

SUSTAINING AN INCLUSIVE DIGITAL FINANCIAL SERVICES (DFS) ECOSYSTEM DURING A GLOBAL EMERGENCY



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EXECUTIVE SUMMARY

As in many countries, the COVID-19 pandemic has had adverse effects on Nigeria's already fragile economy¹, exposing disproportionate adverse impact on vulnerable segments, along both social and economic lines and across informal businesses, gig workers, micro, small and medium enterprises (MSMEs), women, older and disabled people, and forcibly displaced persons (FDPs).

Amidst economic and health system fragilities, this case study documents immediate policy responses brought in to mitigate the COVID-19 effects on the digital financial services (DFS) ecosystem (including FinTech and new innovative offerings leveraging technology) and the role DFS played in responding to a global emergency.

The collaborative approach and role of DFS captured within this study examines how it enabled economic activity, protected vulnerable society segments and sustained access to finance despite mobility restrictions, stay-at-home orders, physical distancing and discouraged social interactions, to ensure the health and safety of the citizens.

We set the case against Nigeria's established payment and financial sector infrastructures, existing regulatory and policy regimes, its financial inclusion goals and overall ecosystem responses during the pandemic, showcasing how enabling regulations and policies, strategic infrastructures and capabilities and resources, made a difference in outcomes observed, particularly for vulnerable groups such as women.

Through this case study, we highlight the role and impact of DFS and FinTech through the inclusive FinTech business models lens and the tenets of the Sochi Accord.²

Payment services followed by lending, savings and investments account for over 75 percent of Nigeria's FinTech ecosystem activity. The introductory chapter presents the contextual background highlighting business (supply), demand and regulatory advancements enabling these activities and how the COVID-19 pandemic affected financial service providers (FSPs): from business continuity and product development

disruptions to reduced business activity, loss in revenues and job cuts in the industry.

Furthermore, we extend our study to cover varying ecosystem interventions spanning monetary policy, financial system stability and integrity, sustained public health and safety and other socio-economic programmes addressing food insecurity, financial aid and other value chain (delivery) concerns, particularly targeting vulnerable and disproportionately excluded segments including smallholder farmers, older people, women, FDPs, rural communities and women-led micro, small and medium-sized enterprises (WMSMEs).

We present the responses of the financial services ecosystem to the catalytic effect of COVID-19 pandemic through the lenses of short- and long-term outcomes. The immediate interventions focused on individuals, households and micro enterprises by providing humanitarian relief, enhancing food security, and maintaining public health and safety. For micro enterprises, the priority was to keep the lights turned on and food on the table through digital economic activity.

Thus, mechanisms for adopting e- and m-commerce, e-business and digital payments channels were paramount. Beyond lives and livelihoods, longer-term outcomes addressed funding gaps in selected industries, digitalization, addressing the digital gender gap in access to finance and worker productivity, hence creating new job opportunities and categories. Nigeria delivered these opportunities and outcomes despite a plethora of challenges including lack of required infrastructures, difficulties triggering business continuity plans, restrictive cost of modernizing workplace systems and practices, cybersecurity concerns with rapid digitalization, social and cultural norms restricting female activities and movements, and lack of digital awareness and capabilities, especially in vulnerable population segments.

These outcomes present six critical lessons to guide emergency responses of financial policy makers and regulators may be faced with:

1. The importance of **leadership and agility** shown by the Central Bank and Bankers' Committee.

1 Prior to the Covid-19 pandemic, Nigeria's national revenues were affected by lower demand for crude oil and falling oil prices creating a budget deficit, declining foreign reserves and higher inflation rates, among others.

2 AFI. 2018. Sochi Accord: FinTech for Financial Inclusion. Available at: <https://www.afi-global.org/publications/sochi-accord-fintech-for-financial-inclusion/>.

2. The **decisiveness** in structuring gender-sensitive, cross-cutting fiscal and monetary interventions across diverse economic segments, including MSMEs and vulnerable households.
3. The **cohesion of the private sector** towards a patriotic clarion call shows **trust** in the leadership of financial services actors and belief in sustained growth and development of Nigeria.
4. The commitment to **building digital and financial rails**, and **leveraging institutional relationships** was the bedrock of sustained economic activity.
5. The **rapid digitalization** of key regulatory and government services combined with up- and reskilling of staff supports the thesis for e-government.
6. The presence of a **gender roadmap**³ to help guide actions to support women's financial inclusion and give practical measures to boost women's financial inclusion and ensure women are not disproportionately impacted by the pandemic effects. Finally, despite the economic downturns, **financial inclusion grew** marginally by 1.9 percent, with a 5.2 percent increase among the banked.

In conclusion, the financial regulator, with the support and active collaboration of relevant and strategic stakeholders, leveraged built capabilities in their efficient real-time national retail payments system, ongoing national identity system and vibrant financial services and telecommunication infrastructure to ensure continued access to payments and other financial services to sustain economic activity. Extending this infrastructure for government stimulus payments, especially to low-income residents in rural locations, will create further opportunities, reduce costs and increase efficiencies.

1. ABOUT NIGERIA

1.1 KEY FACTS ABOUT NIGERIA

The Federal Republic of Nigeria is sub-Saharan Africa's largest economy with a gross domestic product (GDP) exceeding USD400 million and a population of over 200 million people.

The government's Economic Recovery and Growth Plan (ERGP) focuses on making Nigeria globally competitive by investing in its people and economic diversification.

According to the World Bank, the country's per capita GDP is relatively low at USD 2,229.9 (as of 2019)⁴, indicative of continued infrastructure problems including but not limited to reliable and continuous power supply.

Nigeria has a rich array of natural resources, with crude oil being the largest contributor to the national income. Hence, its economic fortunes depend on oil production quotas set by the Organization of Oil Producing Economies (OPEC) and global market crude oil prices.

The agriculture sector is a focus sector that seeks not only to build food security, but also increase rural productivity.

Nigeria's financial system comprises financial intermediaries operating in the financial sector and provides the requisite environment for economic growth and development, productive activity, financial intermediation, capital formation and management, and innovation of the payments system. The financial system comprises financial markets, institutions and instruments.

The financial services regulators – Central Bank of Nigeria (CBN), National Deposit Insurance Corporation (NDIC), Securities and Exchange Commission (SEC), National Insurance Corporation (NAICOM) and National Pension Commission (PENCOM) – are independently setting financial technology goals in banking and payments, capital markets, insurance and pension markets.

Additional key facts about Nigeria are set forth in the facts table (see Appendix I).

³ Central Bank of Nigeria. 2020. Framework for advancing women's financial inclusion in Nigeria. Available at: https://www.cbn.gov.ng/out/2020/dfd/framework%20for%20advancing%20women's%20financial%20inclusion%20in%20nigeria_final_5mb.pdf.

⁴ World Bank Database. GDP per capita (current US\$) - Nigeria. Available at: <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=NG>.



2. INTRODUCTION: BUILDING AN INCLUSIVE DFS ECOSYSTEM

2.1 FINANCIAL INCLUSION IN NIGERIA

“Financial inclusion is achieved when adult Nigerians have easy access to a broad range of formal financial services that meet their needs at an affordable cost”⁵

Nigeria’s financial inclusion journey started with the 2011 signing of the Maya Declaration⁶ committing to a 80 percent financial inclusion by 2020.

Recognizing the impact of digital financial services (DFS) and the benefits of closing the gender gap in access to finance, Nigeria embarked on several policies and interventions to drive financial inclusion. For instance, the development of the National Financial Inclusion Strategy (NFIS) in 2012 defined four key pillars for addressing the financial inclusion targets (agency banking, mobile banking and payments, linkage models, and client empowerment).

The first NFIS review identified the role of innovative business models, acknowledged socio-cultural challenges inhibiting financial services adoption, and the appropriateness of key strategic areas (like deployment channels) as key pivotal components to achieve its financial inclusion ambitions.

The outcome of the revision exercise birthed the revised NFIS strategy document⁷ in 2018. While the target for financial inclusion in Nigeria remained unchanged in the revised strategy, it provided specific focus on important segments representing the underserved, vulnerable and disproportionately excluded populations such as women, rural communities, youth, those residing in Northern Nigeria and MSMEs, making them strategic priorities in its NFIS implementation along the following lines:

1. Create an enabling environment to expand DFS.
2. Enable the rapid growth of agent distribution networks nationwide.
3. Harmonize identity and Know-Your-Customer (KYC) requirements for account opening across wallets and accounts.

4. *Create an enabling environment to serve the most excluded.
5. Improve cashless payments, government-to-person (G2P) and person-to-government (P2G) payments.

According to the 2020 EFInA financial inclusion survey report⁵, the journey and current state of financial inclusion in Nigeria can be summarized as follows:

- Considering the prevailing barriers and challenges to access regulated financial services across several segments in Nigeria, an incremental growth in financial inclusion is recorded since 2008 when the bi-annual survey was initiated.
- Data indicates a persistent access gap over a decade particularly for the most excluded groups including women, youth, Nigerians living in rural areas and the northern region. With this current inclusion rate, the targets set forth in the NFIS for 2020 is forecasted to be met in 2030.
- The main barriers to financial inclusion in Nigeria are identified to be institutional exclusion, cultural and social norms, low affordability, access, and awareness.
- The advent of DFS and FinTech innovation in products and services design and delivery is promising for rapid inclusion. Indeed, banking data shows that use of financial service agents, DFS and informal financial services grew in 2020.
- In summary, growth in DFS, agent networks, and mobile phone ownership (now at 81 percent) highlights an opportunity to drive faster financial inclusion growth through DFS and FinTech such as mobile money. This presents a particularly good opportunity for women’s financial inclusion as it offers the possibility of overcoming social and cultural norms, movement restrictions and who women can interact with.

Figure 1 (page 7) highlights the financial inclusion trends to date.

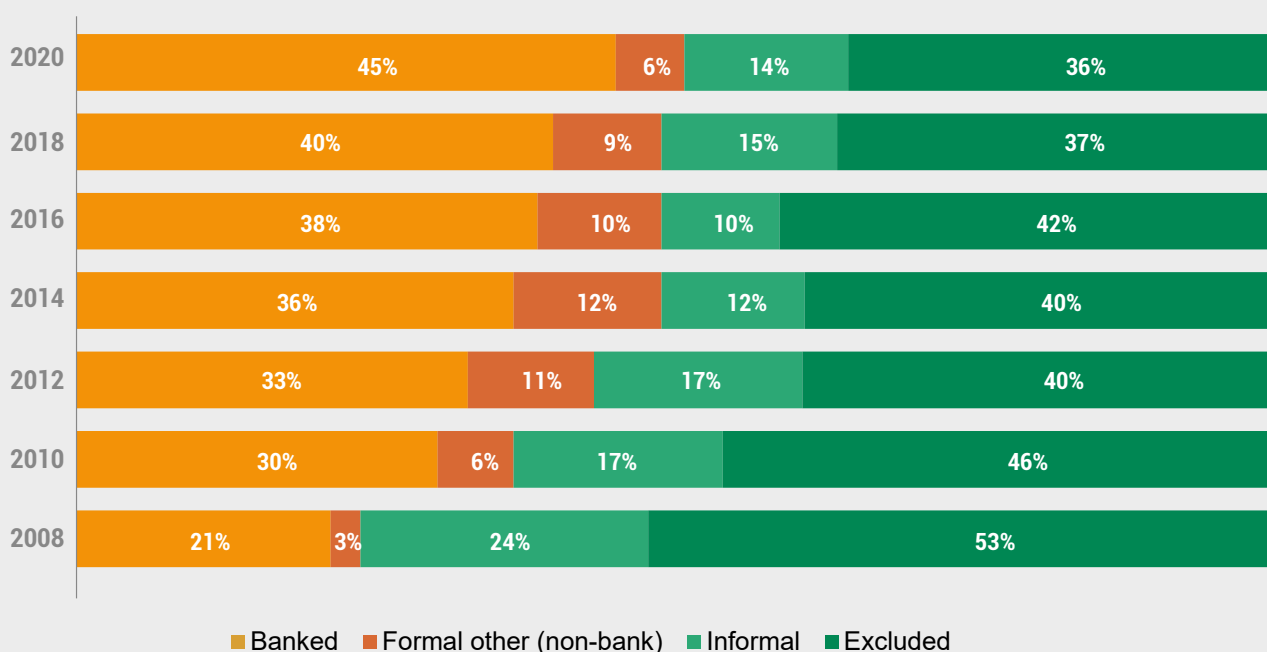
5 Access to Financial Services in Nigeria survey (A2F). 2021. Enhancing Financial Innovation and Access (EFInA) Access to Financial Services in Nigeria 2020 Survey. Available at: <https://a2f.ng/wp-content/uploads/2021/06/A2F-2020-Final-Report.pdf>.

