

# Disrupting the Old-School Banking Style: How Nigeria is Adapting to Open Banking



# Executive Summary

Open banking initiative is changing banking and Fintech collaboration by repositioning traditional banks as players in digital revolution. While 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, Nigeria remains the first African country to issue regulatory guidelines to operate a stable open banking platform on February 17th, 2021.

Open banking is a banking practice in which third-party financial service providers can use application programming interfaces (APIs) to gain access to consumer banking, transactions, and other data from banks and non-banking financial institutions to provider.

This report justifies open banking in Nigerian payment landscape and examined the market and customer data sharing techniques in the open banking platform. Moreover, the study highlights the potential risks associated with API, banks and Fintech collaboration in provide seamless services to the bank customers. The report recommends the need for secured and standardized APIs and provision of regulatory oversight to avoid illicit monetary activities.

## Keywords:

Open Banking  
Platform Banking  
APIs  
Fintech  
Customer Data

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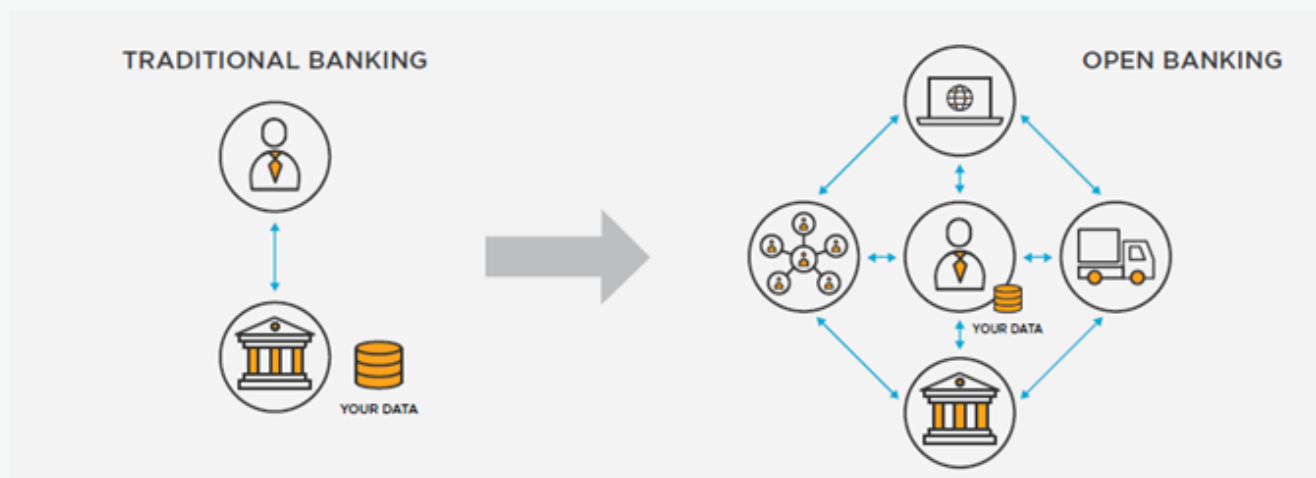
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# Introduction: What is Open Banking?

Financial technology gurus are spearheading unthinkable business models all in the interest of the consumers. From mobile banking, internet banking, transactional banking, correspondent banking, and WhatsApp banking, we are now in the new era of open banking. Open Banking is creating value outside traditional banking and it is disrupting the old-school banking style with consent from the users. Is all about big data, API and central bank regulations to provide heavenly commercial services. Open banking is changing the way we bank and use financial services in the modern world. The open banking market is growing steadily. A report by Allied Market Research announced a 24.4% growth and predicted the market value will reach over \$43 billion by 2026

The Canadian Advisory Committee on OB (2021) asserted open banking allows consumers and small businesses to securely and efficiently transfer their financial data among financial institutions and accredited third-party service providers. Open banking allows third-party payment service providers and other financial service providers to access the personal and financial information of their customers' banks. Before this can happen, the customer must grant access for the sharing of information, usually via an online consent form following a terms and conditions agreement. The third-party providers then access the relevant shared data via exposed APIs.

