recognised digital ID although the US Department of Treasury recommended the introduction of a digital national ID and the development of digital IDs through the public and private sector working together. Meanwhile a key component of the UK’s digital finance reform package involves providing for digital IDs.

Ease of data portability is a signifier of a fintech-friendly jurisdiction. The availability of open banking in countries such as the United States is helpful to challenger fintechs in terms of reducing barriers to market entry by facilitating third party access to client financial data which can be used to develop new fintech services. In the United Kingdom open banking was driven by the action of the Competition and Markets Authority and data standards are planned to create

35 Unsurprisingly this has generated discussion of the appropriate role of competition policy. See, eg Maurice E Stucke and Allen P Grunes, Big Data and Competition Policy (OUP 2016); Drexl (n 17) 10-11; Giuseppe Colangelo and Oscar Borgogno, ‘Data, Innovation and Transatlantic Competition in Finance: The Case of the Access to Account Rule’ (2020) 31 European Business Law Review 573.
38 However, the US Department of Commerce National Institute of Standards and Technology (‘NIST’) has issued technical requirements for federal government use.
39 US Department of Treasury (n 28) 43.
40 UK Department for Digital, Culture, Media and Sport, UK Digital Identity and Attributes Trust Framework policy paper (2022).
the infrastructure for a secure fintech ecosystem. Data portability ensures that smaller entities can compete with legacy banks by having shared secure access to customer data that will help, for example, to speed up lending decisions and thus improve the competitiveness of banking markets. Open and common APIs and data standards also hold real potential to facilitate market entry. These help to counteract the advantages of incumbents. Jurisdictions that have a concept of open banking that extends beyond data portability to API functionality include Hong Kong, Mexico, Singapore and the United States. Providing for API-based open access to data (as seen in Mexico’s Fintech Law) is designed to foster competition. It facilitates financial disintermediation and can increase entry routes, for example, for payment services providers. As Arner et al perceptively note:

Regulation should aim at securing objective, transparent, and fair risk-based, rather than profit-based, conditions of access. Open interfaces, open-source code of the technology core, fair and non-discriminatory access requirements, and a transparent fee structure enable third-party developers to write proprietary applications for platform clients.

On the other hand, open banking initiatives can also allow Big Techs to increase their dominance and spread its influence across new market segments creating new market concentration issues. As such, it should not be assumed that facilitating market entry through open data and standards will have uniform effects – it may open up markets by reducing barriers to entry but it also facilitates ease of transition of market power to expansion into retail banking markets by BigTechs who can cross-subsidise the costs of market entry and fixed costs such as compliance with complex regulatory requirements.

B. Access to Talent

States that are serious about promoting fintech competition are acutely aware of the need to take action to attract fintech talent: highly qualified data scientists, engineers and others who are vital to developing and scaling up a fintech business. This is very much a global labour market and states are aware that they must compete for talent or face the consequences in terms of ceding competitive advantage. In many cases this manifests itself in special visa and immigration

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43 In the United Kingdom this was driven by the outcome of the Competition and Markets Authority investigation in 2016. See further Competition and Markets Authority (n 41) and <https://www.openbanking.org.uk/> accessed 21 July 2022.
44 Application Programming Interface.
46 Arner and others (n 4) 57.
48 These include Meta, Amazon, Google and Apple who have taken steps to enter financial services markets. As an example, before adding ‘buy now, pay later’ arm, Pay Later in 2022, Apple was already a presence with the Apple Card credit card, and Apple Pay enabling huge numbers of contactless payments.
programmes to make entry easier.\footnote{See, \textit{eg}, Australia (Global Talent Programme), Canada (Global Talent Stream), France (Tech Visa). Following the Kalifa Review (n 21) 46, the United Kingdom established the Tech Nation visa programme to help fintechs to scale-up.} The success or otherwise of these programmes has huge ramifications for ready domestic access to a pipeline of suitably qualified personnel and how welcoming a domestic fintech ecosystem is therefore perceived to be.

