

# Regulatory Sandboxes

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# Contents

- Introduction..... 2**
- Innovation and the Role of the Financial Authorities ..... 2**
- Objectives and the Defining Characteristic of Regulatory Sandboxes ..... 3**
  - Stated Objectives ..... 3
  - The Defining Characteristic ..... 4
- A Multitude of Operating Models ..... 5**
  - Eligibility Criteria ..... 5
  - Terms of Participation..... 6
  - Post-Pilot Actions ..... 7
- Running a Regulatory Sandbox..... 8**
- Potential Benefits and Risks of Regulatory Sandboxes ..... 9**
- Conclusion ..... 10**
- Key References ..... 12**
- Additional Readings..... 12**

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## Introduction<sup>1</sup>

The speed and the diversity of global financial innovation have accelerated in the past few years, often spurred by technological developments and the rise of FinTech, RegTech and SupTech.<sup>2</sup> Given the potential benefits and risks of innovation, financial regulatory and supervisory authorities (hereafter “authorities”) have not been mere spectators. Many authorities have assumed an active role in making the regulatory framework more attractive for innovators, and taking additional steps to encourage innovation. The ultimate goal is to balance and advance the authorities’ statutory objectives, which may go beyond promoting safety and soundness of financial institutions and financial stability, to combating financial crime, promoting financial inclusion, increasing the efficiency of payment systems, promoting competition and protecting financial consumers.

The Basel Committee on Banking Supervision (BCBS) has recognized the need to balance competing objectives, recommending that authorities minimize the risk of inhibiting beneficial innovation and learn from each other’s approaches to interacting with innovative players.<sup>3</sup> One approach – regulatory sandboxes – has been drawing increased attention by authorities in both advanced economies and in emerging markets and developing economies (EMDEs). Over 20 authorities have created regulatory sandboxes only in the last few years.<sup>4</sup>

Regulatory sandboxes may offer potential benefits. They could encourage innovators to come forward with new ideas that may not necessarily fit existing regulations and allow them to test such ideas with the blessing of the financial authority. With the right mindset and resources in place, sandboxes – in particular when they are part of a broader package of initiatives to encourage innovation and spur competition – could have positive results and also function as a conduit for richer engagement and mutual learning between the authorities and the industry. However, the evidence on their effectiveness is still sparse and sandboxes do not come without risks.

This Note explains the concept of regulatory sandboxes and discusses their potential benefits and risks. It seeks to help authorities identify issues that need to be taken into account before deciding to create and while designing a regulatory sandbox.

## Innovation and the Role of the Financial Authorities

Innovation is transforming key features of wholesale and retail products and services, delivery channels and customer interfaces, market infrastructures, back-office procedures, and business models. It is impacting multiple financial sectors and is also changing the way the authorities operate and make policy.

Not all innovations are good, however. Some innovation could contribute to the statutory objectives of the authorities, some could be neutral, and others could undermine those objectives. New technologies or new product or service designs may not neatly fit within the existing regulatory framework, which can create uncertainties to both innovators and the authorities.

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<sup>1</sup> This note was prepared by Denise Dias on behalf of Toronto Centre.

<sup>2</sup> See definitions in Denise Dias, “FinTech, RegTech and SupTech: What They Mean for Financial Supervision,” *Toronto Centre Note* (Toronto: Toronto Centre, 2017).  
<http://res.torontocentre.org/guidedocs/FinTech%20RegTech%20and%20SupTech%20-%20What%20They%20Mean%20for%20Financial%20Supervision.pdf>.

<sup>3</sup> Basel Committee on Banking Supervision, “Sound Practices: Implications of Fintech Developments for Banks and Bank Supervisors (I) [Basel: Bank for International Settlements, August 2017],  
<http://www.bis.org/bcbs/publ/d415.htm>.

<sup>4</sup> Ivo Jenik and Kate Lauer, “Regulatory Sandboxes and Financial Inclusion,” *CGAP Working Paper* (August 17, 2017), 1, <http://www.cgap.org/blog/regulatory-sandboxes-potential-financial-inclusion>.

