

CBDC: short- and medium-term opportunities and challenges

1. The concept of CBDC and the current status: between the ideal and reality

The Chair noted that central bank digital currency (CBDC) is a fundamental change in the way central bank money is made available to the public, so it touches upon many issues for legislators. Central bankers have also been clear that they do not want to substitute banks' functions. An industry representative noted that around the world there are over 250 different payment systems. This is an opportunity to write the future of how financial services work together.

1.1 A project that is built in stages – Riksbank Case Study

A Central Bank official confirmed that the Riksbank started working on an e-krona, which is a retail CBDC, in 2016. For two years it has been working on a pilot project. There are three phases. The first phase was to set up the distributed ledger technology (DLT). A digital wallet that can be used as a card, as an app or even like a watch is being tried. The second phase was to involve the private sector. The Riksbank is working with two commercial actors who are integrating the digital wallet into their IT systems. The Riksbank is entering the third phase, which is to gather everything learned during these years. It has 19 work streams, with everything from data protection to cyber security to issues related to sustainability and energy usage.

1.2 A process that takes time

A Central Bank official stated that following the Bank of England's consultation paper at the end of the year, if the decision is to proceed the next step would be to issue a technical blueprint, which would probably be within six months, though it would not be the detailed blueprint. The Bank of England has publicly said it does not think a CBDC could be introduced before the second half of this decade, though that is still rather close given what needs to be put in place. It would be a major, national critical infrastructure project not to be undertaken lightly. The timescales are long. However, the worry is that by the time people see the case for this it is too late. It is unclear how to marry up the timescales and the public case for innovation with a project of this size, because breaking things cannot happen as credibility would be lost.

1.3 CBDC does not mean the end of cash

A Central Bank official was surprised by the vision of substituting digital for cash. At least in the medium term, cash remains an important payment instrument. A Central Bank official stated that the financial stability

concerns and monetary policy implications of even retail CBDCs can be worked out. Though it would be good to move towards a digital currency, it would be in addition to cash.

2. Use and purpose of CBDC

2.1 CBDC at the service of retail

A Central Bank official noted that there are a number of complicated issues to address. The important foundation of the anchoring of central bank money may be at stake, and issuing a digital form of central bank money for retail payments may be an appropriate and effective tool and instrument for addressing this issue.

A Central Bank official remarked that the Bank of England published a model for discussion in the beginning of 2020 for a retail payment CBDC. It was a platform model in which the central bank would run the infrastructure and ledger, but all of the interaction with the consumer would be by the private sector, and the private sector would be allowed to use the CBDC and innovate around it.

The use case is a retail payments CBDC. It is better to start with the public policy objectives from a central bank point of view; this is about ensuring the integrity and robustness of money that circulates. Currently, all money in the United Kingdom that is circulated at a systemic scale is tied to central bank money, is substitutable on demand for central bank money and is regulated, but the provision of cash in the hands of the public also acts as an anchor that holds the whole system together and probably anchors the concept of money in the minds of citizens.

What is being faced is the disappearance of cash into the existing commercial bank system as the means of transaction, as money needs to be more digital, but it is also the entrance of new players into the provision of money for transaction purposes. The question is whether the integrity and robustness of money can be ensured solely by regulation, or if provision of a public sector alternative is needed as an anchor.

A Central Bank official remarked that there is a very good report from the Committee on Payments and Market Infrastructures (CPMI) work stream on how CBDCs could be interoperable, highlighting different models. There could be separate rails in different countries but common standards, a rail that links the public infrastructure in one country to the public infrastructure in another or one global rail with different CBDCs moving along it.

2.2 CBDC to ease wholesale transactions

An industry representative stated that wholesale is where the use case is more obvious, at least in the short term.

There is the possibility of setting up securities in various configurations for many asset classes. Completing cross-border and cross-currency transactions is good for the market and eventually for retail users.

An industry representative noted that interoperability and the ability to not just keep CBDC for retail is vital. By creating new standards and enabling retail and wholesale to come together there is an opportunity to write a future which takes away much of the existing fragmentation and friction.

2.3 Other fields for CBDC use

A policy-maker noted that peer-to-peer (P2P) and platform-to-business (P2B) are the bulk of the payments market, and here cash is still predominant in the eurozone and beyond. However, this is changing rapidly as payments are digitalising. It makes sense to at least initially work on these use cases. The impact on private payment solutions should be taken into account and carefully analysed. There is the possibility of creating synergies between private payment solutions and a digital euro. When it comes to the use of terminal infrastructure or standards, there are a number of areas where there could be synergies.

