



# Regulating Financial Innovation: What Does It Take?

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# Foreword

**Adrienne A. Harris,**

Former Superintendent, New York State Department of Financial Services

**R**APID TECHNOLOGICAL ADVANCEMENTS AND innovation present a unique opportunity to build an equitable, transparent, inclusive, and resilient financial system that benefits individuals and supports businesses. However, to seize this opportunity, regulators must play an active role by providing intentional regulatory guidance to steer market participants towards inclusive finance, setting necessary guardrails to ensure customers are empowered to conduct their financial lives in ways that are productive and safe.



For regulators to play such a role, their work must be guided by a vision that integrates innovation and financial inclusion into core regulatory functions. The false choice between consumer protection and innovation must be rejected, as regulators must find the right balance between ensuring they are protecting consumers and markets while creating an attractive and competitive environment for providers to thrive. To succeed, regulators should continuously work towards improving and modernizing both regulation and supervision. This requires regulators' commitment to data-driven oversight, as well as investment in cutting-edge technology and human capital resources, including specialized teams. Such specialized teams must have diverse professional backgrounds across sectors and industries; and to compete with the private sector for such talent, regulators must cultivate an outcomes-oriented culture of innovation across the organization.

Equally important, regulators must continuously engage with all stakeholders to build trust through enhanced transparency and mutual understanding. Both formal and informal channels that foster open dialogue and collaboration with entrepreneurs in cutting-edge fields should be commonplace. At the international level, regulators should provide guidance and technical assistance to their counterparts, promoting global consistency in financial innovation while supporting collaboration and capacity building.

This paper offers valuable insights into the ways in which regulators around the world have succeeded in adjusting to the new realities of innovative finance while ensuring opportunities for advancing financial inclusion are not lost. By telling stories of individuals and institutions, the paper lifts the veil, allowing the reader a glimpse into the strategies and tactics that have put jurisdictions on the global map of innovative finance.

# Foreword

**Cristina Junqueira,**

Co-founder and Chief Growth Officer, Nubank

## **INNOVATION IS THE DRIVING FORCE BEHIND**

financial inclusion, serving as the fundamental engine that addresses exclusion and expands access to financial services. By fostering new business models and leveraging technology, innovators can reach underserved populations, reduce costs, and offer better choices to consumers. However, the success of innovation in promoting financial inclusion depends critically on the regulatory environment. Regulators play a pivotal role as catalysts, establishing the infrastructure and policies that enable competition and disruption, ultimately benefiting consumers.



Over the past decade, the role of regulators in promoting innovation for financial inclusion has evolved significantly. Where regulators were once seen as resistant to change, today they are recognized as key accelerators of disruption and competition. This transformation is especially evident in Latin America. As described in this paper, Brazil's proactive regulatory approach—exemplified by initiatives like Pix and open finance—has become a global blueprint for fostering innovation. Through these structural changes, regulators have demonstrated how policy can drive both competition and inclusion, setting a new standard for the world, and setting the stage for what's to come with AI and open finance for hyper personalized experiences and low-and-growth lending. The partnership between the private and public sectors—where innovators challenge the status quo and regulators create the conditions for fair competition—ensures that consumers are the primary beneficiaries, gaining access to better choices and the ability to make more informed decisions, while preserving system integrity.

This paper offers a new approach—vision-driven regulation—to financial sector regulation suited to modern day regulatory architecture. Driven by clear vision, strong leadership, innovation culture, and active collaboration, regulators can seize the opportunities presented by innovation and deliver lasting benefits to consumers and markets alike. By embracing this mindset, regulators can harness innovation to build a more inclusive financial system—one where everyone, regardless of income or background, can benefit from accessible and equitable financial services.

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## Abbreviations

APIX	API Exchange Platform
BCRP	Central Reserve Bank of Peru
BIS	Bank for International Settlements
BoG	Bank of Ghana
BNM	Bank Negara Malaysia
CADE	Conselho Administrativo de Defesa Econômica (Brazil's competition authority)
CBDC	Central Bank Digital Currency
CBB	Central Bank of Brazil
CMF	Financial Market Commission (Chile)
FIO	Fintech and Innovation Office (Bank of Ghana)
FAOM	Fintech Association of Malaysia
IFWG	Intergovernmental Fintech Working Group (South Africa)
MAS	Monetary Authority of Singapore
RBI	Reserve Bank of India
RBIH	Reserve Bank Innovation Hub (India)
SSBs	Standard-Setting Bodies
UK	United Kingdom
US	United States

## SECTION 1

# Introduction

**I**N JANUARY 2025, KWAME OPPONG, THE Director of Fintech and Innovation Office (FIO) at the Bank of Ghana (BoG) announced in a LinkedIn post that the central bank was awarded top mobile money regulator by Global System for Mobile Association (GSMA). In the post, he underscored the role of FIO in the achievement. The announcement did not surprise those who had followed Ghana’s story. Within five years under the influence of Deputy Governor Maxwell Opoku-Afari and Oppong, the BoG launched an innovation office, piloted a retail central bank digital currency, and proposed an open finance framework. Oppong, coming from the private sector, was initially hired for a year to advise the governor and his deputies on fintech and innovation only to later find himself setting up and heading an innovation office with 46 staff members.