In this context, one could argue that at the extremes the authorities have two strategies at hand. If an enabling regulatory framework exists and accommodates a range of innovation and innovators, the authorities could observe developments and only act if and when risks have materialized at some scale (a passive, *ex post* approach). Alternatively, if the framework poses obstacles to innovation, the authorities could proactively reform the legislation or regulation to eliminate those obstacles.<sup>5</sup>

In practice, the reality often is more complex and there are numerous intermediate scenarios. For instance, enabling regulations may exist, but the authorities might take unnecessarily restrictive *ex-post* action based on a lack of understanding of the risks inherent in the innovations. This possibility poses a risk to innovators, particularly those pursuing innovations seen as disruptive to established players or markets. In the case where prohibitive requirements are in place, in principle reforms could ease them, but reforms are seldom easy to design (e.g., it is not always obvious what requirements need to be changed and how) or quick to implement, especially when legislation is involved.

The central challenge of the authorities is to have sufficiently in-depth and timely knowledge of existing and emerging innovations to enable – and possibly encourage – “good innovation” while deterring “bad innovation”. The challenge of innovators is to understand the authorities’ expectations, navigate complex regulations to ensure compliance with the minimum possible cost, while keeping the core features of their innovations. The uncertainties and challenges on both sides, and the lack of mutual understanding, could potentially be reduced by the use of regulatory sandboxes. Additionally, regulatory sandboxes could be used as a strategy for going beyond providing an enabling framework to actively encouraging innovation.

## Objectives and the Defining Characteristic of Regulatory Sandboxes

### Stated Objectives

After the UK’s Financial Conduct Authority (FCA) coined the term in 2015, over 20 other authorities in advanced economies and EMDEs have created regulatory sandboxes, and the interest in this type of initiative continues to grow.<sup>6</sup> Although the FCA’s sandbox (see Box 1) is one of the best known internationally, it was not the first initiative of its kind. In 2012 the US Consumer Financial Protection Bureau (CFPB) launched Project Catalyst, which can be considered a sandbox.<sup>7</sup>

#### Box 1. UK FCA’s Project Innovate and Regulatory Sandbox

In 2014, the UK FCA launched Project Innovate with the objectives of reducing regulatory barriers to encourage innovation in the interest of consumers and driving competition. The Project is comprised of five initiatives. The Innovation Hub has two initiatives: being a one-stop shop for all matters related to innovation, including direct support to innovators trying to map regulatory requirements, and encouraging FinTech innovation through external engagement (e.g., participation in and organization of industry events, such as “hackathons”). The Advice Unit is focused on providing feedback to firms developing automated advice and guidance to consumers. The RegTech initiative focuses on facilitating

<sup>5</sup> A fuller description of regulatory approaches to deal with innovation is found in Dirk A. Zetsche et al, “Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation,” August 14, 2017. 14-26, Fordham Journal of Corporate and Financial Law, Forthcoming; European Banking Institute Working Paper Series 2017 - No. 11; University of Luxembourg Law Working Paper No. 006/2017; Center for Business and Corporate Law (CBC) Working Paper Series 001/2017; University of Hong Kong Faculty of Law Research Paper No. 2017/019; UNSW Law Research Paper No. 71. Available at SSRN: <https://ssrn.com/abstract=3018534>.

<sup>6</sup> Jenik and Lauer, “Regulatory Sandboxes and Financial Inclusion,” 1.

<sup>7</sup> Consumer Financial Protection Bureau, web site, <https://www.consumerfinance.gov/about-us/project-catalyst> (accessed October 31, 2017).

collaboration and knowledge sharing on new technologies that support better regulation. Finally, FCA launched a Regulatory Sandbox in 2015 with the objectives of:

- Reducing time-to-market at potentially lower cost;
- Improving innovators' access to finance;
- Increasing the number and range of innovative products in the market; and
- Ensuring appropriate consumer protection safeguards in innovative products.