\textbf{C. Research and Development}

Availability of research and development (R&D) tax credits assist in driving research and innovation and therefore competition by reducing the costs involved. It is important that the scope of R&D tax incentives is broadly enough defined by states to enable fintech so as to cover, not only traditional R&D activities, but also the build-out of new fintech services atop existing legacy infrastructure systems. Similarly, acquiring financial data-sets is often a critical component of building and scaling a fintech business model. Thus, it has been argued that the scope of R&D tax credits should extend to covering the costs of the acquisition of financial datasets.\footnote{This reform was recommended in the UK’s Kalifa Review (n 21) 55.} The framing of R&D incentive framework can also be calibrated to positively encourage innovation activities including collaborations. For example, Fintech Australia recommended that large companies should be incentivised to engage in proof-of-concept work with early-stage technology firms.\footnote{FinTech Australia, \textit{Submission to the Select Committee on Australia as a Technology and Finance Centre} (2021) 16.} Protection of intellectual property also matters to fintech innovators. Realising this, Singapore scored points for the competitiveness of its regulatory environment by putting in place expedited patent review processes. The SG IP Fast Programme that launched in 2018 was a FinTech Fast Track (FTFT) for Fintech inventions followed in 2019 by the Accelerated Initiative for Artificial Intelligence (AI2) for artificial intelligence (AI) inventions.\footnote{The success of these programmes led to the launch of the SG IP Fast Programme which applies to patent applications for all inventions until 30 April 2024.}

\textbf{D. Access to Finance}

States are choosing to invest in the fintech ecosystem in order to boost it. These initiatives are targeted at achieving a wide range of defined policy objectives that will enhance competition. Funding has been used to develop tech clusters.\footnote{See, \textit{eg} the C$100 million investment of the Quebec Government in Scale AI as a Canadian AI super-cluster.} In 2017 the Monetary Authority of Singapore (MAS) launched an Artificial Intelligence and Data Analytics (AIDA) fund worth S$27 million designed to boost the development of AI fintech products. It also committed S$225 million under the Financial Sector Technology & Innovation (FSTI) Scheme with the objective of encouraging financial institutions to set up innovation labs in Singapore and to fund interoperable infrastructure for the benefit of the digital economy.

More generally, access to capital is not simply being left to the free market. Governments are acutely aware that fintechs need access to capital to transition beyond the start-up phase in order to scale up and to compete at a global level. In many cases there is a funding gap between supply of capital and demand for it up to pre-Initial Public Offering (IPO) phase. This represents an important barrier to entry. Countries are therefore focusing on developing means of providing

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routes to capital to finance fintech ventures. In the United Kingdom, the Kalifa Review recommended that a £1bn Fintech Growth Fund would be disbursed over a five year period to address some of the gap in growth funding to stimulate growth and thus make the United Kingdom more attractive to fintech entrepreneurs at pre-IPO stage. Notably, the policy lever behind this recommendation is on ensuring that UK private institutions (rather than simply relying on overseas investors) participate more fully in extending funding to the fintech sector. This is aimed at making the UK venture capital scene more competitive with that operating in the United States. Increasingly crowdfunding has become a viable way for start-up ventures to raise capital and recognising that, crowdfunding regulatory regimes have been designed to spur economic growth. In the United States, the Jumpstart Our Business Startups Act provided a framework for start-up companies and small businesses to raise equity capital using a crowdfunding platform to issue securities. The EU’s crowdfunding regulation covers equity and loan-based crowdfunding for businesses.

IV. FINTECH FACILITATORS

States have focused on capacity-building and engagement. Governments and regulators have established a variety of contact points and supports as well as spaces for collaboration and innovation with a view to demystifying the regulatory journey and facilitating fintech innovation and growth. Regulators and countries that have done so develop a reputation a reputation for being pro-competition and for nurturing new market entrants.

A. Centres of Innovation and Building Relationships

Recognising the centrality of innovative research, a number of jurisdictions have established or committed to establishing centres of innovation to drive domestic and cross-border fintech innovation and trade. The Kalifa Review of UK Fintech has propelled plans for the adoption of the establishment of a Centre of Finance, Innovation and Technology which will involve international collaboration ‘to ensure that the UK remains a world-leader in fintech.’ In the United States, the SEC established its Strategic Hub for Innovation and Financial Technology (FinHub) in 2018 to provide a forum for public engagement on fintech-related issues including digital marketplace funding and use of new technologies. Callaghan Innovation is New Zealand’s state-sponsored innovation agency. It adopts a multi-pronged approach in assisting with technology and product development including R&D funding and its Scale-Up New Zealand initiative.

