Denis Beau: The role of cryptoassets in the payment system

Speech by Mr Denis Beau, First Deputy Governor of the Bank of France, at the Official Monetary and Financial Institutions Forum (OMFIF) Meeting, London, 15 October 2019.

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Ladies and gentlemen,

The payment landscape is currently dominated by a bank-based ecosystem, an interchangeable use at par, of commercial bank and central bank money as settlement assets, and an anchor role for central bank money which is the sole settlement asset with legal tender status. It is certainly an understatement to say that this landscape may be significantly altered given technological developments and changes in consumer preferences underway. As these developments and changes unfold, both the « front-end » arrangements that ensure the interaction between the payer or payee and the payment service provider, to initiate or receive payments, and the « back-end » arrangements that transfer information and funds between the payer and the payee, will change. With the emergence of so called « cryptolassets » like the bitcoin and so called « stablecoins », **we may also see new settlement assets develop which may compete against and possibly, according to their promoters, replace commercial and central bank money as settlement assets at the center of our payment systems**.

For the time being, in spite of their rapidly growing number and variety, crypto-assets only account for a marginal share of assets held by economic agents. In October 2019, according to CoinMarketCap, total outstanding crypto-assets represented EUR 205 billion globally; in comparison, the euro area's M3 monetary aggregate amounted to EUR 12.5 trillion in August 2019.

In addition, **the diversity of views on the contributions that crypto-assets can make to the efficiency and safety of our payment systems mirrors the one in their forms**. Some see crypto-assets as a disruptive innovation poised to radically change the way our monetary and financial system operates, and changing it for the better. Others believe that for the time being they do not provide a new and attractive answer to the classical trilemma payments solutions face between low cost, high execution speed and low risk, and would change the way our monetary and financial system operates for the worse.

To share with you a few thoughts on this debate, speaking from the perspective of a central banker and a supervisor mindful of the benefit of innovations but also of the risks they could bring to financial and monetary stability, I will focus my remarks on:

1- whether and how crypto-assets can contribute to improve our payment systems,

2- the public policy challenges they raise, in particular for central banks, and how to address them.

I – Crypto-assets and the future of payment systems

1- In the payment instrument landscape, there is currently a **twin trend**: **the share of cash payments dwindles while cashless payments undergo a transformation driven by behavioral changes and technological innovation**. Shifts in consumption patterns, such as the growth of e-commerce, are fueling a steady decline in the use of cash in transactions, while the use of electronic payment instruments and systems is increasing, rooted in the current surge in global digitalization, along with the development of internet-based technologies and multi-functional technological devices.

However, the decline of cash payments needs to be put into context because, if the downwards trend is undisputable – the volume of banknotes returned by the public to cash processing firms fell by over 10% between 2012 and 2017, -banknotes still dominate face-to-face transactions- particularly small-value ones. Banknotes remain the main payment instrument in Europe by number of transactions, accounting for 79% of the latter in the euro area and 68% in France (54% and 28% respectively in value).

The increase in the use of electronic payment instruments and systems is developing along **four different pathways**.

First, **the sophistication of internet technologies and devices for transactions**: the number of channels used to initiate and accept payments has increased significantly. Contactless payments and mobile payments are some examples.

Second, **the availability of payment services at any time**: payment services are becoming more available, ignoring physical borders and time constraints to satisfy customer demand for instant, continuous and uniform payment services, as economic agents become ever more mobile. Instant payments in Europe are for example designed to be executed in less than 15 seconds compared to the duration of 24H to 48H for traditional payment orders. This improvement in the functioning of payment systems represents a huge step for liquidity circulation.

Third, **a broader range of participants**: the payments market has expanded to include competition from big techs and major retailers, which are following a wide range of strategies in this respect. The flipside of this trend is that the increasingly global nature of the market is raising sovereignty issues, including those relating to the control of data when the providers are located outside the region or jurisdiction where they offer their services.

