Open finance: prerequisites and considerations for fit-for-context implementation in Africa

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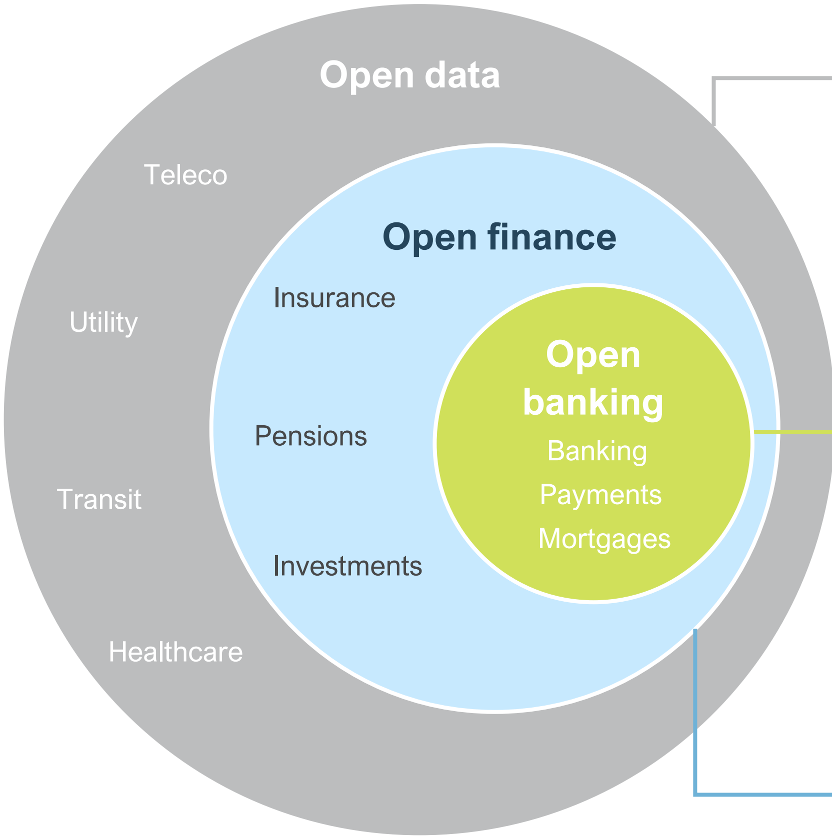
Introduction and background on open finance

Open banking, finance and data enable the sharing of consumer data with third-parties



Open data is data that can be freely used, re-used or re-distributed. It includes the exchange of consumer data between private sector financial and non-financial institutions on the basis of consumer consent. Open data allows for the sharing of all types of data.

Open banking is the exchange of consumer data between banks and other financial service providers (FSPs) and regulated providers on the basis of consumer consent. Open banking typically only allows for the exchange of transactional and bank payment financial data.

Open finance is the exchange of consumer data between financial service providers and third-party providers on the basis of consumer consent. Open finance allows for the sharing of all financial data (mortgages, pensions, savings, insurance, credit, etc).

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***Data portability** is the ability of an individual to obtain on their request their own personal data from current data holders and it not necessarily a precondition for open banking, finance or data.

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Three key stakeholders in open finance regimes

FSP data holders (banks, insurers, investors, etc.) who hold customer data.

FSP data holders are either mandated to or voluntary opt to share customer data with licensed third-party providers and must have received consent from customers to share their data.

FSP customers whose personal, financial and behavioural data the FSPs holds.

Customers give consent to FSP data holders to share their data.

Third-party data users are those that have the right to access data or request access (incumbents, new entrants, brokers, FinTechs, etc).

These institutions are subject to a licensing or authorisation framework with mandatory technical and security standards.

Regulators and policymakers consider the design components of the regime, and in many instances play an enabling role which involves determining the type of regime, scope of financial services included, participants allowed, types of data and data sharing standards, payment initiation, lead regulator and cost determination.

Open Application Programming Interfaces (APIs) allow different applications to communicate and interact with one another. Open APIs are used in open finance to enable third-party providers to access data from financial service providers in a secure manner.

Source: [CGAP (2020)]

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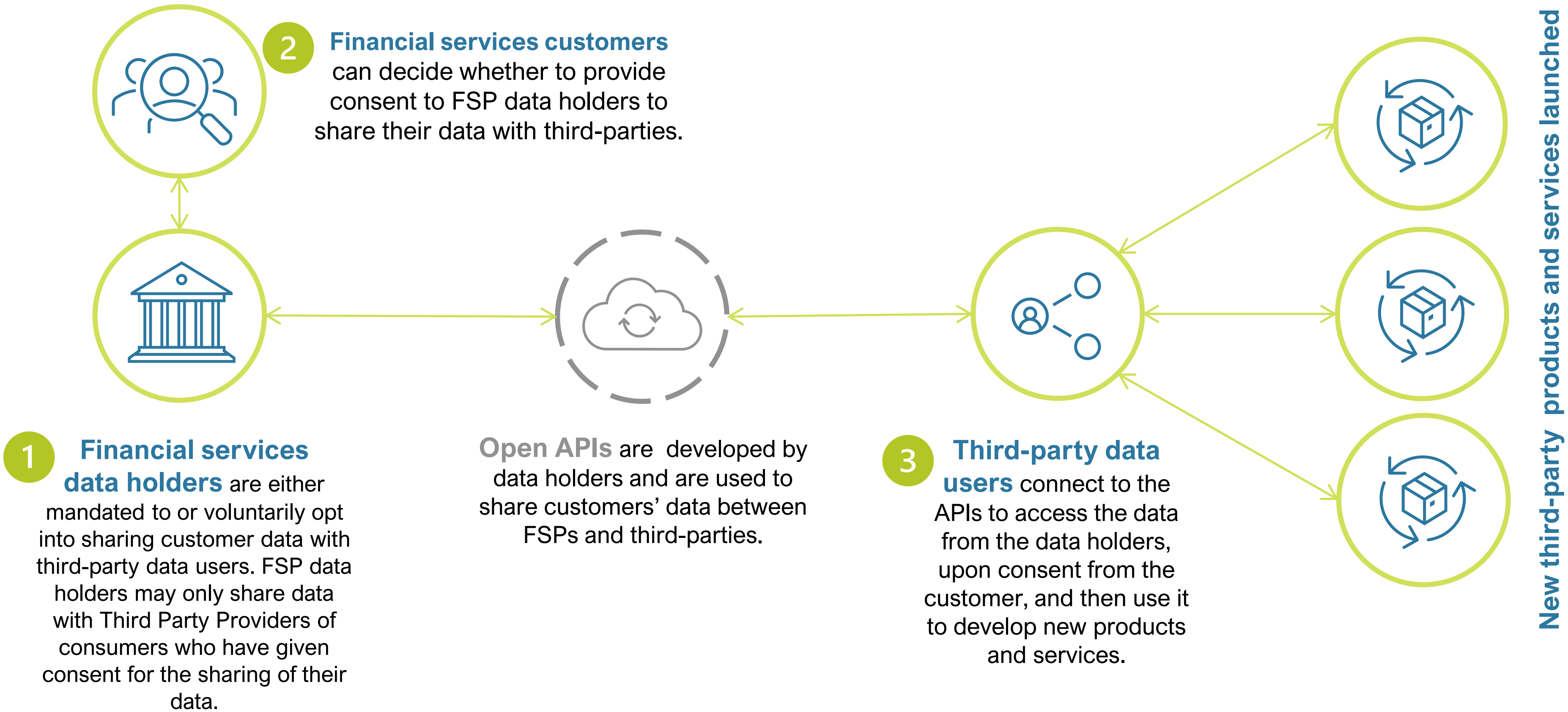
Open finance enables the flow of data among the three stakeholders



