

# REGULATORS NURTURING FINTECH INNOVATION: GLOBAL EVOLUTION OF THE REGULATORY SANDBOX AS OPPORTUNITY-BASED REGULATION

*Deirdre Ahern\**

**ABSTRACT** *The regulatory sandbox is a real-world alternative to regulatory lag. Its emergence as a novel regulatory development responds to challenges faced by FinTech innovators in navigating an unwieldy regulatory landscape not designed with FinTech in mind. Regulatory sandboxes are in operation in developed countries including Australia, Canada, Denmark, Hong Kong, Singapore, Switzerland, the Netherlands, the United Arab Emirates, the United Kingdom, and the United States. Within the European Union they are seen in Denmark, Hungary, Lithuania, Poland and the Netherlands. The concept has also gained traction with regulators in developing countries such as India, Indonesia, Malaysia, Mauritius and Thailand. Not only is the regulatory sandbox an experimental space for firms testing innovative FinTech products and services, it is also a novel regulatory experiment for regulators. This article advances the available literature through focusing on the contradictions inherent in the role of the regulator in administering a regulatory sandbox. It characterises the regulatory sandbox as a form of agile, opportunity-based regulation, distinguished by a regulatory approach that is concerned with actively supporting innovators in nurturing cutting-edge innovation to benefit innovators, consumers, investors, and the wider economy. This is path-breaking regulatory territory. In its provision and design, a regulatory sandbox performs a crucial signalling function in relation to a given financial system's receptivity to FinTech business. An economic, pro-innovation agenda is at work. Distinct policy questions are therefore raised regarding the*

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\* Dr Deirdre Ahern, Associate Professor, Director of Law, Technologies and Society Research Group, Trinity College Dublin, Dublin, Ireland. Email: dahern@tcd.ie. The author is a member of the European Commission's Informal Company Law Expert Group (ICLEG); this paper does not form part of the work of ICLEG, nor do the views expressed in it purport to reflect the position of the European Commission. An earlier version of this paper was presented at the Addressing the Global Challenge of Responsive FinTech Regulation Symposium, Trinity College Dublin, 8 March 2019. The author thanks the symposium participants and the anonymous referees for their comments.

*legitimate role of public gatekeeper financial services regulators operating regulatory sandboxes. The role of a regulatory sandbox in nurturing and expanding competition suggests a public interest role in the interests of consumer choice, price and efficiency rather than simply on risk minimisation. However, pressure on regulators to produce sandbox successes and to compete with other sandboxes may influence the exercise of regulatory discretion and produce regulatory distortions that affect competition in FinTech markets.*

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*“The balance between allowing innovation to thrive and protecting customers is tough to achieve but it is critical. Too much regulation and the industry becomes sclerotic, ... bogging consumers down with antiquated systems and products. Too little, and fraud abounds. As a concept, financial innovation does not have the best of reputations.”<sup>1</sup>*

## I. INTRODUCTION

The Fourth Industrial Revolution is an exhilarating period of experimentation. Path-breaking, disruptive innovation is radically changing the structure of financial services markets and processes. Bricks and mortar banking and face to face advice are being upended by disintermediated access to financial services. The advances being worked upon span a vast sphere including money transmission, smart contracts, digital identification tools, robo-advising, distributed ledger technology (‘DLT’), big data analytics, initial coin offerings (‘ICOs’), crowdfunding and peer to peer lending. It is axiomatic that law often trails in the wake of societal change. This truism is exemplified by the explosion of financial technology (‘FinTech’). The speed of FinTech adaptations has left rule-makers and regulators at sea as they seek to

<sup>1</sup> O Ralph, ‘FCA Does Big Number to Prove it is the Font of Financial Wisdom’ *Financial Times* (London, 6 April 2016) <<https://www-ft-com.eur.idm.oclc.org/content/50b6fb98-fb3b-11e5-b3f6-11d5706b613b>> accessed 2 November 2019.

understand the innovations that are being developed, define their mandate in relation to such innovations, and make important policy choices with respect to the application of regulation to these innovators as compared with more traditional financial services. Certainly, responsive regulation is a tall order as an expanding array of distinct and interchangeable products and services emerge under the FinTech umbrella. But it is more complex than that. 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. Thus, with FinTech, not only is the classic regulatory dilemma between a facilitatory approach and a regulatory approach at play, but an economic agenda is also a significant undercurrent at work. The emergence and spread of the regulatory sandbox as a novel regulatory development speaks to that agenda and responds constructively to the challenges faced by FinTech innovators in navigating an unwieldy regulatory landscape not designed with FinTech in mind. The genius of the regulatory sandbox lies in how it provides a sheltered environment to assist FinTech innovators to negotiate the impasse of an unclear regulatory environment while testing the viability of their imaginative products on a scaled-down basis. This is complex and path breaking regulatory territory that pushes regulators and regulatory actors beyond tried and trusted roles.

Dissecting the regulatory sandbox phenomenon as a form of market intervention falling short of conventional hard regulation, this article presents the regulatory sandbox as agile, opportunity-based regulation, characterised by an original regulatory approach that is concerned with actively supporting innovators in nurturing cutting-edge innovation with a view to delivering benefits to innovators, consumers, investors, and ultimately the wider economy. In its provision and design, the regulatory sandbox phenomenon performs a crucial positioning function, broadcasting a given financial system's receptivity to FinTech business and the perceived constructiveness of its regulatory approach. The existence, design and differentiation of individual regulators' sandbox offerings prompt important questions about the role of regulators in FinTech markets. As the regulatory sandbox concept gains traction and matures, legitimate questions need to be asked in relation to its situation within the regulatory landscape and the role of regulators in playing midwife to selected FinTech entrepreneurs' creations. To begin with, the regulatory sandbox's role in nurturing and expanding competition within FinTech product and service markets suggests a public interest role for regulators in improving consumer choice, price and efficiency. This is a completely different driver than a regulatory model predicated on risk-reduction.

An unavoidable question for scholars and policy-makers concerns how these two mandates can be appropriately reconciled.<sup>2</sup> It is argued here that a regulator's competition promotion agenda should not come at the expense of appropriate consumer and investor protection.

Section II tracks the origination of the regulatory sandbox, positioning it at the apex of regulatory supports for FinTech innovation within a financial ecosystem, and charts its global spread. A characterisation of the regulatory sandbox as opportunity-based regulation follows in Section III. This terrain unpacks the role that financial services regulators are taking as promoters of FinTech innovation within their jurisdiction and the possible implications for competition and regulatory sentiment. Section IV considers the potential for the regulatory environment provided by the regulatory sandbox to compromise appropriate regulation. Flowing from this, Section V presents a hierarchy of models of regulatory relief observed in available sandboxes and their regulatory consequences.

## II. THE ORIGINATION OF THE REGULATORY SANDBOX PHENOMENON

Financial regulation is typically concerned with risks to the public interest including market conduct and consumer protection, market integrity, soundness of financial institutions and financial stability. Classically, financial services regulators are concerned with two ends of a ruler – devising and enforcing rules with a focus on risk-based regulation. However, command and control regulatory behaviour is less fashionable as regulators become more dynamic; responsive regulation is flexible.<sup>3</sup> Challenges for financial market regulation and legal controls have been heightened by technological advances such as the advent of algorithmic trading, predictive advisory services, automated credit scoring applications and Digital IDs, to name but a

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<sup>2</sup> On this, *see*, E Avgouleas, 'Regulating Financial Innovation' in N Moloney, E Ferran and J Payne (eds), *The Oxford Handbook of Financial Regulation* (OUP 2015); C Brummer and Y Yadev, 'Fintech and the Innovation Trilemma' (2019) 107 *Georgetown Law Journal* 235 (exploring the difficulty of regulators successfully encouraging financial innovation while also achieving rules simplicity and market integrity); Iris H-Y Chiu, 'The disruptive implications of fintech - policy themes for financial regulators' (2017) 21(1) *Journal of Technology Law & Policy*.

<sup>3</sup> On responsive regulation, *see generally*, R Baldwin and J Black, 'Really Responsive Regulation' (2008) 71 *Modern Law Review* 59; J Braithwaite, 'The Essence of Responsive Regulation' (2010) 44 *UBC Law Review* 475. For a good discussion in a technology context, *see*, M Fenwick, Wulf Kaal and EP Vermeulen, 'Regulation tomorrow: what happens when technology is faster than the law' (2016) 6 *American University Business Law Review* 561.

few. As Brummer observes, “*regulatory and market disruptions overlap*”.<sup>4</sup> Many regulators believe in the wisdom of standing back and adopting a ‘wait and see’ approach, watching these innovations manifest while probing their costs and benefits. In the European Union (‘the EU’), rather than rushing to regulate in the FinTech space, the EU institutions have undertaken careful information-gathering and monitoring of business and regulatory developments at the national level.<sup>5</sup> Other regulators may be tempted to apply the full rigour of rules not designed for FinTech even where the fit is not good, with the result that beneficial innovation meets with unsuitable regulatory barriers and as such, may risk being stifled prematurely. This could occur, for example, when the full rigour of capital adequacy rules designed for banks are applied to crowdlending operations, making market entry difficult. At the other end of the regulatory continuum lie concerns that amid competition to carve up the FinTech pie, some regulators are opting for a race to the bottom in a bid to attract start-ups and investors.

Globally, we are some way off fashioning a suitable regulatory path to meet the brave new world that FinTech brings. Thus far, much of the extant international policy discussion concerning FinTech remains preliminary and generic – descriptive and largely confined to mapping developments, while extolling the virtues of continuing regulatory debate and dialogue. Progress is slow and no match for the speed of technological invention.<sup>6</sup> In the regula-

<sup>4</sup> C Brummer, ‘Disruptive Technology and Securities Regulation’ (2015) 84 Fordham Law Review 977, 980.

<sup>5</sup> See further, European Commission, *FinTech Action Plan: For a More Competitive and Innovative European Financial Sector* (COM(2018) 109/2) <[https://ec.europa.eu/info/sites/info/files/180308-action-plan-fintech\\_en.pdf](https://ec.europa.eu/info/sites/info/files/180308-action-plan-fintech_en.pdf)> accessed 2 November 2019.