**“The Regulatory Sandbox allows businesses to test innovative products, services, business models and delivery mechanisms in the real market, with real consumers”**

(<https://www.fca.org.uk/firms/regulatory-sandbox>)

There is no standard definition of what are regulatory sandboxes. Their stated objectives vary, and can include: i) enabling innovation; ii) encouraging innovation; iii) improving the regulatory framework; iv) improving licensing procedures; iv) informing policymaking; vi) being a channel for engagement with FinTech firms; and vii) contributing to economic growth. These objectives can be interrelated and overlapping. For instance, the US CFPB seeks to improve regulations to enable consumer-friendly innovations. In improving regulation and actively engaging with innovators through Project Catalyst, CFPB may spur further innovation.

Regulatory sandboxes can have general objectives such as those cited above, but they could also be focused on solving specific challenges faced by the industry, the authorities or the consumer, or on testing specific technologies. Examples are regulatory sandboxes that focus on innovations to improve know-your-customer (KYC) procedures, improve regulatory reporting, or improve processes at the financial authority.<sup>8</sup> Sandboxes may also be set up specifically to test new technologies, such as distributed ledger technologies (DLT). The specific objectives can be set for a limited time or be permanent.

## The Defining Characteristic

Irrespective of the variety of their objectives, regulatory sandboxes have one defining characteristic: the establishment, by a financial authority, of a formal and structured mechanism to receive applications by innovators to work with the authority to test innovative products, services or business models, before they are launched commercially.<sup>9</sup> The tests are conducted through small time-bound pilots with actual consumers, implemented by the innovators, while being monitored by the authority. Hence, a regulatory sandbox is “live testing of new products and services in a controlled environment”.<sup>10</sup> With a regulatory sandbox the authority, in addition to considering innovations presented to them through the normal authorization process,<sup>11</sup> creates a new channel with standard application and pilot-monitoring procedures and requirements. Sandboxes provide a safe and transparent setting for innovators to test their innovations and/or clarify regulatory requirements before they seek formal authorization or go to market. At the same

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<sup>8</sup> For instance, the Bank of England set up its FinTech Accelerator to work with firms on new technology to explore how FinTech innovations could be used in central banking.

<sup>9</sup> Regulatory sandboxes also have a variety of different names that could be interpreted as other types of initiatives. Sometimes other initiatives are also mislabeled as regulatory sandboxes.

<sup>10</sup> Basel Committee on Banking Supervision, “Sound Practices: Implications of Fintech Developments for Banks and Bank Supervisors” ([Basel]: Bank for International Settlements, August 2017), 40.

<sup>11</sup> “Authorization” is broadly used in this Note to refer to any authorization or license that regulated financial institutions or unregulated entities are required to obtain prior to launching a new product or service, or entering a regulated financial market.

time, sandboxes give the authority the chance to learn about innovations in greater depth prior to authorizing full rollout and to pinpoint specific regulatory obstacles and risks.

## A Multitude of Operating Models

There is no single operating model for regulatory sandboxes. The rules governing the interaction between innovators and the authorities – before, during and after the pilots are conducted – vary according to the sandbox objectives, the authorities’ capacity and legal powers, the level of market development, and interest by innovators. The models can be analyzed through a few features: i) eligibility criteria for participation in the sandbox; ii) terms of participation; and iii) post-pilot actions.<sup>12</sup>

### Eligibility Criteria

A regulatory sandbox can attract a large number of applications from innovators interested in piloting their innovations with the blessing and advice of the authority. Usually the authority defines eligibility criteria to select among applicants and ends-up with a manageable number of pilots to monitor. Eligibility criteria are often defined according to the types of innovators and innovations that can apply for participation in the sandbox.<sup>13</sup> The selection of eligible participants should be closely related to the stated objectives of the sandbox.<sup>14</sup> See Box 2.

