



Learning Insights

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In this issue:

CBDCs – Moving forward (slowly)

Open banking – A global perspective



CBDCs – Moving forward (slowly)

Central bank digital currencies (CBDCs) have been characterized as a solution in search of a problem, but central banks seem resolute in their ultimate adoption, in spite of implied threats to commercial banks and financial stability.

According to the Atlantic Council there are now 105 countries whose central banks' are actively developing CBDCs – that's triple the number from as recently as 2020. Developing economies, particularly in the Caribbean, have been at the forefront. Notable early schemes include "Project Sand Dollar" in the Bahamas, DCash by the Eastern Caribbean Central Bank, and eNaira of the Central Bank of Nigeria.



DCash by the Eastern Caribbean Central Bank. Source: <https://www.dcashec.com/>

China leads the way on CBDCs

By some distance the leader is China's central bank digital currency, the e-CNY, which debuted in front of an international audience at the Beijing Winter Olympics last year. At home, the People's Bank of China (PBOC) is in testing mode. Globally, China is thought to be focused on setting regulatory standards that will influence the workings of other countries' CBDCs.

In spite of low adoption rates, the e-CNY is by far the largest CBDC pilot in the world with RMB 13.61 billion in circulation and 260 million wallets. Pilot regions now cover 25 cities, and the PBOC has relentlessly expanded the economic activities that are part of the state-enabled payments network, including public transportation, public health checkpoints, COVID test centers, integrated identification cards to receive and pay utilities, and tax payments and refunds. Testing has also begun on technical and programmability functions like smart contracts for B2B and B2C functions, e-commerce, and credit provision.





No consensus on CBDC objectives

The PBOC's ambition is echoed elsewhere. An OMFIF survey of central banks for its Future of Payments 2022 report, found that two-thirds of its respondents expect to issue a CBDC within 10 years. Of those central banks who don't expect to issue a CBDC, most are actively considering the prospect, and surveyed banks have a median of five employees dedicated to research or development of CBDCs.

Critics of CBDCs are quick to label the medium as “a solution in search of a problem” and indeed the OMFIF survey shows a wide variety of objectives for pursuing CBDC adoption with no identifiable consensus. No central bank cited improved cross-border payments as their main objective in developing a CBDC. “Preserving the central bank's role in money provision” was the second most reported main objective behind “Other” – a category that included a range of objectives including digitalization, improving the resiliency and efficiency of payments systems, and interoperability.



“Preserving the central bank's role in money provision” harks back to the origins of CBDCs: a reaction to the emergence of private digital currencies that threatened to rival fiat money in terms of credibility and a process that began in earnest with the launch of the ill-starred Facebook-backed ‘Diem’ digital currency. Though this threat (and that arising from other cryptocurrencies) has diminished, a raft of other reasons have been advanced in support of CBDCs (as above) but for Europe there is the additional incentive in developing a euro CBDC: namely, the dollar's dominant role as the global reserve currency and the similar dominance of perceived ‘American’ payment schemes such as Visa and Mastercard.





Cash usage and the euro CBDC

Hence, nowhere is the debate around CBDCs as intense as in Europe. A decision on the digital euro, or possible digital euro (PDE) (the acronym preferred in the literature) is not expected to be made until 2026/7, following a testing and legislative phase.

Central to that decision is the level of cash usage. As use of cash declines, a risk-free digital euro would be universally accepted across the euro area, cutting off the potential for other digital currency issuers (including, say, the PBOC and a digital renminbi) to supplant European central banks.



Cash as a percentage of transactions and as a percentage of transactions value in the eurozone has fallen steadily. Yet, in the 21 years of their existence, euro banknotes have increased seven times in value, up to EUR 1.6 trillion – a compounded annual increase of about 10%. The corresponding figure for the US dollar is 6.5%, the British pound, 5.2%, and the Swiss franc, 4.4%.

The enduring popularity of euro-denominated cash indicates confidence in the currency: the PDE and other forms of CBDC seek to replicate this. The popularity of euro cash is not explained by a rise in illegal activities, according to the ECB, which notes that the rise in cash has been smooth – not a characteristic of indicators of criminal activity – while the increase in euro coins shows more or less the same pattern (and criminals and tax evaders are unlikely to make extensive use of coins).





CBDC and the threat to commercial banks

But CBDCs also have a problem with perception, not least in the mind of the consumer. For the public, the difference between a CBDC and a bank deposit will be difficult to discern. Digital currency accounts will be offered almost exclusively by banks. Banks will be responsible for onboarding and offboarding, KYC and AML checks, and providing all of the services normally associated with deposits such as online banking, payments cards, apps, and so on. Opening a CBDC account will involve the same process, same information, same forms to fill as a normal deposit at a bank.

This suggests another threat, specifically to commercial banks – namely the substitution of CBDCs away from bank deposits rather than paper currency. As the ECB notes, a replacement of bank deposits for PDEs implies, euro for euro, a decline in the bank balance sheet, and a corresponding increase in the ECB balance sheet. This would have the effect of decreasing bank liquidity with a contractionary effect: banks would be less inclined to lend out to households and businesses.



CBDC threatens financial stability

For central banks, the existence of CBDCs also gives rise to issues around the conduct of monetary policy and for financial stability.

According to a survey commissioned by the ECB, most people do not understand the difference between commercial bank money and central bank money. Tellingly, they do not seem to appreciate the fact that commercial bank deposits are risky to some extent, whereas ECB deposits are riskless. While in normal conditions that may have little import, it becomes crucial in a banking crisis and the potential for a bank “run” on their deposits.





