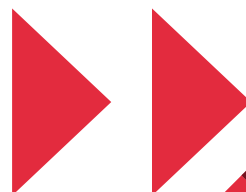


Agpaytech's Research
18th November, 2022



Is Ghana Ready For Open Banking?



Agpaytech

Executive Summary

The open banking initiative is changing banking and Fintech collaboration by repositioning traditional banks as players in the digital revolution. While the number of open banking users worldwide is expected to grow at an average annual rate of nearly 50% between 2020 and 2024, with the European market being the largest, according to Statista. This study explores the readiness index of Ghana in adopting Open Banking.

This report covers the key conditions for effective implementation of Open Banking in Ghana. We examine the prerequisite of Open Banking from the perspective of governance, market, infrastructure, fintech and consumers' readiness. The report indicated that Ghana has all that it takes from human resources, regulations, infrastructure and fintech to coordinate and implement Open Banking Ghana.

Keywords: Open Banking, Open Data, Open Finance, Regulations, Ghana

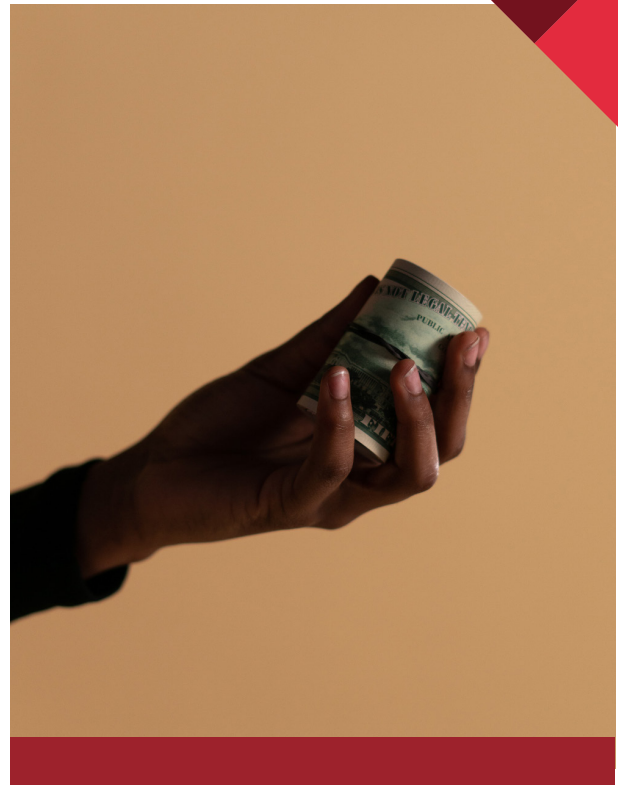
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Introduction

Customers have countless expectations from their financial services providers of which the traditional banks alone cannot meet such demands. That is the consumers' behavior antecedents have grown over time and sharing and the digital economy has made the taste of life more complex than before. Furthermore, the characteristics of the digitization process of financial services include: simplified access for end users via the Internet or mobile Apps, an increase in the processing speed of automated processes, reduction in costs, a stronger focus on customer service, more convenience, higher transparency and the exploitation of network effects, etc., have made open banking more preferable business model.

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 a system under which banks open up their application programming interfaces (APIs), allowing third parties to access financial information needed to develop



new apps and services and providing account holders greater financial transparency options. Open banking is changing the way we bank and use financial services in the modern world. Open banking allows third-party payment service providers and other financial service providers to access the personal and financial information of their customers' banks.

This report covers the key conditions for effective implementation of Open Banking in Ghana. We examine the prerequisite of Open Banking from the perspective of governance, market, infrastructure, fintech and consumers' readiness.

