

FinTech Policy Development Determining Appropriate Policy Mechanism for Trinidad and Tobago

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Several countries have adopted varied mechanisms that support financial innovation (“innovation facilitators”). These include “(FinTech) innovation hubs,” “(FinTech) incubators,” “(FinTech) accelerators,” and “industry sandboxes.” The ability to innovate requires a diversity of skills and the search for the light bulb mindset, not to mention time and space in which ideas can be explored and possibilities unlocked. A regulatory sandbox is a framework set up by a regulator that allows FinTech start-ups and other innovators to conduct live experiments in a controlled environment under a regulator’s supervision. Regulatory sandboxes are gaining popularity, mostly in developed financial markets. With a few exceptions, the countries with regulatory sandboxes designed them to accommodate or even spur FinTech innovations.

Regulatory sandboxes are too new to be fully understood and evaluated. In the absence of hard, long-term data on successful testing, their risks and benefits are speculative, but they deserve further attention.

This paper looks at regulatory sandboxes to stimulate financial innovation in underdeveloped capital markets in small developing economies such as Trinidad and Tobago. A detailed review of a regulatory sand box is undertaken, analysing potential benefits and risks. The study looks specifically at the sandbox, the purposes it serves, its design features relevant to Trinidad and Tobago and those who can benefit from its existence. The paper will also outline the key issues that policy makers who are considering establishing a regulatory sandbox should be aware of. In this regard it attempts to fill the gap in the literature for which there is a paucity of information on appropriate regulations governing a variety of new FinTech products coming to the Caribbean and Trinidad and Tobago in particular.

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1. Introduction

Over the last decade the traditional financial methods in the delivery of financial services³ have experienced new forms of competition from Financial Technology (FinTech or fintech) which is the new technology and innovation in the market space. Such financial services are the economic services provided by the finance industry, which encompasses a broad range of businesses that manage money, including credit unions, banks, credit-card companies, insurance companies, accountancy companies, consumer-finance companies, stock brokerages, investment funds, individual managers and some government-sponsored enterprises. Schüffel (2016)⁴ on the other hand considers FinTech as a new industry that uses technology to improve activities in finance. A review of the literature suggest there appears to be some consensus in accepting Schüffel's (2016) definition that "fintech is a new financial industry that applies technology to improve financial activities."

Sanicola (2017)⁵ spells out examples of technologies aiming to make financial services more accessible to the general public to include smartphones for mobile banking, investing services and cryptocurrency. The latter has proven to be a difficult for regulators to treat with. Both the monetary authorities as well as security regulators have approached cryptocurrencies with caution. Indeed, providing warnings in many jurisdictions. This has also been the case in Trinidad and Tobago.

An important consideration and context to place FinTech is the Fourth Industrial Revolution. This phenomenon is characterized by an array of new technologies that are fusing the physical, digital and biological worlds, impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human.

The fourth Industrial revolution is expected to hasten the movement in the focus of finance from service providers to consumers. The movement is demonstrated as a new industrial landscape coming out of artificial intelligence, blockchain, open platforms and

³ "Infinite Financial Intermediation", 50 Wake Forest Law Review 643 (2015).

⁴ Schüffel, Patrick (2016). Taming the Beast: A Scientific Definition of FinTech. Journal of Innovation Management. p. 32-54

⁵ Sanicola, Lenny (13 February 2017). "What is FinTech?". Huffington Post. Retrieved 20 August 2017.

other fintech innovation, each of which will make available to financial consumers convenient financial services at lower costs. Beyond fintech innovation, its convergence of finance, culture, healthcare, education, and other industries is expected to bring about substantial improvements in consumer benefits.

Focusing on the financial industry and the impact the fourth industrial revolution has had, Fintech has led innovation in every corner of the financial industry, payment and settlement, asset management, retail lending, among the main areas. The Fintech innovation seeks to provide low-cost financial services to anyone regardless of wealth.

