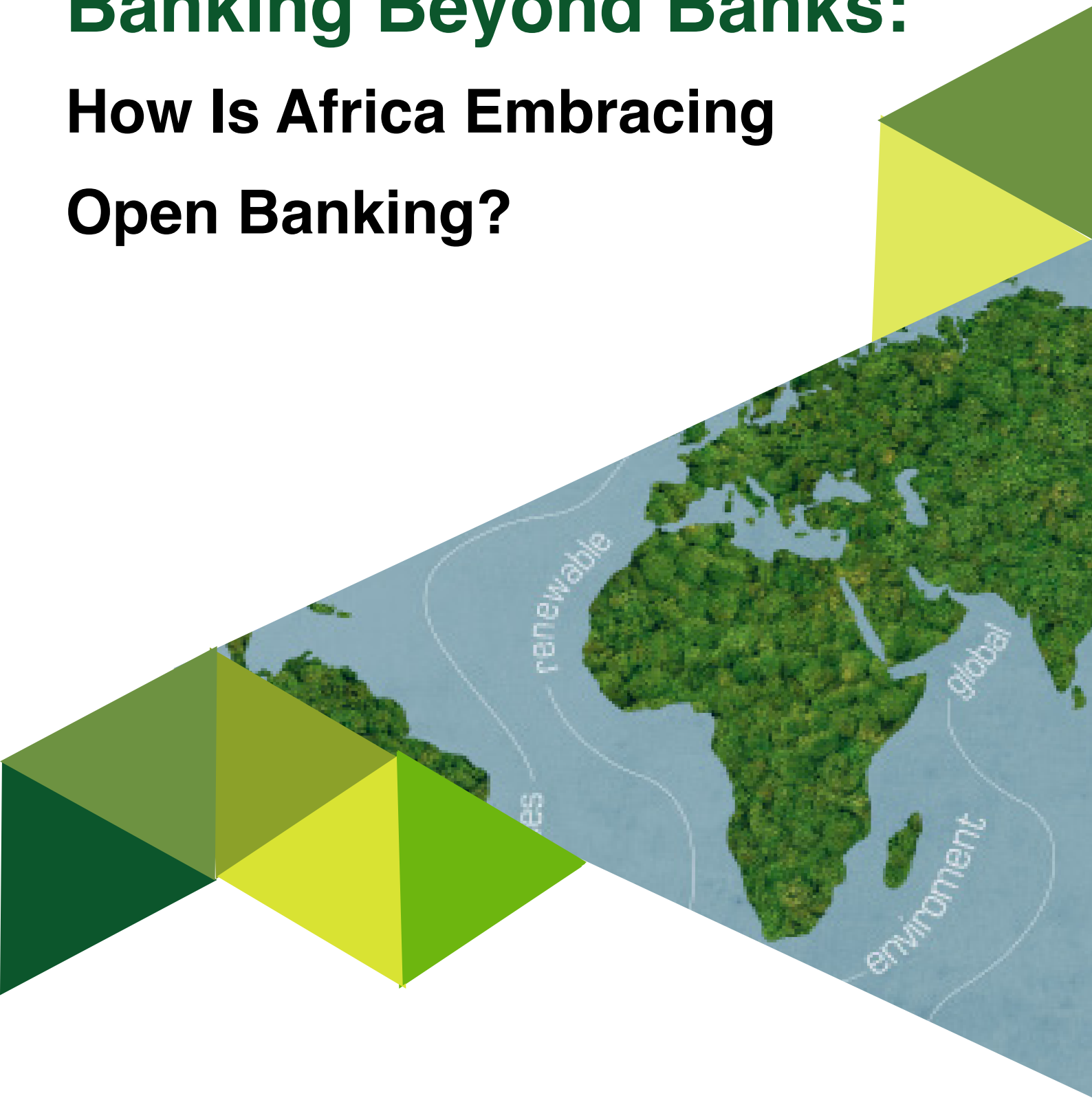
Agpaytech's Research
21st October, 2022

Banking Beyond Banks:

How Is Africa Embracing Open Banking?



Agpaytech

Executive Summary

Open banking initiative has already kicked off in many countries like India, the UK, Canada, etc. Like a few developed countries, Nigeria, Rwanda, Ghana, South Africa, Kenya, etc., are among the few countries in Africa preparing to adopt open banking. Regulators and banks are warming up to the idea of sharing customer data with Fintechs.

Over the past decades, banking has been a historically private affair. Financial institutions typically guard their customers' information under strict regulations from the state and monetary policies. But several commercial banks today struggle to keep up with the demands of modern banking, to say nothing of significantly tougher technical demands of real-time systems like open banking.

In this report, we examined the development of open banking worldwide and its growth characteristics by region. Secondly, the report discussed the open banking ecosystem and open platform initiatives in Africa. Lastly, the report highlighted the policy motivations, opportunities, and potential challenges of open banking. We recommend that Agpaytech provides white-label solutions to banks and Fintechs (BaaS/BaaP) that want third-party services in their open banking initiative.