Figure 1: Traditional vs open banking



Source: TIBCO whitepaper

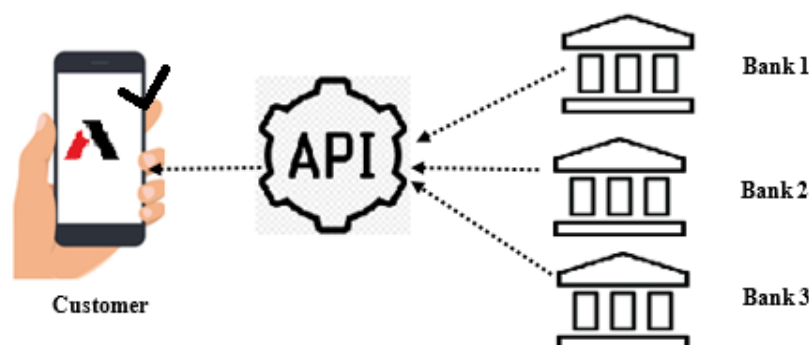
# Open Banking in Nigeria

Open banking development has already kicked off in India, the UK, Canada, etc. In Africa, Nigeria is among the pioneer countries to embrace open banking. 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.

In these scenarios, the OB approach uses APIs to enable third-party payment services and financial service providers to access consumer banking information such as transactions and payment history. In the traditional banking approach where the data is kept by the customers' bank only, with open banking approach the customer will allow third-party providers to access the relevant data from the banks through API which the consumer can use in many ways.

- A customer finds a Fintech app that can manage his/her finances on the mobile device
- The customer willingly links the Fintech app to his/her bank accounts to access financial data
- A customer authorizes his or her bank to share financial data with the app via open banking (account user name and password are not included)
- The customer financial data is shared using a secured online channel (e.g API).
- The app analyzes the customer data and recommends personalized financial products and services, which include product comparison tools, budgetary tools, and users can view all accounts in one place

Figure 2: Open banking model



Source: Agpaytech

# Justification of Open banking in the Nigerian Fintech Space

Using fintech apps with open banking can help users manage their finances online and through mobile devices at their convenient and safe times. Ending the era of jumping from one bank premise to another, open banking users can access financial accounts in one place. It gives consumers greater control over their financial data anywhere anytime. In an open banking framework, users may control, edit, manage, and delete information. Users may also decide when, how, and to what extent this information is communicated to third parties. According to the Canadian Consumer Agency, open banking may offer users several benefits, such as:

- having access to a wider range of useful, competitive, and consumer-friendly financial products and services that meet users' needs.
- having real-time access to all your financial accounts [Bank 1, Bank 2, etc.], products, and services in one place.
- have quick and easy access to personalized tools and products to help improve your financial health. Examples include financial product comparison tools and budgeting tools.

- demonstrating your credit worthiness more easily to loan providers by having all your information in one place.

# Nigeria Open Banking Environment

The OB dream depends on four key forces in their open banking ecosystem; the approved regulations from CBN, third-party providers and financial institutions (banks) and customer-permissioned data, and the API technology providers. Each has a unique and sometimes overlapping role to promote financial inclusion in the open banking financial solution.

Table 1: Open banking environment

Key Stakeholders	Roles
CBN regulations	The issuance and approval of CBN regulatory guidelines are key to the successful implementation of open banking. This was done on February 17 <sup>th</sup> , 2021. Similarly, 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).
API Developers	API is a software intermediary that allows applications to communicate with one another. The developer community involves individuals and entities that develop APIs for participants based on requirements. It includes Fintechs that provide both API and financial innovation solutions.
Consumer consent	Customers to 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.

Source: Agpaytech

# What category of data and service can API access?

API architecture is usually explained in terms of client and server. The application sending the request is the client and the application granting the data response is the server. Thus the API provides a mechanism for two software components to communicate with each other. While there are different types of API, it has common benefits such as integration, innovation, expansion, and ease of maintenance. 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 2: Data and service types available*

<b>Data type</b>	<b>Description</b>	<b>Example</b>	<b>Risk level</b>
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.		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 account 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 customer.	e.g. credit score, income ratings, etc.	High and sensitive

