



Legal and Institutional Frameworks

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Balancing Fintech Opportunities and Risks, San José, Costa Rica
April 23-24, 2019

Disclaimer

Views expressed in this presentation are my own responsibility and do not represent the opinion of CEMLA, nor that of the Fintech Forum Membership.

Contents were prepared using information of the Fintech Forum of CEMLA established in 2018.

Outline

- The 2018-19 Fintech Forum agenda
 - The Working Group on Fintech Regulatory Aspects
 - The Working Group on Central Bank Digital Currencies
- Focus on the regulatory surveys
- In the pipeline: Forum's work agenda 2019-20
- Other CEMLA disruptive initiatives

2018-19 agenda

Fintech Forum motivation

- For authorities, “doing nothing” is not an option. Challenges around fintech are already here.
- Central Banks are called to develop a strategy able to adapt to a changing world (new agents, different jurisdictions, new business models, etc.), as emerging technological innovation may introduce new risks/opportunities in financial systems.
- Limited data and international best practices led CEMLA to contribute with its Membership by providing a forum to better understand and address, if, fintech implications for central banking mandates.

The launch of the Fintech Forum

- 18 Central Bank members met in Buenos Aires (March 2018) to kick-off the Forum, and to identify the priority issues.
- Areas of work:
 - Working Group on Fintech Regulatory Aspects (REG WG):
 - Existing barriers to embrace fintech with existing policy and regulatory framework.
 - Solutions and approaches.
 - Working Group on Central Bank Digital Currencies (CBDC WG):
 - Benchmark for CBDC and assessment of practical cases.
 - Identifying opportunities/risks of digitizing fiat money.
- Ultimate goal: Identify priority issues and report to the Central Banks' Governors of Latin America and the Caribbean on matters that may merit attention.

Main findings: REG WG

- The REG WG took stock of current state of fintech, with special focus in existing practices and efforts towards a fintech regulatory framework in the region.
 - 18 LAC Central Banks and over 80 industry representatives participated, respectively.
- The REG WG found that fintech is bringing:
 - Potential opportunities: increased financial services' competition; efficiency gains and cost savings; addressing unmet/new needs (de-risking and financial inclusion).
 - Existing concerns: consumer protection, data privacy, AML/CFT and cybersecurity, excessive concentration of critical functions.

Main findings: REG WG

- LAC Central Banks are prompted to reassess the adequacy of their legal frameworks to embrace these developments, and with that effectively bring opportunities with risks under control.
 - Traditional regulatory arrangements could: limit adoption of new technologies, take longer to adapt, create an unlevelled playing field, or even yield intergovernmental uneven response.
- The REG WG concludes that policymakers may find useful considering a number of basic principles when drafting or reviewing regulation to fit the new landscape.
 - Functional approach, proportionality, technological neutrality and flexibility, level playing field and competition, cybersecurity and data protection, coordination among regulators, and international cooperation.
 - Explore additional mechanisms (innovation hubs, accelerators, sandbox).

Main findings: CBDC WG

- The CBDC WG identified the main conceptual and practical aspects LAC Central Banks must consider when evaluating CBDC.
- Key considerations found by the CBDC WG:
 - Every CBDC case deserves an its own in-depth analysis of motives, possible solutions and implications, as well as design issues.
 - LAC Central Banks may find it motivating (or necessary) to test CBDC as a gateway to foster financial inclusion, leveraging mobile technologies.
 - New technologies support CBDC, but experimentation is limited. Furthermore, it would move central banks into new territory which could expose them to greater operational and reputational risks.

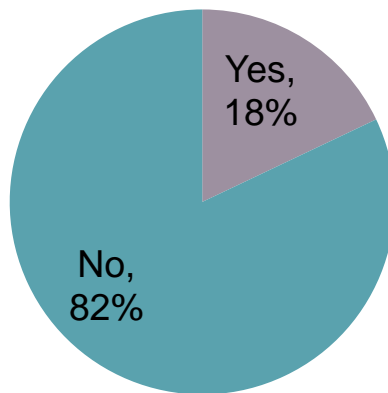
Main findings: CBDC WG

- Key considerations (continued):
 - CBDC as a supplementary alternative to cash.
 - Neither CBDC costs nor subsequent effects are readily quantifiable. Further experimentation is necessary to validate its possible effects on payments, money and financial spheres.
- The CBDC WG concludes that introducing a CBDC system should thus be a gradual and cautious process. In fact, the CBDC WG recommends to carefully assess the benefits, costs, implications and impact of introducing a CBDC with ongoing experimentation as inputs for the analysis.

Focus on the regulatory
surveys

Private sector

Existing Fintech legal framework (incumbents and new entrants):

