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“**Where do crypto-assets fit into our payment system?”**

Ladies and gentlemen,

Bitcoin was valued at USD 0.001 less than a year after its launch in October 2009. Today it is worth USD 6,500, down from a peak of USD 19,500 in December 2017. The explosion and volatility in Bitcoin's price have done much to fuel the media coverage surrounding **the growth of the new monetary and financial instruments known as crypto-assets**, of which Bitcoin is merely the best known. In fact, there are now over 2,000 of these types of assets worldwide.

Initially designed as online instruments of exchange, these assets have gradually gained a foothold in the real economy with the development of services that allow them to be bought and sold against currency issued by central banks or financial institutions, to be held, to be used as instruments of exchange against other assets and, with the recent emergence of Initial Coin Offerings (ICOs), to be employed as investment and financing instruments.

Issued and stored in electronic form, these assets have specific features that US-based comedian John Oliver jokingly summed up in his *Last Week Tonight* show on 11 March 2018, as "everything you don't understand about money combined with everything you don't understand about computers". **His comments reflect the fact that crypto-assets have unique financial, monetary and technical features that set them apart** from the currencies and payment instruments issued by financial institutions and central banks and which form the foundation of our monetary system in Europe. They have no issuer for whom the assets act as a guarantee of value. They do not have a guaranteed fixed exchange rate with the currency issued by the central bank, which forms the basis of our payment system because it is the only one with legal tender status, i.e. which must be accepted by everyone. And they rely for their circulation on blockchain, a decentralised and distributed ledger system using cryptographic techniques.

These unique features largely explain the widely varying views that we hear today about the outlook for crypto-assets, keeping in mind that, for now, they constitute a marginal share of holdings of economic agents and within the global economy. At their peak in January 2018, total outstanding crypto-assets represented EUR 330 billion; in comparison, the euro area's M1 monetary aggregate amounted to EUR 7.5 trillion. Some see crypto-assets as disruptive innovations poised to radically overhaul the way that our monetary and financing system works, changing it for the better. Others believe that these are innovations that still need to find their market. Or, to quote from a special issue on the subject published in September

2018 by *The Economist*, a weekly economics magazine: “Cryptocurrencies look like a solution in search of a problem.”

Given all this uncertainty, I would like to speak today from my perspective as a central banker, supervisor, mindful of innovations that could affect the effectiveness and security of our payment system, since this is a determining factor in the stability of our monetary and financial system. Accordingly, I would like to share a few ideas and thoughts about **where crypto-assets fit into the changes taking place in payment methods**, and about **the supervisory challenges posed by these new assets**.

I. To begin with, let me set the development of crypto-assets in the broader context of the changes affecting payment instruments. Supporting this transformation is a core activity for us at the Banque de France, in accordance with our statutory tasks of ensuring the security of cashless payment instruments as well as the quality of banknotes in circulation. Since banknotes are the only payment instruments with legal tender status, we have to make sure that they remain a secure and easily accessible payment instrument for anyone who wants to use them, especially the most vulnerable people in our society. Given this twofold mission, we base our activities on a principle of neutrality and freedom of choice, which in turn means that we cannot favour one payment instrument over another and do not seek to influence people’s behaviour or preferences.

1) In the payment instrument landscape, we are currently seeing a **twin trend as cash payments go down, while cashless payments undergo a transformation driven by behavioural changes and technological innovation**.

Shifts in consumption approaches, such as the growth of e-commerce, are **fuelling a steady decline in the use of cash in transactions, while the use of electronic payment instruments is increasing**. Statistically speaking, the volume of banknotes returned by the public to cash processing firms fell by over 10% between 2012 and 2017. However, this decline needs to be put into context, because banknotes still dominate face-to-face transactions, particularly small-value transactions, as shown by recent Eurosystem research, which found that banknotes continue to be the main payment instrument in Europe and France by number of transactions, accounting for 79% of transactions in the euro area and 68% in France. In value terms, they make up 54% and 28% respectively.

At the same time, we are seeing **a rise in electronic payments, which are not merely growing but also developing along four different pathways**:

- ⇨ **Spreading technology**: advances in internet technologies and devices have paved the way to increase the number of channels used to initiate and accept payments. The ways in which these technologies are used are becoming more diversified and increasingly digital. They are no longer confined to cards, as we are seeing with the rise of mobile payments.
- ⇨ **A broader range of participants**: I am thinking here about how 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 the increasingly global nature of the market, which is raising sovereignty and independence issues, including the question of control of data with respect to the American and Chinese tech giants.
- ⇨ **Payment is becoming less prominent**: nowadays the actual act of paying is becoming less visible, as it is combined seamlessly within the overall transaction process to minimise the impact on the payer. We are seeing this shift in online payments, for example, which are designed to be increasingly fluid through solutions such as one-click buying.
- ⇨ **Availability of payment services**: 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.

2) **The development of crypto-assets naturally forms part of these underlying trends** affecting payment instruments, combining the search for anonymity, management of non-intermediated peer-to-peer payments and the use of entirely web-based technologies.