From hedge funds to personal loan providers, financial technology (FinTech) firms are bringing to market new solutions to increase efficiency and inclusiveness in banking and financial services. The potential of FinTech is even greater in emerging markets. The many people around the world without access to traditional financial services FinTech could be an important medium to financial inclusiveness and membership in the global digital economy.

Regulators are hopeful, but also aware that regulatory barriers can significantly slow down or prevent FinTech innovation.

Herrera and Vadillo (2018)⁶ pointed out that the FinTech industry throughout the Latin American and Caribbean region has more than 700 platforms that currently offer financial solutions based on new technologies. They also point out that alternative finance is the leading activity in the region, with 25.6 percent of the total platforms dedicated to this sector and 25.2 percent to payments, followed by business finance management (13.2 percent). In the region the mission of more than 40 percent of monitored ventures in the region is to serve clients who are excluded or underserved by the traditional financial services sector.

In Trinidad and Tobago, the Trinidad and Tobago Securities and Exchange Commission (TTSEC) has received several expressions of interest to launch Fintech type products within the local securities market; the first of which was an application to operate an Alternative Trading System (“ATS”). After careful review of the application, the Board of Commissioners mandated that Guidelines/By-Laws be developed to regulate ATSS before the application for operation could be granted. The Securities Act, 2012 provides the legislative framework for the regulation of ATSS.

⁶ Herrera, Diego and Sonia Vadillo(2018). Regulatory Sandboxes in Latin America and the Caribbean for the FinTech Ecosystem and the Financial System. Inter-American Development Bank.

An application was also received the request to launch an equity crowdfunding platform. In addition, the TTSEC has noted an increased interest in issuance of “cryptoassets” as well as investment in these type of products within the local securities market. The attempt by Bartercoin to launch its Initial Coin Offering (“ICO”) in the local securities market was observed through the TTSEC’s surveillance activities. The TTSEC subsequently issued a public statement advising of the risks associated with investing in ICOs. Further to this, a general expression of interest/query was received from a Canadian entity to launch an ICO.

The challenge facing the TTSEC is to encourage innovation while at the same time developing an understanding of rapidly changing innovative platforms. Developing the skill sets, putting the infrastructure and equally important, developing legislative changes are all critical for the development of a framework to address FinTech innovations. One such framework is a regulatory sandbox. This study looks at this framework to provide the TTSEC with an option to offer innovative companies that approaches it with the possibility of operating in a controlled environment, for a limited time (time-bound exceptions), with restricted number of clients, under conditions that is determined by the TTSEC and with less stringent requirements. The firms get a relatively attractive and inexpensive option to test innovative products using sandbox tools⁷, services as well as business models in a live environment. This provider securities’ industry regulators such as the TTSEC with the space to learn how these innovations function and what is needed to regulate areas not covered by rules and/or legislation and what modifications are needed to these to ensure that the benefits of innovation are not diminished.

To explore the sandbox framework this paper is divided into the following sections. The second section looks at how the concept of the sandbox is defined and its role as a policy tool. The third section examines the manner in which sandboxes have been used in various jurisdictions. This is followed by an attempt to assess regulatory sandboxes paying attention to their potential benefits and risks. The fifth section is broken down into multiple parts that details the development and implementation of a sandbox. The last section summarises the paper and concludes.

⁷ These include restricted authorisation, rule waivers, individual guidance and no enforcement letters.

2. Sandbox Defining the Concept – A Policy Tool

For the last two years, the main policy tool used to support the development of the FinTech sector has been the creation of regulatory “sandboxes.” The TORONTOCENTRE (2017)⁸ argued that there is no standard definition of what a regulatory sandbox is. Ivo Jenik and Kate Lauer (2017)⁹ have attempted a definition of a regulatory sandbox as a framework set up by a financial sector regulator to allow small scale, live testing of innovations by private firms in a controlled environment (operating under a special exemption, allowance, or other limited, time-bound exception) under the regulator’s supervision.

