DIGITAL EURO: CATCHING UP AND BROWSING THE DAISY

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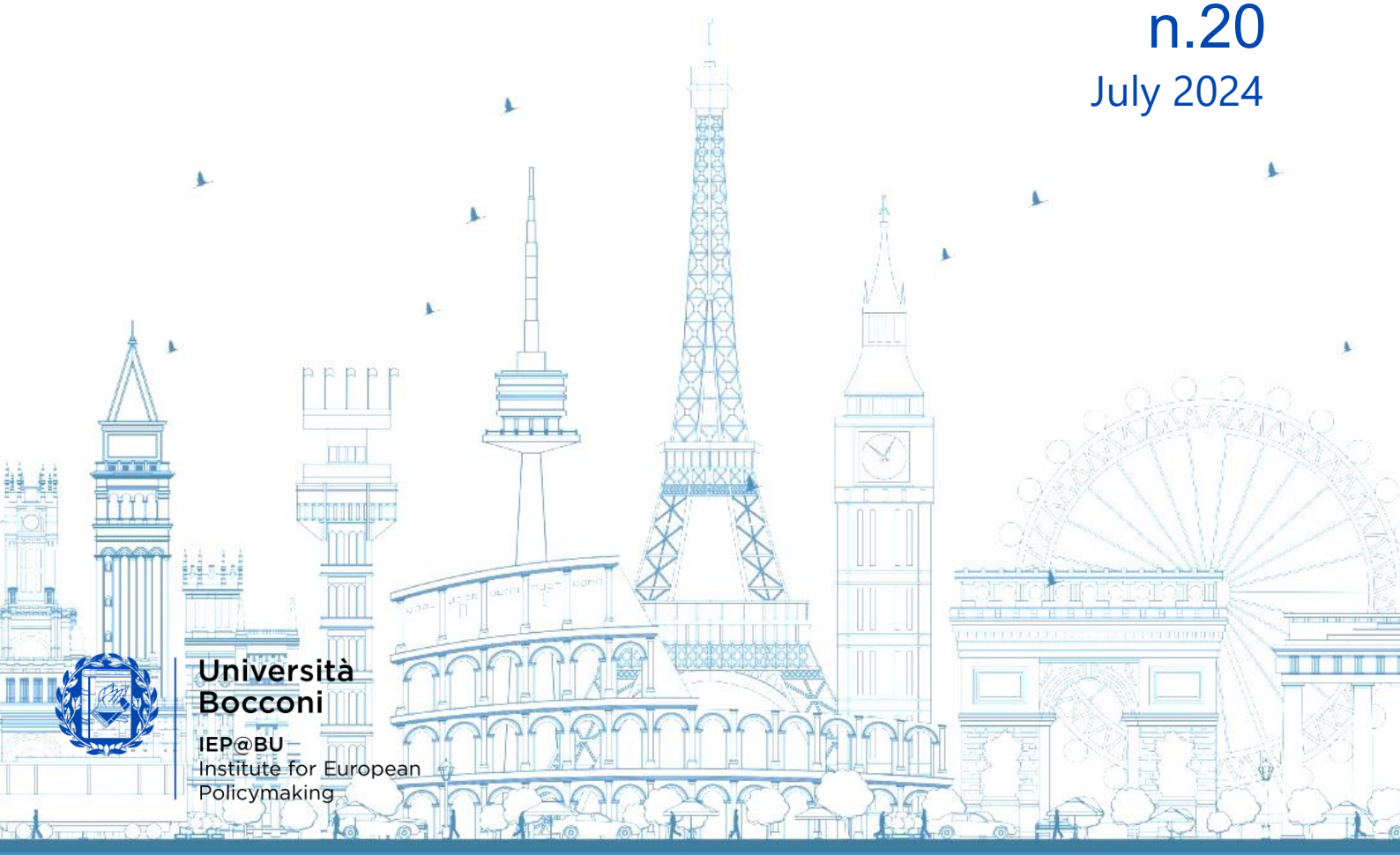

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The Longest Decision Ever

The preparation for the digital euro moves on. In November 2023 the ECB launched a new 3-year program of exploration of the technical features. Barring a postponement, at the end of this phase a decision on the actual launch will be made.