<sup>6</sup> Scholars are beginning to tackle thorny questions of regulatory approach for FinTech. See, for example, Brummer (n 4); Fenwick, Kaal and Vermeulen (n 3); E Biber and others, ‘Regulating Business Innovation as Policy Disruption: From the Model T to Airbnb’ (2017) 70 Vanderbilt Law Review 1561; DW Arner, JN Barberis and RP Buckley, ‘FinTech, RegTech and the Reconceptualization of Financial Regulation’ (2017) 3 Northwestern Journal of International Law and Business 371; W Magnusson, ‘Regulating FinTech’ (2018) 71 Vanderbilt Law Review 1167; D Ahern, ‘Regulatory Arbitrage in a FinTech World: Devising an Optimal EU Regulatory Response to Crowdlending’ (2018) 3 Journal of Business Law 193; J Armour and L Enriques, ‘The Promise and Perils of Crowdfunding: Between Corporate Finance and Consumer Contracts’ (2018) Modern Law Review 51; J Armour and L Enriques, ‘Individual Investors’ Access to Crowdfunding: Two Regulatory Models’ in D Cumming and L Hornuf (eds), *The Economics of Crowdfunding* (Palgrave 2018); Iris H-Y Chiu, ‘Pathways to European Policy and Regulation in the Crypto-economy’ (2019) 10 European Journal of Risk Regulation 738; RH Weber and R Baisch, ‘FinTech – Eligible Safeguards to Foster the Regulatory Framework’ (2018) 33 Journal of International Banking Law & Regulation 335; V Burilov, ‘Regulation of Crypto Tokens and Initial Coin Offerings in the EU’ (2019) 6 European Journal of Comparative Law and Governance 146; M Lehmann, ‘Global Rules for a Global Market Place? – The Regulation and Supervision of Fintech Providers’ (2019) European Banking Institute Working Paper No. 45 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3421963](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3421963)> accessed 2 November 2019.

tory vacuum, the distinctive fluidity of the regulatory sandbox phenomenon is born of regulatory adaptability to the complexity of FinTech. Not surprisingly, in working towards formulating appropriate regulatory approaches to FinTech, a stakeholder-based approach has assumed prominence internationally. This is a space for reflexive governance, fitting within the core of decentred regulation, involving both state and non-state actors operating within a responsive regulatory agenda.<sup>7</sup>

While regulatory solutions for FinTech prove elusive, what is not in doubt is the economic promise of FinTech.<sup>8</sup> An ill-fitting regulatory framework of uncertain application to FinTech applications causes frustration when juxtaposed alongside FinTech's potential, not just for consumers, but also the wider economic benefits for countries where FinTech is nurtured and scaling up is facilitated.<sup>9</sup> Thus, in the regulatory vacuum, governments and regulators are acutely aware of the importance of providing an ecosystem of spaces that will support financial technology – incubators, accelerator hubs and innovation hubs as well as regulatory sandboxes.<sup>10</sup> While incubators generally involve mentoring and hothousing, accelerator hubs<sup>11</sup> provide physical space for experimentation and collaboration. Innovation facilitators, often styled as innovation hubs or labs, are generally designed to provide engagement, support and advice on how to negotiate the regulatory framework. Innovation hubs thus provide informal points of contact with regulators which, at an early stage, proves both less intimidating and more convenient for start-ups and small firms than more formal contacts with regulators. Queries generally addressed by hubs include issues in relation to whether authorisation is needed, how regulatory and supervisory requirements may be applied in practice, anti-money laundering regime issues and the

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<sup>7</sup> For a good discussion of this style of approach to regulation, see, A Wardrop, 'Co-Regulation, Responsive Regulation and the Reform of Australia's Retail Electronic Payment Systems' (2014) 30 *Law in Context: A Socio-Legal Journal* 197; Fenwick, Kaal and Vermeulen (n 3).

<sup>8</sup> The global FinTech market is projected to reach US \$124.3 billion by 2025. See, 'Global FinTech Market Report' (QYResearch, 21 February 2020) <<https://www.qyresearch.com/index/detail/1527695/global-fintech-market>> accessed 4 March 2020.

<sup>9</sup> This of course also depends on the availability of access to venture capital in a given financial system. See, M Arnold, 'UK Fintech Sector in Buoyant Mood as Valuations Soar' *Financial Times* (London, 27 September 2018) <<https://www.ft.com/content/3bcad1be-b1d7-11e8-8d14-6f049d06439c>> accessed 2 November 2019 (reflecting on the effects of open banking in the UK).

<sup>10</sup> Terms such as 'innovation hub' and 'accelerator' have not assumed a unified understanding or become a recognised term of art and are being used interchangeably with a variety of other terms such as 'innovation lab' and 'FinTech lab'. On this taxonomical dissonance, see, Basel Committee on Banking Supervision, *Sound Practices: Implications of Fintech Developments for Banks and Bank Supervisors* (Bank for International Settlements, 2018) 39 <<https://www.bis.org/bcbs/publ/d431.pdf>> accessed 2 November 2019.

<sup>11</sup> The term 'hub' is often added to refer to the provision of a co-working space.

applicability of consumer protection measures.<sup>12</sup> First, benefits flow to the innovator. Vitally, this informal contact allows non-regulated entities to informally engage with FinTech regulators concerning the regulatory perimeter.<sup>13</sup> This may also help to map the need to engage with other regulators and supervisors concerning the regulatory perimeter on issues such as data privacy. Second, and equally crucially, the benefits flowing are two way – regulators who facilitate such contact and informal support gain enormously from the associated ability to keep abreast of and understand FinTech trends in market innovation. This enables the lessening of a regulator’s regulatory blind spot in relation to what is happening outside those firms that are authorised and within its direct regulatory line of sight. These discussions are thus hugely beneficial to regulators and help to ensure that regulatory policy discussions, risk-assessment and decision-making are based on a solid knowledge foundation. In short, innovation supports provide an invaluable and costless mutual learning opportunity.

Building on the mindset of these initiatives to encourage FinTech, the unique hybrid business advisory and regulatory initiative known as the regulatory sandbox germinated. A regulatory sandbox gives permission to try and fail, and to do so in a controlled fashion that is less costly than would be the case on the open market as well as without systemic risk implications. The trailblazing concept originated in the United Kingdom (‘the UK’) and helped to establish the global reputation of the Financial Conduct Authority (‘the FCA’) as a regulatory leader. The history of the regulatory sandbox can be traced back to a deceptively simple act of reasoning by analogy. In 2015, Sir Mark Walport, then Britain’s chief scientific adviser, floated the idea that the financial services sector could benefit from having the equivalent of clinical trials available to the pharmaceutical industry.<sup>14</sup> This appealed to the

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<sup>12</sup> European Supervisory Authorities, *FinTech: Regulatory Sandboxes and Innovation Hubs* (JC 2018 74, 2019) para 28 <<https://esas-joint-committee.europa.eu/Publications/Press%20Releases/JC%202018%2074%20Joint%20Report%20on%20Regulatory%20Sandboxes%20and%20Innovation%20Hubs.pdf>> accessed 2 November 2019. Queries on issues such as data protection and cybersecurity usually fall within the mandate of other sectoral regulators.

<sup>13</sup> There is a credible argument that a regulatory sandbox should be a bolt-on to an effective innovation hub rather than operating on a stand-alone basis. On this, *see*, RP Buckley and others, ‘Building FinTech Ecosystems: Regulatory Sandboxes, Innovation Hubs and Beyond’ (2019) European Banking Institute Working Paper No. 53 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3455872](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3455872)> accessed 2 November 2019.

<sup>14</sup> United Kingdom Government Chief Scientific Adviser, *FinTech Futures: The UK as a World Leader in Financial Technologies* (Government Office for Science, 2015) 10-11, 52 <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/413095/gs-15-3-fintech-futures.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/413095/gs-15-3-fintech-futures.pdf)> accessed 2 November 2019.

Project Innovate division of the FCA<sup>15</sup> and the FCA's regulatory sandbox regime for FinTech was unveiled a year later in 2016. The FCA's prototype 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.*"<sup>16</sup> Firms applying to the FCA sandbox apply on a cohort basis (there are two six-month test periods each year). Applicants must set out in their application how they meet the eligibility criteria for testing. This requires having a financial services business in the UK which is 'genuinely innovative' and meets an 'identifiable consumer benefit'.<sup>17</sup> Applicants must also show a demonstrable need and readiness for sandbox testing.<sup>18</sup> The FCA's dedicated sandbox unit assesses regulatory sandbox applications<sup>19</sup> and decides which, if any, of the applicable regulations can be relaxed in any given case. This allows an agile, tailored approach to be taken which adapts to the needs of individual FinTech companies while also ensuring that appropriate consumer protection is in place. Controlled roll-out to consumers within a regulatory sandbox allows modifications to be made to the business model to respond to consumer and regulatory feedback. The FCA regards the sandbox as having been effective in helping firms to understand and potentially accelerate their route to market, and reduce costs on external regulatory consultants.<sup>20</sup> The FCA also concludes that the sandbox has successfully allowed it to identify and control risks.<sup>21</sup>

The economic imperative of realising FinTech's potential, coupled with the difficulty of navigating regulatory landscape, has played a part in rapidly propelling the success of the regulatory sandbox solution beyond national borders. Following in the footsteps of the UK, regulatory sandboxes have emerged in financial centres across the globe.<sup>22</sup> Regulatory sandboxes are in operation in developed countries including Australia, Brunei, Canada,

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<sup>15</sup> Project Innovate began in 2014 with the aim of providing innovative firms with support to navigate the regulatory system and of promoting competition to benefit consumers.

<sup>16</sup> Financial Conduct Authority, *Regulatory Sandbox Lessons Learned Report* (2017) para 2.1 <[www.fca.org.uk/publication/research-and-data/regulatory-sandbox-lessons-learned-report.pdf](http://www.fca.org.uk/publication/research-and-data/regulatory-sandbox-lessons-learned-report.pdf)> accessed 2 November 2019.

<sup>17</sup> *ibid* 4.

<sup>18</sup> Financial Conduct Authority (n 16) 4.

<sup>19</sup> Distributed ledger technology was the most common type of technology being utilised in the first two cohorts of firms in the FCA sandbox.

<sup>20</sup> Financial Conduct Authority (n 16) para 2.8.

<sup>21</sup> Financial Conduct Authority (n 16).

<sup>22</sup> DA Zetzsche and others, 'Regulating a Revolution from Regulatory Sandboxes to Smart Regulation' (2017) 23 *Fordham Journal of Corporate & Financial Law* 31; M Weschler, L Perlman and N Gurung, 'The State of Regulatory Sandboxes in Developing Countries' (2018) Columbia Digital Financial Services Observatory Working Paper <<https://dfsobservatory.com/sites/default/files/DFS0%20-%20The%20State%20of%20Regulatory%20>



Denmark, Hong Kong, Singapore, Switzerland, the Netherlands, the United Arab Emirates (Abu Dhabi) and the United States (in the States of Arizona, Kentucky, Utah and Wyoming). Within the EU, they are seen in Denmark, Hungary, Lithuania, Poland and the Netherlands. Meanwhile, Austria, Estonia, Italy and Spain have committed to launching a regulatory sandbox. The EU is presently contemplating whether it should intervene to ensure some uniformity of approach.<sup>23</sup> Sandboxes are of most relevance in jurisdictions where there are reasonably developed authorisation regimes for financial services, and particularly, FinTech. While the regulatory sandbox has gathered most headway in developed and emerging economies, it also reveals potential in developing countries. For example, regulatory sandboxes are in evidence in Bahrain, Indonesia, Jordan, Kazakhstan, Malaysia, Mauritius, Mozambique, Nigeria, Rwanda, Sierra Leone and Thailand.<sup>24</sup> Some developing countries such as the Philippines have deployed a ‘test and learn’ model that bears similarities to the sandbox concept. The main differential is that a regulatory sandbox is generally subject to a more formalised process with standard application and assessment criteria.<sup>25</sup> In other emerging and developing economies such as Kenya, Mexico and Sri Lanka, regulatory sandboxes remain under active policy consideration. In the context of developing countries, a regulatory sandbox has obvious potential to facilitate FinTech solutions that assist with a financial inclusion objective within the relevant financial ecosystem.<sup>26</sup> That said, developing countries can present unique challenges for FinTech innovation in terms of market, resources, infrastructure, distance from innovation hubs and other supports.<sup>27</sup>

Among the developing countries, India has made an active effort to improve its receptivity to FinTech innovation. A regulatory sandbox framework was

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Sandboxes%20in%20Developing%20Countries%20-%20PUBLIC.pdf> accessed 2 November 2019; Buckley and others (n 13).