Keywords: *Open Banking, Open Platform, BaaS, BaaP, Digital Solution, Fintech*

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An Overview of Open Banking

The digital challenge for banks is no longer about adjusting traditional products and services to the digital age to preserve existing customer relationships. With new business models and advanced technologies, the competition has taken a new paradigm shift to the repositioning of traditional banks as players in the digital revolution. Banks are now cooperating with Fintechs, commercial businesses, non-banking institutions, and consumers to migrate back offices and data storage to the cloud. Several reports have indicated that there are clear revenue opportunities in the early adoption of the Open-banking initiative, for example from BaaS/BaaP-related fees and commissions. Beyond that, partnering with non-financial businesses can broaden a bank's footprint and place customer relationships on a path better adapted to the new dynamics

Open banking provides a holistic business model that financial institutions automatically and securely share consumer data. By using an approved API, consumer data is securely transmitted because the API acts as a software intermediary allowing different applications to communicate with each other. With this open banking, users can access multiple financial accounts in one place. This gives consumers greater control over their financial data anywhere anytime.

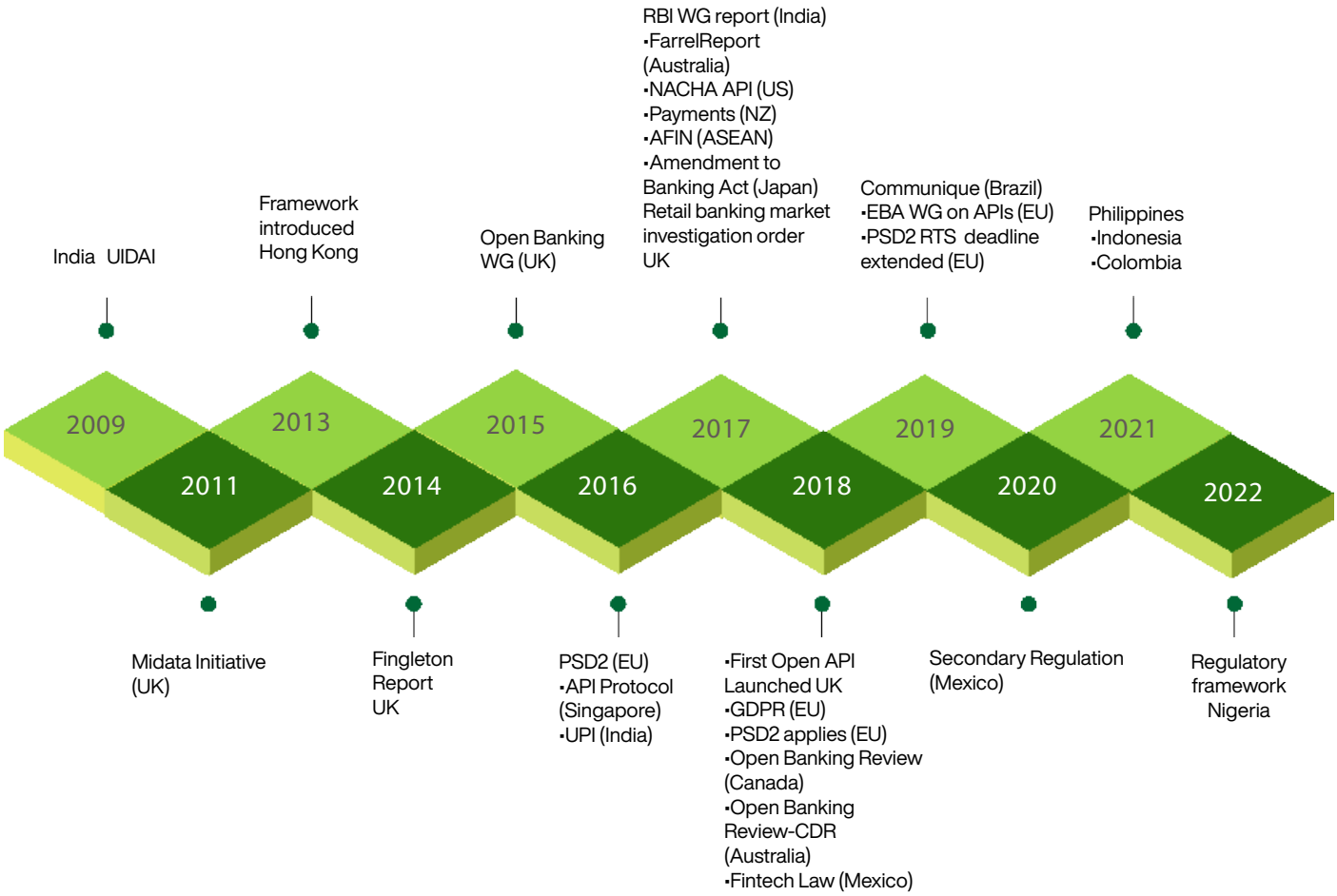
Currently, the open banking initiative is being driven by two key factors worldwide: market and regulatory. For instance, Japan has encouraged banks to contract TPPs and banks are mandated to publish their API policies. With the regulatory-driven, Hong Kong Monetary Authority issued an Open API Framework in July 2018, setting out a four-phase approach for banks to implement Open APIs, starting with information sharing on products and services, and ending with sharing of transactional information and payments initiation services. Nigeria has issued an open banking framework for banks and fintech. Generally, policy-makers in many countries are introducing a range of measures to promote and accelerate the take-up of data-sharing frameworks in banking.