A policy-maker highlighted the importance of looking at instances where a digital currency could create value added compared to private solutions. There is potential, for instance, in the area of offline payments, which could help with financial inclusion, but also in the area of micropayments where the fee structure of private solutions does not allow for use of the full potential. Programmable payments are also an area that should be closely monitored and considered for future developments.

3. CBDC faces several challenges and threats

3.1 The legal challenge

3.1.1 Clear legislation is needed

A Central Bank official stated that the Riksbank is approaching the stage of having to make a decision about whether it will actually introduce an e-krona, and because of that an increasingly important and more complicated matter is the legal side. The Riksbank was granted the monopoly right to issue sovereign money in 1904. When that happened it was clearly specified that this monopoly right was related to the physical representation of money. Internal and external lawyers were very clear that if the Riksbank wants to introduce an e-krona it should be as similar to cash as possible.

Some amendments to current law or some new legislation will be needed to make the decision to issue an e-krona. However, the desire is for any changes to law to be minimal, and that is why the discussion on cash-like retail CBDC is being raised. There are openings because certain words are used. Lawyers care greatly about the definitions of certain words. Talking of interest rates is not acceptable, but 'fees' might be acceptable. There will likely be solutions.

A Central Bank official suggested that whatever the letter of the law, a CBDC cannot be introduced without the support of the political authorities, and there would need to be a political debate. That is one of the reasons why it is important that governments and parliaments are involved.

A policy-maker noted that the Commission will come forward with a legislative proposal in the early part of 2023. This will be prepared fully respecting the different prerogatives of the institutions and working closely with the ECB. The digital euro can only be a success if the work of the ECB and the legislator fit hand in glove. Following the legislative proposal, it is hoped that the EU legislator, the Council and the European Parliament will be able to agree a piece of legislation before the end of the following year, because it is clear that the digital euro cannot be launched without the legislative framework in place.

An industry representative noted that there is an urgent need for a rulebook, so it is great to see fast movement with Markets in Crypto-Assets (MiCA) and other initiatives. The CPMI is working hard on this.

3.1.2 The protection of privacy

A policy-maker stated that privacy and the protection of personal data are fundamental rights in the European Union. The EU General Data Protection Regulation (GDPR) is a benchmark legislative framework. This is not only the expectation of citizens. There will be a legal requirement that the same standards apply to the digital euro and this is also a matter of public trust in the digital euro. The protection of personal data does not equal anonymity, about which there has to be clarity.

3.2 Choosing the optimal model is difficult

A Central Bank official remarked that the retail space is complicated because of the criteria for defining the market segments there are to address. A number may not go in exactly the same direction and may even be in conflict. The first that is important is the desire to address the market segments where the anchoring to central bank money is the most threatened, but at the same time the desire is to address market segments where it is not too complicated to deliver a payment scheme with a settlement asset in central bank money. An additional consideration is the importance of network effects in the payments industry.

A Central Bank official noted that a Bank of England Treasury task force is examining what sort of CBDC would be optimal to meet a number of public policy objectives, what the risks are and how they could be mitigated. It is essentially an assessment of what the optimal model would be in terms of public policy, and how the risk could be mitigated. The aim is to produce a consultation paper by the end of the current year.

3.3 Implementing CBDC is not only a technological exercise and requires all parts to work together

A Central Bank official noted that the introduction of a CBDC is more than a technological or technocratic exercise. Money and the way in which money is expressed in society has always been a political issue. Innovation, robustness and financial inclusion are vital. Those are primarily for the political authorities, but central banks

need to work with them, which is why it is so important to bring the political and technocratic sides together.

A policy-maker emphasised that no one can do this by themselves. Different institutions have to work together while respecting their different missions and prerogatives which, politically, is quite a sensitive exercise. This cooperation has to cover the entire process. There is technical work going on but there is also a discussion ongoing at the political level of different institutions.

3.4 Higher costs are involved

A Central Bank official stated there is an eventual need for heavy investment on the proof of concept as a whole, rather than of little parts, with testing in a simulated environment, pilot testing in a real environment and finally introduction. Once at that stage the investment becomes very significant, so that is not pursued unless there is a very clear presumption that, if it can be made to work, this is where it is desired to go.

An industry representative stated that an answer was needed for the viability of the business model, because there is an increase of costs while new revenue cannot be seen in the model.