Last, **the crave for blockchain technology**: all around the world, market participants and big techs have launched or are preparing to launch new projects for tokens designed to serve as means of payment or settlement using the blockchain technology. We all have in mind first-generation crypto-assets like Bitcoin and Ethereum, but there are now many others coming or foreseen, like the JP Morgan Coin, the UBS' Utility Settlement Coin or The Facebook' Libra.

2- The development of crypto-assets are part of the innovations fueled by these underlying trends affecting payment instruments and systems, combining the search for anonymity, management of non-intermediated peer-to-peer payments and the use of entirely web-based technologies. But they also have their specificities. Actually, **they have unique financial, monetary and technical features which set them apart from the currencies and payment instruments issued by financial institutions and central banks**. Regarding the first wave of crypto-assets which have been brought to the market, they are not a claim on any natural or legal entity, they do not have a guaranteed fixed exchange rate with the currency issued by the central bank and they rely extensively for their circulation on blockchain, a distributed ledger technology system using cryptographic techniques. A second wave might develop in the form of « stablecoin » with a potentially global reach, some of which sponsored by large technology or financial firms, whose distinctive feature, beyond their potentially large size and reach, is that they seek to stabilize their value by linking it to an asset or a pool of assets.

What are the specific benefits of such blockchain-based initiatives?

First, **the blockchain technology and more broadly the DLT could help answer market's needs and demands**. There is in particular a strong demand for quick and safe cross-border payment solutions, available 24h/24, enabling smooth exchanges. There are a number of local instant payment solutions already in place in a number of countries in particular in Europe, available 24/7, settling retail payment orders up to 15 000 euros in less than 15 seconds. A certain number of initiatives follow the European Payment Council SCT^{inst} scheme. The Eurosystem has even launched its own service, under the name of TIPS to help ensure a pan-European reach.

However, these solutions are costly for end users and, at the global level, we are far from having a network (or set of interconnected networks) that would support quick and cheap transfers of funds.

Second, and in close relation to the previous point, **the DLT could help remedy the current limits of the existing wholesale market infrastructures**. Those wholesale infrastructures also have various shortcomings. Since RTGS are not interoperable, correspondent banking is often the only solution to transfer fiat money across borders. However, correspondent banking is costly, and the perimeter of the AML/CTF and KYC checks is in some cases uncertain for the counterparties of a payment order. Furthermore, for security reasons, the access to payment systems is limited to a certain type of entities (mainly credit institutions, investment firms, ancillary systems, etc.). Finally, cross-border payments lack traceability. The DLT could also help improve current aspects of wholesale clearing and settlement mechanisms and facilitate in particular gross and simultaneous Delivery-versus-Payment processes, cross currency settlements and resilience and recovery from operational incidents.

If the issues at stake are not the same in developed as in developing countries, the objectives of crypto-assets, and in particular stablecoins, are the same everywhere. They seek to shortcut central authorities and more generally financial intermediaries. However, they bring their own problems.

3- Indeed, it is quite clear that **crypto-assets undergoing technical and economic trials bring about not only opportunities to improve our payment systems but also material risks which on the contrary might weaken them if unaddressed**, both from an efficiency perspective and a safety perspective through **the introduction of new sources of fragmentation, instability and fraud**.

As many central bankers have pointed out, **today's crypto-assets do not satisfactorily offer the qualities expected from a settlement asset to be used interchangeably with commercial bank money and central bank money, let alone to displace central bank money as the central reference of value, as the privileged settlement asset for wholesale transactions and as the last recourse settlement asset given its legal tender status**. The reasons for this assessment are well known and documented and boil down to stressing that there are misnamed as « currencies » for three reasons:

First, **their value fluctuates enormously**, preventing them from being used as units of account. For instance, the value of Bitcoin (not however representative of all crypto-assets) went up to more than 19 300 euros in December 2017 and has since fallen down to 7400 euros in September this year. And stablecoins represent an imperfect improvement in this field: their value aims to be relatively stable based on backed assets, but in fact fluctuates, in particular if they are not backed on safe assets. As a result, very few prices are denominated in crypto-assets and not many large brick-and-mortar or online retailers accept bitcoin for example, although there are some exceptions [i.e. showroomprivé.com, France's second largest flash sale web retailer, which has accepted bitcoins since 2014].