Open Banking **Development Worldwide**

Open banking development has been supported by regulatory frameworks to protect data share and sustainable business models. At the same time, banks and financial institutions are big targets for criminals, and the loss or misuse of financial data can cause real damage and distress to individuals. The risk of data loss, privacy breaches, fraud, and other cybersecurity attacks is real and increasing. Therefore, banks and financial service providers face new legal responsibilities to prevent the unauthorized or unlawful processing of data and to prevent loss, destruction, or damage.

Several countries worldwide are leading the development and regulation of open banking. The notable countries are EU, UK, India, Canada, etc. Figure 1 depicts open banking initiative progress since 2009

Figure 1: Open banking development

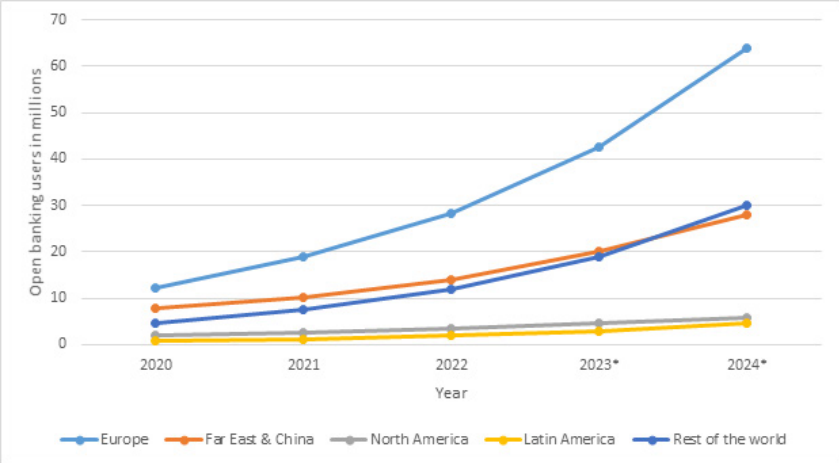


Source: Agpaytech (web comparison)

Global Open Banking **Growth**

The number of open banking users worldwide is expected to grow at an average annual rate of nearly 50 percent between 2020 and 2024, with the European market being the largest. As the graph shows, in 2020, Europe counted approximately 12.2 million open banking users. This figure is expected to reach 63.8 million by 2024. As of 2020, 24.7 million individuals worldwide used open banking services, a number that is forecast to reach 132.2 million by 2024.

Figure 2: Open banking users worldwide



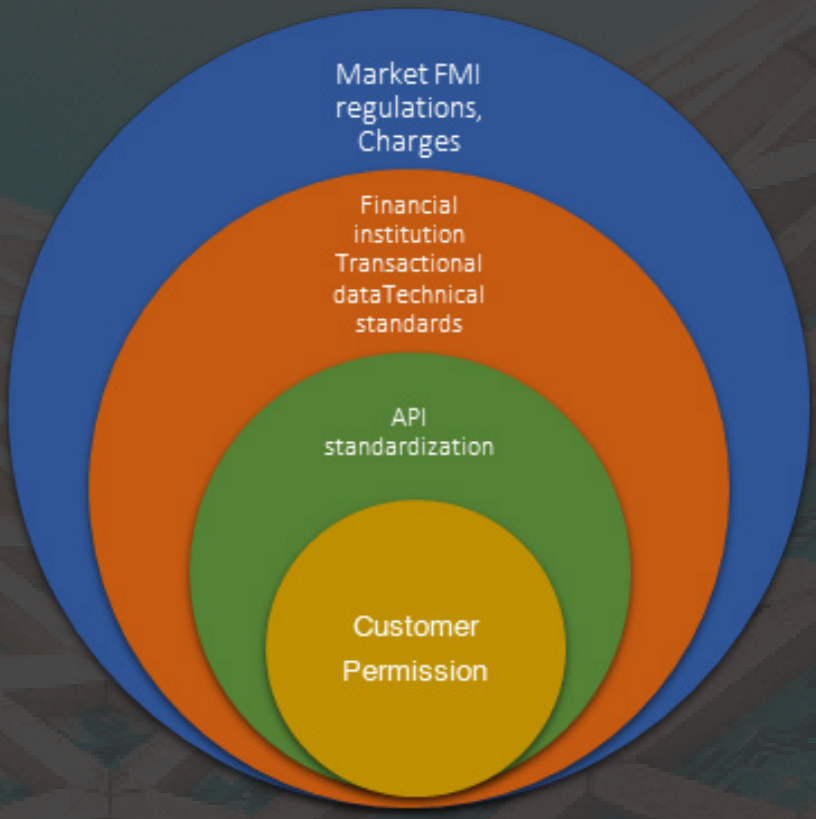
Source: Agpaytech

Opening Banking **Ecosystem** in **Africa**

Like other developed countries, Nigeria, Ghana, South Africa, Kenya, etc., are among the few countries in Africa preparing to adopt open banking. Regulators and banks in Africa are warming up to the idea of sharing customer data with Fintechs. Currently, the open banking initiative is paving way for central banks to set up data access and management guidelines. This is because the current informal economy in Africa is a prime space for fintech innovation, offering fintech a significant pool of unbanked and underbanked consumers hungry for safe, secure, and innovative financial services.