BoG Oversight Analysis

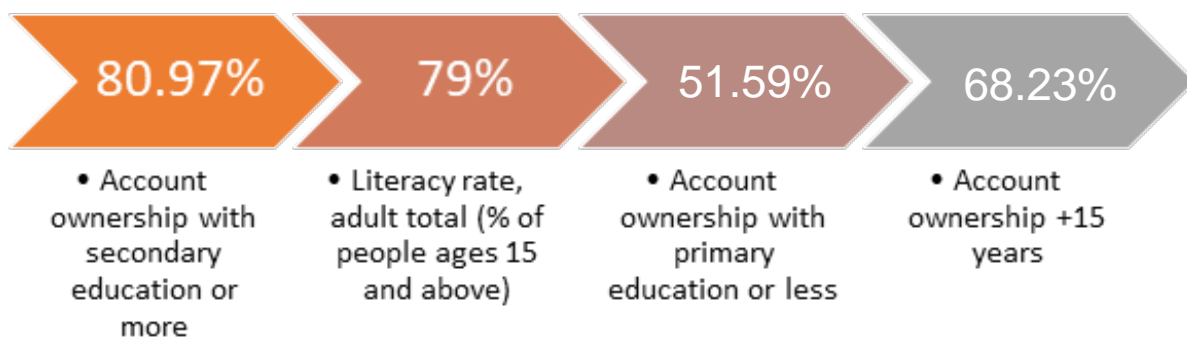
As part of the Bank of Ghana's National Payment Systems Strategic Plan (2019-2024), sets forth the policy direction and guidelines that will promote an enabling environment to develop the Ghanaian payment and financial systems. It leverages opportunities provided by digital technologies to promote competition, 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. The BoG also incorporated the category of promoting financial technologies, which set out plans to evolve standards for open data sharing.

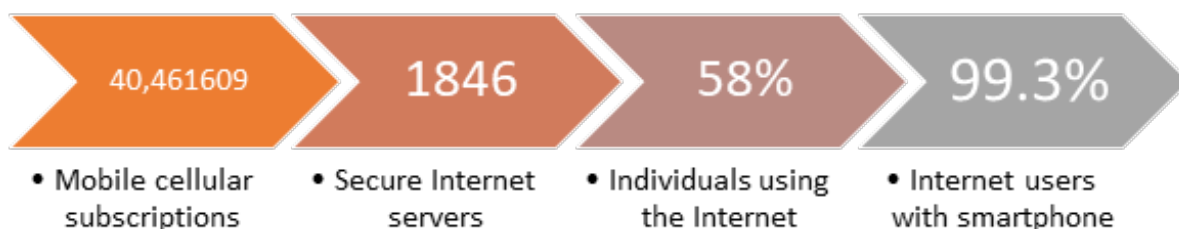
Currently, there is no clear guidelines or regulations on Open Banking in Ghana. However, it is part of the Bank of Ghana's National Payment Systems Strategic Plan (2019-2024)

Ghana Payment Market Analysis

The OB initiative requires financial market readiness in the aspect of internet usage, mobile connections, digital communication infrastructures and higher consumer literacy levels to leverage the requisite consumer data and provide seamless services. Agpaytech examines the payment landscape conditions using the World Development Indicators data of the World Bank. A snapshot of the conducive consumer and market adoption factors is given here;



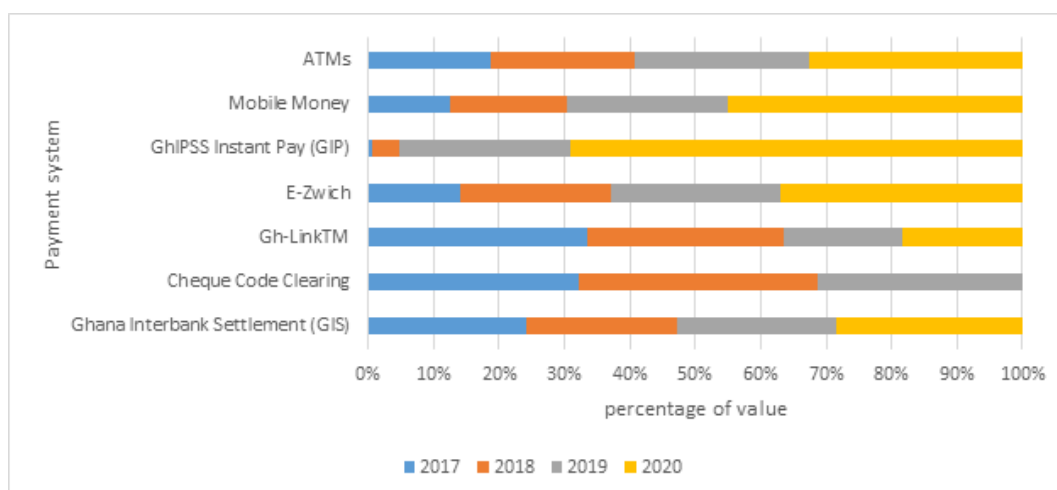
Bank account, mobile phone, internet and application usage literacy are key requirements for consumer management in Open Banking