6 Central Bank of Nigeria. 2018. National Financial Inclusion Strategy (Revised). Available at: <https://www.cbn.gov.ng/out/2019/ccd/national%20financial%20inclusion%20strategy.pdf>.

7 AFI. 2012. A Quick Guide to the Maya Declaration on Financial Inclusion. Available at: https://www.afi-global.org/sites/default/files/publications/afi_maya_quick_guide_withoutannex_i_and_ii.pdf.

8 Central Bank of Nigeria. 2018. National Financial Inclusion Strategy (Revised). Available at: <https://www.cbn.gov.ng/out/2019/ccd/national%20financial%20inclusion%20strategy.pdf>.

FIGURE 1: ACCESS TO FINANCE TRENDS



Source: authors compilation using EFINA data from 2008, 2010, 2012, 2014, 2016, 2018, 2020.

3. DFS IN NIGERIA

3.1 SUPPLY

Nigeria's DFS (including FinTech) industry dates to the mainframe computing (data processing) era with original equipment manufacturers (OEMs) like NCR Nigeria Plc providing computing services to commercial banks. The micro-computing era, computer networks and a new breed of "new generation" banks led to the widespread use of digital technologies in banking and the complementary growth of the computing services industry.

With bank branches as the dominant channels, the quest for digital payments and channels resulted in bank-led consortia launching a stored-value card and distributing point of sale (POS) terminals at merchant locations. Nigerian consumers wanted direct access to their accounts and alternative channels, abandoning the wallet system for direct account-to-account transfers through a private and interconnected automated teller machines (ATMs). Debit cards and the international issuers came alongside ATMs.

In the subsequent paragraphs, we present the DFS evolution eras that started with enterprise services and infrastructure provision.

3.2 FIRST WAVE: PRE-2000

A new crop of private banks that emerged in the late 1980s and early 1990s introduced new generation banks. These new entrants offered differentiated services delivery using digital technologies like computing devices, core banking applications and computer networks, offering online, real-time and multi-branch banking.

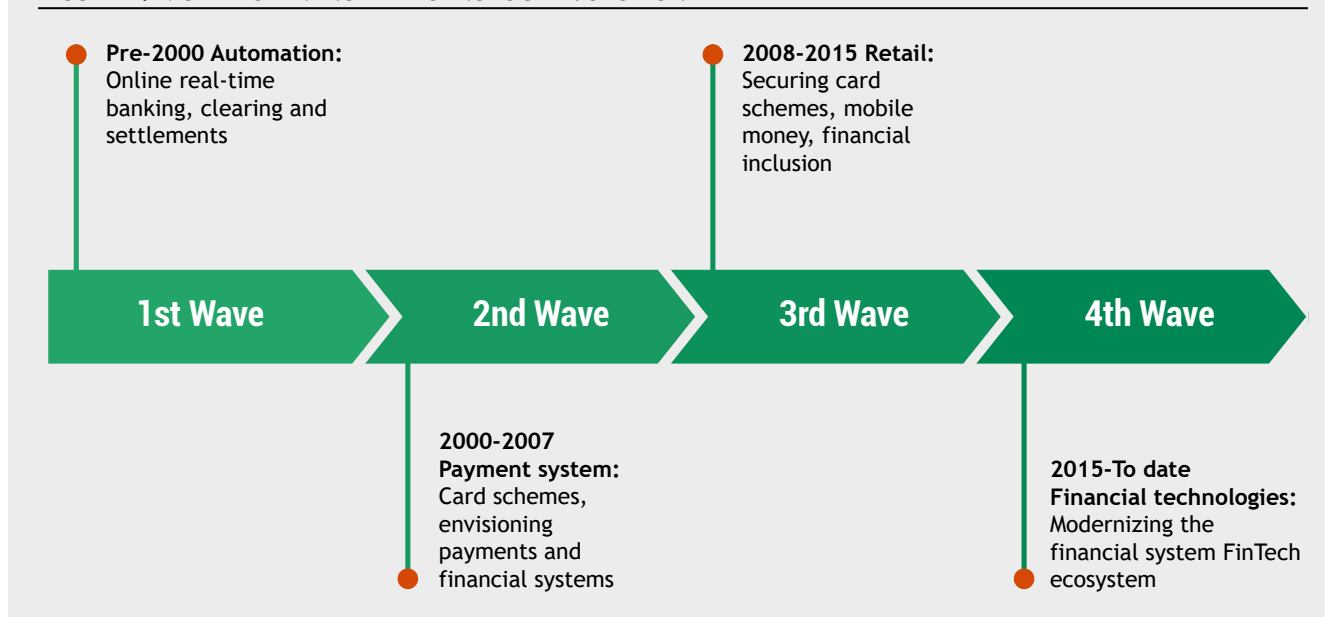
Payment systems automation dates back to the 1995 initiative automating cheque clearing. The Nigeria Automated Clearing System (NACS) complemented magnetic ink character recognition (MICR) cheques using an electronic cheque presentment with image exchange (ECPIX) system that electronically transmits cheque payment information for settlement through an automated clearing house (ACH) and exchanges digital cheque images.

3.3 SECOND WAVE: 2000 - 2007

The demand for bank interoperability and digital channels like internet and merchant payments spurred the wave of electronic banking departments and new market entrants providing transaction switching and smart card-based e-wallets.

With the lack of widely dispersed and high availability of cash-in/cash-out (CICO) agents, the burdens of funding e-wallets stimulated the demand for account-linked debit cards and ATMs for offsite cash disburse.

FIGURE 2: NIGERIA'S FINANCIAL TECHNOLOGY EVOLUTION



CBN supported these developments with the Financial System Strategy 2020⁹, highlighting the strategic plans to herald Nigeria's financial systems to the level of major top tier global financial institutions, as well as the Payment Systems Vision 2020 (PSV2020)¹⁰, a blueprint highlighting directions for payments systems to all sectors and geographies, banked and unbanked, and conforming to regulatory, technical and operational standards.

3.4 THIRD WAVE: 2008 - 2015

As debit card transactions rose, fraud incidents and cyber-related crime became prevalent, spurring the CBN to force industry migration from magnetic stripe-based cards to EMV (Europay, MasterCard and Visa) or chip-and-pin cards.

Through this single policy, Nigeria's payment system leapfrogged that of more developed nations. This era also witnessed bank partnerships with international card schemes like Visa and MasterCard as well as the launch of domestic card schemes under the CBN's Guidelines for Card Issuance and Usage (2014).

On the policy side, the CBN published and revised Guidelines for Stored Value/Prepaid card issuance and operations.¹¹

The PSV2020 Release 2 was launched following further assessment of the payments market and growth in areas such as infrastructure, mobile money, Nigeria Inter-Bank Settlement System (NIBSS) Instant Payments (NIP) and cashless initiatives.

Meanwhile, M-Pesa's impact on Kenya's financial inclusion growth gained global attention, while the CBN launched several interventions like developing exposure drafts for mobile money services and licensing non-bank actors as mobile money operators (MMOs); signing the Maya Declaration Commitment in 2011; developing a National Financial Inclusion Strategy in 2012 and establishing the Financial Inclusion Secretariat.

Despite the prominence of mobile payments solutions and merchant payment infrastructure providers, other niche FinTech models emerged because of migration from cash-dominated transactions to interoperable payment systems and channels, growth in infrastructures, and other factors supported by inclusion-focused enabling policies in Nigeria.

3.5 FOURTH WAVE: 2015 - TO DATE

Today, customers verticals, especially payments and lending, dominate Nigeria's DFS landscape, with a gradual growth in savings and wealth management.

Diverse players, solutions and complex use cases have brought about collaborative ecosystem models.

9 Soludo, C. (2007) "Nigeria's Financial System Strategy 2020 Plan 'Our dream'", FSS 2020 International Conference, Abuja, 18th June 2017. Available at: https://www.cbn.gov.ng/fss/mon/Nigeria%27s%20Financial%20System%20Strategy%202020%20Plan%20-%20OUR%20DREAM_Prof.%20Soludo.pdf. Accessed on October 6, 2021.

10 Central Bank of Nigeria. 2012. Payments System Vision 2020. Release 2.0 - September 2013. Available at: https://www.cbn.gov.ng/icps2013/papers/NIGERIA_PAYMENTS_SYSTEM_VISION_2020%5Bv2%5D.pdf.

11 Central Bank of Nigeria. 2012. Revised Guidelines on Stored Value/Prepaid Card Issuance and Operations. Available at: <https://www.cbn.gov.ng/out/2012/ccd/circular%20iro%20stored%20value%20prepaid%20card%20issuance%20and%20operations.pdf>. Accessed on October 13, 2021.

Traditional banks are rising to meet the change by embarking on digital transformation strategies, offering new and innovative products to a much wider range of potential customers, building partnerships and growing through consolidations.

With Africa's largest population of 200 million people, Nigeria serves as a major financial hub – but there's still a disconnect between FinTech apps and banks.

In the quest to drive innovative financial systems and financial technologies, the CBN revised the NFIS, introduced regulatory frameworks for Regulatory Sandbox Operations¹² and Open Banking.¹³

Each evolutionary era, pervaded by technology, has ushered in new levels of complexity and opportunities in the FinTech ecosystem, and continue to underpin the development and proliferation of new channels through which financial services are delivered.

The next section deep dives into the technological innovations that have supported DFS evolution.

4. THE ROLE AND IMPACT OF TECHNOLOGY

The advancement and adoption of digital technologies in Nigeria's financial services ecosystem has been responsible for the lion's share of FinTech innovations described in the previous section.

However, while a vast majority of inclusive channels are digital, not all digital channels are inclusive. Several of these services also have intersectional consideration to take into account such as whether there is an urban or rural divide in their availability and usage, an age and a gender divide with some channels being more accessible to men than women.

This section presents a summary of the DFS channels currently available to Nigerians without providing a gender breakdown in their uptake.

4.1 THE INTERNET AND WEB CATALYST EFFECT

In the mid-1990s, internet banking was the first channel enabling Nigerian banks to offer a wide range of financial services through internet-enabled and connected devices.¹⁴ Financial service providers (FSPs) have continued to strengthen their internet banking proposition in bid to remain competitive in their digital strategy and to move customers away from the branch as much as possible – enhancing their online platforms with accessible services such as chatbots, while adhering to the most up-to-date security standards.

However, being able to access all the non-cash services available in bank branches – such as viewing account balances, downloading statements, checking recent transactions, wiring transfers and making payments – is prohibitive to customer segments at the bottom of the pyramid. As a result, if the focus overpromotes DFS, it could not only increase the divide in access, but also widen the gender gap.

Many of these DFS channels require high-speed internet access and optimized application interfaces for devices

12 Central Bank of Nigeria. 2021. Framework for Regulatory Sandbox Operations. Available at: <https://www.cbn.gov.ng/out/2021/ccd/framework%20for%20regulatory%20sandbox%20operations.pdf>. Accessed on October 14, 2021.

13 Central Bank of Nigeria. 2021. Regulatory Framework for Open Banking in Nigeria. Available at: <https://www.cbn.gov.ng/out/2021/psmd/circular%20on%20the%20regulatory%20framework%20on%20open%20banking%20in%20nigeria.pdf>. Accessed on October 14, 2021.