Typically, three types of data are shared:

1. **Generic services data:** publicly available information on financial services like product pricing, location
2. **Customer data:** personally identifiable data required for account opening and administration purposes
3. **Transaction data:** data on financial transactions made by consumers

Payment initiation is often integrated into open finance regimes and reduces payment stickiness for customers

- **Payment initiation:** allows third parties to initiate transactions on a customer's behalf from an account the customer holds with another institution (normally a bank)
- In some open finance regimes, payments initiation is mandated and in others it is not. For some jurisdictions, such as the EU, payment initiation is one of the main pillars of their open finance regime due to its effects on competition, allowing third parties to offer new services.

	Pros	Cons
Consumers	Is convenient – can initiate a payment without needing to leave the environment they are in	Heightened privacy and cybersecurity concerns
Third-party providers (data users)	Hassle free payment for consumers is likely to translate into higher conversion rate Increased engagement on digital platforms Safe payment option at lower costs	Could become overly reliant on payment initiation service providers

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- EC, 2018; EC, 2021

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Approaches to open finance follow a continuum

Voluntary

Hands-off approach

Participation in the open finance regime is voluntary and the regulator takes a hands-off approach

E.g. United States has a voluntary approach to open finance and regulators play no role in enabling or governing it.

Hands-on approach

Participation is voluntary, but the regulator plays an orchestrating role and develops standards, rules or frameworks to govern the open finance regime. Once an FSP decides to participate, these standards, rules or frameworks are mandatory.

E.g. Singapore follows a voluntary approach to open banking, but the Monetary Authority of Singapore plays an enabling role and has introduced the "Finance-as-a-Service: API Playbook" and the Finance Industry API Registry.

E.g. Nigeria follows a voluntary approach to open banking, but the Central Bank released a Regulatory Framework for Open Banking in 2021 to facilitate it. Once institutions opt to participate in the regime, they need to comply to certain standards.

Mandatory

Consultative approach

Participation in the open finance regime is mandatory by sector specific regulation, legislation, or court rulings. Participation is voluntary for certain providers. Participation requirements and standards are set by regulatory authorities in consultation with industry players.

E.g. Brazil follows a mandatory approach to open finance but follows a phased approach and industry plays a role in Central Bank's governing structure on implementation.

Non-consultative approach

Participation in the open finance regime is mandated by sector specific regulation, legislation or court rulings. Participation requirements and standards are set by regulatory authorities.

E.g. In 2018, the Competition and Markets Authority ordered the 9 largest banks in the UK to share their customer data with licensed third-party providers. The UK is also in the process of implementing open finance. Industry was not consulted before the banks were mandated to share data but were eventually consulted through the establishment of the OBIE.

Mandated FSPs can be:

1) named specifically
2) specific categories of institutions
3) a broad range of financial sector entities

Risks and benefits of different approaches to open finance

	Risks	Benefits
Voluntary and market led	• May lead to an overly complicated and non-standardised environment that may undermine the benefits of open finance • Limited buy-in from established FSPs if the market is not mature enough	• If the market is mature enough, it could lead to increased competition, improved products and increased inclusion • No costs incurred by the regulator
Voluntary but enabling regulator	• Limited buy-in from established FSPs if the market is not mature enough • Does require time and monetary investment from the regulator	The regulators' involvement can help establish an enabling environment and generate trust, without forcing market players to participate
Mandatory and regulatory led	• Large investments from the regulator to ensure regulation is enabling of open finance and to ensure adequate enforcement of it • Expensive for mandated institutions to develop their own open APIs • If a consultative approach is not taken, despite data sharing being mandated, established FSPs can undermine the regime if they are not adequately bought in	• Leads to a standardised and consistent approach to open finance • Ensures open finance objectives are guaranteed

Use cases, benefits and risks of open finance

Three main use cases for open finance

Improved access to customers

Enhanced KYC: Access to Know-Your-Customer (KYC) data which is already verified can help to accelerate customer onboarding, verification and risk identification. This makes KYC onboarding faster and more affordable.

Cross-selling: Increased ability for established FSPs and innovators for marketing and cross-selling opportunities.

Improved risk modelling

Data on consumers and consumer behaviour enables FSPs and FinTechs to better understand and model risk. Two examples are:

Credit scoring: Additional sources of data can be used to develop more accurate credit scoring for established FSPs and FinTechs, helping to more accurately separate lendable clients from risky ones.

