Regulatory Sandboxes & Financial Inclusion

Ivo Jenik
November 1, 2018
The Importance of Regulatory Adaptation is Increasing
Integrity
Inclusion
New threats
Globalization
Technology & Innovation
Inflation
Consumer protection
Stability
Changing legal & regulatory framework
Coordination
New entrants
Regulators Need to Adapt

Ability to adapt is proportionate to regulator’s flexibility, which is constrained by:

- Degrees of discretion allowed by laws
- Resources (staff, time, money)
- Liability (incentivizing risk aversion)
- Political support (incentivizing risk aversion)
Regulation Needs to Adapt

The rules of game for the financial sector were framed when the game was played by handful of players on a desk board. Now the game is played online and in a multiplayer mode.
New Challenge: Pace of Innovation & Adoption

Household Adoption of Various Technologies, 1970–2012

Source: George Mason University.
New Challenge: Complexity of Innovation

The global FinTech landscape can be mapped across 8 broad categories:

- **Payments**
  - Payment processing, Money transfer Mobile payments, Forex, Credit cards, Prepaid cards, Reward programs
  - Examples: AliPay, Transferwise, PayPal, Square, Klarna, Lightspeed

- **Insurance**
  - Broking, Underwriting, Claims, Risk tools
  - Examples: Oscar, Insureon, Lemonade, Knip, Analyze, ClearRisk

- **Planning**
  - Personal finance, Retirement planning, Enterprise resource mgmt., Tax & budgeting, CRM, Compliance & KYC, Data storage, Infrastructure services
  - Examples: Strands, Slice Technologies, Mint

- **Lending / Crowdfunding**
  - Crowdfunding platforms, Peer-to-peer lending, Mortgages & corporate loans
  - Examples: Avant Credit, SoFi, Asset Avenue, Lending Club, Funding Circle, DianRong, Kabbage

- **Blockchain**
  - Digital currency, Smart contracts, Payments & settlement via blockchain, Asset tracking, Identity mgmt., Blockchain protocol developers
  - Examples: Coinbase, Ripple Labs

- **Trading & Investments**
  - Investment mgmt., Roboadvisory, Trade pricing & algos, Trading IT, Trading platforms, Brokerage, Clearing
  - Examples: Succession Advisory, Wealthfront, Motif Investing, Nutmeg, Fuscet

- **Data & Analytics**
  - Big Data solutions, Data visualization, Predictive analytics, Data providers
  - Examples: Credit Benchmark, Solovis, Zenefits, DocuSign, KreditCheck

- **Security**
  - Digital identity, Authentication, Fraud mgmt., Cybersecurity, Data encryption
  - Examples: Bit9, Veracode, TeleSign

Visualization based on ~1,800 FinTechs receiving the highest amount of private funding. Dataset mapped with Quid and allowed to cluster based on similar products, technologies, customers etc.

1) Data based on over 8,800 companies which were discovered across over 10 data sources. Total funding based on date of funding. Total companies based on founding year. Data as of November 2016.

New Challenge: Direction of Innovation

<table>
<thead>
<tr>
<th>Source of Innovation</th>
<th>Developed Country</th>
<th>Developing Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>User</td>
<td>0 (0%)</td>
<td>10 (50%)</td>
</tr>
<tr>
<td>Producer</td>
<td>3 (15%)</td>
<td>6 (30%)</td>
</tr>
<tr>
<td>Joint</td>
<td>0 (0%)</td>
<td>1 (5%)</td>
</tr>
</tbody>
</table>

Source: Boor et al. 2014.
Regulators need to find ways to safely leverage the opportunities offered by innovation to expand and deepen the reach of financial services.
What Can A Regulatory Sandbox Do?