3.5 Will it be enough?

A Central Bank official noted that one argument that is made is that a CBDC is not needed as people are well served by the money that exists. In fact, the issue is whether they will be well served when technology enables money to be used in very different ways and builds in additional functionality that can no more be imagined now than how smartphones are now used could have been imagined 15 years ago. Central banks have to consider what will need to be provided for future use cases rather than whether something is needed at present.

This is why the interaction with the private sector is important. Any CBDC has to allow the private sector to use it to innovate and to build services that people will want in their digital lives. Without that, central banks will not be able to spot the user needs of the future.

3.6 Is CBDC a priority?

A Central Bank official stated that CBDC will not solve all problems and certainly not overnight. Value for money accepted in one jurisdiction still has to be exchanged for money that is accepted in another. Without a common global currency there will always be that problem of foreign exchange.

There are other parts of the payment system, the correspondent banking system and the linking up of faster payment services which also offer possibilities here, so the position should not be to leave everything as it is while waiting for an international CBDC to come along.

A Central Bank official emphasised that retail CBDC is not the only or the most urgent tool to make available and use to address the threat faced on the anchoring of central bank money on the payment system. Banque de France regards regulation as a top priority, and there are important initiatives from the Commission which are very welcome.

An industry representative stressed that Europe has a very well-functioning payment system currently. There is no urgency to issue CBDC for retail payments. Time needs to be taken to analyse this very closely. One concern is that it is sometimes said that there is a need to provide a safe form of public digital money to consumers and this is the safe form of digital cash. That can have the unintended consequence of making people feel that the digital forms of private money are not as safe as the digital forms of public money.

A Central Bank official noted that the Silicon Valley mantra for technical innovation of moving fast and breaking things cannot apply to central banks as they do not break things. This is a once-in-a-century change in terms of technical innovation. Though there is a need to move fast, it has to be done in a way that does not undermine credibility.

An industry representative stated that a digital euro is not optional; Europe has to move fast on this. Competitors like China and the US are coming onto the market.

3.7 Cyber threats

A Central Bank official noted that the cyber side is equally important to financial inclusion. The Riksbank is testing a retail CBDC that would function even without electricity or the internet. That would be a good complement to the whole payment system facing the new threats there are.

A policy-maker stated the right to the protection of personal data has to be balanced with other public policy objectives. It has to be ensured that the digital euro does not facilitate the illicit use of money in a digital world, so the AML/CFT framework, for example, has to be fully applied with regards to the digital euro.

An industry representative added that while privacy does not mean anonymity, intermediaries should be able to use data in a responsible way respecting citizens' privacy. If all data in day-to-day payment transactions is lost sight of then that would stifle growth and innovation in the private sector.

4. CBDC opening new opportunities and future progress in the financial sector

A Central Bank official remarked that the available models need to be assessed against an agreed set of principles, to evaluate the risks and some of the projects that are out there. There are some very exciting projects by the BIS on multiple CBDC (mCBDC) and how to link these things, to give jurisdictions thinking about CBDCs a view on the multilateral interlinking side so that they can build that into their considerations. There is a need to think internationally about how some of the risks in interlinking CBDCs could be managed.

4.1 Innovative ways to use digital currency

An industry representative suggested three innovative ways of using a retail digital euro. The first is that it is a replacement for cash, and that means a new way for

customers to pay with a digital cash-like payment. It is a way of greening the payments, depending on the choice of infrastructure and technology used. The second use case is for cross-border payments, including a reduction in the number of intermediaries. It is also a way to extend the euro's influence cross-border. The third use of a digital euro still has to be invented. If there is a digital euro, many start-up fintechs and other innovators will create new payment features that currently do not exist.

4.2 Requirements for success

An industry representative stated that Europe will have to move fast and ensure three major requirements. The first is about privacy and know your customer (KYC). Cash is a question of privacy and KYC for customers but also for financial institutions. The second requirement is to ensure the financial stability of banks will still be there. If a digital euro starts to replace traditional deposits then balance sheets will suffer, which has to be addressed. The third is that it has to be seamless. That means it being widely adopted and simple for customers, where 'simple' means all of the different ways of paying. The digital euro has to be inside wallets. The infrastructures have to be the same in terms of all digital wallets. For customers, the digital euro has to be as easy as any other payment.

A Central Bank official stated that the financial stability concerns and monetary policy implications of even retail CBDCs can be worked out. While not easy, they will be resolved.

An industry representative emphasised 'thinking beyond'. A digital euro should not just stay with the CBDC. It could become digital e-money and digital commercial bank money. With thinking beyond, there can continue to be joint work.