

THE STATE OF INSTANT AND INCLUSIVE PAYMENT SYSTEMS IN AFRICA

SIIPS 2022 - CASE STUDY

NIBSS INSTANT PAYMENT



Origin story

Challenge

A high reliance on cash. In 2011, the Central Bank of Nigeria launched the “cashless policy”—designed to curb negative aspects of cash predominance in the economy, including increased risks of corruption, armed robbery, and inefficiency. The CBN set out to find a suitable replacement to mirror the characteristics of cash (immediate, universal, and readily available) while also mitigating the drawbacks (Babalola, 2022).

Value proposition

Instant payments to drive inclusive economic growth. In 2011, the Nigerian Inter-Bank Settlement System (NIBSS) launched NIBSS Instant Payment (NIP)—a real-time interbank payments system designed to facilitate high volumes of retail transactions (World Bank, 2020b).⁷⁸ NIBSS hoped this service would boost economic growth by

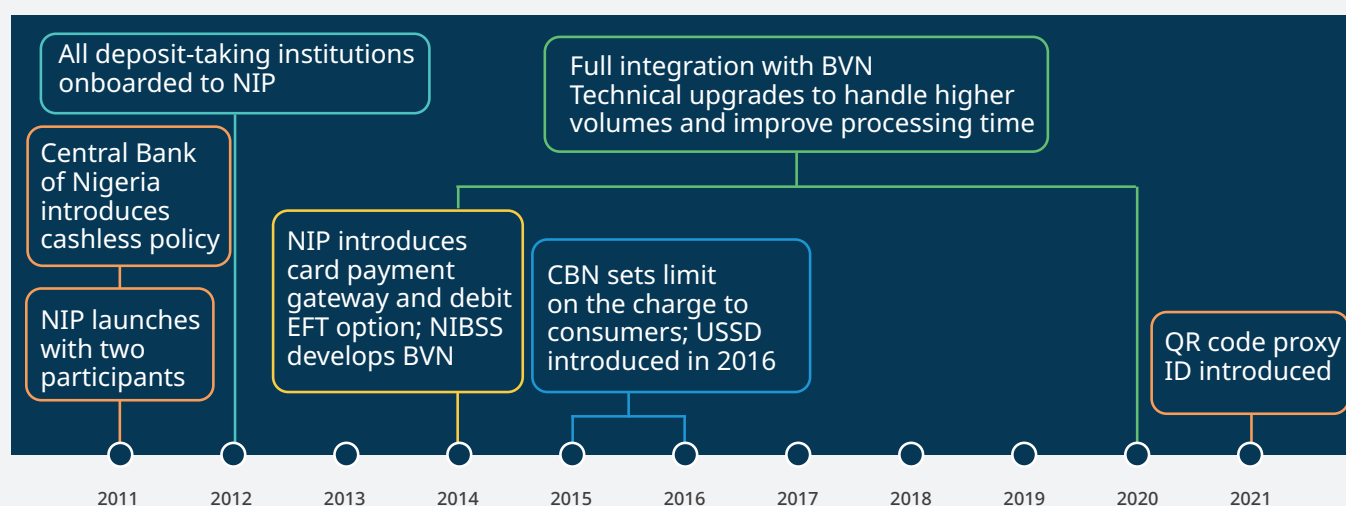
providing faster payment services, lowering traditional barriers to financial inclusion, reducing transaction costs, as well as providing convenient financial services for both urban and rural populations (Oluwole, 2021).

Timeline

Limited launch drove broad market engagement.

NIBSS faced an early challenge in gaining buy-in from banks to join the scheme. The initial launch occurred in September 2011 and was exclusive to two small commercial banks. Access to NIP quickly became a competitive advantage for those banks, and major banks were incentivized to join. Within the next year, the system grew to include all 22 commercial banks, all 20 microfinance banks and all six MMOs in Nigeria (World Bank, 2020b). Additionally, during that period, the central bank strongly endorsed the scheme, but refrained from issuing a regulatory mandate (Stakeholder interviews, 2022).

FIGURE 1. NIP timeline



¹ NIBSS' main role is to develop and maintain effective and innovative payments system infrastructure in Nigeria. This includes for example, managing the Nigeria Central Switch and thereby facilitating interoperable interbank transactions. Other services include revenue collection services (i.e., e-BillsPay), Data and identity services, development of innovative payments infrastructure and rules, among others.