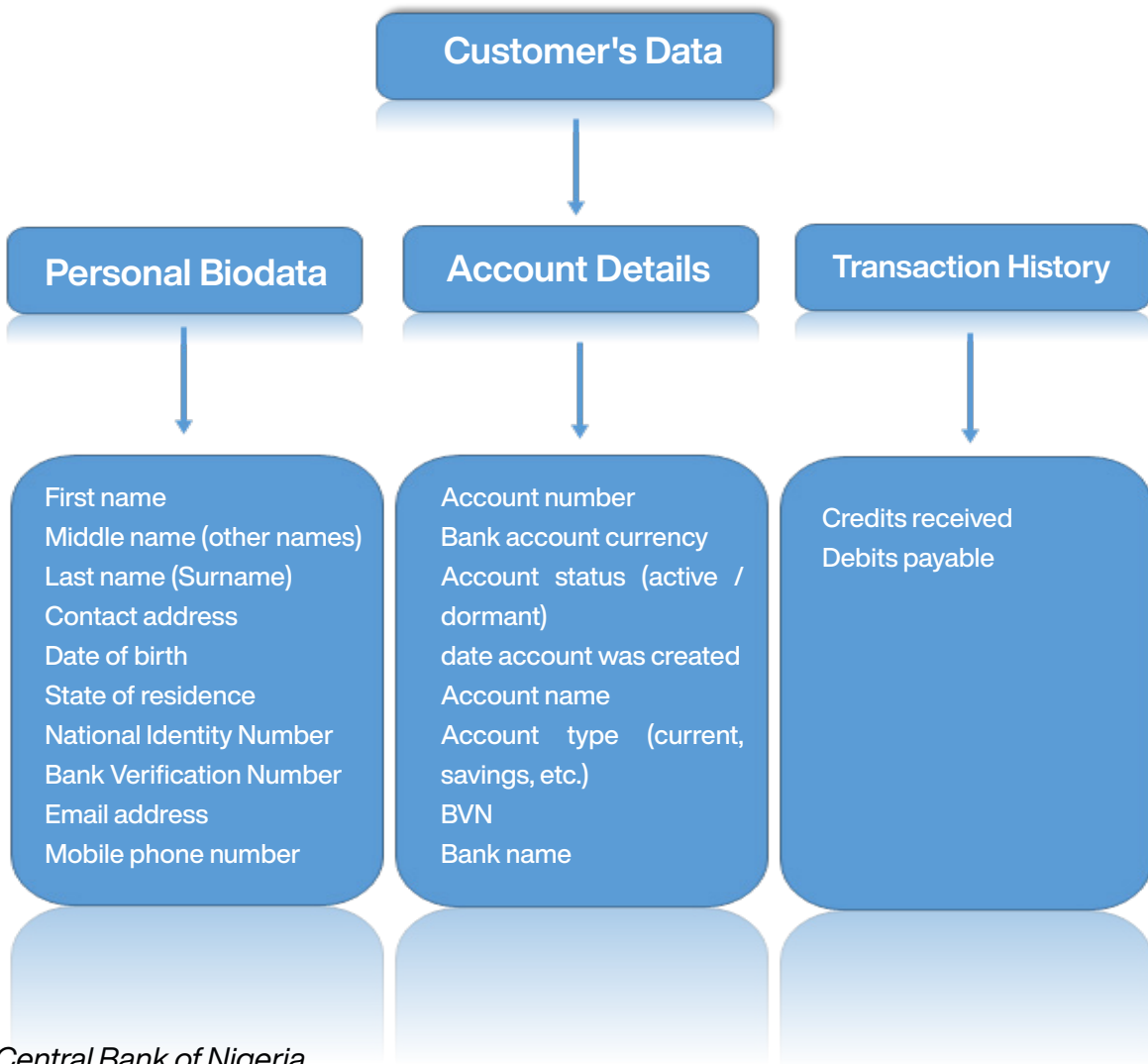
*Source: Central Bank of Nigeria*



# Customer data for open banking

Although consumers provide information to their banks, security and privacy concerns are of high priority. However, open banking requires users to permit third-party providers (TPP) to use API to access the information held with their banks. Three categories of data are required by the TPP; customers' personal biodata, bank or financial account details, and account transaction history. Examples of the actual data description that consumers need to allow TPPs to access are listed in the table below.

