

Agpaytech Research Paper  
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Africa's CBDC Series

# ***eNaira - Africa's First Central Bank Digital Currency***

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Agpaytech



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# Executive Summary

Nigeria has a cash-based Economy. The agents of its economy prefer currency notes, and this attribute has its upsides and downsides. In Nigeria, cash usage presents significant challenges such as susceptibility to robbery, counterfeit notes and the difficulties in carrying large quantities of money from one place to another.

Seeking to address such challenges, the Central Bank of Nigeria (CBN) has undertaken to strengthen its existing payments system. It currently encompasses payments tools such as Automated Teller Machines (ATM), E-payments and debit notes. Such efforts have put the Nigerian economy on a growth trajectory. With the introduction of the eNaira, its Central Bank Digital Currency (CBDC), the CBN now intends to re-energise its financial development.



The CBN controls the payments system in Nigeria. Furthermore, it monitors and enforces regulations to ensure that the banking sector can function effectively within the economy. Furthermore, the Federal Government's financial policies aim to enhance economic growth by using Information Technology and the adequacy of electrical power supply to promote an effective payments system.

Keywords: eNaira, payment system, Bitt.inc, CBDC, policy consideration.

# Introduction

The Central Bank of Nigeria (CBN) wants to onboard the eNaira wallet as a prime tool of its economic policy to ease the pressures on its payments system and herald the African Nation towards a digital future. However, it is currently facing resistance from the concerns over the security of this method and the reluctance of targeted end-users to embrace and patronise this new product.



The Nigerian citizens also face other challenges, such as poor interoperability and interconnectivity of networks. And low levels of card usage presents another significant challenge towards the widespread adoption of this new technology. However, the CBN's governor Mr Godwin Emefiele remains confident in the success of this endeavour as it is in line with current global trends and best practices.

# Objective

This paper aims to understand the concept of eNaira and the role it will play in transforming the Nigerian payments ecosystem. Furthermore, this paper seeks to explain all the ideas and details of the eNaira app. The Central Bank of Nigeria (CBN) wants to achieve a diversified, safer, faster and more reliable payments system. A design that can assist its citizens in conducting business smoothly and benefiting from a resilient, innovative, inclusive, and competitive financial environment.

# Methodology

This paper is based on Secondary Data Methodology. It derives information from news articles, communications issued by the Central Bank and Federal Government of Nigeria and interaction with observers with keen interest on this topic. This methodology is deployed as it can assist in creating a better understanding of the Nigerian economy.

## General Understanding of the eNaira wallet app

- The eNaira is designed to provide fast and resilient payments at a reduced cost for its users.
- The primary objective of this Digital Currency is to recast the Nigerian payments infrastructure and accelerate the digital transformation process of its economy.
- This CBDC can serve as a medium of exchange and a store of value and offer better payment prospects in a retail transaction than cash alternatives.
- Citizens can access this CBDC from a mobile-based application. This mobile app intends to provide an easy user interface for an enhanced experience.

## eNaira payment structure

The participating financial institutions and payment service providers have innovated and created layered payments services to enable broader use cases for the eNaira. The design covers three primary elements to implement this digital currency model.

1. A core ledger provided by the CBN is the root element of this platform. It enables transaction recordings and payments processing.
2. End-user distribution and enabling payment services by participating Financial Institutions.
3. A payment services providers delivery model facilitates organisations such as financial technology companies and mobile money operators to create additional payments functionality.

## eNaira Design Features

CBN has developed some Nigeria Specific principles this help guide the design of its digital currency. These principles are the fundamental tenets on which the eNaira will function, and they are:

- eNaira is legal tender.
- It is subject to parity of value, which is pegged to the value of the Nigerian Naira.
- The design functionality is on a tiered structure for the consumer.
- Operations are conducted through an account-based wallet.
- AML/KYC approach is used to determine customer tiers (NIN/BVN used as unique identifiers).
- The applicable tier determines customer transaction limits.
- This digital currency does not bear any interest.
- It ensures settlement finality
- The eNaira is value-based.

Fig 1: Design features of eNaira



Source: Agpaytech Research

# eNaira Payment Participants

Five stakeholders are involved in the eNaira system to ensure its practical effectiveness in the Nigerian economy; They are:

i. **Monetary Authority (CBN):** The CBN assumes the primary responsibility to issue, distribute, redeem and destroy the eNaira and enable digital currency transactions. Furthermore, it is responsible for storing transaction data on its blockchain network.

ii. **Financial Institutions:** Financial Institutions facilitate the end user's participation in the eNaira ecosystem. They request and seek eNaira from the CBN and issue it to the end-users. These institutions also have the mandate to conduct KYC and AML compliance activities.

