

CRYPTO-ASSETS AND STABLECOINS



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Central banks and trends in digital innovation

One of the pandemic's most long-lasting consequences has been a change in the way we work. We are experiencing, first-hand, global collaboration through technology and platforms. Covid-19 has also accelerated trends in digital innovation that were already well under way.

The pandemic has also shown that it is technology that enables our globally connected world, and the provision of money, to go round. Technology has been indispensable in helping to mitigate the economic and social impact of the Covid-19 crisis by enabling economic activity to continue at arm's length and partially overcome social distancing protocols. Consumers in many countries have stepped up their use of contactless payments, and as bricks-and-mortar stores temporarily closed, e-commerce activity surged. With the rise of "decentralised finance" (DeFi), financial services more

broadly are experiencing a quieter but momentous revolution.

International collaboration is essential to underpin technological capabilities, ensure interoperability between national systems, enhance cross-border payments and remittances, support financial inclusion, and prevent geographical and social fragmentation. This is the essence of the roadmap from the Financial Stability Board and the Committee on Payments and Market Infrastructures for enhancing cross-border payments, as endorsed by G20 Finance Ministers and Central Bank Governors in October 2020 and actively supported by the Bank for International Settlements (BIS).

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In the past few years, we have witnessed the rise of cryptoassets and a global regulatory discussion around stablecoins. Moreover, some big techs have entered credit markets, either directly or in partnership with financial institutions. The expanded use of digital payments brought about by Covid-19 could fuel a rise in digital lending as companies accumulate consumer data and enhance credit analytics. This, in turn, presents new and complex trade-offs between financial stability, competition and data protection.

Central banks will continue to safeguard essential trust in money in this rapidly changing environment. To identify these trade-offs, design sound regulatory responses and continue to fulfil effectively their mission to deliver monetary and financial stability, central banks need to be at the cutting edge of technology.

It is for these reasons that the BIS has established its Innovation Hub (www.bisih.org) to spearhead the central bank response to digital innovation. Reflecting the global nature of innovation and technology, the BIS Innovation Hub already has centres

across Europe and Asia. It has formed a strategic partnership with the Federal Reserve System in New York, and in the next few months it will open new centres in Toronto with the Bank of Canada, London with the Bank of England, Frankfurt/Paris with the Eurosystem, and Stockholm with a group of Nordic central banks. The Hub catalyses collaborative efforts among central banks and cooperates with academia, financial service providers and the broader private sector.

Our work programme is built around six key themes of critical importance to the central banking community: (i) suptech and regtech; (ii) next-generation financial market infrastructures (encompassing capital markets projects, foundational digital infrastructures, tokenisation of assets, cross-border payments and payment infrastructures); (iii) central bank digital currencies; (iv) open finance (encompassing application programming interfaces in the open banking context and related data issues); (v) cyber security; and (vi) green finance.

This work is directed towards practical solutions rather than conceptual research. We are building a portfolio of projects across these six themes – typically as proofs of concept to be delivered to central banks. In doing so, we are helping them to harness the benefits of technology while understanding its limits – and to make global financial markets safer as catalysts, overseers, operators and regulators.

Multilateral collaboration and practical thinking will be essential for building a financial architecture that is future-proof against a large range of shocks.



BURKHARD BALZ

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Are crypto-tokens the future of money?

For more than a decade now, distributed ledger technology (DLT) has facilitated the transfer of crypto-tokens across decentralised digital networks using cryptographic methods. DLT transfers take place in a clear and transparent manner without the need for intermediaries, so the technology promises to be disruptive. This could potentially speed up confirmations and reconciliation processes in the financial sector and even eliminate some steps in the process chain altogether.

As a result, DLT may be of value in particular complex labour-sharing processes like securities settlement, though cross-border payments may benefit as well. Given that DLT can also be used to programme payment flows and incorporate payment processing into delivery processes, it is mainly regarded as a promising basis for many applications in what has been dubbed the Fourth Industrial Revolution.

While DLT offers a wealth of potential, the crypto-tokens currently available in the market are a niche phenomenon in the payment space. Indeed, the chief purpose they serve is as a means of speculation, largely because of their huge swings in value against official currencies like the euro. One key reason for this instability is the lack of a

credible stability anchor. Crypto-tokens have no intrinsic value, and there is usually no reliable issuer that is legally obligated to ensure that tokens will remain stable in value or to guarantee that tokens can be exchanged back into cash or book money. In addition, many crypto-tokens involve comparably low processing capacities, relatively costly money transfers, and consume huge amounts of energy in the most prominent examples, making them an economically and environmentally inefficient proposition as a means of payment so far.