What Oppong and the central bank have achieved is more than proving they can execute initiatives oftentimes associated with wealthier and more advanced markets such as the United Kingdom. They have taken important steps towards building internal capacity to harness innovation, changing organizational culture, and positioning the central bank for the 21st century. And they are not the only ones.

In this paper, the stories of Ghana, Brazil, Singapore, and other markets are featured, explaining how they have succeeded in harnessing innovation to advance financial inclusion. It focuses on their efforts to set a vision for the financial sector, build innovation culture within traditionally conservative organizations, and

engage strategically with the industry. The stories in this paper sometimes show success, sometimes failure, and almost always a struggle. By telling these stories, the authors hope to inspire financial sector regulators and policymakers to dream big, articulate their vision and push it forward. It aims to show that it is possible despite constraints—small or big—to make a lasting change.

And change is needed indeed. Today, 1.3 billion adults remain financially excluded (Klapper et al. 2025) and many more underserved, while the increased digitization of our daily lives renders involuntary financial exclusion unacceptable. Innovation can change that, and regulators play a critical role as they have in the past—from microcredit in the ‘80s, to branchless banking in the 90s, mobile money in 2000s, and digital financial services in 2010s. Now, as the financial system is being reinvented, there is a unique opportunity to learn from past mistakes—failures, crises, and systemic financial exclusion—to build a financial system that is more inclusive and equitable.

**[...] the authors hope to inspire financial sector regulators and policymakers to dream big, articulate their vision and push it forward.**

## SECTION 2

# Five Elements

**IT TOOK SINGAPORE TWENTY-FIVE YEARS** to join the club of high-income countries in 1989, driven by rapid industrialization and the country's strategic location for trade. Today, Singapore is a financial center with a vibrant start-up ecosystem and over 2,000 fintech companies. With GDP per capita at US\$90,000 (World Bank Data 2025), it is among the wealthiest nations in the world with a large financial sector contributing ~14 percent of the GDP (Yong 2025). This achievement is attributed to a policy approach described as the "Singapore Synthesis" (Menon 2022) in a book authored by the man who is considered one of the key forces behind the transformation of the city-state into the international fintech hub: Ravi Menon, ex-Managing Director of the Monetary Authority of Singapore (MAS).

According to Menon, Singapore's success in promoting innovation started as an intuition that emerging technologies were about to change the financial sector in a way that could benefit Singapore and position it as a gateway to Asia. Many other regulators were aware that emerging technology might be consequential for financial markets. MAS had not only the intuition, but the capacity to act on it. In 2015, Menon hired Sopnendu Mohanty as Chief Fintech Officer. In the next five years, MAS launched key initiatives such as a regulatory sandbox, API exchange platform (APIX), and the Singapore FinTech Festival. From intuition emerged a vision for a "progressive financial centre."<sup>1</sup>

The story of Singapore illustrates the fundamental elements underlying the regulatory capacity to harness

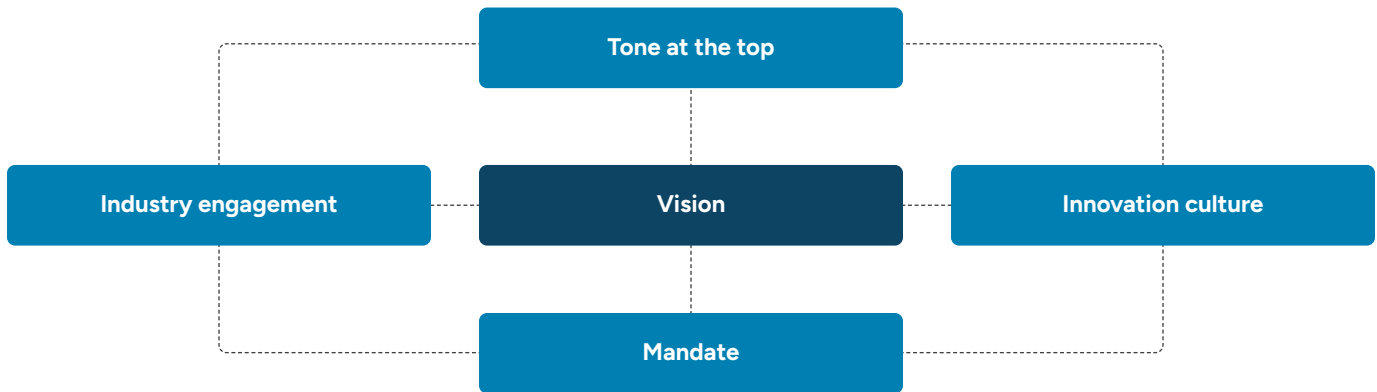
innovation and use it to advance inclusive finance, competition, and other policy objectives:

1. **Vision**—should give key stakeholders a clear sense of direction backed by the credible willingness to implement and necessary political support. A vision without the will to implement it, no matter how well articulated, remains an abstract idea.
2. **Tone at the top**—a critical expression of the will to implement the vision and strong encouragement to join in the effort should come from top executives within the organization.
3. **Innovation culture**—a set of values, attitudes, and behaviors that supports innovation. Innovation culture promotes experimentation, agility, and the ability to learn from failures. It requires leadership support and continuous capacity building.
4. **Industry engagement**—formal and informal channels available for dialogue with industry and related governing processes. Industry engagement strengthens mutual understanding between the regulator and private sector.
5. **Mandate**—regulators operate within legal mandates that often are interpreted as constraining their capacity to address innovation. However, with the needed recognition of the interlinkages between traditional mandates and other policy goals, and a strong vision and right tone at the top, such constraints can often be overcome.

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<sup>1</sup> The stated mission of MAS (as of October 30, 2025) is: "[t]o promote sustainable non-inflationary economic growth, and a sound and progressive financial centre." See [www.mas.gov.sg/who-we-are/about-us](https://www.mas.gov.sg/who-we-are/about-us).

FIGURE 1. Key Elements of Vision-Guided Regulation



Source: Authors

The five elements are intertwined and reinforce each other. And while there is no clear hierarchy among them or a sequence in which they should be implemented, the vision plays the most prominent role, with the four other elements revolving around a clearly defined vision (Figure 1). When implemented together, they lead to what we call “vision-guided regulation.”

## 2.1 Vision

At 101 meters tall, Central Bank of Brazil (CBB) headquarters dominates Brasilia’s skyline—distinct from the high-rises of São Paulo, the country’s financial center. Brasilia is a materialization of a modernist vision for the city of a new era. About forty years after its creation, CBB started pushing for a different kind of vision—a vision for a modern Brazilian financial sector.

By breaking the Redecard/Visanet duopoly in collaboration with Brazil’s competition authority the Administrative Council for Economic Defense (CADE) in 2009, CBB had set the scene for future reforms.

The retail payments law<sup>2</sup> in 2013 launched a new era for CBB; one marked by the shift from a market-led approach to a more interventionist, top-down approach in resolving market failures.<sup>3</sup> By 2016, CBB published a vision and supporting agenda (Agenda BC+). The vision focused on tackling structural issues in the financial sector—reducing the cost of credit, enhancing banking regulations, and increasing efficiency. Today, Brazil is a leader in financial innovation and Latin America’s largest fintech market, with over 1,500 fintechs, including some of the world’s largest ones such as Nubank. It has seen mass adoption of fast payments launched in 2020 and open finance launched in 2021.

A vision can be described in lengthy documents, summarized in a few bullet points on a website, or exist only as a common consciousness of market participants. Form and length matter far less than clarity and commitment to a vision that is:

- **Ambitious and realistic**—ambitious enough to stimulate progress and excite people, while realistically recognizing local circumstances. It

2 Law 12865/2013, instrumentalized by Resolution CMN 4282/2013.

3 The interrelated reforms include: creation of new licensing categories [payment institutions—PIs—including e-money issuers, payment initiation service providers, peer-to-peer (P2P) lenders, platform lenders, merchant acquirers (“credenciadoras”), and registers/clearers of card receivables], improvement of the risk-based customer due diligence rules to allow completely remote account opening, measures affecting credit and collateral data, prohibition of exclusivity clauses in merchant credit based on card receivables, creation of secondary markets for merchant card receivables, capping debit card interchange fees, creation of a loan clearing system, further standardization of payment instruments such as QR codes, the imposition of an open finance regime, and the creation of Pix, an instant payment system with mandatory participation for large financial service providers that allows nonbanks to settle transactions without having to use a bank intermediary.

should follow a cogent, consistent, gradual path towards a desired state.