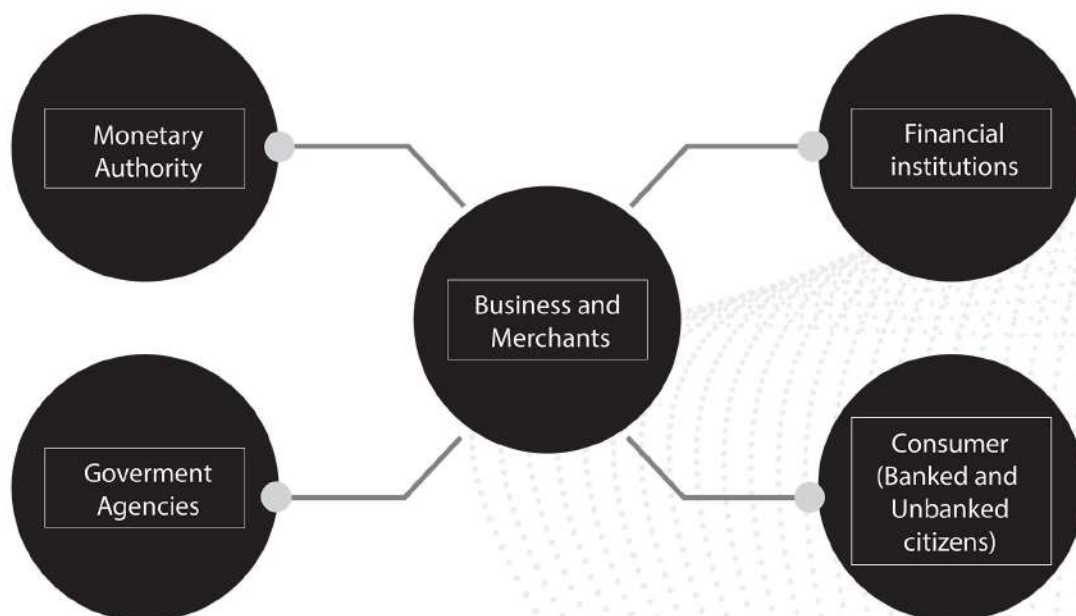
iii. **Government Agencies:** Government agencies are the forebearers of eNaira usage and its primary end-users. They intend to undertake outgoing processing payments such as salaries and receive incoming payments from the citizens.

iv. **Businesses and Merchants:** Merchants and businesses are expected to use eNaira extensively. The eNaira will support payment options such as points of sale (PoS), remote pay and other online payment capabilities.

v. **Consumer (Banked and Unbanked citizens):** Citizens will not be able to transact involving other consumers or directly with the financial institutions using the eNaira. However, they will be able to send and receive this CBDC through the eNaira wallet application.



Fig 2: Payment participants



Source: Agpaytech Research

## Approaches of eNaira wallet usage:

The eNaira design offers a wide range of payments services that will expand as adoption increases. This feature allows this CBDC to provide limitless possibilities to deliver value fast, efficiently and at no cost. It is an open-source system easily accessible by all Nigerians based on multi-tier KYC, bank verification number (BVN) and National Identity Number (NIN). There are two types of wallets, namely;

1. Individual Wallet
2. Merchant Wallet

**Table 1: Individual wallet tier and limit**

Tiers	Category	Requirement	Daily Transaction Limit (NGN)	Daily Cumulative Balance (NGN)
0	Non-bank account	Telephone number	20,000	120,000
1	Non-bank account holders	Telephone number (MIN)	50,000	300,000
2	Bank account holders	BVN	200,000	500,000
3	Bank account holders	BVN	500,000	5,000,000

Source: Central Bank of Nigeria

**Table 2: Merchant wallet tier and limit**

Category	Requirement	Daily Transaction Limit	Daily Cumulative Balance (NGN)	
Bank account holders	BVN, TIN and Bank confirmation	Send No limit	Receive No limit	No Limit

Source: Central Bank of Nigeria

# eNaira - Advantages

The introduction of eNaira will significantly contribute towards improved monetary policy effectiveness. It will make it easier for the Government to enforce targeted social interventions and enhance tax collection. This Central Bank Digital Currency will enhance local and diaspora payments. It will have tremendous influence in facilitating instant cross-border payments in the future.

