The digital euro for tomorrow's payment systems

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1 Introduction

Ladies and gentlemen,

Thank you very much for the warm welcome and your keen interest in BaFinTech 2022. This illustrates once again how important it is to exchange ideas in person.

This is particularly crucial when it comes to the innovative topics we are planning to discuss today and tomorrow. Researchers from Columbia and Stanford universities have recently published a study on this topic.[1]

It finds that the limited visual scope of videoconferencing constrains cognitive processes, and thus inhibits creativity. By contrast, creativity is better able to flourish when we interact in person, where thoughts can "branch out" and disparate information can be combined.

And we will need creativity when it comes to designing the payment systems of the future. Central bank digital currency, such as a digital euro, could play a key role here. Central banks all over the world are working on concepts and prototypes. Nigeria and the Bahamas have already introduced a central bank digital currency. China is conducting extensive pilot tests.

And so today I would like to talk about "why" a digital euro might make sense, "what" it could do and "when" we might be able to make a decision about it – in other words, the "timing".

2 Why might a digitial euro make sense?

So "why" do we need a digital euro?

The first reason is to do with strategic sovereignty in European payments. ECB (European Central Bank) President Christine Lagarde summed the objective up neatly, saying: "In a more digital economy, we also need to ensure the strength and autonomy of European payment systems."[2]

Although we can send and receive SEPA (Single Euro Payments Area) payments throughout Europe, we are still lacking a simple, universal, pan-European payment solution from European providers. Instead, once we cross an intra-European border (if not before), we rely on international card systems and internet payment procedures provided by bigtech firms in both bricks-and-mortar retail and online trading.

Bigtech players benefit from the reach of their platforms and are able to offer customised solutions to a wide range of user groups. However, they often set their own rules and standards, thereby restricting third-party use and access rights. This puts competition and market neutrality at risk in the world of payments, too. For example, the European Commission recently ruled that Apple was restricting competition by limiting NFC (Near Field Communication) access to contactless payments using Apple Pay. Buyers have less choice and innovation is significantly reduced.

We therefore should not allow platforms to bring about a situation in which payments of the future are carried out within fragmented "walled gardens". The move by Facebook, now known as Meta, to create Libra, a kind of private "global currency", was a wake-up call in this regard. Although the group has now abandoned this attempt and suspended the project, renamed Diem, for the time being, the idea is not off the table altogether.

We also need to keep an eye on developments elsewhere. In China, the e-yuan is already being extensively tested in practice.

And sooner or later, it could attain a similar status to Alipay, which is now accepted as a means of payment at popular destinations for Chinese tourists abroad. Ultimately, it could also become more important in international trade and payments, thus strengthening China's currency against the dollar or the euro.

In this context, however, it is not just about the currency, but also about technological leadership, dominant standards and multilateral platforms that could perhaps also be used by other countries for their central bank digital currency.

The second reason why a digital euro might make sense: people are paying less and less often with cash.

For example, in retail outlets, not even 40% of amounts transacted at the point of sale are settled using coins and banknotes. In 2019, it was 8 percentage points higher.[3]

Added to this is the growing volume of online trading with ever-newer business models – from delivery services to digital content streaming and payment options that are integrated directly into cars.

However, cash is so far the only form of central bank money that is accessible to the entire population. Cash cannot be used in e-commerce. The question therefore arises as to whether central bank money should not likewise be equally as universal and readily available in an increasingly digital world as cash is in the analogue world.

Third, a digital euro could later possibly also support digital processes, especially if it could be used in programmable environments.

This would potentially make fully automated payments based on smart contracts conceivable, including entirely new use cases in the Internet of Things.

I would like to add one final point. What do you think of when you hear the following? This technology "…. is really good for humanity and it's ultimately a win for each and every one of us. … every person, every family, and every business will experience more liberty, more freedom, more opportunities, more abundance, more power, and more wealth."[4]

The author, CEO of a US (United States) investment firm, was referring here to decentralised finance. But did we not already hear such – I would almost like to say "promises of miracle cures" – 25 years ago about the opportunities of the internet?

The point I would like to make is this:

The internet originally promised a decentralised form of free and equal communication between sovereign individuals. Today, much is concentrated in the hands of a few bigtech firms.

They are skilled at amassing and monetising rich volumes of data. As gatekeepers, they also determine who gets access to the platforms and who is denied it.

With the proposed Digital Services Act and Digital Markets Act,[5] European legislators are now trying to clamp down on gatekeepers and enable more competition, data protection and consumer protection. In doing so, they have sent an important signal – also internationally.

Decentralised finance, bitcoins, Ethereum and the like are also not as decentralised, free and equal as some all too eagerly proclaim.

For example, a study by the National Bureau of Economic Research has shown how the Bitcoin ecosystem is dominated by large and concentrated players, be they miners, investors or intermediaries.[6]

At the same time, the vast majority of users continue to rely on intermediaries in order to use decentralised finance (DeFi (Decentralised Finance)) or purchase crypto-assets. They are just different ones to before! If we do not want to leave the huge potential that can lie in the use of crypto-tokens and stablecoins in the hands of the few, we must therefore act swiftly.

First, there is a need for adapted regulation and supervision. The planned EU (European Union) Markets in Crypto-assets (MiCA (Markets in Crypto Assets)) Regulation provides a sound initial basis for this. Ms Rodolphe explained BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht)'s approach to DeFi (Decentralised Finance) in her speech and to the panel this afternoon.

Second, it may make sense to supplement private digital services by a central bank digital currency. The ECB (European Central Bank) and the national central banks in the Eurosystem, as potential issuers, enjoy a high level of public confidence. This brings us directly to the question of "what" a digital euro could deliver.