The Financial Conduct Authority (FCA) (2017)¹⁰ along a similar vein defined a regulatory sandbox (“sandbox”), as, allowing firms to test innovative products, services and business models in a live market environment, while ensuring that appropriate safeguards are in place.

A sandbox is a concept, which was developed in a time of rapid technological innovation in financial markets. It is an attempt to address the frictions between regulators’ desire to encourage and enable innovation. This process allows innovators to test their products and understand what regulatory boundaries may eventually apply once they have “graduated” from the sandbox. At the same time, it gives the regulator time to learn before making a decision on how to regulate new products and services, without immediately imposing the usual regulatory costs and approval procedures.

Herrera and Vadillo (2018) saw the creation of regulatory sandboxes, as a tool to mitigate uncertainty in a controlled environment in which companies can test their services under a regulator’s supervision, with two purposes: (i) establish a more direct dialogue between the FinTech industry as a whole and regulators in particular, to better understand the nature of the businesses; and (ii) allow for a smoother transition for FinTech platforms and ventures and their controlling entities, toward oversight based on actual industry activities.

As a word of caution Herrera and Vadillo (2018) pointed out that it is important to clarify that regulatory sandboxes are not a solution, rather it should be considered as a part of a set of policies and measures that enable prudential development of FinTech. Such packages

⁸ Toronto Centre (2017). Regulatory Sandboxes. TorontoCentre.

⁹ Jenik, Ivo and Kate Lauer (2017). Regulatory Sandboxes and Financial Inclusion, CGAP.

¹⁰ FCA (Financial Conduct Authority). 2017. “Regulatory Sandbox Lessons Learned Report.”

must be tailored to the sector's business model and risks, which tend to be different from those of traditional financial institutions.

Ivo Jenik and Kate Lauer (2017) stated that regulatory sandboxes are not the only option available to countries. There are several countries that have adopted other mechanisms that support financial innovation ("innovation facilitators"). These include "(FinTech) innovation hubs," "(FinTech) incubators," "(FinTech) accelerators," and "industry sandboxes." Innovation facilitators are part of a broader ecosystem for innovation and may complement a sandbox simply due to the landscaping potential to contribute to broader FinTech policy development.

3. Sandboxes Use in Various Jurisdictions

Sandboxes have been put to varied uses by a number of countries. In Table 1 examples of different options and the countries they were associate with are spelt out. The regulatory sandbox approach was pioneered in the UK in 2015 for the first time with the express purpose of speeding up the FinTech product development and launch cycle. Since then, nearly a dozen other countries, including Australia, Singapore, and the United Arab Emirates, have followed. Sandboxes are at an early stage of development in other countries, including Brazil, India, and Kenya.

Though it is too soon to tell what impact the sandboxes will have on the broader trajectory of financial innovation (most of these companies are still in an early stage of product testing), the first lessons are coming through. In many countries, impact so far appears limited. Singapore currently has just one recruit in its sandbox, while Canada and Australia (which is considering a redesign) have just two reported recruits. In May 2017, both Malaysia and Thailand admitted four companies to their sandboxes, while the United Arab Emirates accepted five. The UK sandbox, however, has gained the most traction. The Financial Conduct Authority (FCA) received 146 applications and admitted 41 to the testing phase. This may be partially due to the UK's advantageous environment for FinTech, which includes additional regulatory measures that promote FinTech innovation alongside the sandbox, such as tax policy to support business creation (e.g., tax deductions for investors in

seed-stage start-ups), training and assistance to start-ups, conducive business regulation, and strong protection of property rights.