Insurance underwriting: Instant access to additional sources of data can help insurers to underwrite policies faster, and more cheaply, as well as provide a more personalised and longer-term view of the applicant's behaviour.

Improved product design

Access to timely and more consumer data will enable providers to design products and services which are tailored to consumers' needs, which should naturally lead to more consumers seeing the value in these products and taking them up.

Open finance also enables the aggregation of different accounts in one place.

Open finance will also enable players to launch and offer new products and services more quickly.

Improved efficiencies and reduction in costs for both established FSPs and fintechs

…which unlock clear benefits for the different user groups

Customers	Improved personalisation, value, convenience, availability and pricing of financial products and services
Financial service providers (data holders)	Improved operational efficiencies and business opportunities
Financial services providers (data users)	Improved access to customer data and new markets and ability to develop customer centric products and services
Policymakers	Increased financial sector competition, innovation and inclusion

McKinsey 2021; WEF 2021, CGAP (2020)

Examples of products and services stemming from open finance

Financial management	KYC verification to open new accounts	Instant tailored insurance advice	Instant credit checks	Account aggregation
22seven* FROM OLDMUTUAL	authenteq	anorak	Mojo	PLAID
South Africa	**European Union**	**United Kingdom**	**United Kingdom**	**US, EU, UK**
Uses the principles of free budgeting app that allows users to budget, track spending on all of their accounts and invest in a single interface.	AI-powered, fully automated KYC and digital verification service that enables FSPs to easily assess the risk of their customers.	Life, critical illness and income protection insurance advice tailored to your needs conducted through APIs linked to banking, mortgage and ecommerce platforms.	Digital mortgage broker that uses open banking and alternative financial data to help customers get a mortgage score quicker and connect them to the most appropriate lender.	Tool that allows users to consolidate their financial data from multiple sources and categorise their transaction data.

*22seven follows the principles of open and shared consumer data, but South Africa does not currently have an open finance regime, so the way in which the data is accessed and the agreements in place are slightly different

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FSCA 2020; McKinsey 2021; 22seven; Akoni; Open Money

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But open finance doesn't come without risks or challenges

Challenges

- Limited customer adoption (lack of trust, awareness and low financial literacy)
- Complexity of development and limited financial and technical capacity and capability of FSPs
- Reluctance and lack of buy-in from incumbent FSPs
- High cost of implementation
- Cuts across multiple regulators' mandates – increased coordination
- Benefits more visible in the long term

Risks

- Data privacy and security – abuses and misuse
- Cybersecurity and fraud
- Greater financial exclusion (for those not online)
- Increased data asymmetries in favour of Big Tech (competition issues)

FIL; Ashurst, CGAP 2020; Zopa, 2021; Anand, 2018 ; FCA, 2021;

Global studies of open banking and finance

Key insights from the case studies

There is not a singular, correct way of implementing open finance. The approach should fit the context of the relevant jurisdiction. However, there were a few commonalities among the five case studies examined, which are detailed below:

Type of regime pursued: In most instances, mandatory and regulatory led regimes were pursued, with varying degrees of consultation with the private sector. Voluntary regimes were pursued in markets that had sophisticated financial sectors.

Drivers of open finance/banking: In regulatory regimes, regulators typically pursued open finance/banking to increase competition, level the playing field in the financial sector for new players and fintechs, increase innovation and/or improve financial inclusion.

Role of the regulator and policymaker: The role is heavily dependent upon the type of regime pursued; however, regulators can play an enabling role even in voluntary regimes. Although personal data protection regulation is not necessary for open finance, it is commonly in existence in jurisdictions that implemented open finance. In some instances, additional regulation was introduced to regulate the open finance regime.

Institutions mandated to share data: Typically, a phased approach was taken, where a country first starts with open banking and then moves to open finance over time. In this instance, specific banks were named individually or specific tiers (e.g. the largest banks) were required to participate in the regime.

Institutions who can access the data: In most instances, additional licensing was introduced for third-party providers which enables them to access data in the open finance regimes.

APIs: Setting standards for open APIs was common and strong security standard were required.

Cost: Open finance has large cost implications as significant investment and resources are put into the development and maintenance of open APIs. Typically, the data holders incurred the costs of developing the open APIs. Regulators invest significant time in ensuring the regulatory framework is enabling and supervising and enforcing the relevant regulation.

United Kingdom

Open banking

Type

Mandatory through a CMA court ruling

Industries covered

9 largest banks mandated to participate in open banking

Payments initiation

Yes

Driver

Remedying **anti-competitive behaviour** of the 9 largest banks

Regulatory and governance framework

Date started

Jan 2018

Lead regulators

1. Financial Conduct Authority
2. Competition and Markets Authority

Regulatory framework

1. PSD2, which was transposed into PSR
2. RTS-SCA, which became UK-RTS
3. GDPR

Implementation agency

OPEN BANKING

Open Banking Implementation Entity (OBIE)

Actors and data

Type of data shared

- Customer financial data
- Public/product services data
- Transaction data

Who can access the data?

1. Payment initiation service providers (PISPs)
2. Account information service providers (AISPs)

Did these third-party licensing categories exist prior to open finance?

No

Costs

Are APIs standardised?

Yes, APIs are standardized by the OBIE

Who bears the cost?

The 9 largest banks that were mandated to participate in open banking

What is the cost?

£81.1m
as of 2019

Outcomes

APIs, new licensing

166 Open Banking APIs

73 PISPs

184 AISPs

22 AP Aggregators

Products and customers

Growth in open banking products and services was 76% between Dec 2019 and Dec 2020

2.5million UK customers used open banking enabled products and 2.84m payments were initiated in open banking in Oct 2021

European Union

Open banking

Type

Mandatory through PSD2 regulation

Industries covered

Banking

Payments initiation

Yes

Driver

Increase Pan-European competition and levelling the playing field

Regulatory and governance framework

Date started

Sep 2019

Lead regulators

1. National Financial Authorities
2. European Banking Authority

Regulatory framework

1. PSD2
2. RTS-SCA
3. GDPR

Implementation agency

European Banking Authority

Actors and data

Type of data shared

- Customer financial data
- Public/product services data
- Transaction data

Who can access the data?

