

World Bank Fast Payments Toolkit

Case Study: Nigeria

NIBSS Instant Payment | 2011

Payment Instruments



Credit
Transfer



Direct Debit



E-money

Use Cases/ Services



Merchant
Payment



Bill
Payment



Glossary of terms

S. No.	Term	Definition
1	GDP	Gross Domestic Product at current price
2	Income Category	Classification as per World Bank based on Gross National Income (GNI) per capita
3	CPMI	Committee on Payments and Market Infrastructure
4	FPS	As per CPMI, fast payment System is defined as payments in which the transmission of the payment message and the availability of final funds to the payee occur in real time or near-real time and on as near to a 24-hour and 7-day (24/7) basis as possible
5	Oversight	Regulating or governing body supervising the payments system
6	Operator	Institutions responsible for the operation of the payment system
7	Alias	Alternative to bank account numbers for increased convenience of the customer. For e.g., mobile number, national identification number
8	Access Channels	Modes used by customer to initiate transaction on FPS. For e.g., branch, internet, mobile
9	Individual Payment Type	Person to person (P2P) – Payment between individuals for non-business purposes
10	Business Payment Type	Person to Business (P2B) – Payment from an individual to a business entity Business to Person (B2P) – Payment from a business entity to an individual Business to Business (B2B) – Payment between two business entities
11	Government Payment Type	Person/Business to Government (P/B2G) – Payment from person/Business to a government institution Government to Person/Business (G2P/B) – Payment from government institution to a person or business entity
12	Credit transfers	Credit transfers are payment instruments based on payment orders or possibly sequences of payment orders made for the purpose of placing funds at the disposal of the payee
13	Direct Debits	Direct debits are payment instruments in which the transaction is pre-authorized, and funds are blocked in account for a debit to be initiated at a future date. In direct debits, payer’s account is debited on execution of mandate by merchant or payee
14	E-money	E-money is a prepaid value stored electronically, which represents a liability of the e-money issuer (a bank, an e-money institution or any other entity authorized or allowed to issue e-money in the local jurisdiction) and which is denominated in a currency backed by an authority

Abbreviations

S.No.	Term	Expanded form
1	BVN	Bank Verification Number
2	CBN	Central Bank of Nigeria
3	IBAN	International Bank Account Number
4	MFB	Micro-Finance banks
5	MMO	Mobile Money Operator
6	NCS	Nigeria Central Switch
7	NIBSS	Nigeria Interbank Settlement System
8	NIP	NIBSS Instant Payment
9	NGN	Nigerian Naira
10	NRIC	National Registration Identity Card
11	PSB	Payment Scheme Board
12	PICC	Payment Initiative Coordinating Committee

Select parameters



GDP

GDP – \$448 billion



Income Category

Lower Middle Income



Population

201 million



Access to mobile phone*

70.60%



Access to internet*

27.50%



Bank account*

39.6%



Branches per 100,000 adult

4.44



Made or received digital payment in last 1 year*

29.67%



Received government wages or transfer in account*

9.8%

Source : World Bank – 2019, Income Category: World Bank – June 2019

Currency Exchange Rate USD 1 = NGN 306.92 <2019 Average, World Bank>

Others – World Bank 2017 <World Bank>

* For age >15 years

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How to read this report

- This **deep dive report** relates to the **NIBSS Instant Payment in Nigeria**
- It has been developed based on research done by leveraging **secondary sources and the information needs to be validated from relevant authorities like the central bank and the operator**
- Key secondary sources include NIBSS website, CBN website and CBN publications
- The table below presents a legend to assist readers as they navigate through different sections of the report