14 Tarhini, Ali et al. 2015. User Adoption of Online Banking in Nigeria: A Qualitative Study. Journal of Internet Banking and Commerce. December 2015, vol. 20, no. 3. Available at: <https://www.icommercecentral.com/open-access/user-adoption-of-online-banking-in-nigeria-a-qualitative-study.pdf>.



TABLE 1 - ECONOMY

	Account/ wallet management	Customer service/ Support	CICO	Payments/ Remittances	Credit	Savings/ Investments	Insurance	Pensions
Internet/Web	✓	✓		✓	✓	✓	✓	✓
Mobile (APP)	✓	✓		✓	✓	✓	✓	✓
Mobile (USSD)	✓	✓		✓	✓			
Mobile (QR)			✓	✓				
IVR/Call center		✓						
POS	✓		✓	✓				
ATM	✓			✓	✓			
Agent	✓	✓	✓	✓	✓			
Physical location (bank branch, other)	✓	✓	✓	✓	✓	✓		

such as computers rather than smaller, mobile devices such as smartphones and digital phones. Connecting computers to the internet requires additional configuration and tools such as routers and modems and by design, the internet banking user journey from onboarding through use is complex, requiring complicated registration procedures with the bank and multiple authentication measures (tokens) as devices are part of a public network.

As a result, less sophisticated users, especially those from vulnerable groups, cannot gain the financial capability skills needed and have to shun internet banking for other digital channels for retail and small value banking products.

A 2018 McKinsey report¹⁵ that examined growth and innovation in African retail banking shares that two to three times as many banking clients prefer mobile channels to internet channels. The same report showed that 10 percent of total consumers surveyed preferred internet banking to carry out their transactions (many belong to affluent and middle-class customer segments) while 49 percent preferred mobile digital channels.

However, the most important factor that prevents this channel from furthering inclusion is the need for a

traditional bank account before using services via this channel.

Indeed, 73 percent of unbanked Nigerian adults do not have the required documents to open a tier three bank account and it disproportionately affects women and FDPs.¹⁶

4.2 MOBILE - THE GAME CHANGER

Mobile channels allow access to a bank's network using cellular phones or similar devices through telecommunication wireless networks. Mobile financial services therefore cover a wide range of business models offering banking services through collaborations among banks, mobile operators and sometimes a trusted third party.

Consumers need little more than an access to a mobile phone, the skills and knowledge on how to use it, and a subscriber identity module (SIM).

15 Chironga, M. et al. 2018. Roaring to life: Growth and innovation in African retail banking. McKinsey&Company. Global Banking Practice. Available at: <https://www.mckinsey.com/-/media/McKinsey/Industries/Financial%20Services/Our%20Insights/African%20retail%20bankings%20next%20growth%20frontier/Roaring-to-life-growth-and-innovation-in-African-retail-banking-web-final.ashx>.

16 Access to Financial Services in Nigeria survey (A2F). 2021. Enhancing Financial Innovation and Access (EFInA) Access to Financial Services in Nigeria 2020 Survey. Available at: <https://a2f.ng/wp-content/uploads/2021/06/A2F-2020-Final-Report.pdf>.



Customer Service And Contact Center - AdobeStock/Andrey Popov

Because of the low barrier to entry for many consumers, potential reach, enabling regulations and multiple differentiated services from financial and non-financial players, mobile channels have continued to create a massive opportunity for enabling inclusion. Indeed, with 81 percent mobile phone ownership, Nigeria can drive faster financial inclusion growth through DFS such as mobile money if necessary gender considerations ensure that women and vulnerable communities are fully included and not left behind.¹⁷

Mobile channels may be internet-based or internet agnostic. Nevertheless, dependencies, such as internet penetration rates (50 percent in January 2021), a person's ability to use a mobile device and the cost of owning internet-enabled mobile devices constrain internet-based mobile channels like mobile apps and mobile quick response (QR) codes. This is especially so for internet-agnostic mobile channels Interactive Voice Response (IVR) call center and more especially Mobile Unstructured Supplementary Service Data (USSD) are the most promising for direct-to-consumer strategies with fewer dependencies and a higher potential for serving bottom-of-the-pyramid and last-mile customers. A report by NIBBS revealed that 78 percent of total instant payments carried out in 2020 used mobile devices, while app-based transactions accounted for 43 percent and USSD for 35 percent.¹⁸

4.3 AGENTS: A LOW-TOUCH DELIVERY CHANNEL

Agent banking allows third-parties to provide banking services to customers on behalf of a licensed, regulated financial institution, such as banks or other deposit-taking institutions. Sometimes referred to as the “bank-based model”, the customer has a direct contractual relationship with a bank.

Mobile payments also refer to providing financial services using a third-party agent, a mobile phone or another technology-enabled delivery mechanism (such as a POS device).

However, the customer does not have a direct contractual relationship with a bank here, but with a mobile operator or another payment service provider.

Both models provide a platform aggregating multiple remote access financial services and incorporating a cash-in/cash-out infrastructure through mobile devices and the banking agent.

According to EFINA, only 38 percent of adults in rural areas are within proximity of financial access points or FSPs, out of which 84 percent are financial services agents.

17 Ibid.

18 Nairametrics. 2021. Mobile & USSD transactions surge by 82.6% as Covid-19 spurs mobile adoption. Available at: <https://nairametrics.com/2021/04/15/mobile-ussd-transactions-surge-by-82-6-as-covid-19-spurs-mobile-adoption/>.

Agent locations, as alternatives to traditional bank branches, are DFS channels providing last-mile users a cheap and easy way to switch between the worlds of cash and digital currency.

They can also help women access financial services by reducing not only their security risk in having to travel long distances carrying cash, but also the time they are away from their businesses or having to find someone who can support them with domestic tasks such as looking after unschooled children.

Increasing the number of female agents can also help women overcome negative social and cultural norms, especially in more conservative rural areas, and can provide women with higher levels of satisfaction as evidence shows women prefer dealing with women agents.

4.4. AUTOMATED TELLER MACHINES (ATMS)

Banks introduced ATMs to reduce the congestion in the banking halls, offering convenience and providing banking services well beyond the traditional brick-and-mortar service hours. This is well-suited for market traders who may have to start early in the mornings and finish late in the evenings.

Today, ATMs are providing a wider array of banking services covering cash withdrawals, bill payments, fund transfers, accounts management, and less commonly, cash deposit services. To function, the machines need power supply, internet connectivity and frequent cash management. In urban regions, ATMs and bank branches are the most common channels for cash services. ATMs also allow women to interact with banking services without facing potential discrimination from banking staff or other customers, while offering them privacy that may not be available with in-person services.

According to NIBSS, there were 17,518 ATMs in Nigeria as of December 2019 compared to 18,731 in March 2019. The decrease might be explained by the rise of digital and internet banking, high maintenance cost of running the machines, and mergers and acquisitions of bank branches.

Nevertheless, ATMs still have a place in driving financial inclusion in Nigeria.

Indeed, most of the Nigerian population living in rural areas have limited digital access and trust cash

as a store of value¹⁹. For such people, similar to agents, ATMs serve as a bridge to overcome the access limitations to digital financial services.

Table 2 summarizes key DFS milestones instrumental to ecosystem development.

4.5. 4IR TECHNOLOGIES

Fourth industrial revolution (4IR) technologies like cloud computing, artificial intelligence (AI) and digital platforms have catalyzed the digitalization of financial services.

For example, cloud computing technologies have reduced the costs of computing and given rise to new digital-only stakeholders like digital banks. Two-sided digital lending and crowdfunding platforms are enabling access to finance whilst AI robots (bots) are enabling chat-based customer service through platforms like Facebook Messenger and WhatsApp.

19 NCR Corporation. 2017. The Role of the ATM in Driving Financial Inclusion Worldwide. Extending financial services to the unbanked. An NCR white paper. Available at: https://www.ncr.com/content/dam/ncrcom/content-type/white_papers/17fin8384_financial_inclusion_wp_v1_3.pdf.



TABLE 2 - DFS MILESTONES

YEAR	Description
1987	The automated teller machine (ATM) first emerged in the Nigerian Market when National Cash Registers (NCR) Plc one of the leading ATM vendors in the country installed the first ATM machine for the then Société Générale Bank of Nigeria in 1987. ²⁰
1996	Electronic money was introduced in 1996 when the Central Bank of Nigeria gave approval to All State Trust Bank Limited to offer a financial product known as the Electronic Smart Card Account (ESCA), an electronic purse (Ovia, 2002). ²¹
2001	Global systems for mobile communications, otherwise known as GSM launched in the Nigerian market paving the way for mobile financial services.
2007	CBN launches the Payment Systems Vision 2020 to increase resilience of the payments system infrastructure and work-streams to encourage the usage of electronic payment methods. ²²
2009	Migration from magnetic stripe based cards to EMV (Europay, MasterCard and Visa) or chip-and-pin cards. Nigeria Central Switch (NCS) became operational enabling interconnectivity and interoperability among deposit-taking institutions and licensed payment service providers.
2011	Introduction of CBN's cashless policy aimed at reducing the volume of physical cash circulating in the economy whilst encouraging more electronic based transactions. Moreover, CBN granted operating licenses to twenty-one mobile money operators (MMOs) to provide mobile money services in the country.
2012	'Cashless Lagos' pilot ramped Point-of-Sale (POS) terminal distribution. As the ecosystem aimed to drive more transactions through the e-payments network, the POS was to facilitate payments for goods and services at merchant locations using payment cards issued by all banks on the network.
2014	Launch of a centralized Bank Verification System and the Bank Verification Number (BVN) , enabling unique identification of bank account holders, linkage of customer accounts, and effective storage of transactions and customer information.
2015	CBN issued the guidelines for Mobile Money Services in Nigeria.
2016	Mainstream offering of USSD banking services by major commercial banks in the country, providing short codes for banking transactions via GSM networks and the simplest feature phones.
2017	Wema Bank launched ALAT, Nigeria's first digital banking product.
2018	Emergence of digital chatbot applications.
2019	Regulatory approval of the first telecoms subsidiary to offer DFS, further opening the market to non-traditional players .
2020	Securities and Exchange Commission (SEC) presents exposure draft for crowdfunding rules. ²³
2021	Nigeria piloted " eNaira ", a retail Central Bank Digital Currency (CBDC) ²⁴ , in October 2021.

20 Bashir A. Yauri, Aliyu R. Yauri. E-Service and the Nigerian Banking Sector: A Review of ATM Architecture and Operations. International Journal of Economics and Management Engineering, Vol. 10, No. 1, 2016. Available at: <https://publications.waset.org/10003111/e-service-and-the-nigerian-banking-sector-a-review-of-atm-architecture-and-operations>.

21 Osa, Igbaekemen G. 2016. The Impact of E-Banking on Efficient Service Delivery to Customers in Nigeria Economy. European Journal of Business and Innovation Research, Vol. 4, No. 2, pp. 76-87. Available at: <https://www.eajournals.org/wp-content/uploads/The-Impact-of-E-Banking-on-Efficient-Service-Delivery-to-Customers-in-Nigeria-Economy.pdf>.

22 Central Bank of Nigeria. 2012. Nigeria Payments System Vision 2020. Release 2.0 - September 2013. Available at: https://www.cbn.gov.ng/icps2013/papers/NIGERIA_PAYMENTS_SYSTEM_VISION_2020%5Bv2%5D.pdf.

23 Securities and Exchange Commission. 2021. SEC Executed Rules. New rules and amendments to the rules and regulations of the Commission. Available at: <https://sec.gov.ng/wp-content/uploads/2021/01/Jan-2021-Executed-Rules.pdf>. Accessed: October 14, 2021.

24 eNaira. Available at: <https://enaira.gov.ng>.



Presentation To Team Of Business People - AdobeStock/Andrey Popov

5. ADDRESSING DEMAND

According to the Access to Financial Services (A2F) 2020 survey results, financial inclusion has, despite

challenging economic circumstances, continued to grow with more than half of Nigerian adults using formal regulated financial services.

Indeed, 81 percent of Nigerian adults have mobile phones and the year 2020 brought rapid growth through the use of digital banking and financial agents.