The OB dream depends on four key forces in the open banking ecosystem; the approved regulations from central banks and monetary unions, third-party providers such as financial technology API developers, financial and non-financial institutions, and bank customers. These four institutions' permission data, and the API technology providers. Each has a unique and sometimes overlapping role to promote financial inclusion in the open banking financial solution.

Figure 3: Open banking ecosystem



Source: Agpaytech

Financial market data and regulations: The open data will require essential environmental data to render key services such as maps, access location, regulated charges, standardized API, and other guidelines. For instance, countries such as the UK, India, and Canada have developed their financial conduct regulation to govern OB. For example, the Payment Services Directive Two (PSD2) mandates that banks share data, if the customer gives permission, with trusted third parties through APIs.

Financial institutions: These are the commercial banks or other non-bank financial institutions that possess customers' data and with customers' permission can share it with third parties. It includes Fintech companies that provide innovative financial solutions, products and services.

Third-party providers: A provider is a participant that uses API to avail data or services to another participant. Third-Party Providers comprise payment initiative service providers (PISPs) and account information service providers (AISPs). It includes Fintechs that provide both API and financial innovation solutions.

Consumer management: Customers of the financial institution are the users of services or products. Customers should be able to grant, revoke, and manage this authorization transparently. The consumer is a participant that uses API released by the providers to access data or services.

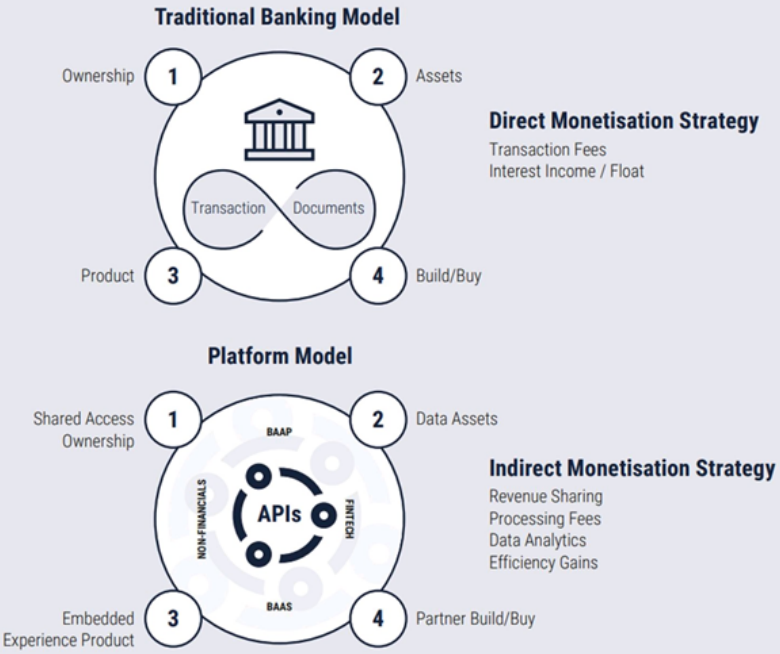
The **Open Platform** Model

The future of banking lies in open-platform transactions providing customers with transparency around price and choice. The open platform model (either market or regulation driven) is forcing banks to give up their monopoly and open their systems to third parties. With the revolution of Fintechs that has disrupted the traditional banking approach with a new model, third-party payment service providers are collaborating with existing banks to give a seamless experience to consumers. Two key business use case models are the Banking as-a-Service (BAAS) and Banking as a Platform (BAAP).

BaaS: The services provided by a traditional bank can now be provided, with the help of online payment technologies, to companies who can work as a bank. In other words, companies can integrate seamlessly with existing back-office of banking services. This allows non-banks to easily and cost-effectively launch additional financial products and expand into additional markets.

BaaP: Banking as a Platform enables Fintech and non-financial companies to provide services to banking institutions. Banking as a Platform means that a Fintech or any other software/technology company can develop a service and "rent" it to a bank.

Figure 4: Traditional and open banking models



Source: MIT Sloan

Policy Motivations of Open Banking

The rise of a new financial technology model requires new guidelines and monetary policies to enhance its operationalization. Safeguarding competition, strengthening market contestability, and protecting the integrity of legal frameworks in the face of innovations from payment initiation and account services/aggregation is the main reason why the legislatures and monetary policymakers have intervened to enact rules.

Table 1: Policy motivation for open banking in Africa

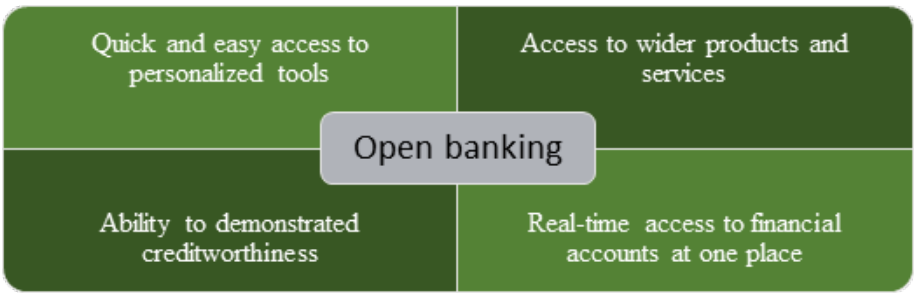
Policy Areas	Motivations
Financial innovation	• Provide a new business model of financial innovation to fintech, bigtech, etc. • It's an avenue for experimentation of API and financial institutions.
Competition and contestability	• It's a new market entry for fintech companies to contest in the financial market. • Strengthen business use cases of API and data right • Provide multiple choice payment avenues for consumers to choose from.
Third-Party Access	• Provides services beyond traditional financial institutions. • Test the effectiveness of data regulation and business use model.