Legend



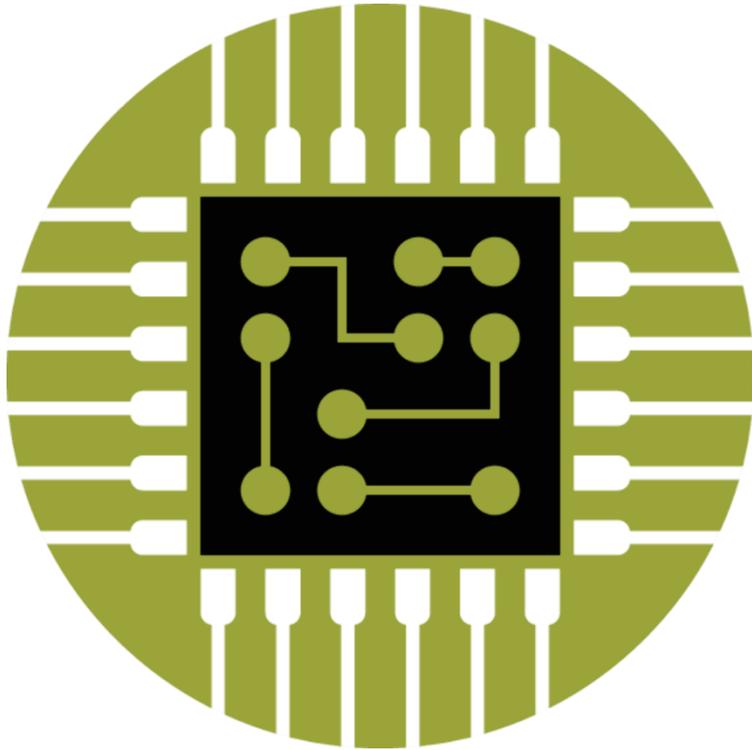
The first slide of every section includes a chapter summary to provide readers with an overview of the section contents



The green box with the adjacent icon indicates **section/sub-section summary across** the report. Reader may choose to read through this for a **high-level overview on the selected topic**

A. Executive Summary

Faster Payment System | Nigeria NIBSS Instant Payment



- **NIBSS Instant Payment** is a fast payment system in Nigeria launched in 2012, NIP enables their customers to make cross-bank payments by entering account number of the recipient, with funds available to the recipient almost immediately. The Express Elixir system operates on **24x7 basis and supports payments in Nigerian Naira**
- **NIBSS Instant Payment** is owned and operated **by Nigeria Interbank Settlement System (NIBSS)** which is a key financial infrastructure institution in Nigeria, providing clearing and settlement services. NIBSS is jointly owned Central Bank of Nigeria (CBN) & all licensed banks
- NIP allows both banks and mobile money operators to participate in its system as direct participants and transactions between the both are completely interoperable
- NIBSS announced that it is working towards developing the **NIP Central Listing feature**. Currently, the payer is required to provide the account number and bank name details of the beneficiary. However, with Central Listing, all that will be required is the account number of the beneficiary
- Users can make payments in NIP system via their **internet, mobile banking platforms, PoS, Agents, USSD, ATM and bank branches**

- | | | |
|-------------------------|-----------------------------------|--------------------------------|
| • Real time payments | • Supports Mobile Money Operators | • Deferred Net settlement |
| • Only IBAN as an alias | • Operates 24x7x365 | • Supports only Nigerian Naira |

- NIBSS has announced that it aims to extend NIP services beyond the Nigerian borders, first to neighboring African countries and then to the rest of Africa and other continents

B. Detailed Report

1. Overview

Chapter sections:

1.1. Background



1.1. Background



- NIBSS Instant Payments (NIP) is an account-number based, online-real-time Inter-Bank payment solution developed in the year 2011 by Nigeria Interbank Settlement System (NIBSS)

