Innovation in Central Banking
Experience at the Central Bank of the Dominican Republic (BCRD)

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Systems and Technological Innovation Deputy Manager

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I. Technological Innovation vs. Digital Transformation vs. central Banks

II. BCRD experience and lessons learned

III. Advances in Payment Systems and Fintechs

IV. Cybersecurity in DR

V. Conclusions
II. Technological Innovation

Or...
Digital transformation: "integration of new technologies in all areas of an institution to change the way it operates".

It is not an option to be evaluated, nor a possibility to be considered in the medium or long term; it is a requirement to be assumed immediately, with a positive attitude towards the changes brought about by digitalization.
Why are traditional players losing ground?

- They have been conservative
- They keep away from people
- They do not respond quickly to the needs of the new generations
- Low innovation
- Concentration on high-volume lines of business and not retail
Key disrupters

- **Speed to Market** *(technology)*
- **Personalization Expectation** *(clients)*
- **Cybersecurity Risks**
- **Alternatives to Banking** *(suppliers)*
- **Balance between Innovation and Regulation**
What do we associate central banks with?
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HOW DO WE LOOK AT OURSELVES?

Eight I's of Infinite Innovation

Dream. Think. Create.

Innovation Lab [Makerspace @ SPC]

by Braden Kelley
III. BCRD experience and lessons learned
HOW HAVE WE HANDLED IT AT THE BCRD?

INWARDS
- SYSTEMS AND TECHNOLOGICAL INNOVATION DEPUTY MANAGEMENT
- SUPPORT FROM PLANNING AND COMMUNICATIONS AREAS

OUTWARDS
- PAYMENTS SYSTEMS
- CYBERSECURITY
Objective:

HOW ARE WE DOING IT?

USING OUR MAIN WEAPON: THE REGULATION

- Open Banking (API's)*
- Digital Signature in financial processes
- Payments Ecosystem for Financial Inclusion
- Connectivity and Redundancy*
- Interinstitutional Collaboration*
- Compliance Evaluation Tool (HEC)*
- Digital Identity*
- Paperless office (digital signature)
- Sectorial CSIRT*
- Digital payments (CBDC, ePeso, EPEs)
- Digital payments
- Payments
- Innovation Hub
- Innovation
- ETC. (Because innovation is ongoing)
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Innovate to regulate or regulate to innovate?

Aspects to be regulated:

- Company incorporation, local or cross-border, shareholders.
- KYC and compliance (to them and to customers)
- Protection of users' rights (personal data and their money).
- Guarantees for proper operation, not impacting macroeconomic balance
- Transparency
- Interoperability
- Hidden costs
- Contingency mechanisms, continuity of operations
- Dissolution procedure....etc.
III. Advances in Payment Systems and Fintechs
Electronic Payment Entity

Sole proprietorship authorized by the Board of Directors to provide payment services through electronic payment accounts through technological solutions.

To have a minimum paid-in capital of RD$15.0 million, to be increased according to the risks associated with the provision of the service.

They will manage electronic payment accounts for use by individuals or legal entities that will be accessible through technological solutions.
It is a space dedicated to dialogue and consultation for innovative regulated and non-regulated companies that wish to develop their projects in the Dominican financial sector.

WHO ARE ITS MEMBERS?
Objetivos

To guide
Innovators within the current legal framework

To promote
Innovations in the Dominican financial system

To observe
Trends to promote innovative reforms
Initiative Impact Areas

15 Service requests
10 Elegibles
4 Completed
6 In progress

- Payments: 25%
- Remittances: 25%
- Alternative Financing: 20%
- Personal Finances Management: 10%
- Business Technologies for Financial Institutions: 5%
- Trading of Financial Assets or Securities Market: 5%
- Financial Education: 5%
- Insurances: 5%
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IV. Cybersecurity in DR
### When do respondents forecast risks will become a critical threat to the world?

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic</strong></td>
<td></td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>58.0</td>
</tr>
<tr>
<td>Livelihood crises</td>
<td>55.1</td>
</tr>
<tr>
<td>Extreme weather events</td>
<td>52.7</td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
</tr>
<tr>
<td>Cybersecurity failure</td>
<td>39.0</td>
</tr>
<tr>
<td>Digital inequality</td>
<td>38.3</td>
</tr>
<tr>
<td>Prolonged stagnation</td>
<td>38.3</td>
</tr>
<tr>
<td><strong>Geopolitical</strong></td>
<td></td>
</tr>
<tr>
<td>Terrorist attacks</td>
<td>37.8</td>
</tr>
<tr>
<td><strong>Societal</strong></td>
<td></td>
</tr>
<tr>
<td>Youth disillusionment</td>
<td>36.4</td>
</tr>
<tr>
<td>Social cohesion erosion</td>
<td>35.6</td>
</tr>
<tr>
<td><strong>Technological</strong></td>
<td></td>
</tr>
<tr>
<td>Human environmental damage</td>
<td>35.6</td>
</tr>
</tbody>
</table>

**Clear and present dangers**
Short-term risks (0 – 2 years)
Risk management measures

- Strengthening the regulatory and normative cybersecurity framework
- Strengthening of administrative and technological controls in the cybersecurity area
- Ongoing entities’ technical staff training
- Continuous exchange of information and experience between entities and regulators at the local and international level
- Establishment of internal and sectoral cybersecurity incident response mechanisms
Cybersecurity and Information Security Regulation for the financial and payment system
**Regulation Framework**

**Purpose**
- To establish the general principles and guidelines for the regulated entities to ensure the integrity, availability and confidentiality of the information and the optimal operation of their Information Systems and Technological Infrastructure.

**Scope of Application**
- Financial Intermediation Entities (FIEs) participating in SIPARD.
- Administrators and other SIPARD Participants.
- Support Entities and Related Services interconnected with any FIU or to SIPARD.
Future Perspectives: role of the regulator

Pressure of change on the ecosystem
- New regulation
- Customer expectations
- Technology
- New players in the ecosystem, including government entities

Leveling cyber risk management
- Guarantee of Security, Integrity and Privacy
- Banca abierta frente a la "banca de bolsillo"
- Differentiation between the entity that faces the customer (24/7, accessibility, personalization...) and the entity/s that provide services, both core business and infrastructure services
- Segmentation vs. interconnection
- New but interoperable products, services and types of entities

INTERNAL CULTURE CHANGE!
It is up to us to regulate and supervise, seeking a balance between:

- Promoting safety and efficiency
- Protecting the user
- Managing innovation
- Promoting competition and regulatory fairness
- Ensuring legal certainty
"All this would not have been possible without a regulation driven by the Central Bank, which seeks a balance between promoting innovation in the provision of financial services, including the emergence of new players in the ecosystem, and the preservation of financial stability and user protection.

As central banks, we have opened spaces and forums for collaboration and learning.... in which guidelines and policies related to topics such as open banking, cybersecurity, the Cloud, Artificial Intelligence, and more recently, discussions on the benefits of distributed technologies, central bank digital money (CBDC), cryptocurrencies and many other novelties that are already part of our daily work.

We at the Central Bank wish to reiterate once again our commitment to this progress and modernization, to this drive towards a financial and payment system that is as digital as possible, and to the financial inclusion of traditionally underserved sectors.

But always, within a framework of economic and financial stability for all, to contribute to achieving "a fairer, sustainable and inclusive economy that leaves no one behind."

Héctor Valdez Albizu, Governor of the Central Bank
Thank you
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