1. Payment initiation service providers (PISPs)
2. Account information service providers (AISPs)

Did these third-party licensing categories exist prior to open finance?

Only eIDAS Certificates

Costs

Are APIs standardised?

No, API standards differ across each country in the EU and are set up by independently

Who bears the cost?

Mandated Financial Institutions (Banks) who also fund and create own APIs

What is the cost?

N/A

Outcomes

APIs, new licensing

302 Licensed TPPs

30 PISPs

236 AISPs

Products and customers

Over 12 million EU Consumers use open banking products and services and is expected to reach 63.8 million by 2024

Brazil

Open Finance

Type
Mandatory but sector-specific

Industries covered
Mandatory for Segment 1 and 2 Banks and authorized payment institutions. Voluntary for all other financial institutions if compliant with technical requirements and on participant repository

Payments initiation
Yes

Driver
To foster competition in the financial sector and ensure a level-playing field with data sharing between companies

Regulatory and governance framework

Date started
May 2020

Lead regulators
1. Central Bank of Brazil (BCB)

Regulatory framework
1. CMN/BCB No.1/2020 (Creates Open Banking)
2. Circular BCB No. 4.15/2020 (Data/Services)
3. General Data Protection Law (LGPD)
4. CMN No. 4,893/2021 (Cybersecurity)

Implementation agency
BANCO CENTRAL DO BRASIL

Central Bank of Brazil Deliberative Council

Actors and data

Type of data shared
- Customer financial data
- Public/product services data
- Transaction data

Who can access the data?
1. All licensed participating institutions

Did these third-party licensing categories exist prior to open finance?
No

Costs

Are APIs standardised?
Yes, APIs are standardised by the Deliberative Council and Technical Groups of the Central Bank

Who bears the cost?
Cost is borne by the participants of the scheme based on their market share. Data recipients are required to reimburse data holders for certain API data calls

What is the cost?
N/A

Outcomes

APIs, new licensing
12 — Open Banking APIs

12 — API Aggregators

Products and customers
152 million successful API Calls were made in March 2022

Nigeria

Open Banking

Type

Voluntary, but regulated when accessed

Industries covered

Banking and other related financial services

Payments initiation

Yes

Driver

To develop the financial sector, enhance financial inclusion, and improve competition in financial services

Regulatory and governance framework

Date started

TBD

Lead regulators

1. Central Bank of Nigeria (CBN)

Regulatory framework

1. Regulatory Framework for Open Banking
2. Nigeria Data Protection Regulation

Implementation agency

Central Bank of Nigeria

Actors and data

Type of data shared

- Customer financial data
- Public/product services data
- Transaction data

Who can access the data?

1. Licensed Third Party Providers such as Payments Services Solution Providers, Mobile Money Operators, Payment Services Banks, among others.

Did these third-party licensing categories exist prior to open finance?

No

Costs

Are APIs standardised?

Yes, APIs standardised by the CBN

Who bears the cost?

Borne by banks and account providers

What is the cost?

N/A

Outcomes

APIs, new licensing

TBD

Products and customers

TBD

TBD

Singapore

Open Finance

Type

Voluntary-market lead, but regulated when accessed

Industries covered

Banking, insurance, payments

Payments initiation

Yes, not mandatory

Driver

To provide a market environment that would reduce barriers of entry for innovation, fintechs, and other new players

Regulatory and governance framework

Date started

2013

Lead regulators

1. Monetary Authority of Singapore
2. Personal Data Protection Commission

Regulatory framework

1. API Playbook
2. Personal Data Protection Act

Implementation agency

Monetary Authority of Singapore (MAS)

Actors and data

Type of data shared

- Customer financial data
- Public/product services data
- Transaction data

Who can access the data?

1. Licenced third party providers according to private agreements entered into with FSPs

Did these third-party licensing categories exist prior to open finance?

Partially

Costs

Are APIs standardised?

APIs are standardised by MAS

Who bears the cost?

The regulator and the parties (TPPs, Banks) who pay fees to utilize APIX sandbox

What is the cost?