Before considering substance, one should commend the openness with which the central bank is conducting its work. The ECB keeps the public regularly informed. Stakeholders are being consulted. Outside experts are in a position to understand what is going on and form their views. In preparing for a possible digital euro, the ECB is abiding to high standards of transparency.

As mentioned, the final decision about launching a digital euro has not been made yet. The process started in 2020 with a 3-year "investigation phase". The current "preparation phase" should end in 2026. During this time the central bank is "browsing the daisy", suspended between a "yes" or "no" decision. If, after a "go" decision, some more time passes before the digital euro enters our pockets, its gestation will have taken more time than the euro itself (1992-1999), let alone the euro banknotes (1999-2002) and the ECB banking supervision (2012-2014). That's not necessarily bad, given the uncertainties and risks involved.

While the process unfolds, however, payment technology and geopolitics are moving fast. Developments in both areas influence what happens around the world concerning the possible introduction of central bank digital currencies (CBDCs).

Tech giants on both sides of the Pacific (China and even more California) relentlessly introduce more advanced digital payment applications, leveraging on the synergies with handheld devices. A recent example is Tap-to-Pay, the new P2P solution by Apple. P2P functionalities already exist on PayPal, Revolut, and other platforms, but Tap-to-Pay does more: it promises to invade B2P, sending Point-of-Sale technology into retirement (Forbes, 2024b).

Prepare for a time in which a portable phone will be all a shop manager needs to do business, including complying with accounting and tax obligations. More innovation will come after AI takes hold and combines with payments. Central banks which in the meantime have become suppliers of their own retail digital payment products will find themselves in a fast-moving, fiercely competitive business environment, in which they are unlikely to have the upper hand but are relegated to a "follower" position, constantly catching up. Not an enviable situation.

Geopolitics is also moving. After the Russian invasion of Ukraine and amid the new expansionism of China, international relations and the global security situation have worsened. Monetary and financial arrangements, including the international use of currencies, are affected. Cyber threats to the financial sector are rampant. The traditional role of the US dollar as the main reserve and vehicle currency comes under threat as many "non-aligned" countries look for alternatives.

CBDCs are increasingly becoming a battleground of international currency competition. As discussed more extensively below, China appears to be using its digital currency, the e-CNY, as a lever to increase the attractiveness of the yuan as an international transaction and reserve instrument among neighboring countries and beyond, undermining the established roles of the US dollar and the euro.

Amid this complex set of influences, the purpose of this paper is twofold. First, in Section 2, we revisit the main arguments in favor and against the adoption of a digital euro, focusing on the design choice chosen by the ECB, namely, a retail instrument available to the generality of citizens, producers, and

retailers. The conclusion here is that uncertainties regarding the underlying motivation for this type of instrument remain; they have been limited but not fully dispelled by the preparatory work.

In Section 3 the focus is broadened to developments outside the eurozone. One takeaway from this overview is that there is an extreme variety of views and orientations regarding the rationale of CBDCs, their purpose and design, and more fundamentally the advisability of introducing one and in what form.

Another one is that, whereas in developing countries the goal of creating a new secure retail payment means prevails, in the United States that of improving the efficiency of wholesale and international payments is gaining ground. Section 4 concludes with some tentative indications for future work on the digital euro.

Revisiting the Arguments

This section briefly revisits the arguments in favour and against the prospective introduction of a retail digital euro, along the lines of an earlier paper (Angeloni, 2023a), considering whether those arguments are still valid, as preparatory work progresses. The discussion is divided into six headings: Market reception; Effects on bank intermediation; Consequences for monetary policy; Consequences for financial Stability; Financial inclusion; and Privacy.

Market reception

The simplest and most down-to-earth question the promoters of a retail-based digital euro must answer is this: Do people need it? The answer depends on whether the digital euro has a chance to succeed in the marketplace or risks being a flop.

The critical fact is that the ECB would offer a new payment instrument to a large customer base in competition with private providers of similar products.

Traditionally, central banks offer their products and services on a monopolistic basis, for example when they print banknotes, or to specific subjects they regulate and supervise, as is the case for deposit and settlement services to commercial banks.

The digital euro puts the ECB in a wholly new situation, where it is not protected by monopolist power and market rejection is possible. Today users have countless digital payment options, largely similar to one another, all efficient, safe, and cheap. If rejected by the market, the digital euro would involve reputational and other costs for the central bank.