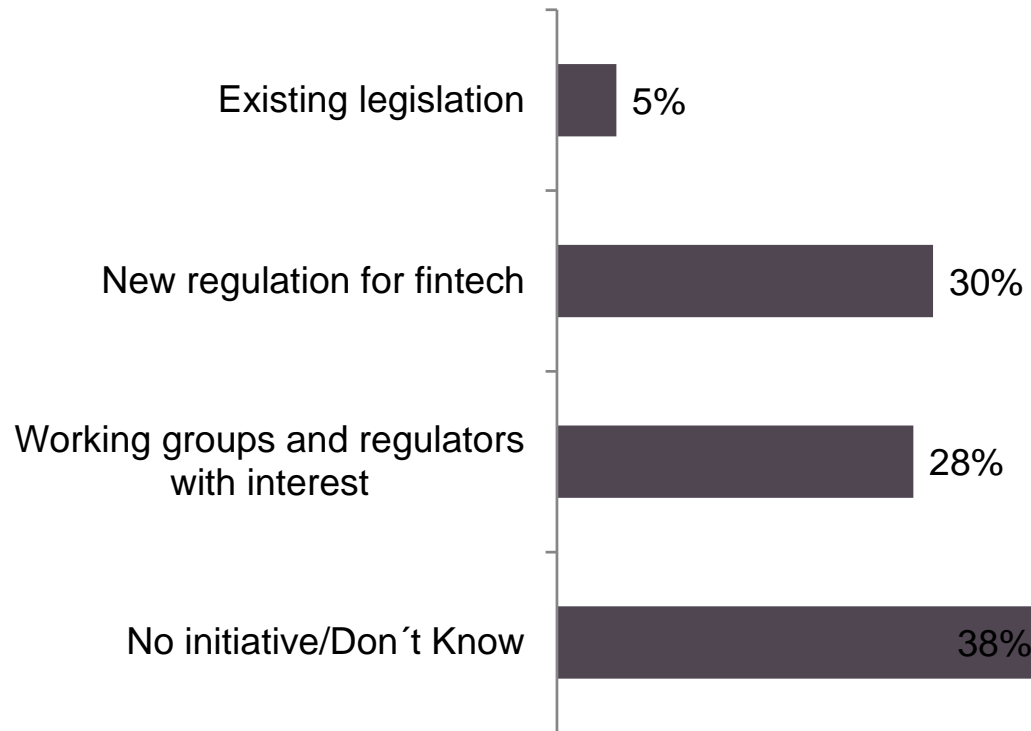


Legal framework total (%)

- Over 80% of respondents indicated there is no fintech regulation in place.
- Note, however, that almost all positive answers correspond to countries where competitors in the same segment have no recollection of the corresponding regulation.
- Also, the survey might now be outdated.

Private sector

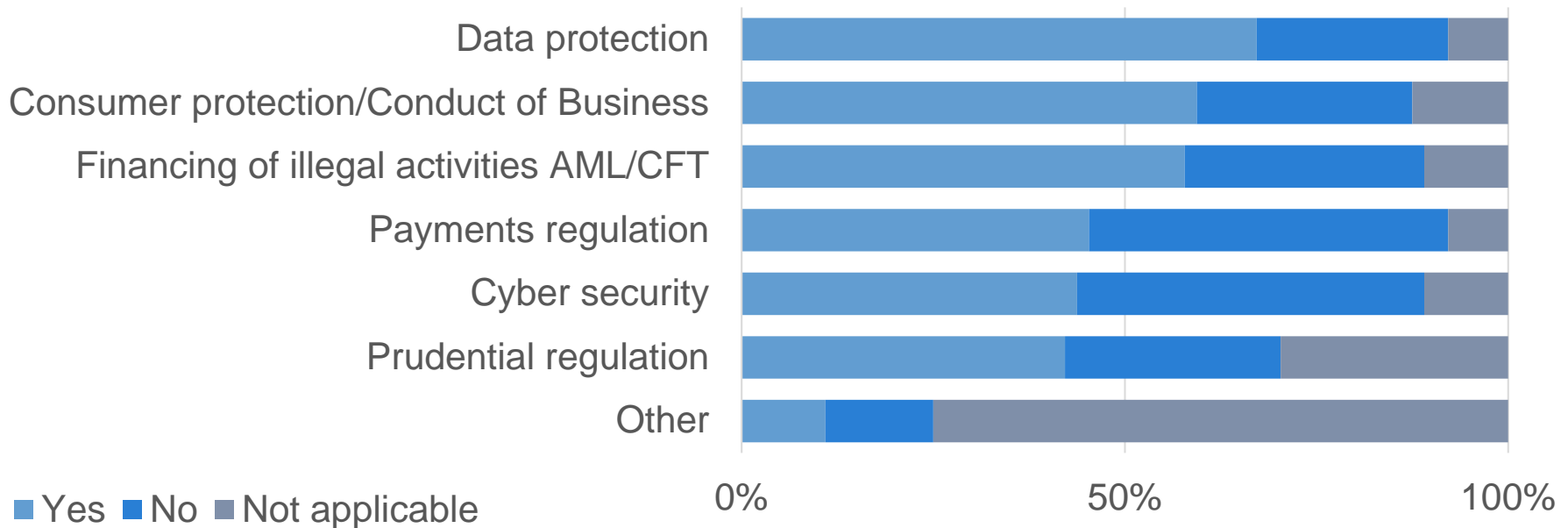
Regulatory changes to enable fintech



Respondents, in general, acknowledged there is interest, and in some cases, initiatives, from authorities regarding fintech regulation.