Figure 3: Customer data type

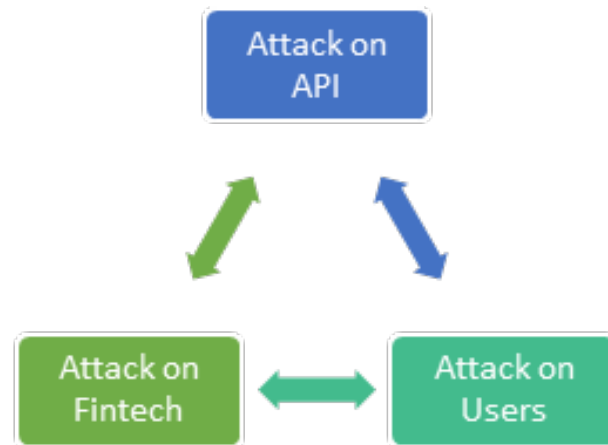


Source: Central Bank of Nigeria

# Risks Associated with Open Banking

Like every payment system, there is the possibility of risk occurrences if weak structures are put in place. Open banking requires strong API and Fintech security with consumers being careful with their secret keys. Attacks on the APIs can result in distributed denial of service (DDoS), resulting in downtime for banking operations and transactions. A hacker can study how the API system works once it goes public and find unexpected responses and security flaws in the back end. Moreover, not all Fintech companies will have the same security level and experience that banks do and this can be a target to steal customers' banking data. Besides, attacks against the user, thus old social engineering and phishing techniques will likely find traction against end users

Figure 4: Attack on participants



Source: Agpaytech

Again, the CBN (2022) provided key risks in open banking including cybersecurity, data privacy, and integrity, contract management, product management, money laundering, regulations, and compliance.

Table 4: Risk and security of open banking

Risk	Details
Cyber-Security Risk	Cybersecurity risk arises, as a result of the use of APIs for interconnectivity between participants. APIs potentially expose the financial system to more vulnerabilities due to sharing of data.
Contract management	Contract management risk is associated with possible losses arising from the non-fulfillment of the terms of the contract or the contract performing poorly
Money laundering	Open APIs create new areas of vulnerability for participants as a result of interconnectivity, giving rise to a large number of financial players and easing cross-border transactions, which makes the monitoring of transactions more complex
Regulatory and Compliance Risk	This risk exists when the products or services of a third party are inconsistent with governing laws, rules, regulations, policies, or ethical standards.
Data Integrity Risk	This is the risk that data stored and processed by information technology systems are incomplete, inaccurate, or inconsistent across different IT systems
Data Privacy Risk	This is the risk of unauthorized access, use, disclosure, disruption, modification, or destruction of information and/or information systems.
Product Management Risk	Open Banking creates the potential for the proliferation of innovative products and services which may increase the complexity of financial services delivery, thus, making it difficult to control operational risk, information security, money laundering, etc.

Source: Central Bank of Nigeria

## Establishing a Standard API for Open Banking in Nigeria

The open banking concept is new in the Nigerian payment sector. And therefore the CBN has issued a standard feature of API to be used in the open banking operations. In view 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.

Unlike many other Open Banking regimes, OBN considers the UK standard over-engineered for Nigeria's purposes. They hope to draft their own standard that will be more appropriate for Nigeria and other countries in West Africa. OBN hopes that an API framework will reduce the cost of innovation to service providers and provide a good customer experience. The Foundation believes Open Banking to revolutionize the Nigerian banking sector and be a "huge boost" to the economy as a whole.