- Nigeria is predominantly a cash-based economy, as a result, there was a need felt to develop a payment solution that is very close to cash in terms of some of its unique characteristics – immediate, readily available and universal (i.e. can be used and accepted by all)
- In 2011, Nigerian Interbank Settlement System(NIBSS) developed NIBSS instant payment system where transactions can happen in real time, 24 hours a day, 7 days a week, 365 days a year (i.e. 24/7/365) and the transferred funds will be available immediately for use by the recipient
- Its service commenced with only two commercial banks as participants. However, today, the number of participants has grown to include all commercial banks, Micro-Finance banks (MFBs), and Mobile Money Operators (MMOs) in Nigeria
- It has become a foundational platform on which banks and other payment service providers operate services such as Chat Banking, card-less payments, and IOT proof of concept initiatives thereby promoting innovation in the payment space in Nigeria

2. Business and Operating Model

Chapter sections:

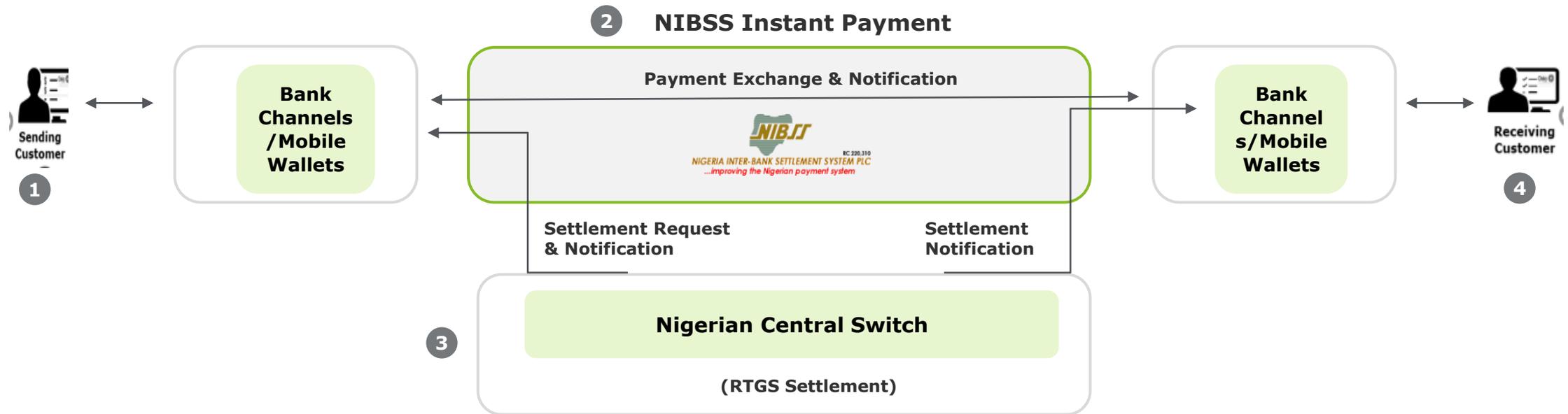
- 2.1. FPS Structure
- 2.2. Participants
- 2.3. Payment Instruments, Transaction Types, Aliases and Use Cases/Services
- 2.4. Channels and Agent Network



2.1. FPS Structure



NIBSS developed and operates NIP (NIBSS Instant Payments), a real-time account-to-account payment system



Key entities

Central Bank of Nigeria

- Deputy Governor, Financial System Stability of the Central Bank of Nigeria heads the board of NIBSS
- CBN performs the role of regulator and overseer, CBN established the Payments System Policy and Oversight Office, for effective monitoring of existing and planned payments system

Nigeria Inter-Bank Settlement System Plc (NIBSS)

- NIBSS was incorporated in 1993 and is jointly owned Central Bank of Nigeria (CBN) & all licensed banks
- It has put in place modern world-class infrastructures for handling inter-bank payments in Nigeria
- It is responsible for the operation of Nigeria Central Switch & other structures such as NACS, NEFT, etc.

2.2. Participants



NIBSS Instant Payment allows membership of banks, micro-finance banks and mobile money operators as direct participants.

