

Open Finance Implementation: Global lessons from the first wave of innovation

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Executive Summary

Open finance refers to systems which support consumer-led financial information sharing, where financial service providers—at the consumer’s direction—make their financial information available to other financial service providers to help the consumer benefit from new products and innovations. Since 2018, dozens of countries have implemented or are considering open finance in their markets.⁴

This report summarizes key lessons on open finance implementation from early-mover markets, with the goal of supporting policymakers to develop appropriate open finance ecosystems for their local context. The key lessons are focused on four topics that are key to the early stages of open finance implementation:

- 1. Governance models and industry oversight
- 2. Liability frameworks
- 3. Costs, pricing and monetization of open finance
- 4. Supervision of open finance ecosystems

1. Governance in open finance

Governance in open finance encompasses key policy decisions such as design of the open finance ecosystem, rules and standards on participation, and safeguards for consumer protection and competition. **Policymakers with experience in open finance repeatedly emphasize how critical the design of the governance system is to ensure a smooth start to open finance, and to ensure open finance evolves over time with market needs and trends.**

As open finance evolves, some markets have adjusted their governance approaches over time, either to address slow development of the ecosystem, or to reflect new use cases and participants in open finance. Each model will be highly dependent on policy mandate, market structure, and policy objectives, but several key lessons have emerged on governance from early open finance implementation experiences, a partial list of which are summarized below (a full list of key lessons is shared in Section III. of this report):

Key lessons on governance in open finance (full list on page 6)	
Rule-setting for open finance	<ul style="list-style-type: none">1. Some degree of mandatory participation and common standards helps to achieve timely progress with open finance.2. Common API and data standards are necessary to enable open finance to develop swiftly and efficiently.3. Rules and standards on key topics should be integrated within the regulatory framework, such as technical standards, minimum aspects

⁴ Juneja, Sanya, Bill Roberts, Dana K. Salman, Pavle Avramovic, Alan Ainsworth, and Bryan Zhang. 2024. [The Global State of Open Banking and Open Finance Report](#). Cambridge Centre for Alternative Finance.

	of contractual relationships (e.g. liability or pricing rules), and standards for complaints handling and redress.
Industry oversight	<ol style="list-style-type: none"> 1. Even if implementation is largely left to the industry, there should be strong oversight by relevant authority(ies). 2. User experience standards should be developed and issued by the authority to ensure usage is not hindered or made overly complex. 3. Industry bodies' roles may change over time—including taking more of a lead in day-to-day operations and oversight as markets mature.
Driving open finance adoption	<ol style="list-style-type: none"> 1. Fast, interoperable payments are key to open finance use cases and market expansion. 2. Government data and digital public infrastructure can make open finance more appealing and incentivize participation. 3. Private sector implementation entities and self-regulatory organizations can support long-term sustainability and flexibility of open finance.

2. Liability frameworks in open finance

Liability in open finance refers to the rights and responsibilities of firms for their conduct in open finance. **A clear liability framework is essential to underpin trust, but is complex to implement in open finance, as it involves a diverse range of entities and the movement of sensitive data.**

Assigning liability in open finance may require new frameworks which account for the various interactions which occur in an open finance ecosystem and the diverse set of entities participating in open finance, including non-regulated financial institutions and third parties involved in data transfers and transaction initiation. Aspects of open finance where decisions need to be made on the design and rules of a liability regime include: 1. Regulatory basis of liability; 2. Allocations of liability amongst participating entities; 3. Principles for allocation of liability for third parties; 4. Requirements and processes for resolution of disputes; and 5. Making consumers whole. Each of these aspects are discussed in detail with country comparison of policy approaches in Section IV. of this report.

<p>Key lessons on liability frameworks in open finance (full list on page 12)</p> <ol style="list-style-type: none"> 1. The technical infrastructure underpinning open finance has implications for the liability regime. A single channel simplifies liability relative to distributed solutions, but a single channel also creates a single point of failure and the risk of a large-scale liability event. 2. Data presents new challenges to assigning liability versus other financial transactions, as data is non-rivalrous and the same customer data can be held by many parties. 3. There is an important distinction between liability related to sharing of data and the use to which shared data is put by the data recipient. 4. The scale of data breach risks raises possible needs for indemnity insurance or other mechanisms for participating entities to be able to make others whole. 5. It should not be incumbent on customers to enforce liability and determine with whom to seek redress, and systems should be in place to make customers whole while participants determine liability.

3. Costs, pricing and monetization in open finance

Policymakers and industry must decide on what the right approaches are to covering operating costs of the systems, and establish rules for pricing and monetization of different data exchanges and transactions linked to open finance. **Regulators are often put in the middle of what can be contentious discussions on who pays for the infrastructure, and whether participants should pay for data exchange of transaction initiation. Industry incentives on these topics are often not well aligned across financial service provider types, making setting pricing rules all the more difficult.** Two of the most important early decisions on costs and pricing regulators will need to take are: 1. The financing of national infrastructure, and 2. Fees for service and cost recovery.

Open finance ecosystems have highly varied approaches to the topics of funding costs of open finance and whether any aspects of open finance can be charged for. In most cases larger financial institutions have borne a substantial part of upfront infrastructure costs, with costs being more evenly shared across participants over time. In policy-led, mandatory models, there are generally some sets of rules and standards regarding charging for data exchanges or transactions. Some markets prohibit charging, while others allow charging beyond a certain volume of exchanges, or set rules on how much may be charged. It is also important to set principles against things such as discriminatory or anti-competitive pricing, so that firms may not use pricing as a way to discourage data exchange requests.

Key lessons on costs, pricing and monetization in open finance (full list on page 16)

1. Where charging for data or payment initiation is allowed, market-based pricing raises concerns about costs to consumers and use of pricing for anti-competitive purposes.
2. Firms should at a minimum not be allowed to charge different rates for the same services in open finance. Further consideration should be made as to whether costs should be based on amount/volume or a cost-recovery principle, versus allowing a free-market pricing schedule.
3. If fees for data requests are permitted (not the common practice), this could result in pass-through charges from paying firms to their customers and impact objectives such as affordability and financial inclusion.
4. Open finance pricing rules need to not conflict with any existing data sharing provisions, such as data protection laws which prohibit charging for access to personal or financial information.

4. Supervision of open finance ecosystems

The wide range of financial and non-financial institutions serving consumers and handling their data in open finance ecosystems requires robust prudential, market conduct, and consumer protection supervision. It also requires technical knowledge in a range of disciplines likely not within the current capacities of any single authority, and new data collection and analysis needs. Supervisory frameworks and metrics should be established from the outset of open finance, specialized supervision teams set up to address its cross-functional nature. There are three primary categories of new supervisory tasks arising in open finance, summarized in the table below.

Open finance supervisory task	Goals of supervisory task
Monitoring market performance and market risks	Ensure growth of the market, security and safety of the ecosystem Ensure adherence to minimum performance standards
Monitoring conduct and consumer risks	Identify and remedy risks which threaten firms and consumers
Dissemination of market information, standards, and performance data	Share data to industry and public on performance, rules and uses for open finance

In early open finance markets, supervision processes were often primarily built after initial live deployment. Future markets should anticipate this need, build out supervisory frameworks and metrics from the outset, and set up specialized open finance supervision teams to address its cross-functional (market conduct, prudential) and cross-sectoral (payments, banks, nonbanks, insurance, etc.) nature.