54 Kalifa Review (n 21) 60. It is anticipated that half of this funding would be provided by large institutions and the remainder from smaller institutions.
56 JOBS Act; PL 112-106. The Act, including Title III (known as the ‘CROWDFUND Act’) took effect in May 2016. One criticism was that the capital raised was capped at $1 million. This was later increased to $5 million.
58 Kalifa Review (n 21).
59 Briefing Pack, Queen’s Speech (2022) 56.
B. Facilitating Partnerships

Many countries have set out to enable the formation of fintech partnerships to facilitate exchange of know-how, encouraging efficiencies and market entry. Long-established banking institutions may seek to become more digitally agile by partnering with fintech start-ups. While incumbent banks may wish to outsource services to fintech start-ups, innovators are drawn to the reputation, customer base and regulatory standing of the incumbents.

Mexico’s 2018 Fintech Law permits financial institutions to invest within certain defined ownership limits in fintech companies. This provides capital in return for innovation, facilitating market entry and may also aid financial inclusion and microfinance. In the United States, where many fintech firms would struggle to qualify for a banking licence, they may choose to partner with banks and credit unions. In the United Kingdom, a planned digital scalebox will facilitate incumbent players and fintechs to partner and work together. The provision of tax incentives to encourage partnering has also been suggested. Nonetheless, partnering arrangements must be effectively supervised to ensure that there are no competition concerns or risks to consumers or to financial stability.

C. Incubators, Accelerators and Hubs

Incubators, accelerators and hubs form the backbone of state front-facing infrastructural support for the fintech industry. Although the terms are not terms of art, incubators usually involve mentoring and accelerator hubs provide a co-working physical space for innovators to experiment and collaborate. As such, they promote and support the creation and growth of innovative start-ups.

For example, in Canada, Ontario established a FinTech Accelerator Office to connect fintechs and provide support for their growth. By contrast, innovation facilitators often known as ‘innovation hubs’ or ‘labs’ are designed to provide open and friendly informal points of contact with regulators for advice concerning the regulatory framework and its application.

The Australian Investment and Securities Commission (ASIC)’s Innovation Hub allows fintechs to receive informal guidance on licensing processes and waivers and other regulatory issues applicable to them as they develop innovative financial products or services. This contrast with a more formal outreach approach as evident in the United States where the depository regulators have set up working groups and offices to understand the impact of

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61 Lars Hornuf and others, ‘How Do Banks Interact with Fintech Startups?’ (2021) 57 Small Business Economics 1505. While beneficial, these technology partnerships generate new operational risks for banks that require management.


64 Kalifa Review (n 21) 36.

65 Ibid.


67 See further Ahern (n 31) 350-351: ‘Queries generally addressed by hubs include … whether authorisation is needed, how regulatory and supervisory requirements may be applied in practice, anti-money laundering regime issues and the applicability of consumer protection measures.’
technological innovation and to provide an industry point of contact. A step up from these approaches is the hands-on nature of the highly novel regulatory sandbox phenomenon as a catalyst for market entry.

**D. Regulatory Sandboxes**

The regulatory sandbox has its origins in the United Kingdom where the idea was mooted in 2015 to provide an analogous process to the clinical trials process for the pharmaceutical industry for the financial service industry. The subsequent roll-out of the regulatory sandbox by the FCA aimed ‘to promote more effective competition in the interests of consumers by allowing firms to test innovative products, services and business models in a live market environment, while ensuring that appropriate safeguards are in place.’ The FCA stated:

A regulatory sandbox has the potential to deliver more effective competition in the interests of consumers by reducing the time and, potentially, the cost of getting innovative ideas to market; enabling greater access to finance for innovators; enabling more products to be tested and, thus, potentially introduced to the market.

This cemented its reputation as a forward-thinking and flexible regulator that welcomed innovation and shepherded it.