Table 1. Examples of Regulatory Sandboxes

	Options	Illustrative Examples	Comments
<i>Objective(s)</i>	Innovation	Abu Dhabi, Hong Kong, Malaysia, Netherlands, UK	A legislative change may be needed when (i) the envisioned objectives do not fall under the current mandate or (ii) the regulator does not have the powers necessary to set up a sandbox.
	Competition	Abu Dhabi, Bahrain, Indonesia, Thailand, UK	
	Consumer benefits	Bahrain, Netherlands, Singapore, Thailand, UK	
	Financial inclusion	Bahrain, India, Malaysia, Sierra Leone	
<i>Eligibility</i>	Regulated and aspiring financial services providers	Australia, Canada, Netherlands, Singapore, Switzerland, Thailand	The eligibility criteria may be dictated by the regulator’s mandate and actual legal and regulatory framework (e.g., a regulator may not be allowed to let third-party providers into a sandbox unless partnered with authorized firms— Hong Kong).
	All innovators	Abu Dhabi, Brunei, Malaysia, US (Catalyst)	
	All products/activities (within the regulator’s remit)	Canada, Hong Kong, Singapore, Thailand, UK	
	Defined products/activities	Australia, India, Thailand, Republic of Korea	
<i>Safeguards</i>	Minimum capital	UK	A regulatory sandbox should not promote regulatory arbitrage, generate unacceptable risks, or become a vehicle for forbearance. Therefore, some regulatory requirements, such as basic AML/CFT and consumer protection requirements, should not be waived even for limited testing.
	Fit and Proper	Netherlands	
	AML/CFT	Abu Dhabi, Australia, Canada, Hong Kong, Netherlands	
	Consumer protection	Australia, Brunei, Hong Kong, Malaysia, Thailand, UK	
	Quantitative limits (max. no. of customers; max. assets under management)	Australia, Bahrain, Brunei, Malaysia	
	Reporting requirements	Australia, Brunei, Malaysia, Thailand, UK	
<i>Timing</i>	Cohorts	Bahrain, Kenya, Abu Dhabi (UAE), UK	Either option comes with benefits and downsides. The actual configuration should be primarily determined by the overall objectives and the regulator’s capacity.
	Rolling	Australia, Canada, Malaysia, Mexico, Netherlands	

Source: Ivo Jenik, and Kate Lauer (2017). Regulatory Sandboxes and Financial Inclusion, CGAP

4. Assessing Regulatory Sandboxes

The Toronto Centre (2017)¹¹ noted that up to November last year 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. Indeed a similar tone has also been expressed by the UK Financial Conduct Authority (FCA)¹², where it states 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.”

There are a number of benefits that can be identified which can apriori be derived from the use of Sandboxes. However, understanding the risks that exists is also necessary. These must be considered when thinking about the use of a sandbox and addressed when designing a sandbox. In the Table II below a number of the possible benefits and risks of regulatory sandboxes are spelt out.

The potential benefits spelt out in Table II represent an important gain that can possible be derived from its use, including reduced costs, knowledge acquisition by both innovators as well as the regulators. It is important to note that a number of the potential risks laid out in Table II can be mitigated by proper design components, restrictions and safeguards.

Armstrong (2017)¹³ has pointed out that the disruption of traditional models or contracts poses major challenges to regulators and market participants alike. The challenge is determining when the regulator’s intervention is needed, that is, identifying the critical point at which something ceases to be “too small to matter” and becomes “too large to ignore”.

¹¹ Toronto Centre (2017). Regulatory Sandboxes. TorontoCentre.

¹² Financial Conduct Authority, “Regulatory Sandbox Lessons Learned Report,” (London: FCA, 2017). London: FCA.

¹³ Armstrong, P. (2017). Financial Technology: Applications within the Securities Sector. Oslo Børs ASA: Stock exchange and Securities Conference 18 January 2017. Available at: https://www.esma.europa.eu/sites/default/files/library/esma71844457584-330_speech_FinTech_and_asset_management_by_patrick_armstrong.pdf.

