

Vitas Vasiliauskas: Central bank digital currencies

Speech by Mr Vitas Vasiliauskas, Chairman of the Board of the Bank of Lithuania, at the Reinventing Bretton Woods Committee conference "Managing the Soft Landing of the Global Economy", Washington DC, 12 April, 2019.

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Good morning, dear Ladies and Gentlemen,

First of all, let me thank the organizers for the opportunity to participate in this conference. I must say that I was pretty surprised when I received the invitation to cover the topic of central bank digital currencies – or CBDCs. This probably happened because the Bank of Lithuania has been seen lately as one of the frontrunners in the broader FinTech domain.

Yet despite being an innovation-friendly regulator, in terms of CBDCs, we do not have much in-house projects to share, at least at this point. This is apart from the digital collector coin of course, which is quite another thing.

However, I will do my best to cover the topic: in my view, issuing CBDCs represents one of the most intriguing and complex ideas in current discussions on the monetary system.

Let me begin with a basic question: what exactly are CBDCs?

Well, it is in fact easier to first say what they are not.

Under the current financial architecture central banks issue two sorts of money: currency in circulation in the form of the good old banknotes and coins, and digital money, available as reserve or settlement accounts with the central bank. Accordingly, households and businesses cannot hold claims on the central bank in a digital form. The banks and certain other financial or public institutions can.

And yet, when we talk about the concept of CBDC, we have in mind something new, something unlike what we currently have.

The CBDC would be a novel type of central bank money. Although also digital, it should be distinguished a traditional reserve account. The CBDC would also be fundamentally different from private crypto assets. This is because it would be... money! It would serve as a medium of exchange, a means of payment and a store of value, just like the current forms of central bank money.

It is thus simple to define what the CBDC is not: not a conventional reserve account, and not a private crypto asset. But once you start explaining what it is, the picture gets complicated. The complexity lies in the variety of combinations of different properties that the CBDC can feature.

To somewhat simplify this complexity, let us take one key property – accessibility. The debate is whether CBDCs should be retail, or wholesale only currencies, or perhaps both. In the first case, the CBDC would be available for the general public. The accessibility to the wholesale currency would be restricted to a limited counterparty circle, mostly financial institutions. In between these two general CBDC types, multiple theoretical sub-models also exist.

One example would be the value-based wholesale CBDC. Some argue it could be run on a distributed ledger. In such case, it would replace or complement reserves at the central bank with a restricted-access digital token. A token would be a bearer asset, meaning that during the transaction the sender would transfer value to the receiver, without intermediaries. This is

something fundamentally different from the current system in which the central bank debits and credits the accounts without transferring actual values.

But here is only one of several possible scenarios for the wholesale CBDC.

Another basic variation would be the value-based retail CBDC. In this model, the value – theoretically – could be stored locally, on some sort of device or a mobile wallet. It could thus resemble cash – universally available digital cash, guaranteed by the central bank.

We may also discuss account-based retail CBDCs. These would simply come in a form of an account at the central bank, available to each and every member of the society.

One might ask: why would we ever have to bother going through this classification? For me, knowing the basic models allows to better understand the driving factors and motivations behind the idea.

Let us turn first to the wholesale currency. According to the Bank of International Settlements (BIS), some central bank-operated wholesale payment systems are at the end of their technological life cycles, making the current system subject to errors. Thus the rationale for the wholesale CBDC could be to enhance payments and securities settlement efficiency, as well as to reduce counterparty credit and liquidity risks.

In terms of the retail CBDCs, different motivating factors are in play. Clearly, we live in an age characterized by the rise of electronic payment methods. Although these are often more convenient and efficient than paper banknotes, such digital payment solutions are based on commercial bank money.

The amount of cash in circulation is declining in some countries. This could mean that one day – even if it seems like a distant prospect – every single person will have to have an account with a private entity just to make payments. Unfortunately, this may lead to increased levels of financial exclusion. Note that we still have vulnerable groups which, for one reason or another, are underbanked.

Therefore, amid the evolving payments market, one of the key motivations for the retail CBDC is to ensure people's continued access to the central bank money.

Beyond payments, CBDCs could have important and, perhaps, desirable implications in other areas as well.

Some say that issuance of the interest-bearing retail CBDC could potentially improve the transmission of monetary policy – if indeed it is used widely. First, it may strengthen the pass-through of the policy rates to deposit and lending rates. Second, the CBDC may alleviate the effective lower bound constraint, making it possible to go deeper into the negative territory.