However, amongst the excluded, the second reason for not having a bank account was distance of banks to home or work (27 percent), high cost of reaching a bank and owning a bank account. 46 percent of adults accessed a digital stored value account at one time, and financial capability levels (a measure of financial planning, financial control, knowledge and skills and making financial choices) showed a positive correlation with the use of digital financial services.

Women have also been keen to embrace DFS, especially when FSPs develop products and serves specifically tailored to meet their needs. DFS offer a level of privacy they may not find in local services, making them more likely to gradually use a wider range of products

and services (if they have the skills to use such services) and it allows them a safe place to save compared to village savings groups, especially in rural areas.

The NIBSS 2020 payments' statistics evidenced the rapid growth of electronic funds transfer volumes by 77 percent and value by 50 percent between 2019 and 2020.

Moreover, the number of unique accounts that carried out an instant payment transaction grew by 6 million and unique customers that received payments through an instant payment transaction grew by 13.7 million in that period. POS transactions grew by 50 percent in volume and 48 percent in value, According to the report, a 97 percent increase in youth adoption aged 15-24 represents 12 percent of the interbank transactions during the period. Mobile was the preferred channel with 43 percent of total transactions, followed by USSD with 35 percent ▫ both registering an 80 percent and 84 percent year-over-year (YOY) growth. There was also a 10 percent increase in internet banking transactions arising from closed bank branches.²⁵

25 Nigeria Interbank Settlement System (2021). NIBSS Insight (Third edition): Instant Payments 2020 Annual Statistics. Available at: <https://7a8d075c.flowpaper.com/NIBSSInsight3rdEdition1/#page=1>.

6. THE ENABLING REGULATORY ENVIRONMENT

As seen in many parts of the world, digital technologies, especially mobile systems, can help to

address financial inclusion if developed inclusively to narrow the current gap vulnerable groups experience in physical systems.

In pursuing these DFS inclusion goals, the Central Bank of Nigeria (CBN) identified priority regulatory interventions to advance financial access and utilization.



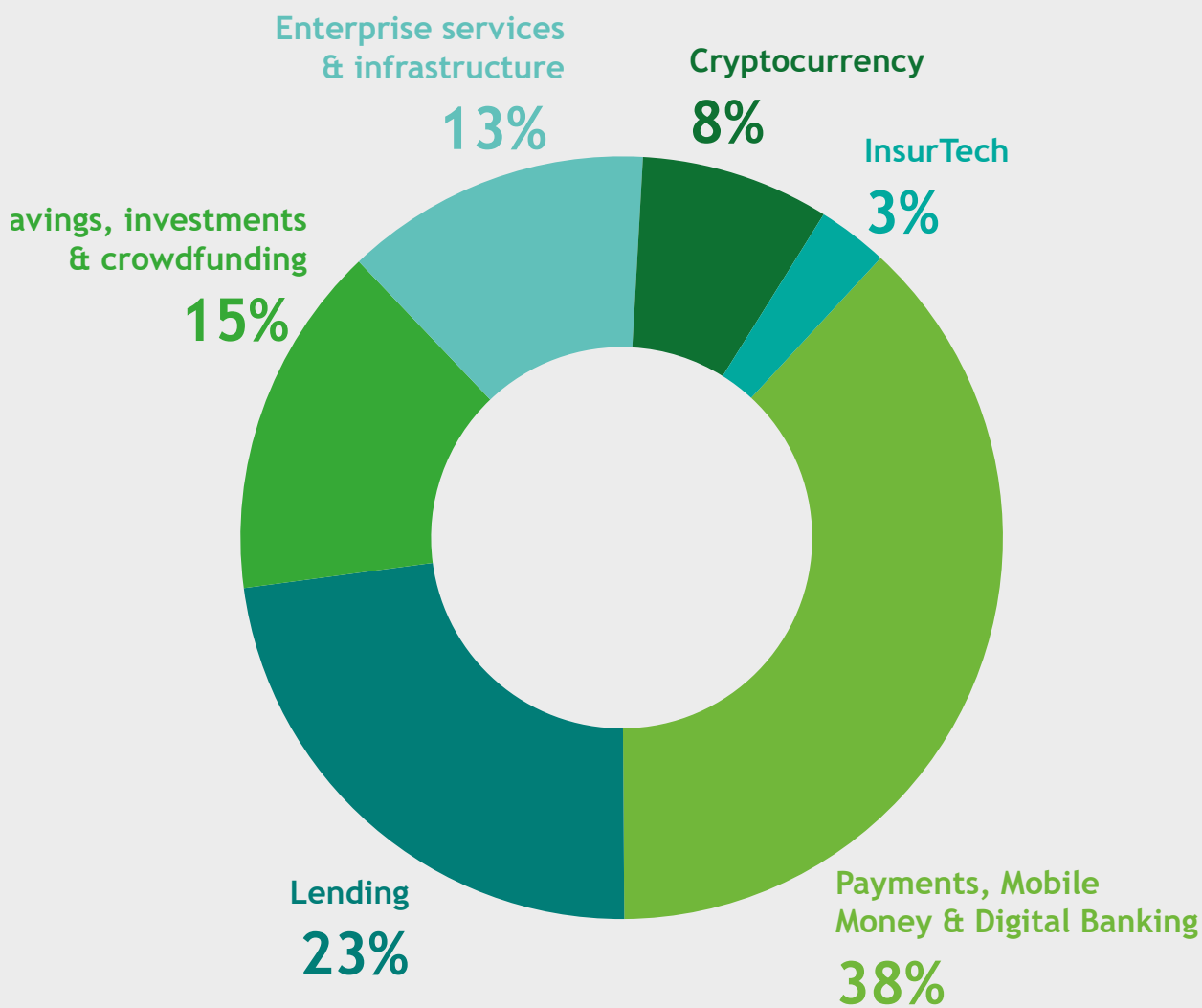
TABLE 3 - KEY REGULATORY INTERVENTIONS DRIVING FINANCIAL INCLUSION AND FINTECH

Intervention	Description	Financial inclusion domain
Three-tiered KYC policy	Provisions for tiered account opening and maintenance requirements. These include minimum balance and daily transaction limits.	Access
Identification documentation	Periodically, the Apex Bank reviews acceptable identification documents for customer onboarding by financial institutions. Considering the plight of immigrants and displaced persons, machine readable convention travel documents (MRCTD) and refugee identification cards issued by the National Commission for Refugees, Migrants and Internally Displaced Persons (NCFRMI) form part of the acceptable identification documents. Women are also less likely to access all the relevant identity documents needed and can now verify their addresses, in many cases, with a letter of residency confirmation from a local chief or elder. This particularly benefits rural women who live in areas where formal house and street addresses do not exist.	Access
Guidelines on mobile money services Regulatory framework for mobile money services	Expanding the financial services ecosystem to include non-bank financial institutions that will provide mobile money services and promote the mobile channel to drive financial inclusion to the underserved.	Access/Provision/Distribution
Guidelines for licensing and regulation of PSBs in Nigeria	Licensing and regulatory guidelines for operating payment services banks (PSBs) to serve low-income Nigerians in rural locations. PSBs “are expected to leverage on mobile and digital channels to enhance financial inclusion and stimulate economic activities at the grassroots”	Access/Provision/Distribution
Guidelines for the regulation of agent banking and agent banking relationships Regulatory framework for licensing super-agents	Supporting agent banking relationships either provided directly by financial institutions or indirectly through specialized entities known as super-agents.	Access/Use/Distribution
Shared Agent Network Expansion Facility (SANEF)	A CBN and Bankers Committee initiative to provide low-interest financial support to licensed entities to grow the agent distribution networks.	Access/Use/Distribution
Guide to charges by banks, OFIs and non-bank FIs	Sets industry-approved tariffs and charges	Use/Affordability
CBN Consumer Protection Framework	Sets minimum standards of protection afforded to customers in the Nigerian economy. This also protects those from vulnerable customer segments the most as they are likely to have lower financial capability levels and be more at risk of an adverse financial event happening to them and less knowledge about where to then go for redress.	Quality
Framework for Regulatory Sandbox Operation	Creates a controlled environment for financial institutions to develop and test innovative solutions that meets the needs of Nigerians and close the financial inclusion gap.	Use/Quality

7. A SUMMARIZED FINTECH TAXONOMY

Nigeria's financial technology ecosystem has grown since the late 1980s with a plethora of vendors in the digital technology ecosystem. Figure 3 and table 4 illustrate Nigeria's FinTech ecosystem, with a taxonomy summarizing the mainstreaming of business models and innovative products.²⁶

FIGURE 3: NIGERIA'S FINTECH ECOSYSTEM TAXONOMY CHART



Source: authors compilation using E&Y FinTech census

26 Ernst & Young (2020). Nigeria Fintech Census 2020. Profiling and defining the FinTech sector. Available at: https://assets.ey.com/content/dam/ey-sites/ey-com/en_ng/ey-fintech-nigeria-census-final.pdf.



TABLE 4 - ACCESS TO FINANCE TRENDS

Segment	Size	Key sub-segments	Key actors
Payment	38%	<ul style="list-style-type: none"> Digital payments Mobile money and wallets Payments processing and switching Digital banks and accounts Global transfers and remittances Terminal and infrastructure providers 	Interswitch Flutterwave Paga Paystack Unified Payments
Lending	23%	<ul style="list-style-type: none"> Retail lending SME lending Credit data analytics and loan assessments Lending focused on serving the women's market segments 	Lidya Carbon Branch Migo FairMoney
Savings, investments & crowdfunding	15%	<ul style="list-style-type: none"> Digital wealth and asset management Automatic savings platforms Alternate investments International investment platforms Crowdfunding 	PiggyVest Cowrywise Farmcrowdy Bankly
Enterprise services & infrastructure	13%	<ul style="list-style-type: none"> Financial services solutions Credit infrastructure APIs and connectors 	NIBSS Interswitch Okra Appzone
Cryptocurrency	8%	<ul style="list-style-type: none"> Cryptocurrency exchanges and wallets 	Buycoins Belfrics
InsurTech	3%	<ul style="list-style-type: none"> Digital insurers Insurance comparison services Digital agents and distribution platforms Insurance system providers 	Helium Health Compare Insurance Curacel

Source: authors compilation using E&Y FinTech census



Testing for presence of coronavirus in Nigeria. Tube containing a swab sample that has tested positive for COVID-19. Nigerian flag in the background - AdobeStock/MyriamB

8. THE COVID-19 GLOBAL EMERGENCY

Prior to the pandemic, declining oil prices adversely affected Nigeria's economy.

With COVID-19, the economy shrank by 1.8 percent while the external context marked by capital outflows intensified risk aversion, low oil prices, and shrinking foreign remittances.²⁷

A United Nations Development Programme (UNDP) and National Bureau of Statistics (NBS) report²⁸ revealed that several key economic sectors witnessed a significant growth decline.

The services sector, where a high number of women are concentrated, and industries sector experienced negative growth rates during 2020, contracting by 2.2 percent and 5.9 percent respectively.

The impact on the agricultural sector was not as significant, shrinking only by 0.14 percentage points against its performance in 2019. The World Bank²⁹ estimated a 27.7 percent decline in remittance inflows during the COVID-19 pandemic, particularly affecting women in rural areas who have less income and lower social mobility and where therefore more reliant on receiving remittances.

In addition, regional countries were particularly affected by restricted mobility measures and increasing unemployment.

In sum, health crises and movement restrictions limited economic activity, increased gender-based and economic violence on women and negatively affected individuals, households and businesses taking part in and served by the financial ecosystem.

27 World Bank. 2021. Nigeria economic update: resilience through reforms. Washington DC: International Bank for Reconstruction and Development / The World Bank. Available at: <https://www.worldbank.org/en/country/nigeria/publication/nigeria-economic-update-resilience-through-reforms>.

28 United National Development Programme & National Bureau of Statistics. (2021). The Impact of COVID19 on Business Enterprises in Nigeria. Available at: <https://www.ng.undp.org/content/nigeria/en/home/library/mdg/the-impact-of-covid-19-on-business-enterprises-in-nigeria.html>.