Second, **as intermediaries in exchanges, crypto-assets are far less effective than a settlement asset with legal tender status**, insofar as (i) their price volatility makes it hard to use them as a means of payment, (ii) they generate transaction fees that are far too high for simple retail transactions (for instance, the redemption fee on Tether is 3%), and (iii) they offer no guarantee of a refund in the event of fraud.

Third, the fact that they have no intrinsic value and that they offer no guarantee that they can be converted at par upon demand with commercial bank money or central bank money means that **they cannot be used to create trustworthy stores of value**.

In addition, **crypto-assets « front end » and « back-end » payment arrangements are significantly exposed to risks of various nature, including legal, financial, operational and compliance risk** with money laundering and terrorist financing, consumer and investor protection, which need to be seriously addressed if they are not to become the « weak links » in our payment systems, with the risk that they undermine the safety of the whole payment chain. **From that perspective, stablecoins of potential large size and reach may pose additional challenges of system-wide importance, to competition policy, financial and monetary stability**.

II- Public policy challenges, in particular for central banks, and how to address them.

1- In that context, various courses of action are available to the public authorities.

The first would be to ignore crypto-assets. But even if the volumes in play remain small and do not represent a threat to financial stability, the risks that I mentioned earlier must be addressed. This is all the more true for stablecoins which raise the most serious issues and deserve attention and responses before they possibly meet a significant market demand.

The second course of action would be to ban crypto-assets outright because of these same risks. Several countries have already gone down this route, including China in 2013 and Russia in 2017.

A third option, and the one that has so far been the preferred response in Europe and France to innovations with the potential to change the payment services market, is **to establish appropriate regulations that make it possible to reconcile two key imperatives:**

- **First, address the risks that I mentioned**
- **Second, preserve the potential for technological innovation offered by crypto-assets**

To that end, should we reconsider or reaffirm the two current core features of our payment systems (see: the role of central bank money in payment systems-CPSS 2003)? Namely:

- the coexistence and competition of central bank money and private money (mainly so far commercial bank money) as settlement assets
- the anchor role of central bank money

My answer to this question would be to **reaffirm and therefore preserve those core features which have served well the public interest of financial and monetary stability. But this does not mean that we should aim for the status quo both in terms of regulatory and oversight frameworks and in terms of services that central banks should offer** in providing central bank money as a settlement asset in payment systems.

2- **A number of risks to which crypto-assets payment arrangements are exposed are familiar and in this respect, existing regulatory and oversight frameworks only require to be adapted to address them**. To that end, three key issues to be considered are the legal qualification of crypto- assets, venues used to exchange them and the conditions under which a crypto-asset can be exchanged into another one, in commercial bank money or in central bank money. France has already moved into that direction with the adoption of a regulatory regime for blockchains, tokens and ICOs. After a Blockchain Ordinance authorizing some specific security tokens to be seen as securities when they are not registered in a central security depository, France adopted in May this year a legislation on crypto-assets, referred to as the PACTE bill. The bill includes henceforth provisions on blockchains, tokens, ICOs and providers of crypto-asset services.

However, **adaptation of local national regimes should fit into a larger regulatory framework to be adopted at global level**. There is indeed a need for overall consistency to prevent regulatory arbitrage under the “same activities, same risks, same rules” principle, and also to address risks that fall outside existing frameworks, including risks for fair competition and for transmission of monetary policy. Indeed, in July 2019, G7 Finance Ministers and Central Bank Governors agreed that possible stablecoins initiatives must meet the highest regulatory standards, be subject to prudent supervision and oversight and that possible regulatory gaps should, as a matter of priority, be assessed and addressed. Accordingly, at global level, several groups are working on a global regulatory and supervisory approach towards crypto-assets and a G7 working group is finalizing a report investigating specifically the impact of global stable coins, which should be published shortly.