Key lessons on supervision of open finance (full list on page 21)
<ol style="list-style-type: none">1. Supervisors should aim for automated provision of at least some types of data, either by supervised participants and/or the centralized governance structure.2. It is preferable for the supervisor to have some form of direct access to APIs (directly or via an appointed agent) to assess user experience and performance quality, rather than relying entirely on reporting by data holders.3. Publication of data can be an important incentive for high quality implementation, and can publicly flag those with poor performance metrics on uptime or successful transactions.4. Open finance demands supervisory expertise which regulators may not already have, and additional supervisory capacities will likely be needed, as this function cannot be easily absorbed by existing supervisory teams.

I. Introduction

Open finance refers to systems which support consumer-led financial information sharing, where financial service providers—at the consumer’s direction—make their financial information available to other financial service providers to help the consumer benefit from new products and innovations. Since 2018, dozens of countries have implemented or are considering open finance in their markets.⁵

After 7+ years of innovation, open finance is at an important point of reflection. Several pioneering markets are revising their governance and rules, or adding new functions, industries, and data types. Meanwhile an increasing number of emerging market and developing economies (EMDEs) are developing or deploying new open finance models.⁶ This new generation of open finance markets can learn from implementation experiences in early open finance markets to inform their initial design, adopting good practices and avoiding hard lessons learned.

This report summarizes key lessons on open finance implementation from early-mover markets, with the goal of supporting policymakers to develop appropriate open finance ecosystems for their local context. The key lessons are focused on four priority topics that we see as some of the more important topics for the early stages of open finance implementation:

1. Governance models and industry oversight
2. Liability frameworks and participant dispute resolution
3. Costs, pricing and monetization of open finance
4. Supervision of open finance ecosystems

These lessons are based in part on discussions during an Open Finance Implementation Workshop, held in October, 2024, as well as desk research, expert interviews with more than 20 representatives from policy, industry, and research communities, and research on open finance ecosystems and policies from across the globe. The Open Finance Implementation Workshop convened topical experts and policymakers from 13 countries in various stages of open finance development from Asia, Africa, Europe and Latin America. This report distills common reflections and lessons shared, country examples, and possible areas for further research from the global review and discussions with experts. Section II. briefly reviews common open finance implementation archetypes across the world. Section III. shares lessons learned on governance in open finance. Sections IV - VI. present learnings and examples on three aspects of open finance implementation for further discussion and research : 1. Liability rules; 2. Costs, pricing and monetization; and 3. Supervision of open finance. Section VII. then suggests a forward-looking research agenda to deepen the insights from this initial research.

⁵ Juneja, Sanya, Bill Roberts, Dana K. Salman, Pavle Avramovic, Alan Ainsworth, and Bryan Zhang. 2024. [The Global State of Open Banking and Open Finance Report](#). Cambridge Centre for Alternative Finance.

⁶ Juneja, et al 2024.

II. Open finance implementation archetypes

One of the key variations in open finance is who leads the implementation. This decision will determine much of the governance arrangements, and is crucial for rulesmaking, standard-setting, and supervision of the open finance ecosystem. Generally, there are five types of implementation leadership models in open finance, with differing degrees of private sector leadership and policymaker guidance or requirements:

1. Private sector implementation without policymaker inputs. In these models a voluntary group of financial institutions and other firms agree to share certain types of consumer financial information at the consumer’s consent through a set of API standards. There is typically a set of rules for participation, and mechanisms for dispute resolution and non-compliance with rules of participation. Financial Data Exchange (FDX) in the United States developed APIs to allow for the sharing of financial data amongst banks, aggregators, payment service providers, and others, and reports more than 94 million accounts connected as of September, 2024.⁷ FDX has recently been approved as a standard-setting body under the U.S. Consumer Financial Protection Bureau’s (CFPB) data sharing regulations⁸, which would transition this private sector-led model to a mandatory model,⁹ while still leveraging the infrastructure built by FDX over 5+ years.¹⁰

2. Private sector implementation with policy guidance. In this model policymakers use incentives and other soft power to encourage industry development of open finance, and in some cases co-create a set of voluntary standards with them. The Monetary Authority of Singapore collaborated with industry actors to develop a set of standard APIs for financial institutions—named APIX¹¹—and a data exchange—named SG FinDex.¹² Participation in APIX and SG FinDex is purely voluntary, and agreements to share data dependent on firms making private commercial agreements.¹³ Other countries such as Malaysia have issued guidance documents on Open APIs for data sharing, but have similarly left implementation to the industry.¹⁴ These private sector models can in the long term evolve to include more direct

⁷ Source: [FDX website](#).

⁸ Consumer Financial Protection Bureau. [Required Rulemaking on Personal Financial Data Rights](#). February 2025.

⁹ On February 3, 2025, the CFPB was ordered by its Acting Director to suspend activities temporarily to ensure their alignment with the priorities of the Trump Administration, which at least temporarily pauses this transition to public mandate.

¹⁰ <https://financialdataexchange.org/FDX/News/Press-Releases/FDX%20Recognized%20by%20CFPB%20as%20a%20Standard-Setting%20Body,%20a%20Step%20Forward%20for%20Open%20Banking.aspx>

¹¹ <https://www.openinnovationnetwork.gov.sg/network/open-innovation-intermediaries/apix>

¹² <https://www.mas.gov.sg/development/fintech/sgfindex>

¹³ OECD. [“G20 Compendium on Data Access and Sharing Across the Public Sector and with Private Sector for Public Interest.”](#) September, 2024.

¹⁴ [Financial Inclusion Framework Discussion Paper](#). February 3, 2023. Bank Negara Malaysia.

policymaker participation.¹⁵ In Korea, the initial voluntary open banking ecosystem was expanded after several years through the Credit Information Use and Protection Act, which both included new credit data types and lending institutions in open finance, as well as created a mandatory data-sharing requirement, shifting Korea from a voluntary model to a mandatory regime.¹⁶

3. Private sector implementation of voluntary policy frameworks. Some countries have issued regulations and directives on open finance but make participation in open finance voluntary. The Central Bank of Nigeria issued Open Banking Guidelines in 2023, specifying standards in areas such as consumer protection, consent management, service level agreements, performance standards and monitoring, and dispute management. The Guidelines also specify that CBN will conduct certain oversight activities such as maintaining a registry of open banking participants, and data oversight and governance for open banking information of all participants.¹⁷ However, implementation has been primarily left to financial institutions and the Nigeria Interbank Settlement System (NIBSS) has been delegated to manage the Open Banking Registry and the Open Banking Consent Management System.¹⁸ In India, the Reserve Bank of India Account Aggregator Directions¹⁹ established a new licensing window for account aggregators, who facilitate secure exchange of data from Financial Information Providers (FIPs)²⁰ to Financial Information Users (FIUs)²¹, however only FIPs who have joined the account aggregator ecosystem must make this data available. Through the nonprofit Sahamati, the AA ecosystem has onboarded 99 million accounts and completed 119 million consent requests across 439 FIPs, FIUs and account aggregators, as of February, 2025.²²

4. Private sector implementation of mandatory models. In these models open finance participation is mandatory for key sectors of financial services, and implementation is led by a governing body which consists of industry representatives and policymaker(s). In the United Kingdom, the Open Banking Implementation Entity, comprising of a diverse range of financial sector and civil society members²³, led the development of the standards for open banking, with the Competition and Markets Authority (CMA) overseeing the process. In Brazil, the Central Bank of Brazil (BCB) set the initial governance structure for implementation of open finance,

¹⁵ Luis Maldonado. "[Technical Note on Open Banking: Comparative Study on Regulatory Approaches.](#)" World Bank Group. 2022.