<sup>23</sup> European Supervisory Authorities (n 12); European Commission, *Final report of the Expert Group on Regulatory Obstacles to Financial Innovation* (2018) 70 <[https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/191113-report-expert-group-regulatory-obstacles-financial-innovation\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/191113-report-expert-group-regulatory-obstacles-financial-innovation_en.pdf)> accessed 2 November 2019.

<sup>24</sup> Weschler, Perlman and Gurung (n 22).

<sup>25</sup> Weschler, Perlman and Gurung (n 22) para 2.2, Exhibit 1.

<sup>26</sup> On financial inclusion, see, I Jenik and K Lauer, ‘Regulatory Sandboxes and Financial Inclusion’ (2017) Consultative Group to Assist the Poor Working Paper <[www.cgap.org/sites/default/files/researches/documents/Working-Paper-Regulatory-Sandboxes-Oct-2017.pdf](http://www.cgap.org/sites/default/files/researches/documents/Working-Paper-Regulatory-Sandboxes-Oct-2017.pdf)> accessed 2 November 2019; T Aveni and I Jenik, ‘Crowdfunding in China: the Financial Inclusion Dimension’ (*Consultative Group to Assist the Poor*, July 2017) <[www.cgap.org/sites/default/files/researches/documents/Brief-Crowdfunding-in-China-Jul-2017\\_0.pdf](http://www.cgap.org/sites/default/files/researches/documents/Brief-Crowdfunding-in-China-Jul-2017_0.pdf)> accessed 2 November 2019.

<sup>27</sup> Weschler, Perlman and Gurung (n 22) para 4.2.3.

finalised by the Reserve Bank of India ('the RBI') in 2019.<sup>28</sup> In 2016, the RBI established an inter-regulator working group to examine the regulatory landscape for enabling the delivery of low-cost financial products and services in the context of the FinTech evolution. Its observations floodlit the importance of establishing a regulatory sandbox for FinTech. The origination of the RBI's sandbox proposal can be traced to the 2017 Household Finance Report<sup>29</sup> where the creation of a regulatory sandbox was proposed that would allow small-scale testing and temporary waivers of certain regulations in a carefully controlled environment.<sup>30</sup> The subsequent deliberations of the Working Group on FinTech and Digital Banking<sup>31</sup> led in turn to the publication of a Draft Framework in April 2019 for public consultation and of the 'Enabling Framework for Regulatory Sandbox' in August 2019.<sup>32</sup> The potential to improve retailer and consumer access to banking and payments mechanisms and other financial services in India was well-captured in the following terms:

The [regulatory sandbox] can go a long way in not only improving the pace of innovation and technology absorption but also in financial inclusion and in improving financial reach [such as through enabling] microfinance, innovative small savings and micro-insurance products, remittances, mobile banking and other digital payments.<sup>33</sup>

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<sup>28</sup> The final framework was released in August 2019: *see*, Reserve Bank of India (Department of Banking Regulation, Banking Policy Division), *Enabling Framework for Regulatory Sandbox* (2019) <<https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/ENABLING79D8EBD31FED47A0BE21158C337123BF.PDF>> accessed 2 November 2019.

<sup>29</sup> Reserve Bank of India, *Report of the Household Finance Committee on Indian Household Finance* (2017) para 7 <<https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/HFCRA28D0415E2144A009112DD314ECF5C07.PDF>> accessed 2 November 2019.

<sup>30</sup> *ibid* para 7. This would enable the collection of "empirical evidence which can ultimately lead to better policy solutions, whilst simultaneously evaluating the risk of any new product or technology."

<sup>31</sup> Reserve Bank of India, *Report of the Working Group on FinTech and Digital Banking* (2018) <<https://rbi.org.in/scripts/PublicationReportDetails.aspx?ID=892#4>> accessed 2 November 2019.

<sup>32</sup> Reserve Bank of India (Department of Banking Regulation, Banking Policy Division), *Draft Enabling Framework for Regulatory Sandbox* (2019) <<https://rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=920>> accessed 2 November 2019; Reserve Bank of India, 'RBI releases draft Enabling Framework for Regulatory Sandbox' (Press Release, 2019) <[https://www.rbi.org.in/Scripts/BS\\_PressReleaseDisplay.aspx?prid=46843](https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=46843)> accessed 2 November 2019. The RBI indicated that feedback was received from 69 stakeholders, including FinTech firms, banks, multilateral agencies, industry associations, payment aggregators, audit and legal firms, government departments and individuals.

<sup>33</sup> Reserve Bank of India (n 28) para 3.3.

The RBI regulatory sandbox framework for FinTech companies includes an indicative list of innovative products and technologies which may be eligible,<sup>34</sup> and also indicates what is ineligible including cryptocurrencies, ICOs and credit registries. The framework is designed to be open to entities including banks and financial institutions for products that are ready for testing, meet a gap in the financial ecosystem and have clear benefits for consumers or the FinTech industry. The RBI framework also sets out a series of conditions to be met including minimum net worth requirements, fit and proper criteria for directors and promoters, satisfactory credit score, robust IT infrastructure and adequate managerial resources. Notably, insurance cover is a requirement for participation.<sup>35</sup> The RBI's sandbox will operate on the basis of a series of thematic cohorts such as financial inclusion, payments and lending, and digital know your customer ('KYC'). The application process for the first themed sandbox on digital retail payments products opened in late 2019 with a view to testing commencing in 2020.<sup>36</sup> This will enable FinTech innovation in the sphere of digital payments, digital KYC and wealth management. This is in line the RBI's drive to facilitate FinTech innovation, improve financial inclusion and move India towards a cashless economy. The Indian example illustrates the significant potential for FinTech to provide digital payment solutions in developing countries where access to brick and mortar financial institutions is a challenge.

### III. OPPORTUNITY-BASED REGULATION AND REGULATORS AS PROMOTERS OF COMPETITION IN FINTECH MARKETS

The regulatory sandbox effectively showcases how regulators themselves have proved agile and inventive in recognising and working around the deadening effect of regulatory lag.<sup>37</sup> The regulatory sandbox also represents a 'reasonable compromise'<sup>38</sup> where rushing to regulate may be a mistake.

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<sup>34</sup> Mobile technology applications, data analytics, application program interface (API) services, blockchain technology applications, artificial intelligence and machine learning applications are listed. *See*, Reserve Bank of India (n 28) paras 6.1.1-6.1.2.

<sup>35</sup> Reserve Bank of India (n 28) para 6.8.3.

<sup>36</sup> No maximum number of participants has been set for each cohort. Participation will be for a maximum of 27 weeks.

<sup>37</sup> On agile governance, *see*, World Economic Forum, 'Agile Governance: Reimagining Policy-making in the Fourth Industrial Revolution' (2018) <[http://www3.weforum.org/docs/WEF\\_Agile\\_Governance\\_Reimagining\\_Policy-making\\_4IR\\_report.pdf](http://www3.weforum.org/docs/WEF_Agile_Governance_Reimagining_Policy-making_4IR_report.pdf)> accessed 2 November 2019.

<sup>38</sup> WG Ringe and C Ruof, 'A Regulatory Sandbox for Robo Advice' (2018) European Banking Institute Working Paper No. 26, 52 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3188828](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3188828)> accessed 2 November 2019.

Within the framework of FinTech innovation supports, the regulatory sandbox lies at the apex in terms of its characteristic regulatory interface because it moves beyond being purely an advisory conduit associated with other supports such as innovation hubs. Although regulatory sandboxes for FinTech differ across jurisdictions in terms of entry requirements and nature of the environment, a shared characteristic is that firms admitted to the sandbox are restricted in relation to the nature and scale of the activities they may carry out during testing in the sandbox environment. Monitoring of testing is a more resource-intensive activity for regulators than the general compliance monitoring they typically undertake, given the innovative nature of the FinTech products being tested and the likelihood of unknowable risks, all the while navigating a regulatory framework not designed with the product in mind. This explains the importance of managing a contained roll-out within the test bed. A scaled-down test reduces the total risk and may be designed to concentrate the risk on consumers considered best equipped to handle such risk. As far as sandbox users are concerned, contained roll-out provides invaluable early-stage feedback allowing product modifications and tweaks to the business model. Provision of advice by regulators on regulatory compliance assists with product roll-out and increases the chance of being able to harness the opportunity successfully. In short, the sandbox is of benefit in terms of saving time and financial resources as well as easing the regulatory journey of a user. If viability is thrown into doubt, the associated expense for failure will be far less in a sandbox launch to a small client base followed by a managed exit than would be the case with a full-scale launch on the open market.

Incontestably, the adoption of a regulatory sandbox qualifies, on its face, as a pro-innovation regulatory stance – an adaptive regulatory move away from Baldwin and Black’s dialectic of risk-based regulation or problem-based regulation<sup>39</sup> to a new type of regulation which this article terms ‘opportunity-based regulation’. Within the lens of opportunity-based regulation, financial services regulators play a critical part in actively nurturing and promoting competition in emerging and nascent FinTech markets, in addition to operating in the traditional regulatory space. Quintessentially, the sandbox concept comprises a *realpolitik* alternative to regulators sitting on their hands while maintaining a passive ‘wait and see’ stance to regulatory lag.<sup>40</sup> Through the prism of a regulatory sandbox, opportunity-based regula-

<sup>39</sup> R Baldwin and J Black, ‘Driving Priorities in Risk-Based Regulation: What’s the Problem?’ (2016) 43(4) *Journal of Law and Society* 565.

<sup>40</sup> For a discussion of a ‘wait and see’ approach as a justifiable regulatory strategy in the context of crowdfunding, *see*, Armour and Enriques (n 6). In the context of crowdlending, *see*, Ahern (n 6).

tion provides a ‘third way’ featuring a more active stance involving support, mutual dialogue and learning in order to realise the potential of FinTech innovation.<sup>41</sup> This is regulatory agility at its peak. The regulatory sandbox concept actively supports cutting-edge innovation with a view to delivering opportunities for innovators, but also benefits for consumers, investors, and ultimately the wider economy. The active support and mentoring provided within the sandbox environment marks out opportunity-based regulation in this context as travelling quite some distance beyond mere facilitative regulation.