Arguably, the retail CBDC could also have positive effects on financial stability. Commercial bank money bears liquidity risks: for instance, the risk of commercial bank default. Central bank money – by definition – is more secure than claims on any private financial institution.

This holds true despite the existing deposit insurance schemes and no matter how sound the banking system is. Even the finest financial supervisor will not beat the textbook truth.

Knowing this, the retail CBDC would further ensure that the funds stored in bank accounts can indeed be easily converted to risk-free central bank money. This could provide confidence in the

monetary system.

Dear colleagues,

I am not sure if a digital coin has a reverse side. But a proper physical one certainly does. So let's look at the other side of the coin – the underlying risks and uncertainties related to the CBDC.

Let me begin with the retail version of the currency. As a matter of fact, we could have introduced it a while ago, at least the account-based model. The technology to do so is available. However, this has not been done, and probably for a reason.

The issue here is that central bank money being risk-free also means that the retail CBDC would be a safe asset. As such, it might essentially substitute for, let's say, bank deposits. Being more secure, and more convenient than cash, it could also be more attractive relative to a claim on a private bank.

Such a substitution effect could facilitate a flight towards a central bank. In the extreme scenario, CBDCs could encourage “digital” sector-wide bank runs which could occur in an unprecedented speed and scale.

The role of the central bank would probably have to change as well, to the point where it may have to extend credit to the economy. Here I have to admit that central bankers tend to be competent officials. However, market forces are generally more efficient in allocating resources.

As the CBDC crowds out cash and commercial bank deposits, a larger central bank balance sheet may be needed to maintain bank reserves through liquidity-injecting open market operations. This might increase credit risk for the central banks, especially if it becomes necessary to widen collateral eligibility. Larger-scale accumulation of assets could also distort financial markets.

There also other more general drawbacks applicable to most types of the CBDC.

First, the robustness of the proposed underlying technologies for issuing the CBDC is quite uncertain. For instance, the DLT is relatively immature and we are still learning the way it operates.

Also, the crucial issue is the adherence to the money laundering requirements. Given the ease with which large amounts can be transferred electronically, how are we to apply the AML standards to the anonymous forms of CBDC? The AML compliance would place a huge prevention burden on central banks, on any level of anonymity of the currency.

Having taken the bird's-eye view, let us now zoom in at some of the positions of central banks.

The Riksbank in Sweden seems to be the closest to actually issuing a CBDC, the so-called e-Krona. The bank has been working on it since early 2017, and a possible pilot program is the pipeline. The underpinning argument is that the state needs to maintain the role in the payment system, considering the trend of dramatically declining cash use in the country.

Interestingly, the central bank of another Nordic country – Denmark – is on the opposite side of the pole. It has announced that it has no plans to issue CBDC since it would not improve the existing payment solutions and may also increase financial stability risks. Such divergence of opinions in otherwise a relatively homogenous region only illustrates the controversial nature of

the issue at hand.

Beyond the discussion on Sweden and Denmark, only a few national central banks (with the central bank of Uruguay being a notable example) globally have taken real practical steps towards developing CBDCs or have an intention to issue them in the medium term¹. Most of the activities have been limited to conceptual research or initial proof-of-concept experiments.

With regard to the Bank of Lithuania, we are generally fond of financial innovation. For instance, we even have plans to open a new generation technological sandbox for testing blockchain solutions (called LBChain).

We therefore do not reject the potential that CBDCs carry. Yet at this point we remain cautious.

I also have to stress that the Bank of Lithuania is part of the Eurosystem. For us, any significant step in the field of CBDCs would require action at the ECB level. For now, this seems like quite a distant prospect.

In any case, our future positions in this domain will be based on a rigorous cost-benefit analysis. We will take into account the possible alternatives. For instance, the Bank of Lithuania already provides an effective payments infrastructure titled Centrolink. The system supports 24/7 instant payments and is accessible for all payment service operators, including FinTech companies. By creating a level playing field for different types of market players, we aim to encourage competition. This creates the necessary conditions for the emergence of new and efficient private retail payment products.

In some sense, such developments limit the potential added-value of the retail CBDC.

Therefore, assessing the balance between risks and benefits from the perspective of generally conservative central banks, the wholesale CBDC seems like a more viable option going forward.

However, we feel the need to acquire a better theoretical understanding of the way any sort of CBDC would function, and learn from practical pilot experiments. Notably, research and monitoring carried out by international organizations, such as the IMF or standard-setting bodies, could play an important part in finding an optimal future design.

¹ As shown by the survey conducted by the Committee on Payments and Market Infrastructures (CPMI) last year.