A Regulatory Sandbox…

- Is a space for testing of new ideas in a live environment with regulatory permission
- Brings down the cost of innovation and generates insights into regulatory work
- Is one among other regulatory tools…
## One Tool Among Others

<table>
<thead>
<tr>
<th></th>
<th>Wait-and-See (liberal)</th>
<th>Test-and-Learn (bespoke)</th>
<th>FinTech License (legislative)</th>
<th>Regulatory Sandbox</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structured</strong> (a defined process to deal with innovations)</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Permanent</strong> (a permanent framework)</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Objective-driven</strong> (implementation driven by defined objectives)</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Open access</strong> (objective and transparent criteria determine access)</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Parametrized test</strong> (restrictions and safeguards in place)</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Mutual learning</strong> (intense dialogue between the regulator and innovators)</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

**Note:** The listed examples of tools are only illustrative and cannot be considered exhaustive.
Wait-and-See
Monitoring of a trend to understand it better before any intervention

P2P Lending in China
Examples of policy interventions

**State Council issues a directive to promote innovative finance, particularly for micro and small enterprises**
- March 2015

**State Council encourages crowdfunding for agriculture and SMEs**
- July 2015

**State Council adopts steps to prevent and sanction acts of illegal financing**
- September 2015

**China Securities Regulatory Commission publishes regulations on equity crowdfunding, defining illegal practices**
- January 2016

**Chinese central regulatory agencies and industry regulators released the Guiding Opinions on Promoting the Healthy Development of Internet Finance; People’s Bank of China requires equity crowdfunding companies to be regulated as an agent platform; China Securities Regulatory Commission identified as the primary regulator of equity crowdfunding**
- February 2016

**State Council mandates online lending and alternative financing channels to address micro, small, and medium enterprises, farmers, and lower income individuals**
- May 2016

**Ministry of Commerce of the People’s Republic of China regional offices must implement a new advertising law to crack down on misleading or fake online ads for online finance companies**
- October 2016

Source: Aveni and Jenik, 2017.
Test-and-Learn
A bespoke framework to test a new idea in a live environment

Bangko Sentral ng Philipinas

2004
Permitting non-banks to pilot e-money with safeguards and reporting requirements in place

2009
E-money regulations adopted

Today
T&L approached used to test various innovations from payments agents to e-KYC

For more information click here.
FinTech License (not implemented yet)

FinTech License in Switzerland

Main Features

▪ Deposit-taking up to CHF100 million
▪ Mandatory compliance with certain rules
▪ Safeguards in place (scale, leverage)
▪ Regulatory reporting
What is a Regulatory Sandbox?
Guidance issued by a financial sector regulator to allow small scale, **live testing of innovations** by innovators in a **contained environment** under the regulator’s supervision.

**Note:** In reality, a range of practices exists, some of which may not fit neatly under the definition.

For more information click [here](#).
Equilibrium of Positive Innovation

FinTechs & Start-ups → Regulatory Sandbox → Incumbent Banks & FIs

Negative Innovation ← Positive Innovation → Little Innovation
Ideal Scenario: Win-Win

- **Regulators** learn about new innovations
  - **Review & Adapt Regulations** based on experience

- **Innovators** incur less costs associated with legal fees
  - **Bad innovations** are stopped
  - **Good innovations** are replicated

- **Incumbents & FinTechs** can legally test new products & services
  - **FinTech x FinServ partnerships** are easier in collaborative environment

- **Scale successful products & services**
Benefits vs. Risks

Summary of benefits

- Lowering cost of innovation
- Opening access to regulator
- Improving communication between the regulator and innovators
- Formalizing framework for safe, live testing
- Market monitoring
- Signaling

For more information click here.
Benefits vs. Risks

Summary of risks

- Competition issues (winners picking, uneven playing filed)
- Limited capacity of regulator to run sandbox
- Liability issues in case of failed testing
- Fragmentation of regulatory regimes nationally and internationally
- Coordination issues

For more information click here.
Diversity of regulatory sandboxes revolves around several design components