29 World Bank (2021). Resilience: COVID-19 Crisis Through a Migration Lens. Migration and Development brief 34. Available at: https://www.knomad.org/sites/default/files/2021-05/Migration%20and%20Development%20Brief%2034_1.pdf.

8.1 IMPACT OF COVID-19 ON THE NIGERIAN MARKET

The Africa Covid Community Vulnerability Index (CCVI)³⁰ ranks the vulnerability of nations based on their ability to mitigate, treat, and delay coronavirus transmission risks.

The index measures clinical and socioeconomic risk factors across seven themes: socioeconomic status, population density, access to transportation and housing; epidemiological factors; health system factors; fragility; and age.

Three important themes interest the wellbeing of Nigerians: socioeconomic status, access to transportation and housing, and fragility.

The socioeconomic status theme assessing access to information, education, poverty and unemployment shows higher vulnerability levels in Northern Nigeria. Sub-themes like civil unrest, population of concern sites and food insecurity explain the fragility theme, show more vulnerabilities across the eastern parts of the country.

Access to transportation, connectivity by road, crowding in household, improved housing and sanitation describe the housing type and transportation theme and affect most parts of the North-East and North-West regions.

8.1.1 IMPACT ON RETAIL CUSTOMERS: INDIVIDUALS AND MSMEs

Evidence from Accion's Centre for Financial Inclusion (CFI) highlight three critical challenges affecting MSMEs, namely declining revenues resulting in their inability to cover expenses, rising unemployment because of widespread layoffs, and food insecurity resulting from reduced food consumption.

Similar wave-surveys conducted by BFA Global³¹ and Centre for Financial Inclusion³² assessing the impact of COVID-19 on individuals' livelihoods further highlight the financial vulnerability of Nigerians. Depleting income sources and lack of emergency funds aggravates the paucity of government help (cash or food support programmes).

Reduced availability and consumption show evidence of food insecurity.

Personal safety concerns amidst increasing crime levels were also a cause for concern as is the increase in gender-based violence (GBV) on women and girls as well as the rise of teenage pregnancy and forced prostitution.

Earnings vulnerabilities from under- and unemployment where the lion's share of surveyed respondents are self-employed or engaged in other casual economic activity. Because of market closures and lower customer patronage, income levels reduced, undermining the overall financial health of Nigerians.

According to the COVID-19 monitoring survey³³ conducted by the National Bureau of Statistics (NBS), the share of Nigerians aged 15-64 who are employed is recorded to remain slightly lower at 71 percent in September 2020 compared to 77 percent in August 2018.

More significantly, women and youth in Nigeria are recorded to experience a slower pace of recovery and were more likely to lose their incomes at the outset of the pandemic, since they have been less economically active, with lower financial reserve for a longer period of time.

This outlook might be attributed to COVID-19 potentially entrenching pre-existing labor and employment market gender inequalities. Data from the survey indicates 83 percent of working-age men and 72 percent of working-age women were employed pre-COVID-19 (2018), compared to 78 percent and 65 percent respectively by September 2020.

However, Nigerians continue to show resilience with high confidence levels of recovery from the health and financial challenges. While the commercial business activities reduced at the onset of lockdowns, with the support of payments providers, small business merchants pivoted to digital commerce solutions using e-commerce or social media platforms.

In these instances, the coping mechanisms included cost-reduction measures like employee reductions and reduced hours; productivity measures like longer hours; pivoting like starting a delivery business and selling on digital platforms. Nevertheless, only 2 percent received government conditional cash transfers.

These business disruptions ultimately affected households and their ability to cover household expenses for up to 6 months, resulting in smaller, fewer

30 Surgo Ventures. Precision for COVID. Africa Covid Community Vulnerability Index (CCVI). Available at: <https://precisionforcovid.org/africa>.

31 BFA Global. 2020. Snapshot of financial health during peak COVID-19. Available at: <https://bfa-global.com/insights/snapshot-of-financial-health-during-peak-covid-19/>.

32 <https://www.centerforfinancialinclusion.org/research/covid-19-and-msmes-data-and-analysis-to-understand-impact/nigeria>

33 World Bank. Nigeria COVID-19 National Longitudinal Phone Survey (COVID-19 NLPS). 2020. Fifth Round was implemented by the National Bureau of Statistics (NBS). Available at: <https://microdata.worldbank.org/index.php/catalog/3712/download/49281>.

and even no meals. Data³⁴ suggests that urbanicity further stresses the misery factor and vulnerability of rural dwellers.

Despite their branches being closed, banks provided transaction and information services digitally. However, the limited availability of relational and logistics services affected individuals. The surge on bank branches after the lockdown highlighted the paucity of end-to-end digital customer-facing processes and digitalization gaps.³⁵

With issues ranging from unresolved complaints to cash deposits and debit card collections, alternative digital complaints channels were not as effective as face-to-face interactions. The volume of complaints on failed (unfulfilled) transactions spotlights the reliability of the payments systems infrastructure (rails).

The CBN guidelines reducing complaints resolution periods were appropriate, yet highlighting poor coordination amongst financial institutions and the levels of social awareness on consumer rights.

8.1.2 IMPACT ON MICRO-FINANCE BANKS (MFBS)

Among micro-finance banks (MfBs) that target underserved populations, reduced lending alongside increasing loan delinquencies, although women have lower levels of non-performing loans than men, limited their ability to meet salary expenses and job losses.

The reduced business activity affected prudential standards like portfolio-at-risk, capital adequacy and liquidity ratios jeopardizing the continuity of some weaker microfinance institutions due to capital depletion and lower profits, and the inability to raise new capital. In addition, limited technology capabilities impacted their ability to render returns.

8.1.3 IMPACT ON FINTECHS

With FinTech companies providing the financial infrastructure, “keeping the lights on” was a major priority as the restricted movements and lockdowns stress tested business continuity and resilience plans. This priority encompassed the redesign of work systems and practices that addressed a distributed enterprise, employee wellbeing and safety in the era of remote work and social distancing protocols.

In addition, the reduced commercial activities of business and merchants that resulted in reduced transaction volumes and income was addressed by redesigning and developing products alongside supporting online merchant commerce.

Alongside these operational challenges, increasing fraud incidents warranted reviewing security and risk management protocols and more proactive monitoring.

Even though the CBN and payments partners focused on sustaining commercial activities, specific business support interventions for smaller, emerging start-ups were lacking. Moreover, non-participation in government distribution of financial COVID-19 relief measures and schemes using innovation diffusion and customer onboarding regulatory mechanisms could have been better.³⁶

8.1.4 IMPACT ON AGENTS

With banks closed, the value of agents as intermediaries grew, notwithstanding security risks and illiquidity affected agents’ ability to serve their communities.

By classifying agents and other financial services providers as “essential” workers, reduced the security risks. The liquidity and float rebalance challenges required more creative solutions.

On the non-financial side, super-agent partners also supported agents’ welfare with food packs, provided health and safety kits, as well as knowledge and skills on how to protect themselves and limit the spread of the virus.

8.1.5 IMPACT AND ROLE OF TELECOMMUNICATIONS

Mobile network operators (MNOs) and other telecommunications operators provide communications infrastructures for digital financial services.

With all business and commerce activities moving online, a data surge ensued, warranting enabling remote work an immediate priority for MNOs. With sufficient spectrum headroom, MNOs could quickly redistribute and reallocate capacity between commercial and residential districts.

In addition, the telecommunications also enhanced the government’s information and communications capabilities on COVID-19 communications.

8.1.6 IMPACT ON DEPOSIT MONEY BANKS (DMBS)

Since the onset of the e-banking era, deposit money banks (DMBs) have built digital capabilities to support

34 The Guardian. 2021. 1m Nigerians to benefit from COVID-19 Cash Transfer, Osinbajo says. Available at: <https://guardian.ng/news/1m-nigerians-to-benefit-from-covid-19-cash-transfer-osinbajo-says/>.

35 Techcabal. 2020. Post-lockdown rush underscores slow pace of digitization in Nigerian banking. Available at: <https://techcabal.com/2020/05/04/post-lockdown-lagos-digital-banking/>.

36 World Bank and CCAF. 2020. The Global Covid-19 FinTech Regulatory Rapid Assessment Study. Available at: <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-report-fintech-regulatory-rapid-assessment.pdf>.

business continuity in some business areas, like systematically moving transactions from bank branches to digital channels, notwithstanding the pandemic affected banks' operating costs, especially staff costs.

Furthermore, to prevent layoffs that would further decimate households and livelihoods, the CBN and Bankers Committee suspended all industry layoffs.

9. INCLUSIVE DFS ECOSYSTEM DURING COVID-19

9.1 FINANCIAL SYSTEM

Monetary policy: Despite a significant informal economy³⁷, Nigeria's financial system remains a critical part of the economic system.

The departments of Apex Bank, specifically Banking Supervision, Other Financial Institutions Supervision and Payments Systems Management, tasked with monitoring and managing the activities of licensed institutions working alongside the Financial Regulation and Policy team to maintain stability across the ecosystem.

The subsequent paragraphs detail the various monetary policy interventions to stimulate the economy.

1. Regulatory forbearance:

- a. Moratoriums extensions for intervention facilities availed through OFIs and recipients of the Government Enterprise and Empowerment Programme (GEEP) scheme, including TraderMoni, MarketMoni and FarmerMoni loans.
- b. Fee and interest rate adjustments: Interest rate reductions on intervention funds.

2. strengthening the loan-to-deposit ratio (LDR) policy: The CBN increased the LDR of banks to 65 percent to stimulate lending to the real sector and growth. To keep the momentum, the CBN will continue to monitor and strengthen LDR policies for the good of the economy.
3. Reporting extension: Submitting audited accounts to accommodate businesses with the disruptions of remote working.
4. Recapitalization exercise extension: Prolonging the recapitalization period for microfinance banks.

Financial system stability: Amidst the pandemic, it was imperative that the CBN continue to create a safe and stable financial system through consumer protection interventions, which included:

³⁷ BusinessDay. 2019. Nigeria's shadow economy is becoming too big to ignore. Available at: <https://businessday.ng/exclusives/article/nigerias-shadow-economy-is-becoming-too-big-to-ignore/?login=success>.

1. Deployment of the Consumer Complaints Management System (CCMS) to encourage complaints escalation, follow-up and resolution. In addition, the CBN reduced complaints resolution turnaround times to ensure reliability and integrity, mandating reduced periods for resolving complaints regarding ATMs, POS and web transactions. Table 5 provides a snapshot of escalated complaints.
2. Proactive fraud advisories to licensed financial institutions to increase fraud surveillance based on emergent cybersecurity attacks.

Safety, health and environment: The surface transmission of the COVID-19 virus presented CBN with another opportunity to promote its cashless policy and reduce the likelihood of spreading the coronavirus through bank notes.

The COVID-19 health risks required increased awareness on safe physical contact, personal hygiene and use of face masks.

While the CBN issued advisories on sanitizing bank premises and ATMs, super-agents and other aggregators provided the agents with the supplies (Personal Protective Equipments, commonly referred to as “PPE”, and hand sanitizers) and safety signs to keep financial access points operational without increasing health and safety risks.

9.2 FOCUS ON VULNERABLE SEGMENTS AND THE PRO-POOR

As part of the Federal Government’s N3.5 trillion stimulus packages (approximately USD8.4 billion), the Targeted Credit Facility (TCF) seeks to cushion the COVID-19 pandemic effects on affected households and MSMEs. The credit facilities aimed to support business recovery and productivity expansion.

The fourth quarter of 2020 labor force statistics³⁸ report published by the National Bureau of Statistics (NBS) estimates a 42.5 percent youth unemployment rate among Nigerians between 15 and 34 years.