Opportunity-based regulation for sandbox participants is responsive and dialogic, but also time-limited. This serves to dynamically propel FinTech innovation to market in spite of the unwieldiness of a regulatory framework not made with these business models in mind. This agenda is consistent with Ringe and Ruof’s contention that “[g]ood regulation ... should not only focus on addressing potential risks, but should also strive to identify market developments that are desirable for the system, and moreover promote those.”<sup>42</sup>

In big picture terms, it is entirely legitimate to regard the regulatory sandbox as part proxy for governmental desire to boost the economy by attracting and enabling FinTech innovation. This forces the consideration of competition promotion as part of the regulatory agenda of the regulatory sandbox. Internationally, there is a bifurcation between countries adopting the dual mandate model, whereby regulators are charged with encouraging business innovation as well as having a traditional regulatory role, and those where market development is hived off to specialist trade bodies. The UK’s FCA provides the quintessential example of the formal dual mandate model, having the role of promoting effective competition in regulated financial services in the interests of consumers as well as of performing traditional regulatory functions. The Financial Services Act 2012 acknowledges a triptych of consumer protection, market integrity and competition objectives.<sup>43</sup> The FCA’s effective competition mandate is further elucidated by the statutory specification that regard may be had by the FCA to considerations such as

<sup>41</sup> In the United States, there is a history of the Securities and Exchange Commission using pilot schemes to trial regulation. On this, *see*, Brummer (n 4) 1046-1047.

<sup>42</sup> Ringe and Ruof (n 38) 7.

<sup>43</sup> Financial Services and Markets Act 2000, s 1B(3) (as substituted by s 6 of the Financial Services Act 2012). On the background to the competition promotion mandate, *see*, Independent Commission on Banking, *Final Report: Recommendations* (2011) paras 8.75-8.87 <<https://webarchive.nationalarchives.gov.uk/20120827143059/http://banking-commission.independent.gov.uk/>> accessed 2 November 2019.

ease of market entry and encouragement of innovation.<sup>44</sup> That said, even where a competition promotion role is not formally assigned to a regulatory agency in establishment legislation, a pro-FinTech agenda may nonetheless arise on a *de facto* basis based on the adaptive manner in which a regulatory agency exercises its operational powers. This has particular resonance in relation to the operational application of regulatory sandbox models by regulators in practice.

Why does this matter? A role in promoting innovation and effective competition in financial services assigned to a sectoral regulator is clearly distinct from the role of competition law, more generally, in preventing abusive behaviour which distorts the market. Nonetheless, arguments can be summoned against a quasi-market-making role being assigned to regulators. Most obviously, the argument can be advanced that in the case of the regulatory sandbox, regulators are artificially interfering with natural selection in the market. The operation of a regulatory sandbox regime has direct and indirect impacts on the structure of competition and shapes market responses of both incumbents and potential entrants to FinTech markets. Both the existence of a regulatory sandbox regime and its design features matter and have effects on the choices and behaviour of regulatory actors. The contours of the regulatory perimeter of a regulatory sandbox have an impact on how FinTech actors, particularly start-ups, plan and execute their route to market. Buckley et al contend that any ‘copy-cat sandbox’ based on the FCA model does not send such a strong pro-innovation signal as the original.<sup>45</sup> However, as the regulatory sandbox proliferates globally, many other regulators are carving out their own identity through innovating in their own right on sandbox characteristics, for instance, by providing a guaranteed time to a decision on applications, and in Singapore and India, through the provision of a dedicated Insurtech sandbox.

The regulatory sandbox is unique in terms of the manner in which the regulator is making *ex ante* business judgments on the commerciality of what is proposed and is placing itself in the position of an arbiter on innovation. Representing the heart of what the regulatory sandbox is about, innovation is understandably the overriding entry threshold. However, the strictures of how that is understood vary from jurisdiction to jurisdiction. Under the UK FCA model, the overriding criterion for admission to the sandbox is essentially that what is proposed to be tested must involve bringing sufficiently new or ground-breaking innovation to the market that makes a real addition

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<sup>44</sup> Financial Services and Markets Act 2000, s 1E(2) (as substituted by s 6 of the Financial Services Act 2012).

<sup>45</sup> Buckley and others (n 13) 17-18.

to the available consumer offering.<sup>46</sup> This innovation threshold has gone on to become a fairly universal requirement in other jurisdictions inspired by the UK's initiative.<sup>47</sup> This generally requires demonstration that the financial services product or service is genuinely innovative and benefits consumers by either meeting an untapped need or serving an existing need better than current market players. A well-measured approach is seen in the definition of 'innovation' in Arizona, a state which has led the way in the United States in terms of being the first to provide a framework for FinTech. Innovation is defined as:

the use or incorporation of new or emerging technology or the re-imagination of uses for existing technology to address a problem, provide a benefit or otherwise offer a product, service, business model or delivery mechanism that is not known by the Attorney General to have a comparable widespread offering in this state.<sup>48</sup>

The knock-on effects of threshold determinations on innovativeness are considerable given the practical and goodwill advantages that accompany the cachet of selection for a given sandbox. This points up the prospect of regulators as deciders of what qualifies as innovative, rather than as simply interpreters and enforcers of rules. This is a major role shift.

In judging novelty, given the rapidly emerging nature of the FinTech industry, there are likely to be amplified knowledge and information gaps relevant on the part of the FinTech regulator.<sup>49</sup> Regulatory personnel assessing sandbox applications are likely doing their very best to be on top of FinTech in terms of both business models and technological innovation, yet they may be heavily reliant on observation-based learning, often from regulatory actors with whom they are engaged in regulatory dialogue, rather than having the benefit of direct experiential learning. The challenge of threshold decisions on admission to the sandbox being made on the basis of imperfect information is particularly acute in emerging markets with innovative new products. Information asymmetries are likely to be greater again for sandbox regulators who prioritise guaranteed expedited decision-making as a feature of the

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<sup>46</sup> Financial Conduct Authority, 'Applying to the regulatory sandbox' (2017) <<https://www.fca.org.uk/firms/regulatory-sandbox/prepare-application>> accessed 2 November 2019.

<sup>47</sup> See, for example, Monetary Authority of Singapore, *FinTech Regulatory Sandbox Guidelines* (2016) paras 6.2(a), 6.2(b) and 7.4 <[www.mas.gov.sg/~media/Smart%20Financial%20Centre/Sandbox/FinTech%20Regulatory%20Sandbox%20Guidelines%2019Feb2018.pdf](http://www.mas.gov.sg/~media/Smart%20Financial%20Centre/Sandbox/FinTech%20Regulatory%20Sandbox%20Guidelines%2019Feb2018.pdf)> accessed 2 November 2019.

<sup>48</sup> Arizona Revised Statutes 2018, § 41-5601, para 4 <<https://law.justia.com/codes/arizona/2018/title-41/section-41-5601>> accessed 2 November 2019.

<sup>49</sup> F Scott Morton, 'Are a Competition Authority and an Industry Regulator Equivalent?' (2015) 14 Colorado Technology Law Journal 9, 13.

sandbox offering, thus making decisions based on a truncated assessment process.

The assessment of innovation as the touchstone entry criterion for admission to regulatory sandboxes means that regulator determinations indirectly influence market viability propositions and thus, market outcomes. Accordingly, whether or not a competition promotion role is formally assigned to a relevant regulator administering a FinTech sandbox, assessment invariably requires financial services regulators to gauge and compare applications based on existing competition, product comparators and substitutability and potential market demand.<sup>50</sup> Anna Wallace, Head of Innovate at the UK's FCA has reflected on the contribution of regulators to determining market innovation as follows:

As regulators we're under constant pressure to be more 'pro-innovative'. [A regulatory sandbox allows you] to do that in a way that gives you comfort that you're creating an environment that you control. Up until now regulators have never had the power to do that — the regulators have either decided whether something is outside or inside regulation. The regulatory sandbox provides a third way, where you can allow it in a small way into regulation, so you can observe what the risks and issues of that business model are. You control that environment before allowing it into the market.<sup>51</sup>

In terms of market outcomes, opportunity-based regulation is selectively applied – there are winners and losers. The competitive selection process for the sandbox creates a small in-group cohort of participants<sup>52</sup> and a larger out-group of non-participants. The sandbox gives those admitted a considerable competitive advantage compared to their peers in terms of testing, negotiating route to market and navigating regulatory compliance. Sandbox participation can help to reduce initial regulatory uncertainty, thereby enabling greater focus by participants on crystallising the technical performance of the innovative product or service and its business model. Sandboxes participants benefit from cost-free compliance advice, potential regulatory

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<sup>50</sup> On the question of whether sectoral regulators are appropriately equipped to define markets and engage in market analysis, *see*, MM Dabbah, 'The Relationship Between Competition Authorities and Sectoral Regulators' (2011) 70 Cambridge Law Journal 113, 128.

<sup>51</sup> J Kelly, 'Arizona Sandbox Gives Start-Ups a Regulatory Path to US' *Financial Times* (London, 12 November 2018) <<https://www.ft.com/content/aac62a22-c196-11e8-84cd-9e601db069b8>> accessed 2 November 2019.

<sup>52</sup> Responding to criticism of an earlier proposal to limit participation to 10-12 entities at once, the Reserve Bank of India's final framework for its regulatory sandbox released in August 2019 (n 28) did not limit the number of entities that could be admitted to the sandbox at once.



waivers, and the goodwill value of a level of official endorsement which is marketable to financiers and potential clients. The type of tools and support provided by regulators vary but advice on regulatory compliance that assists with product roll-out is standard. Thus, special treatment afforded to sandbox participants dissolves the level playing field for market entry, and participation in the sandbox potentially reduces both the barriers to and the costs of market entry significantly.

A sandbox regime based on selective admission and centred around innovation differs fundamentally from an authorisation regime that is potentially open to all. The riposte to this is that the trade-off of the sandbox's selectivity is a stopgap measure to address regulatory complexity and that individual nurturing in small cohorts helps some FinTech innovators succeed who otherwise would not. Nonetheless, in the rush to facilitate FinTech innovation, countries need to be conscious of fairness in designing, integrating and applying a regulatory sandbox within a financial system. Equality of access is a consideration. The RBI's Working Group on FinTech and Digital Banking highlighted the regulatory pitfall of choosing "*to unduly favour newcomers by regulating them less stringently than incumbents, in the name of fostering competition.*"<sup>53</sup> Reflecting that objection, not every jurisdiction has thrown its hat in the regulatory sandbox ring, and for some regulators, this is a conscious decision based on principled objection rather than a passive regulatory stance. Anecdotal evidence suggests that some sectoral regulators, including those in France, Germany and Ireland remain cautious and sceptical about the role of regulatory sandboxes and their part in driving competition outcomes in this post-financial crisis era. The preference of these regulators is to confine themselves to a more general advisory role, often in the form of a FinTech regulatory advisory desk open to all.

A further consideration concerns the manner in which the traditional role of the regulator is rewritten in the context of the regulatory sandbox. Provision of a regulatory sandbox sees a regulator moving from the role of gatekeeper to quasi-compliance consultant and ally. Valuable product advice is dispensed. For example, in the UK, the FCA provides secondary review of robo-advice by a qualified financial advisor.<sup>54</sup> Relatedly, there is an inherent

<sup>53</sup> Reserve Bank of India (n 31). However, that objection did not permeate the subsequent Draft Enabling Framework for Regulatory Sandbox: Reserve Bank of India (n 32). See also, United States Department of the Treasury, *A Financial System that Creates Economic Opportunities: Nonbank Financials, Fintech and Innovation* (2018) 171 <<https://home.treasury.gov/sites/default/files/2018-07/A-Financial-System-that-Creates-Economic-Opportunities---Nonbank-Financi....pdf>> accessed 2 November 2019.