Payment Statistics in Ghana

Ghana's retail payment system is forefront by mobile money payment, and others like GhPay, QR code, digital payment, and card payments have played vital roles in the paperless transaction system in Ghana. The BoG payment system statistics from 2017 to 2020 recorded that in 2020 GhIPSS Instant Pay (GIP) recorded a growth of 62.2%. The total volume of transactions was 6,804,754, with a value of GH¢ 9.15 billion, compared with 1,905,267 and GH¢ 3.46 billion, respectively, in 2019. Ghana Inter-Bank Settlement (GIS) system transactions increased by 4.8 % from 1,376,094 in 2019 to 1,442,182 in end December 2020. ATM transactions continued to dominate Gh-link™ platform transactions and constituted more than 99.0% of the total transactions. The total value of mobile money transactions grew by 82.4% over the 2019 value to GH¢564.16 billion in 2020.

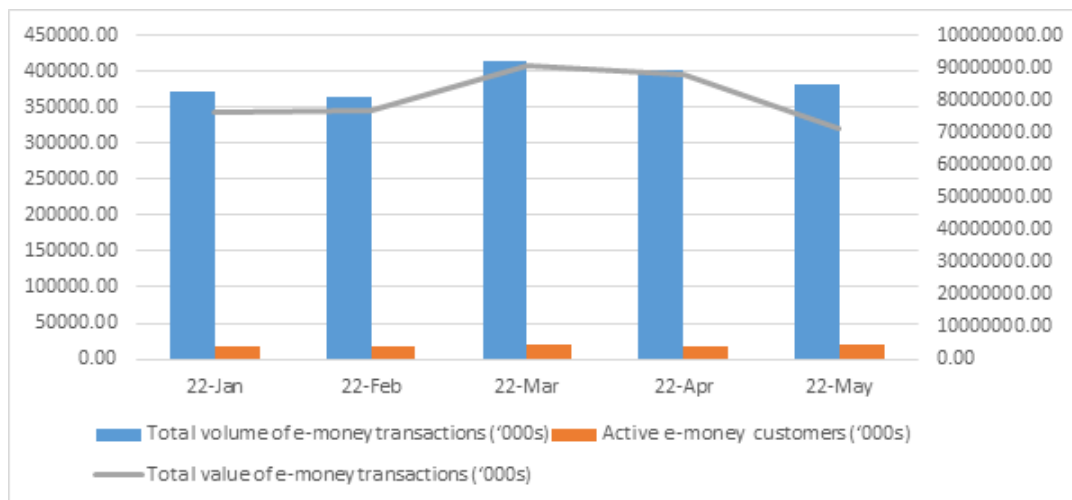
Figure 1: Comparative Payment System Statistics, 2017-2020



Source: Bank of Ghana

Bank of Ghana's fintech statistics on electronic money (e-money) for the month of January to May 2022 illustrated that both registered e-money customers and active e-money customers are growing. However, the total value of e-money transactions declined 18.51% largely due to the introduction of the electronic levy on mobile payment transactions.

Figure 2: e-money growth (Jan 2022-May 2022)



Source: BoG-Fintech Statistics

Payment Infrastructure for Open Banking

One of the primary policy objectives of Open Banking requires that it should be reliable and resilient. This provides that the Open Banking infrastructure needs to be secured, risk-free, accurate data, and availability of standardized API. Besides, there is a need for modern technological experts and tools for data transmission, interoperability, etc.

In Ghana, a key technological infrastructure capable of managing the OB initiative is the Ghana Interbank Payment and Settlement Systems Limited (GhIPSS), which is a wholly-owned subsidiary of the Bank of Ghana. Incorporated in May 2007, with a mandate to implement and manage interoperable payment system infrastructures for banks and non-bank financial institutions in Ghana. GhIPSS could securely collaborate with fintech and API developers to manage open data initiatives and provide reliable data transfer between financial and non-financial institutions.

Moreover, in line with its mandate, GhIPSS has implemented and currently manages the following:

1. National Switch & Biometric Smart Card Payment System- e-zwich
2. Cheque Codeline Clearing (CCC) System
3. Ghana Automated Clearing House (GACH) systems- Direct Credit & Direct Debit
4. National Switching and Processing System- gh-link.

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.