TABLE 5 - SNAPSHOT OF ESCALATED COMPLAINTS

Category	June 2020	July 2020	Key actors
Account management	67	68	1.5%
Bonds and guarantees	1	3	66.7%
ATM dispense error	33	62	46.8%
Erroneous transfers	5	72	93.1%
Excess charges	20	44	54.5%
Failed transaction	142	184	22.8%
Fraud	55	77	28.6%
Loans	8	4	-100.0%
Others	5	0	
Tenured investments	1	2	50.0%
Unauthorized charges	1	0	

38 NBS. Labor Force Statistics: Unemployment and Underemployment Report (Q4 2020). Available at: <https://nigerianstat.gov.ng/elibrary/read/1238>.

To address this vulnerable segment, the CBN is funding the [Nigeria Youth Investment Fund](#) (NYIF), an initiative of the Federal Ministry of Youth and Sports Development (FMYSD).

By enhancing access to finance for the youth segments, this fund will also stimulate economic activity, catalyze entrepreneurship and reduce unemployment. Fund recipients will receive mandatory entrepreneurship training and support to formalize their business ventures.

With agriculture being the main stay of rural Nigerians, the CBNs value-chain focused anchor borrowers programme creates economic linkages between small holder famers and agro-processors/anchors.

BOX 1 - SOLUTIONS FOR INTERNALLY DISPLACED PERSONS (IDPS)

Among the vulnerable groups impacted by Covid-19, internally displaced persons (IDPs) are further disadvantaged because they live in camps or new communities where they are unknown, had to flee conflict and lack access to identity or even addresses required for customer due diligence.

In cognisance of these challenges limiting IDPs from accessing financial services, the CBN issued an administrative letter to financial institutions recognising Machine Readable Convention Travel Documents (MRCTD) and Refugee Identification cards issued by the National Commission for Refugees, Migrants and Internally Displaced Persons (NCFRMI) as a valid means of identification.

As a result, it increased IDPs chances in accessing the Targeted Credit Facility (TCF) and Nigerian Youth Investment Fund (NYIF).

Finally, IDPs benefitted from financial institutions' corporate social responsibility (CSR) initiatives, receiving humanitarian aid such as food baskets and safety items.

BOX 2 - WOMEN³⁹

For women and girls, the shadow pandemic of gender-based violence (GBV) accompanied other COVID-19 ills, with financial distress being one of the outcomes.

Being that the NFIS identifies women a priority segment, the CBN is actively deploying women-focused policy and stimulus interventions.

The MSME Development Fund (MSMEDF) is one of such interventions addressing women, with the CBN dedicating 60% of the fund's wholesale component to women entrepreneurs or women-led MSMEs.

With a decreasing gender gap, the CBN doubled efforts to ameliorate women's financial inclusion with the Framework for Advancing Women's Financial Inclusion (FAWFIN) which sets out eight strategic pillars (see Figure 4) that affirm Nigeria's commitment to the Denarau Action Plan to increase women's access to finance.

Despite the pandemic restrictions, the CBN launched the framework and inaugurated communities of practice (CoP) to conceptualize and implement actions across the strategic pillars.

It is working with key national level stakeholders to bring each of the pillar to life and to ensure Nigerian women and girls are financially included.



Figure 4: FAWFIN's strategic pillars

39 Central Bank of Nigeria. 2020. Framework for Advancing Women's Financial Inclusion in Nigeria. Available at: https://www.cbn.gov.ng/out/2020/dfd/framework%20for%20advancing%20women%27s%20financial%20inclusion%20in%20nigeria_final_5mb.pdf.

9.3 MSMEs SUPPORT

The Development Finance department led fiscal policy interventions to stimulate the economy. Besides enhancing financial access to existing schemes, extending to critical segments like healthcare and manufacturing.

Healthcare: The COVID-19 pandemic further highlighted Nigeria's vulnerability across the healthcare sector value chain. To curb the dependence on imported medicines, the CBN launched the Healthcare Sector Intervention Facility (HSIF) to conserve foreign exchange and reduce health tourism but also provide credit to indigenous pharmaceutical companies and healthcare value chain players intending to build and expand capacity, increasing private and public investments in the sector.

The Bank also established the Healthcare Sector Research and Development Intervention Scheme (HSRDIS) in 2020 to support research and development for producing indigenous vaccine, drugs and herbal medicines to control, prevent and treat infectious diseases.

Manufacturing: To strengthen Nigeria's real sector, the Bank established a N1 Trillion (approximately USD 2.4 billion) COVID-19 Intervention for the Manufacturing Sector (CIMS) to improve access to credit for upgrading manufacturing equipment and practices, and promoting Nigerian-made products.

9.4 OUTCOMES AND IMPACTS

As of June 20, 2021, the COVID-19 virus had officially infected only 0.08 percent of Nigerians.⁴⁰ Having escaped the impending health catastrophe, COVID-19 compounded the economic fragilities of Nigerians. Working proactively with the CBN and other partners, the FinTech ecosystem was able to sustain economic activity through business and social programmes.

Humanitarian relief: For the under- and unemployed who earn daily wages, the lockdown immediately affected their livelihoods because they had no or very low levels of savings or financial resilience therefore organizations and other private sector groups immediately formed to support the society with humanitarian aid.

While most businesses contributed directly as entities, others built portals encouraging individual donations from staff members.

Food security: The anchor borrowers programme availed over 3 million small holder farmers loans to cultivate about 3.8 million hectares of farmland, increasing food supply.

In sum, Figure 4 shows the overall benefits of the COVID-19 interventions to the workforce, business enterprises and economy in through the sustained development and use of DFS and FinTech to serve the underserved.

9.5 CHALLENGES

Nigeria birthed the outcomes and benefits described earlier amidst challenges at the macro (national), meso (industry) and micro (organization) levels.

Macro (National): The dearth of physical infrastructure (roads, power) that plague the country were further expounded during the pandemic, causing additional operational disruptions to service providers like mobile network operators that maintain live mobile sites powered by diesel generators.

With the lion's share of economic activity moving online, keeping the economy going required moving diesel trucks that were inhibited at the start of the lockdown. With the interventions of the telecommunications regulator, the services classification changed to "essential", enabling mobility.

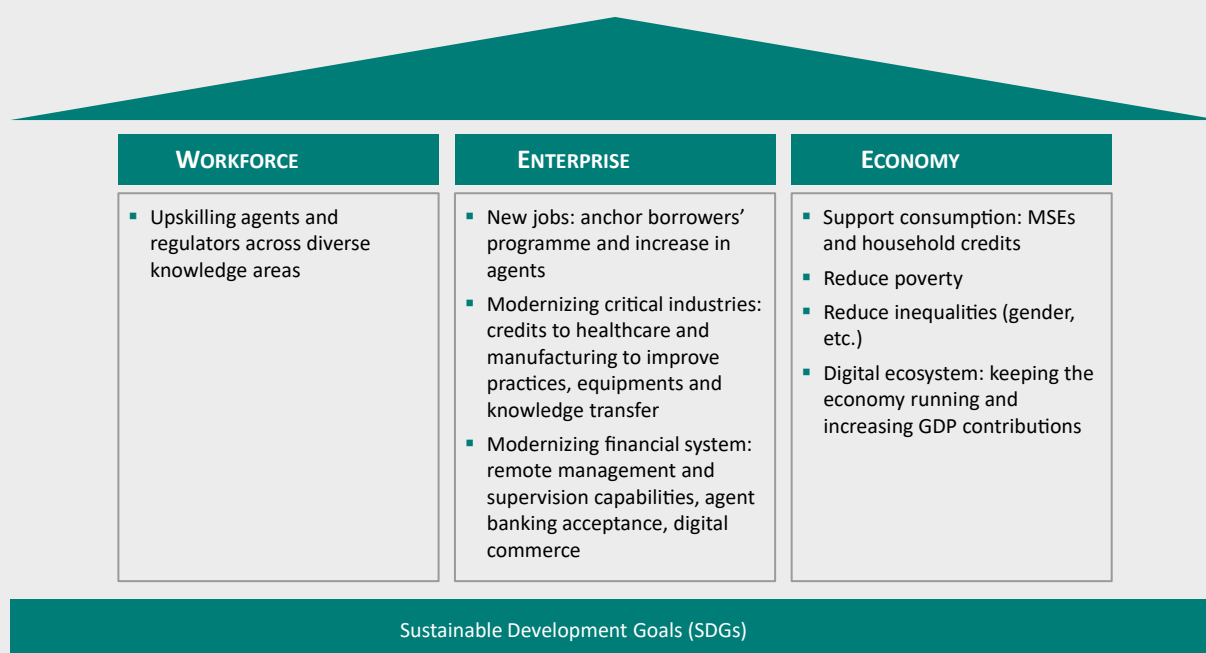
The insurgency and insecurity threats especially in Northern Nigeria and farmers unwilling to return to their farms affected efficiency of the CBN anchor borrowers programme. Although telecoms facilities are critical national infrastructure (CNI),⁴¹ equipment theft cases and vandalization cases at mobile site locations increased, further causing outages, increasing operating costs and further exposing vulnerabilities to global supply chains that were also constrained during the pandemic.

Meso (Financial Services Ecosystem): Business continuity and the changes in work systems and practices were the immediate priorities for financial institutions where the varying degrees of digitalization affected the ability to maintain business activities, including reporting and onsite supervision activities. Though the CBN launched remote supervision processes, the Apex Bank were unable to examine some financial institutions in 2020.

40 Worldometer. COVID-19 Coronavirus Pandemic. Available at: <https://www.worldometers.info/coronavirus/>.

41 Vanguard. 2020. FG declares telecoms facilities critical national Infrastructure. Available at: <https://www.vanguardngr.com/2020/06/fg-declares-telecoms-facilities-critical-national-infrastructure/>.

FIGURE 5: SUMMARY OF DFS IMPACTS ON FINANCIAL INCLUSION



Prioritizing digital financial flows were important to private sector actors, insufficient financial access points inhibited their ability to support distributing stimulus funds. Rising fraud cases that, combined with low consumer education and financial literacy, left some users exposed to the caprices of cyber criminals, also complemented the surge in digital transactions. While some sectors contracted and reduced staffing levels, digital technology providers and enablers getting MSEs online thrived and experienced staffing shortages.

Thus, talent expansion was an unintended consequence of the pandemic. Despite the various monetary policy interventions, the high mortality rates of MSEs and the low awareness and adoption of tools supported banks' reluctance to stimulate the economy through lending like the National Collateral Registry (NCR).

With banks closed and mobility restricted, agents became the focal points for cash-out services. However, some agents ceased operations and closed their storefronts citing security and protection threats like theft of cash assets and harassment from law enforcement officials challenging their legitimacy.

Through the CBN, the Government classified financial institutions as essential services, permitting the legitimate movement of personnel and operation of agent locations. Notwithstanding this victory, liquidity to support business operations was the next hurdle.

For some agents, their categorization as tier-1 agents limited their transaction capacity; and for others, bank closures affected their ability to rebalance their float accounts.

Micro (Organizations and individuals): COVID-19 not only catalyzed the digital transformation of work and business but also remote work that has proven to be an ante-thesis to the enterprise systems narrative. While the telecommunications were reallocating and redistributing capacity, microfinance financial institutions lacking digital capabilities had to cease operations.

At the side of the spectrum are financial institutions and regulators still utilizing manual processes. Other barriers to DFS and FinTech reaching underserved population segments include affordability, DFS awareness and digital capabilities.

10. SUSTAINING INCLUSIVE DIGITAL FINANCIAL SERVICES (DFS)

10.1 LESSONS AND RECOMMENDATIONS

Even though the health implications were minimal compared to many other countries, the lessons learnt from the pandemic are essential for national, industry and organizational resilience building.

The first lesson is the need for **crisis management systems at the national, sub-national, local government and industry domains** that develop, maintain and coordinate emergency response policies and plans. The delayed classification of financial services and telecommunications workers as essential services questions the currency and efficacy the National Emergency Management Agency (NEMA) and National disaster framework, given the Presidency setup the COVID-19 Presidential task force.⁴²

Hence, redefining infrastructure beyond power and roads, and taking cognizance of the shift in industrial revolutions. At the industry level, the mix of regulators, industry associations and organizations should ensure business continuity plans and strategies are in place however better coordination is needed.