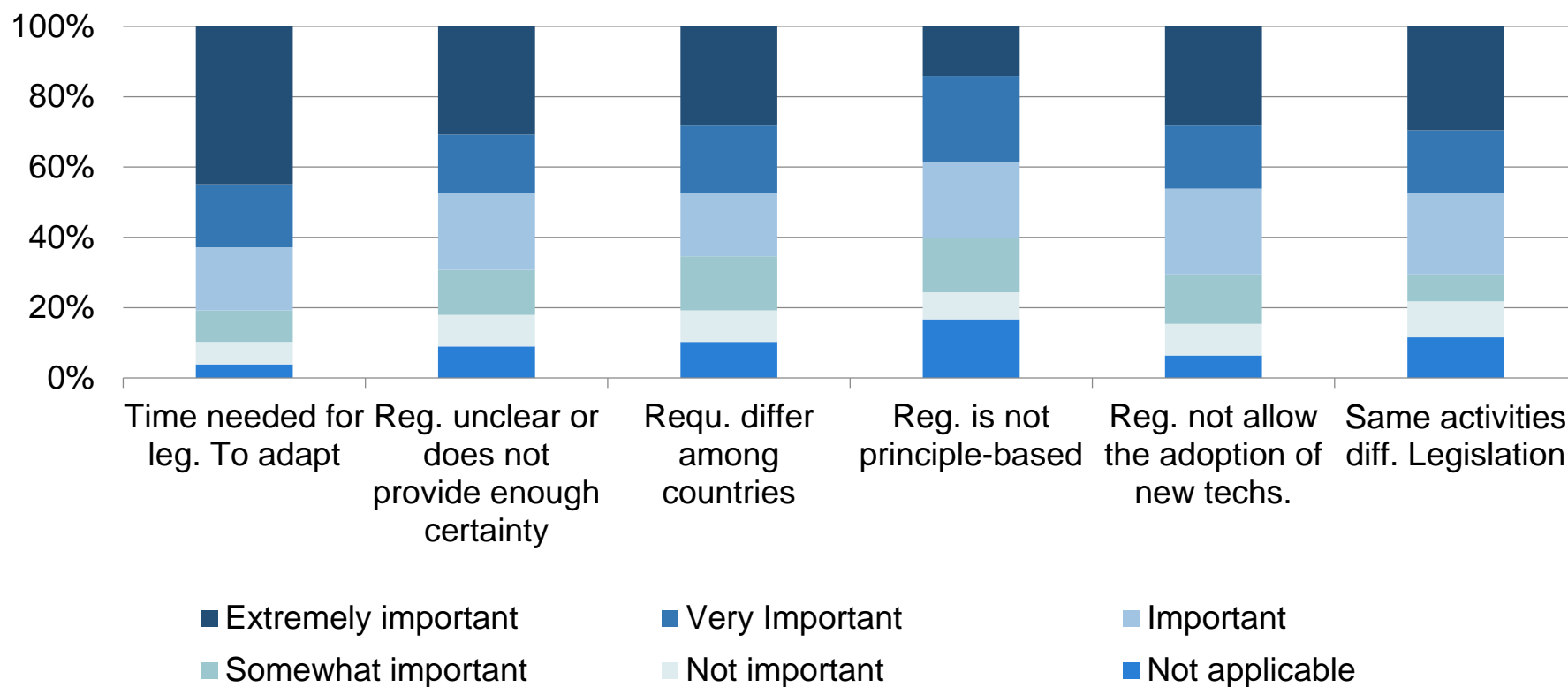
Private sector

Aspects for fintech that could be covered with existing legal framework



Private sector

Importance of regulatory barriers for financial innovation

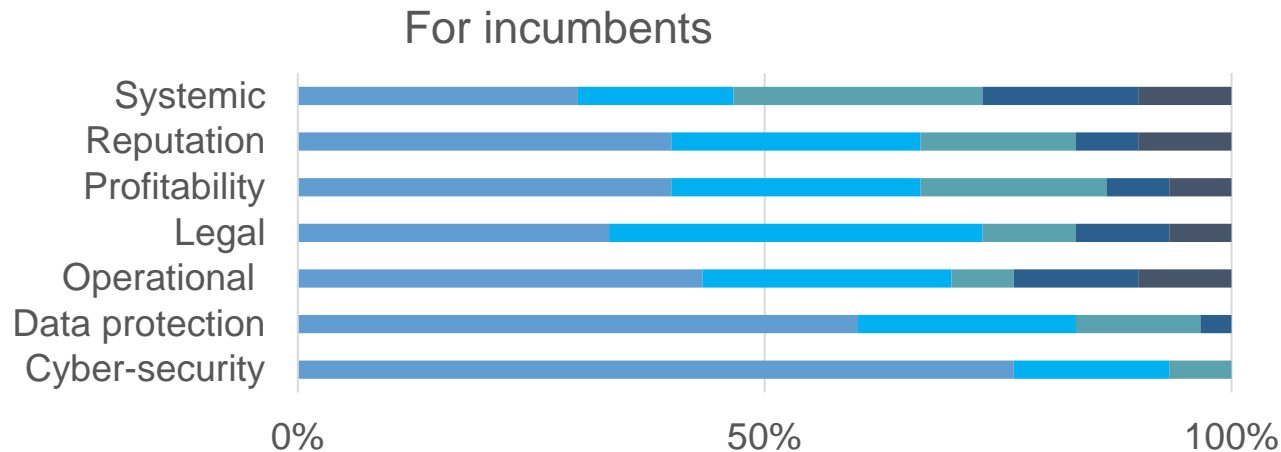
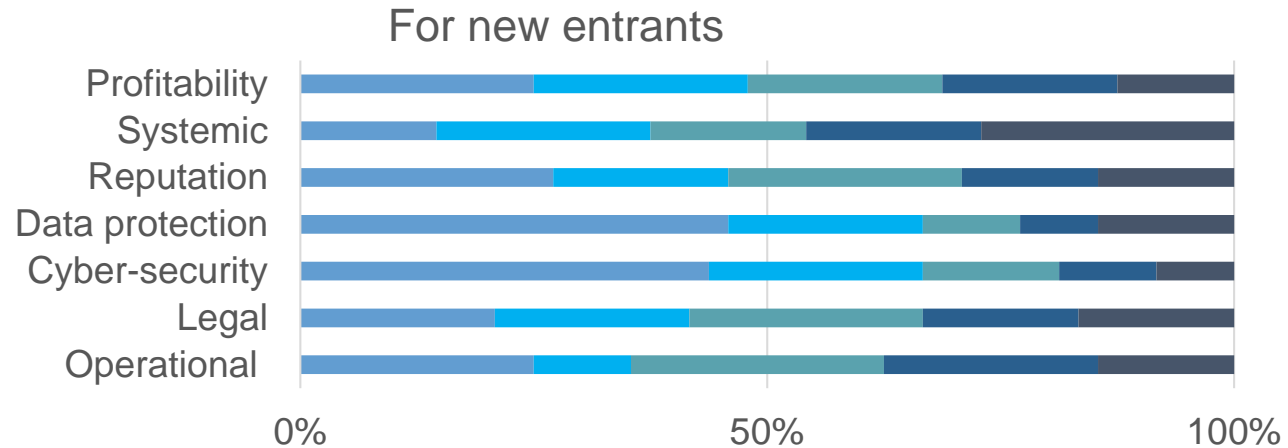