Source: Agpaytech

Types of **Open Banking Services**

The main types of services in open banking are real-time transactional services, communicative services, and information services. Using Fintech apps with open banking can help users manage their finances online and through mobile devices at their convenient and safe times. It gives consumers greater control over their financial data anywhere anytime. Some of the key open banking services are summarized in the diagram below.

Figure 5: Open banking services



Source: Agpaytech

Challenges and Opportunities of Open Banking

The success factor of open banking depends on harnessing the potential opportunities and challenges of different types of open banking-enabled services and users of the services (consumers and small businesses). This report highlights four areas that would account for the smooth implementation of open banking. We focused on the regulators or supervisory bodies (central banks, monetary committees, etc.), financial and non-financial institutions, fintech, consumers or users, and community infrastructures.

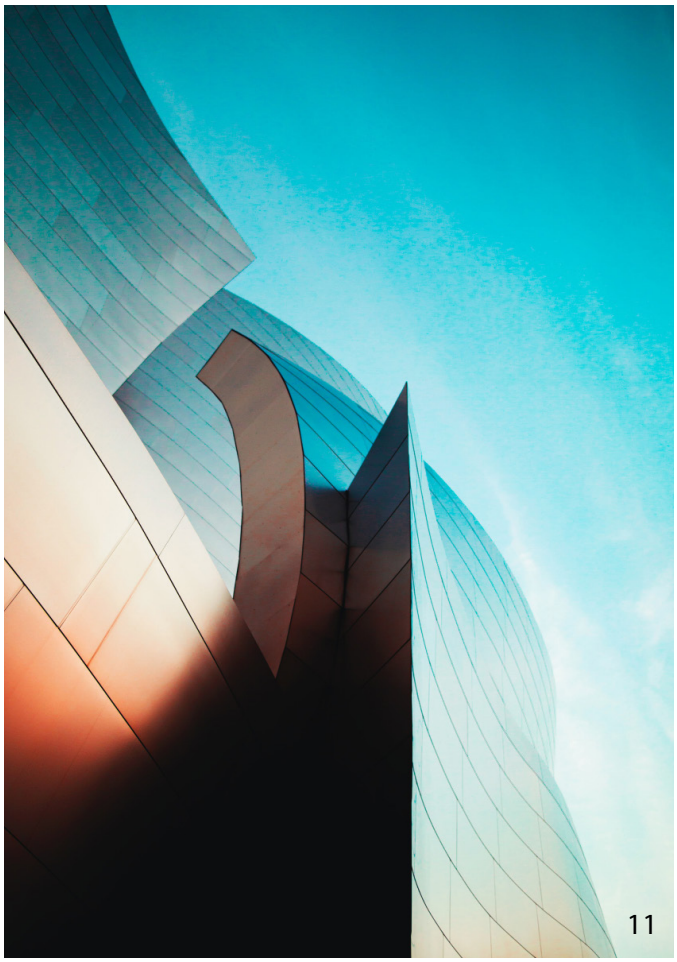


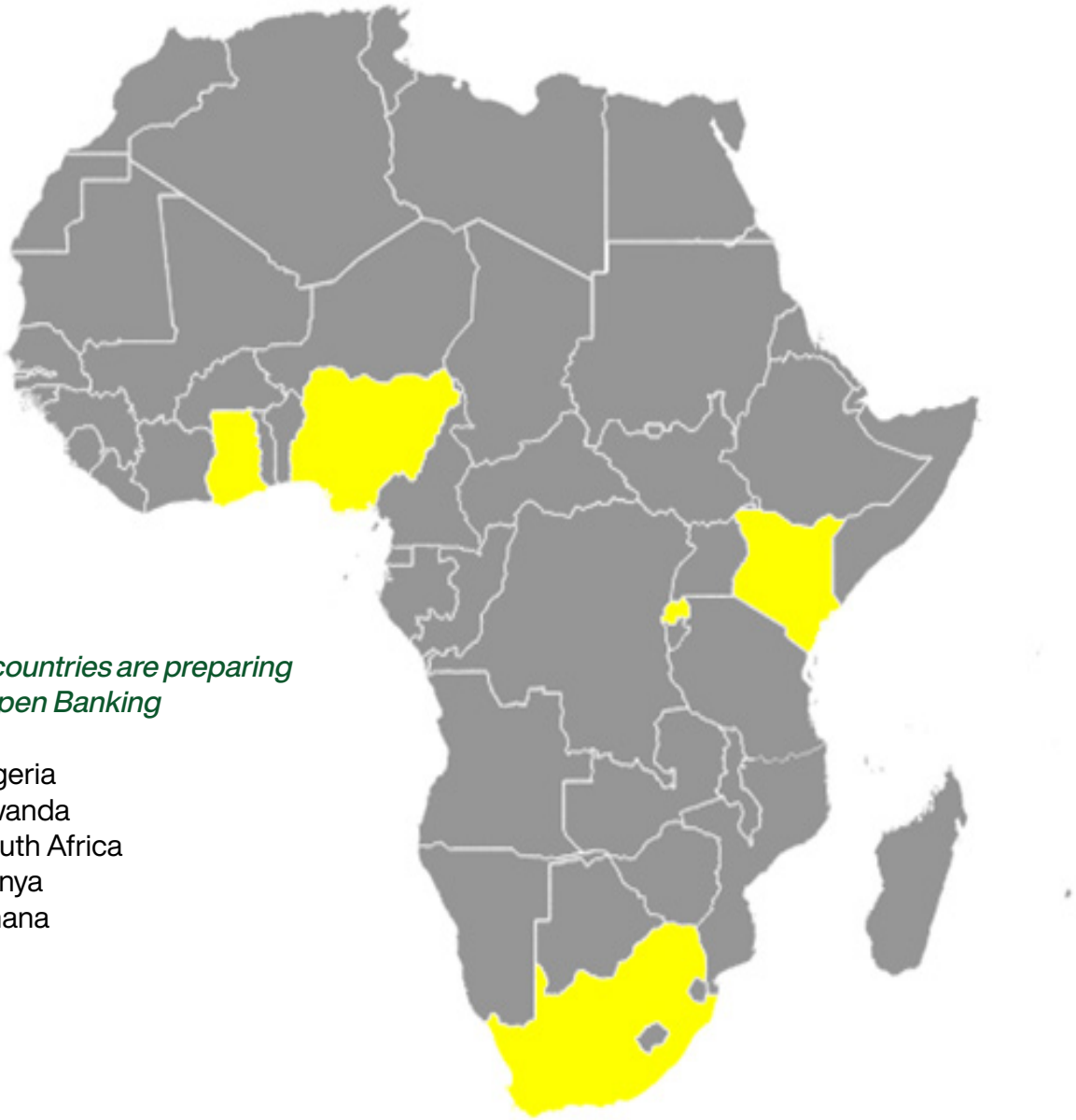
Table 2: Opportunities and challenges of open banking

	Supervisors	Financial & non-institutions	Fintechs	Consumers	Infrastructure
Opportunities	Support their governance mechanism and supervision efforts	New business and transactional service Additional revenue stream	Strengthen fintech positions in the financial market Increase collaborative business models with banks.	Access to a wider range of products and services Increase in user experience.	Improves banking and Fintech infrastructure facility
Challenges	Unclear accreditation criteria Unstandardized API Requires time and cost for technical training	Unstandardized API cybersecurity risks	Regulation and compliance issues Cybersecurity risks	Data privacy Risk and security of data concern	Require cost and time to meet standardization Poor internet Low smartphone penetration

Source: Agpaytech

Open Banking in **Africa**

Although no African country has enforced a clear legislative rule for Open Banking, there are still promising developments in several countries. Currently, Nigeria, South Africa, Rwanda, and Kenya are preparing grounds for the OB initiative. However, only Nigeria has issued a regulatory approach to adopt the OB in its payment landscape.