¹⁶ Heung Jin Kwon, Kyoosun Choi, and Soohyang Lee. "[Open Finance: The Korean experience and opportunities and challenges for the East Asia and Pacific region](#)". World Bank Group. May 20, 2024.

¹⁷ Central Bank of Nigeria. [Operational Guidelines for Open Banking](#). March 2023.

¹⁸ Open Banking Nigeria. November 30, 2024. "[The role of NIBSS in open banking.](#)"

¹⁹ Reserve Bank of India. 2022. [Account Aggregator Directions](#).

²⁰ FIPs are defined in the Directions to include "bank, banking company, non-banking financial company, asset management company, depository, depository participant, insurance company, insurance repository, pension fund, Goods and Services Tax Network (GSTN) and such other entity as may be identified by the Bank for the purposes of these directions, from time to time."

²¹ FIUs are defined in the Directions as "an entity registered with and regulated by any financial sector regulator."

²² <https://sahamati.org.in/aa-dashboard/> and <https://sahamati.org.in/certified-entities/>. Accessed February 3, 2025.

²³ See, for example, the members roster from 2022: <https://www.openbanking.org.uk/wp-content/uploads/SWG-Panel-Members-15092022.pdf>

establishing a Deliberative Council to develop the governance process and various other implementation aspects, such as technical standards and resolution of disputes.²⁴ Beneath the Deliberative Council a Secretariat supported the implementation, while various technical groups developed the standards for open finance. Participating entities were expected to reach consensus on each implementation aspect, all of which could be subject to review by the central bank.

5. Public sector-implemented mandatory model²⁵. In this model government agencies play more of a leading role in the operations of open finance. Australia’s Consumer Data Right includes public-private engagement such as the Data Standards Advisory Committee.²⁶ However, compared to other markets, implementation in Australia has remained more explicitly within the operations of the responsible government agencies—National Treasury, the Australian Competition and Consumer Commission, and the Australian Information Commissioner. Part of this choice may be that Australia’s CDR applies to industries beyond the financial sector,²⁷ and so industry-led approaches may be difficult where they require coordination across multiple areas of the economy, a lesson for countries as they move from open finance to open data.

III. Lessons learned on governance in open finance

Governance in open finance refers to the arrangements that guide decision-making related to operational, functional, and fiduciary rules and standards for open finance. Governance arrangements and mechanisms are necessary to address sector-wide decisions that involve multiple actors and stakeholders who may have conflicting interests, to define how decisions are made and to ensure the accountability of all participants.

-CGAP, BIS, IMF, UNSGSA, and World Bank. 2024. “[Key Considerations for Open Finance](#).” Washington, D.C.: CGAP.

Policymakers with experience in open finance repeatedly emphasize how critical the design of the governance system was to ensure a smooth start to open finance. In fact, several markets adjusted their governance approaches early on—including Brazil, Hong Kong, and India—as initial approaches were not achieving sufficient improvements in areas such as participation, technical feasibility, or utilization. Options for governance models include a government agency, para-statal organization, non-profit, self-regulatory body, or decentralized set of standards and bilateral agreements. Table 1 on the following page highlights some of the key governance decisions that policymakers will need to consider when designing an open finance system.

²⁴ Open Finance Brazil. “Gobernanca” webpage: <https://openfinancebrasil.org.br/governanca/>. Accessed February 17, 2025.

²⁵ An alternative, and not very common approach to public sector models is a voluntary but government-run model. Azerbaijan has chosen to run their new open banking regime through a platform within the central bank, although participation at this stage is fully voluntary. Source: Central Bank of the Republic of Azerbaijan. 2024. “Open Banking Road Map.”

²⁶ <https://consumerdatastandards.gov.au/engagement/advisory-committees>

²⁷ See for example Consumer Data Right. “CDR in the Energy Sector” webpage: <https://www.cdr.gov.au/rollout/cdr-energy-sector> Accessed February 17, 2025.

Table 1. Key Governance Decisions in Early Stages of Open Finance

Governing organizations and committees	<ul style="list-style-type: none"> ▪ How can governance bodies be designed to ensure fair and equal participation in decision-making of key participant types? ▪ What models best balance agility and private sector leadership with policymaker oversight and enforcement?
Accreditation processes and registry maintenance	<ul style="list-style-type: none"> ▪ Is registration maintained by an authority or by participants? ▪ Are unaccredited participants permitted? And if so what are rules for third-parties/sponsorship models, etc.?
Data security, data protection, and consent management	<ul style="list-style-type: none"> ▪ Are there existing data protection and privacy laws or standards that need to be considered in the design? ▪ What are the rules for consent, in terms of proof, duration, type, and non-permissible activities? ▪ What are the policies for addressing possible data privacy violations or data breaches?
API standards	<ul style="list-style-type: none"> ▪ What is the governance and decision-making process for developing the technical standards for data exchange, and who is responsible for developing, testing, and updating these standards? ▪ Is there one single technical standard for APIs, or can different standards be developed provided they comply with the rules of open finance?
Data reciprocity	<ul style="list-style-type: none"> ▪ Is data reciprocity required for all participants? ▪ Is data reciprocity required for all data types or only certain types?
Performance standards	<ul style="list-style-type: none"> ▪ What should the minimum standards be for quality of APIs, transactions, and other activities within open finance? ▪ How will performance data be collected and monitored (e.g. centralized data repositories, performance dashboards)? ▪ What are the punitive measures and remedies for participants who fail to meet performance standards?
Liability and dispute resolution frameworks	<ul style="list-style-type: none"> ▪ How is liability allocated across participants, and at which point in data exchange does liability transfer between participants? ▪ What are the rules for dispute resolution between firms? ▪ How can consumers receive swift redress even when firms dispute liability for an incidence? ▪ What are the rules and plans for handling large-scale liability issues, such as a data breach?
User interface and user experience standards	<ul style="list-style-type: none"> ▪ To what extent should the rules specify requirements for how firms deliver open finance? ▪ Is a technical guide or published standards for user experience to be required in the regulations or industry code of conduct?

The decisions in Table 2 will all need to be made based on the local financial sector market structure; policy mandate; and cultural context. Still, conversations with policymakers and industry have raised some lessons which seem to hold up in most countries and contexts. These lessons on what helps to drive open finance implementation forward are organized into three thematic areas: 1. Rule-setting, 2. Oversight, and 3. Driving adoption.

a. Lessons on rule-setting for open finance

After setting policy objectives and updating mandates where necessary, initial rules on activities, participation, and conduct need to be developed. These rules are influenced by the authorities and mandates in place; the types of providers that are key for open finance; and the degree of connectivity and digital public infrastructure already in place. Still, several common lessons for rule-setting have emerged from early implementation experiences.