3 What could a digital euro deliver?

Alongside cash and deposits on accounts held with the central bank, a digital euro would be a third form of central bank money. It is capable, in principle, of providing efficient, modern, digital payments with pan-European reach. Properly designed and flanked by appropriate regulation, it could have the following advantages:

- A digital euro would safeguard the "anchor function" of government money in our two-tier monetary system. This means that the euro would continue to be available as a backup even in the face of highly dynamic market developments. The ECB (European Central Bank) and the national central banks in the Eurosystem would therefore be able to continue to ensure safe and efficient payments, in line with their mandates.
- It would be a useful complement to cash, as people would also have access to digital currency as legal tender that would be secure, cost-effective and stable in value.
- The digital euro could offer all groups in society quick and convenient access to a digital means of payment, even for the less "digitally native". Offline usability would also make sense.
- At the same time, the issuance of a digital euro would not be driven by business interests. The data generated by payments would not be commercially used by central banks.
- More than 340 million people would be able to use central bank digital currency to pay anywhere in the euro area, across borders and independently of international providers.

In the fast-growing payments market, this would create an additional, truly European product and thus strengthen European sovereignty. This would require a digital euro to be sufficiently scalable.

- Last but not least, a digital euro could play a part in the development of pan-European digital ecosystems.

Should the Eurosystem opt to introduce a central bank digital currency, we need to think through the consequences carefully. Central banks and supervisors need to analyse potential risks to the real economy, financial stability and monetary policy, weigh up conflicting objectives and come up with a design that best takes account of all of these factors.

The digital euro needs to be an attractive means of payment for all – for households, merchants and other businesses alike. This is its only avenue to success. In addition, the digital euro would have to be economically attractive for banks and other payment service providers in order for them to assume the role of intermediary.

At the same time, however, large outflows of deposits from the banking sector need to be avoided, as do sudden shifts to central bank money. One option might be to set limits on digital euro holdings or to set tiered interest rates. At the same time, these provisions must take into account the effects they may have on how the digital euro is accepted.

The following can be said of acceptance: the digital euro must serve the needs of users. In order to learn more, the Eurosystem created focus groups to ask various groups in society and smaller merchants what they would expect from such a means of payment.

Payers want a solution that:

- has as many areas of application as possible;
- is secure and reliable; and
- is accepted throughout the euro area and, if possible, beyond.

It should be easy and free to use, protect privacy and be secure.

According to the focus groups, merchants' main driver to adopt a new payment solution is customer demand. In addition, cost is an especially important point, though they also value speed, interaction with existing systems, reliability and security.[7]

Of course, we also have to take into account the needs of industry and the financial market with respect to the digital euro's design. At the same time, effective prevention of money laundering and terrorist financing is crucial.

It is for this reason that the Eurosystem partners with all stakeholders. The Euro Retail Payments Board (ERPB (Euro Retail Payments Board)) is a forum where central banks exchange views with representatives from both the supply and demand side at the European level. In Germany, these consultations take place within the framework of our payments forum.

The Eurosystem has additionally set up a Market Advisory Group, in which payment systems experts deliberate on the potential design and distribution of a digital euro. This is because intermediaries are indispensable. These are the people with the expertise and direct access to customers needed to create and distribute attractive private payment solutions based on a digital euro.

However, the digital euro debate is not just about user requirements, technical specifications and the macroeconomic opportunities and risks that we as central banks have to weigh up: the digital euro is a political project, too.

On 25 February, the euro area finance ministers explained the important role it can play in fostering innovation, strengthening European sovereignty and contributing to the functioning of the monetary union.[8]

The European Commission intends to present a legislative proposal which sets the legal framework by the beginning of 2023. As part of this, it is launching a public consultation, which will be open until 14 June.[9] You are also welcome to take part!

4 When might a decision on the digital euro be made?

In July 2021, the ECB (European Central Bank) Governing Council agreed to set up a formal project on the digital euro. As a member of the High-Level Task Force, I am closely involved in this process.

Since October 2021, Eurosystem experts have now been working to address specific issues concerning the potential design of a digital euro, in what is known as the investigation phase.

We are examining various use cases for consumers, enterprises and, where appropriate, government. Machine payments in the Internet of Things are also conceivable, but may only be possible during a later phase.

Potential functionalities, conceivable technical infrastructure, as well as effects on the market and the role of intermediaries also feature in the analysis.

In addition, we are addressing the necessary legal basis for a possible rollout. Mechanisms are also being developed to ensure high cyber security standards and operational resilience.

Then, at the end of 2023, the Eurosystem will decide whether to enter the realisation phase, which could take three years. This phase will comprise the development and testing of the technical solutions and frameworks needed for the issuance of a digital euro.

Regardless of the decisions that are made, one thing is clear: the Eurosystem will continue to offer cash in the future. The digital euro will complement cash, not replace it.

5 Conclusion

Ladies and gentlemen,

We need to exploit the potential of digitalisation, support the innovative power of European enterprises and provide the basis for payment solutions that can be used by all groups in society.

In my view, banks and other payment service providers will remain indispensable at the point of service.

It is particularly up to you, ladies and gentlemen together in this room, to leverage your ideas and creativity in order to advance suitable solutions. We have to be bold. Because, to quote Democritus, "Boldness is the beginning of action, but fortune controls how it ends."

Footnotes:

1. Brucks, M.S., Levav, J. (2022). Virtual communication curbs creative idea generation. Nature 605, 108-112. https://doi.org/10.1038/s41586-022-04643-y *[https://doi.org/10.1038/s41586-022-04643-y]*
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4. Hendrith Vanlon Smith Jr, US (United States) banker, author, politician, CEO investment company Mayflower-Plymouth Capital LLC, source: https://www.goodreads.com/quotes/ *[https://www.goodreads.com/quotes/]*
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