Entry to regulatory sandboxes is competitive and the benefits are immense in providing a contained testing with the availability of hands-on free regulatory advice. The FCA earned a reputation that it ‘worked hand-in-hand with newcomers, letting start-ups test business models.’ The goodwill generated was enormous. Consequently, the regulatory sandbox became emulated the world over by fintech regulators. Within the developed world, regulatory sandboxes are available in a large and growing number of countries and there has been some take-up in emerging and developing economies to promote financial inclusion goals. Consequently, would-be fintech entrepreneurs can weigh up the relative benefits of regulators’ sandboxes and their features such as eligibility criteria, duration, available supports, potential for relaxation of relevant regulatory rules and expected reporting requirements.

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71 Financial Conduct Authority (n 34) 2.


74 After a slow start, some 10 States in the United States have taken the plunge.

75 See further Ahern (n 13); Ahern *Regulatory Lag* (n 73).

76 Under its Fintech Law, Mexico allows the narrowing of the regulatory perimeter for up two years during controlled testing.
Sandboxes assist participants with their route to market but impact on barriers to entry and natural selection in fintech markets as they do not seek to level the playing field but rather to extend preferential treatment to a handful of accepted sandbox participants. Sandbox regulators are thrust into actively pursuing a pro-innovation agenda and even a novel ‘quasi-market-making role’ as they decide what innovations deserve a place in the sandbox for supervised testing.

Being pro-innovation should not come at too high a cost. Pressure on regulators to operate a regulatory sandbox and to do so in a manner that burnishes a domestic and global reputation for being fintech-friendly may lead to regulatory distortions that affect the structure of fintech markets. Furthermore, attention to risk may potentially be downgraded. Brown and Piroksa contend that regulatory sandboxes involve the danger of ‘riskwashing’ whereby ‘organisations take actions to make it seem as if an asset class or technology or business model is not excessively risky, whether it is or not.’ This may be unduly harsh. What is not disputable, however, is that although admission to the sandbox is for beta testing and advice, the competitive selection process for entry to a sandbox means that admission itself has competitive benefits. It is often inaccurately perceived as bestowing a ‘coveted regulatory stamp of approval and de facto endorsement of the underlying product or service, which helps to attract customers and venture capital.’

One can see the regulatory sandbox development as integral to states’ intention to both attract and nurture fintech innovation. The FCA’s review of the regulatory sandbox hailed it as a success in assisting fintech firms to find and in some cases expedite their route to market while reducing costs which would otherwise accrue in obtaining advice on related regulatory compliance issues. While beneficial, the very informality associated with regulatory sandboxes constitutes their Achilles heel. To maintain credibility, regulatory sandboxes need to be operated transparently, due regard ought to be had to investor protection, and there should be no relaxation of regulatory rules.

E. Proactively challenging innovators to innovate

A variant of the sandbox concept is the digital sandbox. In the United Kingdom, the FCA has used a series of digital sandbox competitions to promote competition in the market. Designed to support new product and service testing and development, one of the benefits is that participants can test using an API digital marketplace. The second phase of the FCA digital sandbox launched in 2021 and was themed around technology for consumers concerning environmental, social and governance (ESG) data and disclosures. Criteria for selection required genuine innovation providing a new product or solution that was sufficiently differentiated from any existing market developments. However, there also had to be a demonstrated need for participation in the digital sandbox with a view to developing or improving the proposed solution’s features – ‘proof of concept’. The credibility of the testing plan and post-testing steps was also relevant.

77 Ahern (n 13) 358.
80 Financial Conduct Authority (n 70) para 2.1.
81 For a development of these arguments see Ahern (n 13).
What was interesting was how the regulator used industry engagement to level up the digital sandbox offering. The FCA brought in an Expert Advisory Panel of tech and finance bodies to support the evaluation process. The process was further levelled up by inviting expressions of interest for mentoring, engagement and collaboration from established players with digital sandbox participants and creation of a dedicated collaboration platform. This showed a regulator going above and beyond to provide a nurturing safe space for seedling new fintech products and services and playing a matchmaking role usually performed by trade promotion bodies. Following the Kalifa Review’s recommendation, the FCA plans to establish a new permanent digital sandbox with a view to promoting innovation. This commendable development will ‘allow digital collaboration, access to synthetic data sets, design and deployment on open source and open architecture “plug and play” at international, national and sectoral level’. The United Kingdom is expanding its fintech support offering through provision of a ‘scalebox’ providing support to fintech innovators in their growth phase as they scale or where they fall within identified priority fintech areas.