<sup>54</sup> Financial Conduct Authority (n 16) para 2.6. For an exploration of the potential of a dedicated regulatory sandbox for robo-advice, see, Ringe and Ruof (n 38). On regulation of

risk of herding behaviour by both investors and retail customers based on a positive bias surrounding mere selection for admission to testing in the regulatory sandbox. Rightly or wrongly, a firm's admission to a regulatory sandbox and the associated regulatory oversight has prestige value and can lead to a public perception of increased regulatory certainty. Although in actuality a preliminary testing phase, admission to the sandbox is frequently perceived on the ground and in the media as providing a coveted regulatory stamp of approval and de facto endorsement of the underlying product or service, which helps to attract customers and venture capital.<sup>55</sup> In the UK, the FCA specifically flags as a success indicator that testing in the regulatory sandbox has been instrumental in helping firms access finance.<sup>56</sup> Indeed, reflecting this, anecdotal evidence suggests that some firms primarily use the sandbox process not for product testing, but rather to obtain free compliance advice or alternatively, as a means to attract the interest of venture capitalists so that they can pivot and scale up. To conclude, both direct and indirect competitive impacts accrue from regulatory sandbox participation.

Turning to the regulator's perspective, there is pressure on regulators administering sandboxes to produce tangible results and for regulators to compare their respective outcomes. Pressure on regulators to produce sandbox successes may influence the exercise of regulatory discretion and produce regulatory distortions. Particularly in cases where a tailored regulatory environment is created, an element of regulatory capture may be at play given the desire of regulators to see successful testing and market entry of sandbox participants. For the FCA sandbox, the first cohort of 24 accepted firms was announced in late 2016.<sup>57</sup> 75 percent of firms in the first cohort successfully completed testing with 90 percent of these proceeding towards a wider market launch.<sup>58</sup> On the back of these figures, the FCA sandbox is regarded as top of the leader board by competition promotion standards. However, in many other jurisdictions, sandbox outcomes have been far more muted.<sup>59</sup> In some cases, a less than expected initial take-up of the regulatory

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robo-advice, *see*, Iris H-Y Chiu, 'Transforming the Financial Advice Market - The Roles of Robo-advice, Financial Regulation and Public Governance in the UK' (2019) *Banking and Finance Law Review* (forthcoming).

<sup>55</sup> J Kelly, 'A 'Fintech Sandbox' might sound like a Harmless Idea. It's Not' *Financial Times* (London, 5 December 2018) <<https://ftalphaville.ft.com/2018/12/05/1543986004000/A-fintech-sandbox--might-sound-like-a-harmless-idea--It-s-not/>> accessed 2 November 2019.

<sup>56</sup> Financial Conduct Authority (n 16) paras 1.1, 2.10-2.12.

<sup>57</sup> A further four cohorts were accepted based on competitive applications in 2017, 2018 and 2019.

<sup>58</sup> Financial Conduct Authority (n 16) para 2.9.

<sup>59</sup> For example, in Australia, as of May 2019, there was only one current user and six past users of the regulatory sandbox licence exemption: *See*, Australian Securities and Investments

sandbox offering is likely to be due in part to inherent restrictions within the national design of a particular sandbox.<sup>60</sup> Public discussion around bottom line results underscores how conscious FinTech regulators are about calibrating their sandboxes to signal their attractiveness to the FinTech market. As a consequence, some regulators have been coy in relation to fully transparent disclosure of outcomes.

This brings the discussion to the competition between jurisdictions (and thus, sandbox regulators) for FinTech business. A regulatory sandbox needs to be contextualised as but one element of a regulatory environment. However, all else being equal, each regulator competes with substitute sandbox regimes to attract the market for sandboxes: start-ups and other innovators across the FinTech spectrum. In an open market, prices perform an economic signalling role in relation to the state of supply and demand. The regulatory sandbox performs a similar function, providing an indicator that a regulator offering the regulatory sandbox as a lifeline to FinTech actors is pro-innovation or ‘FinTech-friendly’. Innovation is the overriding entry threshold and this, combined with favourable regulatory treatment and support provides the foundation of the signalling function. The signal emitted is nuanced, going beyond the black or white of the existence of a sandbox offering or its absence. Signalling comes not only from the primary signal provided by the availability of the sandbox, but also from the more nuanced secondary signalling deriving from a sandbox’s constituent parameters (comprising matters such as eligibility criteria, duration, supports, regulatory relief and reporting requirements). Thus, the FinTech-friendly signal being broadcast to FinTech innovators may be stronger in some jurisdictions and dimmer or absent in others.

In examining secondary signalling, overall consideration of the design choices made by the sandbox regulator should enable a view to be formed in relation to the general regulatory approach being adopted, including whether it is well-defined, objective and transparent and whether the overall approach is facilitatory or even lax, having regard to the protections available

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Commission, ‘Regulatory sandbox: Licence exemption users’ (2019) <<https://asic.gov.au/for-business/innovation-hub/fintech-regulatory-sandbox/regulatory-sandbox-licence-exemption-users/>> accessed 2 November 2019.

<sup>60</sup> In Australia, for example, when poor levels of industry interest became evident, there was a strong backlash against the restrictive design of the regulatory sandbox and (as referred to earlier), root and branch legislative reform is consequently underway to make the exemption framework accessible to a greater range of financial products and services. See, ‘FinTech Australia Supports Proposed Sandbox Expansion and Calls for Further Improvements’ (*FinTech Australia*, 15 March 2018) <<https://fintechaustralia.org.au/fintech-australia-supports-proposed-sandbox-expansion-and-calls-for-further-improvements/>> accessed 2 November 2019.

to consumers and the equivalent treatment of competitors outside the sandbox. Furthermore, by the same means, inter-country comparisons of regulatory sandboxes (and overall regulatory structures) should be capable of being formed by the business and legal community and scholars. However, at this point in the evolution of the regulatory sandbox, a few short years after the UK led the field in establishing the first sandbox in 2016, it is challenging to comprehensively compare different sandbox regimes.<sup>61</sup> In the absence of a supranational guiding framework for regulatory sandboxes, use of terminology, wider legal frameworks and regulatory approaches and design vary considerably. National regulators have adapted and innovated in devising their own brand of regulatory sandbox. This restricts observational generalisations when discussing the regulatory sandbox concept.<sup>62</sup> In design, FinTech regulatory sandboxes cover a wide range of activities, traversing banking, investment activities and services as well as insurance and compliance products. In some countries, a selective or restricted approach to eligible candidates and types of projects admitted has been employed. For example, in India, the RBI's sandbox was initially designed to be specifically confined to start-ups but in response to feedback this was broadened out in the final version. Hong Kong's sandbox is restricted to incumbent banks (and partnering technology firms). Its FinTech Supervisory Sandbox launched in 2016 is specifically intended to enable banks to engage in pilot tests of FinTech initiatives such as biometric authentication.<sup>63</sup> Reflecting its heritage in banking, Switzerland has a regulatory sandbox solely for projects involved in banking.<sup>64</sup>

#### IV. DOES THE REGULATORY SANDBOX COMPROMISE APPROPRIATE REGULATION?

In defining eligibility controls to restrict access to regulatory sandboxes, jurisdictions are learning through trial and error what fits best in their regulatory and commercial landscape. As such, regulators are finding their regulatory comfort zone and broadcasting it to the market in the form of agreed parameters for regulatory sandboxes. Not all opportunities are regarded equally.

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<sup>61</sup> Ringe and Ruof (n 38) 44 (noting the difficulty of comparing the efficacy of different regulatory sandbox models while they are in their infancy).

<sup>62</sup> Given the different models of sandbox that have evolved, the term 'regulatory sandbox' as employed in this paper, is neutral as to whether the firms admitted are regulated or unregulated and whether any regulatory relief applies to them.

<sup>63</sup> Hong Kong Monetary Authority, *Fintech Supervisory Sandbox 2.0* (2020) <<https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech-supervisory-sandbox.shtml>> accessed 2 November 2019.

<sup>64</sup> In 2018, proposals were made that would extend the Swiss sandbox to include the development of products based on blockchain.

The State of Arizona, motivated by risk minimisation, specifically excludes securities trading, insurance products, or services that provide solely deposit-taking functions from eligibility to enter the FinTech Sandbox.<sup>65</sup> There is a concern that some finance centres with light touch regulatory environments that are keen to position themselves as FinTech-friendly may prioritise innovation over putting adequate safeguards in place to protect the public interest.<sup>66</sup> Cryptocurrencies are a case in point. For some observers, the willingness of certain regulators to allow cryptocurrency actors to experiment in the sandbox has raised alarm bells. Many jurisdictions have steered clear no doubt due in part to concerns about the insufficiency of investor protection as well as the uncertainty of regulatory approach.<sup>67</sup> For example, the RBI's indicative black list shows caution in excluding cryptocurrency/crypto asset services and ICOs from sandbox participation.<sup>68</sup> Such judgment calls are particularly complex in relation to emerging technologies and dovetail to a wider frame of how the relevant sandbox operates. As such, it would be facile to label such regulatory choices as inherently right or wrong in their own right. There is nonetheless a concern that facilitating market access via the establishment of a regulatory sandbox could cut across well-established objectives of financial regulation and in doing so, permit harm to investors and consumers.<sup>69</sup> Problematically, there is a dearth of publicly available information, both as to the exercise of regulatory discretion, and in relation to sandbox outcomes in practice.

In Singapore, a recognised regional financial centre with a light-touch regulatory environment, the Central Bank has been focused on trialling ICOs and facilitating ownership of cryptocurrencies using a regulatory sandbox rather than banning them outright as some countries have done amid investor protection fears.<sup>70</sup> In the UK, a number of cryptocurrency companies have been admitted to the FCA sandbox. Within a controlled environment, it hopes to be able to distinguish good ICOs and cryptocurrencies from poor

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<sup>65</sup> Arizona Attorney General, 'FinTech – FAQs' (2018) <<https://www.azag.gov/fintech/faq>> accessed 2 November 2019.

<sup>66</sup> *See generally*, Iris H-Y Chiu, 'A Rational Regulatory Strategy for Governing Financial Innovation' (2017) 8 European Journal of Risk Regulation 743 (arguing that there has been insufficient regulatory focus on governing financial innovation).

<sup>67</sup> For a good discussion of the issues, *see*, Iris H-Y Chiu, 'Decoupling Tokens from Trading: Reaching Beyond Investment Regulation for Regulatory Policy in Initial Coin Offerings' (2018) 3 International Business Law Journal 265; Chiu (n 6).

<sup>68</sup> Reserve Bank of India (n 28) para 6.3.

<sup>69</sup> Weber and Baisch (n 6).