#### Box 2. Eligibility criteria for participation in a regulatory sandbox

Types of innovators	Types of innovations
<p>Sandboxes may accept applications from regulated institutions (i.e., incumbents), unregulated innovators (e.g., startups and large FinTech companies), or both.</p> <p>Regulated institutions may be interested in reducing uncertainty about potential regulatory/supervisory action against an innovation that does not clearly fit the regulation, or in obtaining relaxation/clarification of regulatory requirements. Unregulated innovators may have similar interests in reducing legal uncertainty prior to seeking authorization to enter the market as a regulated institution. For them, the sandbox may have extra value (compared to currently regulated institutions) in lowering entry barriers, such as by reducing costs of legal advice</p>	<p>Authorities define the types of innovations that could be considered for the sandbox. The usual focus is <u>not</u> on innovations that are clearly permitted by regulation, but there is no standard practice.<sup>15</sup></p> <p>Innovations should be ready to market, i.e., an idea in its initial stages of development is not a candidate for a regulatory sandbox.</p> <p>Innovators may be asked to demonstrate that their proposal has specific objectives to be proved with the pilot, such as reducing costs to consumers, improving assessment of credit risk, etc. Authorities may choose to temporarily or permanently focus on specific innovations, such as testing DLT for large value payments, innovative approaches to consumer disclosures</p>

<sup>12</sup> See description of several existing regulatory sandboxes and their legal basis in Zetsche et al, “Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation,” 13, 26-41 and a snapshot of existing sandboxes in Jenik and Lauer, “Regulatory Sandboxes and Financial Inclusion,” 12.

<sup>13</sup> See other entry criteria in Zetsche et al, Ibid, 30-32.

<sup>14</sup> See examples of participants in Jenik and Lauer, “Regulatory Sandboxes and Financial Inclusion”, 13-16.

<sup>15</sup> Arguably, innovations that neatly fit existing regulations and face no obstacle in the regulations would not require a regulatory sandbox. Other initiatives could be more appropriate to promote such innovations (e.g., Accelerators, Hubs, innovation challenges). However, in countries where the authority requires regulated institutions to seek approval before launching any new product or service, or before establishing any outsourcing arrangement, and approval processes are usually lengthy, a sandbox could help speed-up authorization and reduce the level of uncertainty for financial institutions.

and the costs of lengthy authorization processes. Unregulated innovators that are not seeking authorization may also benefit from obtaining confirmation that their business, products or services are not subject to regulation.

that are prohibited by existing regulations (e.g., CFPB),<sup>16</sup> or innovations to improve processes within the financial authority (e.g., Bank of England).<sup>17</sup>

## Terms of Participation

The acceptance of innovators in the sandbox allows them to start separate pilots to test their proposed innovations. Conducting pilots is commonplace for financial institutions before launching new products and services, but a pilot conducted within a regulatory sandbox is different, in that the pilot is explicitly authorized by the authority. As a consequence, there is a need to establish strict rules to mitigate risks for the innovator, the authority, and the consumers affected by the pilot.

- **General principles, parameters and conditions.** There are terms that will apply to all innovators and all pilots, including principles (e.g., fair treatment of consumers, protection of customer data), parameters (e.g., maximum duration for all pilots) and conditions (e.g., obligation to report to the authority on the progress of the pilots, the authority’s right to mandate early termination of pilots [e.g., when an innovator does not follow the agreed terms of participation, or when risks of a pilot have proved to exceed the benefits], the authority’s right to publicize certain aspects of the pilots and the lessons drawn from them, and the innovators’ right to opt out the sandbox).
- **Customized parameters and conditions.** In addition to terms that apply to all sandbox participants, there can be customized parameters and conditions for each pilot. An example is the extension of waivers or other leniency (see below) to individual innovators in order to allow them to conduct their pilots without the implication that other innovators will receive similar treatment.
- **Extension or removal of privileges.** There is no guarantee that waivers or other leniencies extended to individual innovators prior to the start of their pilots will be extended after the end of the pilots
- **Innovator’s liability.** Waivers or other leniencies extended to innovators to participate in the sandbox should not limit their liability towards consumers and third parties negatively impacted by their pilots.