- **Specific**—specific enough to serve as a compass, for instance in prioritization of topics, acquisition of resources, selection of tools, and measurement of impact.
- **Widely understood and supported**—no vision can be implemented in isolation. Stakeholders across public and private sectors should understand the vision and the role they play in achieving it.

A vision needs a visionary. Roberto Campos Neto, ex-Governor of CBB (2019 - 2025), recalls wanting to build: “something that affects people’s lives” and withstands the test of time. While the CBB’s reform agenda preceded Campos Neto’s arrival, it was he who personally fought with incumbents to complete disruptive initiatives such as Pix and open finance, impressing people beyond Brazilian borders. One Colombian fintech company noted: “A cowboy regulator like the Central Bank of Brazil: that’s what we need!” In addition, Campos Neto spearheaded many less well-known but equally important reforms, helping CBB to reduce inefficiencies and increase competition in payments and credit markets.

“Having a vision as a reference is comfortable for the market. Companies can make decisions easier, knowing what CBB thinks,” a fintech executive noted. Another added: “it is very important that CBB is very transparent about their view of the future of the financial system. Education, inclusion, competition, efficiency, sustainability—this agenda is clear to all participants.”

The industry requires high levels of certainty, and in many markets, the necessary clarity of vision may be lacking. While the Chilean fintech law has defined six principles for its implementation, it is not clear how the regulator will apply and prioritize them. In Peru, the initial lack of a strategic plan and regulatory action in open finance threatened to benefit the largest incumbent bank that has been setting up bilateral data sharing agreements based on its own standards and technical requirements. However, according to

José Luis Vasquez Paz from the Central Reserve Bank of Peru (BCRP), there is now an institutional vision focused on promoting innovation and competition. BCRP is working with the industry on Phase 4 of its interoperability strategy, which corresponds to the payment initiation model (or open payments). This phase will lay the foundation for a more open and interoperable ecosystem, with payment interoperability representing a concrete step toward the future development of open finance. The BCRP and the Superintendency of Banking, Insurance and Private Pension Fund Administrators (SBS) are coordinating a joint work agenda to ensure that this evolution toward open finance is implemented in the most secure, efficient, interoperable, and competitive manner.

Where a vision exists, but fails to play its navigating role, it is often due to:

- **Not respecting local circumstances**—visions implanted from outside or oblivious to local context are destined to fail and leave stakeholders frustrated.
- **Impractical complexity**—the more complex the vision, the harder it is for stakeholders to embrace it. One example of impractical complexity is a long timeline. While big visions often take decades to materialize, it is impractical for daily implementation to set goals reaching far beyond the stakeholders’ planning capacity.
- **Weak communication**—where a vision is not clearly and consistently communicated, there is a risk that the message will be misunderstood, ignored, or diluted over time. Without a compelling narrative that resonates with different stakeholders including banks and nonbank financial institutions, it becomes difficult to maintain alignment and shared purpose.
- **Lack of continuity and leadership commitment**—visions often span years. They require sustained leadership commitment across political cycles, administrative changes, leadership transitions, or crises. When key champions leave, the implementation of the vision may lose momentum, or be abandoned altogether. CGAP research

suggests, however, that compelling visions do not get abandoned when, for instance, political leadership changes. In such cases, the narrative for why the vision matters may change, but the vision can be preserved.

- **Insufficient resourcing and institutional capacity**—even the most compelling vision cannot be realized without the practical means to implement it. A lack of funding, human capital, or institutional strength can turn a well-crafted vision into a document with little real-world impact.
- **Lack of buy-in**—where key stakeholders, sometimes even those behind the vision itself, do not fully buy into the vision to support its implementation, the vision is destined to fail.

Stakeholders buy-in was among the most cited obstacles to vision implementation. Resistance can come from different stakeholder groups. Internal resistance can slow or derail progress if middle management resists the change due to workload pressures, fear of disruption, or risk aversion. Or when employees perceive the vision as “just another slogan.” Other market participants may resist the reforms to preserve status quo and protect their market share. Roberto Campos Neto recalls tackling the resistance methodically in Brazil. He would give presentations to small groups of legislators explaining CBB’s vision and the importance of needed legislative reforms (Campos Neto mentions that fifty laws had to be amended to implement various reforms)—gradually winning their support. He also motivated his staff by collaborating with global leaders in innovation from top universities (e.g., Stanford) and global firms (e.g., Dan Schulman, then-Chief Executive Officer of PayPal).