- GhIPSS Instant Pay (GIP)
- Proxy Pay Service
- Ghana's Universal QR Code Scheme (GhQR)
- Request to Pay
- Mobile Money Interoperability
- E-Bills Pay
- GIP Payment Gateway
- GhIPSS Corporate Suite

Partners of GhIPSS

- Commercial banks
- Saving and loans
- Third-party

The Ghana Interbank Payment and Settlement Systems (GhIPSS) has collaborated with the Ghana Association of Banks (GAB) for the development and launch of a bank-wide mobile wallet christened GhanaPay. The move is an attempt by the GAB to extend financial inclusion to low KYC customers using an existing familiar channel like the mobile wallet solution

Fintech Readiness

Fintech is a term used to describe companies operating in the financial technology sector. It relates mainly to small start-up companies, which develop innovative technological solutions in such areas as online and mobile payments, big data, alternative finance and financial management.

The FinTech market is characterized by a rapidly growing number of startups and businesses without bank licenses (non-banks). FinTech start-ups tend to focus on selected parts of the financial value chain and try to unbundle traditional bank, business models.

Table 1: Fintechs development in different areas

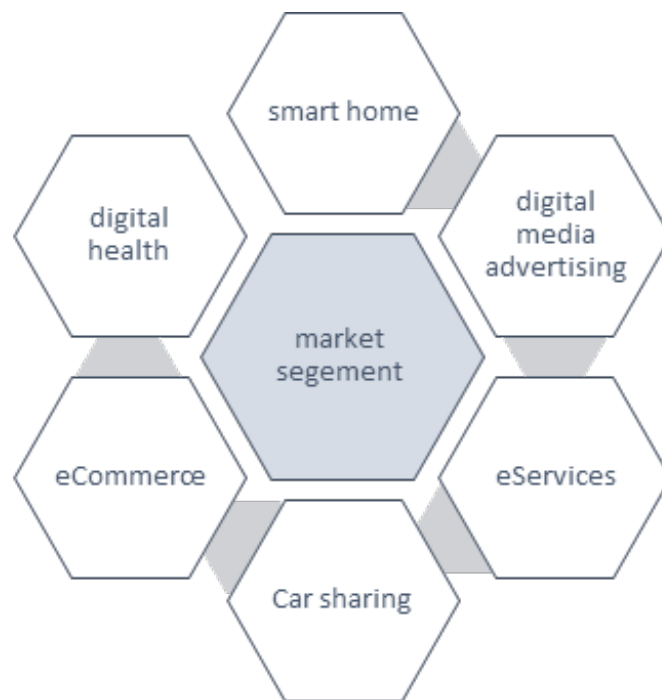
Digital Payments	Digital Investment	Digital Assets	Alternative Lending	Alternative Financing
Mobile POS Payments	Neobrokers	Cryptocurrencies	Marketplace Lending (Consumer)	Crowd Investing
Digital Remittances	Robo-Advisors	NFT	Crowdlending (Business)	Crowdfunding

Source: Agpaytech

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.