1. **Some degree of mandatory participation and common standards helps to achieve timely progress with open finance.** A global survey by the Cambridge Center for Alternative Finance found that regulator-led models had faster implementation timeframes and broader provider and data coverage.²⁸
2. **Common API and data standards are necessary to enable the open finance ecosystem to develop swiftly and efficiently, and avoid extra effort in connectivity and complexity.** APIs can be implemented centrally or bilaterally, and consideration should be made for how this decision impacts smaller participants in particular, given the resources required to establish and maintain many bilateral connections at once.
3. **Incorporating payments functionality into open finance is likely to generate more consumer engagement and provider use cases than data sharing on its own.** Markets like Australia where action initiation was not included have cited this as a limiting factor to market growth and since updated their policies accordingly.²⁹
4. **Regulators should consider the role of data aggregators³⁰ in their governance and rules, and consider engaging these actors more deeply early on in the implementation.** Even where third parties are not formally allowed in the ecosystem, establishing rules for internal use of technology service providers for participants is important to safeguard system integrity and clarify liability for third-parties' conduct.

²⁸ Juneja, et al. 2024.

²⁹ Geoff McGrath, Andrew Hilton, Sashini Walpola, and Jared Gerson. "[Action Initiated? Action initiation under Australia's Consumer Data Right becomes law.](#)" Ashurst. September 5, 2024.

³⁰ Data aggregators are firms which execute consumer data sharing requests that are made by open finance participants at the consent of the data subject. These aggregators often consolidate this data in a central repository for the data subject/customer.

5. **Technical standards should be integrated within the regulatory framework** (after extensive technical discussions with technical working groups.) Multiple jurisdictions found addressing certain aspects of the technical standards within the regulations supports consistency in implementation and enforceability, even as the APIs, data types, and functions may evolve over time.
6. **Certain minimum aspects of contractual relationships, such as liability or pricing rules, should be set in the regulations.** Even if contracts are left to participants to develop bilaterally, certain clauses that need to be included in all participant agreements should be specified. (See more on liability and pricing in Sections IV. And V below)
7. **Open finance policy frameworks should set out processes and standards for complaints handling and redress.** This can include minimum turnaround time, designation of agencies like ombuds for escalated complaints, or processes for resolution of complaints related to third-parties which are sponsored by principals.
8. **Data reciprocity should be required of participants to support consumers' rights to access and use similar financial data types.** This can be required for all actors up front, or eventually phased in as the ecosystem grows. In Korea, the introduction of reciprocity is credited with having increased the diversity of participants in their open banking ecosystem.³¹
9. **Roles of different authorities need to be clearly defined and activities coordinated early on.** Where open banking oversight sits with one actor, but other open finance activity oversight may reside with other authorities, authorities should establish clear roles and coordinating mechanisms early on in implementation.

b. Lessons on industry oversight

Proper oversight is important to ensure timely and good-faith implementation of the rules and standards in open finance. Even in the most successful models, there is a constant need to monitor, troubleshoot, and enforce compliance. Some of the lessons on how governance models best support oversight of open finance ecosystems include:

1. **Even if implementation is largely left to the industry, there should be strong oversight by relevant authority(ies).** This includes direct roles on both higher-level governance bodies and technical committees. In many cases these authorities will need to hire in or upskill existing staff on oversight of open finance-related functions.
2. **User experience standards should be developed and issued by the authority early on to ensure customer usage is not hindered or made overly complex.** In the United Kingdom certain aspects which the CMA did not think would need detailed rules

³¹ Kwon, et al. 2024.

were found to have high variance in intemplation, such as user-friendly interfaces, leading to the issuance of further guidance such as the Open Banking Customer Experience Guidelines,³² a practice seen in other leading markets such as Australia³³, Brazil³⁴ and India.

3. **Challenge prizes, hackathons and sandboxes have helped to engage innovators, encourage collaboration, and explore OF use cases.** In the Philippines the Bangko Sentral ng Pilipinas (BSP) ran an open finance hackathon in July, 2024, which identified possible use cases for open finance. BSP and the industry-led Open Finance Oversight Committee are now piloting a first open finance use case for pension products.³⁵
4. **Industry bodies' roles may change over time**—including taking more of a lead in day-to-day operations and oversight as markets mature. The EU's proposed Financial Data Access (FIDA) framework would authorize industry-led data sharing schemes to develop common standards and manage data-sharing networks.
5. **Membership and votes in the governance system can be adjusted over time** to reflect the inclusion of new sectors or a more democratic governance model. In Brazil, The Deliberative Council which oversees the open finance governance system initially comprised 9 members, including the Central Bank in an oversight role, but has recently been expanded to 11 members, to include new sectors such as fintechs.³⁶
6. **Cross-departmental coordination within the implementing authority(ies) should be an early priority, as should engagement between competition and data protection authorities.** Engaging departments beyond the implementing team will facilitate readiness in areas such as data analytics, supervision, and conduct enforcement.

c. Lessons on driving open finance adoption

The sizable investment of resources, time, and political will open finance requires will only be worth the investment if open finance is able to make a significant impact on policy goals such as competition, innovation, and financial access. Research and policymaker experiences point to several factors which support uptake and expansion of open finance over time:

1. **Payments are key to open finance use cases and market expansion.** Interoperable (and potentially instant) payments, payments initiation, and related features should be linked with

³² Open Banking. 2024. [Customer Experience Guidelines, Version 4.0](#). Accessed February 17, 2025.

³³ Australian Government Data Standards Body. [Consumer Experience \(CX\) guidelines](#) Accessed February 17, 2025

³⁴ Open Finance Brasil. January 31, 2025. [Open Finance - Guia de Experiência do Usuário para Compartilhamento de Dados e Iniciação de Pagamento](#). Version 10.01.00.

³⁵ Ralph Harvey Rirao. "[Team ATRAM wins first Open Finance Hackathon](#)," *Manila Standard*. August 25, 2024.

³⁶ Central Bank of Brazil. 2024. [Resolucao No. 400: Dispõe sobre as diretrizes para o estabelecimento da Estrutura de Governança do Open Finance](#).

consumer-led data sharing to maximize the use cases and innovation potential of open finance.³⁷

2. **Government data and digital public infrastructure can make open finance more appealing to participants.** Linking of government data such as tax records, national ID systems, and business registrations to open finance can incentivize participation and lead to more services and greater consumer uptake of open finance. India, Korea, Singapore, and the United Kingdom are examples of countries which have integrated government data and services effectively into their open finance regimes.³⁸
3. **Private sector implementation entities and self-regulatory organizations (SROs) may be key for long-term sustainability and flexibility of open finance ecosystems.** Regulators who played a more hands-on role initially are now considering how industry can more actively manage open finance in the long-term, while some new regimes, such as the United States, are embedding existing SROs like FDX as key actors in their new regulatory framework from the start.
4. **Several consumer protection risks have emerged which need to be properly addressed.** Quality of user interfaces, effective redress, use of open finance for fraud and scams, and the enabling of aggressive targeting of consumers with products such as high-cost short-term loans are emerging as issues to be addressed.³⁹ Supervisory approaches to open finance are still in early stages and need to be improved upon to mitigate these risks.

