Digital euro: what we know, what we don't[1]

Ignazio Angeloni

Good evening. It is a pleasure to speak at this symposium of the OMFIF Digital Monetary Institute. I thank OMFIF for the invitation.

My topic this evening is the digital euro: what we know about it, what we don't know yet, and what we can expect.

You may think that the euro is not the most natural topic to speak about in London nowadays. This may be true, but the digital euro is different. Most central banks, including the one a few hundred yards from here, are engaged in studies that will one day lead to the decision of whether or not to launch a "central bank digital currency" (CBDC) in their jurisdiction. These studies proceed in parallel, cover similar ground and will probably lead to a Yes-or-No decision more or less at the same time. In a way, therefore, the possible launch of CBDCs is a collective endeavor. Analyses can contribute to one another. I also doubt that the main Western central banks can make radically different choices in this field. They don't have to coordinate, but to an extent they should, and probably will.

On things that we know and don't know, actually I should have been more precise: I meant, essentially, the "knowns" and the "known unknowns". But as you remember, the late Donald Rumsfeld once told us that problems often come from the "unknown unknowns". So I shall briefly mention them as well.

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We know, of course, that the ECB is actively preparing for the possible digital euro (PDE). Reports and speeches witness a very thorough and fairly transparent research program, involving many stakeholders. This is good. The ECB cannot ignore or lag behind in this important line of work involving the whole central banking community. In this way, the ECB also develops its expertise in digital payments, where it has statutory responsibilities. So, preparing is a good idea but, of course, does not necessarily mean that actually launching a digital euro is a good idea as well. The decision will come many years from now, after a testing and legislative phase. This is where the unknown unknowns may play out.

[1] Keynote address at the OMFIF Symposium on Central Bank Digital Currencies, London, 9 May 2023. These remarks draw on a recent paper prepared for the European Parliament, "Digital euro: when in doubt, abstain (but be prepared)", April 2023, available here. In that paper, the reader can find references and analyses that corroborate many statements made here.

The most important thing we know is that the PDE would be a liability of the ECB – or rather the Eurosystem, the combination of the ECB and the national central banks of the eurozone. This puts it in a category apart from all other financial assets in the economy, with the exception of two, paper currency and deposits at the central bank, the latter held mainly by banks. Both have been quite popular in recent years. Deposits at the ECB have grown enormously as a result of quantitative easing and now stand at 4 tn. euros. But banknotes have not fared too badly either. In the 21 years of their existence, euro banknotes have increased seven times in value, up to 1.6 tn. euros; this amounts to a compounded annual increase of about 10%. The corresponding figure for the US dollar is 6.5%, the British pound, 5.2%, the Swiss franc, 4.4%. By this metric, we should conclude not only that cash is popular, but that euro cash is the most popular.

Some argue that the popularity of cash is sweet as well as sour: it signals confidence in a currency, but also growing illegal activities. This may be, but the latter is unlikely to explain most of the phenomenon. Over the 21 years period, the increase of the euros in circulation was very steady; indicators of criminal activity do not have such a smooth profile. And the increase in euro coins shows more or less the same pattern. Criminals and tax evaders are unlikely to make extensive use of coins.

It seems, clear, therefore, that people actually like holding euro banknotes, in spite of the fact that for many retail purposes, they are being replaced by more convenient digital means – online platforms, payment cards, smartphone applications, and the like. This preference has implications for the digital euro, as we shall see.

Another important thing we know for sure is that the digital euro will look very much like a bank deposit. Digital euro accounts will be offered by banks (to a lesser extent by other payment service providers, PSPs). All front-end functions will be carried out by them. They will be responsible for onboarding and offboarding, KYC and AML checks, as well as providing to users all services normally 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 PDE or a normal deposit at a bank.

From what I just said, my conclusion is that the introduction of a digital euro should result primarily in a substitution away from bank deposits, more than from paper currency. Banknotes have unique characteristics – simplicity, absolute privacy, and – I dare say – tangibility – that are highly valued and that the digital euro will never have.

High substitution between digital euros and deposits entails complications and imponderables for the conduct of monetary policy and for financial stability.

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. Bank liquidity would decrease on impact. The effect is contractionary: banks would be less inclined to lend out to households and businesses. Of course, the central bank can always sterilize this effect with refinancing operations; and with today's large amount of liquidity, the effect may be like a drop in the ocean.

