UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

UNITED NATIONS
UNCTAD

# POLICY BRIEF No. 101

JUNE 2022

KEY POINTS

- To mitigate the financial stability and security-related risks of cryptocurrencies, monetary authorities should provide digital payment options, to ensure that national payment systems function as a public good in the digital era.
- In cases where digital payment streams are not readily available to households, monetary authorities should carefully consider the implementation of a central bank digital currency or fast retail payment system, depending on national capabilities and needs.

# Public payment systems in the digital era: Responding to the financial stability and security-related risks of cryptocurrencies

**The digital era is leading to many changes in the payment system landscape, some of which threaten monetary stability and security in developing countries. To ensure that payment systems function as a public good, monetary authorities should carefully consider the implementation of a central bank digital currency. Depending on national capabilities and needs, and the challenges of creating such a currency, authorities could alternatively create a fast retail payment system. Moreover, given the risk of accentuating the digital divide in developing countries, authorities should maintain the issuance and distribution of cash.**

## Introduction

During the pandemic, and with the growing use of digital rather than cash-based payments, the use of cryptocurrencies has increased globally, particularly in developing countries.[1] This raises issues about financial consumer protection and, moreover, the market turbulence with regard to cryptocurrencies in 2022 indicates that, if left unchecked, such private digital currencies can have broader implications and jeopardize the stability and security of monetary systems, shrink policy space and even harm macroeconomic stability.[2]

[1] See UNCTAD, 2022a, All that glitters is not gold: The high cost of leaving cryptocurrencies unregulated, Policy brief No. 100.

[2] See UNCTAD, 2022b, Financial consumer protection, including financial education and literacy, TD/B/C.I/CPLP/29, Geneva, 6 May; and https://www.ft.com/content/5887ef43-d43a-4608-a1ac-aacc99f076b9.

*Note:* All websites referred to in footnotes were accessed in June 2022.

However, curbing the spread of cryptocurrencies is not an easy task. Besides implementing comprehensive financial regulations targeted directly at cryptocurrencies and crypto-exchanges and restricting advertising related to cryptocurrencies, as recommended by UNCTAD, policymakers need to ensure that the domestic payment system in the digital era serves as a public good. The best national payment systems provide stability, safety, efficiency, affordability and integrity; and protect privacy.[3]

To harness the opportunities and minimize the risks of digitalization in developing countries, authorities need to consider creating a digital version of a national payment system in the light of social and economic realities.[4] In this policy brief, two options are addressed that could help developing countries achieve this goal, namely, central bank digital currencies and fast retail payment systems.

## Central bank digital currencies

A central bank digital currency is a digital representation of a sovereign currency, which is backed, issued and controlled by a national monetary authority.[5] Until recently, there was no direct connection between monetary authorities and citizens. Access to payment options relied on intermediaries, such as commercial banks. Through the use of a central bank digital currency, citizens can have direct access to a currency and related payment options backed by a central bank.

The technological advantages of a central bank digital currency include a high processing speed, lower costs and the potential for financial inclusion. The latter is also associated with private digital currencies. To a great extent, the use of a central bank digital currency has been a response to risks related to cryptocurrencies, including following the digital currency proposal of a major digital platform and the increasing importance of private payment providers in some countries. For example, in China, Alipay and Wechat Pay make up 90 per cent of the mobile payment sector and, in Kenya, M-Pesa makes up 98.9 per cent.[6] As at December 2021, three projects with regard to such currencies had been launched by Bahamas, Nigeria and the Eastern Caribbean Central Bank, the monetary authority for Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Anguilla and Montserrat. Worldwide, 15 economies are in the pilot stage of issuing a central bank digital currency and 67 economies are exploring the benefits and drawbacks of issuing such a currency.[7] The risk of data breaches or abuse by public authorities requires a careful approach and much depends on the design (box 1), yet the use of a central bank digital currency can help avoid the risk of the monetary exploitation of personal data by private digital payment providers.[8] Moreover, for consumers, the use of such a currency should be costless, as the monetary authority bears the costs of launch and operation, as with the use of cash at present.

### Box 1 Nigeria: Finding a balance between inclusiveness and the restriction of illicit transactions

The design of a central bank digital currency involves trade-offs. Such a currency should be universally accessible, yet mechanisms are necessary to prevent its use in illicit financial transactions, such as tax evasion and money laundering. Use of a central bank digital currency may be appealing for the sake of financial inclusion yet, as accounts are anonymous, illegal transactions are thereby potentially facilitated. Implementation of an account-based central bank digital currency, with each wallet linked to a person, would better help control illicit transactions, but might risk excluding undocumented populations.