Phased approach to technical development was key:

At launch, NIP only supported instant EFT credit transfers. It is now interoperable with mobile wallets and card networks and is linked to various proxy identities for customer convenience. In 2014, debit EFT was introduced and NIBSS developed the biometrics-based financial sector ID called Bank Verification Number (BVN) to address potential fraud concerns. In 2015, card interoperability through payment gateways was embedded. This was followed by an increase in the number of settlement cycles from one to two in 2016 and the introduction of USSD functionality. The integration

of mobile wallets happened in 2018, and the addition of QR code functionality in 2021 via the New Quick Response (NQR) platform. Settlement windows were further increased to four times a day in 2021. Every two to three years, NIBSS upgrades the system and requires banks to meet these new standards. NIBSS regularly monitors the average payments processing time of each bank and generates a monthly consolidated list ranking participant performance, shared with each bank. Currently, the maximum transaction time is 45 seconds, although most transactions are processed in 10 seconds or less.

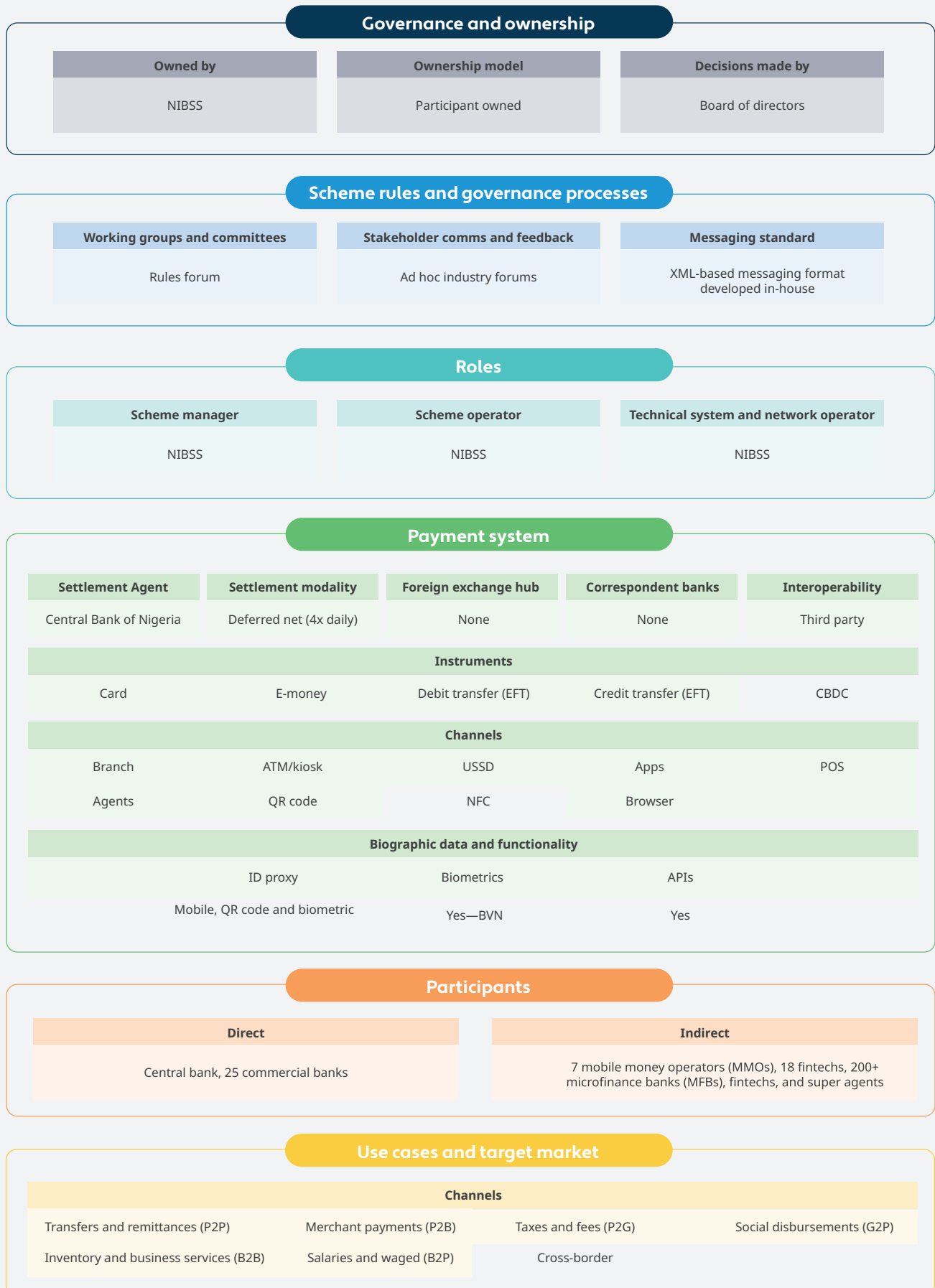
Governance and operations

Payment system overview

Hub-switch model ensures interoperability among all players. NIBSS operates a central processing hub—the Nigerian Central Switch—which connects directly to all commercial banks, microfinance banks, and mobile money operators (MMOs) in Nigeria. Direct participants consist of banks, while indirect participants are microfinance

banks (MFBs), MNOs, super agents, other PSPs and fintechs (World Bank, 2020b). Transactions are settled in batches on a deferred net basis, four times per day via the NIBSS platform. Indirect participants settle via their sponsor banks. The proceeding figure provides a visual representation of NIP.



FIGURE 2. NIP model overview

NIBSS governs and operates most aspects of NIP. NIBSS is the owner, operator, and scheme manager. The Central Bank of Nigeria (CBN) is the settlement agent. As such, NIBSS is responsible for setting scheme rules and technical standards, managing the technology that enables safe and efficient transactions (World Bank, 2020b). The rules of the scheme are decided by the NIBSS Board of Directors, which meets on an ad hoc basis. The chairman of the board is the CBN Deputy Governor of Fiscal and Monetary Policy. There are an additional eight board members consisting of four managing directors from the major banks in Nigeria, and four from other banks on a rotational basis. Decision-making rests largely with the chairman. Other fora exist and are leveraged