Figure 3: Fintech market segment in Ghana

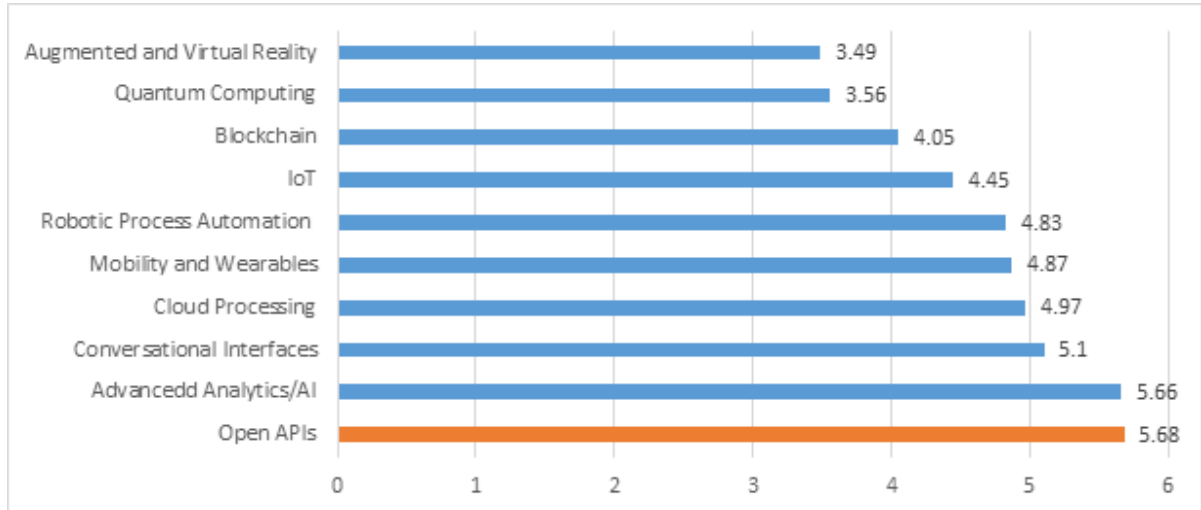


Source: Agpaytech

Role of API in Open Banking

Open API technology is an application programming interface technology, and its importance and relationship with open banking are not farfetched. Open banking is a system or strategy employed by banks using API technology to provide customers with the privilege to have a network of financial institution data. This privilege enables customers (third-party developers) to develop applications and services around the financial institutions using the technology (Benmoussa, 2019).

Figure 4: Impact of technologies on banking over the next year (2020)



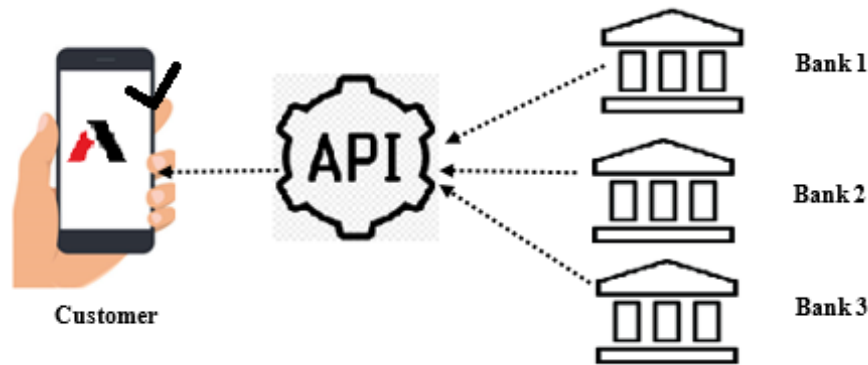
Source: (FSBT.TECH, 2019)

[note; scale is 1-7, where 1 is very low and 7 is very high]

Open banking APIs enable fintech, third-party service providers, people, and businesses to experience new financial and personalized services. The APIs are important because they give third-party providers access to data from financial institutions safely and efficiently.

- An API (application programming interface) allows different applications to communicate and interact with one another.
- Open banking APIs can give third-party providers access to data from financial institutions safely and efficiently.
- By being able to access financial data, companies can innovate and broaden their offering

Figure 5: API facilitating data sharing in the Open Banking model



Source: Agpaytech

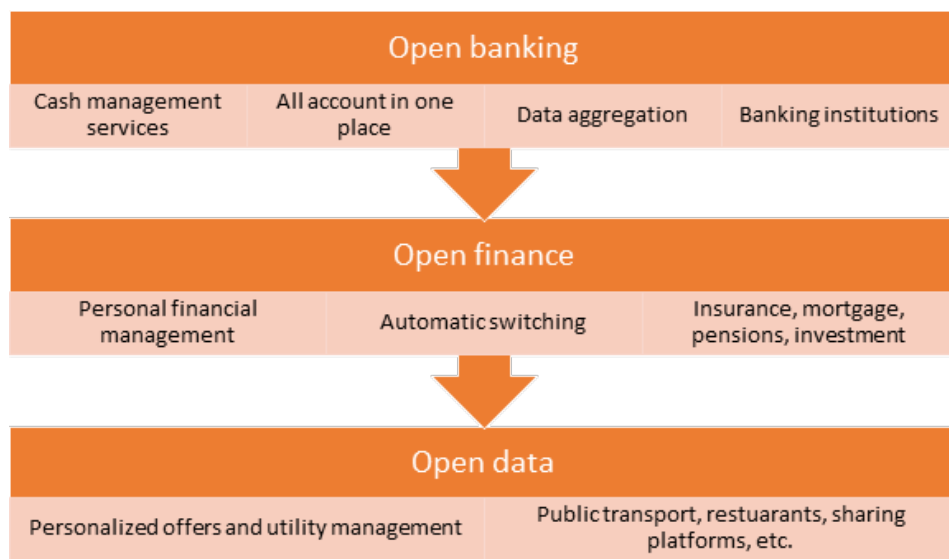
A customer permits a third-party service provider (Fintech, bank, or other service providers) to access its bank's information. Third-party service providers could be API developers or payment initiative service providers (PISPs) and account information service providers (AISPs). Since the API is open, developers can connect to it. Financial institutions (Banks) or TPP receive the request and automatically send data back using the API. The API can also look at customers' transaction data to identify the best financial products and services for them.