Also worthy of note is the launch by the ASEAN Financial Innovation Network (AFIN) of a fintech sandbox with the aim of fostering collaboration between financial institutions and fintech firms to enhance financial inclusion in less developed ASEAN markets. Transitioning financial institutions towards use of open architecture is a central part of this sandbox’s digital economy proposition. Within the sandbox, APIX represented a global first in creating a cross-order, open architecture platform to power digital transformation in the Asia-Pacific region.

Outside of regulatory sandboxes and digital ones, regulators are finding other novel avenues to shape the operationalisation of an innovation agenda. They have organised various competitions and initiatives designed to bring tech innovators together to collectively come up with solutions to societal challenges such as time-limited hackathons and data/tech sprints. Other medium-term projects have also been launched by regulators to motivate innovation., Project Ubin launched in 2016 involved collaboration between Singapore’s central bank and the international financial industry to test the use of DLT for clearing and settlement of payments and securities. Project Ubin led to a new cross-border payments network by Monetary Authority of Singapore in partnership with DBS Bank, JP Morgan and Temasek. In the United States, the FDIC Tech Lab (FDiTech) was created in 2018 to engage with fintech firms to promote competition and economic inclusion but also to improve safety and risk management for depository institutions.

F. Making sense of the regulatory environment

82 An ‘observation deck’ allowed regulators to observe the testing and for the process to inform understanding and policy development.
83 Kalifa Review (n 21) 35.
84 ibid.
85 ibid.
87 A hackathon is an organised public event for group collaborative programming for defined purposes.
88 A data sprint involves a short set period of time for collaborative completion of a defined programming or coding challenge.
1. Safe Harbours, No Action Letters and Other Innovations

In the United States the Consumer Financial Protection Bureau has developed No-Action Letter (NAL) policies for the fintech space creating a safe harbour from enforcement actions provided certain conditions are met. This encourages firms to develop products and services that benefit consumer choice and welfare. The first NAL was issued in respect of a company using alternative data and machine learning in credit underwriting decision-making. Also in the United States, there has been policy discussion of the possibility of providing for a token safe harbour to give developers three years to build a functional or decentralised network with an exemption from registration under federal securities laws. This would see the SEC standing back to allow DLT networks to be established during which time securities laws would not apply. In Australia, ASIC introduced a licence waiver scheme for fintech using its sandbox. Access to it within the Enhanced Regulatory Sandbox includes a requirement that the product or service satisfies an innovation test and a net public interest test.

State actors are aware that regulation may not stand the test of time and that fintechs need time to adapt to changes in the law. In this regard, sunrise and sunset clauses constitute useful mechanisms in promoting market development. A sunrise clause extends its application to events before it becomes operative. By contrast, a sunset clause allows a regime to expire in order to allow a review on its merits after it has been in operation for a time. There is also potential in this arena to use a grandfather or legacy clause that allows entities to adhere to a set of rules that predate the implementation of a new regulatory regime. To be most effective, safe harbours need to be time limited rather than perpetual.

2. Navigating Multiple Regulators and Regulatory Codes

Regulatory landscapes for fintech are multi-layered. Often there is a domestic fragmented approach to fintech regulation with division among a variety of codes policed by individual sectoral regulators such as financial services and data protection regulators. It is understandable that regulators are bending over backwards to guide fintech innovators through the labyrinth of regulation. This speaks again to an underlying competition promotion and economic agenda at work. The UK Kalifa Review emphasised the importance of a streamlined single interface approach whereby the establishment of a Digital Economy Taskforce would present a coordinating face on a digital finance package. New Zealand set up the Fintech Forum to provide a one stop shop coordinating advice on fintech regulation across regulators. Meanwhile, Singapore has gone further, pursuing a goal of streamlining regulations to encourage fintech innovation. Its much-lauded Payment Services Act 2019 consolidated previously disparate legal

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92 First introduced in 2016, this was reworked in 2020.