NA

Outcomes

APIs, new licensing

1692

APIs available

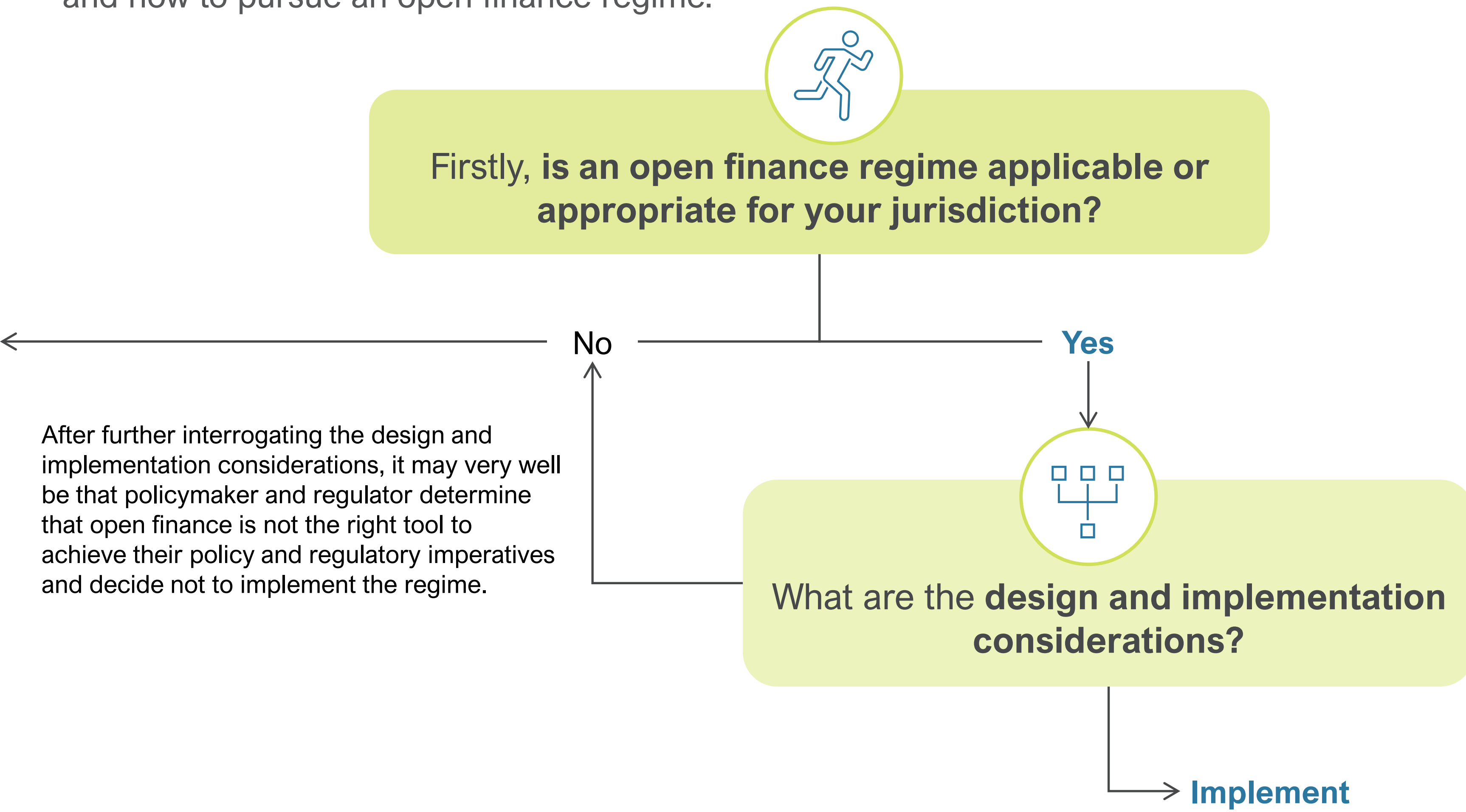
Products and customers

Singapore has developed a large fintech market built largely around APIs, for instance, for risk-decisioning in the absence of formal credit-scoring agencies. Singapore's customers also have high adoption potential with 67% already using mobile banking apps and 88% of the digitally active population using two or more TTP services.

Open finance implementation and design considerations framework – *a rapid assessment*

Open finance implementation and design considerations

There are two key questions policymakers and regulators need to consider when deciding whether and how to pursue an open finance regime:



Should an open finance regime be pursued?

Five key high-level questions for the rapid assessment

Whether an open finance regime could be viable to pursue will depend on a series of five sequential questions. Only should a country reasonably answer **yes** to all the questions below, can it move onto further considering the design and implementation considerations of the regime. If any of the questions are **no**, then open finance should be put on the backburner, for now.

If a country answers **maybe or yes**, **but with some caveats**, then it will be important for the country to undertake an in-depth assessment to see how open finance could play out in their respective market and to ensure that all the design, implementation and governance costs are worth it the policy and regulatory imperatives it achieves.

Are the benefits of open finance aligned to the policy and regulatory imperatives of the country, taking into consideration the state of the market?

Yes

Are there sufficient policy, regulatory and institutional mechanisms to implement an open finance regime or are there sufficient tools to implement necessary ones?

Yes

Could there be a perceived net benefit to data holders to participate in open finance and do they have the required ability?

Yes

Is there a market for the effective use of shared data by innovators?

Yes

Are consumers likely to see benefits and participate in open data markets?

Should an open finance regime be pursued?

Sub-questions

Is an open finance regime applicable or appropriate for your jurisdiction?

Are the benefits of open finance aligned to the policy and regulatory imperatives of the country given the state of the current market?

- Are increased innovation, competition and inclusion key policy and regulatory imperatives?
- Will the broader set of market conditions, such as digital infrastructure, size of the market, maturity of the market, etc. enable open finance to function?

Are there sufficient policy, regulatory and institutional mechanisms to implement an open finance framework, or are there sufficient tools to implement necessary ones?

- Is the existing regulatory framework sufficiently developed around institutional mandates, supervision and enforcement, third-party provider licensing, API standards, data protection and cybersecurity?
- Would there need to be a comprehensive overhaul/introduction of new legislation or regulation?
- Are there effective mechanisms and structures for coordination between affected regulators?

Could there be a perceived net benefit to data holders to participate in open finance?

- Would it be possible to convince incumbent FSPs to see the benefits and cooperate in an open finance regime?
- Do FSPs have the financial, technical capacity and capability and data maturity to implement open finance?
- Would FSPs be able to implement sufficient cybersecurity measures?

Is there a market for the effective use of shared data by innovators?

- Would third-party providers (e.g., FinTechs) naturally enter the market if there was an open finance regime?
- Would these third-party providers have the capability and capacity to appropriately utilize the data?
- Would these third-party providers be willing to pay (within reason) to access the data?
- Would third-party providers have the capacity to implement sufficient cybersecurity measures as required in the financial sector?
- Would FinTechs be less inclined to enter this jurisdiction if open finance was not pursued?

Are consumers likely to see benefits and participate in open data markets?

- How can the use cases be made easily visible to consumers?
- How do individuals within the jurisdiction think about their data?
- Would it be possible to get consumers to willingly opt into sharing their data?
- Do consumers trust FSPs?

If yes, what are the design and implementation considerations?

If yes, how should the open finance regime be designed and implemented?

High-level questions

Which type of regime and implementation timeline is the most suitable?

How should the regime be regulated and governed?

Which entities will be required and allowed to participate in the data sharing framework?

How should data sharing be approached?

Which entities should bear the implementation costs of the regime?

What are the design and implementation considerations

Sub-questions

If yes, what are the design and implementation considerations?

Which type of regime and implementation timeline is most suitable?

- What should be the type of approach?
- Which implementation process should be followed?

How should the regime be regulated and governed?

- Who should be the lead regulator?
- Should a separate implementation entity be established?
- What additional legislation or regulation would need to be introduced?

Which entities will be required and allowed to participate in the data sharing framework?

- Who should be required to share data?
- Who can access data and what are the licensing and regulatory requirements for the data accessors?
- How can the data holders be encouraged to willingly participate in the open finance regime instead of doing the bare minimum?