Private sector

The group of respondents ranked the usefulness of different regulatory approaches to enable fintech and innovations. It was found that:

- Establishing a functional approach followed by specific guidance by authorities will be the most useful approaches.
- Sandboxes ranked low due to various respondents considering this an unknown. Yet, the respondents with a positive ranking, valued this approach much.
- “Other” suggested approaches included better inter-institutional coordination and the use of best international practices.

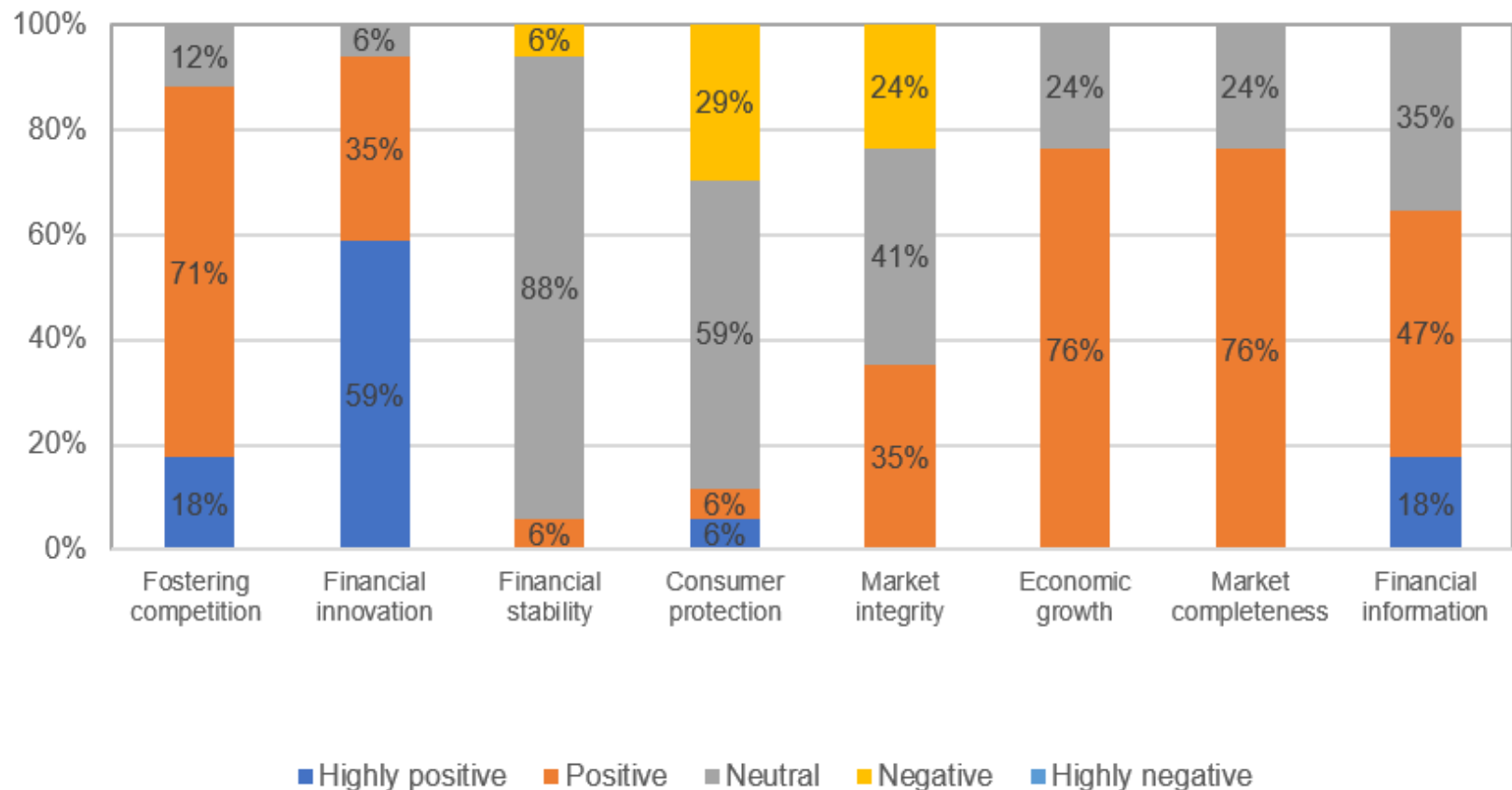
Private sector



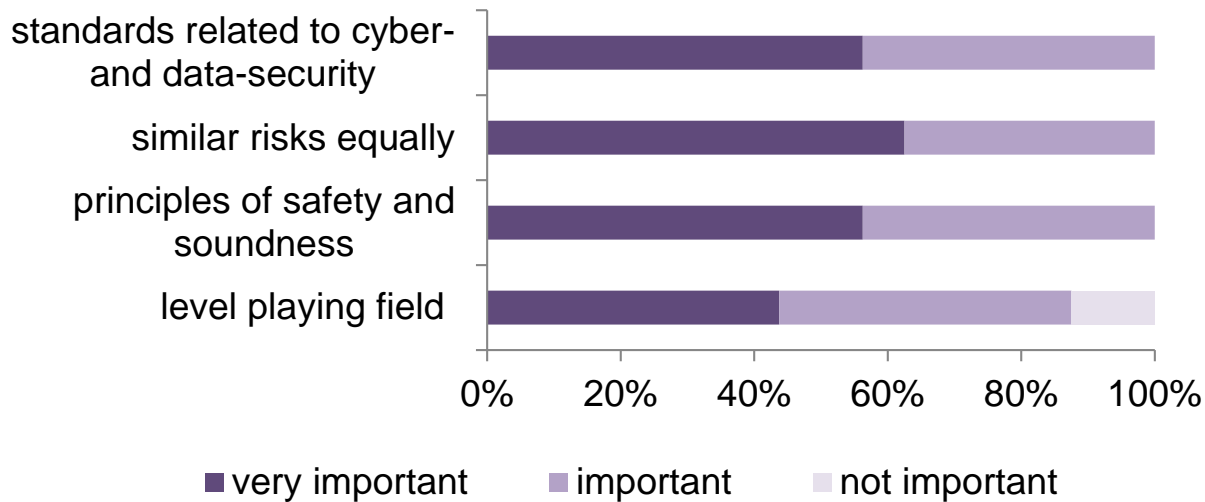
■ Very Important ■ Important ■ Moderately Important

Authorities

Fintech impact in..