Membership in NIP

Direct Membership



Commercial banks



Micro-Finance Banks



Mobile money operators

Adoption Statistics (as on May-2020)

- The NIP service commenced with only two commercial banks as participants.
- Today, the number of participants has grown to include all commercial banks, Micro-Finance banks (MFBs), and Mobile Money Operators (MMOs)

2.3. Payment Instruments, Transaction Types, Aliases and Use Cases/Services

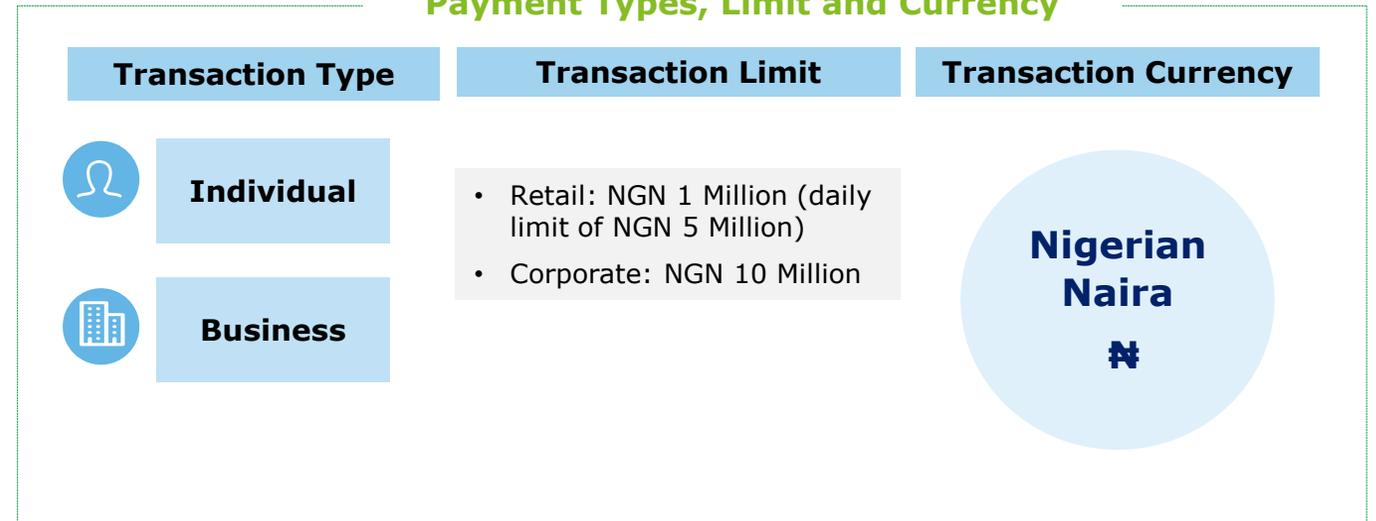


NIP enables payments via **banks account** with the help of **mobile, internet banking, PoS terminals, agents, ATM and USSD**. Banks are at liberty to decide the access channels they provide to their customers

Payment Instruments Supported



Payment Types, Limit and Currency



Aliases

- NIBSS Instant Payments uses bank account number for all types of transaction initiated on its platform
- Transactional data generated by NIBSS leverages Nigeria's Bank Verification Number (BVN), a unique customer identifier used together with bank account details for every transaction processed by NIBSS

Use cases/Services

- NIBSS eBillPay is an account-number-based, online real-time Credit Transfer product that enables customers to make electronic bills payment services through payment channels which leverages the NIBSS Instant Payment (NIP) platform
- In 2016, NIBSS collaborated with Central bank of Nigeria, MNOs and commercial banks, to launch the mobile payments innovation mCash, which was designed with a financial inclusion focus, leveraging on NIP to make low-value instant payments to merchants