How open banking would evolve in Ghana

The financial sector in Ghana promises a seamless digital experience beyond open banking due to the biometric Ghana National Identification Card, the Ghana Postal Address as well Sim Card Registration. This will make it easier to establish KYC and use authentic data to provide heavenly services to users.

Open banking if successful could promote open finance and open data in numerous market segments. In some regions like the United Kingdom, Brazil, and Australia, Open Banking has already expanded into open finance by allowing a customer's data to be shared across an ecosystem of new and existing service providers. They are now looking ahead to the next stage in the evolution, which is the open data, which will help incorporate data sharing by utility companies, a variety of industries, and government bodies.

Figure 6: How open data could evolve the payment market



Source: Agpaytech



Open Banking Approach in Ghana: Regulatory or Market Driven?

The open banking initiative is being driven by two key factors worldwide: market and regulatory approach. 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.

Table 2: Open Banking approach

Market-driven approach	Regulator-driven approach
Policy-makers, instead of regulators, introduce measures to promote the Open-API framework to initiate open banking.	Regulatory entities analyze the market and define the implementation guidelines for open banking.
In most countries, only the big banks tend to embrace the initiative. Therefore, the lower part of the demographics won't get to take advantage.	Set timelines for the banks to expose and third parties to consume banking APIs. Once the timelines are met, everyone in the demographics can take advantage.
Addresses market requirements.	Addresses market requirements.

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. Through the use of networked accounts, open banking could also help lenders get a more accurate picture of a consumer's financial situation and risk level to offer more appropriate loan terms. It could also help consumers get a more accurate picture of their finances before taking on debt.

“It is likely for Ghana to adopt a regulatory-driven open banking. It is part of the Bank of Ghana’s National Payment Systems Strategic Plan (2019-2024)”

Lastly, open banking can help small businesses save time through online accounting, and help fraud detection companies to be more effective in monitoring customers' accounts and identifying problems more expeditiously. It gives consumers greater control over their financial data anywhere anytime.

Impact of Regulatory Sandbox Framework on Open Banking in Ghana

The Bank of Ghana has supported and created a conducive financial stability environment with the passage of the Banks and Specialised Deposit-Taking Institutions Act, 2016 (Act 930) and the Payment Systems and Services Act, 2019 (Act 987), to spur innovative digital financial services without risking the stability of the financial service industry (BoG Sandbox Report, 2022).

According to BoG, the regulatory and innovation sandbox are regulatory frameworks to support responsible innovations and nurturing new business models. This framework enables small scale, live testing of innovative financial products, services and business models by eligible financial service providers and startups (operating under a

special exemption, allowance, or other limited, timebound exception) in a controlled environment under the supervision of the Bank of Ghana. By this arrangement, innovators are permitted to temporarily test new ideas without being subjected to the full set of regulatory requirements applicable outside the sandbox while addressing users' and the regulator's respective concerns.

This regulatory sandbox has positive impact on open banking since Fintechs can partner with banks and provide third-party services to customers under the special arrangement of new product testing stage. This is because the sandbox initiative aimed to permit the Bank to obtain evidence pertaining to financial innovation with a view to improve regulations, guidelines, and policies for emerging technologies as well as assisting the Bank to learn about innovations faster.

Conclusion

The Open Banking initiative is foreseeable in Ghana's financial landscape with banks and fintech using advanced technology to provide unimaginable personalized services to consumers. Although it is yet to start on a full-scale adoption worldwide many European countries are head. With a promising payment market environment with growing payment infrastructures, the Open Banking model is unavoidable.

This report discovered that the Ghanaian financial market is ready and capable of adopting Open Banking due to the growth trends in e-money customers and transactional value, fintech growth, GhIPSS national switch infrastructures, and banks' technological improvement consumers' financial literacy.

While the approach to Open Banking in Ghana is yet to be determined, this report suggests that the regulatory-driven approach is more friendly to help standardize open banking adoption and growth. This will help in providing unilateral API security, guidelines, and governance mechanisms.

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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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