The customized terms governing the participation of each innovator may vary according to the proposed pilot and to country- or authority-specific factors such as the types of products and services that are subject to licensing or authorization, and the scope of the authority’ ability to exercise discretion in the application of the regulatory framework. For instance, some authorities can accept for participation in the sandbox an unregulated firm that would otherwise need an authorization, or an innovation that does not comply with a regulation. These situations could require the use of “special regulatory instruments” to limit, alleviate, suspend, waive or delay application of regulatory and licensing requirements while the innovation is being tested in the sandbox. The need for, and the nature and availability of, such special instruments vary across regulatory sandboxes. Some of the existing instruments are described below.

- **Restricted authorization.** When an unregulated innovator needs an authorization to operate and offer the type of product or service that is being proposed to the sandbox, a restricted

<sup>16</sup> Consumer Financial Protection Bureau, web site, <https://www.consumerfinance.gov/about-us/project-catalyst/trial-disclosure-program> (accessed October 31, 2017).

<sup>17</sup> Bank of England, web site, <http://www.bankofengland.co.uk/Pages/fintech/default.aspx>, (accessed October 31, 2017).

authorization can be issued exclusively to give permission for the innovator to run the pilot. The restricted authorization would make the full authorization process easier, in case the innovator applies for one when the pilot is completed.

- **Waivers.** In case the authority determines that an innovation being proposed to the sandbox is made difficult or is prohibited by a regulatory requirement, the authority can issue a waiver or similar regulatory leniency instrument. A waiver may also be used in substitution of a restricted authorization.<sup>18</sup>
- **No enforcement action letter.** No enforcement action letters can be used when an innovation raises uncertainty as to which regulatory requirements could be breached during the pilot and in what manner. The objective is to give assurance to innovators that no disciplinary action will be taken should unexpected problems arise, as long as the innovators respect the agreed-upon parameters and principles and actively and openly engage with the authority during their pilots.

When instruments such as those cited above are not needed or possible, the authority could provide formal guidance (written or otherwise) to an innovator on the application of regulatory requirements to the innovation being proposed to the sandbox.

In addition to principles, parameters and conditions applicable to all innovators participating in the sandbox, specific conditions for each innovator and its pilot can be established, including:

- **Parameters (limits) of the pilot.** Authorities may set a general maximum duration for all pilots (e.g., one year) while specific parameters for individual pilots can be customized (e.g., the specific duration, maximum number of customers, types of customers, maximum number or value of payment transactions, geographical reach, maximum value of deposits or loans, maximum number of agents or transaction points, etc.).
- **Reporting to the authority.** The authority can set specific reporting requirements on the progress of individual pilots, and at their completion, according to the characteristics of each pilot. The reporting should give timely and sufficient information to the authority while not being overly burdensome to the innovators.
- **Exit strategy and safeguards.** The innovators must have a clear exit strategy to terminate the pilot at a pre-defined date. For instance, they need to explain to the authority how consumers will be informed about any discontinuation of services, and whether they will be eligible to receive any compensation. Depending on the pilot, an innovator may be required to provide specific disclosures to consumers, such as informing them that the services are being provided as part of a pilot within the regulatory sandbox. The authority may also require safeguards (e.g., compensation funds, professional indemnity insurance), such as to compensate losses or other harm incurred by consumers.

## Post-Pilot Actions

Based on the results of the pilots, the authority can decide upon measures to take in relation to unregulated innovators and/or regulated institutions that participated in the sandbox, a market segment, or in relation to certain regulatory requirements. Potential post-pilot actions can be significantly limited by an authority's legal powers, and could include:

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<sup>18</sup> The Australian Securities and Investment Commission (ASIC) has issued a FinTech waiver to any FinTech firm willing to test products for a limited time following certain principles, parameters and conditions. ASIC, web site, <http://asic.gov.au/for-business/your-business/innovation-hub/licensing-and-regulation/licensing-exemption-for-fintech-testing> (accessed November 2, 2017).



