## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:30</td>
<td>Introductions (Greg Chen)</td>
</tr>
<tr>
<td>3:35</td>
<td>Ivo Jenik</td>
</tr>
<tr>
<td>4:05</td>
<td>Catherine Wines</td>
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<td>4:20</td>
<td>Schan Duff</td>
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<tr>
<td>4:35</td>
<td>Dea Markova</td>
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<tr>
<td>4:50</td>
<td>Q&amp;A and Discussion</td>
</tr>
<tr>
<td>5:20</td>
<td>Conclusion Remarks</td>
</tr>
</tbody>
</table>
What is a Regulatory Sandbox?
Ivo Jenik, CGAP
The Importance of Regulatory Adaptation is Increasing
Integrity

Inflation

Consumer protection

Stability

Changing legal & regulatory framework

Coordination

Globalization

New threats

Inclusion

New entrants

Technology & Innovation

CGAP 2017
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.
Is This a New Challenge?

Household Adoption of Various Technologies, 1970–2012

The global FinTech landscape can be mapped across 8 broad categories

Innovation in Mobile Financial Services

<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: George Mason University.


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>
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<tbody>
<tr>
<td><strong>Structured</strong> (a defined process to deal with innovations)</td>
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<td>✔</td>
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<tr>
<td><strong>Permanent</strong> (a permanent framework)</td>
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<tr>
<td><strong>Objective-driven</strong> (implementation driven by defined objectives)</td>
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<tr>
<td><strong>Open access</strong> (objective and transparent criteria determine access)</td>
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<tr>
<td><strong>Parametrized test</strong> (restrictions and safeguards in place)</td>
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</table>
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
State Council encourages crowdfunding for agriculture and SMEs
State Council adopts steps to prevent and sanction acts of illegal financing
China Securities Regulatory Commission publishes regulations on equity crowdfunding defining illegal practices

March 2015
July 2015
September 2015
January 2016
February 2016
May 2016
October 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
State Council mandates online lending and alternative financing channels to address micro, small, and medium enterprises, farmers, and lower income individuals
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

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

FinTech License in Switzerland

Main Features

- Deposit-taking up to CHF100 million
- Mandatory compliance with certain rules
- Safeguards in place (scale, leverage)
- Regulatory reporting
One Tool Among Others

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<td>✓</td>
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</table>
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.

For more information click here.
Equilibrium of Positive Innovation

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

Negative Innovation → Positive Innovation → Little Innovation
Regulators learn about new innovations

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

Review & Adapt Regulations based on experience
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:

- **Objectives**: (promote innovation, competition, consumer convenience, inclusion)
- **Eligibility**: (incumbents, fintechs, innovators)
- **Safeguards & other restrictions**: (AML/CFT, disclosure, complaints handling, limited scale)
- **Timing for applications & tests**: (cohorts, rolling, 3 – 24 months)
- **Costs**: (application fees, licensing fees, testing costs)
- **Post-test options**: (license, cease-and-desist, regulatory change)

For more information click [here](#).
Regulatory Sandboxes Around the World
As of August 31, 2017

Countries with regulatory sandbox
Regulatory Sandboxes Around the World
As of August 31, 2017

Countries with regulatory sandbox
Countries considering regulatory sandbox
Regulatory Sandboxes Around the World
As of August 31, 2017

- Countries with regulatory sandbox
- Countries considering regulatory sandbox
FinTech Ecosystem in Africa
Snapshot

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>
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</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>
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.”
WorldRemit’s Experience
Catherine Wines, WorldRemit
Today, WorldRemit operates an impressive Send and Receive Network

From **50+** Countries…

- Credit & Debit Cards
- Bank Transfer
- 6 alternative digital payment methods

…To **140+** Countries

- Mobile Money
- Bank Deposit
- Send to Card
- Cash Pickup
- Door-to-Door
- AirTime Top-up
$600bn annual remittances industry is moving online

WorldRemit is well placed to capture market share as traditional offline providers are being disrupted by more efficient online solutions.
Mobile Money – The World’s New Bank

*WorldRemit has the largest global Mobile Money network and is uniquely positioned to capitalise on the expanding mobile remittance market*

- **270+** Mobile Money services with **100+** more preparing for launch
- WorldRemit covers **35** services in **27** countries and can reach **117m** Mobile Money accounts
Three years ago, **2.5 billion** adults were **unbanked**.

Today, **2 billion** adults remain without an account.