**Importantly, the tone at the top creates ownership of the vision that is necessary for its implementation and is a seed of innovation culture. A vision owned by nobody becomes a vision for nobody.**

## 2.2 Tone at the Top

When Ravi Menon stepped down in 2024 as the longest-serving managing director at MAS, he was leaving an organization acknowledged for its leadership in innovation and fintech. He encouraged MAS to integrate emerging technologies, regulatory flexibility, and a global outlook—embracing innovations such as programmable money, tokenization, and fast payments. To do this, he hired people with atypical skillsets. This approach reflects Menon’s belief that the regulator is both a developer and a promoter (Wilson 2019) of fintech and as such must find inventive ways to keep the financial sector safe without stifling creativity. His tone at the top created an environment where change is viewed as an opportunity rather than a risk.

A strong tone combines setting a clear vision, legitimizing experimentation, encouraging exploration, and backing it with real resources and authority. Tone without resources could have positive short-lived effects, like raising staff morale and motivation. But this could also be perceived as superficial. In the absence of tone, even well-resourced initiatives may struggle to gain traction or legitimacy. Importantly, the tone at the top creates ownership of the vision that is necessary for its implementation and is a seed of innovation culture. A vision owned by nobody becomes a vision for nobody.

## 2.3 Innovation Culture

In 2015, the Bank of Ghana made a significant pivot when it overhauled its branchless banking guidelines issued seven years earlier. The guidelines forced mobile network operators into partnerships with banks, effectively stalling mobile money growth. In 2011, Elly Ohene-Adu, the head of the Payment Systems Directorate, concluded that a radical move away from the bank-centered model was required. Her insight led to Ghana’s first bespoke licensing category for nonbank e-money providers (Mattern and McKay 2018), marking the beginning of unprecedented advances in Ghana’s financial inclusion.

A few years later, Kwame Oppong joined BoG. Over time, he managed to gain the trust of his colleagues and brewed a culture of innovation. Oppong worked to develop relationships within BoG’s senior ranks, but also recruited new staff—growing the innovation office from five to forty-six employees by 2025. On average, staff in his division are younger and, as Oppong describes them, “non-lateral thinkers.” While he brought in a few specialists from outside, he also sought talent within the BoG. Deputy Governor Opoku-Afari recalls that, at one point, all the younger employees wanted to work in the FIO, yet only a few passed the selection process and joined.

To build capacity on new topics, some staff members were sent to external training courses at renowned universities such as Cambridge or Harvard, and global training institutes. Oppong also built credibility and enthusiasm for his work by organizing “Fintech Fridays,” where anyone from BoG could come and learn about fintech-related topics. Nevertheless, changing a culture takes time. One challenge Oppong noted was that agendas labeled “digital” tended to be automatically assigned to his office, creating a risk that other departments offload work onto the FIO without adopting innovation culture themselves.

Innovation culture can be defined as a set of values, attitudes, and behaviors that encourage and support innovation, and promote experimentation, agility, and the ability to learn from failure. It supports experimentation and some level of risk-taking, for instance through regulatory sandboxes and internal innovation challenges. It encourages constant learning and information exchange that exposes staff to different perspectives.

While culture is an abstract concept, it is demonstrated in tangible ways by questioning current practices and embracing new ways of doing things. Peer exchanges such as regular internal workshops, lunch presentations, innovation challenges and joint retreats can promote knowledge exchange. Collaboration can help bring together experts from different departments to work along with the innovation team. For instance,

the Capital Markets Authority of Kenya’s regulatory sandbox team would regularly work on sandbox cases with subject matter experts from the regulatory, supervisory and IT departments. The Peruvian central bank has used a similar cross-team approach to advance its payment interoperability project.

Allowing the innovation culture to reach outside the innovation department, however, does not mean that a risk-tolerant culture must prevail. An innovation culture does not mean embracing excessive risk; it should create conditions where new ideas and experimentation are encouraged, and where learning from failure informs better assessment of risks. Rather, a healthy “competition of cultures” supported by information exchange, peer learning and discussion, helps the authority find its equilibrium in pursuing innovation without running into unmeasured or unknown risks. In recent years, such competition is intensifying as regulators hire more data engineers, data scientists, experts in blockchain and tokenization, AI experts (Table 1). Though, it is important to note that it does not suffice to hire these “outliers” to junior positions in which they are managed by senior staff

TABLE 1. **Hiring for Innovation by MAS (August 2021 - May 2025 (% of total))**

Skill Grouping	Percentage of total posts by MAS
Cyber Security	17.04%
FinTech	14.73%
Data Warehousing	12.98%
Data Analysis	12.41%
Cryptocurrency	8.64%
Tokenization	6.49%
Machine Learning	5.19%
Data Modeling	4.62%
Blockchain	4.26%
Central Bank Digital Currency	4.26%
Artificial Intelligence	3.94%

Source: Authors (see annex for details)

with “traditional” mindsets. The organization must acquire new talent and skillsets across its hierarchy.