- **Authorization for rolling out an innovation.** The most common outcomes from existing regulatory sandboxes have been for an unregulated innovator to obtain authorization to enter a regulated market, and for a currently regulated institution to receive authorization to roll out the product or service tested in the sandbox. The authorization can be full (e.g., an authorization to operate as a full-fledged bank, or an authorization to roll-out the product without any limiting condition) or tailored (e.g., an authorization to operate as a limited-purpose bank with a narrow range of permissible activities, or an authorization to roll out the product subject to certain limitations).
- **Individual or general (class) waivers.** Waivers that were provided to individual innovators prior to launching their pilots in the sandbox can be extended or terminated when the pilots are over. Based on the results from one or more pilots, the authority can also issue general (or class) waivers from certain regulatory requirements that would benefit a whole segment of the unregulated and/or regulated market (e.g., a waiver for FinTech firms, a waiver from a payment transaction authentication requirement, etc.)
- **Regulatory or supervisory reforms.** The authority may decide, based on the results of the sandbox, that a regulatory change is in order, for example to permit or to lower obstacles for certain innovations. Supervisory practices that could have been impeding certain innovations may also be changed.
- **Regulatory guidance.** The authority may decide that it is necessary to issue additional guidance clarifying how certain regulatory requirements apply to certain innovations. Guidance can be issued to a specific innovator or to all regulated institutions.

Taking general actions (i.e., actions that could benefit institutions beyond sandbox participants) could be as important as taking action in relation to individual sandbox participants when they exit the sandbox. The purpose is to avoid creating unlevel competition (or the perception of unfairness) by extending privileges such as waivers and regulatory guidance to individual innovators. The learnings from the sandbox should lead to a consistent approach to innovation that benefits any potential market participant, including improvements to the overall regulatory framework.

## Running a Regulatory Sandbox

A regulatory sandbox can be a resource-intensive initiative requiring human, logical and financial resources, without which it could fail to achieve its stated objectives. Some sandboxes will require a formal and dedicated unit within the authority’s organizational structure, while others will not.<sup>19</sup> The required resources will vary according to the sandbox’ operating model and could be used in a range of activities, as described in Box 3.

### Box 3. Examples of activities involved in running a regulatory sandbox

#### Setting up the sandbox

Conducting research on sandbox practices, operating models and the regulatory instruments available to and used by financial authorities; drafting the objectives, governing rules and operational procedures of the sandbox; coordinating and undertaking internal and external consultations; preparing and coordinating internal and external communication materials and efforts; conducting research on innovations, etc.

#### Running the sandbox

<sup>19</sup> In theory, a regulatory sandbox could also be a licensed and supervised non-profit entity set-up by innovators and other market participants as a “sandbox umbrella”, as proposed for example by UK FCA in Financial Conduct Authority, “Regulatory Sandbox,” (London: FCA, November, 2015), <https://www.fca.org.uk/publication/research/regulatory-sandbox.pdf>.

Advertising and managing application processes; screening and coordinating the analysis of applications; coordinating and conducting meetings with the applicants; communicating the decision on each application; receiving, analyzing and giving feedback on monitoring reports of ongoing pilots; proposing and consulting on post-pilot measures for individual innovators.

#### Other tasks

Other activities may be necessary to enhance the results of the regulatory sandbox, such as proposing and pushing for regulatory reforms, coordinating decisions on participants and post-pilot actions with other authorities, organizing and participating in industry events to discuss innovations, and preparing, consulting on and communicating progress reports on the regulatory sandbox.<sup>20</sup>

A sandbox that receives applications on a rolling basis can be more difficult to manage, so the authority may want to limit applications to one or a few time-windows per year. This could reduce the burden on the authority, allowing them to manage cohorts of applications and the pilots. Another way to reduce the burden of running a sandbox is to temporarily or permanently focus on innovations that tackle a limited set of specific issues, such as RegTech for regulatory reporting or innovations to expand financial inclusion.