Technological factors have also increased the speed of bank runs and the euro CBDC would compound the problem by offering a risk-free online alternative to bank deposits where, in the absence of full banking union, there is a crucial lack of area-wide deposit insurance. With this in mind, the ECB intends to set a limit to the maximum holding of PDE, possibly EUR 3,000.

CBDC integration promises to be a significant operational challenge but given that CBDCs will eventually become legal tender, participation will be compulsory – in Europe and beyond. On balance, despite sceptics as to the business rationale, for commercial banks it would seem wise to assume CBDCs are inevitable and plan accordingly.

Intuition Know-How has a number of tutorials related to the content of this article:

- [Payments – An Introduction](#)
- [Payments Systems](#)
- [Digital Money & Mobile Payments](#)
- [Payments Cards](#)
- [Financial Authorities \(China\)](#)
- [Financial Authorities \(Europe\) – ECB](#)
- [Crypto Assets](#)
- [Financial Regulation – An Introduction](#)
- [Monetary Policy Analysis](#)
- [Anti-Money Laundering \(AML\) \(2023\)](#)





Open banking – A global perspective

It is more than a decade since open banking arrived on the scene to a reluctant banking sector. That is just one reason why it has yet to reach its potential but it is in less developed markets where its impact promises to be revolutionary.

Open banking – the sharing of payment account data with another third party provider (TPP) (with the user’s consent) – was designed to bring access to a range of new banking services. For example, it makes it possible to obtain an overview of all of a user’s different bank accounts, across different providers, in one single app, to manage money via that app, and keep track of spending by category.

Europe lags in open banking adoption

Europe embraced open banking enthusiastically and believed that with the second Payment Services Directive (PSD2), which came into force in 2018, it had put in place a regulatory regime to ensure it thrived. Yet by 2021 less than 5 percent of consumers in the European Union were availing of open banking.



The European Commission acknowledges the disappointing pace of take-up: “To say that hasn’t reached its potential is rather an understatement,” commented Commissioner for Financial Services, Mairead McGuinness, in March.

The Commission has identified several reasons why this is so. Top of the list is how open banking providers connect with banks which share data – often via Fintech companies – through a type of software called an application programming interface, or API. According to the European Commission, APIs vary hugely in quality and functionality and often cause open banking operations to fail.





Another issue is trust. Potential open banking customers see privacy as a big concern and are unsure as to whether companies will respect customer data and use it in their best interests – meanwhile the rights and obligations of companies are unclear. Likewise, security and the risk of cyberattacks looms large.

All told, “The technical infrastructure for sharing data just isn’t in place. And the data to be shared isn’t standardized,” according to McGuinness, which means the Commission is “aiming to tackle problems with open banking as part of the revision of the Payment Services Directive” and to fix these problems without causing significant cost or disruption for those already engaged in open banking.

UK banks reluctant open banking converts

Outside the EU, the UK is considered one of the leaders in open banking. This was largely because the government there, through the Competition and Markets Authority (CMA), forced a reluctant banking sector to comply. Five years later, the CMA ruled last January that the six largest banks had implemented all of the requirements of the Open Banking Roadmap.

In contrast to the European Union with its prescriptive, regulatory regime, the United States has until now adopted a more market-led approach to Open Banking – an approach that some see as more accommodating to innovation. Nonetheless, the director of the Consumer Financial Protection Bureau (CFPB), Rohit Chopra, in October 2022 announced the coming of a new US Open Banking Rule, with the aim to accelerate the move toward open banking through consolidation of personal financial data rights.



Director of the Consumer Financial Protection Bureau (CFPB), Rohit Chopra. Source: Financial Times

US regime “broken”

According to Chopra, the new regulation will be a catalyst for more competition giving individuals and “nascent” firms more bargaining power and leverage. While consumers can currently permit access to their financial information through data brokers (or data “aggregators”), “the broader overall regime is broken because consumer access is based on a set of unstable and inconsistent norms across market participants.”





This means that even when large institutions that share personal data with their customers use APIs, “there is no guarantee those institutions don’t play games on availability, latency, and critical data points, like price.” Consequently, the CFPB is looking to “make these games much more difficult for users to play.”



Rise of embedded finance

One of the consequences of the US approach to open banking to date has been the rise of embedded finance – the placing of a financial product in a nonfinancial customer experience, journey, or platform. This has even greater potential in countries with relatively underdeveloped financial and banking infrastructure, for example India.

Most Indian adults (around 800 million) have a bank account, cost factors mean that commercial banks service only the top 100 million with financial services, such as loans, insurance, or wealth management. While India’s banks have been reluctant to get involved in open banking relationships (and India has no regulatory mandate forcing banks to share their customer data with third parties), embedded finance solves the cost of distribution problem for banks with less affluent customers. Of course, the risk is that banks then become highly commoditized with negative brand implications.





Open banking facilitates financial inclusion

But India, like many other less developed countries, sees the vast potential of open banking for financial inclusion and has created the infrastructure to make it easier. Aadhaar, the state national identity database, is designed to bring down the costs and risks of sharing customer information. Unified Payments Interface (UPI), the instant payment system developed by the National Payments Corporation of India (NPCI), enables common standards for digital payments. Aadhaar also provides a sandbox in which banks and FinTechs can collaborate and experiment.

This approach would appear to be a model from which many other jurisdictions can learn. Indeed, open banking has the potential for vast numbers of people to step on the banking and financial services ladder, leapfrogging traditional banking infrastructure hurdles in the same manner as the mobile payments revolution.

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