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Eligibility</th>
<th>Safeguards &amp; other restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>(promote innovation, competition, consumer convenience, inclusion)</td>
<td>(incumbents, fintechs, innovators)</td>
<td>(AML/CFT, disclosure, complaints handling, limited scale)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timing for applications &amp; tests</th>
<th>Costs</th>
<th>Post-test options</th>
</tr>
</thead>
<tbody>
<tr>
<td>(cohorts, rolling, 3 – 24 months)</td>
<td>(application fees, licensing fees, testing costs)</td>
<td>(license, cease-and-desist, regulatory change)</td>
</tr>
</tbody>
</table>

For more information click [here](#).
Regulatory Sandboxes Around the World
As of August 31, 2018

Countries with regulatory sandbox
Regulatory Sandboxes Around the World
As of August 31, 2018
Regulatory Sandboxes Around the World
As of July 7, 2018

- Countries with regulatory sandbox
- Countries considering regulatory sandbox
FinTech Ecosystem in Africa
Snapshot from CGAP FinTech Challenge


- **Countries with regulatory sandbox**
- **Countries considering regulatory sandbox**
### Tools for Regulatory Adaptation

<table>
<thead>
<tr>
<th></th>
<th>Liberal (wait-and-see)</th>
<th>Bespoke (test-and-learn)</th>
<th>Legislative (statutory exemption)</th>
<th>Regulatory sandbox</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formality</strong></td>
<td>★</td>
<td>★★★★</td>
<td>★★★★★</td>
<td>★★★★★</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>★</td>
<td>★★★★</td>
<td>★★★★★</td>
<td>★★★★★</td>
</tr>
<tr>
<td><strong>Transparency</strong></td>
<td>★</td>
<td>★★★★</td>
<td>★★★★★</td>
<td>★★★★★</td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
<td>★★★★★</td>
<td>★★★★</td>
<td>★</td>
<td>★★★★</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td>★</td>
<td>★★★★</td>
<td>★★★★★</td>
<td>★★★★★</td>
</tr>
<tr>
<td><strong>Intervention</strong></td>
<td>★</td>
<td>★★★</td>
<td>★★★★★</td>
<td>★★★★★</td>
</tr>
</tbody>
</table>

**Note:** The listed examples of tools are only illustrative and cannot be considered exhaustive.
Regulatory Sandboxes or Other Tools?

Considerations

- Market conditions/demand
- Stakeholder ecosystem
- Legal and regulatory framework
- Capacity and available resources
- Policy priorities

For more information click here.
What does this all have to do with financial inclusion?
Promoting Financial Inclusion

- Not hard data to make a strong case yet
- No blueprint to copy
- High implementation costs to justify wide-spread application
Pro-Financial Inclusion Benefits

Several hypothesis

- Improving capacity of regulators to balance innovations with I-SIP objectives

- Promoting innovation that improves financial inclusion (as demonstrated by past examples – though not tested in a sandbox)
  - New, affordable products or services (BitPesa)
  - Distribution channels (AliPay)
  - Operational efficiencies (Yu’e Bao)
  - Business models (PayGo)
  - Compliance and risk management (iProov)
  - Increased competition

For more information click here.
Leveraging Regulatory Sandboxes for Financial Inclusion

- Segment targeting
  - At the testing stage
  - At the rollout stage
  - KPIs for serving excluded customers

- A preferential regime for pro-inclusion providers

For more information click here.
Implementation Risks

Several hypothesis

- Stretching regulatory capacity
- Regulatory procrastination
- Inadequate institutional arrangements
- New risks associated with products and services
- Disproportionate distribution of benefits to already included segments

For more information click here.
Summary

1. One out of several other options

2. Not an exclusive point of entry for innovation

3. Too early to evaluate real impact

For more information click here.
Outstanding Questions

1. Can regulatory sandboxes harness innovation for financial inclusion?

2. Under what circumstances?
Sources

- Boor et al. 2014. “Users as innovators in developing countries: The global sources of innovation and diffusion in mobile banking services.”
- IOSCO. 2017. “Research report on financial technologies (FinTech).”
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