94 ‘Governments fear that if their regulators do not come to the aid of FinTech innovators to assist them to navigate the regulatory framework, entrepreneurs may be discouraged from bringing their product to market in that jurisdiction’: Ahern (n 13) 347.

95 Kalifa Review (n 21) 9.

provisions governing different forms of payment services making them more accessible to navigate.

3. **Best Practice Standards**

Technical and digital standards can act in place of traditional rulemaking and facilitate both national and international interoperability. Singapore’s MAS has sought to aid governance and development of good practice standards by publishing guidance around the promotion of fairness, ethics, accountability and transparency (FEAT) concerning the use of AI and data analytics in finance. This led to MAS collaborating with industry partners from 2019 on the Veritas project to create a framework for AIDA projects to evaluating compliance with FEAT and to the successful application of the FEAT methodology to credit scoring and customer marketing.\(^97\) In the United States, the SEC issued guidance on the use of robo-advisors to provide automated investment advice which assists fintechs to comply with relevant investor protection regulation.\(^98\) Meanwhile in the United Kingdom, official policy is to consider non-regulatory measures such as technical standards before regulatory intervention in order to reduce regulatory burden.\(^99\) International cooperation on standards is crucial and this is a focus in international fora such as at G7 level.\(^100\)

4. **Regtech and the Reporting Landscape**

States are very aware that regulatory complexity and opacity serve as powerful deterrents to market entry. Regulators are themselves climbing on board the technological train. The availability of machine readable legislation and regtech offers the potential to considerably reduce the time and economic costs associated with compliance for fintechs.\(^101\) The future advent of digital regulatory reporting will transform compliance.\(^102\) It is early days but these developments hold real potential to bring efficiency gains from big data automation and machine learning that will radically transform the supervision and compliance landscape, making it easier to navigate on both sides of the regulatory fence. This is important as the complexity of the regulatory environment represents a considerable barrier to entry for fintechs.

V. **GENERAL REFLECTIONS AND FUTURE DEVELOPMENTS**

This chapter has focused on an array of measures that fall outside of competition law tools that are being marshalled by State actors to whip up interest in competing. A challenge for assessing their efficacy is that a direct correlation between state actor proactiveness and market entry can be difficult to establish. It is the synergistic effect of a complex web of combined variables forming an overall favourable climate for fintechs that may induce location and/or market entry.

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\(^99\) UK Department for Digital, Culture, Media and Sport, *Digital Regulation, Growth and Unlocking Innovation* (2022), ‘Our Principles’.

\(^100\) G7, *Digital and Technology Ministerial Declaration* (2021).


\(^102\) The FCA is working on a project to operationalise digital regulatory reporting.
in a given jurisdiction. States are focusing on GDP contribution and market valuations\(^\text{103}\) as a crude indicator of fintech success. However, attracting fintech interest is one thing, such businesses thriving and staying afloat, particularly, in a downturn is another.

It is interesting that the language of policy discourse, including competition policy discourse, is observably shifting to expressly encompass furthering effective competition. The Kalifa Review’s vision for fintech policy and regulation in the United Kingdom was ‘dynamic leadership that protects consumers yet nurtures fintech activity and encourages competition’.\(^\text{104}\) This thinking has also motivated the planned establishment of the Digital Market Unit in the UK Competition and Market Authority with a view to promoting competition in digital markets.\(^\text{105}\) The EU Commission has acknowledged that competition policy objectives ought to be broadened to assist market entry and public interest considerations.\(^\text{106}\) Thus the development of the contours of innovation-motivated policy goals as they continue to evolve will be enthralling to observe.