Merchant Payments

Bill Payments

2.4. Access channels and agent network



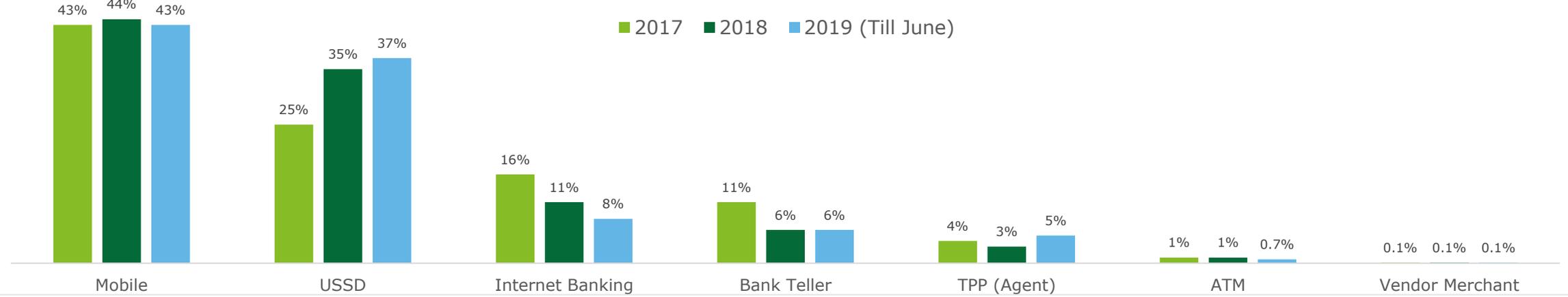
NIP enables payments via **banks account** with the help of **mobile, internet banking, PoS terminals, agents, ATM and USSD**. Each banks are at the liberty to decide the access channels they provide to their customers