Most regulatory sandboxes are led by one authority, but joint initiatives, where a regulatory sandbox is created and managed by more than one authority, are possible. Joint efforts could facilitate innovations that blur the boundaries between different sectors, such as by bundling or linking insurance, credit, savings, and payments services. However, a joint effort could be more burdensome due to the inter-agency coordination required.

## Potential Benefits and Risks of Regulatory Sandboxes

The experience with regulatory sandboxes by financial authorities is still limited and there is not yet enough evidence of their positive impact in encouraging innovation. The UK FCA, for instance, reports that “it is too early to draw robust conclusions on the sandbox overall impact (...) [but] testing indicates that the sandbox is making progress towards promoting competition in the market.”<sup>21</sup>

There could be a range of benefits from a regulatory sandbox, but there could also be risks, which need to be taken into consideration and addressed by authorities considering creating a sandbox, or already designing or operating one. Some potential benefits and risks are described in Box 4.<sup>22</sup>

### Box 4. Potential benefits and risks of regulatory sandboxes

Potential benefits	Potential risks
<ul style="list-style-type: none"> <li>Lowering entry barriers for nonbanks such as FinTech to spur competition with currently regulated institutions</li> </ul>	<ul style="list-style-type: none"> <li>Jeopardizing regulatory, supervisory or even administrative priorities by diverting scarce resources and attention, including reforms that are known to be needed to enable innovation</li> </ul>

<sup>20</sup> See Financial Conduct Authority, “Regulatory Sandbox Lessons Learned Report,” (London: FCA, 2017).

<sup>21</sup> Ibid, 4.

<sup>22</sup> Zetzsche et al, “Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation,” 38-41 describes the upsides and downsides of regulatory sandboxes and other regulatory approaches to innovation. Jenik and Lauer, “Regulatory Sandboxes and Financial Inclusion,” 4-6, also provides a discussion of benefits and risks of sandboxes, and specific considerations on financial inclusion.

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| <ul style="list-style-type: none"> <li>• Facilitating and increasing the quality of regulatory reforms that can enable innovation (e.g., pinpoint regulatory barriers and related solutions through the pilots)</li> <li>• Increasing transparency about the authority's positioning with regard to innovators and innovations</li> <li>• Passing a strong message to the general public and the industry about the authority's support to innovation</li> <li>• Increasing legal certainty for innovators, including currently regulated institutions, which could spur further innovation</li> <li>• Reducing innovators' costs with legal advice to interpret regulations</li> <li>• Reducing the length of authorization/licensing procedures</li> <li>• Allowing the authority to learn and understand innovations and their risks in greater depth and in a timely manner, which could increase supervisory effectiveness</li> <li>• Increasing innovator's access to, or improving terms of, external funding</li> <li>• Creating a practice of open, active and continuous dialogue and engagement between authorities and industry players</li> </ul> | <ul style="list-style-type: none"> <li>• Failing to set up and enforce effective safeguards for customers and market participants that could be negatively impacted by the pilot</li> <li>• Undermining competition by steering innovation, creating the perception that the sandbox is the only entry door for innovation, and by benefiting (e.g., via waivers) only a limited group of innovators</li> <li>• Failing to address obstacles that cross the boundaries between different sectors</li> <li>• Not creating a fully enabling environment for innovation in the absence of the right mindset and openness to innovation and regulatory change</li> <li>• Not addressing obstacles that are not rooted in the regulatory or supervisory framework</li> <li>• Failing to secure adequate resources for the regulatory sandbox</li> <li>• Incurring unforeseen costs and legal liability due to negative impact of the pilots</li> <li>• Creating the perception that after successful pilots under the sandbox, innovations are risk-free and guaranteed by the authority</li> <li>• Hurting the authority's reputation due to the materialization of the risks cited above</li> </ul> |
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## Conclusion

Many financial authorities have set up regulatory sandboxes and others are likely to follow. There is limited evidence so far on the effectiveness of regulatory sandboxes in promoting innovation, and they might not be necessary or even possible in every context. In fact, some authorities may be able to use special regulatory instruments such as waivers and no enforcement action letters without setting up a regulatory sandbox. However, regulatory sandboxes offer many potential benefits, importantly including improving the dialogue between the authorities and innovators.