³⁷ Ivo Jenik, Rafe Mazer, and Maria Fernandez Vidal. 2024. "[Building Blocks Supporting Open Finance.](#)" CGAP: Washington, D.C.

³⁸ Rafe Mazer. 2023a. [Moving markets towards open finance: Policy considerations for emerging markets and developing economies.](#) Raidiam.

³⁹ Rafe Mazer. 2023b. [Consumer Protection for Open Finance Ecosystems.](#)

IV. Liability frameworks in open finance⁴⁰

Liability in open finance refers to the rights and responsibilities of firms for their conduct in open finance. A clear liability framework is essential to underpin trust, but is complex to implement in open finance, as it involves a diverse range of entities and the movement of sensitive data and orders to transfer money. Assigning liability in open finance may require new frameworks which account for two features of open finance that differ from most traditional financial services:

1. The various interactions which occur in an open finance ecosystem and issues which arise from them, such as misuse of consumer data, failed or fraudulent payment transactions, and improper charges or fees;
2. The diverse set of entities participating in open finance, including non-regulated financial institutions and third parties involved in data transfers and transaction initiation.

Approaches to placing and assessing liability in open finance regimes vary considerably. Key areas where decisions need to be made on the design and rules of a liability regime are: 1. Regulatory basis of liability; 2. Allocations of liability amongst participating entities; 3. Principles for allocation of liability for third parties; 4. Requirements and processes for resolution of disputes; and 5. Making consumers whole. Examples of approaches to each of these five aspects of liability are discussed in brief below.

1. Regulatory basis for open finance liability arrangements. While some voluntary open finance ecosystems lack any liability allocation provisions, most open finance regimes set forth several provisions which must be included in agreements amongst participating entities. These provisions often include: security measures for receipt of customer data; availability of information and resources adequate to monitor performance; obligations to notify the principal when the partner sub-contracts services; and complaints handling procedures.

2. Allocation of liability amongst open finance participating entities. One of the key decisions for open finance is where the liability of each participant begins and ends. Several regimes state that participants responsibility ends where their operational control ends, or that liability “follows the flow of the data”. However, liability can be allocated differently depending on the types of data sharing activities. The European Union, for example, distinguishes between liability arrangements when the liability relates to a contractual agreement for data exchange, versus provisions regarding data exchange which are covered under legislation.⁴¹ In Switzerland, when data activities are outsourced the financial institution granting access to data is usually held liable, whereas when the data exchange falls under the common platform, liability depends on the contractual arrangements between the parties.⁴²

⁴⁰ This discussion of liability is based in part on unpublished content prepared by Scott Farrell and Rafe Mazer for the Open Finance Implementation Workshop, London, October, 2024.

⁴¹ [Report on Open Finance: Report of the Expert Group on European financial data space](#). October 2022. European Union.

⁴² OECD. 2023.

3. Liability arrangements between open finance participants and third parties. Where third parties and sponsorship models are permitted, there should be clear rules on oversight and liability for these parties by the participating entities. In Chile, participating entities must implement a set of risk management requirements and develop a plan for how they will address key outsourcing risks if they wish to use third parties. Placing standards regarding liability and oversight of third parties by participating entities in the open finance rules would seem a sound approach to ensure consistency of oversight and obligations.

Determining the right liability framework for third parties should be a high priority for policymakers, so that open finance consumers can benefit from the services third parties enable, while ensuring oversight and soundness of the system. Australia has supported widespread third-party participation through a sponsorship model, under which an authorized data recipient (ADR) “sponsors” another entity (known as an ‘affiliate’) to participate in open finance. A January, 2025 review of the Australian Open Banking Ecosystem found that only 11% of data holders were ADRs, indicating the important role third parties are playing in supporting ADRs and driving engagement in Australia.⁴³

4. Processes for resolution of disputes between participants. Most open finance frameworks articulate dispute resolution processes for the participating entities. These frameworks should also ensure that participants can make others whole if they are found to be responsible for reimbursement or restitution. To address this, Oman’s open finance regulatory framework requires proof of professional indemnity insurance at the time of application to participate, which “shall cover their liability to Banks, PSP Licensees, Financial Institutions, or the Customers resulting from unauthorized or fraudulent access to or unauthorized or fraudulent use of a Customer’s Data.”⁴⁴ Such requirements are particularly important due to the frequent participation of smaller firms in open finance, and the potential for large-scale harm or violations—and so substantial compensation required—for misuse of data, data breaches, and fraud in particular.⁴⁵

5. Making consumers whole in cases of disputed liability. To limit the burden on the consumer, some jurisdictions require the consumer to be made whole swiftly and separate from the resolution of liability between the commercial actors involved in disputes over transactions initiated through open finance. Carr, et al (2018) propose placing responsibility on the party where the transaction took origin, and developing streamlined dispute resolution procedures between open finance entities, including between financial institutions and third-party service providers.⁴⁶ Regardless of how responsibility is ultimately assigned, it is important that it does not delay or diminish consumers’ ability to receive redress.

⁴³ FinTech Australia. January 2025. “Australian Open Banking Ecosystem Map and Report – 5th Edition.”

⁴⁴ Central Bank of Oman. 2024. [Open Banking Regulatory Framework, Version 1.0](#).

⁴⁵ Scott Farrell. 2023. *Banking on Data: Evaluating Open Banking and Data Rights in Banking Law*

⁴⁶ Brad Carr, Pablo Urbiola, and Adrien Delle-Case. [Liability and Consumer Protection in Open Banking](#). September, 2018. The Institute of International Finance, Inc.

Key lessons learned on liability frameworks in open finance

- 1. The technical infrastructure underpinning open finance has implications for the liability regime.** A single channel/data exchange simplifies liability relative to distributed solutions, but a single channel also creates a single point of failure and the risk of a large-scale liability event.
- 2. Data presents new challenges to assigning liability versus other financial transactions,** as data is non-rivalrous and the same customer data can be held by many parties.
- 3. There is an important distinction between liability related to sharing of data and the use to which shared data is put by the data recipient.** For example, when accurate data is shared but the data recipient uses it for bad ends (e.g. targeting consumers with improper loans.)
- 4. The scale of data breach risks raises possible needs for indemnity insurance or other mechanisms for participating entities to be able to make others whole.** Further, where open finance data is held by a failing entity, they should not be allowed to sell the data, and should have to delete it.
- 5. It should not be incumbent on customers to enforce liability and determine with whom to seek redress, and systems should be in place to make customers whole while participants determine liability.**

V. Costs, monetization, and pricing of open finance⁴⁷

As open finance grows and matures, policymakers and industry must decide on what the right approaches are to covering operating costs of the systems, and establish rules for pricing and monetization of different data exchanges and transactions linked to open finance. Some larger participants in open finance have raised concerns about the high upfront costs imposed on a small number of participants (e.g. larger banks), while smaller participants have objected to any ability of data holders to charge fees for some open finance activities. This puts the regulator in the middle of what can be contentious discussions, where industry incentives are not well aligned across different financial service provider types. Two of the most important early decisions on costs and pricing regulators will need to take are: 1. The financing of national infrastructure, and 2. Fees for service and cost recovery. Examples of approaches to these topics and their implications for ecosystem development and funding are highlighted below.