A key reflection on competition promotion endeavours is that the execution of well-meaning policies may potentially prove non-welfare-enhancing from the perspective of actual and potential market participants in a given market. Some ex-post assessment of competition in fintech markets would assist in judging the effectiveness of the role of state interventions in boosting competition. The danger is that market distortions may indirectly result from selective interventions that favour some market operators more than others. The regulatory sandbox provides a prime example. A question worth interrogating is whether all competition leading to market entry is worth promoting provided that competition rules are abided by, or should the bar be higher. The playing field for entry to fintech markets is never level and in a platform economy the potential for oligopolistic markets that are ‘not really bad but not really good’ in competition terms looms large.\(^\text{107}\) As Langley and Leyshon astutely observe, ‘[p]rocesses of consolidation rather than competition characterise FinTech because, fundamentally, successful platform reintermediation turns on transforming and monopolising new market structures of retail money and finance.’\(^\text{108}\) Indeed, a study by Cambridge Centre for Alternative Finance reports that platforms offering balance sheet consumer and business lending were understandably worried about the threat to their business model from increasing competition from market entry by BigTech firms.\(^\text{109}\) Moreover, within a platform economy dominated by BigTech infrastructure increased competition has the potential to negatively affect both investor protection and financial stability.\(^\text{110}\)

While competition may benefit consumers and the wider economy, fintech policy needs to be holistic and not divorced from the broader regulatory landscape including the financial services, anti-money laundering, data protection and competition law landscape. Consumer

\(^\text{103}\) These include the presence of so-called ‘unicorn’ public companies with valuations of $1 billion such as Ant Technology (China), Klarna (Sweden), N26 (Germany), Revolut (United Kingdom) and Stripe (United States).

\(^\text{104}\) Kalifa Review (n 21) 8.

\(^\text{105}\) See also the development of the UK’s Digital Regulation Cooperation Forum.

\(^\text{106}\) European Commission (n 22) 4.


protection and financial stability goals permeate these systems and demonstrate that competition at all costs should not be welcomed. Arrival of new fintech products may give rise to consumer exploitation concerns such as the explosion of heavily marketed buy now, play later (BNPL) products.\footnote{Patrick Jenkins, ‘Buy Now, Pay Later Must be Regulated — Now’ \textit{Financial Times} (London, 7 June 2022); ‘Customers tend to use multiple providers and rack up dozens or even hundreds of overlapping purchases. That not only means individuals’ finances can spiral out of control; it also makes it hard to grasp the macro effect.’} Money laundering and fraud are also proving challenges as regulators and supervisors struggle to get a grip on properly supervising fintech operators that are global rather than simply domestic in nature.\footnote{The large-scale global fall-out of the German Wirecard fraud scandal provides a cautionary example of this.} Indeed, regulators are becoming more vocal in articulating what activities are not welcome in their jurisdiction. Thus, a multi-faceted ‘balancing act’ is frequently in evidence by States in adopting a policy approach to fintech.\footnote{Bromberg, Godwin and Ramsay (n 20) 59.}

An unfortunate correlation can exist between the laxity of the regulatory environment and the profitability of the underlying business model. A lax or ill-adapted regulatory or supervisory environment may encourage market entrants who then adopt questionable credit risk and other practices.\footnote{Eg, in regard to the extension of high-risk marketplace loans at exorbitant rates before regulation of the market. See further Ahern (n 11) 197.} Thus, having incentivised fintech innovation and markets to take off, sectoral regulators now have to consider if and when a more nuanced approach is required. Important issues of regulatory policy arise for financial service markets regulators the world over – when should they take steps to tighten the regulatory reins or leave it to market discipline. This discussion is salient in relation to the risks presented by cryptocurrencies. An adjustment is seen, in Singapore’s shift towards a tougher policy stance on the crypto industry after previously heavily courting the industry.\footnote{Ravi Menon, ‘MAS’ Approach to the Crypto Ecosystem’ speech 27 April 2022 <https://www.mas.gov.sg/news/speeches/2022/mas-approach-to-the-crypto-ecosystem> accessed 21 July 2022.} The need for this balancing act around a fulcrum of being ‘fintech-friendly’ is in line with what this author has previously argued:

The role of expanding competition suggests a public interest mandate in promoting consumer choice, price and efficiency. This is a completely different driver than a risk-reduction regulatory model which typically stems from a regulatory focus on mitigating the potential for systemic harm and harm to the consumer. In the zeal to embrace FinTech, a legitimate and unavoidable question concerns how easily these two mandates can be reconciled. These divergent drivers create the potential for regulatory friction. Clearly, a competition promotion mandate should not come at the expense of appropriate investor protection and concern for market stability.\footnote{Ahern (n 13) 370.}