A related consideration is that the central bank has regulatory powers in the same market, which generates a conflict of interest. The central bank may be tempted to use those powers to prop up its own product, distorting competition and hampering innovation. China's example, discussed below, where the government promotes the digital yuan as an alternative to Alipay and Tencent, is not directly applicable but not irrelevant either.

Market analyses conducted by the ECB (for example, Kantar Public, 2022) have not answered that question definitively. People like efficient and safe digital payment, but consider the existing options quite satisfactory. The extra safety consisting of the digital euro being a central bank liability is not

regarded as important.

Moreover, people are attached to physical cash because it has unique characteristics: tangibility and absolute privacy. ECB data show that the demand for euro banknotes has increased steadily since the birth of the new currency, dispelling concerns that euro cash may disappear soon, even though digital payments are increasingly popular for online and other retail transactions (ECB, 2024b). These considerations raise the question of whether there is a market niche for the digital euro. More analyses as part of the current preparation would help clarify this point.

Effect on bank intermediation

From a macroeconomic perspective, the central question regards the impact of the introduction of the digital euro on bank intermediation. If the new instrument is sufficiently attractive, a shift will take place away from other instruments. The demand for paper currency will probably not be impacted in a significant way, because cash has specific characteristics the digital euro will never reproduce fully. More likely is a decline in the demand for bank deposits.

This is particularly the case because the ECB has decided to outsource all front-end functions relating to the digital euro to banks: onboarding and offboarding, KYC and AML checks, and all services associated with deposits – online banking, payment cards, apps, etc.

There will be strong synergies between opening a bank deposit and a digital euro deposit – same process, same information, same forms to fill. From a user perspective, there will be no difference between opening a digital euro account or a normal deposit.

The digital euro therefore is likely to imply a decline in the balance sheet of the bank and an increase in the balance sheet of the ECB, of a size hard to quantify ex-ante (for a review of the literature, see Infante et al., 2023). Aware of the risks involved, the ECB plans to set strict limits on digital euro balances. In its latest progress report (ECB, 2024), it announced work on a methodology to quantify these limits. The nature and the extent of these limits is one important open issue that will determine how the prospective digital euro may look, and the impact it may have on the financial sector.

Consequences for Monetary Policy

The digital euro was never intended primarily as a monetary policy instrument but may have unintended effects on the way monetary policy impacts the economy. The likely shift away from bank deposits would shrink the balance sheet of banks. Bank liquidity would decrease, with a contractionary effect on lending: banks would tend to restrict credit to households and businesses. The way these effects play out through the balance sheets of depositors, banks and the central bank is described in Angeloni (2023c). The amounts could be macroeconomically relevant. The central bank can always compensate for the liquidity squeeze by offering more refinancing operations. However, banks usually do not regard central bank funding as a perfect substitute for deposit funding, which is traditionally more stable.

It is sometimes argued that a digital euro is needed to preserve the role of central bank money as a “monetary anchor” in an increasingly digitalized financial sector. This idea, however, overlooks that existing monetary control processes are already entirely digital. Bank liquidity, the crucial variable for the transmission of monetary policy, takes the form of electronic deposits at the central bank. Open market operations affecting bank liquidity are digitalized, as are the ensuing settlement operations. Cash, physical or digital, plays no role in the conduct of monetary policy, as an “anchor” or otherwise.

Consequences for Financial Stability

Depositors may not appreciate the difference between a commercial bank's and a central bank's money in normal conditions, but such distinction becomes crucial in a banking crisis when they perceive their bank may fail. In the EU bank deposits are guaranteed up to 100.000 euros: beyond that, deposits are at least partially at risk.

The digital euro would offer depositors a convenient, instant, and costless channel to "run" their bank, shifting from bank deposits to a riskless liquid asset. This would risk exacerbating the banking crisis. This risk is compounded by the fact that the eurozone lacks an area-wide deposit insurance scheme.

The practical relevance of this problem depends on the design of the digital euro. If holding limits were sufficiently strict, the danger would be reduced in the aggregate. The impact on each individual bank, however, depends on its funding structure. Moreover, one should not overlook the risk that in a banking crisis, the ECB may come under pressure to relax the limits, to shelter citizens from losses.