Besides key resources, such plans should also highlight dependencies like telecoms and other partners critical to the delivery of digital financial services. A shared responsibility model, as recommended by the AFI⁴³ ensures that interdependent risks are avoided through close cooperation between the government, service providers and other economic stakeholders.

Guidelines issued by CBN mandate regulated financial institutions have an approved business continuity plans. However, credit risk management practices may require review to include business continuity risk of borrowers as evidenced by the pandemic effects on businesses' revenues, digital readiness, inability to work remotely, among other factors affecting cash flows and loan repayments.

Our second lesson is **using digital technologies, the digital transformation of businesses, is mandatory.**

While COVID-19's sped up digital transformation, the levels of preparation in most industries and organizations varied. Indeed, because of costs and

other exigent factors, widespread digital adoption has been slow, especially among the extensive MSEs network as many digital products and services still do not meet their unique needs. COVID-19 has supported the thesis that digital is no longer an option and the surge of MSEs taking their businesses online supports the theory that access to technology is not the only limiting factor, especially for women MSME owners. Identifying and mitigating these factors will support the transformation into a true digital (and cashless) economy.

Alongside the general adoption of digital solutions, regulators also need to further digitize manual processes to continue to develop and monitor a stable financial system and ensure they the data they generate is fully sex and age disaggregated. As we promote FinTech solutions for customers, we should deploy gender-sensitive regulatory and supervisory technologies (RegTech and SupTech). Embarking on cross-cutting digital transformation requires homegrown solutions that are affordable by all business classes and workforces along with societal upskilling and development of digital capabilities. AFIs policy framework provides guidance to regulators on developing policies that leverage DFS to respond to global emergencies such as COVID-19.

Thirdly, the opportunity to **leverage DFS to digitize the conditional cash transfers (CCTs) programmes** to the poor and especially women, were a missed opportunity that could have onboarded new, mainly female, customers using innovative solutions and establishing new distribution networks. For example, the Central Bank of Brazil, through Caixa Econômica Federal, a state-owned bank, created 14 million new accounts within a week under a disbursements programme targeting the self-employed, unemployed and micro-enterprise workers.⁴⁴

Likewise, future efforts to digitize cash should address merchant acceptance that will reduce the liquidity burdens of agents, support MSEs record keeping and access to credit through alternative forms of financing.

42 National Legislative Bodies. 2010. Nigeria: National Disaster Framework. Understanding the framework. Available at: https://www.preventionweb.net/files/21708_nigherianationaldisastermanagementf.pdf.

43 AFI. 2020. Policy Framework for Leveraging Digital Financial Services to Respond to Global Emergencies - Case of Covid-19. Available at: <https://www.afi-global.org/publications/policy-framework-for-leveraging-digital-financial-services-to-respond-to-global-emergencies-case-of-covid-19/>.

44 Kazzaz, Z. 2020. Emergency Disbursements during COVID-19: Regulatory Tools for Rapid Account

Opening and Oversight. Overcoming barriers to financial inclusion via innovative regulatory approaches. Glenbrook Partners LLC. Available at: https://www.findevgateway.org/sites/default/files/publications/submissions/72016/Emergency%20Disbursements%20during%20COVID-19_20200718.pdf.



Elbow Bump In Mask At Office - AdobeStock/Andrey Popov

With POS terminals being the dominant channel for card-based transactions, emerging acceptance methods like QR codes still operate using bank accounts and card-based payment instruments.

Thus, addressing the liquidity frictions at agent locations will require digitizing cash in a scalable manner that micro-merchants can adopt. Taking financial services down market will require interventions that address pricing (cost-to-serve and cost-to-use), infrastructure (power, communications), consumer behavior and other ecosystem frictions are paramount. With the support and leadership of the CBN, how can we address financial services research and innovation? The ability to exploit opportunities during crises requires innovation and experimental mindsets that are agile and nimble. **Embedding digital, innovation, gender sensitivities, nimbleness and agility as a way of thinking should be a critical component of the upskilling.**

Fourthly, **scaling and strengthening payments systems infrastructure** for transaction growth and reliability is pivotal. It is imperative that gender sensitive and sex-disaggregated fraud and complaints monitoring and management are integral components of the payment systems infrastructure, alongside identity since fraud and complaints increase alongside electronic funds transfers (see table 5).

Another lesson is the crises tendency to go hand in hand with misinformation or sometimes, under-information, creating reputational risk and information voids. Hence, prioritizing information and communication management at national, industry and organizational levels is fundamental. Moreover, it is important to note that those most at risk of being accepting misinformation are those who are hardest to reach so communication campaigns in local languages and through channels and modalities where the intended recipients can access the message is key.

Nigeria's electronic payment systems is comparable with that of developed countries, but barriers such as trust, cash dependence and awareness, highlight the need for continuous financial education and literacy, especially for vulnerable groups as they are less likely to have completed their school education and held jobs that would build the required knowledge and skills.

10.2 CONCLUSION

In this emergency, the Nigerian example shows that DFS and FinTech solutions can advance financial inclusion among vulnerable society segments, including MSMEs, as long as providers deploy suitable gender sensitive business models. From this case, we propose a policy approach abstraction for employing DFS and FinTech in emergency response and recovery situations.

10.2.1 POLICY APPROACH FOR AN INCLUSIVE DFS ECOSYSTEM DURING EMERGENCY

In emergency response and recovery situations, the priority customer segments include the large proportion of Nigerians operating in the informal sector (women, micro-entrepreneurs, under-employed citizens) and other vulnerable groups like IDPs.

The desired propositions from the banking and payments sector are reliable, effective and innovative DFS. For merchants and MSEs, this encompasses solutions like digital collections that facilitate business, entrepreneurship and commerce.

DFS providers use direct and indirect channels (physical and digital) as well as above- and below-the-line communications strategies to build awareness, support evaluation, onboard customers, support usage and conduct customer service. Financial institutions build and maintain customer relationships through agent networks and bank branches, self-service, call centers and automated service bots. Consumers pay transaction and service fees for the propositions.

Producing DFS and FinTech solutions requires a complex array of resources and activities that are well complemented by diverse strategic partners.

Production activities like technology and network management are essential to keeping the lights on.

Problem solving activities encompasses research, policy analysis and development, product development, banking and payments operations, and service delivery, including complaints management and dispute resolution.

Partner and network building activities like agent management and capacity building are also essential to the delivery of DFS to the target customers. Financial institutions also rely on resources like digital technologies, physical locations, intellectual property and capital. Partners support DFS providers by conducting the activities or providing resources.

Partners like NIBSS with the BVN identity solution to reduce KYC risks and uncertainties; mobile network operators and counter vendors that optimize and build infrastructure configurations and the NIBSS instant payments solution; others like the Ministry of Humanitarian Affairs Disaster Management and Social Development and the National Commission for Refugees, Migrants and Internally Displaced Persons (NCFRMI) build economies of scale by driving customer acquisition. The relative costs of delivering (cost-to-

serve) pro-poor propositions requires scale driven by user base and transaction volumes.

The efficacy of this business model depends on sustainable strategic partnerships and committed financial system regulators and providers (banks, non-banks and distribution agent networks) to creating jobs and other economic opportunities, building a stable financial system that endears consumer trust and a resilient and stable digital and payments infrastructure.

10.2.2 A VIEW OF THE FUTURE

It would be injudicious to assume the COVID-19 pandemic was a one-off global disruption or that a similar incident could not reoccur.

An optimistic but more prudent approach would be to envision a future crisis and build mitigants from the lessons and recommendations proposed. This vision should prioritize gender sensitive access and usage for an inclusive ecosystem, even amidst a disruption (see table 6).



TABLE 6 - SECTORAL PRIORITIES FOR THE FUTURE

Indicators	Sectoral priorities
Access	<ul style="list-style-type: none"> • Reliable and affordable technology infrastructure • KYC/Digital identity • Alternative providers and agents (e.g. PSBs) in rural and remote locations • Innovative and appropriate solutions • Onboarding with humanitarian aid • Acceptance of alternative forms of collateral
Usage	<ul style="list-style-type: none"> • Reliable payments and remittances systems • Affordable fees and charges • Effective complaints management (channels, prompt resolutions) • Financial and digital literacy (consumer protection, fraud)



Customer In Face Mask Consulting Lawyer - AdobeStock/Andrey Popov

APPENDIX

NIGERIA FACTS TABLE

Geography	Location	West Coast of Africa	Source
	Area (sq km)	923,768	UN Country Stats
	Capital city	Abuja	
Government	Type	Federal republic	
	Legal system	Mixed system of English, Islamic and traditional laws	
People and society	Population	211,432,261	US Census
	Population density	215.0	World Bank
	Population growth rate	2.6%	World Bank
	Urban population	51.16% (2019)	Statista
	Age structure (2020 est.)	<ul style="list-style-type: none"> 0-14 years: 41.7% (male 45,571,738/female 43,674,769) 15-24 years: 20.27% (male 22,022,660/female 21,358,753) 25-54 years: 30.6% (male 32,808,913/female 32,686,474) 55-64 years: 4.13% (male 4,327,847/female 4,514,264) 65 years and over: 3.3% (male 3,329,083/female 3,733,801) 	Index Mundi
	Literacy rate	62.01% (2018)	World Bank
	Health expenditures	3.89%	Statista
	Physicians	0.4/1,000 population (2008)	WHO
	Hospital bed density	0.53/1,000 population (2004)	WHO

Economy	National currency	Naira (NGN)	
	GDP (2020)	USD2,083	UN Country Stats
	GDP growth rate	2.7%	
	GDP per capita (2020)	USD2,097	World Bank
	GDP composition, by end use (2017 est.)	<ul style="list-style-type: none"> Household consumption: 50.3% Government consumption: 12.8% Investment in fixed capital: 9.8% Investment in inventories: 0% Export of goods and services: 49.9% Import of goods and services: 22.8% 	
	GDP composition, by sector of origin (2019)	<ul style="list-style-type: none"> Agriculture: 21.91% Industry: 27.38% Services and other activity: 49.73% 	Statista
	Income level	Lower middle	World Bank
	Industrial production growth rate (2017 est.)	2.2%	Index mundi
	Labor force (2020 est.)	62 million	ILOSTAT
	Unemployment rate (2020 est.)	33.3%	Bloomberg
	Household income or consumption by percentage share (2010 est.)	Lowest 10%: 1.8%	
	Highest 10%: 38.2%	Index mundi	
	Distribution of family income - Gini index (2018)	35.1	World Bank
	Inflation rate (consumer prices)	18.17%	NBS
	Commercial bank prime lending rate	11.1%	CBN

Communications	Telephones - main lines (2012)	418,200	Index mundi
	Telephones - mobile cellular (May 2021)	187,026,517	NCC
	Teledensity (May 2021)	97.98%	NCC
	International country code	234 (phone) .ng (domain)	
	Submarine cables	5	Submarine networks
	Internet hosts (2012)	1,234	Index mundi
	Internet users (May 2021)	140,488,490	NCC
	Airports	20	NCAA
Transport	Railways (2014)	3,798 km	Index mundi
	Roadways (2017)	195,000 km	Index mundi
	Waterways	10,000 km	NIWA

ACRONYMS AND ABBREVIATIONS

4IR	Fourth Industrial Revolution
A2F	Access to financial services
ACH	Automated Clearing House
AFI	Alliance for Financial Inclusion
AI	Artificial Intelligence
ATM	Automated Teller Machines
BVN	Bank Verification Number
CBDC	Central Bank Digital Currency
CBN	Central Bank of Nigeria
CCMS	Consumer Complaints Management System
CCT	Conditional cash transfers
CCVI	Covid Community Vulnerability Index
CFI	Centre for Financial Inclusion
CICO	Cash-in/Cash-out
CIMS	COVID-19 Intervention for the Manufacturing Sector
CNI	Critical national infrastructure
CoP	Communities of practice
COVID-19	Coronavirus Disease 2019
CSR	Corporate Social Responsibility
DFS	Digital financial services
DMBs	Deposit Money Banks
ECPIX	Electronic cheque presentment with image exchange
EFInA	Enhancing Financial Innovation and Access
EMV	Europay, Mastercard and Visa
ERGP	Economic Recovery and Growth Plan
ESCA	Electronic Smart Card Account
FAWFIN	Framework for Advancing Women's Financial Inclusion
FDPs	Forcibly displaced persons
FinTech	Financial Technology
FMYSO	Federal Ministry of Youth and Sports Development
FSPs	Financial service providers
G2P	Government-to-person
GBV	Gender-based violence
GDP	Gross Domestic Product
GEEP	Government Enterprise and Empowerment Programme