The usefulness, operating model and risks of regulatory sandboxes will vary across countries, depending on numerous factors such as whether the regulatory framework is overly prescriptive, whether the authority has legal discretion to waive or customize regulatory requirements, and whether there are resources available to run the sandbox. Authorities should determine the best approach for their particular context, and should work-out the details of their regulatory sandboxes early in the design process, especially including how to mitigate potential risks.

Regulatory sandboxes are more likely to contribute to enduring results if they are part of a broader, more comprehensive package of initiatives to spur innovation and address underlying weaknesses that block beneficial innovation. Comprehensive packages can include:

- A proactive and ongoing effort to improve the regulatory framework (e.g., creation of special charters,<sup>23</sup> open banking,<sup>24</sup> and smaller adjustments<sup>25</sup>).
- A proactive effort to periodically review and improve regular licensing and product authorization processes and requirements in light of market developments and regulatory or supervisory strategies.
- Policy or supervisory measures designed to increase competition and spur innovation generally.<sup>26</sup>
- Routine conduct of regulatory impact assessments (i.e., comprehensive and systematic appraisals of the positive and negative effects of proposed or existing regulations).<sup>27</sup>
- Innovation hubs (i.e., one-stop-shops at financial authorities dedicated to researching and sharing knowledge on innovation, and providing information to innovators).<sup>28</sup>
- Support to FinTech accelerators, incubators, and competitive events.<sup>29</sup>
- Proactively improving information sharing and coordination with non-financial authorities to deal with issues outside the financial sector that impact financial innovation such as deficient public infrastructure (e.g., unreliable telecommunications services and lack of a national ID system), which are particularly important in EMDEs.

Thus, regulatory sandboxes should not be viewed as a panacea, and should be considered in the context of a range of steps the authorities can take to promote competition and enable and encourage innovation. This Note has sought to provide financial authorities an orientation to current developments regarding a regulatory sandboxes and related initiatives worldwide, and to highlight the key potential benefits and risks associated with them.

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<sup>23</sup> Special charters are regulatory spaces created specifically to allow entry of nonbanks into a regulated market. Examples are FinTech charters, limited/payment bank licenses, and nonbank e-money issuer licenses.

<sup>24</sup> “Open banking” refers to requirements for banks to allow third parties such as FinTech firms to offer services to bank customers using Application Programming Interfaces to access the bank customer information held at the bank. See for example the Payment System Directive 2 in Europe (Directive (EU) 2015/2366) which imposes such a requirement on all payment account providers (including banks).

<sup>25</sup> Small adjustments to regulation – rather than major reforms such as the creation of special charters – can have a positive impact on innovation. An example would be tweaking transaction authentication requirement to allow a range of technologies to be used.

<sup>26</sup> An example is the package of initiatives implemented by Mexico’s pensions regulator, CONSAR, to increase competition and improve customer service through the adoption of technology, which included requiring digitalization of operational procedures by pension administrators, publicizing a service quality ranking of pension administrators and launching an open mobile application (“Afore Móvil”) to allow remote pension account opening and deposits (the mobile application is described here: <https://www.gob.mx/aforemovil>).

<sup>27</sup> Organisation for Economic Cooperation and Development, web site, <http://www.oecd.org/gov/regulatory-policy/ria.htm>. (Accessed November 2, 2017).

<sup>28</sup> See a description and examples of innovation hubs in Zetzsche et al, “Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation,” 8-11.

<sup>29</sup> There are no standard definitions for these terms and they are sometimes used interchangeably. In general, an accelerator provides opportunities for FinTech firms to access seed funding, while in an incubator FinTech firms have access to management support. Competitive events such as innovation challenges offer prizes or other rewards to innovators that present the best solution to a particular problem.

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## Additional Readings

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