A banking crisis is always a painful and politically sensitive event; in certain scenarios, the idea of using the digital euro to shelter savers from losses may become politically attractive. Far from resolving the crisis, the relaxation of the limits would aggravate it and make it systemic.

Financial Inclusion

A rationale often mentioned is that CBDCs can foster financial inclusion – the access of "unbanked" citizens to the financial sector. This motive may be important for several developing countries (see the next section), but in the case of the eurozone, it is unlikely to be so. Citizens who choose to remain outside the traditional banking channel and use cash instead do so because they are technologically unsophisticated or because they are wary of the formalities and complexity of opening a bank account. A digital euro involving the same steps and the same contacts with a bank is unlikely to change this situation.

A related issue is that of foreign workers' remittances. Cross-border workers often face extraordinary delays and costs in transferring money to their families at home. An increasing number of eurozone workers are immigrants.

Facilitating money transfers for those workers would be a valuable service from an economic and social perspective. An active role of the public sector, central banks particularly, would be justified. Dedicated schemes for immigrant workers would require accords among the central banks of the countries involved. Alternatively, private initiatives by banks and other providers of international money transfers could be facilitated and subsidized.

Privacy

As mentioned already, citizens consider privacy an important feature of payment means and regard cash as the ideal instrument for this purpose. Accordingly, the ECB is considering technical features that can deliver "cash-like" privacy. In its latest progress report, it states, in particular, its intention to "... use state-of-the-art measures, including pseudonymisation, hashing, and data encryption, to ensure it would not be able to directly link digital euro transactions to specific users." (ECB, 2024a).

While this may soothe some concerns, it is unlikely to solve the problem fully. Digital transactions can always be traced and will never be equivalent to exchanges of cash, at least in the eyes of users.

Offline functionality, foreseen by the ECB, helps but it is of little relevance: today's prepaid cards are

not extensively used. Moreover, privacy is a blessing in certain respects but a curse in others. Money launderers, drug dealers, and other criminals are very interested in efficient and confidential payment means. Traditionally they used to fill briefcases with cash; today they increasingly use digital alternatives, including crypto-assets. A digital euro with good privacy features would not escape their attention, posing another reputational risk for the central bank.

Looking Beyond the Eurozone Borders

The eventual decision on launching a digital euro, the way it will be designed, and what purpose it will be supposed to serve, is likely to depend to a significant extent on what happens elsewhere in the world. The complexity and risks involved are such that a "do it alone" choice is hardly likely or even advisable. Especially among the highly integrated and interdependent Western bloc, cross-border coherence can make country-specific choices more credible and robust. "Interoperability" among different CBDCs is an important oft-quoted requirement. Moreover, what happens outside the Western bloc is also important: in particular, China is exerting first-mover influence on the United States and other countries as well.

At present, however, what happens around the world is far from clear. Most central banks are conducting studies, but few have made definite decisions. The future is open for the digital euro as well: on the one hand, the passage of time and the cost and investment sunk in the project increases the probability that "something" will be done eventually. On the other, one cannot ignore the persistence of arguments and views to the contrary, especially with regard to a retail CBDC.

What follows is a high-level selective overview of initiatives and debates outside the eurozone. It focuses on initiatives, decisions, and official statements that are relatively recent and can signal future trends at the national or international level.

China

China deserves the first mention in this review for two reasons. It was the first country to launch a CBDC project in 2017 and to experiment it three years later. The second reason is that what happens in China influences opinions and orientations in the United States. The choices made by China can therefore have an indirect global influence.

The e-CNY experimented by the People's Bank of China (PBoC) is a retail instrument. It was made available initially in four cities in 2020 and later extended to several regions, although not yet to the whole country (Atlantic Council, 2024). There are different types of e-CNY available, from the simplest ones and most limited in size and functionality to the more extensive ones, the latter subject to stringent disclosure requirements.

The Chinese government is proactively promoting the instrument, granting for example discounts and concessions to holders. Private providers like Alipay and Tencent, already massively present in the country, have integrated the e-CNY, facilitating its circulation.