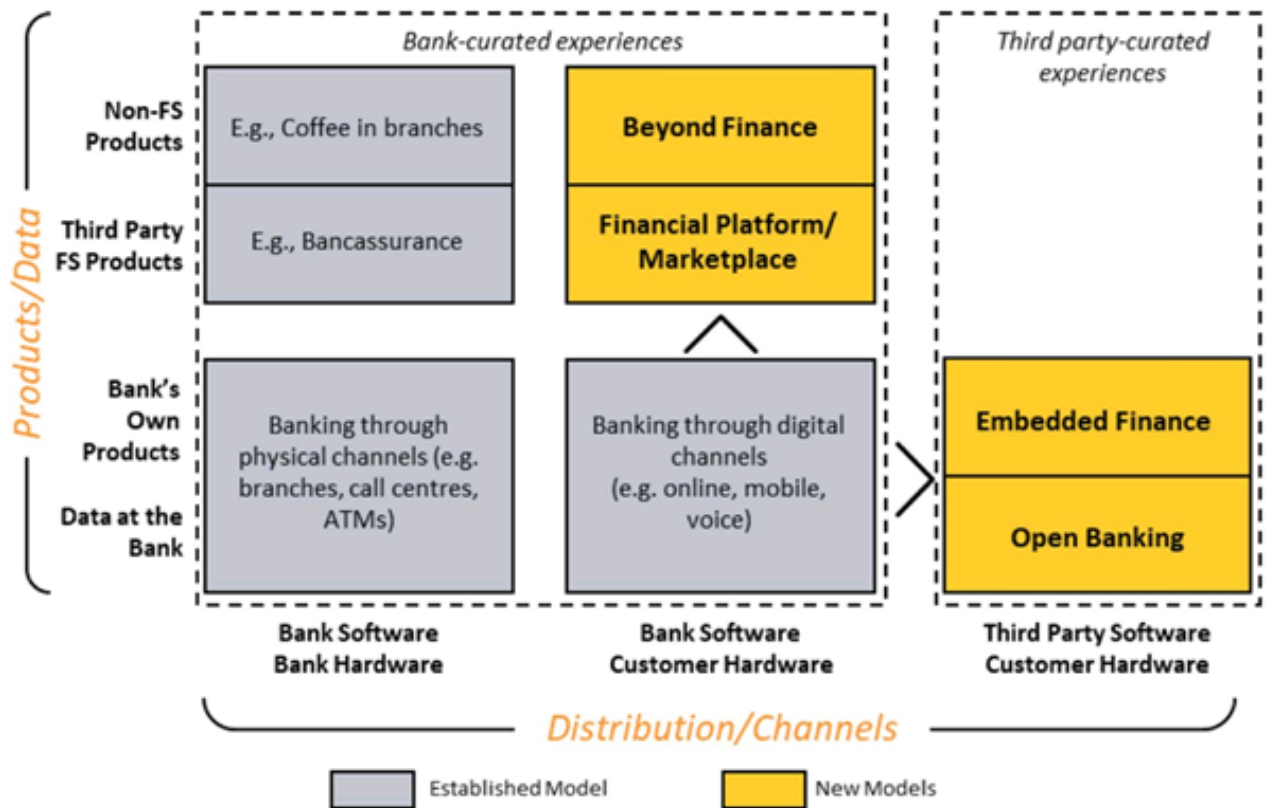
More importantly, API Providers shall comply with the provisions of CNB guidelines and regulations on access rules, service level management, incident management, performance monitoring, continuity and change management as well as reporting and communication management.

## **The Future of Open Banking in Nigeria**

The Nigerian Payments System witnessed remarkable achievements in the recent past, introducing several initiatives under the Payments System Vision 2020. The CBN has implemented over 25 payment structures and regulations to stabilize and make payment more convenient. The payment facilities are; card payment schemes, mobile money operators, switching & processing companies, payment solution service, payment terminals, etc. Nigeria Inter-Bank Clearing and Settlement System. The current implementation of the CBN digital version of Naira (eNaira) also provides a great avenue to achieve a cash-lite economy.

Open banking is a new business model integrated into the financial system through third-party providers to provide essential convenience and choice to bank customers. This creates another opportunity and competition for PSPs and traditional banks to innovate and re-align to today's digitalization possibilities in Nigeria.

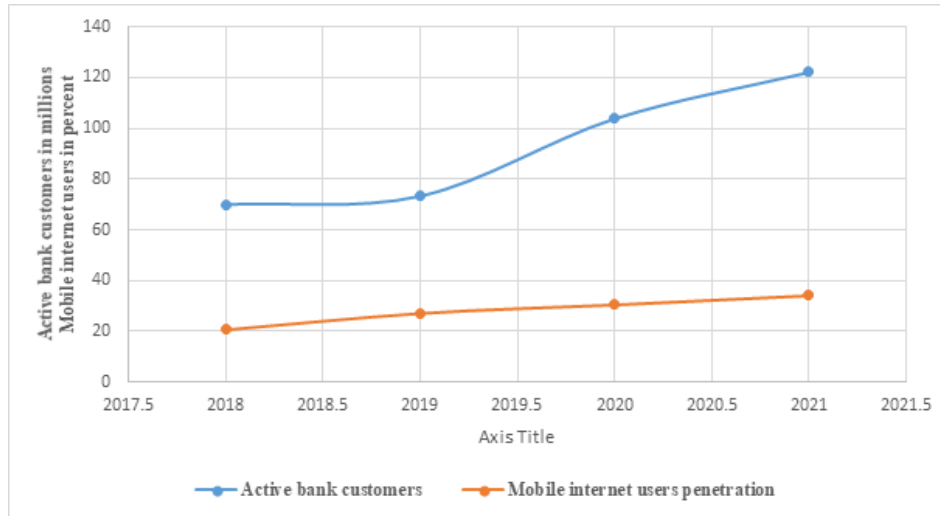
Figure 5: How business models are changing financial services