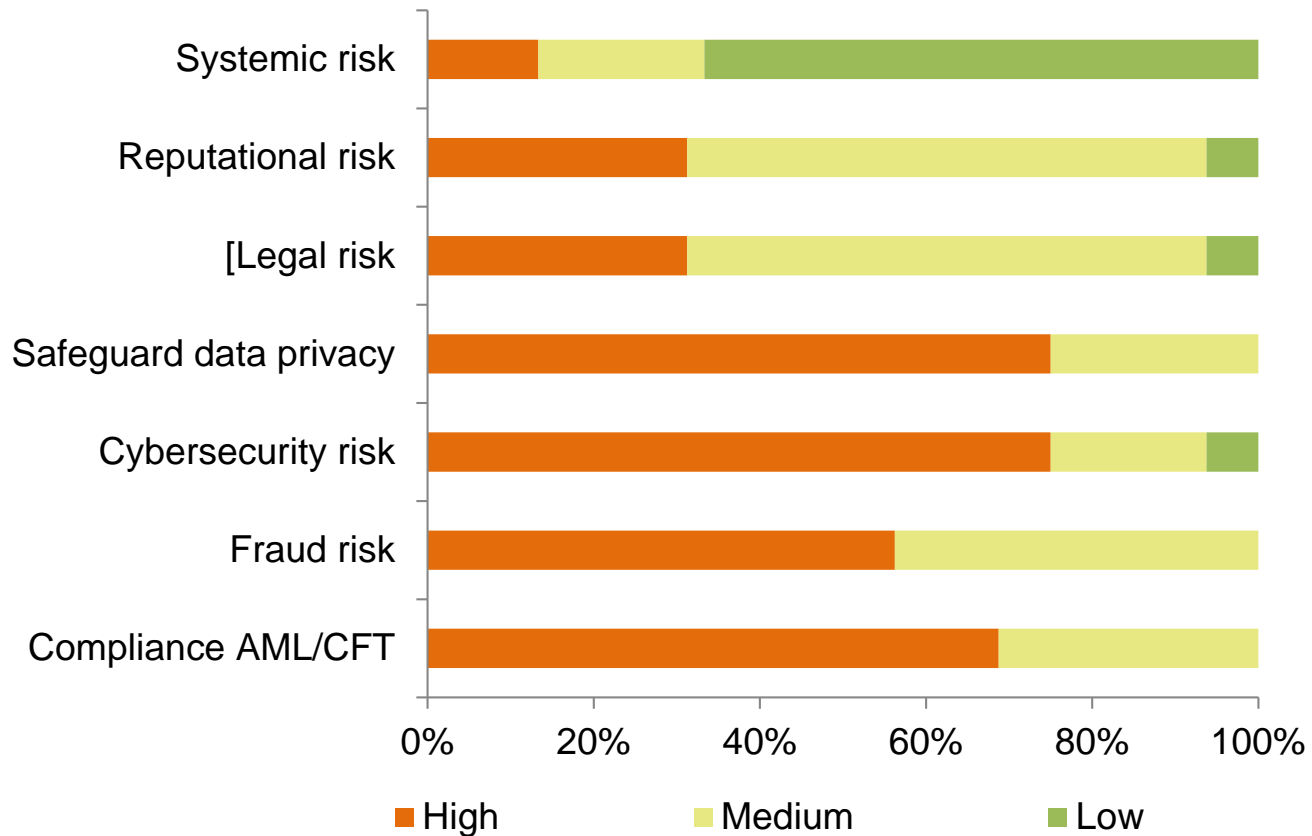


Authorities

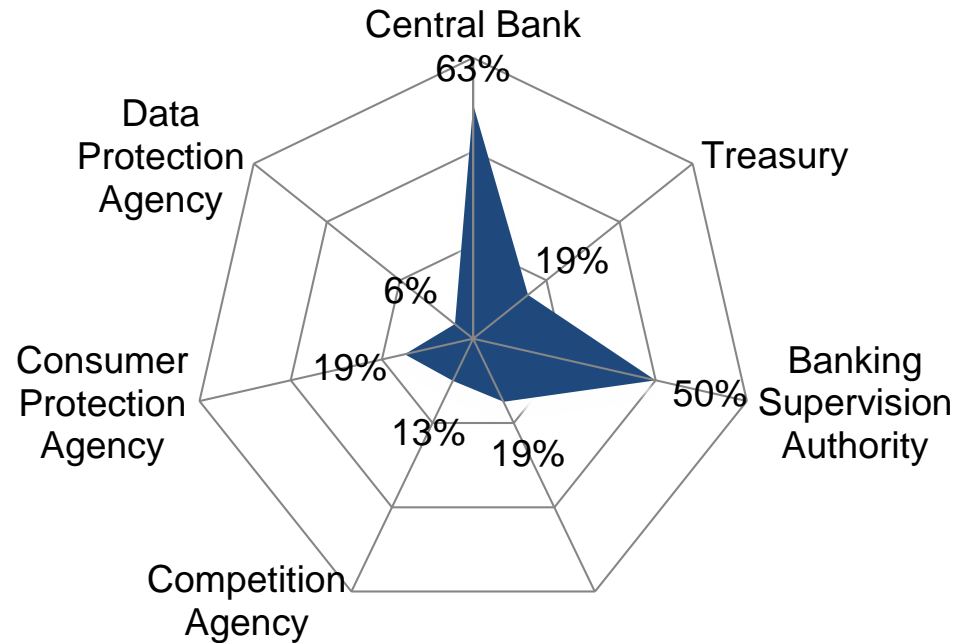


- All fintech related aspects are generally perceived as important by the central banks.
- The functional approach arises again, through the “Similar