**1 billion of those unbanked** have a **mobile phone**.
Bank Negara approves WorldRemit ops under new regulatory Sandbox programme

KUALA LUMPUR/LONDON: WorldRemit, a leading digital money transfer company, is launching operations in Malaysia.

This follows the company’s acceptance as one of only four initial entrants into Bank Negara’s new Sandbox programme.

THE MOBILE MONEY competition in Asia is heating up. Worldwide top industry executives have slated the region as a global leader in payments innovation and according to the United Nations, the most dynamic growth in remittances over the past decade has been in Asia.
Please use your webcam to scan the front of your ID

1. Hold your document up to your webcam
   - Center it in the viewing window
   - When the document is fully legible click "Take snapshot"

2. Verify your shot in the window to the right
   - If fully legible click "Finish"
   - If not fully legible click "Take another snapshot" to try again

Tip: make sure that no lights create a glare on plastic cards

Capture front

Take snapshot

Finish & start verification
Bank of Sierra Leone: Regulatory Sandbox Pilot Program

Schan Duff, Aspen Institute
13% Economically active population with access to financial services

“We are steadily moving from our learning stage to creating enabling frameworks that make it attractive for all financial institutions to target the excluded…”

- National Strategy for Financial Inclusion, 2017-2020
Enabling Framework

Ecosystem Catalysts

Financial Inclusion Mandate

Technical Partners

Regulatory Sandbox Pilot Program Guidelines (Proposed)

Objectives and Principles

1. The aim of the program is to facilitate the deployment of new and innovative financial technologies (FiTech) and services enabled by Sierra Leone. This includes promoting and enabling regulatory cooperation, innovation, and experimentation in SiTech.

2. The program is designed to enable FiTech to be developed and deployed in a risk-assessment and regulatory sandbox environment. This environment is intended to facilitate testing of FiTech products and services in a controlled and safe environment.

3. The program is intended to be flexible and adaptable to the needs of FiTech providers. It is designed to provide a platform for FiTech providers to test and develop their products and services, subject to existing regulatory frameworks.

4. The program is intended to be inclusive, with a focus on promoting financial inclusion and addressing the needs of underserved and unbanked populations.

5. The program is intended to be adaptable to the evolving landscape of FiTech, with a focus on promoting innovation and fostering a culture of experimentation and learning.
External Framework

- Incorporates emerging best practices
- Eligibility criteria (e.g., genuine innovation, consumer benefit, etc.)
- Risk-based testing safeguards
- Supervision and reporting protocols
- Linked to National Strategy for Financial Inclusion
  - Progressive selection criteria to promote inclusion-oriented innovation
- Responsive to regulatory capacity
  - Cohort size based on available BSL resources
- Open to any individual or company (FinTech or FI) with > 50% Sierra Leone ownership
- Public consultation with broad participation (ongoing)
## Internal Framework: operations, governance and learning mechanisms

<table>
<thead>
<tr>
<th>Step</th>
<th>Application Period (60 days)</th>
<th>Review Period (30 days)</th>
<th>Sandbox Phase (up to six months)</th>
<th>Procedural Review (90 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Public engagement</td>
<td>Administrative review of applications</td>
<td>Collect and process participation fee</td>
<td>Public reporting on lessons learned from cohort experience</td>
</tr>
<tr>
<td></td>
<td>Digital communication strategy</td>
<td>Engage expert resources (as appropriate)</td>
<td>Assign participants to a dedicated Supervisory Team</td>
<td>Revisions to Sandbox Framework (as appropriate)</td>
</tr>
<tr>
<td></td>
<td>Outreach to key innovators and FIs</td>
<td>Prepare and disseminate applicant landscape and “board books” to Selection Committee</td>
<td>Design testing and safeguard plans</td>
<td>Revisions to licensing and regulatory regime (as appropriate)</td>
</tr>
<tr>
<td></td>
<td>Designate Sandbox Ombudsperson</td>
<td>Convene Selection Committee to select finalists for in-person interviews</td>
<td>Review and approval of testing and safeguard plans by Sandbox Committee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Launch FAQs and web resources</td>
<td>Conduct background check on applicant finalists</td>
<td>Implement testing plans</td>
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<tr>
<td></td>
<td></td>
<td>Interview all finalists</td>
<td>Interim reporting and review of testing metrics by Supervisory Teams</td>
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<tr>
<td></td>
<td></td>
<td>Select and notify final cohort participants</td>
<td>Monthly check-ins between Supervisory Teams and Sandbox Committee</td>
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<tr>
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<td></td>
<td>Incident reporting (e.g., breach, consumer injury, etc.) to Sandbox Committee</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Review of final test results and preparation of recommendations by Supervisory Team</td>
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<td></td>
<td></td>
<td></td>
<td>Presentation and review of final regulatory/exit recommendations by Sandbox Committee</td>
<td></td>
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<tr>
<td>2</td>
<td>Designate Sandbox “ambassadors” and Ombudsperson</td>
<td>Designate Sandbox Supervisory Teams (&quot;Supervisory Team&quot;)</td>
<td></td>
<td>Sandbox Committee, Selection Committee, and Supervisory Team meet within 30 days of cohort exit to identify lessons learned from the initial cohort</td>
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<tr>
<td></td>
<td>Track and engage in-bound inquiries</td>
<td></td>
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<td>Recommendations for any modification to the Sandbox Framework, Selection Process, Supervision Process or broader regulatory frameworks conveyed for consideration</td>
</tr>
<tr>
<td></td>
<td>Review and revise FAQs, outreach and communications plan</td>
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<tr>
<td>3</td>
<td>Appoint Sandbox Selection Committee (“Selection Committee”)</td>
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Cohort Announced *Cohort Exit *
Sandbox 2.0?