<sup>70</sup> HE Benedetti and L Kostovetsky, 'Digital Tulips? Returns to Investors in Initial Coin Offerings' (2018) <<https://ssrn.com/abstract=3182169>> accessed 2 November 2019; DA Zetzsche and others, 'The ICO Gold Rush: It's a Scam, It's a Bubble, It's a Super Challenge for Regulators' (2019) 63(2) Harvard International Law Journal 267.

ones. However, a crucial observation is that participation in an ICO that has come about via a sandbox may lack appropriate regulatory protection for disgruntled investors. There are valid concerns to be ironed out given that crypto-assets such as Bitcoin are frequently used to facilitate criminal activity and also expose inexperienced retail investors to considerable risk.<sup>71</sup> This illustrates the regulatory dilemmas that exist surrounding satisfactory reconciliation of a pro-innovation stance with a risk protection imperative when administering a regulatory sandbox.

A further issue arises in relation to how thoroughly sandbox applications are vetted for fitness and probity. Notably, competitive rivalry between sandboxes within a broader FinTech competition agenda is driving a trend towards both the type of information assessed at the application stage being watered down, and decisions being made and communicated in a relatively short pre-determined time, rather than based on an objective, substantive assessment by the regulator which leaves it suitably informed and ready to make its decision. As competition for a slice of the FinTech pie has heated up, a number of jurisdictions have sought to give their sandbox an enhanced competitive edge by introducing expedited decision-making with a view to enabling innovative products to come to market more quickly. An expedited application process reduces the burden on firms in relation to the time and financial resources committed to the application process. Malaysia and Singapore have come to the fore in this respect. The Central Bank of Malaysia is expected to reach a decision on applications within a remarkably quick time of 15 working days.<sup>72</sup> Singapore's Sandbox Express provides a 21 day model for insurance broking, recognised market operators and remittance businesses.<sup>73</sup> Applications for the Sandbox Express are truncated and considered based on an evaluation of the technological innovativeness of the relevant product or service and on a fitness and propriety assessment with a view to fast-tracking decisions. In India, a four week time to decision is on the table.<sup>74</sup> It is too early to say whether these developments will have a deleterious effect in individual cases, but with truncated decision-making, there

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<sup>71</sup> A fuller consideration of investor protection issues is outside the scope of this paper.

<sup>72</sup> Bank Negara Malaysia, *Financial Technology Regulatory Sandbox Framework* (2016) <[www.bnm.gov.my/index.php?ch=57&pg=137&ac=533&bb=file](http://www.bnm.gov.my/index.php?ch=57&pg=137&ac=533&bb=file)> accessed 2 November 2019.

<sup>73</sup> Monetary Authority of Singapore, 'MAS Launches Sandbox Express for Faster Market Testing of Innovative Financial Services' (Media Release, 2019) <<https://www.mas.gov.sg/news/media-releases/2019/mas-launches-sandbox-express-for-faster-market-testing-of-innovative-financial-services>> accessed 2 November 2019.

<sup>74</sup> Reserve Bank of India (n 28) para 7.2.1. This, however, relates to preliminary screening. A further three-week assessment period is provided for, following a four-week test design phase.

certainly seems to be potential for inadequate risk-assessment with consequent adverse implications for the public good during testing and beyond.<sup>75</sup>

### A. Disclosures

Disclosures perform an important function in drawing consumers' attention to risk. Most sandboxes have specific rules in relation to informing potential consumers in relation to the restricted nature of the sandbox. Customers of sandbox participants are notified of the potential risks of participating in the testing and are obliged to give their informed consent indicating that they understand and accept the risks.<sup>76</sup> There may also be a requirement to make consumers aware of available redress mechanisms. In jurisdictions where consumer protection is restricted during the sandbox period, as compared to on the open market, consumers must be duly notified of such restriction.<sup>77</sup> Until the regulatory sandbox, as a regulatory innovation, matures and is subject to empirical study, it is difficult to fathom the effectiveness of disclosures in influencing the market behaviour of prospective sandbox consumers and investors. The potential cautionary effects of such disclosures may be counteracted by press releases from regulators trumpeting the admission of the latest participants to their sandbox, thus lending an air of credibility to proceedings that may cause market actors to unduly relax their guard. This shows the delicate tightrope that FinTech regulators must walk as they negotiate promoting innovation with micro-prudential and macro-prudential objectives.

### B. Risk Mitigation

Small-scale testing over a defined period of time within a sandbox helps to minimise consumer risk. Nonetheless, one of the most important design aspects of the testing environment provided by any regulatory sandbox is the nature of the controls provided concerning how risk is mapped and contained. It is common for a bespoke framework of protections to be agreed upon by regulators with each sandbox participant, tailored to the nature of the testing activity. Regulators face a multi-faceted challenge in designing

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<sup>75</sup> In Singapore, for applications that are complex and require more time to assess, the MAS may decide not to consider the application under the Sandbox Express and instead assess it under the customised sandbox approach.

<sup>76</sup> See, for example, Reserve Bank of India (n 28) para 6.8.2.

<sup>77</sup> In some regulatory sandboxes, consumers can expect to enjoy the same consumer protection and enforcement rights as consumers outside the sandbox in that jurisdiction. Thus, in the UK, consumers in appropriate cases may have recourse to the Financial Ombudsman Services and the Financial Services Compensation Scheme. In other schemes such as the Australian FinTech Licensing Exemption, the protection available to sandbox consumers is truncated.

appropriate investor, consumer and systemic protections, based on anticipating a range of actor responses to a given stimulus.<sup>78</sup> This challenge is multiplied several-fold in the case of FinTech innovation as it involves wading through relatively uncharted waters. The point has been reinforced by the Consultative Group to Assist the Poor:

New products and services that are tested in a sandbox may present additional risks that may be hard to assess before the service/product is fully launched in the market. These risks may include those stemming from features of the innovation and/or limited regulatory and supervisory capacity (e.g., poorly designed regulatory requirements, whether too light or too burdensome; inadequate supervisory tools necessary for collecting and analyzing the data generated).<sup>79</sup>

In the UK, assignment of a dedicated case officer to sandbox participants helps to support the successful design and operation of the test as well as the navigation of the regulatory framework. Close contact with an FCA case officer is designed to ensure that the business model fits within the regulatory framework and that necessary safeguards are built in.<sup>80</sup> Such mode of continuing discussion, and where appropriate, recalibration, is useful. This model is also on the cards for the RBI's sandbox which counts on the oversight of its FinTech Unit under the guidance of an Inter Departmental Group, benefiting from domain experts.<sup>81</sup> By contrast, stock protections can be built into a FinTech block exemption model that does not require an individual application and approval process. In Australia, a number of safeguards are built in by the Australian Securities and Investments Commission ('ASIC') to the FinTech licensing exemption through the imposition of pre-conditions such as consumer protection measures, client and exposure limits, dispute resolution and compensation arrangements. In relation to testing robo-advice products, consumer detriment can be mitigated against by ensuring that the advice generated is audited by appropriately qualified staff provided by the regulator.<sup>82</sup> This solution is of clear benefit to both the sandbox participant and clients. This approach was taken in the UK by the FCA for firms using its sandbox to test robo-advice products.<sup>83</sup> Such safeguards can thus

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<sup>78</sup> See further, N Moloney, 'Regulating the Retail Markets' in Moloney, Ferran and Payne (n 2).

<sup>79</sup> Jenik and Lauer (n 26) 6.

<sup>80</sup> Financial Conduct Authority (n 16) para 2.14.

<sup>81</sup> Reserve Bank of India (n 28) para 7.1.

<sup>82</sup> This is done through qualified financial advisers checking the automated advice provided based on programmed algorithms.

<sup>83</sup> Financial Conduct Authority (n 16) para 4.42.



mitigate the risk of unsuitable or incorrect advice being provided both while live testing is occurring and thereafter.

It bears mentioning that since the global financial crisis, policy-makers have moved from a conception of the financial citizen as empowered to a more protective stance in relation to consumers as in need of fair treatment.<sup>84</sup> In the domain of new FinTech products and services, investors of varying hues are at risk of falling for hype and not being suitably informed as to what could go wrong and the consequences therein. Appropriate types of consumer protection measures for sandbox testing will vary depending on factors such as the business model and the nature of technology employed. Restrictions of scale are likely to be imposed in order to contain risk, both for individual consumers and to avoid risks that would impact on financial stability more generally. Along with capital limits, restrictions may be imposed on the number of consumers<sup>85</sup> and on the frequency of transactions. Where relevant, it is common to impose quantifiable restrictions in the form of maximum transaction values and cash holding limits. In some cases, customers may be restricted to a certain profile or market segment better placed to absorb the potential risk. Furthermore, measures to shore up data privacy and cybersecurity are key matters of concern.<sup>86</sup>

A consumer redress mechanism may be tailored, including specification of the availability of financial compensation to customers in the testing period in specified circumstances. Sandbox participants must generally demonstrate that they have the resources to be able to compensate customers in the event of any loss suffered during testing. Reflecting this, for sandbox participants trialling the use of digital currencies in money remittance underpinned by DLT, a safeguard built in by the UK's FCA requires participants to guarantee any funds lost in the transmission process.<sup>87</sup> This underpins the importance of reliable and efficient payment mechanisms. The Indian RBI sandbox framework opts instead for an insurance requirement to cover losses.<sup>88</sup>

The biggest issue in judging whether a regulatory sandbox compromises appropriate regulation relates to the matter of regulatory reliefs being afforded to participants, and it is to this question that we now turn.

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<sup>84</sup> D Kingsford Smith and O Dixon, 'The Consumer Interest and the Financial Markets' in Moloney, Ferran and Payne (n 2).

<sup>85</sup> In Arizona, a cap of 10,000 Arizona-resident consumers is imposed.

<sup>86</sup> RP Buckley and others, 'The Dark Side of Digital Financial Transformation: The New Risks of FinTech and the Rise of TechRisk' (2019) European Banking Institute Working Paper No. 54 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3478640](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3478640)> accessed 2 November 2019.

<sup>87</sup> Financial Conduct Authority (n 16) para 4.9.

<sup>88</sup> Reserve Bank of India (n 28) para 6.8.3.