Furthermore, it is expected to enhance financial inclusion in the economy. This point assumes significance since Nigeria has a large informal economy contributing almost half of its GDP.

## Accessibility

The Central Bank of Nigeria holds an apex position in its CBDC ecosystem. It assumes the authority to issue and maintain the eNaira. The commercial and other financial service providers play an anchor role in the distribution process.

To access the eNaira, consumers will have to create a digital wallet; it is as simple as opening a bank account. Furthermore, agent outlets will remain accessible for people who don't have a bank account.

# Threat to the existing banking system

Recently, the international monetary fund (IMF) stated that the eNaira wallet poses a threat to deposits in commercial banks and carries risks for monetary policy implementation, cyber security, operational resilience and financial integrity and stability. It further opined that the eNaira could consequently reduce the deposit in commercial banks. This hazard can have severe implications on the formal banking system since its large banks have measurable market-cap and generate large volumes of employment.

Furthermore, eNaira works on the Distributed Ledger Technology (DLT), similar to the underlying technology of Bitcoin and other cryptocurrency platforms. And the network will require considerable focus on risk mitigation from potential cyber-attacks and other associated hazards.

## eNaira has attracted the masses:

Until late last year, there were over half a million downloads of the eNaira app. Almost 78000 merchants also participated in the process leading to the usage of this CBDC. According to Mr Osita Nwanisobi, CBN's director of corporate communication has stated the response to the eNaira is excellent, with over N62 million worth of virtual currency being traded since its introduction.

A primary reason for this incredible response is the empowerment of the eNaira as a legal tender by the CBN. Citizens and businesses entities are legally bound to accept the eNaira as a means of settlement. It is truly the digital form of its corresponding FIAT currency.

## Assistance in formulating the Macro-Economic Policy

CBN believes that the data nurtured from its CBDC will assist it in formulating better Macro-economic policy. Ms Rakiya Mohammed has stated that the adoption of CBDCs will have a booster effect in cross border trade, however as a pre-condition, all merchants and business outlets must start accepting it as a form of settlement.

She further stated that the Apex bank would play the leading role in the development and design of the eNaira, and commercial banks, payments service providers and financial technology companies will be on board this venture.

Ms Mohammed further noted that although Nigeria has one of the best payment systems globally, there is further scope for improvement in terms of efficiency. She believes that e-naira will be a catalyst for the digital economy since it will integrate people outside the formal banking sector.

## Offline Transactions and Cross-Border Payment Solutions

According to experts, eNaira's fourth phase should offer offline and cross border payment solutions. Furthermore, licensed PSPs must build more products and services to leverage the values provided by digital currencies. They must develop solutions that offer offline eNaira functionalities for cards, wearables and USSD (Unstructured supplementary service data), communications service and discover more such inventive ways to ease the user experience.

Furthermore, officials from the CBN have clarified that it doesn't intend to compete with commercial banks or other players of the Nigerian Payments System. On the contrary, it wants to engage with such institutions and is open to recommendations and innovation that eases the user journey and adds value to the eNaira ecosystem.

## Technology Partnership

The CBN has partnered with Bitt Inc to provide the underlying blockchain technology to power the eNaira. It will rely on the company's tested and proven digital currency experience, which is already in circulation in several Eastern Caribbean Countries. Bitt Inc. was key to developing and successfully launching the central bank digital currency (CBDC) pilot of the Eastern Caribbean Central Bank (ECCB) in April 2021.

CBN selected from a pool of highly competitive bidders, and Bitt Inc must register as a limited liability company to participate in the development process.