Five countries are preparing for Open Banking

- Nigeria
- Rwanda
- South Africa
- Kenya
- Ghana

What is so exciting about Open Banking in Africa?

- In Africa, Open Banking has the potential to transform financial services (including payments), increase competition, broaden service offerings, support innovation, and improve convenience and customer experience.

- Open Banking is expected to improve consumers' experience in the financial service offered 40%.

Table 3: Open Banking development in Africa

	Nigeria	South Africa	Kenya	Ghana	Rwanda
Preparation	Has declared official intention to adapt OB	The intention to start OB is incorporated into Vision 25 objective	OB initiative included in the Five-Year Digital Economy Strategy	OB was hinted at in Ghana's National Payment Systems Strategic Plan (2019-2024)	OB is based on the EU regulatory framework.
Approach	Regulatory led	Regulatory led	Unknown	Unknown	Regulatory led
Regulatory guidelines	Has issued guidelines on 17th February 2021	A consultation paper on OB has been published by NPSD of SARB on November 2020.	Yet to issue official guidelines OB initiative is proposed under the "Data Access and Management".	No specific regulatory guideline has been outlined	Implementation of technical standards by 2024
API	Has issued a guideline on standard API	Lack of uniformity of APIs for OB	No specific guidelines on APIs	Yet to develop a road map for data sharing on API	Follows EU PSD2
Fintechs	Fintechs are collaborating with the Nigeria Open Technology Foundation	Fintechs have embraced OB	The fintech industry is the backbone of OB	Fintechs are ready for the initiative	Fintechs are ready for the initiative

Source: Agpaytech

Open Banking in **Nigeria**

On February 17th, 2021, the CBN issued a regulatory framework for open banking to foster the sharing and leveraging of customer-permission data by banks with third-party firms to build solutions and services that provide efficiency, greater financial transparency, and options for account holders and to enhance access to financial services in Nigeria. The CBN maintains an Open Banking Registry (OBR) of all participants to provide regulatory oversight. The OBR is a public repository for details of registered participants in the OB ecosystem.