How should data sharing be approached?

- What data will be shared?
- Who should set the technical specifications and standards of the APIs?
- How should data reciprocity be tackled?

Which entities should bear the implementation costs of the regime?

- Who should bear the infrastructure costs?
- Should there be a cost to access the data, and if so how should cost be determined?
- Do incumbent FSPs have funding to develop their own Open APIs?

Open finance considerations for Rwanda

African local contextual realities will shape the answer that each country arrives at across the decision framework

The following contextual factors can influence the viability of implementing open finance in Africa, as well as the design thereof:

- **Proliferation of mobile money.** There are more than half a billion registered mobile money accounts in Africa, surpassing the number of African adults with a bank account. This means that the inclusion of mobile money account data will be an important consideration for open finance frameworks in Africa that seek to enhance financial inclusion.

- **Resource constraints.** Open finance entails extensive supervision and enforcement, as well as coordination of multiple regulators. This will require additional resources which will be difficult to attain in the African context, where most financial regulatory authorities face resource constraints. Many financial services providers in Africa are also resource constrained and may hence not have sufficient technical and financial capacity to implement open finance.

- **Consumer capability to engage with digital financial services.** Financial literacy has been defined as a “combination of awareness, knowledge, skill, attitude, and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being”. The need for consumer consent in open finance requires a basic level of financial and digital literacy, as well as awareness of consumer rights and responsibilities and to what extent such rights are protected in the context of an open finance offering.

- **General low smartphone and mobile internet access.** Products and services that benefit from open finance tend to be app-based and fintech-driven. That means that the success of open finance to enhance meaningful financial inclusion also to some extent depends on the connectivity as well as smartphone access of the population. Africa still has the lowest internet penetration rate, globally, with only 43% of people using the internet. Moreover, much of mobile money in Africa is still USSD based.

1

Should an open finance regime be pursued in Rwanda?

Are the benefits of open finance aligned to the policy and regulatory imperatives in the country?

YES

- Priority # 3 of The National Strategy for Transformation 2017-2023 establishes Rwanda as a globally **competitive knowledge-based economy for innovation** and centre for excellence, and Priority #5 positions Rwanda as a hub for **financial services to promote investments**.
- The Smart Rwanda Master Plan 2015-2020 provides for the **enhancing of electronic financial transactions** and the implementation of systems to **support financial inclusion**.
- The Financial Sector Development Program II focuses on **encouraging financial and non-financial institutions to provide a broader range of low-cost financial services**. It also aims to **increase competition in the banking sector and licensing new entrants with innovative business models** to provide services to SMEs and the lower-income end.
- The National Data Revolution Policy sets procedures and strategies to generate and open more data for user communities and drive an industry of big data analytics to power national tech-innovation efforts and adds the importance of a **strong engagement between demand and supply side of data utilization**. The policy also provides for **enforcing data standards and API.**
- The Science, Technology and Innovation policy and the National Cybersecurity policy set up solutions and a roadmap for **implementing cybersecurity infrastructure and capacity building around cybersecurity.**

Key takeaway:

Increasing competition in the financial sector, **improving financial inclusion**, allowing **new innovative entrants** and **establishing Rwanda as a hub for financial investments while considering cybersecurity** are key policy imperatives for Rwanda, which align with the benefits and use cases of open finance.

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Are there sufficient policy, regulatory and institutional mechanisms to implement and open finance framework or are there sufficient tools to implement necessary ones?

YES but new guidelines and coordination structures would need to be put in place

Is the existing regulatory framework sufficiently developed?

- The **BNR Law** empowers it to supervise and regulate payment and banking systems including MNOs, PSPs, banks, SACCOs, MFIs, card providers and technical services providers.
- The **Personal Data and Privacy Law** provides sufficient safeguards and permits for data sharing.
- RURA, BNR, RISA and the NCSA have cybersecurity provisions within the boundaries of their mandates.
- **Payment Services Providers regulation**, provides for and regulates payment initiation activities, which is relevant for open finance.

Would there need to be a comprehensive overhaul or introduction of new legislation or regulation?

- If a mandatory approach was taken, **new regulation or guidelines** would need to be introduced mandating the selected entities to share their data.
- **API standards and/or regulations** have not been published; however, the existing **Electronic Transactions Law** could be used as a base to set standards.
- There is not currently a specific regulatory framework for fintechs or **licensing category for third-party providers**. However, a fintech strategy and roadmap are underway.

Are there effective mechanisms and structures for coordination among the affected regulators?

- There is currently ongoing coordination and collaboration among the BNR, RURA, NCSA, Capital Markets Authority, and MINECOFIN.
- The existing **National Payment Council**, under the oversight of BNR, is a consensus building institution to provide guidance from banking, payments and telecom industries. It may be a good steering entity.
- It is likely that a **new structure for coordination** among the regulators that open finance touches on would need to be created – however, it has been noted that this would be possible.

Key takeaways:

- There are **sufficiently robust regulatory and institutional frameworks for open finance**, however, there are **gaps that would need** to be addressed around licensing categories for data accessors and API standards/regulations, and regulations or guidelines around which entities were required to share which data.
- Any change should be made through **issuing guidelines or regulations,** as passing laws is lengthy and cumbersome.
- There is **not currently a forum** among regulators that is appropriate for open finance, but it would not be a challenge to create a dedicated coordination platform for open finance.

Could there be a perceived net benefit to data holders to participate in open finance?

YES if FSPs invest in additional analytical capability

Would it be possible to convince incumbent FSPs to see the benefits and cooperate in an open finance regime?

- The mobile money market is dominated by one player and three banks hold ~50% of total banking assets. It will be **challenging to convince these large players to voluntarily** opt into sharing their customer data.
- Consequently, **the use cases and benefits of open finance and potential added revenue** for data holders (e.g. established FSPs) should be emphasized.
- Creating a **"fear of missing out"** could encourage established players to participate.
- Established FSPs that were consulted seem **generally open** to open finance.

Do FSPs have the technical capacity and capability to implement open finance?