risks equally” aspects, getting the highest share of “very important”

Authorities

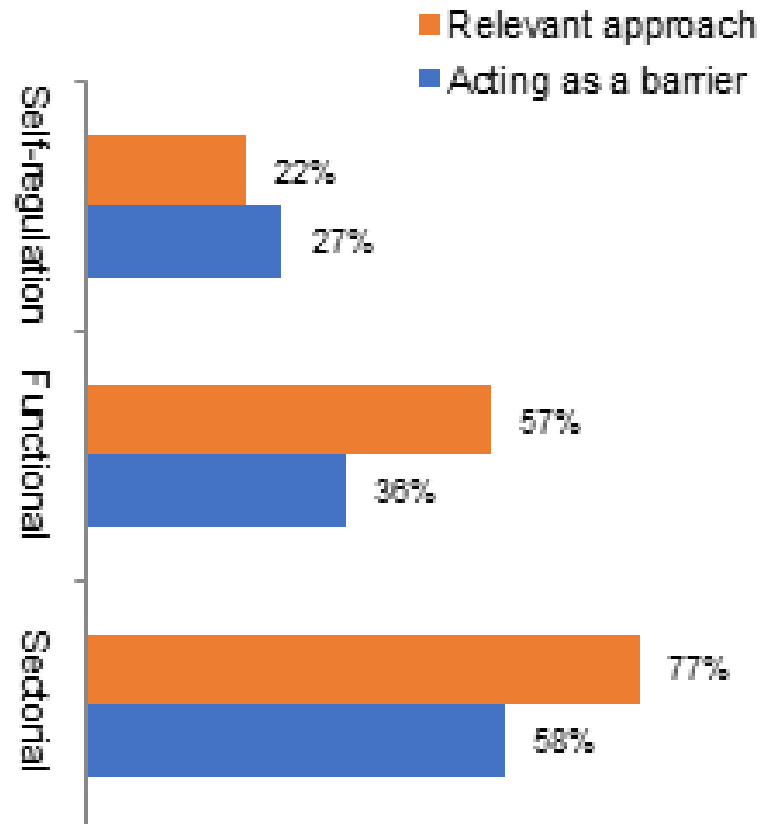


Authorities



Respondents indicate that there is a need of further involvement from all the relevant authorities.