## 2.4 Industry Engagement

Within less than two years since its launch in late 2020, Brazil’s open finance ecosystem overtook the one in the United Kingdom—until then considered to be the leader in open banking. Over 66 million individuals have used Brazilian open finance as of September 2025 (Open Finance Brazil 2025). A key to this success has been stakeholder engagement encompassing the open finance governance structure and the central bank’s decision to intervene only when implementation barriers could not be solved by the industry itself.

Gustavo Bresler, a Brazilian expert in open finance explains how industry players (old and new) and regulators come together to quickly solve challenges in open finance implementation. They use WhatsApp, Zoom and other means of communication to quickly alert each other of problems and find solutions. These mini, sometimes ad hoc, working group conversations are informal and highly efficient.

Industry engagement may be the piece of regulatory architecture that has changed the most in response to innovation. Regulators need to follow fast-paced market developments and to understand the sophisticated technology underlying financial innovations. New types of providers have emerged, competing with incumbents that have long-established relationships with the regulators. Establishing open, transparent, frequent, and equitable means of industry engagement is therefore a matter of necessity and essential for creating a level playing field.

For good industry engagement, regulators should ensure that:

- Stakeholders of various types are adequately represented.
- The right level of industry management is involved.

- The process becomes a routine, not only prompted by special occasions such as drafting a regulation.
- Industry players are empowered to initiate the engagement rather than wait for the regulator’s initiative.

Industry associations play a vital role in engagement with the regulator. That may partially explain why in some jurisdictions such as Singapore or Thailand, the foundation of fintech associations has been assisted by the regulator itself. In Uganda, the central bank was instrumental in setting up the Payment Services Providers (PSP) Association, as it was easier for the central bank to engage with the association rather than with individual PSPs.

Industry associations can also take part in the regulatory agenda. To make the application process more efficient, Bank Negara Malaysia (BNM) partnered in 2023 with the Fintech Association of Malaysia (FAOM) to screen applications to the regulatory sandbox. FAOM’s roles in screening include (FAOM 2025):

- Initial assessment to determine whether the sandbox is suitable for the proposed test.
- “Mentorship and Readiness Check” assessing eligibility and readiness for the sandbox.
- Application guidance on how to submit a strong application to BNM.
- Feedback to BNM about each applicant.
- Policy insights to help identify areas where the regulatory framework could evolve to better support fintech innovation.

In highly concentrated markets with dominant banks, industry associations representing non-banks bring the desired diversity of perspectives into regulatory discussions. In Malaysia, besides FAOM, there are the Registered Digital Market Association (representing the crowdfunding industry), Digital Asset Platform Association, the Bank Association of Malaysia, and the Insurance Association of Malaysia. To ensure balanced decision-making in open finance in Brazil, CBB mandated the participation of industry associations

representing different banking and nonbanking segments in the governance of the open finance implementation structure. Industry associations also help smaller firms with limited bandwidth and expertise to participate in dialogue with the regulator.

Innovation facilitators and sandboxes have also helped with industry engagement—making regulators more available even to smaller firms or those without pre-existing contacts. Through consultations, firms get their regulatory questions answered, while regulators learn about innovation and the underlying technology. In Ghana, the FIO changed the way BoG communicates with the industry, among other things, by setting up the “FinTech & Innovation” section on BoG’s website that includes detailed descriptions of licensing categories, a breakdown of licensing requirements, a glossary, and fintech statistics. It also allows innovators to book a virtual appointment with BoG using an online calendar or even to start the license application online by filling in a form (BoG 2025). Clarence Blay, who is now the Head of the Payment Systems Department at BoG and was with the FIO before, describes their approach towards fintech as “holding in one hand a stick to make sure that they comply, in other hand a carrot making sure to nurture them.”

There are many challenges and obstacles to effective industry engagement. For regulators, they often have to do with confidentiality of information, the restrictions on providing normative guidance, let alone legal advice, and limited capacity and resources. The key is to start where feasible, carry on and not give up.

For providers, challenges exist too. Newcomers often mention not knowing which regulator to address with their queries or applications. This is why the South African Intergovernmental Fintech Working Group (IFWG) set up the Regulatory Guidance Unit (IFWG 2025a) as a central point of enquiry. The unit operates a “first responder network” consisting of subject matter experts from all eight IFWG member organizations

(IFWG 2025b) and a central portal for submitting enquiries. Once received, the enquiry is shared with all regulators of relevance, and a joint response is submitted to the innovator (IFWG 2025c). Insights from the enquiries are used to inform the IFWG’s work.