This in turn raises larger questions which merit future study concerning the appropriate competencies and policy stances of competition authorities and sectoral regulators and how they are influenced by trade policy.\footnote{On this see Maher M Dabbah, ‘The Relationship Between Competition Authorities and Sector Regulators’ (2011) 70 \textit{CLJ} 113.} Reliance on a broad public interest precept for fintech policy in both competition policy and regulatory policy is leading to a morphing of policy boundaries to advance an economic agenda. Relevant to this discussion is the contention that fintech and
innovation discourse involves unnecessary ‘solutionism’. It is worth exploring the countervailing moral and social costs for investors, consumers and society in actively fostering a triptych of market entry, market development, and scaling as stand-alone ends. Thus it would be wrong not to balance a discussion on novel and alternative pro-competition mechanisms that state actors are pushing with a sensitivity to risk. A level of discernment is needed in developing fintech policy which includes the need to stand back regularly to take a big picture glance at its impact and to make adjustments as appropriate. Doing this well necessitates consultation between the gamut of regulatory agencies governing digital markets on issues ranging from data protection to prudential regulation to competition issues to decide what role competition promotion should continue to play and how it should manifest. Cooperation and dialogue among both national and international regulators are also crucial. Calls for the emergence of all powerful digital regulators also form part of this conversation.

VI. CONCLUSION

Fintech brings opportunities for entrepreneurship, development of new product and service markets and disruption of old ways of doing business by market incumbents. State actors and the states they represent desperately want to be perceived as being ‘pro-innovation’ to drive fintech inward investment. Many have succeeded in brandishing that calling card and have done so with bravura, devising a daring, agile toolkit of novel strategies other than market regulation to woo fintech innovators to their markets, to help them gain traction and to scale up. Countries have strategically acted to build up the fintech infrastructure through investing capital, in training and in providing hands-on support and advice to fintechs. Sectoral regulators have also taken brave initiatives to directly nurture innovation and bring it to market while invaluably seeking to make it easier to negotiate the application of complex regulatory environments. These initiatives, along with the wider regulatory environment, give each jurisdiction its unique fintech flavour.

And yet there is an undeniable tension between an agile competition promotion mandate and sensitivity to other salient issues such as abuse of market power, risk to investors and the need for regulation. Boundaries are needed. Competition promotion and comparative benchmarking should not yield a ‘race to the bottom’ in order to gain fintech business. Nor should competition promotion involve a risk of regulatory capture. This is a risk for state actors deploying competition promotion strategies, where regulatory masks are lowered and regulators may be dazzled by the seeming brilliance of innovators, a risk augmented by informational asymmetries in knowledge which favour innovators over regulators.

A reasonable prediction is that over time some alternative methods of stimulating competition in fintech markets will become mainstream (the regulatory sandbox already has), while others will have served their purpose and will fall by the wayside as markets evolve in terms of their efficiency and welfare outcomes and their regulation. Mastery by regulators, born of careful market study, leading to the provision of legally certain, proportionate regulatory frameworks constitutes the most robust way of assisting responsible market entry by both

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118 Evgeny Morozov, To Save Everything Click Here: The Folly of Technological Solutionism (Public Affairs 2013); Brown and Piroska (n 78) 21.


120 One such network is the Global Financial Innovation Network (GFIN).

domestic and international players. As time goes on, the argument that fintech markets need to be given room to develop and that the emphasis should be on fostering dynamic competition ought to yield to a more measured regulatory approach. This would take account of the distinctive features of digital financial services models that are heavily focused on technology, data and platforms. As fintech continues to reshape financial services markets, regulators need to monitor and study evolving digital market developments including market structure and exercises of market power, to address risks and promote integrity and resilience. This should be buttressed by regular inter-agency national and international dialogue about these issues to ensure an informed and joined-up approach. Widening out the discussion, the meaning of ‘public interest’ in terms of competition needs expanding with the growing focus on sustainability which assesses the impact of market participation in terms which go far beyond the economic potential which underlies state interests in propping up fintech. This lays a whole host of other criteria for assessing public interest, from company culture to green credentials to value chain relationships-factors which are also increasingly being linked to fintechs’ reputation and profitability.