Table II: Potential Benefits and Risks of Regulatory Sandboxes

Potential Benefits	Potential Risks
Lowering entry barriers for nonbanks such as FinTech to spur competition with currently regulated institutions	Jeopardizing regulatory, supervisory or even administrative priorities by diverting scarce resources and attention, including reforms that are known to be needed to enable innovation
Facilitating and increasing the quality of regulatory reforms that can enable innovation (e.g., pinpoint regulatory barriers and related solutions through the pilots)	Failing to set up and enforce effective safeguards for customers and market participants that could be negatively impacted by the pilot
Increasing transparency about the authority's positioning with regard to innovators and innovations	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
Passing a strong message to the general public and the industry about the authority's support to innovation	Failing to address obstacles that cross the boundaries between different sectors
Increasing legal certainty for innovators, including currently regulated institutions, which could spur further innovation	Not creating a fully enabling environment for innovation in the absence of the right mind-set and openness to innovation and regulatory change
Reducing innovators' costs with legal advice to interpret regulations	Not addressing obstacles that are not rooted in the regulatory or supervisory framework
Reducing the length of authorization/licensing procedures	Failing to secure adequate resources for the regulatory sandbox
Allowing the authority to learn and understand innovations and their risks in greater depth and in a timely manner, which could increase supervisory effectiveness	Incurring unforeseen costs and legal liability due to negative impact of the pilots
Increasing innovator's access to, or improving terms of, external funding	Creating the perception that after successful pilots under the sandbox, innovations are risk-free and guaranteed by the authority
Creating a practice of open, active and continuous dialogue and engagement between authorities and industry players	Hurting the authority's reputation due to the materialization of the risks cited above

5. Developing and Implementing a Regulatory Sandbox

A. The Design Components of a Regulatory Sandbox.

When contemplating the establishment of a regulatory sandbox and a review of the literature is undertaken there appears to be an evolution of the concept of regulatory sandboxes as well as their implementation and there are distinct models emerging. However, Ivo Jenik, and Kate Lauer (2017) noted that globally many regulatory sandboxes follow the FCA's blueprint. The following are the design components: spelling out the objectives of the sandbox; eligibility to apply to the sandbox; criteria (specified in the application) regarding risks, safeguards, and other restrictions; timing for applicants and sandbox entities tests; costs to the regulator and the sandbox entities; regulator's actions following sandbox test(s).

A key objective of any regulatory sandbox is determined by the regulator's mandate and are typically set forth in the founding document. A common objective of a regulatory sandbox is to promote competition and efficiencies through innovation. However, the role of regulatory sandboxes in promoting innovation may be limited in instances where a regulatory reform is considered a more appropriate means to handle new entrants and technologies.

Regulatory sandboxes have been criticised for being a process used to answer the question should an innovation or innovator be permitted to launch instead of solving the broad underlying problems presented by regulatory approaches (Mueller 2017¹⁴). Philippon (2017¹⁵) argues that for FinTech to disrupt the financial system for the better, substantial regulatory reform is needed. Zetzsche et al. (2017¹⁶) stated that too many applications for a regulatory sandbox indicate a deficiency in rules. In this regard paying attention to proper design and the reason for setting up the sandbox is critical to counter the view that reason for the establishment of the sandbox is misplaced.

The eligibility of those wishing to enter the sandbox is based on the authority and the legal framework. Only those institutions that may fall under the authority of the regulator(s) and that are not under exclusive authority of another regulator can apply to the sandbox. Some sandboxes permit only incumbents, others permit only start-ups, and a few permits both. Only products or services, whose innovative nature deserves a special attention instead of regulatory approval or rejection may enter the sandbox.

There are a number of restrictions that are applied to sandbox entities, such as maximum number of customers served, this is detailed further in this study. In addition, entities may be mandated to put in place safeguards that reflect the risks and benefits of the proposed innovation, including strengthened disclosure and a compensation fund, to limit potential impact of test failure on market participants. Sandbox entities would also be expected to meet the terms of mandatory rules because regulators cannot waive criteria established by law.