**There are many challenges and obstacles to effective industry engagement. [...] The key is to start where feasible, carry on and not give up.**

## 2.5 Mandate

When merging the banking supervisor with the supervisor of securities and insurance into the single agency Financial Market Commission (CMF), the legislators in Chile decided to add ‘market development’ into its mandate (Law No. 21.000 passed in 2017). According to Kevin C. Logan, ex-Commissioner at CMF, this was seen as beneficial for future financial market expansion and deepening both by the legislators and the industry. The Law also gave the CMF power to initiate legislative changes by submitting proposals to the Ministry of Finance. This power was later used to initiate the FinTech Law (Law 21.521 passed in 2023). The primary reason for this initiative was the rapid rise of the fintech sector and the need to bring new players within the regulatory perimeter. The Fintech Law connected the CMF’s market development mandate to the objective of promoting competition, innovation, and financial inclusion.

Not all modifications of mandates are introduced through legislation, though. CBB, for instance, interprets its stability and efficiency mandate in a broad manner, allowing for pro-competition and pro-inclusion initiatives. Prior to recognizing the close interrelationship between core mandates and “unorthodox” goals, CBB had to fight the competition

authority CADE in court to play a role in competition.<sup>4</sup> This fruitless fight was later substituted by a close inter-agency collaboration between the two agencies, enabling CBB to explicitly include goals such as financial citizenship (i.e., financial inclusion, education and health) and competition, as elements of its Agenda BC# (CBB 2025).

Besides the question of scope, another pertinent debate concerns jurisdiction. In countries with multiple regulators, who should be responsible for what innovation? Coordination mechanisms are often suggested and tried, but with mixed success. Kristin Johnson, an ex-Commissioner at the United States Commodity Futures Trading Commission has suggested a more straightforward solution—the legislative body decides by amending the relevant laws (Johnson 2025).

Mandates matter, but how much? CGAP has long argued for building synergies among key policy

objectives of stability, integrity, and consumer protection (see, e.g., the I-SIP toolkit, Tomilova and Valenzuela 2018). What does the expansion of mandates to include market development, competition, and innovation (see, e.g., Tombini 2025; Kirakul et al. 2021), mean for the debate on the role of mandate as an enabler or inhibitor of regulatory efforts to harness innovation?

The evidence suggests that the mandate matters. But there is also evidence that legal ways can be found to overcome an apparent limited mandate, allowing financial sector authorities to start initiatives that enable innovation. Especially, in jurisdictions where there is recognition of the interlinkages and complementarities between traditional mandates and other policy goals such as competition and financial inclusion, or where a vision and tone are in place. These can often be linked back to core mandates such as stability and efficiency. In some cases, like in Chile, legislative changes need to be considered.

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4 Law 4595/1964, which created CBB, notes that CBB will address competition as part of its supervisory responsibilities (art. 18) and will analyze concentration acts (art. 10, X, c). However, this “competition mandate” triggered a long legal battle between CBB and CADE (created in 1962). The dispute reached the constitutional court and was dismissed in 2014 (Supreme Federal Court 2014). CADE and CBB abandoned the lawsuit in 2015 and in 2017 created a working group that culminated, in 2018, in a Memorandum of Understanding (MoU) and a Joint Normative Act. Among other issues, these instruments formalized how the two organizations would coordinate analyses of market abuse, share information and establish a schedule for regular meetings. These instruments were incorporated into a draft law that is currently waiting for deliberation in Congress.

## SECTION 3

# Conclusion

**T**ODAY, REGULATORS ARE FACED WITH the opportunity to harness innovation for inclusive finance. In fact, they are expected to seize this opportunity, often to help their markets leapfrog. They do so by adopting policies, modernizing their own modus operandi, and building—or helping to build—market infrastructure. The broader context in their jurisdictions sometimes poses limits outside of the authority’s control. A country with severe structural deficiencies cannot expect to become an innovation center overnight merely by publishing a vision for the financial sector, issuing a regulatory sandbox or open finance guidelines.

When foundations are in place, regulators who succeed in the task of harnessing innovation to advance a mix of policy objectives are those who follow vision-guided financial regulation that revolves around five key elements: (i) the vision, (ii) tone at the top, (iii) innovation culture, (iv) industry engagement, and (v) mandate. This publication presents examples of how these elements have featured in countries as diverse as Brazil, Chile, Ghana, Kenya, Malaysia, Peru, Singapore, South Africa, Thailand, and Uganda.

Following vision-guided regulation should help regulators in their efforts to harness innovation for inclusive finance. Among other things, it should help them prioritize their work and where to spend limited resources—should these be spent on open finance, fast payments, Central Bank Digital Currency (CBDC), or

whatever comes next? Vision-guided regulation should help regulators contextualize their innovation-focused efforts rather than indiscriminately following the latest trends. Better contextualization increases the likelihood of positive impact on the policy objectives they pursue. Finally, this approach helps align all stakeholders behind the vision, creating synergies in their respective efforts.