1. Financing of national infrastructure of open finance. Many open finance place funding obligations primarily on larger financial institutions, such as banks. In Brazil, banks initially covered approximately 80-90% of the costs, with the costs shared according to members' net worth, with a maximum contribution of 15% of total costs.⁴⁸ In Australia, costs to financial institutions for implementing the CDR have been self-reported between AUS\$1M and AUS\$100M, with large financial institutions typically reporting having spent more due to the higher volume of data requests they receive, and the fact that banks core banking systems were not prepared for data sharing APIs.⁴⁹

As open finance ecosystems have matured, new approaches to funding recurring costs are being explored, with an eye towards spreading costs around and supporting sustainability. One solution is to make more types of participants fund the infrastructure—an approach being explored in Brazil, where the cap on a single bank's contribution is being reduced from 15% to 7% of total costs for open finance. Another approach is to explore the use of fees for additional open finance services. In Australia, the Consumer Data Rights Cost Compliance Review recommended to explore opportunities for fee-based, voluntary data sets and establish a process for progressing these through rules or standards.

Part of the solution to these concerns over high infrastructure costs may simply be patience. In early phases of open finance, there can be fewer participants and more frequent updating of standards, functions, and data types, which can raise average costs per participant. As systems become lower cost, and newer participants contribute to the shared costs, the value of the ecosystem hopefully outweighs the recurring costs participants must cover.

For EMDEs in particular, another possible source of financing for initial open finance infrastructure could be grants and other philanthropic support. Grant funding could be a way to

⁴⁷ This discussion of costs, monetization, and pricing is based in part on unpublished content prepared by Rafe Mazer and Marie Walker for the Open Finance Implementation Workshop, London, October, 2024.

⁴⁸ Industry consultations.

⁴⁹ Better Regulation Advisory. December, 2023. "[Consumer Data Right Cost Compliance Review](#)."

defray some of the upfront costs, which may be more difficult for governments with lower budgets to cover, or where political will or mandate makes it harder to force larger financial institutions to pay for open finance infrastructure development.

2. Fees for service and cost recovery. Early experiences with the costs of open finance have led to recent discussions on introducing new pricing models in mature open finance markets. Generally there appears to be a growing comfort with allowing firms to charge other firms for certain activities in open finance, although the practices are highly varied:

- a. **Open to commercial rates.** In India, Sahamati’s Participation Terms do not include any references to commercial terms, pricing or charges.⁵⁰ In the European Union, while data in open banking must be made available for free, the draft open finance rules would let fee structures be set by the country-level independent data sharing schemes.⁵¹
- b. **Free below certain thresholds.** Brazil and Chile have similar policies where all payment initiation is free, but charges can be assessed for certain data requests, when they exceed monthly limits. (Table 3) In both countries the permitted charges are not specified, although it is not permitted to charge different fees for the same request type, and in Chile charges should only be “direct incremental costs to attend to the volume of consultations to their interfaces” beyond volume limits.”⁵²⁵³ However, in Brazil no providers are charging for these calls, because developing a billing process for this would be expensive and complicated, and is not a priority for banks currently.⁵⁴

Table 3. Pricing rules for open finance participants in Brazil and Chile		
	Activities which cannot be charged for	Monthly limits for free data requests per customer
Brazil	Payment initiation	KYC data (>2 per month) Transaction data for covered products (>120 per month)
Chile	Payment initiation; development of OF infrastructure	KYC data (>4 per month) Financial positions, transaction and usage history, and active products (>150 per month) Terms and conditions and channels of attention (>120 per month)

⁵⁰ Sahamati. February 23, 2024. [Community Guidelines in the Sahamati AA Ecosystem](#).

⁵¹ European Commission. June 28, 2023. [Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on a framework for Financial Data Access and amending Regulations \(EU\) No 1093/2010, \(EU\) No 1094/2010, \(EU\) No 1095/2010 and \(EU\) 2022/2554](#).

⁵² Comisión para el Mercado Financiero. 2024. [Norma Que Regula el Sistema de Finanzas Abiertas](#).

⁵³ Central Bank of Brazil. May 4, 2020. [Resolucao Conjunta No 1](#).

⁵⁴ Industry consultations.

- c. **Cost recovery.** Similar to Chile, countries like Mexico⁵⁵ have provisions regarding recovery of costs, “reasonable fees”, or other relatively undefined rules on pricing. In Korea, the Credit Information Use and Protection Act states that credit information providers may charge minimum costs for “regular” requests for data sharing, however these fees are not yet determined, and defining “regular” could be difficult in practice.⁵⁶ Going forward open finance ecosystems will need to develop more specific pricing rules and methods for determining reasonable cost recovery or risk disputes amongst participants over fair versus anti-competitive pricing.
- d. **Free with options for premium APIs and services.** In Australia the Customer Data Right is allowing for the charging of fees for “Premium” or “value-added” APIs, which would provide services beyond the core data sharing activities that are included in the Consumer Data Right. To date, there are no known uses of these APIs in practice.⁵⁷ Colombia’s 2022 Open Finance Regulations modified existing rules regarding data use to both allow for the charging for provision of data, as well as for the use of regulated entities’ channels to provide financial services. However, the regulation is clear that pricing cannot be used to discriminate against certain participants.⁵⁸

Picking any of these pricing approaches can be a challenging decision, due to the uncertainty of their positive and negative effects in each market, existing pricing rules, and uncertainty around upfront and long-term costs. This may be why policymakers are designing pricing rules with built-in flexibility, such as by putting pricing rules in Annexes to regulations, or providing various options for future policies. There is no one right pricing policy then, but rather several issues which should guide the pricing policy choices made, including: 1. Whether there is a need to allow for cost recovery for participants; 2. The cost implications of providing core infrastructure such as centralized APIs; 3. Conflicting incentives of large and small actors regarding fees for usage; and 4. Risks of abusive and anti-competitive pricing practices where charging is permitted.

⁵⁵ United States of México. 2018. [Ley para Regular las Instituciones de Tecnología Financiera.](#)

⁵⁶ Kwon, et al. 2024.

⁵⁷ Industry consultations.

⁵⁸ Republic of Colombia. 2022. [Decreto 1297 de 2022.](#)

The right approach to these issues will depend in part on the size and profitability of the financial sector, the resources governments possess, and the political will or mandate to compel industry to cover at least some development costs. These policies will also continue to evolve as cost of infrastructure change, and new firms and data types enter the open finance—or in the future open data—ecosystem.