Applicants hoping to enter a sandbox must prove to the regulator that they are in a position to test the innovation. This should form part of the entry criteria that is spelt out later in the study. In addition the testing has to have a specified period of existence in order

¹⁴ Mueller, J. (2017). "FinTech Considerations on How to Enable a 21st Century Financial Services Ecosystem". Washington, D.C Milken Institute.

¹⁵ Philippon, T. 2017. "The FinTech Opportunity," Basel, Switzerland: Bank for International Settlement.

¹⁶ Zetzsche, D., et al. (2017). *Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation.* Frankfurt am Main: European Banking Institute.

to ensure that there is no undue probing of innovations that may be either underdeveloped or not viable. This idea is further developed as part of the standard operating procedures of a sandbox.

A review of the operations of sandboxes in jurisdictions around the world suggest that generally they offer a sandbox free of any charge. However, there are costs involved in running tests such as an example Penetration Tests (this is dealt with further in the study). The regulator may also face costs associated with the sandbox such as the hiring of new staff with the needed skills to operationalise the sandbox.

There may be several possible outcomes that follow a sandbox test. The most obvious is a successful testing phase that leads to full-fledged or tailored authorisation of the innovator and or innovation. There are instances when a regulator may decide to allow a sandbox firm to continue to operate outside the regulatory perimeter if further observations are required or other specified reasons provided. In the case of tests failure, then this will require the sandbox firm to cease running the innovation.

Perhaps one of the key issues that must be addressed in establishing a sandbox is the legal requirements to create one. A preliminary analysis identifies certain critical issues which are represented in the following questions.

1. Which regulatory barriers do companies seeking to test new ideas encounter and how can they be lowered?
2. Which is the legal framework for new activities and which powers do regulators have to adjust it to meet the needs of innovative entities?
3. What protective measures should be implemented?
4. What are the objectives of the sandbox?

The last question will be addressed when looking at the design components. The answers to the questions outlined above require care to be exercised answering since this is a new area and attempting to operationalise maximum legal certainty has been advised by Herrera and Vadillo (2018)

B. Entry Criteria

When giving consideration to the acceptance of participating companies into a sandbox it has to be based on criteria including objectivity and transparency. In the case of the TTSEC entities that are not regulated, as well as those that are regulated but have intention to make

available products or services not yet part of their present authorisation to operate, are free to participate. Both regulated and unregulated entities must prove the following to the regulator as part of an entry criteria.

- a) The first criteria is that the business model or project put forward by a firm should be novel and needs to be tested. Depending on the defined purpose the regulator assigns to the sandbox, this means that:
 - 1. The product or service offered does not previously exist or is not licensed.
 - 2. The platform creates a new channel for offering financial services.
 - 3. It relies on the use of a financial technology or innovation not previously tested in the jurisdiction.
 - 4. Anything else that the regulator considers to be innovation.
 - 5. The large scale commercialisation can benefit consumers.

- b. The product or service to be tested should be at that stage where it is ready to operate in trial mode and the candidate platform should have sufficient capacity to offer it.

- c. The platform should be able to establish that the proposed product or service can favour the production, shipment, capture, or generation of value for the financial consumer.

C. TTSEC Capacity Requirements

The application of a sandbox requires adequate institutional support. The oversight and supervision of a sandbox needs specify organisational, technical, human and technological capabilities that must be assessed prior to the establishment of a sandbox.

As is the case with the TTSEC where regulatory powers are strictly defined and it is not possible to take on new responsibilities such as will be required to implement a sandbox. Minor amendments are needed to permit regulatory powers and resources to be assigned to oversight of the activities of a sandbox.

Once the legal huddles can be addressed then the next step is identifying the technical and human resource requirements. Herrera and Vadillo (2018) points out that FinTech companies have operational meticulousness that make conventional monitoring models unsuitable for businesses operating in a decentralized manner on a technology platform. The auditing of the FinTech sector necessitates explicit skills and technical and human resources

combined into multidisciplinary teams, with specialists in areas such as cybersecurity, big data, or artificial intelligence, capable of dealing with emerging risks.