Vision-guided regulation is not a blueprint, but rather a new approach to financial sector regulation apt for the 21<sup>st</sup> century’s regulatory architecture. As such, it promises to enable a more inclusive financial system where everyone can benefit from the financial services regardless of their income level and other socio-economic demographics. Innovation often promises to enable a new ecosystem, change the prevalent paradigm, or disrupt entrenched market dynamics. Thus, it is very important to ensure new ecosystems or paradigms are more inclusive and equitable than the old ones. And that can only be done if diverse voices are represented in the process.<sup>5</sup> And if inclusive goals remain a key reference in the regulator’s mind.

Our hope is that this paper, and the real-life examples featured here, inspire financial regulators and policymakers around the world to advance financial inclusion by embracing the concept of vision-guided regulation. For those regulators inspired enough to jump into action, CGAP is preparing a set of knowledge products focused on individual elements and/or specific technical topics related to innovation.

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5 For instance, by considering disparate conditions faced by women when designing a CBDC such as limited access to their own smartphones.

# Research Methodology

**T**HIS PAPER IS BASED ON A combination of desk research, remote interviews and in-country visits. The desk research was primarily focused on the analysis of various documents, including international standards, national laws and regulations, policy guidance documents, academic and non-academic research, news articles, and social media posts. In addition to the human review performed by the authors and the supporting team, artificial intelligence tools (ChatGPT, MAI –a World Bank enterprise solution, ChatPDF, and Microsoft Co-Pilot) were used, especially to analyze the documents and answer research questions with the team reviewing the AI output.

The remote interviews were conducted with stakeholders representing both the public and private sector. The interviews were conducted confidentially. The attributed information that appears in this paper has been approved for publication by the individuals concerned. The country visits consisted of in-person interviews, multi-stakeholder discussions (e.g., roundtables) and onsite observations that provided further detail to enrich our knowledge gathered from desk research and remote interviews. The authors interviewed and consulted over 200 experts from over 26 countries, including Rajesh Bansal (former Reserve Bank Innovation Hub), Clarence Blay (Bank of Ghana), Gustavo Bresler (Iniciador), Andrew Kawere (Bank of Uganda), Kevin Cowan Logan (Universidad Adolfo Ibañez), Sopnendu Mohanty (GFTN), Roberto Campos Neto (Nubank), Maxwell Opoku-Afari (former Bank

of Ghana), Kwame Oppong (former Bank of Ghana), Diego Perez (ABFintechs), Carolina Sansão (Febraban), Alvinder Singh (Monetary Authority of Singapore), and José Luiz Vasquez (Central Reserve Bank of Peru).

The analysis of skillset acquisition by financial sector regulators presented in this paper (see Table 1) has been conducted by Chmura Economics & Analytics hired by CGAP. Through this analysis, the authors sought to understand how regulators adjust their hiring to better deal with innovation. Job posts (between August 2021 and May 2025) by selected financial sector regulators in Australia, Malaysia, Singapore, South Africa, and the United Kingdom were scanned for presence of one of the key words. The key words were: Artificial Intelligence, Blockchain, CBDC, Cryptocurrency, Cyber Security, Data Analysis, Data Modeling, Data Science, Data Warehousing, Financial Technology (FinTech), Machine Learning, Open Finance / Open Banking, Quantum Computing, Regulatory Technology (RegTech), Regulatory Sandbox, and Tokenization. The analysis has provided us with a rough estimate of the trends in human resources (HR) acquisition by financial sector regulators in those markets related to innovation- and/or technology-specific skills. There are several caveats to this approach. First, there is no way to tell if the job was filled or not. Second, there is no way to tell if the job post was posted repeatedly. Third, there is no way to tell if some of the hiring was triggered by events besides the strategic need for re-skilling such as hiring cycle, an external shock (e.g., cyber-attack),

budgetary cycle, political influence etc. Fourth, all job posts that included the key words were counted. That is, if an agency had a standard language referring to cryptocurrency, even when hiring a maintenance staff (e.g., a leading cryptocurrency regulator expanding its cleaning team), it was counted. The summary findings of the HR analysis have been published in a blog post (Jeník and Feibel 2025).

Finally, the work has been further informed by CGAP's qualitative research into the role of competition policies in advancing financial inclusion (see Kumaraswamy and Kremnitzer 2025).

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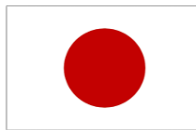
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