Access channels and Agent networks



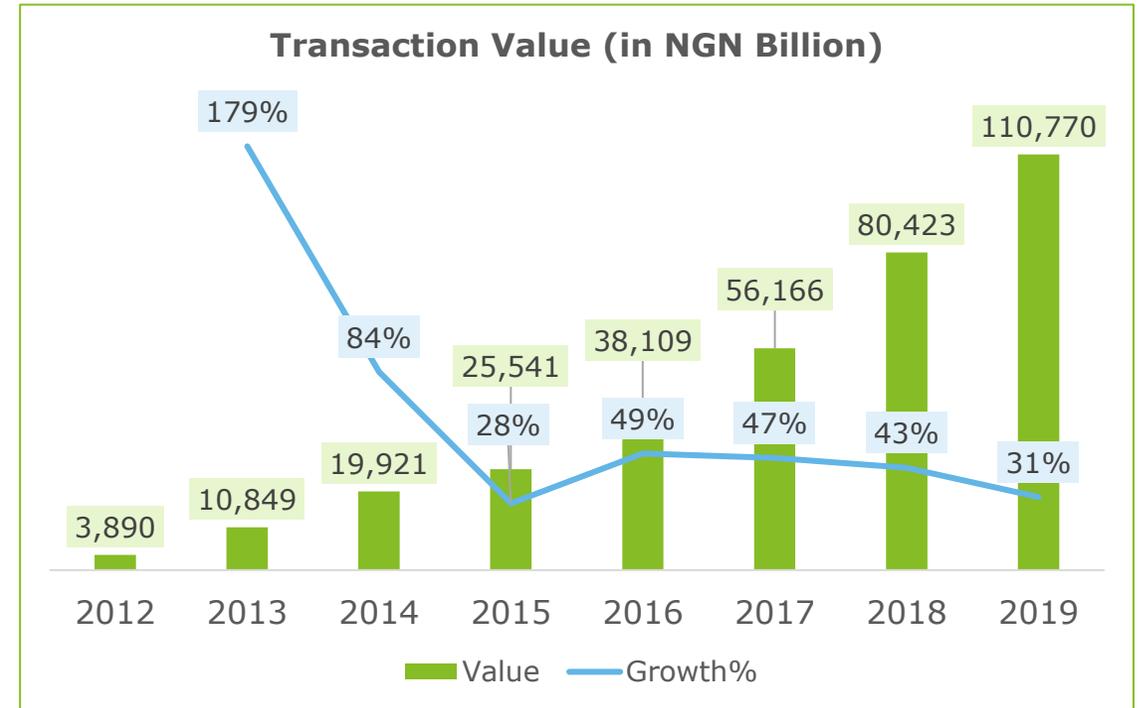
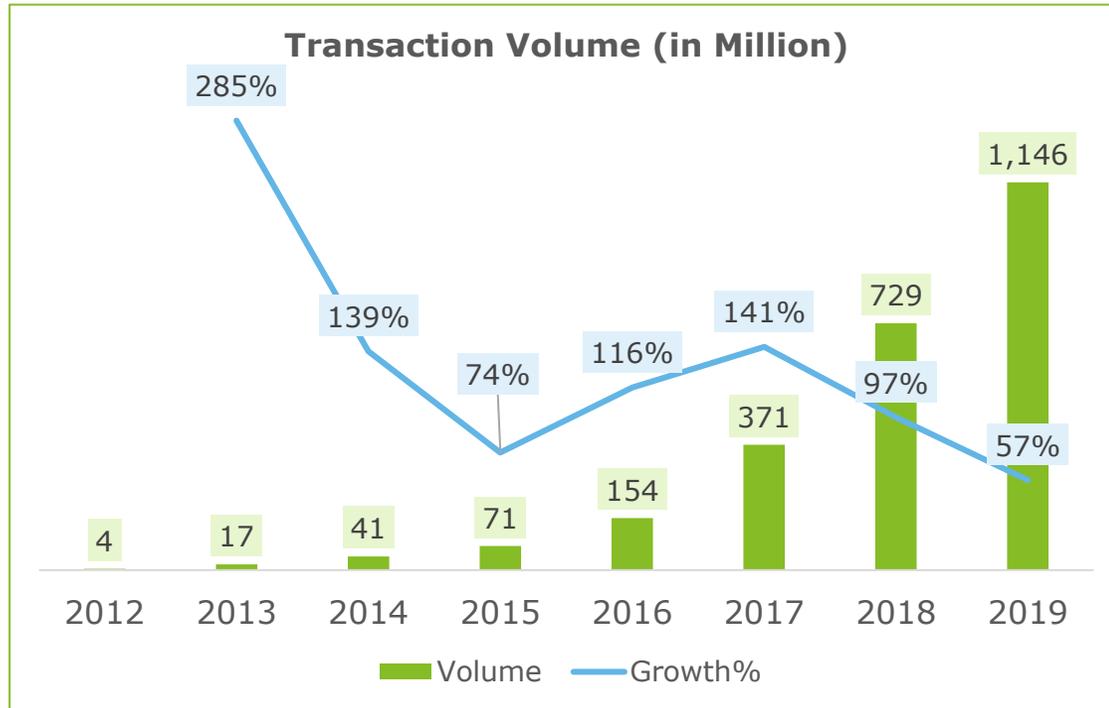
- NIP allows transactions across mobile banking, e-banking, ATMs, PoS terminal, Agents and USSD code
- Mobile and USSD channel are the most popular means of payment, particular for small value transactions
- In 2019, **mobile channel accounted for ~43% and USSD channel accounted for ~37%** of all transactions by volume

NIBSS Instant Payment by Channel
(Channel share by volume)



Source: NIBSS | CBN

3. User Adoption



Growing adoption of Instant Payment System

- NIBSS instant payment (NIP), accounts for around 70% of all monthly transactions (volume) processed by NIBSS. Growth in transaction by NIP comes from increased use by new customers in recent years
- Average transaction value for NIP have declined in nominal terms. A decline in average or median transaction values is consistent with a broadening of the customer base and/or transaction types associated with lower-value payments
- USSD channel which accounts for a large number of NIP transaction is associated with the lowest-average transaction values indicating adoption of NIP amongst the low-income group