Lessons learned on costs, monetization, and pricing

1. Where charging for data or payment initiation is allowed, market-based pricing raises concerns about costs to consumers and use of pricing for anti-competitive purposes. **Rules for setting prices then likely need to be set by the regulator.**
2. **Estimating potential implementation costs in new jurisdictions is difficult** because industry has presented widely varying costs, and the costs presented are not always solely from OF implementation. It could be useful to separate the costs of the shared infrastructure from the costs of each participant, as mixing of these costs by participants has contributed to confusion on true costs of implementation.
3. **Firms should at a minimum not be allowed to charge different rates for the same services in open finance.** Further consideration should be made as to whether costs should be capped at a certain amount/volume, or based on a cost-recovery principle, versus allowing a free-market pricing schedule.
4. If fees for data requests are permitted (not the common practice), **this could result in pass-through charges from paying firms to their customers and impact objectives such as affordability and financial inclusion.**
5. In countries with broader data rights, **open finance pricing rules need to not conflict with any existing data sharing provisions**, such as those prohibiting charging for access to personal or financial information in data protection laws.

VI. Supervision of open finance ecosystems

Supervising open finance ecosystems is particularly complex. Open finance often increases the number and type of firms that a financial supervisor needs to monitor, including unregulated third-parties; increases the exchange of sensitive information such as personal financial details; and may be resisted by some of the firms required to participate—raising the need for enforcement and intervention in cases of misconduct.

The wide range of financial and non-financial institutions serving consumers and handling their data in open finance ecosystems requires robust prudential, market conduct and consumer protection supervision. It also requires technical knowledge in a range of disciplines, which are likely not all within the current capacities of any single authority, and creates new data collection and analysis needs for supervisors to monitor performance of APIs, consumer consent processes, and user experience, to name just a few of the areas where new monitoring tools will be needed.

In early open finance markets, supervision processes were often primarily built after initial live deployment. But future markets should build out supervisory frameworks and metrics from the outset, and set up specialized open finance supervision teams to address its cross-functional (market conduct, prudential) and cross-sectoral (payments, banks, nonbanks, insurance, etc.) nature. There are three primary categories of new supervisory tasks arising in open finance: 1. Market performance, 2. Consumer and conduct risks, and 3. Dissemination of market information. (Table 4)

Supervisory task	Goals of supervisory task
Monitoring market performance and market risks	-Ensure growth of the market, security and safety of the ecosystem -Ensure adherence to minimum performance standards
Monitoring conduct and consumer risks	Identify and remedy risks which threaten firms and consumers
Dissemination of market information, standards, and performance data	Share data to industry and public on performance, rules and uses for open finance

1. Monitoring market performance and market risks. Keeping a close eye on open finance ecosystems as they scale up is necessary to identify any issues which might hinder growth or reduce the value of the open finance ecosystem to participants and consumers. Ecosystems can be monitored across several types of indicators that support growth of the ecosystem alongside security and safety for participating institutions and individuals.

Ecosystem growth and quality of performance. These indicators help monitor growth in usage of open finance and identify concerning trends such as issues with availability and completion of data or payment transaction requests. Some of the common indicators which are set by open finance supervisors and governance entities include

- i. Uptime and availability of API connections

- ii. Response time for different API calls
- iii. Rates of success of API calls and data transfers
- iv. Rates of rejection of requests and reasons for rejections
- v. Transaction success rates
- vi. Availability and accuracy of information required to be shared under open finance

It is common for open finance participants to have poor performance in data sharing, or low-quality data in early stages of implementation. In Europe response times from banks on open banking APIs were reported to take as long as 18 seconds,⁵⁹ and poor availability of bank APIs was common in the early stages in the United Kingdom,⁶⁰ although this has improved greatly since.⁶¹ In India, “some banks experienced error rates exceeding 99 percent in data retrieval processes...Additionally, interviews revealed that the data obtained is sometimes incomplete or lacking the necessary structure, making further analysis challenging.”⁶² These examples demonstrate why performance indicators are particularly important early on or when significant expansions of participants or features are introduced. To improve performance, authorities have at times had to issue fines or other sanctions when participants did not comply with quality of performance, or accuracy and completeness of information.

Entity diversity and emerging use cases. Early in the implementation process, authorities should reflect on their goals for open finance, and develop a list of indicators to monitor for consent and transaction volumes, data sharing and transaction types, participating entities by type, and qualitative feedback from the industry and consumers. Such data can be informative to identify emerging use cases and understand utilization of open finance. The BCB in Brazil uses the standard list of API endpoints (71 currently) to categorize the different types of activities consumers provide consent for, allowing them to track which types of uses are most common in open finance. They have also partnered with CGAP on a survey of open finance users and non-users, which has revealed several important insights for how to expand open finance to drive greater impact on financial inclusion, including what the main reasons are for not using open finance (lack of awareness (31%), lack of interest (26%), and security concerns (9%) were the top 3 responses in the survey).⁶³ In Australia, the ACCC’s reporting templates for both Accredited Data Recipients and Consumer Data Right Representatives ask a series of questions about how the CDR data is impacting product innovation, and to describe any new goods and services that are being offered to CDR consumers. In India, Sahamati has published analysis of emerging use cases in the ecosystem, such as the recent growth in the use of the AA ecosystem by investment and financial advisory services.⁶⁴ The analysis combines data

⁵⁹Nicole Green. “[Yapily’s recommendations for minimum open banking requirements in the EU.](#)” Yapily.

⁶⁰ Alex Rolfe. “[UK Open Banking initiative stalling due to bank led outages.](#)” May 23, 2019. Payments Industry Intelligence

⁶¹ [Open Banking API Performance Data](#)

⁶² Edoardo Totolo, Ivan Mortimer-Schutts, Alex Rizzi, Colin Rice, and Anindita Chakraborty. 2024. “[The Role of Data Exchange in Financial Inclusion.](#)” Center for Financial Inclusion.

⁶³ Maria Fernandez Vidal, Ivo Jenik, and Arisha Salman. “[Success in Open Finance Requires Trust – Lessons from Brazil.](#)” CGAP Blog. October 11, 2023.

⁶⁴ Sahamati. “[Report on Personal Finance Management facilitated by Account Aggregators.](#)” June, 2024.

from Sahamati's performance indicators with testimonials from AA users in this space on customer retention, cost savings, and other benefits of AA ecosystem participation.

2. Monitoring conduct and consumer risks. The wide range of financial and non-financial institutions serving consumers and handling their data in open finance ecosystems requires robust prudential, market conduct and consumer protection supervision. However, even more advanced open finance ecosystems are only a few years into their journeys, so their supervisory approaches are still emerging. Already some key risks are emerging as priorities to monitor and address as they occur:

Transparency and accountability in use of consumer data. Ensuring that open finance data trails can be easily monitored by the data subject, that providers document consent and follow data protection standards fully, and that there are clear limitations on use of data, are essential supervisory aspects of open finance.⁶⁵ Monitoring providers' adherence to responsible data practices and data sharing limitations is an essential part of any consumer protection supervision approach for open finance.

Quality of interfaces and user experience. Sometimes financial institutions add intentional friction to limit usage of open banking by their customers and third-party providers,⁶⁶ such as:

- i. **Security scare tactics**, such as extra security prompts or questions to play up potential risks and reduce the propensity of consumers to port their data to another open finance participant.
- ii. **Excess screens or steps.** Overly complex procedures to complete data sharing or payment initiation functions can hinder uptake of these innovations.⁶⁷

Several markets have issued user experience guidance and requirements to address these practices. The ACCC in Australia has also developed compliance reports for the Consumer Data Right, which have been used to identify deficiencies in practices such as how CDR principals oversee their representatives in functions such as data management, use of CDR data, and processes for asking for consumers' consent.⁶⁸ These types of reports could be a useful tool to periodically assess conduct related to priority risks in open finance.