HSIF	Healthcare Sector Intervention Facility
HSRDIS	Healthcare Sector Research and Development Intervention Scheme
IDPs	Internally Displaced Persons
IVR	Interactive voice response
KYC	Know-your-Customer
LDR	Loan-to-Deposit Ratio
MfBs	Micro-finance banks
MICR	Magnetic ink character recognition
MMOs	Mobile Money Operators
MNOs	Mobile Network Operators
MRCTD	Machine readable convention travel documents
MSMEDF	MSME Development Fund
MSMEs	Micro, Small and Medium Enterprises
NACS	Nigeria Automated Clearing System
NAICOM	National Insurance Corporation
NBS	National Bureau of Statistics
NCFRMI	National Commission for Refugees, Migrants and Internally Displaced Persons
NCR	National Collateral Registry
NCR Nigeria Plc	National Cash Registers Nigeria Plc
NCS	Nigeria Central Switch
NDIC	National Deposit Insurance Corporation
NEMA	National Emergency Management Agency
NFIS	National Financial Inclusion Strategy
NIBSS	Nigeria Inter-Bank Settlement System
NIP	NIBSS Instant Payments
NYIF	Nigeria Youth Investment Fund
OEM	Original equipment manufacturers
OPEC	Organization of Oil Producing Economies
P2G	Person-to-government
PENCOM	National Pension Commission
POS	Point of Sale
PPE	Personal Protective Equipment
PSBs	Payment Service Banks
PSV2020	Payment Systems Vision 2020
QR	Quick response
RegTech	Regulatory Technology
SANEF	Shared Agent Network Expansion Facility

SDGs	Sustainable Development Goals
SEC	Securities and Exchange Commission
SIM	Subscriber identity module
SupTech	Supervisory technology
TCF	Targeted Credit Facility
UNDP	United Nations Development Programme
USSD	Unstructured Supplementary Service Data
WMSMEs	Women-led micro, small and medium- sized enterprises
YOY	Year-over-Year

REFERENCES

AFI PUBLICATIONS

AFI. 2012. A Quick Guide to the Maya Declaration on Financial Inclusion. Available at: https://www.afi-global.org/sites/default/files/publications/afi_maya_quick_guide_withoutannex_i_and_ii.pdf.

AFI. 2018. Sochi Accord: FinTech for Financial Inclusion. Available at: <https://www.afi-global.org/publications/sochi-accord-fintech-for-financial-inclusion/>.

AFI. 2020. Policy Framework for Leveraging Digital Financial Services to Respond to Global Emergencies - Case of Covid-19. Available at: <https://www.afi-global.org/publications/policy-framework-for-leveraging-digital-financial-services-to-respond-to-global-emergencies-case-of-covid-19/>.

ARTICLES

BusinessDay. 2019. Nigeria's shadow economy is becoming too big to ignore. Available at: <https://businessday.ng/exclusives/article/nigerias-shadow-economy-is-becoming-too-big-to-ignore/?login=success>.

Nairametrics. 2021. Mobile & USSD transactions surge by 82.6% as Covid-19 spurs mobile adoption. Available at: <https://nairametrics.com/2021/04/15/mobile-ussd-transactions-surge-by-82-6-as-covid-19-spurs-mobile-adoption/>.

Techcabal. 2020. Post-lockdown rush underscores slow pace of digitization in Nigerian banking. Available at: <https://techcabal.com/2020/05/04/post-lockdown-lagos-digital-banking/>.

The Guardian. 2021. 1m Nigerians to benefit from COVID-19 Cash Transfer, Osinbajo says. Available at: <https://guardian.ng/news/1m-nigerians-to-benefit-from-covid-19-cash-transfer-osinbajo-says/>.

Vanguard. 2020. FG declares telecoms facilities critical national Infrastructure. Available at: <https://www.vanguardngr.com/2020/06/fg-declares-telecoms-facilities-critical-national-infrastructure/>.

CENTRAL BANK OF NIGERIA DOCUMENTS

Central Bank of Nigeria. 2012. Revised Guidelines on Stored Value/Prepaid Card Issuance and Operations. Available at: <https://www.cbn.gov.ng/out/2012/ccd/circular%20iro%20stored%20value%20prepaid%20card%20issuance%20and%20operations.pdf>. Accessed on October 13, 2021.

Central Bank of Nigeria. 2012. Nigeria Payments System Vision 2020. Release 2.0 - September 2013. Available at: https://www.cbn.gov.ng/icps2013/papers/NIGERIA_PAYMENTS_SYSTEM_VISION_2020%5Bv2%5D.pdf.

Central Bank of Nigeria. 2018. National Financial Inclusion Strategy (Revised). Available at: <https://www.cbn.gov.ng/out/2019/ccd/national%20financial%20inclusion%20strategy.pdf>.

Central Bank of Nigeria. 2020. Framework for Advancing Women's Financial Inclusion in Nigeria. Available at: https://www.cbn.gov.ng/out/2020/dfd/framework%20for%20advancing%20women%27s%20financial%20inclusion%20in%20nigeria_final_5mb.pdf.

Central Bank of Nigeria. 2021. Framework for Regulatory Sandbox Operations. Available at: <https://www.cbn.gov.ng/out/2021/ccd/framework%20for%20regulatory%20sandbox%20operations.pdf>. Accessed on October 14, 2021.

Central Bank of Nigeria. 2021. Regulatory Framework for Open Banking in Nigeria. Available at: <https://www.cbn.gov.ng/out/2021/psmd/circular%20on%20the%20regulatory%20framework%20on%20open%20banking%20in%20nigeria.pdf>. Accessed on October 14, 2021.

Soludo, C. 2007. "Nigeria's Financial System Strategy 2020 Plan 'Our dream'". FSS 2020 International Conference, Abuja, 18th June 2017. Available at: https://www.cbn.gov.ng/fss/mon/Nigeria%27s%20Financial%20System%20Strategy%202020%20Plan%20-%20OUR%20DREAM_Prof.%20Soludo.pdf. Accessed on October 6, 2021.

DATA PORTALS

Surgo Ventures. Precision for COVID. Africa Covid Community Vulnerability Index (CCVI). <https://precisionforcovid.org/africa>.

World Bank Database. GDP per capita (current US\$) - Nigeria. Available at: <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=NG>.

Worldometer. COVID-19 Coronavirus Pandemic. Available at: <https://www.worldometers.info/coronavirus/>.

MISCELLANEOUS

eNaira. Available at: <https://enaira.gov.ng>.

REPORTS AND STUDIES

Access to Financial Services in Nigeria survey (A2F). 2021. Enhancing Financial Innovation and Access (EFInA) Access to Financial Services in Nigeria 2020

Survey. Available at: <https://a2f.ng/wp-content/uploads/2021/06/A2F-2020-Final-Report.pdf>.

Bashir A. Yauri, Aliyu R. Yauri. E-Service and the Nigerian Banking Sector: A Review of ATM Architecture and Operations. *International Journal of Economics and Management Engineering* Vol:10, No:1, 2016. Available at: <https://publications.waset.org/10003111/e-service-and-the-nigerian-banking-sector-a-review-of-atm-architecture-and-operations>.

BFA Global. 2020. Snapshot of financial health during peak COVID-19. Available at: <https://bfaglobal.com/insights/snapshot-of-financial-health-during-peak-covid-19/>.

Chironga, M. et al. 2018. Roaring to life: Growth and innovation in African retail banking. McKinsey&Company. *Global Banking Practice*. Available at: <https://www.mckinsey.com/-/media/McKinsey/Industries/Financial%20Services/Our%20Insights/African%20retail%20bankings%20next%20growth%20frontier/Roaring-to-life-growth-and-innovation-in-African-retail-banking-web-final.ashx>.

Ernst & Young (2020). Nigeria Fintech Census 2020. Profiling and defining the FinTech sector. Available at: https://assets.ey.com/content/dam/ey-sites/ey-com/en_ng/ey-fintech-nigeria-census-final.pdf.

Kazzaz, Z. 2020. Emergency Disbursements during COVID-19: Regulatory Tools for Rapid Account Opening and Oversight. Overcoming barriers to financial inclusion via innovative regulatory approaches. Glenbrook Partners LLC. Available at: https://www.findevgateway.org/sites/default/files/publications/submissions/72016/Emergency%20Disbursements%20during%20COVID-19_20200718.pdf.

National Legislative Bodies. 2010. Nigeria: National Disaster Framework. Understanding the framework. Available at: https://www.preventionweb.net/files/21708_nigherianationaldisastermanagementf.pdf.

NBS. Labor Force Statistics: Unemployment and Underemployment Report (Q4 2020). Available at: <https://nigerianstat.gov.ng/elibrary/read/1238>.

NCR Corporation. 2017. The Role of the ATM in Driving Financial Inclusion Worldwide. Extending financial services to the unbanked. An NCR white paper. Available at: https://www.ncr.com/content/dam/ncrcom/content-type/white_papers/17fin8384_financial_inclusion_wp_v1_3.pdf.

Nigeria Interbank Settlement System (2021). NIBSS

Insight (Third edition): Instant Payments 2020 Annual Statistics. Available at: <https://7a8d075c.flowpaper.com/NIBSSInsight3rdEdition1/#page=1>.

Osa, Igbaekemen G. 2016. The Impact of E-Banking on Efficient Service Delivery to Customers in Nigeria Economy. *European Journal of Business and Innovation Research*, Vol. 4, No. 2, pp. 76-87. Available at: <https://www.eajournals.org/wp-content/uploads/The-Impact-of-E-Banking-on-Efficient-Service-Delivery-to-Customers-in-Nigeria-Economy.pdf>.

Securities and Exchange Commission. 2021. SEC Executed Rules. New rules and amendments to the rules and regulations of the Commission. Available at: <https://sec.gov.ng/wp-content/uploads/2021/01/Jan-2021-Executed-Rules.pdf>. Accessed on October 14, 2021.

Tarhini, Ali et al. 2015. User Adoption of Online Banking in Nigeria: A Qualitative Study. *Journal of Internet Banking and Commerce*. December 2015, vol. 20, no. 3. Available at: <https://www.icommercecentral.com/open-access/user-adoption-of-online-banking-in-nigeria-a-qualitative-study.pdf>.

United National Development Programme & National Bureau of Statistics. 2021. The Impact of COVID19 on Business Enterprises in Nigeria. Available at: <https://www.ng.undp.org/content/nigeria/en/home/library/mdg/the-impact-of-covid-19-on-business-enterprises-in-nigeria.html>.

World Bank. 2021. Nigeria economic update: resilience through reforms. Washington DC: International Bank for Reconstruction and Development/The World Bank. Available at: <https://www.worldbank.org/en/country/nigeria/publication/nigeria-economic-update-resilience-through-reforms>.

World Bank. 2021. Resilience: COVID-19 Crisis Through a Migration Lens. Migration and Development brief 34. Available at: https://www.knomad.org/sites/default/files/2021-05/Migration%20and%20Development%20Brief%2034_1.pdf.

World Bank and CCAF. 2020. The Global Covid-19 FinTech Regulatory Rapid Assessment Study. Available at: <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-report-fintech-regulatory-rapid-assessment.pdf>.

World Bank. Nigeria COVID-19 National Longitudinal Phone Survey (COVID-19 NLPs). 2020. Fifth Round was implemented by the National Bureau of Statistics (NBS). Available at: <https://microdata.worldbank.org/index.php/catalog/3712/download/49281>.

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