4. Technical Details and Payment Process

Chapter sections:

4.1. Technical Details | Messaging Format, Customer Authentication & Settlement Mechanism



4.1. Technical Details| Messaging Format, Customer Authentication and Settlement Mechanism



Below are the technical details of NIBSS Instant Payment covering the **messaging format, customer authentication and settlement mechanism**. The messaging standard is extremely important in terms of connectivity and interoperability

Messaging Format

- NIBSS Instant Payment is based on XML based messaging format

Customer Authentication

- The Central Bank of Nigeria through the Banker’ Committee and in collaboration with all banks in Nigeria on February 14, 2014, launched a centralized biometric identification system for the banking industry tagged Bank Verification Number (BVN)
- It needs to be confirmed if it applies specifically to NIP**
- The Customers unique BVN is accepted as a means of identification across all Nigerian Banks
- A unique ID number shall be issued to every Bank customer at enrolment and linked to every account that the customer has in ALL Nigerian Banks. Individuals shall be required to submit an acceptable means of identification as prescribed for enrolment
- For authentication purposes, individuals performing banking transactions shall be required to identify themselves using their biometric features which will be matched against information in the central database
- The BVN and unique features of an individual should be used in conjunction with a PIN on a point of transaction

Settlement Mechanism

Approach	Type Time	Settlement Institution
 Hub	Deferred Net Settlement 1 cycle per day	Central Bank of Nigeria

5. Governance Framework

Chapter sections:

- 5.1. Legal and Regulatory Aspects
- 5.2. Risk Management
- 5.3. Dispute Resolution



5.1 Legal, Regulatory and Governance Aspects



- **The laws of Nigeria form the legal basis for the operations of NIP, supplemented by various statutes, regulations and contractual provisions. All the relevant documents are governed by Nigerian law and are legally binding and enforceable**
- **Central Bank of Nigeria oversight policy** is primarily addressed to entities which operate systems subjected to oversight, i.e., payment systems operators and NIP is governed by the same
- ***While the applicability of the same is universal, it needs to be confirmed if it applies specifically to NIP***

Institutional and Governance Framework

Legal Framework:
CBN Act of 2007

Regulator and Overseer:
Central Bank of Nigeria
(CBN)

As per Central Bank of Nigeria

- The primary legal basis for the payment systems infrastructure is the Central Bank of Nigeria Act No. 7 of 2007 (CBN Act) which provides CBN with the right and responsibility for national payment systems
- One of the mandates of the CBN is the promotion of a sound financial system in Nigeria. Promotion of a sound financial system necessarily entails active support for the effectiveness, efficiency and systemic safety of the payments system
- The CBN Act 2007 was passed into law to further clarify the mandate of CBN in providing oversight of the payment system
- CBN is 'Lender of Last Resort' for ultimate default of a participant in deferred net settlement systems
- The Central Bank of Nigeria mandates that each Scheme Board shall
 - i. Recommend clear rules with regards to the irrevocability of transactions, finality of payment and settlement
 - ii. Recommend and communicate settlement procedures to all participants; furthermore, each participant shall ensure full compliance with settlement rules as it applies to the scheme and take adequate steps to mitigate its exposure to liquidity and credit risks that may impact on the scheme settlement
 - iii. Recommend well defined procedure for the management of default. Such procedure shall be in line with existing PFMI; where appropriate, the scheme board shall define who bears any losses that may result from a default, what actions are taken against the defaulting party and any other steps required to ensure the continuity of the scheme
 - iv. Develop appropriate credit risk management practices to limit the risk associated with counter party and settlement failure
 - v. Agree a unified risk based collateral requirement for participation in the payment space

5.2. Risk Management (1/2)



- The Central Bank of Nigeria (CBN) has released the Nigerian Payments System Risk and Information Security Management Framework designed to mitigate risks associated with payment systems in January 2020 applicable on operators and users of the payment systems across Nigeria
- ***While the applicability of the same is universal, it needs to be confirmed if it applies specifically to NIP***

Objectives of Risk Management framework

- Identify and address sources of systemic risks within the Nigerian Payments System landscape
- Establish sound governance arrangements to oversee the risk management framework by ensuring that risks are identified, monitored and treated
- Establish clear and appropriate rules and procedures to carry out the risk management objectives
- Employ the resources necessary to achieve the payments system's risk management objectives; and e. integrate risk management into the decision-making processes of the Scheme Boards and Working Groups under PSV 2020.

