

Chapter 17

Blockchain and cryptocurrencies through a central banker's lens¹

Introduction

As you know, fintech and blockchain technology have been called the technology has the potential to reshape the entire financial system and the governance of information in general, just like the internet has reshaped the transfer of information. At the same time, it has been seen as a threat to the banking industry due to fintech companies' perceived potential of taking over from traditional banks. The European Union has been quick to take steps to adapt to the challenges of digitalisation and push forward the adoption of blockchain technology and distributed ledger technologies in order to increase its competitiveness and technological leadership. Blockchain is used as the system behind most of the hundreds upon hundreds of virtual currencies, known as cryptocurrencies. They have attracted a plethora of investors around the world, but have yet to gain widespread adoption in the global economy.

¹ Opening remarks at the session entitled "Cybersecurity and Information Governance" at the Crans Montana Forum on homeland & global security, held in Geneva, on 25 October 2018.

So I propose today to skip issues on cybersecurity (which I am sure will attract most of our attention in this session) and focus on the following two questions. Firstly, what is the role for central banks as potential regulators of cryptocurrencies and secondly what is the future of cryptocurrencies vis-à-vis other major sovereign currencies like the US dollar, the euro or the yen?

1. What is the role for central banks as regulators of cryptocurrencies?

There is a growing debate about the need to regulate cryptocurrencies. The standard principle of regulation applies here too “same risk, same regulation”. At the moment, there are no significant implications for the financial system in terms of large bank exposure to these assets and, as a result, there are no systemic threats to financial stability. However, regulation is necessary if fintech technologies are to achieve their full potential given, for instance, their limited costs and their ease of transactions.

Central banks as regulators should make sure that they have the sufficient legal toolkit at their disposal to address the appearance of blockchain and cryptocurrencies. There have been calls to central banks for institutionalizing bitcoin trading in order to reduce systemic risk or for issuing their own digital currencies.

Daily volumes traded at cryptocurrency exchanges are of course small (about US\$13 billion mid-March compared with foreign exchange market volumes of about US\$5,000 billion, according to BIS data). There have already been high-level talks on this issue, such as the G20 finance ministers and central bank governors meeting in Buenos Aires in March 2018 with a view to addressing priority concerns about consumer protection, money-laundering and terrorist financing and also in order to come up with global regulatory responses. Their global dimension makes international cooperation an imperative. However, various central banks have taken different approaches, ranging, on the one hand, from the Swedish central bank (research in the issuance of an e-krona dates from 2016), the Bank of Canada, the Bank of Japan, and the European Central Bank, which have all been undertaking research in this area to China, on the other hand, once one of the most active markets for cryptocurrencies,

but which has introduced regulations to ban cryptocurrency exchanges, and initial coin offering (ICO) websites.

All in all, the role of central banks today with regard to cryptocurrencies is, at a minimum, to provide clarity to the market by introducing standards and rules for operators and providing information to consumers about the potential risks of investing in such assets.

The rise of cryptocurrencies and their unique characteristics, such as the independence of any state, agility in performing operations, issuance of units in value in mathematical form, among others, which were never observed on such a scale in the global financial system, brings to the fore redrawing of regulatory boundaries. As the authorities are looking for ways to ensure the integrity of markets and payment systems, to protect consumers and investors, to safeguard overall financial stability and, at the same time, to preserve long-run incentives for innovation, the rise of cryptocurrencies and related technology could bring to the fore the following three key regulatory challenges:

The first key regulatory challenge is anti-money laundering (AML) and combating the financing of terrorism (CFT). Because cryptocurrencies are anonymous, it is hard to quantify the extent to which they are being used to avoid capital controls or taxes, or to engage in illegal transactions more generally.

A second challenge encompasses securities rules and other regulations ensuring consumer and investor protection. One common problem is digital theft due to unregulated intermediaries (such as Mt Gox or Bitfinex).

A third, longer-term challenge concerns the stability of the financial system. It remains to be seen whether widespread use of cryptocurrencies and related self-executing financial products will give rise to new financial vulnerabilities and systemic risks, in which case close monitoring of developments will be required.

From my point of view, in order to address the aforementioned challenges the following four proposals will need to be implemented:

1. Given the global nature of cryptocurrencies, only a globally coordinated regulation has a chance to be effective.
2. Additionally, the interoperability of cryptocurrencies with regulated financial entities could be considered. Only regulated exchanges should provide the liquidity necessary for DLT-based financial products to be anything but niche markets, and settlement flows ultimately need to be converted into sovereign currency. The tax and capital treatment rules for regulated institutions wanting to deal in cryptocurrency-related assets could thus be adapted. Regulators could monitor whether and how banks deliver or receive cryptocurrencies as collateral.
3. Third, regulation can target institutions offering services specific to cryptocurrencies. For example, to ensure effective AML/CFT, regulation could focus on the point at which a cryptocurrency is exchanged into a sovereign currency. Other existing laws and regulations relating to payment services focus on safety, efficiency and legality of use. These principles could also be applied to cryptocurrency infrastructure providers, such as “crypto wallets”. To avoid leakages, the regulation would ideally be broadly similar and consistently implemented across jurisdictions.
4. Regulation could enhance the ability for institutions adopting blockchain technology to remain compliant with critical regulations such as the Bank Secrecy Act (BSA), including know-your-customer (KYC) and suspicious activity reporting.

B. What is the future of cryptocurrencies vis-à-vis other sovereign currencies?

Right now, the size of the cryptocurrency market is about US\$210 billion globally, down 70% from its January peak (US\$770 billion), less than 2% of the global sovereign currency reserves worth almost US\$12 trillion.

Yves Mersch, executive board member of the ECB, pointed out in a recent speech that central banks, entrusted with protecting currency as a public good, are intending to defend it. And of course I fully subscribe to this. There has been lately a trend towards a larger share of digital payments and a subsequent drop in cash usage. But a distinction should be

made between the idea of central bank digital currencies or digital fiat currencies, which are a digital replication of cash, denominated in legal tender, as opposed to cryptocurrencies. A central bank digital currency, unlike unregulated cryptocurrencies, would fulfil all three of the key functions of sovereign money: medium of exchange, unit of account and store of value. Cryptocurrencies are digital tokens that use cryptography technology to validate, aiming at allowing users to exchange value online quickly and cheaply, mimicking some qualities of currencies such as the dollar, but without the physical infrastructure for its circulation. So cryptocurrencies are decentralised between individuals and their denomination is not linked to any existing fiat currency. The term 'cryptocurrency' is a misnomer, as such assets are neither a working unit of account nor a store of value and only in limited cases a means of payment. Given their heightened volatility and low liquidity, they are riskier assets and indeed, they have thrived as a speculative asset.

Financial products based on bitcoin and other currencies have still not gained regulatory approval, and crypto-investors have been hit with substantial losses repeatedly this year tied to hacking and other incidents. In the case of bitcoin (which holds 60% of the cryptocurrency market), hacking incidents have cost millions to bitcoin holders and due to the technical nature of cryptocurrencies, any disruption in the "blockchain" or computer 'glitch' can be very costly.

Concluding remarks

In closing, I would say that I am very positive about blockchain's impact on and benefits for the banking industry, given its innovative potential for financial operations, e.g. payments and settlement systems. I am quite sceptical though about private cryptocurrencies in general, given their limitations and this will probably remain so, until the huge volatility is removed and cryptocurrencies become widely accepted by the market and provided that they are fully regulated.