Admittedly small security regulators such as the TTSEC at this time and based on the type of sandbox and the specifications may not have all the needed resources to implement sandboxes. In this regard there are options which governments can pursue including international assistance and adoption of training policies. The use of agencies such as the Inter-American Development Bank (IDB) can assist with technical expertise and this can assist countries that are experiencing skill deficiencies in key areas.

Ernst and Young (2016)¹⁷ noted that a robust FinTech ecosystem is based on four basic features: talent, capital, government policy, and demand. In more developed markets, such as Singapore, the United Kingdom, and the United States, schools and universities are promoting educational programs aimed at engineers, developers, and technicians, with the goal of training qualified personnel and attracting professional talent. Certainly, the centres of higher education have to cater for emerging specialised needs. However, in the interim training of personnel has to be targeted and funded to attract the needed skills in Caribbean countries such as Trinidad and Tobago.

D. Standard Procedures for Running a Sandbox

Herrera and Vadillo (2018) suggested that operating a sandbox should have certain standard operating procedures. These are spelt out below.

- a. Given the region's characteristics, an initial duration of six months is recommended which may be extended for another six months, if required, by the regulator. This is due to the monitoring costs involved and the fact that it is a trial period.
- b. Determining the number of clients that should be allowed to participate will depend on the size of the country's economy, but the sample should be statistically significant and verifiable. A sufficiently diverse group should be selected, with no potential conflicts of interest or links to the platform's shareholders or legal representatives.
- c. The platform should notify its clients in advance of operationalization of the sandbox of the risks that could arise and the proposed mechanisms for hedging or indemnification. The clients should be expected to indicate (e.g., through an electronically signed document) their consent and acceptance of the sandbox's conditions.

¹⁷ Ernst & Young 2016. UK FinTech: On the Cutting Edge. London. Available at: <http://www.ey.com/Publication/vwLUAssets/EY-UK-FinTech-On-the-cutting-edge/%24FILE/EY-UK-FinTech-On-the-cutting-edge.pdf>.

d. It is important to define the content of the information to be reported by the platform and the frequency that this information has to be transmitted to the regulator prior to the establishment of the sandbox. Examples of the information that should be reported should include transactional data, compliance milestones, number and types of customers, identified risks, and mitigation measures. It should be understood from the very start of the operation of the sandbox that should an extraordinary risks arise, the platform should communicate this as well as corrective measure contemplated immediately.

E. Regulators Safeguards

To mitigate the risks associated with the introduction of sandboxes and prevent direct customer impact, the regulator should require different protection mechanisms such as:

- (i) Limit the testing activities to customers who have given their informed consent; this is also dealt with under the standard operating procedures recommended for the operation of sandboxes.
- (ii) require entities to have sufficient resources to compensate for any losses;
- (iii) guarantee the same rights as those enjoyed by customers of authorized and supervised entities; and
- (iv) agree on transparency, protection, and compensation measures on a case-by-case basis, the latter being the FCA's preferred option.
- (v) In the rule regulating the sandbox, it has to be explicit from the start that the participating platforms are not monitored or inspected by the supervisor and therefore, there is no administrative responsibility of the authority or its officers, derived from the risks that materialize in the sandbox.
- (vi) In a sandbox the regulator has no formal powers of inspection or oversight. This does not mean that the platforms can operate unchecked. They are required to respond to requests for on-site and off-site information from the regulator. One means to guarantee that the experiment runs smoothly is the use of Penetration Tests. These are known measures for systems testing. The measure permits the regulator to conclude if the platform is vulnerable to any kind of attack or if there are design and management flaws in it. It is best from the outset, to clearly institute with the platforms that this form of testing is to be conducted.