Scope

- The Framework is designed to guide the operators and users of the payment systems across Nigeria. These systems may be organized, located, or operated within Nigeria (domestic payments), outside Nigeria (offshore payments), or both (cross-border payments) and may involve currencies other than the Naira

Governance Structure

- The Payments System Management Department of the CBN is responsible for setting, applying and coordinating risk standards across the Nigeria Payments space. It is supported by the Payments Initiative Coordinating Committee and the four Scheme Boards

1

PAYMENT INITIATIVE COORDINATING COMMITTEE (PICC)

- The membership of PICC is composed of all the Chairpersons of the Payment Scheme Boards, Payments Initiative Working Groups, Special Interest Working Groups and Independent Director(s) representing the end-user community. The PICC is Chaired by the Director, Payments System Management Department

2

PAYMENTS SCHEME BOARD (PSB)

- The PSBs are responsible for monitoring full conformance to the Principles of Financial Market Infrastructure and other best practices
- The PSBs shall recommend initiatives, strategies and policies to the CBN with a view to close any gaps related to full conformance to agreed best practice

5.2. Risk Management (2/2)

Cyber Security

As per the guidelines issued by the central bank System operators, Participants and PSPs shall:

- i. establish and implement Information Security policies that are in line with ISO 27001 standards or subsequent standards
 - ii. ensure the confidentiality, integrity and availability of all information, systems and networks that are critical to the success of the scheme. The owners of such information, systems and networks shall be responsible for deploying the required resources
- Participants and PSPs shall conduct annual Information Security assessment including penetration and vulnerability tests to ensure it is aware and is taking adequate steps to address current and on-going issues

5.3. Dispute Resolution

Inter-Bank Dispute and Customer Complaints

As per guidelines issued by CBN

- Each scheme shall establish its dispute resolution mechanism to serve as an additional dispute resolution mechanism that will help participants resolve disputes in a timely and cost-effective manner
- Disputes that arise between or across schemes may be referred through the Director, Payments System Management Department of the CBN to the PICC for resolution

6. Annexure

Chapter sections:

6.1. Key Features



6.1. Key Features

Features

Key Highlights

	Operating hours	<ul style="list-style-type: none"> 24*7 including weekends and bank holidays
	Payment speed	<ul style="list-style-type: none"> Real time
	Transaction limit	<ul style="list-style-type: none"> Retail: NGN 1 Mn (daily limit of NGN 5 Mn) Corporate: NGN 10 Mn
	Alias	<ul style="list-style-type: none"> No aliases
	Channel	<ul style="list-style-type: none"> Internet banking, bank branch, Kiosks, mobile apps, Unstructured Supplementary Service Data (USSD), POS, ATM
	User charges	<ul style="list-style-type: none"> Each bank individually decides on the policy of fees and varies by transaction amount (range from NGN 40 to NGN 500)
	Infrastructure setup	<ul style="list-style-type: none"> New system
	Use of Open APIs	<ul style="list-style-type: none"> No Open access API interface
	Authentication	<ul style="list-style-type: none"> Bank Verification Number

Payment Types & Use Cases/Services

Individual	Business	Government
	Merchant Payments	
		Bulk / Batch Payments
	Cross-border Payments	
		Request to Pay
	Schedule future Payments	
		Bill Payments

Settlement

Approach	Hub RTGS Distributed clearing
Type Time	Deferred Net settlement One cycle per day