for the development of NIP. For example, the Committee of e-Banking Industry Heads (CeBIH) is leveraged to discuss key issues in the Nigeria payments landscape including NIP, and these issues are further deliberated at NIP board meetings. Moreover, early in the development of NIP, NIBSS held forums on a regular basis with industry players (e.g., banks, MMOs, and MFBs) to get feedback on the progress of NIP. Forums are still held on an ad hoc basis to gather industry input. The dispute resolution process is typically defined by the scheme; however, ratified by the CBN Disputes arising between or across schemes may be referred through the Director of the Payments System Management Department of the CBN, or the Payment Initiative Coordinating Committee (World Bank, 2020b).

Functionality

Advanced functionality developed and rolled out. NIP is available 24/7, permitting transactions across various channels and supporting most use cases. Proxy IDs are available via Nigeria's BVN, which is a unique customer identifier used with bank account details for every transaction processed via NIBSS (World Bank, 2020b).² Customers can approach an ATM and simply input their thumbprint, allowing them to send a payment and/or make a withdrawal from an ATM, providing exceptional convenience and fraud prevention. NIBSS also introduced the NQR platform in 2021, which facilitates real-time, account-based QR payments for P2P and P2B use cases. The platform was designed to be low cost for merchants, allowing consumers to pay for an item by scanning a QR code generated by the seller that can be scanned with a customer's banking app (NIBSS, 2021a), which is EMV compliant.

Technical standards and use cases

Supporting use cases through distinct system components. NIP is based on messaging standards developed in-house; however, NIBSS is planning to upgrade to ISO 20022 (Stakeholder interviews, 2022). When it was initially conceived, it only supported P2P and P2B push EFTs; however, over time it grew to cater for a myriad of other channels and use cases, including B2P, P2G, B2B, G2P, and G2B. P2G and P2B transactions occur through NIBSS eBillPay—an online real-time credit transfer collections platform leveraging the NIP platform. For P2B micropayments, NIBSS with support from the CBN launched mCash, allowing customers to make instant payments to merchants leveraging NIP (World Bank, 2020b). Transactions are cleared on a deferred basis, and settlement happens four times a day (Stakeholder interviews, 2022). The settlement windows were raised in 2016 from once a day to two times a day to reduce settlement risk. In July 2021, they were raised to four times a day to further improve the efficiency of payment processing.