## V. A HIERARCHY OF MODELS OF REGULATORY RELIEF IN SANDBOXES

Responsive regulation needs to be responsible. Public gatekeeper functions and regulatory controls should not take a back seat in the race to attract FinTech start-ups. This dilemma has parallels with the debate on the market for corporate incorporations, with the race for pre-eminence in the United States being won hands down by Delaware for its pro-management corporate law framework.<sup>89</sup> Like the market for incorporations, regulatory fragmentation enables competition among regulatory sandbox regimes. Jurisdictions vary in terms of the sectoral regulator's power to relax or waive regulatory requirements for sandbox users. Weber and Baisch caution that "*watering down and softening proven regulatory concepts should not be done recklessly.*"<sup>90</sup> Indeed, some jurisdictions have come out firmly against regulatory sandboxes in so far as they embody regulatory dilution. 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.<sup>91</sup> It has been contended that while a race to the bottom is a concern, this is outweighed by the "*dire need of more competition*" in financial services markets.<sup>92</sup> Within oppor-

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<sup>89</sup> K Greenfield, 'Democracy and the Dominance of Delaware in Corporate Law' (2004) 67(4) Law and Contemporary Problems 105; F Stevelman, 'Regulatory Competition, Choice of Forum, and Delaware's Stake in Corporate Law' (2009) 34(1) Delaware Journal of Corporate Law 57. In a European context, see, C Kirchner, RW Painter and Wulf Kaal, 'Regulatory Competition in EU Corporate Law after *Inspire Art*: Unbundling Delaware's Product for Europe' (2005) 2 European Company and Financial Law Review 159; D Ahern, 'The Societas Unius Personae: Using the Single-Member Company as a Vehicle for EU Private Company Law Reform, Some Critical Reflections on Regulatory Approach' in AJ Viera Gonzalez and C Teichmann (eds), *Private Companies in Europe: the Societas Personae (SUP) and the Recent Developments in the EU Member States* (Thomson Reuters Aranzadi 2016) 55.

<sup>90</sup> Weber and Baisch (n 6) 337.

<sup>91</sup> Competition and potentially, financial stability challenges are posed by TechFins (large technology companies (the acronym 'GAFA' is used to refer to Google, Apple, Facebook, and Amazon) entering the FinTech space. For a discussion of the issues and the case for a potential monitoring role for RegTech, see, DW Arner, J Barberis and RP Buckley, 'FinTech, RegTech and the Reconceptualization of Financial Regulation' (2017) 33 Northwestern Journal of International Law and Business 371; RP Buckley and others (n 86).

<sup>92</sup> Buckley and others (n 13) 21.

tunity-based regulation, a robust regulatory approach should, however, dictate that where such a dilemma presents itself, risk minimisation must be prioritised. In the UK, a statutory cue is provided that in the event of a clash, consumer protection and market integrity trump promoting effective competition.<sup>93</sup>

Within the EU, both Germany and France have exhibited robust anti-sandbox sentiment and are not in favour of providing regulatory sandboxes, with BaFin, the German regulator, said to be against providing ‘little buckets and spades’.<sup>94</sup> These regulators are sending a distinct message – that FinTech should not be afforded special treatment and that risk protection is the paramount concern of the regulator. Within the regulatory culture that prevails in Germany, the FinTech industry itself is also keen to avoid the reputational damage which admission to a special regulatory environment might yield.<sup>95</sup> Notably, no dual competition mandate exists in Germany. The solution here for inexperienced firms is to find a licensed co-operation partner to provide a stepping stone before going it alone to seek regulatory authorisation. There has also been strong opposition in the United States to the possibility that legislative reforms might involve regulatory requirements being waived for FinTech.<sup>96</sup>

Jurisdictions vary in terms of the latitude afforded to the regulator to relax or waive regulatory requirements for sandbox participants. While providing regulatory relief to participants divides opinions, it is in essence an agile regulatory adaptation to harsh or unwieldy regulatory topography. As the United States Treasury Department puts it, “[a] regulatory environment with largely binary outcomes — either approval or disapproval — may lack appropriate flexibility for dealing with innovations.”<sup>97</sup> A hierarchy or sliding scale of models of regulatory relief observed in different regulatory sandbox systems that have emerged to date is presented below. Four primary models characterising an observed continuum of national regulatory

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<sup>93</sup> Financial Services and Markets Act 2000, s 1B(4) (as substituted by s 6 of the Financial Services Act 2012).

<sup>94</sup> Attributed to Felix Hufeid, President of the German Federal Financial Services Supervisory Authority (BaFin): C Kociok, ‘No Regulatory Sandbox in Germany’ (*GreenbergTraurog*, 27 April 2017) <[www.gtlaw-financialservicesobserver.com/2017/04/no-sandbox-in-germany/](http://www.gtlaw-financialservicesobserver.com/2017/04/no-sandbox-in-germany/)> accessed 2 November 2019.

<sup>95</sup> *ibid.*

<sup>96</sup> See, the opposition engendered by the Financial Services Innovation Bill introduced in the House of Representatives in 2016 (The Financial Services Innovation Act of 2016, HR 6118, 114<sup>th</sup> Cong 2016). See further, LG Thomas, ‘The Case for a Federal Regulatory Sandbox for Fintech Companies’ (2018) 22 North Carolina Banking Institute 257, 268-269.

<sup>97</sup> United States Department of the Treasury (n 53) 167.

approaches to sandboxes are evident, each sending different signals to would-be participants.

### **A. No Relaxation of Applicable Rules**

The first category of regulatory sandbox predicates that no relaxation of rules is available to sandbox users. It evinces a strict letter of the law approach. Participants are subject to applicable legislation at all times. This has the consequence that participants in the sandbox do not receive more favourable treatment than those outside it in relation to the applicability of relevant rules. The Danish Financial Supervisory Authority's regulatory sandbox, FTLab, which opened in 2018, provides an example of this approach. Not permitting a relaxation of the rules during the sandbox test period helps to meet concerns in relation to equality of access. What marks this type of sandbox out from forms of informal FinTech supports such as innovation hubs is that the assistance provided to chosen participants is more formalised and concentrated.

### **B. Relaxation of Applicable Rules Permitted Only Within the Discretionary Scope of Existing Rules**

The second category is a variant on the first and occurs where there is an inbuilt discretion in the relevant regulatory rules to relax their application, with the sandbox operating within this framework. This model has particular potential within the EU where national regulatory authorities are required to apply relevant EU financial services legislation but are permitted to work within any in-built flexibility in these instruments in relation to their application to FinTech. EU financial services law enshrines a principle of proportionality whereby regulatory and supervisory requirements are to be applied having regard to matters such as the size and risk profile of the firm concerned as well as the nature and complexity of the risks inherent in the business model.<sup>98</sup> The EU's FinTech Action Plan expressly tips off Member States in relation to this possibility:

National competent authorities must apply relevant EU financial services legislation. However, these rules include a margin of discretion with regard to the application of the proportionality and flexibility principles embedded in these rules. This can be particularly useful in the context of technological innovation.<sup>99</sup>

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<sup>98</sup> See further, European Supervisory Authorities (n 12) para 30.

<sup>99</sup> European Commission (n 5).

To date, the UK's FCA has followed this approach in applying the EU financial services rulebook.<sup>100</sup> For the FCA sandbox, most firms are required to have a restricted authorisation in order to enter the test environment. This ensures that the firm has the requisite competence and financial wherewithal needed to carry on the relevant business with an appropriate degree of consumer and investor protection. However, sandbox tools provided by the FCA potentially include rule waivers and no-enforcement action letters (comfort letters). That said, despite signalling the potential for rule waivers in individual cases, anecdotal evidence suggests that to date, the FCA has not relaxed actual regulatory requirements for any sandbox user. The Norwegian regulatory sandbox for the FinTech industry, created by the Financial Supervisory Authority of Norway meets this model, with the supervisory authority having the power to suspend certain requirements based on the principle of proportionality to the extent permitted by the regulatory regime.<sup>101</sup>

### C. Block Exemption Licence

While application to a general regulatory sandbox may result in the creation of a customised sandbox, a block exemption licence model would not. A block exemption approach is intended to provide a pre-defined sandbox with pre-determined parameters including in relation to available regulatory reliefs. Using a block exemption approach signals to FinTech innovators that they can opt-in based on an autonomous determination of eligibility by the regulatory actor.

This model is evident in Australia, Switzerland and Singapore. In Australia, ASIC has exercised its statutory relief powers to provide a FinTech licensing exemption for a period of up to 12 months, free from the need to have an Australian financial services or credit licence.<sup>102</sup> ASIC uses a white list approach such that firms can satisfy themselves that they come within criteria for validation testing and notify ASIC of intention to test without

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<sup>100</sup> A post-EU withdrawal approach remains to be seen but is likely to remain consistent.

<sup>101</sup> The Norwegian Ministry of Finance asked the Financial Supervisory Authority of Norway to establish a FinTech regulatory sandbox in 2019. It was established in December 2019. *See further*, M Wilhelm, 'Regulatory Sandbox for the Fintech Industry Coming to Norway in 2019' (*Simonsen Vogt Wiig*, 14 November 2018) <<https://svw.no/aktuelt/aktuelt/20182/november/regulatory-sandbox-for-the-fintech-industry-coming-to-norway-in-2019/>> accessed 2 November 2019.

<sup>102</sup> ASIC Corporations (Concept Validation Licensing Exemption) Instrument 2016/1175 and ASIC Credit (Concept Validation Licensing Exemption) Instrument 2016/1176. *See further*, ASIC, *Testing FinTech Products and Services without Holding an AFS or Credit Licence* (Regulatory Guide 257, 2016) <<https://download.asic.gov.au/media/4420907/rg257-published-23-august-2017.pdf>> accessed 2 November 2019.

any requirement that ASIC issue an approval.<sup>103</sup> A number of safeguards are built in through the imposition of pre-conditions such as consumer protection measures, client and exposure limits, dispute resolution and compensation arrangements. There is no exemption from other laws such as anti-money laundering or tax laws. Switzerland's regulatory sandbox, introduced in 2017 for projects in banking, involves a licence-free innovation area or sandbox by means of an amendment to the Banking Ordinance.<sup>104</sup> Crucially, this means that FinTech companies carrying out relevant activities can test without a banking licence. In 2019, Singapore introduced a fast-track sandbox (to complement its pre-existing general regulatory sandbox) named the Sandbox Express, built on a block exemption approach.<sup>105</sup> The objective is to enable certain lower risk and well-understood activities to enter the experimentation phase and test more quickly by providing pre-defined sandboxes to cover insurance broking, recognised market operators and remittance businesses.<sup>106</sup>

#### D. Tailor-Made Sandbox Based on Relaxation of Specific Rules

The most radical category of sandbox is the tailor-made sandbox whereby discretionary relaxation of rules for individual sandbox users is permitted and no such flexibility is provided to entities outside the sandbox. The tailor-made sandbox model permits relaxation of rules on a case by case basis to create an individualised sandbox for FinTech entrepreneurs. This is a regulatory trump card for countries positioning themselves as key FinTech centres and signalling their willingness to facilitate new business models. Opportunity-based regulation involving relaxation of the regulatory framework is clearly considered justifiable by these regulators in helping to get nascent FinTech innovation out of the traps. However, care needs to be taken that due attention is paid to risks as well as opportunities in making that compromise.

In contemplating a relaxation of otherwise applicable rules, this model of regulatory sandbox goes counter-clockwise to the trend of post-global

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<sup>103</sup> This dispensation from the need for an Australian Financial Services Licence or credit licence applies, for example, to stored value card products and the provision of certain foreign exchange services.

<sup>104</sup> Relevant operators are not regarded as accepting deposits from the public on a commercial basis if the sums deposited do not exceed CHF 1 million and certain other criteria are met.

<sup>105</sup> Monetary Authority of Singapore (n 73).