Source: Celent

The open banking market is sparking with disruptive potential for both Fintech as API providers and financial solution providers. It is creating seamless control and convenient shopping behaviors where customers can have access to all their financial accounts in one place. With about 37.34% mobile internet user penetration in Nigeria, which is projected to grow to 48% in 2027 the number of mobile internet users in Nigeria amounted to over 80.93 million is an opportunity for Fintechs, bigtechs, and e-commerce commercials to rise. Moreover, Nigeria had 122.3 million active bank customers in 2021. Compared to 2016, the number of clients increased by over 60 million (Statista.com).

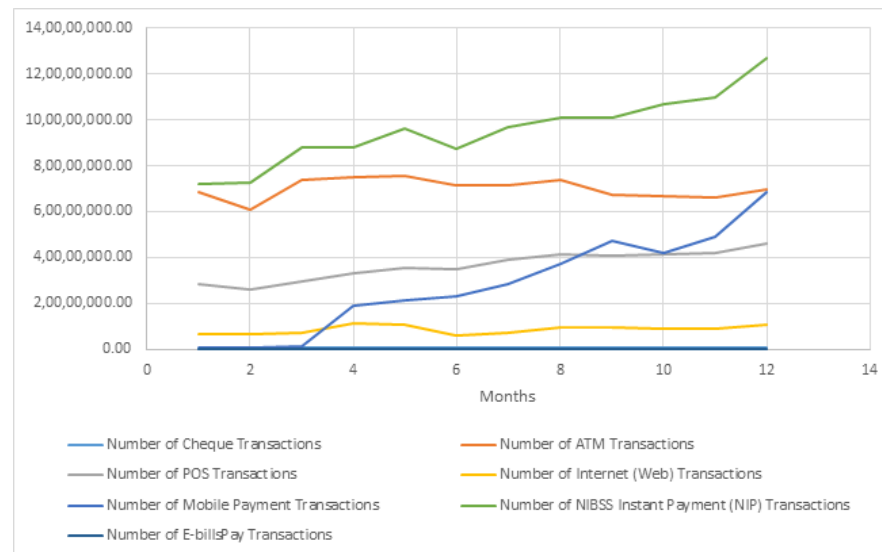
Figure 6: Bank customers and mobile internet users in Nigeria (2018-2021)



Source: Agpaytech [data retrieved from Statista.com]

Nigeria's real-time retail payment market has witnessed the remarkable change over the years. With support from NIBSS, several transactions are completed within a minute or seconds. For instance, figure 7 illustrates the number of cheque transactions, POS, mobile payments, ATM, internet or web, and instant payment transactions for the year 2019.

Figure 7: Payment system statistics 2019 (values in millions)



Source: Agpaytech [data retrieved from CBN]

# Conclusion

The development of faster payment solutions has not come to an end. Financial technocrats are exploring more ways to make money usage safe, convenient, and secure at anytime and anywhere. With the country's digitalization and financial inclusion agenda, open banking will offer customers with "all-bank at the go" service where users can reuse their financial data purposefully.

Besides, open banking can offer many benefits to consumers, but it is important that it is introduced in a way that protects consumers, and bank data and promote trust and a secure payment system. With this, the CBN should standardize all APIs and provide strict regulatory oversight to avoid illicit monetary activities. Also, persistent technology and business engagement forums are recommended to provide smooth operationalization of Nigeria's open banking.



# 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](http://www.agpaytech.co.uk)

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