Business model

Consumer fees determined by banks, with NIP operating on a cost-plus basis. The system was created in-house by a team of developers and did not receive funding from donors. As such, NIBSS' upfront build was intentionally limited with plans to later improve and upgrade it. Participants pay a fee to NIBSS per transaction processed, and they are permitted to pass this cost on to their consumers up to a prescribed limit. As such, the system is funded through high usage, and consumer prices are capped by the CBN.³ NIBSS itself operates on a cost-recovery model with moderated profit to its shareholders.

Scheme rules

Scheme rules include adherence to multiple bodies of regulation. Rather than create scheme-level rules, NIP relies on detailed national financial regulations that cover the rights and responsibilities of the sending and receiving entities, guidelines on dispute resolution, compliance frameworks, KYC requirements, etc. Instant payment service providers are only permitted to charge fees in compliance with the approved CBN Guide to Bank Charges (Central Bank of Nigeria, 2019). The scheme rules require FSPs to

² The BVN is a biometric identification system consisting of a unique 11-digit number implemented by the Central Bank of Nigeria to curb illegal banking transactions in Nigeria. A BVN is issued to each individual upon opening their first bank account, and every bank account they open thereafter (regardless of the institution) will have the same BVN number attached to it. The BVN protects against fraud and enables biometric-based authentication for digital payments and services.

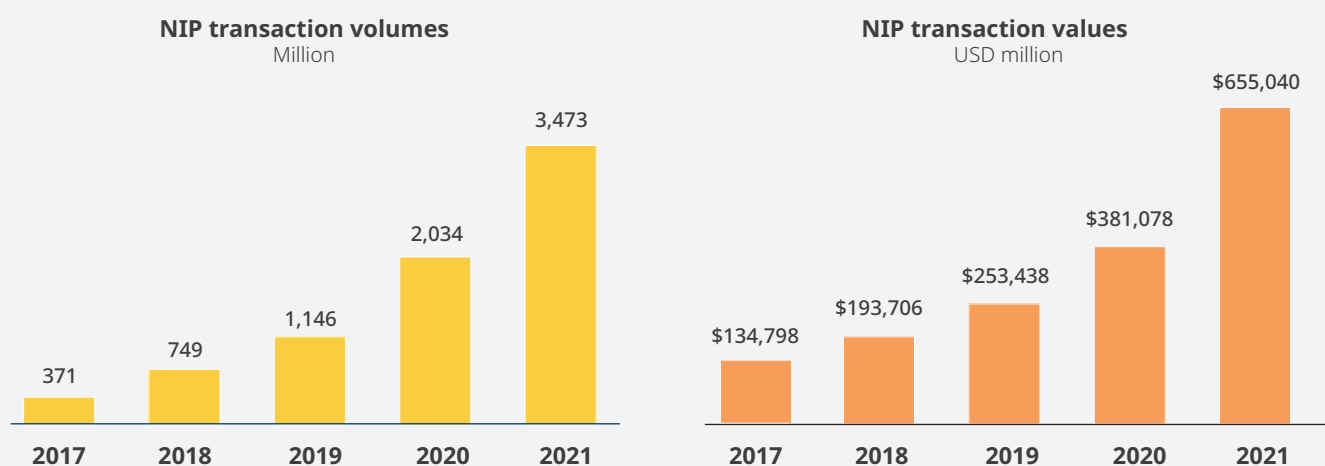
³ The specific price limits set by CBN are as follows: below NGN 5,000 (USD 12) = NGN 10 (USD 0.02); NGN 5,001 – NGN 50,000 (USD 12 – USD 120) = NGN 25 (USD 0.06); above NGN 50,000 (USD 120) = NGN 50 (USD 0.12). Nigerian naira converted to USD using an exchange rate of USD 1 = NGN 416.67 as of 3 August 2022.

follow consumer recourse mechanisms that are available on CBN's website. FSPs are obliged to have a helpdesk to handle all consumer complaints. Impacted consumers must first report the complaint to the FSP—FSPs are then mandated to resolve the issue within two weeks. If the matter is not resolved thereafter, consumers can direct their complaints to the consumer protection office at the CBN for adjudication and recourse.