Moreover, CBN has issued a standard feature of API to be used in open banking operations. Because of this, Nigeria Open Technology Foundation, a not-for-profit organization, launched Open Banking Nigeria (OBN) in 2018 in a bid to drive innovation and choice in the Nigerian banking sector. Its objective is to roll out open APIs and encourage banks and Fintechs to adopt open standards for API implementation. In the Nigerian open banking system, the CBN outlines four major data and services that open banking providers can access depending on their maturity level as described by the CBN-OB guideline.

Table 4: Data and service types available

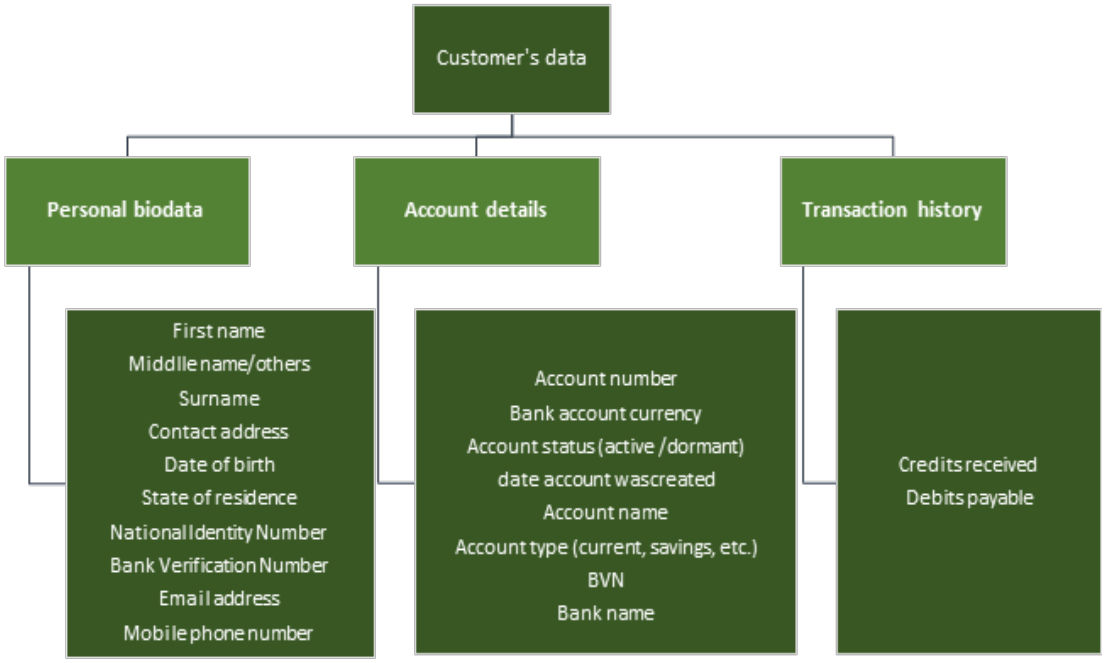
Data type	Description	Example	Risk level
Product Information and Service Touchpoints (PIST)	OB entity information to customers	ATM/POS/Agents locations, channels (website/app) addresses, institution identifiers, service codes, fees, charges and quotes, rates, tenors, etc.	Low
Market Insight Transactions (MIT	This shall include statistical data aggregated on basis of products, services, segments, etc. It shall not be associated with any individual customer or account.	Reliable market data	Moderate
Personal Information and Financial Transaction (PIFT)	data at individual customer level either on general information on the customer or data transaction history	KYC data, types of accounts held balances, bill payments, loans, repayments, recurring transactions, etc.	High
Profile, Analytics, and Scoring Transaction (PAST)	This shall include information on a customer which analyses, scores, or give an opinion on a customer.	e.g. credit score, income ratings, etc.	High and sensitive

Source: Central Bank of Nigeria

Customer Data for open banking in **Nigeria**

The CBN outlined examples of consumers' data that could be shared with the TPP. Three categories of data are required by the TPP; customers' biodata, bank or financial account details, and account transaction history.

Figure 6: Consumers' data for open banking



Source: Central Bank of Nigeria

Open Banking in **Kenya**

The Central Bank of Kenya (CBK) released a five-year Digital Economy Strategy on 20th July 2020. The Strategy aims at setting the pace to place Kenya as one of the leading players in the digital economy in Africa and the process unleash the new economic possibilities created by future industries and markets. The report highlighted the route to achieving open banking initiative through “Data Access and Management”.

According to the Draft Report, the Government will facilitate data access and management by developing an open data policy, standards, and guidelines and establishing standards for data handling and sharing. This could go beyond the one-off data that is collected at the time of onboarding onto different services (static data/information) to take a more holistic approach and include a wider informational context that users and customers generate throughout various touchpoints and consumption journeys (dynamic data/information).

From a financial services perspective, dynamic data is just as vital as static user data in terms of safeguarding and protection. Moreover, data access and management would also serve as a backbone for other industries to reach the market through mobile application (app) integrations with business platforms for effective service delivery.

Open Banking in **Ghana**

As part of the Bank of Ghana's National Payment Systems Strategic Plan (2019-2024)", sets forth the policy direction and guidelines that will promote an enabling environment to develop the Ghanaian payment and financial systems. It leverages opportunities provided by digital technologies to promote competition, efficiency, innovation, and financial inclusion within the payment ecosystem. The plan is anchored on the provisions of the Bank of Ghana Act, 2002 (Act 612), as amended, and the Payment Systems and Services Act, 2019.