<sup>106</sup> Monetary Authority of Singapore, *Sandbox Express* (Consultation Paper P015, 2018) <[www.mas.gov.sg/~media/MAS/News%20and%20Publications/Consultation%20Papers/2018%20Nov%20Sandbox%20Express/Consultation%20Paper%20on%20Sandbox%20Express.pdf](http://www.mas.gov.sg/~media/MAS/News%20and%20Publications/Consultation%20Papers/2018%20Nov%20Sandbox%20Express/Consultation%20Paper%20on%20Sandbox%20Express.pdf)> accessed 2 November 2019.

financial crisis regulation where the regulatory landscape for financial services has seen accretions of more regulation rather than less. In a sandbox design allowing regulatory requirements to be relaxed for participants, there is an obvious concern that this may compromise consumer protection. That said, such relief is generally ring-fenced – where regulatory requirements are relaxed for entities admitted to the sandbox, this is usually confined to the sandbox testing period. Unless the jurisdiction allows for a tailored regulatory regime to be negotiated upon sandbox exit, entities will need to obtain the requisite regulatory approvals generally applicable outside of the sandbox. Although it is early days and regulators are still dipping their toes in the waters of regulatory flexibility, it bears pointing out that a lack of transparency in relation to how far rules may be bent is problematic. For instance, Malaysia's National Regulatory Sandbox Initiative somewhat opaquely contemplates 'regulatory flexibilities' being afforded.<sup>107</sup>

Jurisdictions where tailored regulatory relaxation is permitted include the State of Arizona (United States), Brunei, Canada, Hong Kong, Indonesia, Malaysia and Singapore. The approach taken by Malaysia as a competitive regulatory strategy was elaborated upon by a policy insider as follows:

With the Sandbox, we are willing to “flex” rules and regulations to enable testing where we deem that the solution contains strong value proposition and the risks can be appropriately contained. This will also allow us to reduce time to market for new innovative products, which under normal process, might get stifled by regulatory hurdles. It enables us to ensure that our regulatory framework is relevant and responsive to innovations that can bring game changing outcomes to our financial services sector.<sup>108</sup>

Rather than a consensus approach emerging, each regulator has approached regulatory relaxation in its own way. The Hong Kong Monetary Authority has the power to relax supervisory requirements for incumbent banks admitted to its FinTech Supervisory Sandbox launched in 2016 to enable banks to engage in pilot tests of FinTech initiatives such as biometric authentication.<sup>109</sup> In Singapore, the Monetary Authority of Singapore's regu-

<sup>107</sup> Bank Negara Malaysia, *Financial Technology Regulatory Sandbox Framework* (2016) para 1.5 <[www.bnm.gov.my/index.php?ch=57&pg=137&ac=533&bb=file](http://www.bnm.gov.my/index.php?ch=57&pg=137&ac=533&bb=file)> accessed 2 November 2019.

<sup>108</sup> Encik Aznan bin Abdul Aziz, 'Financial Technology Enabler Group (FTEG) Chairman's Opening Remarks at Finnovasia KL' (Finnovasia, Kuala Lumpur, Malaysia, 20 March 2017) <[http://www.bnm.gov.my/index.php?ch=en\\_speech&pg=en\\_speech&ac=721&lang=en](http://www.bnm.gov.my/index.php?ch=en_speech&pg=en_speech&ac=721&lang=en)> accessed 2 November 2019.

<sup>109</sup> Norman TL Chan, 'Speech by Mr Norman T L Chan, Chief Executive of the Hong Kong Monetary Authority' (HKMA Fintech Day, Hong Kong, 11 November 2016) <[www.bis.org](http://www.bis.org)>

latory sandbox permits the creation of a customised sandbox for participants whereby certain legal and regulatory requirements may be relaxed for an entity for the duration of the sandbox.<sup>110</sup> Examples of these are provided in the relevant sandbox guidelines and include financial requirements such as capital adequacy requirements, as well as matters relating to management experience and existing track record.<sup>111</sup> In India, the RBI Sandbox contemplates relaxation of regulatory requirements on a case by case basis for the duration of the sandbox<sup>112</sup> and the framework provides examples in the form of matters including track record, liquidity requirements and financial soundness.<sup>113</sup> Such flexibility does not extend to KYC requirements, anti-money laundering requirements, counter-financing of terrorism measures and other statutory restrictions.

The Canadian Securities Administrators ('the CSA') also plays a role in tailoring bespoke exceptions to securities laws.<sup>114</sup> In Canada, discussion may first occur with the local securities regulator on a case by case basis in relation to the relevant business model and the application of securities laws before submission of an application to the CSA. The CSA will determine the tailored terms and conditions for individual sandbox participation. For example, in 2017, Token Funder Inc. was admitted to the CSA Regulatory Sandbox with a view to launching an initial token offering by means of a private placement and was granted relief from the dealer registration requirement while in the sandbox. However, conditions including KYC requirements were imposed.<sup>115</sup> Somewhat controversially, Québec's financial regulator, Autorité des Marchés Financiers ('AMF'), provided Impak Finance, an ICO platform for investing in socially responsible enterprises, with relief from securities regulation requirements concerning not only registration as a securities dealer, but also the provision of a prospectus to investors.<sup>116</sup> These are usually considered standard investor protection measures.

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org/review/r161111c.pdf> accessed 2 November 2019.

<sup>110</sup> Monetary Authority of Singapore (n 47) Appendix A.

<sup>111</sup> Monetary Authority of Singapore (n 47) Appendix A.

<sup>112</sup> Reserve Bank of India (n 28). Some interpretative confusion is created by the juxtaposition of para 8.1, which states "*the RBI will provide the appropriate regulatory support by relaxing specific regulatory requirements*" where necessary, for the duration of the sandbox, with para 4.3, which states "*the RBI or its RS [regulatory sandbox] cannot provide any legal waivers.*"

<sup>113</sup> Reserve Bank of India (n 28) para 6.2.

<sup>114</sup> Canadian Securities Administrators, *CSA Regulatory Sandbox* (2017) <[https://www.securities-administrators.ca/industry\\_resources.aspx?id=1588](https://www.securities-administrators.ca/industry_resources.aspx?id=1588)> accessed 2 November 2019.

<sup>115</sup> See, Canadian Securities Administrators, *Decision in the Matter of Token Funder Inc.* (2017) <[https://www.securities-administrators.ca/uploadedFiles/Industry\\_Resources/DE\\_TokenFunderInc.pdf](https://www.securities-administrators.ca/uploadedFiles/Industry_Resources/DE_TokenFunderInc.pdf)> accessed 2 November 2019.

<sup>116</sup> A Stanley, 'ICO Ban? Canada's Regulators are Giving One Token Sale a Big Break' (*CoinDesk*, 6 September 2017) <<https://www.coindesk.com/ico-ban-canadas->



Patrick Theoret of AMF reasoned that “[i]t’s in the spirit of the sandbox that we are willing to alleviate some of the requirements on ... a test case basis. It’s a test run to see whether there are investor protection [issues] with the relief that we grant.”<sup>117</sup> This highlights the role of the sandbox as a contained mutual learning experience.

Open-ended regulatory flexibility permits adaptability and regulatory dialogue. However, any associated lack of certainty in relation to determining the baseline of the regulatory perimeter is absolutely undesirable, not just as a matter of commercial certainty, but more fundamentally, in terms of the need for a core policy determination of where the regulatory bar should be set. Therefore, although the flexibility of the regulatory sandbox is its strength in relation to promoting competition, it may also prove to be its Achilles’ heel. While promoting innovation and competition in Fintech markets, regulators need to remember that they are public gatekeepers. Regulatory dialogue is one thing. There needs, however, to be firm limits as to the extent of regulatory flexibility. All market participants ought to be treated equally and fundamental sound principles of financial regulation should not be watered down on a whim even for a time-limited period. Reflecting such concerns, for some, the regulatory sandbox is simply wrong-headed and a tailor-made sandbox, a *non sequitur*. Perhaps the real work can be just as well done by the unsung hero – the innovation hub.<sup>118</sup> It would be wrong to assume that the relatively small number of regulatory sandbox schemes in existence across the globe to date is simply attributable to many regulators lagging behind early adopters. In some countries, regulators are privately unconvinced that a regulatory sandbox is an appropriate part of the toolbox of a regulator in their distinct regulatory landscape and regulatory culture. These concerns ought to be weighed in the balance in inter-regulator and stakeholder dialogue on the regulatory sandbox, and the future of FinTech regulation and innovation facilitation.

## VI. CONCLUSION

Transformative technological change is ongoing and regulators are keenly aware of their contribution to facilitating FinTech competition and innovation. Market innovation is forcing regulatory innovation; iterative, agile experimentation and new regulatory strategies. The regulatory sandbox construct, characterised here as opportunity-based regulation, is best understood

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regulators-giving-one-token-sale-big-break> accessed 2 November 2019.

<sup>117</sup> Stanley (n 116).

<sup>118</sup> Buckley and others (n 13).

contextually within, if not a regulatory vacuum, a slowly evolving regulatory topography that does not yet meet the specific needs of FinTech markets. A compromise blend of ‘softly, softly’ and ‘wait and see’ regulatory stances is accordingly evident in the roll-out of the regulatory sandbox as a two-way learning tool for the regulator and the regulatory actor. Significantly, not only is the regulatory sandbox an experimental phase for firms testing innovative products and services, it is also a novel regulatory experiment as far as regulators are concerned as they use the sandbox to actively learn about new technologies and products and how regulation needs to adapt and respond.

While sandboxes perform a valuable gap-filling role, they are not a regulatory panacea for FinTech. Financial innovation is complex, involving technological innovation and disruptive new business models, and presents both benefits and risks. Proportionate regulation is the answer but understanding and devising what is needed will take a considered response. As one regulatory insider astutely puts it, “*Regulation must not front-run innovation. Introducing regulation prematurely may stifle innovation and potentially derail the adoption of useful technology.*”<sup>119</sup> The proliferation of the regulatory sandbox phenomenon is indicative of a willingness among regulators to boost the FinTech economic bounce with an adaptive regulatory stopgap for the brightest FinTech innovators. The broader coherence and competition challenges for FinTech, posed by global regulatory fragmentation, will continue. In the meantime, there is considerable potential for calculated forum shopping by mobile FinTech entrepreneurs as they work out what opportunities are offered by available regulatory sandboxes.

In forging ahead with a competition promotion agenda, regulators need to be sensitive to the ripple effects of a regulatory sandbox on barriers to entry and natural selection in the market. The tailor-made regulatory sandbox model evident in some jurisdictions heralds bespoke regulation for a sandbox in-group, thus creating a multi-tiered regulatory framework. This is a remarkable development. As we tread a careful path from the global financial crisis, care must be taken not to compromise appropriate regulation. A fundamental regulatory issue for each jurisdiction to confront concerns the justifiability of granting full or partial waiver of core regulatory requirements to sandbox participants, even for a time-limited period.

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<sup>119</sup> R Menon, ‘Remarks of R Menon, Managing Director, Monetary Authority of Singapore’ (Singapore Forum, Singapore, 2 April 2016) <<https://www.finews.asia/finance/23415-ravi-menon-monetary-authority-of-singapore-fintech-innovation-blockchain-lattice-80>> accessed 2 November 2019.