- Thematic sandboxes
  - Gap-based (e.g., promoting credit to agricultural sector)
  - Resource-based (e.g., supervised experimentation with public data)
  - Event-based (e.g., temporary licensing regimes for episodic events)
  - Multi-regulator (bank vs. mobile inclusion pathways)

- Model variation
  - Developed vs. LDC
  - Inclusion vs. Innovation vs. RegTech vs. ?
  - Cohort (company-specific) vs. Infrastructure
Sandbox Design Principles
Dea Markova, Innovate Finance
Sandboxes Landscape

**INDUSTRY SANDBOX**

An Industry Sandbox is an industry-led collaborative environment which firstly, enables the validation of innovative product by giving developers access to relevant data, technologies and services and secondly, allows industry to come together and resolved shared challenges.

**ACCELERATOR / INCUBATOR**

Open innovation solutions enable startups to develop business models and prototypes. A common success metric for accelerators is how many cohort members exist with a proof-of-concept agreed with a potential client.

**REGULATORY SANDBOX**

A Regulatory Sandbox is a regulator-led environment that aims to create a “safe space” for FinTechs and a limited number of real consumers to engage in an “on-market” trial.

**LIVE MARKET**

- off-market
- on-market
**SOLUTION DEVELOPMENT**
Access to resources such as data, APIs, or certification enable entrepreneurs to create solutions readily integrated with the legacy technology stack.

**COMPLEX PROBLEM SOLVING**
The technical and legal framework facilitates industry collaboration on identifying and addressing complex shared consumer, technological and regulatory challenges.

**REGULATORY EFFICIENCY**
Observer Forums engage (multiple) regulators learn and potentially address uncertainties during solution development.
Design Principles

High level Industry Sandbox design requirements have been developed by reviewing global practices and community requirements.

GOVERNANCE
- Open
- Connected
- Accessible

PARTICIPANTS:
- Users
- Contributors
- Sponsors
-Observers

ROLE OF REGULATOR
- Share knowledge
- Observe output
- Test RegTech
- Inform Policy
DESIGN COMPONENTS

- Application Assessment
- Data
- Permissions
- Reference Architectures
- Advisory Space
- Showcase Space
- Certification
- Analytics and Audit
- Participants' Forums
FINANCIAL INCLUSION USE CASE

DATA

- Infrastructure to support data philanthropy including sharing, anonymisation, and analytics
- Governance structure to support data privacy and manage access to sensitive data
- Aggregate thin (e.g. complaints) data on consumer issues to illustrate a pattern or a bias
- Open-source alternative credit scoring; aggregate alternative data
- Democratize consumer behaviour data and insights

DIGITAL CROSS-BORDER INFRASTRUCTURE

- Provide a development environment underpinned by an interoperable payments system, digital identity stack, e-KYC
- Nurture an entrepreneurial ecosystem

REGULATORY FORUM

- Share knowledge and views on supervising FinTech and its implications on supervisory objectives
- Improve clarity and predictability in the supervision of cross-border propositions
- Allow application to multiple regulatory sandboxes at one time
Q&A

1. For questions, please use the Chat box on the left-hand side of the Webex session.

2. To ensure your question is seen by the moderator, select “All Participants” from the drop-down menu when sending the question.
WHAT’S NEXT

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