Monitoring participant dispute resolution. In markets with implementing entities or self-regulatory organizations, they may be able to take the lead on participant dispute resolution. In Brazil, the open finance governing body has developed a ticketing system for issues raised by open finance participants with each other. This system has three levels for dispute resolution: 1. Ticketing system which is monitored by the governing body; 2. Formal dispute resolution with a fixed cost of ~\$9; 3. Arbitration. However, as of October, 2024, levels 2 and 3 have never had to be used.⁶⁹ The BCB has access to the system so they can monitor trends in the disputes and

⁶⁵ See, for example, Medine, David and Plaitakis, Ariadne. 2023. [Combining Open Finance and Data Protection for Low-Income Consumers](#). CGAP

⁶⁶ Mazer, 2023.

⁶⁷ Mazer, 2023.

⁶⁸ Australian Competition and Consumer Commission. May, 2024. [ACCC CDR Compliance Review of CDR Representative Principals](#).

⁶⁹ Industry consultation.

review individual cases, but it is preferred that these disputes are resolved either by the providers themselves, or through the industry open finance governing body.

Fraud incidences affecting consumers. Open finance systems can mitigate and reduce fraud through sharing of data such as KYC records and increased tracking and sharing of data on fraud risks and fraud attempts. FDX in the United States has created a fraud reporting endpoint which its members can use to share fraud incidences as they occur,⁷⁰ and the UK has developed Confirmation of Payee name-checking to prevent push payment scams⁷¹, and launched a Mules Insights Tactical Solution (MITS) to track suspicious payments and identify mule accounts which are used to receive payments for push payments fraudsters.⁷² Sharing fraud data by product types, transaction types and consumer demographics could improve fraud detection ability—analysis of fraud data in the United Kingdom’s Open Banking has found that payment initiation fraud often targets an account be held by an older person, while the receiving account is often in the name of a younger adult. Policymakers could both set standards for fraud information sharing amongst participants, as well as review this data to ensure industry is implementing robust fraud information sharing and prevention strategies.

Monitoring consumer complaints handling. All mandated open finance regimes should—and generally do—have clear consumer redress obligations built in, either through new requirements or leveraging existing consumer redress rules. As an example, in Chile the Fintech Law requires that all the various participating institutions in open finance be responsible for attending and resolving consumer complaints related to both data use and services provided.⁷³ Nigeria’s Operational Guidelines for Open Banking stipulate that participants are to abide by existing complaints handling rules under the CBN Consumer Protection Framework,⁷⁴ and requires all API users have customer service desks available 24 hours/7 days a week to reduce the risk that a financial institution would be unable to swiftly raise and resolve an issue with a third-party provider on behalf of their customer. In some markets industry bodies are being used for consumer complaint handling functions, as is the case in Japan.⁷⁵

To ensure proper complaints handling practices, supervisors should use consumer complaints and provider disputes data to monitor the quality of, and emerging risks within, open finance. For example, Australia requires CDR participants to report out the total number of CDR complaints received broken down by complaint type, the number of resolved complaints including average number of days taken to resolve these CDR complaints, and the number of CRD complaints referred to an external dispute resolution scheme, including the number of complaints resolved by external dispute resolution.

⁷⁰ The Paypers. November, 2022. [Report 2022: The Enablers of Open Banking, Open Finance, and Open Data.](#)

⁷¹ Confirmation of payee is a simple but often effective solution which has been shown to reduce sending errors and also fake payment request fraud in mobile money.

⁷² UK Finance. 2022. [Annual Fraud Report 2022.](#)

⁷³ Gobierno de la República de Chile. January 4, 2023. [Ley 21.521 \(Ley Fintec\).](#)

⁷⁴ [Operational Guidelines for Open Banking in Nigeria.](#) March, 2023. Central Bank of Nigeria.

⁷⁵ World Bank Group. 2022. [Technical Note on Open Banking: Comparative Study on Regulatory Approaches.](#) 2022. World Bank Group.

3. Dissemination of market information, standards, and performance data. Perhaps the most important dissemination tool early on in open finance is performance dashboards, often posted on open finance implementing organizations' websites, which offer statistics on the volumes and performance of open finance. Sahamati is a particularly noteworthy example of this, as they have developed a set of API health dashboards, which offer detailed analysis of the difference performance levels of financial institutions with seven different API performance indicators, showing which participants are performing best, updated in real-time.⁷⁶ Another important dissemination activity is developing information and materials which explain the open finance system to financial consumers and the general public. Videos, FAQs, public information campaigns, and other approaches have all been used by the industry and policymakers to raise awareness and usage. However, some types of public campaigns can be expensive, so cost-benefit considerations should be carefully considered before launching any such campaign. It may also be possible to raise awareness through existing financial institution communication channels or service points, which could be a less expensive means for information dissemination and awareness-raising.

Key lessons learned on supervision in open finance

- 1. Identifying data needs for supervisory purposes, and how this data will be collected, should be an early priority in the implementation roadmap.**
- 2. New metrics and indicators may have to be collected by different units within the supervisory authority, across different authorities, or through an implementing entity or self-regulatory organization.**
- 3. Supervisors should aim for automated provision of at least some types of data,** either by supervised participants and/or the centralized governance structure.
- 4. It is preferable for the supervisor to have some form of direct access to APIs** (directly or via an appointed agent) to assess user experience and performance quality, rather than relying entirely on reporting by data holders.
- 5. Publication of data can be an important incentive for high quality implementation,** and can publicly flag those with poor performance metrics on uptime or successful transactions.
- 6. Open finance demands supervisory expertise which regulators may not already have (e.g. monitoring API quality and performance, quality of user interfaces), and additional supervisory capacities will likely be needed, as this function cannot be easily absorbed by existing supervisory teams.**

⁷⁶ <https://sahamati.org.in/saans-api-health-dashboard/>

VII. What's next in open finance policy research?

The lessons and examples shared in this report are reflective of a point in time in open finance, but certainly will change as more EMDEs build and launch their open finance ecosystems. This report has sought to distill a key lessons for open finance implementation from experiences to date on governance, liability, pricing/monetization, and supervision. Still, there are many questions which remain unresolved on these topics. For example, we do not fully understand how the types of liability rules that exist for third parties impacts their use in open finance by the participating financial institutions, and what this means for the speed of innovation and growth. Nor do we know what sustainable but fair pricing models will look like in the long-run in open finance—and how the distinct approaches in markets like Brazil, the EU, or India will impact costs and participation between firms. Finally, on supervision the knowledge base is substantially limited by the small number of markets with several years of live open finance activities, and documentation of good practices is needed to develop supervision toolkits or guidance that can be used by authorities in different markets. In the coming months we will be diving deeper into these topics, with the goal of producing further insights and examples to expand knowledge of what works in open finance implementation.