Volumes and values processed by the payments system

Usage of NIP has grown substantially since its inception. Volumes increased from 371 million in 2017 to 3.4 billion in 2021. Values rose from USD 135 billion in 2017 to USD 655 billion in 2021. The average transaction size has decreased from USD 363 (NGN 151,251) in 2017 to USD 188 (NGN 78,334) in 2021. COVID-19 may have been a key factor in increasing the use of digital payments.

FIGURE 3. NIP transaction volumes and values



Source: NIBSS, 2022

Regulation

Nigeria's regulatory ecosystem for payments is well established. While initial legislation focused on creating the foundations for a working payments system (such as the Payment System Management Bill of 2009) and to create trust in the system, recent additions have been geared toward financial inclusion and innovation. Guided by the National Financial Inclusion Strategy (NFIS), the central bank released Guidelines on Instant (Inter-Bank) Electronic Funds Transfer Services in 2015, Guidelines for the Licensing and Regulation of Payment Service Banks in 2018, Nigerian Payments System Risk and Information Security Management Framework in 2019, as well as guidelines for Microfinance banking, agent banking and comprehensive tiered KYC guidelines. These have been key in creating an enabling environment for NIP. For example, NIP participants require a license to use the system and

must obey the Regulation on Instant Electronic Funds Transfer Services in Nigeria. Risk management protocols must be adhered to, and providers are referred to the Nigerian Payments System Risk and Information Security Management Framework. To ensure NIP remains an attractive offer to customers from a price perspective, CBN plays an active role in regulating pricing of services that use NIP—via for example circulars to set limits on charges to consumers using NIP. Key regulations and policies that supported the system include:

- 2011 Cashless policy drove the initiative around EFT
- 2014 Circular on the review of NIP and other e-Payment options with similar features
- 2018 Regulation of Instant EFT Service in Nigeria

Inclusivity learnings

Basic level of inclusivity. Measured by the inclusivity criteria in Chapter 2.6, NIP has a basic level of inclusivity. NIP allows for inclusive functionality given that it serves the most use cases of any domestic scheme in this study and serves all payment channels used by consumers. Yet, the current governance structure does not allow for inclusive decision-making as only banks are allowed to give input. A focus on pro-poor outcomes and the inclusion of all licensed PSPs into decision-making would increase the inclusivity rating.

The following drivers of inclusion have been identified for NIP:

- A fit-for-purpose system at all times ensured through a phased-development approach.** NIP was developed in-house and initially had limited functionality and two banks integrated. This approach limited the upfront investment required to develop the system. As the value proposition became clear, more participants joined, which quickly led to scale. NIBSS enhanced the system and required participants to upgrade their systems accordingly. The upgrades and iteration allowed the system to remain nimble and adjust to the needs of the market. In-house development of the system was key to ensuring that the necessary skills and know-how were available to implement such upgrades.
- Promoting smooth performance of the system: important for trust and sustainability.** The first iteration of the NIP system required transactions to be cleared within 50 seconds, yet not all providers were able to comply, which affected the customer experience. A poor-performing provider creates reputational implications for all the banks connected to the IPS. To improve performance of the system
 - and to ensure a trusted, smooth experience for consumers, NIBSS shortened the clearing time requirement. NIBSS is utilizing the monthly ranked reports on the average transactions processing time and other variables to incentivize the banks and to advance quality of service delivery. This is aimed at encouraging banks to compete and meet the new standards, and to create healthy competition to drive uptime and performance (Stakeholder interviews, 2022).
- Underlying digital identity infrastructure benefits the system significantly.** Nigeria's BVN system is an advanced biometrically enabled digital identity system. Having a foundational financial sector ID in place enables authentication modalities that unlock new ways of interacting with the system. The ability to verify oneself without presenting any physical document (fingerprint and BVN number alone) enables convenient access to various payment methods, including the ability to send and withdraw money from an ATM instantly.
- Fee transparency and fairness is an important driver of adoption.** The original fees for instant EFT services charged to customers is set by the banks, with little transparency in price. This led to customers' complaints of price gouging. In response, the CBN issued regulation capping customer fees between NGN10 and NGN50, depending on transaction size. This increased consumer confidence and limited the differential in prices charged by providers. Additionally, the low price encourages use among the lower-income population who are most susceptible to fees. This has been an important aspect in keeping the system inclusive.



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