The strategic plan aims to promote open banking initiatives. To achieve this purpose, the plan set out a timeline of 2021-2024 to promote open data initiatives by putting in place standards for data sharing, and engaging stakeholders to develop the road map for data sharing. According to the BoG plan, the benefits of open data and open banking provide more innovative services for consumers and create competition and choice among Fintechs, commercial banks, and all users as well.

How GhIPSS can operationalize Ghana's Open Banking Initiative?

The adoption of open banking requires the integration of existing payment infrastructures, APIs technologies, and Fintech collaboration. In the Ghanaian payment landscape, the Open banking initiative in Ghana can be effectively designed and operationalized by Ghana Interbank Payment and Settlement Systems (GhIPSS). GhIPSS´ payment infrastructure is currently used by all banks in Ghana including the ARB Apex Bank and its affiliates, Savings and Loans companies and Third Party Payment Providers. Real-Time Payment Services GhIPSS' Real-Time/ Instant Payment services leverage the company's Instant Funds transfer solution which rides on the National Switch; the gh-link Infrastructure. gh-link is GhIPSS' interbank switching and processing system which interconnects switches of Financial Institutions and systems of third-party payment service providers.

Open Banking in **South Africa**

According to SARB (2020), the traditional model of creating batch files of transactions and sharing them via a file transfer protocol network on a deferred basis is regarded as no longer fit for purpose by consumers who need payment providers to offer real-time or immediate payments. Joining the global demand for access to customers' financial information by third-party providers for them to provide payment services that would meet, or be tailored to, the needs of the customer. Unlike screen scraping, open APIs are considered a secure way of giving third-party providers access to customers' financial information to enable the provision of enhanced services, as they do not involve sharing sensitive information like login credentials. Open banking has the potential to transform financial services (including payments), increase competition, broaden service offerings, support innovation, and improve convenience and customer experience (SARB, 2020)

According to the Consultation Paper on open-banking activities in the national payment system from National Payment System Department released by SARB on November 2020, the policy paper aims to develop a regulatory framework that will introduce standards for open banking to maintain the safety, integrity, and efficiency of the NPS to achieve the Vision 2025. SARB surveyed screen-scraping practices and open-banking activities in the payments industry. The majority of the banks are in support of open banking where open APIs are used, given that they are more secure than screen scraping. However, banks have raised concerns about the lack of uniformity in a standard for open-banking APIs.

Open Banking in **Rwanda**

The National Bank of Rwanda (BNR) has acknowledged that fintech and more particularly increasing the availability of digital customer data can revolutionize financial markets. The growing fintech market in Rwanda already supports the availability of digital customer data that can be mined and analyzed to gain a better understanding of customer needs, but the BNR has now also published a regulation to formalize the approach and the publication of standards is imminent.

On February 24, 2020, Rwanda gazetted Regulation 31/2019 of December 16, 2019, on Protection of Payment Service Users (Rwanda PSD), which closely follows the EU PSD2 concerning payments. The Rwanda PSD is part of a suite of recent legislation governing payments. The regulation sets out "the rules to protect the users of payment services provided totally or partially in Rwanda as well as the enforcement of rights and/or obligations in the provision of payment services."

The Open Banking regulation in Rwanda covers individual consumers and small businesses and addresses data sharing and data portability to encourage innovation, efficiency, new product development, and new players. Because 90-95 percent of Rwanda's population already accesses financial services via telecommunications providers rather than banks, Rwandan legislation and policy must apply to and require participation by telecommunications companies and mobile banking providers in addition to traditional banks.

Conclusion

Open Banking is inevitable in Africa because it could transform traditional banking services to match the fast-developing financial world. Banks that fall behind in adjusting their structures and operations to the emerging digital-first ecosystem will find it increasingly hard to remain competitive and profitable. Digitalization is making this situation worse, even if Open Banking and its subsets – Banking-as-a-Service (BaaS), Banking-as-a-Platform (BaaP), and Embedded Finance – are not purposely designed to bypass banks.

***What needs to be done to improve Open Banking Adoption in Africa*?**

- Clear regulations and legislation
- Clear consumer consent guidelines
- Who owns the data?
- Standardized APIs
- Open engagement forums with stakeholders?

Financial services firms wishing to participate successfully in this new environment will need to go through a radical review of their long-term strategy, as well as their technological and operational capabilities. Above all else firms will need to recognize that from now on putting customers fully in control of their 'data lives will be both a commercial and regulatory imperative.

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About **Agpaytech**

Agpaytech Ltd. is a company pioneering in the Fintech Space with a focused approach to building robust technologies for eCommerce Card Processing Solutions for Payment Service Providers (PSPs). Additionally, we provide Compliance and Regulatory Umbrella, Remittance-as-a-Service, White-Label Solution, Foreign Exchange, Cross Border Payments, and digital currency technology. We have partnered with multiple banks, non-banking financial institutions, and corporate organizations to create a solid service delivery model for them and their customers to ease their international remittances and payments concerns. Website www.agpaytech.co.uk

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