Despite strong official promotional activity, the digital yuan has had a slow start. Data – unfortunately very scanty – suggest that the uptake so far is limited, because of strong competition from very efficient private applications. There are reportedly 260 million wallets open, around 18% of the population (Atlantic Council, 2024). As of mid-2023, some 950 million transactions had cumulatively

taken place. Over a 4-year horizon, this amounts to an average of 2 transactions per wallet per year, a negligible number. Over the last year for which data are available, the average number of transactions per second was about 20, against some 120,000 reported by Alipay alone. The outstanding stock of e-CNYs in 2023 was just about 0.13% of the currency in circulation.

The modest domestic uptake of the digital yuan is confirmed by other sporadic sources. An interesting "test drive" conducted by a journalist in Guangzhou (the fourth-largest Chinese city, otherwise known as Canton), in restaurants, hotels, and other places of public accommodation, concluded that the e-CNY was little used and even known, except in public transportation and other government-owned facilities (Quinn, 2024).

Other Asian Countries

While domestic penetration of the digital yuan remains limited, China is promoting its international use of among Far- and Middle-Eastern countries. eBridge, a China-led multiple-country platform started in 2021 in collaboration with the BIS, has so far associated with the Hong Kong Monetary Authority, the Bank of Thailand, and the central bank of the United Arab Emirates.

eBridge works as a multi-central bank platform among participating central banks and commercial banks, on a distributed ledger allowing fast cross-border payments and settlement among the participating entities. Recently, Saudi Arabia has joined; an important extension. It should be noted, however, that the attitude of individual countries toward CBDCs varies. The Bank of Thailand, for example, while a member of eBridge has recently stated that it has no intention for the moment to issue a retail CBDC (Bank of Thailand, 2024).

The tense geo-political situation following Russia's invasion of Ukraine has increased interest in initiatives like eBridge (Atlantic Council, 2024), and in general in payment platforms that allow to avoid mainstream financial channels dominated by the US dollar (Ku, 2024).

A survey conducted by the International Monetary Fund on work by Middle-East and Central Asian countries revealed that most of them are exploring the possibility of launching a CBDC (IMF, 2024). A smaller number of countries expressed no interest. In most cases, the involvement is driven by domestic considerations: financial inclusion, enhancing financial and technological literacy, and promoting efficiency and competition.

Japan has explored the potential of an electronic yen, most recently launching a pilot and an opinion survey. The activism of China likely contributed to Japan's interest. Recently, however, a statement by the central bank governor suggests caution (Ueda, 2024). The governor mentions a scarce awareness by the population and emphasizes the benefits of physical cash (tangibility, proximity of the transacting parties, privacy), calling for more experimentation and public involvement.

The Reserve Bank of India has launched pilots of tokenized CBDC instruments for bank wholesale and retail transactions in 2022. While the government has adopted measures to help the success of the initiative, its prospects are still unclear.

Russia

Given the geopolitical relevance of CBDCs, some attention to what happens in Russia is due. Vladimir Putin's Federation has not been active on CBDCs at first, but this is changing. In early 2024, the central bank governor informed on ongoing initiatives to launch a national CBDC (Ledger Insights, 2024).

The Duma passed legislation and the first trials started in 2023. Some 25.000 transactions have taken place since then, mostly P2P transfers, a very small number which may be due in part to the recent start of the trial.

A “second wave” involving large banks will be started after the central bank has fixed many bugs. Technical features of the digital rouble are quite sophisticated, including dynamic QR codes, smart contracts, and programmable money. The goal of building something that is state-of-the-art and attractive internationally is quite evident.

United States

The Federal Reserve started explorations years ago but is still sitting on the fence, neither supporting nor excluding the idea. Technical work tends to emphasize risks for financial stability, while also mentioning potential benefits (Carapella et al., 2024). Christopher Waller, a Board member, famously dubbed the CBDC “a solution in search of a problem” (Waller, 2021).

Subsequent statements by Fed policymakers moderated the tone a bit, but in substance were on the same line, emphasizing rather the advantages of FedNow, a different type of Fed-sponsored instant money transfer.