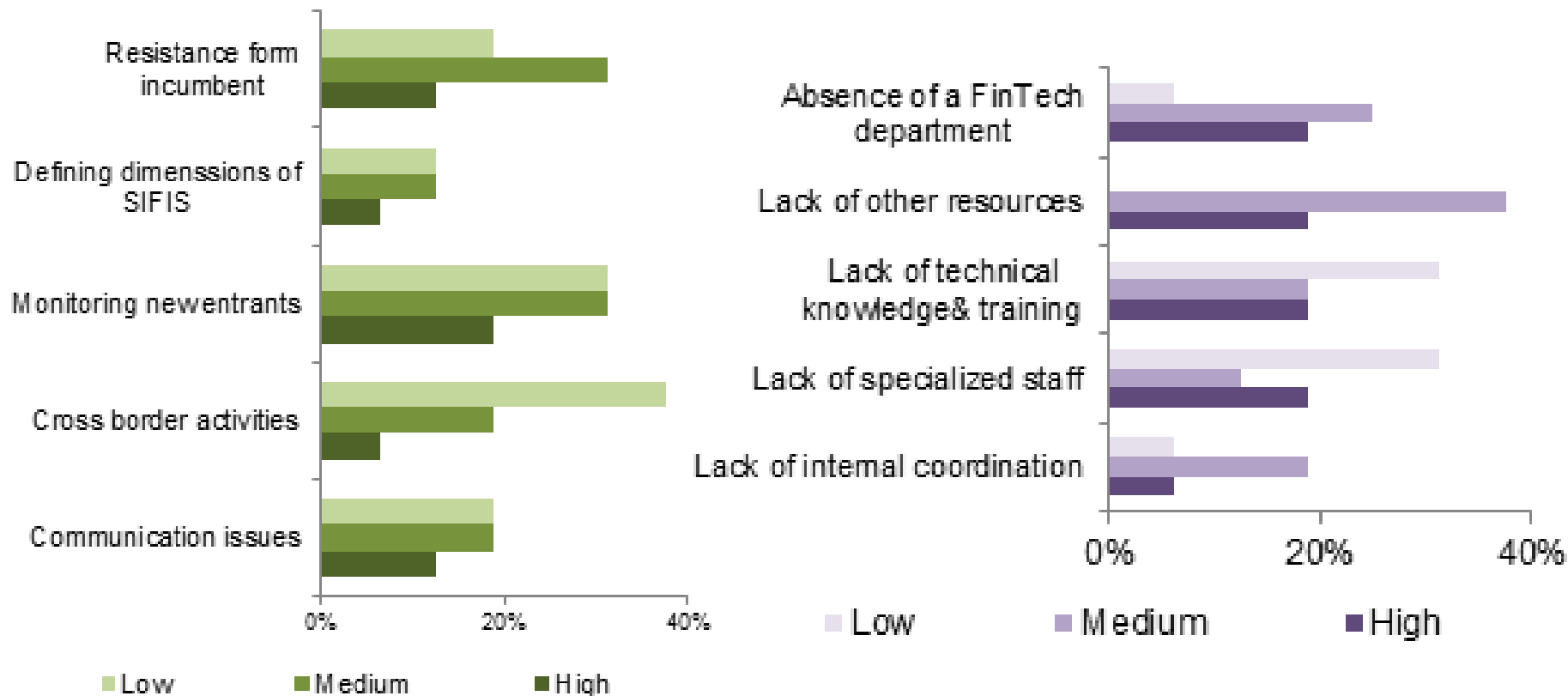
Authorities



Authorities

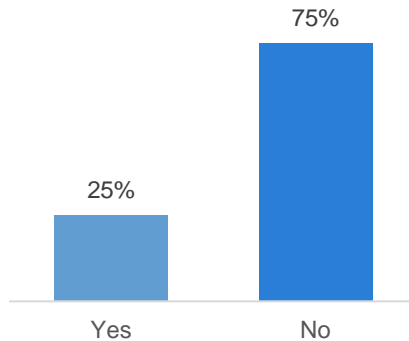
Regulatory approach	Representing a barrier	Potential benefits
Sectorial	<p>This approach may be too expensive for small (fintech) companies that are focused in limited services.</p>	<ul style="list-style-type: none"> • If prudential and proportionated, could boost innovation by increasing trust and acceptance. • Other non-regulatory barriers may be more significant (market structure, size and costs) in the region.
Functional	<ul style="list-style-type: none"> • Focuses on consumer protection & risk management which may create barriers for continuous innovation. • This approach may have flaws (proportionality). 	<ul style="list-style-type: none"> • This approach may promote innovation since it is based on functions and risks equalizing conditions, with compliance of minimum requirements • It may promote financial innovation & competition, particularly for new entrants. • This approach may be more frequently updated to remain current.
Self-regulation	<ul style="list-style-type: none"> • May create a misperception on the lack of general rules. • It can raise potential conflict of interest where incumbents try to prevent new firms to operate. 	<ul style="list-style-type: none"> • May reduce access barriers but may not guarantee legal soundness, therefore resulting in fragmented markets. • Should be considered as a complementary approach to enable financial innovation and promoting a culture of risks management. • If well supervised, this approach may create certainty and reliability at the industry level.

Authorities



Authorities

Innovation hub



YES:

There are specific programs from agencies for the development of new fintech developments (some of them are private)

A central bank established a working group to discuss financial innovation.