F. Platform Requirements

Ivo Jenik, and Kate Lauer (2017) suggested that candidate platforms/firms should confirm that they have adequate technical and financial capacity and a structured business plan. Prior to commencement of the operation of a sandbox, an application for admission has to be submitted with the following requirements:

a. Legal documentation

1. Certification of the platform's existence and its representatives. Depending on the legal system of each jurisdiction, the company type may vary.
2. Description of the company's corporate purpose, with details of the activities it will carry out.
3. Company address identified.

b. Business plan

- i. An explanation of the problem solved by the service or product offered.
- ii. This document should specify the target market: geographic location, number of clients, and maximum amounts per transaction, among others. Depending on the nature of the regulation, a distinction could be made between qualified and unqualified investors.
- iii. Business model breakdown.
- iv. Risk analysis and management policies, particularly those related to cybersecurity.
- v. Process for entry into production for the general public.

c. Damage protection:

The platform should set out the anticipated remedies for possible damage to customers during the trial period. To this effect, a relatively efficient solution could be to obtain civil and administrative liability insurance.

d. Close out and exit procedure (An exit strategy): The platform should be able to bring its activities to an end if requested by the regulator, ensuring that customers are unaffected. However, they shall not be entitled to compensation for damages other than those for which the platform is responsible.

G. The Need for More than Regulatory Sandboxes

In most emerging markets, regulatory sandboxes alone will not generate the desired innovation in financial services; FinTech firms and investors consider much more than the availability of a regulatory sandbox when evaluating market and investment opportunities. Therefore, developing market economies like those of the Caribbean need to take a holistic approach to creating business environments that truly enable FinTech innovation and address the many challenges that can prove fatal to the growth of FinTech firms. To promote the FinTech sector as part of government innovation policies and to make adequate resources available for its implementation through measures such as:

1. Granting tax incentives to companies and investors.
2. Assistance for financing and investment in entrepreneurs' capital.
3. Technical and legal advice.
4. Creation of innovation spaces or laboratories.
5. Entrepreneurship competitions.
6. Business incubation and acceleration programs.
7. Mentoring practices.
8. Promotion of partnerships and strategic agreements with financial institutions.
9. Creation of FinTech venture capital funds.

6. Conclusion

In the Caribbean and certainly in Trinidad and Tobago FinTech is making an entry in the financial sector and in particular the securities market. The emergence of new entrants and unknown activities is presenting a challenge to regulators for market regulation and oversight, while ensuring safeguards for all actors and working toward stability and confidence of the market. The nature of the change and the anticipate rate of change require changes to the regulatory models.

The key is for regulatory action and regulation to encourage innovation. Certainly within the context of the removal of information asymmetries, set up ground rules and ensure fair conditions of operation, engender confidence, and prevent and ensure that there is no market distortions. Against this backdrop regulatory sandboxes provide an environment for entities to test innovative products or services, within a limited sphere of operation.

Regulatory sandboxes are all quite new with limited if not a total lack of data set and against a diversity of possible sandbox approaches. This makes, at this stage measurement of success or just allowing for a comparison of individual sandboxes, difficult. What is known is that sandboxes represent an important approach to policy makers in their attempt to deal with innovation.

There are many paths for innovation and a regulatory sandbox is just one. There are some incremental innovations that cannot be tested within a limited period and a small scale required by a regulatory sandbox.

Once the limitations are understood then the value of the sandbox can be appreciated. It allows for individual solutions to be offered and modifications or adjustments to be made, making it an ideal tool for understanding how disruptive and immensely dynamic sectors work. For regulators, it is a valuable space for learning, cooperation, and dialogue with firms, where they can analyse how they operate and assess whether new activities need to be regulated or if rules that may hamper innovation need to be changed. In this regard the careful development and design of a sandbox is essential both for the success for the firm testing the innovation as well as the observation of the innovation by the regulator and determining its value to the sector.