In a recent statement, another Board member, Michelle Bowman, concluded: “From my perspective, there could be some promise for wholesale CBDCs in the future for settlement of certain financial market transactions and processing international payments. When it comes to some of the broader design and policy issues, particularly those around consumer privacy and impacts on the banking system, it is difficult to imagine a world where the tradeoffs between benefits and unintended consequences could justify a direct access CBDC for uses beyond interbank and wholesale transactions.” (Bowman, 2023)

Outside the Fed, discussions tend to be dominated by geostrategic competition with China. In 2002, the Hoover Institution, a Republican-leaning think tank, assembled a high-profile team of experts to examine the challenges that digital payments in China pose for the US.

The report takes the view that the e-CNY will effectively promote China’s financial system and currency, making them more attractive and undercutting the position of the US dollar. The report calls for the US government and the Fed to be more active in developing a strategy for digital payments.

National politics meanwhile moves in a different direction. Conservative circles in Washington criticize the Fed for the opposite reason, namely, for keeping the digital dollar option open. The Republican majority in the House of Representatives recently promoted an amendment to the Federal Reserve Act banning the creation of a digital dollar (Forbes, 2024a).

Trump himself has called it “very dangerous”. Political maneuvering is in flux, partly directed against the independence of the Fed. Chairman Powell has repeatedly stated that the Fed will not go ahead if not explicitly mandated by the legislature. In recent testimony, he was quite vocal against a retail CBDC: “People don’t need to worry about a central bank digital currency, nothing like that is remotely close to happening anytime soon”, adding that “... the last thing the Federal Reserve would want would be to have individual accounts for all Americans." (Reuters, 2024).

United Kingdom

The Bank of England has been preparing for a digital sterling since 2021, with the UK Treasury. The

model is much along the lines of the ECB, namely, a retail instrument available to citizens and companies. The central bank seems quite open to the prospect, although a definitive decision has not been made (Cunliffe, 2023).

Public Bank of England's information conveys a rather favorable picture, mentioning possible benefits for innovation, consumer choice, and privacy of information. Legislators will need to issue primary law before any launch is decided. Recently, the UK Parliament's Treasury Committee Chair has stated that the instrument will not be launched before 2023, and holding balances will be limited.

Switzerland

The Swiss National Bank's most recent digital payment initiative, Helvetia III, launched in December 2023, is a pilot aimed at offering commercial banks central bank deposits in tokenized form. Offering full integration between central bank money and the Swiss exchange for tokenized financial assets, SDX, the project makes commercial bank transactions more efficient. The scheme is strictly reserved for commercial banks and based on central bank settlement.

On the option of a retail CBDC, the chairman of the Swiss National Bank recently stated that "The SNB currently sees no need in Switzerland for such digital central bank money for the general public, also known as retail CBDC. Consumers and businesses already have access to a wide range of efficient and innovative payment instruments offered by the private sector. Retail CBDC could fundamentally alter the current monetary system and the role of central banks and commercial banks, with far-reaching consequences for the financial system. From a Swiss perspective, the risks of retail CBDC currently outweigh its potential benefits." (Jordan, 2024)

The African Continent

The African continent provides a fertile ground for CBDCs and digital payments in general. It lacks, in many countries, a developed banking infrastructure with traditional channels – branch networks, ATMs, etc. On the other hand, handheld telephony is quite widespread, and digital transformation, while still backward, is progressing fast (World Bank, 2024). Money laundering and terrorist financing are a risk in some places. This calls for close monitoring and control, something a CBDC can potentially facilitate.

A recent survey shows that out of 54 African countries, only 4 possess payment system infrastructures that could potentially support a CBDC. 14 countries have made official expressions of interest towards issuing the instrument, and are involved in research and technical exploration of such possibility, while the others have not expressed an interest (Ozili, 2023).

Two digital payment instruments launched in recent years in Africa have attracted global attention: M-Pesa and the e-Naira.

M-Pesa, the largest digital payment instrument in Africa, has over 30 million users in ten countries. Introduced in 2007 in Kenya, it allows to deposit, withdraw, and pay through text messages sent via smartphone, using retail stores as banking agents. M-Pesa is not a CBDC – the funds are not on the central bank balance sheet – but a money transfer technology relying on a branchless network of quasi-banks. Research has shown that M-Pesa had a positive economic effect, by removing constraints on consumption and reducing poverty (Suri and Jack, 2016).