To minimize this trade-off, in Nigeria, the Central Bank has designed wallet categories. Currently, the electronic naira currency is provided only to people with a bank account and, therefore, in possession of an identification document. The Central Bank plans to expand access to this currency to anyone with a mobile telephone, which would include undocumented populations. To minimize the risk of illicit transactions, accounts linked to identification documents are permitted to hold higher values, of up to ₦5 million (around $12,000) and anonymous accounts are limited to lower values, of up to ₦120,000 (around $300). Such graduated access should be a temporary solution, however, with authorities reducing barriers to citizens in accessing the payment system, including through the universal provision of identification documents.

*Source:* Bank for International Settlements, 2021a. See https://enaira.gov.ng/.

[3] See UNCTAD, 2022a; and Bank for International Settlements, 2001, Core principles for systemically important payment systems, available at https://www.bis.org/cpmi/publ/d43.htm.

[4] See United Nations, 2019, The age of digital interdependence: Report of the United Nations Secretary-General's High-level Panel on Digital Cooperation, available at https://digitallibrary.un.org/record/3865925?ln=en.

[5] See International Monetary Fund, 2022, Behind the scenes of central bank digital currency, Fin[ancial] Tech[nology] Note No. 4.

[6] F Restoy, 2022, The digital disruption: The role of regulation, available at https://www.bis.org/speeches/sp220128.htm; Kenya, Communications Authority, 2019, Statistics reports for financial year 2019–2020, available at https://www.ca.go.ke/consumers/industry-research-statistics/statistics.

[7] See https://www.atlanticcouncil.org/cbdctracker.

[8] See Bank for International Settlements, 2021a, CBDCs[Central bank digital currencies]: An opportunity for the monetary system, available at https://www.bis.org/publ/arpdf/ar2021e3.htm; and Bank for International Settlements, 2021b, Fintech[Financial technology] and payments: Regulating digital payment services and e[lectronic] money, available at https://www.bis.org/fsi/publ/insights33.htm.

Several design alternatives are under discussion, including on whether the underlying technology of a central bank digital currency should be distributed ledger technology. Consensus regarding the superiority of the latter in supporting a central bank digital currency has not yet been reached, for example because, as noted in some studies, its use can compromise the speed of payments.[9]

The Bank for International Settlements has highlighted the risks of financial disintermediation and a flight to safety from commercial bank deposits to central bank digital currencies since, during times of financial turmoil, people may perceive central bank digital currencies as safer than commercial bank deposits and prefer to hold balances in the former.[10] However, as commercial banks have access to central bank liquidity, such risks are relatively low, and can be managed. Moreover, authorities could set a cap on central bank digital currency accounts and refrain from paying interest on them, to further mitigate such risks.

Despite the advantages of a central bank digital currency in maintaining financial stability and security, launching such a currency is not a simple task. A lack of human and financial resources is one of the most significant barriers.[11] Moreover, in some cases, a central bank digital currency would require a revised legal framework. Given such challenges, monetary authorities must carefully weigh the pros and cons of implementing a central bank digital currency. A fast retail payment system might be a practical alternative.

## Fast retail payment systems

A fast retail payment system is an electronic payment scheme that allows for the processing of small-value (retail) transactions in real time.[12] Such a system was first introduced in the Republic of Korea in 2001. Since then, over 60 jurisdictions have launched or are planning to implement a similar system. There are different frameworks in place but, in most cases, central banks have taken on three crucial roles, namely, as designers, overseers and operators. If well designed, overseen and operated by a central bank, a fast retail payment system can meet the requirements of a digital payment system, but may fall short in terms of financial inclusion, as it requires intermediaries to offer accounts to users.

The advantage of a fast retail payment system, compared with other payment streams, is that it may be provided at no cost or a low cost. The use of an alias (taxpayer identification number, telephone number or email address) can be used to identify the payee instead of a bank account number. This makes access to fast payments easier and reinforces the safety and integrity of the system, as it helps to reduce fraudulent activity and payment to an incorrect payee.

Yet a fast retail payment system operated by a profit-seeking private institution carries considerable risk unless it is strictly supervised. Moreover, to ensure liquidity, the monetary authority will need to implement special arrangements that enable participants to access central bank liquidity when necessary.[13]

In choosing between a central bank digital currency and a fast retail payment system to address risks related to cryptocurrencies, policymakers need to consider the structural features of the domestic financial system. In countries in which financial inclusion levels are already high, or in which financial institutions can successfully extend transaction accounts to the population, a fast retail payment system can serve as a system that has some of the advantages of a central bank digital currency (box 2). A country may opt to launch a fast retail payment system and then develop a central bank digital currency, yet it should be noted that a successfully implemented fast retail payment system reduces the necessity of developing the latter.

## Policy recommendations

One way to contain the expansion of cryptocurrencies in developing countries is through the provision of a domestic digital