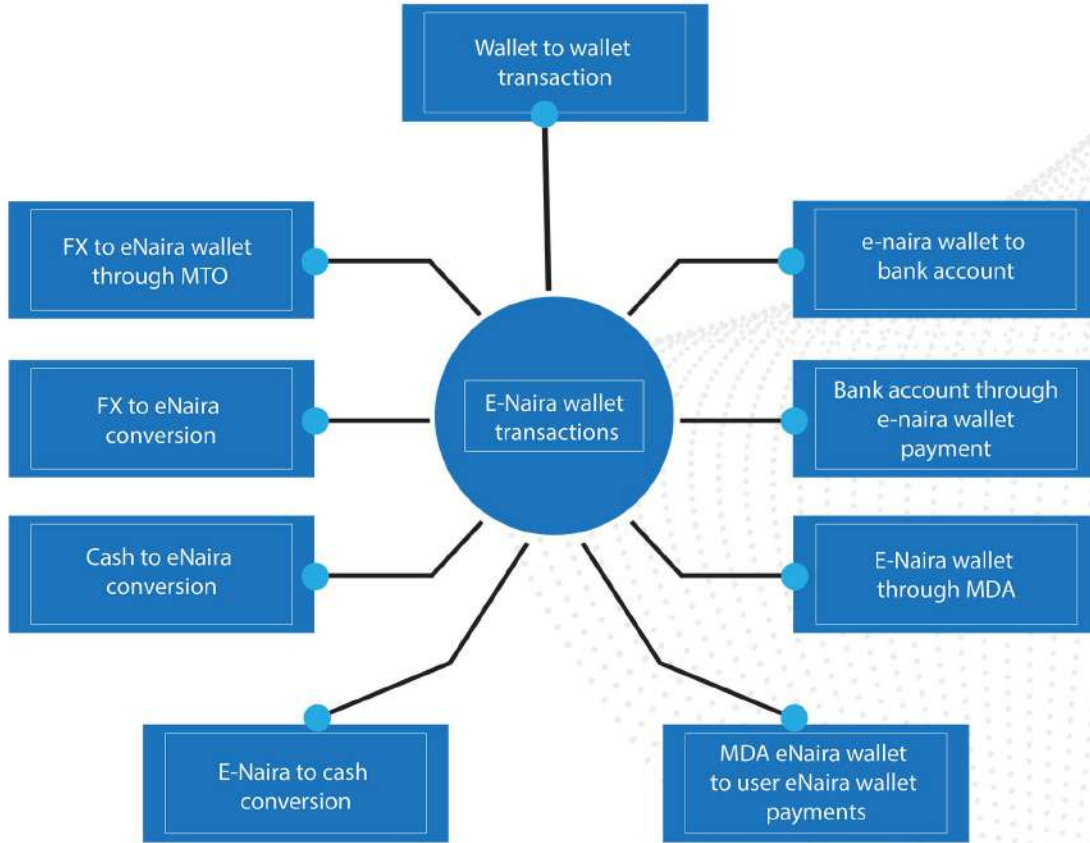
eNaira is currently a retail CBDC, and the CBN has chosen a hybrid functionality method. Where-in CBN issues, the eNaira and financial institutions play the intermediary between the Central Bank and its citizens. This design allows the CBN to focus more on core areas and shields them from time and labour intensive jobs such as AML and KYC compliances.

## Payment Functionality

The eNaira system will enable consumers to undertake various types of transactions using this CBDC, and it offers a broad range of services. And the system will permit more options once the adoption increases and more use cases are identified. In light of risk awareness and mitigation, currently, CBN allows only micropayments through the app.

Furthermore, CBN aims to reduce cash usage in the society that remains outside the ambit of scheduled banks and bring it within the folds of the formal banking system.

Fig 3: payment functionality



Source: Agpaytech Research

# Challenges

It is imperative that payment systems are effective and resilient in the face of difficulties. And in Nigeria, the infrastructure can present a significant challenge to technological breakthroughs. Especially as far electricity and network coverage are concerned in farther country regions. Due to electricity supply issues and network coverage, transactions may not go through, and the system being built on a design that only allows 100% success, partial transactions are not recorded. Hence, a transaction is either a success or a failure.

Although the Nigerian Payments system demonstrates resilience due to the existing banking system, the Government will need to improve infrastructure from a technology perspective. And it can do so by partnering with stakeholders such as telecom companies that may expand the fibre optic network, thus boosting the internet penetration within the country.



## Conclusion

The eNaira project appears to be very promising for the Nigerian economy. Although it may face multiple challenges such as widespread acceptance resistance, electricity supply issues, and lack of literacy amongst citizens, it has a solid potential to transform the African Nation's financial ecosystem digitally. The eNaira can do so by offering relative value stability by being accepted as legal tender and possessing an anti-fraud management system for the protection of users, the former being guaranteed by the Sovereign and later by its digital roots.

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AGPAYTECH is a company pioneering in the Fintech Space with a focused approach on building robust technologies for eCommerce Card Processing Solution for Payment Service Providers (PSPs). Additionally, we provide Compliance and Regulatory Umbrella, Remittance-as-a-Service White-Label Solution, Foreign Exchange, Cross Border Payments, digital currency solution. We have partnered with multiple banks, non-banking financial institutions, and corporate organizations to create a solid service delivery model for them and their customers to ease their international remittances and payments concerns. [info@agpaytech.com](mailto:info@agpaytech.com)