By contrast, eNaira is a CBDC. Launched in 2021 in Nigeria, the largest African country, it operates via a distributed ledger. Nigeria's population is relatively highly sophisticated digitally: a large fraction

of the population has mobile phones but no bank account, and there is a thriving high-tech sector. The main stated purpose of the eNaira was to provide financial services to the unbanked, leveraging on the high level of digitalization. Another reason is to combat corruption and tax evasion since eNaira transactions are traceable.

Despite careful preparation and official measures to prop up the instrument, the e-Naira was a flop. Uptake is limited, with 1 million wallets according to recent information (Nigerian population is 200 mn). The few wallets are rarely used, and the volume of transactions represents a negligible share of the money supply.

By contrast, over one-half of the Nigerian population is trading in cryptocurrencies, confirming that technology is not a barrier. (this and some other information on CBDCs mentioned here is drawn from a coauthored forthcoming book: Angeloni and Gros, 2024).

Latin America and the Caribbean

Most Latin American countries, including "island" Caribbean economies, have expressed interest in CBDC and are conducting analyses. Crypto-activity is extensive in the area, and digital expertise is widespread. Actual experiences vary, however.

In Brazil, an efficient digital payment infrastructure, Pix, was introduced in 2019. While sponsored by the central bank, Pix is not a CBDC but a digital money transfer based on bank balance sheets. The system allows for instant, convenient, safe, and low-cost payment functionality; as such, it caters to the main needs of retail users and reduces the potential scope of a CBDC.

A case that attracted worldwide attention years ago is that of the Bahamas. With its tropical climate, tax-exempt system, and lax financial supervision, the Commonwealth of the Bahamas attracts tourists and hazardous financiers alike — most prominently FTX, the infamous crypto exchange that went bankrupt in 2022. In 2019, it was the first country to introduce a CBDC, called the "sand dollar". Its main stated aim was to help financial inclusion and facilitate monetary transactions across a collection of islands subject to frequent disruption because of hurricanes. Despite its fame, the experiment was not successful. As of recently, the sand dollar balances represented a minor share of central bank money in circulation and transactions were negligible.

Other cases of Latin American countries exploring the potential introduction of CBDCs (none of which have made decisions yet) are reported in a recent survey by the International Monetary Fund (IMF, 2023).

Conclusions

For several years now, the ECB has been engaged in preparatory work for the introduction of its own central bank digital currency, the digital euro. Its work has advanced our understanding of the complex issues involved and has contributed to a line of research actively pursued in many parts of the world.

After revisiting the pros and cons, this paper concludes that, all in all, the rationale for introducing an ECB-sponsored digital euro for citizens, retailers, and producers, is not solidly established. Today's

highly dynamic, innovative, and efficient digital payment ecosystem does not require such an instrument, which would duplicate existing applications and probably struggle to match private innovation.

The paper also offers a short survey of international experiences regarding CBDCs and alternative digital solutions. stands out in this overview is the extreme diversity of orientations. Developing countries are interested in promoting financial inclusion and literacy, bypassing their lack of developed physical banking networks. Emerging countries either take different directions altogether (Brazil) or experiment with pilot CBDCs (India).

China stands out in being fully committed to a digital yuan, clearly – though not explicitly – motivated by internal state control and geopolitical expansion. Despite extensive public intervention, however, the e-CNY has not attracted so far much favor among the population, amid fierce competition from private competitors like Alipay and Tencent.

The US Federal Reserve seems inclined to explore wholesale central bank-based digital solutions to improve the efficiency of the international payments system. A retail-based CBDC seems ruled out for the time being. Switzerland, a country whose financial sector has a small but significant international role, has undertaken moves in the same direction.

The ECB has so far placed its bets on a retail CBDC, but in our view would be well advised to pay attention to other options as well. The need to improve the functionality of the international payment system is long-standing and solidly established. CBDCs can help in this regard (Adrian, 2023).

The ECB should actively join the Fed and other central banks in studying a wholesale, interoperable multi-currency version of CBDC capable of making the international large-value payments more efficient and safer. Such an instrument would also serve as a potential backup in case of technical failures in the private digital payment infrastructures which require public intervention (Angeloni, 2023b).

More generally, it is important that in conducting its preparatory work the ECB coordinates with other Western central banks. In a highly interdependent global monetary and financial system, a situation in which the main central banks take markedly different orientations on CBDCs is hardly advisable or even conceivable.

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