- **Data sharing is currently nascent in Rwanda**, although there are some accounts of APIs being developed and used by data holders (e.g. the TransUnion credit reference bureau).
- It is unlikely that FSPs, even the big established ones have the internal skills and capacity to develop and maintain open APIs on their own.
- Currently, the use of data to inform new products and services is limited among established FSPs.

Would FSPs be able to implement sufficient cybersecurity measures?

- Cybersecurity is a **top priority** for all the banks.
- **Bigger banks may have sufficient cybersecurity mechanisms** and teams in place.
- Smaller banks **may struggle** to put in place sufficient cybersecurity mechanisms.

Key takeaways:

- Convincing dominant players to participate in an open finance regime will depend on how well the **use cases and business opportunities are illustrated for data holders,** but established banks have **generally been open** to the concept.
- Convincing MNOs will require special considerations (they have hindered interoperability).
- Banks are currently unlikely to have **capacity** to implement open finance and smaller banks may struggle to **maintain sufficient cybersecurity measure.**

Is there a market for the effective use of shared data by innovators?

YES if fintechs invest in additional analytical capability

Would third-party providers (e.g. fintechs) naturally enter the market if there was an open finance regime?

- An open finance regime is seen as **highly beneficial** and a "**game changer**" for fintechs and would allow them to introduce innovative products.
- Fintechs would **utilise data** made available in an open finance regime, should existing licensing categories or new licensing categories enable them to do so.
- The BNR has issued specific licenses that may allow new entrants to easily and naturally join an open finance framework.

Would third-party providers have the capability and capacity to appropriately utilise the data?

- There are currently **47 fintechs operating in Rwanda,** who have varying degrees of sophistication when it comes to their data and analytics capabilities.
- The more sophisticated fintechs **would be able to utilize the data** as they already do so, while the less sophisticated ones may require additional capacity building to utilize the data in a meaningful way.

Would third-party providers have the capacity to implement sufficient cybersecurity measures as required in the financial sector?

- Fintechs are only **starting** to develop their **cybersecurity capacities.**
- There is a need for **capacity building** for start-ups in terms of cybersecurity.
- BNR has **cybersecurity regulations for licensed FSPs;** any licence will require complying with strict requirements around cybersecurity.

Key takeaways:

- Fintechs **will participate in an open finance regime** and utilize data made available should there be appropriate licensing for third-party providers (TTPs) to access data.
- However, fintechs may need **capacity building on cybersecurity**, data management and analytics, and API usage.

Are consumers likely to see benefits and participate in open data markets?

YES **if key safeguards are put in place**

How can use cases be made easily visible to consumers?

- Consumers are already interacting with some fintech companies which provide value added services to their traditional banking services, but in a very limited way
- Consumers would need to understand the use cases related to open finance and see benefits in using the products and services that stem from open finance

How do individuals within the jurisdiction think about their data? Are they at ease to share their data?

- Individuals in Rwanda are quite private and are therefore protective of their data.
- Due to this, they would be quite hesitant to share their data unless there are clear safeguards put in place and the benefits to them are made clear.

Do consumers trust FSPs?

- Individuals in Rwanda tend to mistrust financial service providers until they have interacted with them and become a customer as trust is built over time.

Key takeaways:

- The use cases of open finance would need to be tested with consumers to know whether they resonated with them
- Individuals in Rwanda are quite **private, protective of their data** and hesitant to trust FSPs unless they have past positive interactions with them.
- Therefore, for consumers to willingly opt in to sharing their data, it will be necessary for the **right safeguards** to be put in place and the **key benefits** to be highlighted to them – but with capacity building and exposing them to positive use cases, this should be possible.

Can an open finance regime be considered for Rwanda?

Are the benefits of open finance aligned to the policy and regulatory imperatives of the country?

Yes

Are there sufficient policy, regulatory and institutional mechanisms to implement and open finance regime or are there sufficient tools to implement necessary ones?

Yes

Could there be a perceived net benefit to data holders to participate in open finance?

Yes, if

Is there a market for the effective use of shared data by innovators?

Yes, if

Are consumers likely to see benefits and participate in open data markets?

Yes, if

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How should the open finance regime be designed and implemented in Rwanda?

Initial recommendations

Based on desktop research and interviews with stakeholders in Rwanda we provided **initial high-level recommendations** towards the design and implementation of an open finance framework.

We believe that a more **detailed more in-depth open finance market and regulatory assessment which assesses the state of the market in terms of the infrastructure, skills and capacity of the established FSPs, innovators and regulators** should be undertaken. An in-depth assessment of the cost and sustainability of an open finance regime should be undertaken, and ultimately policymakers and regulators need to determine whether an open finance framework is the right tool to achieve their policy and regulatory imperatives given the maturity of the market and costs associated with it.

Which type of regime and implementation timeline is the most suitable?

What should be the type of approach?

- As it may be challenging to get established FSPs to willingly participate in an open finance regime, a **mandatory approach** should be pursued.
- While a mandatory approach is recommended, the lead regulator should work closely with the private sector to ensure buy-in and so that the regime is designed in a way that speaks to their needs.

Which implementation process should be followed?

- Rwanda should pursue open finance more broadly, but should implement a **phased approach** where specific established entities of one sector (e.g. banking) are mandated to share their data, which speak to specific use cases the regulator sees as priority.
- The design and implementation process should consider the **dominant position of MNOs** on the mobile money sector and actively work to address data asymmetries.
- The scheme should be **designed and implemented in consultation** with the various existing actors in the market, taking into consideration their concerns and requirements.

How should the regime be regulated and governed?

Who should be the lead regulator?

- The **BNR would be the lead regulator**, given it supervises and regulates the payment and banking system.
- The BNR would **need to collaborate** with other relevant regulators in the design and implementation of open finance, such as RURA, NCSA, Capital Markets Authority, and MINECOFIN. A separate coordination platform for these regulators should be created explicitly to focus on open finance.

Should a separate implementation entity be established?

- A **separate implementation entity** should be established to deliver API standards, data structures and security architectures that enable developers to harness open data and ensure adequate security measures in place.
- This could either be a **separate entity which is overseen by the BNR** or could be a **specific department within the BNR**.