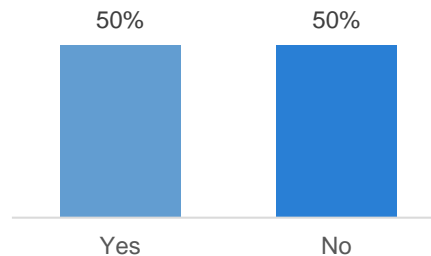
NO:

The private sector is very active in this area, making this not relevant for central authorities.

Some respondents mentioned that this measure has not been considered.

In some cases, the central bank has not yet reached the phase to decide which tool will be used.

Regulatory sandbox



YES:

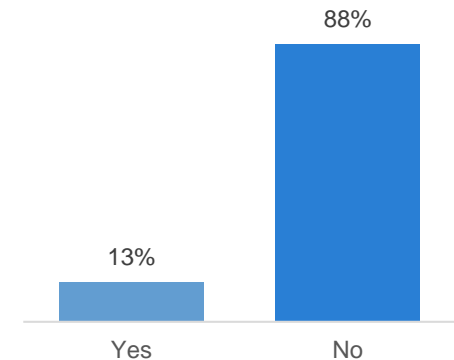
There is a variety of stages in the region. Given this, some countries are:

- Evaluating the possibility, with ongoing discussions, but with the need to clarify some issues, mainly legal aspects.
- At the initial stage, studying its legal feasibility.
- In the middle of the process, working on the creation of a sandbox.

NO:

- It is being analyzed, its pros and cons.
- Not yet considered to be included this tool in the regulations.

Accelerator



YES:

The private sector has an active role in developing accelerators and incubators. In fact, national and International entities are jump-starting new businesses by providing technical and financial support

Few respondents mentioned to have programs to promote new business.

NO:

The private sector is very active in this area, making this not relevant for central authorities.

From a regulatory perspective, it is required for any initiative to have an alliance with a CB regulated entity.

In some cases, not yet considered to be included this tool in the regulations

In the pipeline: Forum's 2019-20 agenda

Priority issues identified by the Forum

Issue (ordered by priority)	Proposed activity
CBDC experimentation	<i>Research-Working Group</i>
Regional repository	<i>Website project</i>
Data requirements for fintech	<i>Stocktaking-Working Group</i>
Regulatory regional approach	<i>Conferences, Stocktaking</i>
BigTechs	<i>Research-Working Group</i>
Adoption efforts for digital finance	<i>Stocktaking</i>

CEMLA Regional Innovation Hub

- Objective: to serve as a vehicle for LAC Central Banks to better understand (learning by doing) new technologies, and possibly developing tools and solutions for their specific tasks (regulation, surveillance, monitoring, operations, data analysis).
- Implementation: Central Banks to develop use cases and with that setting the grounds for a Regional Innovation Hub. The initiative will comprise:
 - Individual use cases' preparation.
 - Training activities.
 - CEMLA support & guidance from international experts (UCL, FNA, Silo AI).

Use cases

- Use cases will be proposed by LAC Central Banks and selected by the academic team.
- For each selected use case the involved teams will design the approach and methodologies beforehand.
 - Datasets must be available, and at least a part of the original dataset, or a simulated one, must be also available to academics and other Central Banks for training purposes.
 - It is expected that uses cases to be discussed and studied by external parties (other Central Banks) that could learn from the experience.

Use cases

- LAC Central Banks are kindly invited to analyze potential use cases and approach CEMLA.

Topics	Methodologies	Use Cases (examples)
Complex Systems Systemic Risk	Complex Networks PCA Random matrix theory	<i>Overlapping Portfolios Interbank lending Network filtering and validation</i>
Big Data Analytics Machine Learning	Probabilistic Modelling	<i>Risk Spillover</i>
Artificial Intelligence	Neural Networks	<i>P2P lending</i>
Distributed systems	Blockchain technologies	<i>Mortgage market</i>

Other CEMLA disruptive initiatives

Course on Fintech and Central Banking

Mexico City, November 12- 14, 2019

- Hands-on course delivered by UCL, a group that has trained FCA, UK staff.
 - Financial Computing & Analytics Group led by Tomasso Aste (Director UCL Centre for Blockchain Technologies). Other Group members include Fabio Caccioli, Paolo Barucca and Giacomo Lavin.
- Objective: To promote the knowledge exchange between academics and central bankers, who are regulating/overseeing these technologies in financial markets and are themselves using these technologies for policy and regulatory purposes.
- Topics: Overlapping portfolios, interbank lending, risks spillover, retail payments, P2P lending.

2020 Course on Fintech and Central Banking

Kingston, February 2020

- Hands-on course delivered by FNA and Silo AI experts.
 - FNA has a long career in supporting financial authorities to develop monitoring tools based on financial networks and related analytical tools.
 - Silo AI has supported European central banks to develop systemic risks analytical tools based on artificial intelligence.
- Objective: To promote central bankers approaching innovative analytical and visual tools for financial stability and regulation purposes.
- Use cases: Regtech, supotech, AI-based solutions for central banking operations tasks, among others.

2020 Course on Machine Learning

Venue to be confirmed, II-2020

- Hands-on course delivered by the Deutsche Bundesbank.
 - Bundesbank staff with expertise in machine learning, artificial intelligence and big data, from the perspective of central banks
- Objective: To promote the knowledge exchange between central bankers, who are interested in developing solutions for the collection and analysis of data based on new technologies.
- Topics: Intelligent systems, collection, analysis and use of big data, governance and data management, case studies from central bankers, regulators and supervisors as well as other industries, data protection and data access issues

Thank you for your attention