But crypto-assets are also different because of their financial, monetary and technological features that I mentioned in my introduction. These clearly create opportunities to improve payment services in at least three ways, by:

- **Harnessing the underlying blockchain technology to improve or supplement existing processes**: the Banque de France is already employing blockchain technology to improve industry processes. For example, we are using a blockchain project called MADRE to assign SEPA Creditor Identifiers, which are needed for creditors to issue direct debits.

- **Helping to remedy market inefficiencies:** this could be done in the area of international multi-currency payments, for example, with a view to improving the conditions under which individuals transfer funds abroad.

- **Diversifying project financing methods**: a prime example would be ICOs, which have enabled swift and large-scale fundraising in the network technologies sector in the past two years.

3) Yet for all that, can crypto-assets become true currencies that will revolutionise our payment system, providing the decisive innovation that will lead us to the cashless society that some people are predicting and even hoping for?

For the time being, this seems unlikely because **existing crypto-assets are far from perfect**. As many central bankers have pointed out, today's crypto-assets do not satisfactorily offer the qualities expected of a currency and cannot be considered as such:

- First, **their value fluctuates enormously, preventing them from being used as units of account**. 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 currency 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, and (iii) they offer no guarantee of a refund in the event of fraud.

- Third, **the fact that they have no intrinsic value means that they cannot be used to create trustworthy stores of value**.

In addition, crypto-assets may be conduits for financial risk, security risk and especially risks of cyber-attacks, money laundering and terrorist financing. These would represent major risks for users and hence for the orderly functioning of our payment system if crypto-assets were ever to play a major role in that system.

II- In this complicated context, with crypto-assets undergoing technical and economic trials that offer opportunities but also present material risks for our payment system, should we consider establishing a regulatory framework and supervisory approach and, if so, how should we go about this?

1) 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. 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, notably with a view to ensuring an adequate level of protection for participants, whether they be investors or consumers.
- ⇨ Second, preserve the potential for technological innovation offered by crypto-assets.

These two imperatives are mutually beneficial. **Adopting a framework that protects participants in the real economy will help to increase their confidence in the mechanisms associated with crypto-assets, thereby promoting growth in the new assets**.

2) **If we opt for creating a regulatory framework, what should go into it? That is precisely the topic of a number of debates currently being conducted** around France's new PACTE Bill. The proposed legislation includes an approach to crypto-assets based on two pillars. The first specifically addresses the question of ICOs, proposing an optional labelling system. Under this system, a company planning an ICO would be able to ask the AMF to label the offering. This optional label would give the offering greater credibility and reassure potential token buyers about the serious nature of the project and the associated financing arrangements.

The second pillar concerns providers of crypto-asset services. These essentially include venues used to exchange digital assets against legal currency, and providers of custody solutions for digital assets. To satisfy anti-laundering obligations, these platforms must be registered. But to address risks relating to security, market integrity and price manipulation, an optional label could be granted at the service provider's request by the AMF after a more in-depth investigation, in order to provide security for the service offered to users. The regulation of venues used to exchange digital assets for legal currency, in France and elsewhere, is a key issue for obvious reasons, as these platforms are the interface between the virtual and real worlds and hence where risk can spread from the former to the latter.

As you are doubtless aware, the authorisation and labelling schemes mentioned in the PACTE Bill are optional. But there is an exception when it comes to anti-money laundering and terrorist financing (AML/TF) mechanisms. European regulators have been firm in their resolve not to compromise in any way on this matter. Accordingly, the Fifth European Anti-Money Laundering Directive makes all participants handling digital assets subject to applicable AML/TF provisions. This is consistent with the system in place since 2014 in France, which states that an exchange of crypto-assets in euro requires a payment services provider authorisation, and, accordingly, compliance with AML/TF rules.

To take account of the experimental phase that crypto-assets are presently in and to satisfy the key requirements of ensuring payment security while encouraging innovation in the area, a possible alternative to the optional approach currently favoured by the PACTE Bill would be to maintain a proportional approach. This has been the basis for the European regulation of payment services up to now and consists in setting a mandatory framework whose requirements are adjusted according to the nature, development stage and risk of the associated services. This approach was employed under the Second Payment Services Directive (PSD2) to regulate the market development of account aggregators and payment initiators.

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. Right now, **there are major limitations to their everyday use in retail payments, and crypto-assets still have to prove their attractiveness in this regard, particularly since an extensive range of payment solutions is available, and these solutions continue to modernise** to address the need for instant exchanges, with, for example, the introduction of mobile payment solutions and instant transfers. **That said, the underlying technologies that I mentioned, and especially blockchain, open up interesting development prospects for major payment and market infrastructures**.

Uncertainty over the future of crypto-assets in the world of payments does not relieve us of the need to regulate their development, given the attendant risks. **Adopting a framework that protects participants in the real economy will help to increase their confidence in the mechanisms associated with crypto-assets, thereby promoting growth in the new assets. The intrinsically digital and global nature of crypto-assets means however that a coordinated international approach must be taken to avoid creating an opportunity effect**, because experience tells us that participants can easily relocate to another territory offering more flexible laws. Several international organisations have set up working groups to explore this question, under the leadership of the G20. While some of the discussions are still in their infancy, the aim in the medium term is to come up with a framework and an international code of conduct to preserve security for everyone and promote financial stability, which is a common good that we all share.

Thank you for your attention.