Complications arise also in connection with the remuneration of PDEs. With today's mass of liquidity parked in its deposits, the ECB must move the deposit rate in order to influence money market rates. That rate is today at 3.25%. If the remuneration on PDEs were to be set at a different level (presumably lower) or perhaps at zero, arbitrage opportunities would arise: banks could offer fixed-term swaps to profit from that margin. The ECB may try to inhibit such operations. But as long as market pressure exists for the two rates to converge, complications would arise because the two rates are supposed to serve different objectives – one for monetary policy, and the other for payment system considerations.

Let's move to financial stability. According to a survey commissioned by the ECB, most eurozone citizens do not understand the difference between commercial bank money and central bank money. In particular, they do not seem to appreciate the fact that commercial bank deposits are risky to some extent, whereas ECB deposits are riskless.

This fundamental difference remains hidden in normal conditions but becomes crucial in a banking crisis when depositors become keenly aware of the risk and "run" on their deposits. A report issued last week by the US Federal Deposit Insurance Corporation warns against the increased speed of bank runs, as a result of financial and technological factors. The PDE would magnify the problem by offering a risk-free online alternative to bank deposits. In the eurozone, this risk is compounded by the incompleteness of the banking union, specifically the lack of area-wide deposit insurance.

To mitigate this problem, the ECB intends to set a limit to the maximum holding of PDE (possibly, 3,000 euros). This would cap the maximum aggregate outflow at around 10-15% of overnight deposits. For individual banks that percentage could be bigger, depending on the bank's funding structure. The risk of a run is relevant for individual banks, because once a bank is at risk, contagion may propagate the crisis to others.

There may be political complications as well. In case of a bank run, the ECB may come under pressure to relax the upper limit on PDE deposits. A banking crisis is a painful and politically sensitive event because it puts individual savings at risk. As banking supervisor, the ECB is responsible for financial stability. It is not required to bail out depositors in a crisis, and until the digital euro does not exist, nobody will make that suggestion. But once those deposits exist, that idea may gain political traction, and pressure on the ECB may result.

I should also mention that views are currently split between the relative merits of wholesale vs retail CBDCs. The ECB has communicated that, at least initially, retailers will not be allowed to hold positive balances in digital euros. Only physical persons would be allowed to both transact and hold. This contrasts with a view recently signaled by the US Federal Reserve, which sees a possible prospect only for a wholesale CBDC. As I mentioned, already, divergence among the major central banks should better be avoided.

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Turning now to things we don't know, a big imponderable, in my opinion, is the reception by the market. The digital payment sector is quite saturated. Most users, including your speaker and probably many of you, have in their smartphones many digital payment means, not all of which are frequently used. To compete with powerful incumbents like Applepay or GooglePay or even smaller but very efficient ones like Revolut, the new entrant would have to be very innovative. This is not likely to be the case for the digital euro. A failure to market the PDE successfully would have negative reputational and cost implications for the central bank.

The countries that have already launched a CBDC on an experimental basis, like China and the Bahamas, are not very successful so far. The Bahamas launched the Sand Dollar in 2021; at the end of 2022, there were only 300,000 Sand Dollars in circulation, a negligible amount. China launched the e-Yuan in 2020, and in 2022, the transactions on it were negligible compared to its private sector competitors, Alipay and WeChat.

These experiences reinforce the impression that the private digital payment sector has been quite efficient in recent years. It is hard to identify market failures that justify public intervention.

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Before I conclude, let me address the biggest question: Will the digital euro actually see the light one day?

That is where the "unknown unknowns" enter the picture. I hesitate to discuss them because, as a career economist and central banker, I am not trained to talk about things I know nothing about. Yet to some extent we should do that, because it is useful. Out-of-the-box scenarios help us better understand the conditions in which a CBDC may really be needed and to make us more prepared for very different circumstances.

Let me be clear: Based on the information we have today and for the reasons I have explained as well as others I did not have time to, I do not believe that the balance of the arguments would favor the launch of a digital euro *if* such a decision had to be taken today. However, the decision will not be taken today, nor any time soon, but many years from now. In between, there is plenty of space for unknown unknowns.

We could witness, for example, a collapse in the use of banknotes which current digital payment providers and their infrastructures cannot handle with the available technologies. Or we could experience financial instability requiring the ECB to step in to preserve the functionality of the payment system. Or, there could be strategic security conditions requiring to put in place more state-controlled monetary and payment infrastructures. Fortunately, these are very unlikely scenarios, but not impossible ones, which may call for central banks to step in, perhaps within a short time.

Therefore, the best advice one can give to the ECB, and to other central banks, is: Continue to prepare, otherwise wait and see.

Thank you for your attention.