3- But adapting the regulatory framework might not be enough. **To preserve the advantages** of **multiple issuers of settlement assets in providing innovative, efficient and safe means of payment, central banks as issuers of the reference settlement asset may contribute further in revisiting and improving the conditions under which they make available that settlement asset**.

In that perspective, a possibility regularly mentioned is that central banks issue their money in digital form, the so-called concept of Central Bank Digital Currency (CBDC). It is important here to draw a distinction between a retail CBDC, accessible to the general public, and a wholesale CBDC, accessible only to financial intermediaries.

As regards retail CBDC, different motivations to introduce it can be considered.

One motivation could be for instance the need to cope with a significant demand for digital payment solutions and avoid that the supply be ensured only by private payment structures (e.g. Libra) or a non-euro area CBDC, which may achieve significant market power, thus posing risks to security and financial stability. Another motivation could be the political will to ensure the accessibility of central bank money for the general public, in particular in countries where the use of cash in payments is declining. There may be other reasons.

But my feeling is that, at this stage, **the “business case” for pushing a retail CBDC at the scale of the Euro area is somehow weak**. I don’t believe anyhow that such an initiative should be conceived as a mean to counterbalance private initiatives such as Libra, keeping also in mind that the weaknesses the latter intends to address in cross-border payments may not be more easily handled by such CBDC. Furthermore, the macroeconomic implications of the issuance of a CBDC must be sufficiently well understood and anticipated before the introduction of CBDC for retail purposes can be considered.

Motivations for a wholesale CBDC are of a different nature. We already begin to observe a tokenization of financial assets (securities or means of settlement) exchanged between financial actors. The risk there is that such a trend leads to disorderly approaches and heterogeneous adaptations of market infrastructures, in particular when it comes to the modalities of settlement. Several initiatives or projects are in effect considered by the industry in the post-trade area, pointing to the role central banks could play in this regard, as they have done in the past. Against this background, **the potential role of a wholesale CBDC is in my view worth considering if not desirable**.

But all in all, I would say that, whatever the final orientations taken, **we shouldn't refrain from experimenting the different forms of CBDC**.

Another contribution for central banks could be to **help address one the major failings of the current payment systems which is cross-border retail payments**, which is one of the drivers of the development of crypto-assets.

One solution to the weaknesses of private initiatives in the field of cross-border payments could be to interconnect these systems. It is technically and legally feasible for a given area, for example, in the euro zone. However, at the global scale, between systems of different areas, it is more complex, in particular when several currencies are involved.

Another domain where progress can be made is promoting the adoption of common international industry standards facilitating the interoperability of payment systems at global scale. In particular, it would be necessary to foster the harmonization of domestic and international regulations with respect to AML/CTF, KYC. Developing support programs for countries with underdeveloped payment infrastructures could also enhance financial inclusion by strengthening the development of local domestic and cross-border payment systems.

We need to work further on these important issues – and will do so.

In conclusion, it is hard to anticipate the role that crypto-assets might play in the payment system of the future, especially since the characteristics and features of these assets look set to change considerably. While it is clear that crypto-assets undergoing technical and economic trials bring about opportunities to improve our payment systems, they can also bring material risks to our payment systems which, if unaddressed, might introduce new sources of fragmentation, instability and fraud. In that context, beyond contributing to the adaptation of the regulatory framework to address those risks, central banks may contribute further in revisiting and possibly improving the conditions under which they make available central bank money for settlement purposes. The intrinsically digital and global nature of crypto-assets means however that a coordinated international approach is necessary to be effective in addressing the issues raised by crypto-assets. The work currently underway by the G7 and also the FSB, under this aegis of the G20, should therefore be seen as important and promising.

Thank you for your attention.