What additional legislation or regulation need to be introduced?

- A regulatory impact assessment and **SWOT analysis** should be performed to determine where the key gaps are.
- Current gaps identified: **Licencing categories for data accessors**, regulations on **entities required to share data and types of data to be shared**, mandatory implementation of API and data standards.

Which entities will be required and allowed to participate in the data-sharing framework?

Who should be required to share data?

- As Rwanda should implement a phased approach to open finance, it is suggested that they start with the **banking sector first** and **mandate the largest banks** to share their data. Other smaller banks should see the value of open finance and naturally enter.
- After the banking sector is participating in the regime, **other financial institutions** such as insurers should be mandated to participate.
- It should be considered if governmental entities should be part of the data sharing of public information.

Who can access data and what are the licensing and regulatory requirements for the data accessors?

- Any entity with a **licence granted by the BNR to provide financial services** would be able to access data.
- The BNR should develop a **third-party providers (TPP) licensing category**, which would enable institutions that are not licensed as FSPs to access the data.

How can the data holders be encouraged to willingly participate in the open finance regime as opposed to doing the bare minimum?

A **phased approach with extensive consultations with stakeholders**; where the **benefits** of the open finance framework are clearly shown; tax incentives could be used to incentivize participation; creating "fear of missing out".

How should the rules of engagement for data sharing be developed?

What data will be shared?

- Data to be shared**: (1) generic services data, (2) customer data and (3) transactional data.**
- Ideally data should be shared following a **phased approach**, starting with generic services data, this will allow testing of the systems and generate trust at the same time.
- The implementation committee should be given an **explicit mandate to further identify, develop and incorporate new types of relevant data sources** into the regime. They should work with different government regulators and data holders to incorporate more of this data over time.

Who should set the technical specifications and standards of the APIs?

The **API standards** should be set by the **implementation entity** in consultation with the various stakeholders: established FSPs, fintechs, etc.

How should data reciprocity be tackled?

- **Data reciprocity should be enabled** but it should be limited to specific categories determined by the regulator for every sector.
- Competition issues should be discussed to **empower smaller players and not only bigger ones.**

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Which entities should bear the implementation costs of the regime?

Who should bear the infrastructure costs?

- **Data holders** (e.g. established FSPs) would bear the costs for the development and maintenance of the open APIs.
- The cost of the **implementation entity** should be covered by the **BNR.**

Should there be a cost to access the data? If so, how should the cost be determined?

- The data holders will have invested significantly in the development of the open APIs, and will need to **recover the costs somehow.**
- Therefore, there could either be a) a **cost to access the data**, which should be borne by the data accessors (e.g. fintechs) or b) the data holders get a **certain percentage of revenue** generated by the products and services developed as a result of open finance by the data accessors.
- Costs should be determined and set by **the implementation entity** and take into consideration the cost of development and maintenance of the open APIs. However, costs should not be set so high as to deter data accessors in participating in the regime.

Do incumbent FSPs have funding to develop their own APIs?

- Some larger banks have mentioned that they have **sufficient funding** and have already started to develop their own APIs.
- Smaller, less established FSPs would **struggle to cover the costs** and maintenance of the open APIs.

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Key imperatives for Rwanda

- Our initial assessment is that the **Rwandan market is not immediately ready to implement open finance** as the private sector (established FSPs and fintechs) lack much of the data skills, capacity and key infrastructure required to build and participate in meaningful open data architectures.
- Open finance is not something that can be implemented overnight as it **requires extensive engagement, buy-in and skills and infrastructure to be built**. Early evidence also suggests that a longer timeframe from initial concept to implementation may yield the greatest results in terms of buy-in and success.
- Open finance is a mechanism which is increasingly being adopted around the world as means for **enabling innovation, competition and financial inclusion**. Open finance is attractive to fintechs, and therefore as Rwanda strives to be a global fintech hub, it is imperative that **Rwanda publicly articulates its long-term strategic approach to open finance.** This can be done through either a plan or a five-year roadmap, which articulates its path to adoption of open finance. The development of this roadmap requires an in-depth market assessment.
- A **more in-depth open finance market assessment should be undertaken** to determine exactly where the gaps are in the capacity and capability of the regulators, established FSPs and innovators, **coupled with a tangible multi-year action plan** to address gaps and build the required infrastructure and expertise.
  - On the **supply side**, the assessment will require a full understanding of all the potential market players' capacities, considering aspects such as data management skills and infrastructure, cybersecurity mechanisms in place, and financial capability to implement an open finance model.
  - On the **demand side**, the assessment should consider aspects such as the willingness of consumers to share their data, their readiness and capacity to interact with the technology, and the need for the innovative products that an open finance framework could bring. This will help to identify what additional skills need to be built for a meaningful open finance regime.

Thank you

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About Cenfri

Cenfri is a global think-tank and non-profit enterprise that bridges the gap between insights and impact in the financial sector. Cenfri's people are driven by a vision of a world where all people live their financial lives optimally to enhance welfare and grow the economy. Its core focus is on generating insights that can inform policymakers, market players and donors who seek to unlock development outcomes through inclusive financial services and the financial sector more broadly.

Stakeholders interviewed

We would like to extend our sincere gratitude to all the stakeholders that participated in this study.

Rwandan Stakeholders	Global Experts
Esther Kunda (Ministry of ICT)	**Ariadne Plaitakis and Stefan Staschen** (CGAP)
Alex Ntale (ICT Chamber of Commerce)	**Comfort Phelane** (South African Reserve Bank)
Arlette Rwakazina (RURA)	**Nydia Remolina** (Singapore Management University)
Valence Kimenyi (National Bank of Rwanda)	**Adedeji Olowe** (Open Banking Nigeria)
Rhema Muhimuzi and Dadi Niwenjye (Bank of Kigali)	**Leandro Pupe Nobrega** (Belvo – Brasil)
Olivier Mugabonake (ADFinance and Rwanda Fintech Association)	
Tony Francis Ntore (Rwanda Bankers' Association)	
Ntoudi Mouyelo (Rwanda Finance Limited)	
Steve Mutsinzi (I&M Bank)	