For crypto-tokens to maximise their potential as a payment instrument, they will need to be stable in value and safe to use. Stablecoins may fit the bill, given that they stabilise their value for example by pegging it to, and backing it by, a currency issued by a central bank. There are several conceivable ways in which stablecoins can be legally structured, and the European Union's Markets in Crypto-Assets Regulation (MiCA) is a new piece of legislation designed to regulate their issuance in the EU. MiCA aims to provide clarity and certainty for crypto-asset issuers and providers, while establishing sufficient safeguards for the buyers of such coins, for example in the form of capital requirements for issuers, well-defined investor rights and stringent supervision.

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I believe that in a market economy, offering innovative payment solutions to the general public should be a primary task of the private sector. Nowadays, the vast majority of payment transactions between non-banks are settled in commercial bank money. Stablecoins issued by a private commercial bank could therefore be one way forward to satisfy the demand for crypto-tokens as a programmable payment medium in the financial sector and real economy. However, central bank money will continue to play an important role in payments in the future, just as it does today. Recipients of large payments are likely to prefer settlement in central

bank money, while money in the form of cash enjoys enduring popularity as a means of payment for the public.

For this reason, Bundesbank experts are exploring ways to technically bridge the space between DLT networks and existing payment systems in a way that would allow DLT-based trade to be settled in central bank money. Moreover, the Eurosystem is currently examining the risks and rewards of central banks issuing their own digital currencies, or CBDCs. There needs to be a clear understanding of the potential implications of launching a digital euro for matters including financial stability and monetary policy effectiveness before any such decision can be made.

The potential downsides of CBDC, such as structural disintermediation of the banking system, have to be manageable and outweighed by positive effects such as efficiency gains or the facilitation of new business applications. Therefore, we will have to pay close attention to how any digital euro is designed.



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Crypto assets – reaping the benefits while addressing the risks

The ongoing digital transformation of the financial system brings along with it innovative classes of assets or products relying on new technologies. One of these are crypto assets built on distributed ledger technologies (DLT).

The market for crypto-assets is very small compared to the market for traditional financial assets. It has historically been prone to leverage, operational risks and high volatility. While stressing the potential of DLT, many authorities have therefore issued warnings about the risks related to certain crypto-assets.¹

Even so, crypto assets could deliver many benefits. They could increase efficiency, as DLT offers a way to record key information in a safe, immutable format and can make that information widely accessible. It could also increase the efficiency of payments, by reducing cost, increasing speed, security and user-friendliness. It could enhance competition in payment markets, also by encouraging incumbents to improve.

However, there are also challenges. Price volatility undermines their utility as a means of payment, exchange or store of value. However, some crypto assets – so-called “stablecoins” – address this by stabilising their value against an underlying pool of assets. If this is credible and effective, they are more likely to be used for payments. This could be particularly promising for cross-border payments, notably remittances, where there is indeed margin for improvement.

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Beyond price volatility, there are also important operational challenges related to e.g. the ability to scale up DLT. A key challenge, however, relates to the lack of certainty about the rules that apply, as many crypto assets are likely to fall outside existing financial services legislation.

While for all these reasons, the market for crypto assets has remained small, the market is developing rapidly notably

in the stablecoin area. This heralds the possibility of such instruments becoming more widely used, notably as a means of payment. This would come with additional challenges and risks that need to be addressed.

The European Commission in September 2020 adopted a proposal for a regulation on markets in crypto assets (MiCA). It creates a new bespoke framework for crypto assets that currently fall outside EU financial services legislation. MiCA also sets more stringent regulation and supervision of stablecoins. This will allow crypto asset markets and related private sector initiatives to develop on a safe and sound foundation.

As these markets will grow, it remains to be seen how they contribute to more efficient payment arrangements. Stablecoins could potentially become a widespread digital means of payment. As set out in MiCA, they should therefore be subject to the same rules as other digital means of payment, so as to ensure a high level of consumer protection and a sound retail payments market. In parallel, the Retail payments strategy will foster the development of instant payment solutions, in a pan-European fashion, which will further improve the efficiency of cross-border payments in the EU and beyond.

1. See e.g. the 2018 joint warning of the European Supervisory authorities on the risks for consumers of buying virtual currencies. <https://www.esa.europa.eu/esas-warn-consumers-of-risks-in-buying-virtual-currencies>



ROELAND VAN DER STAPPEN

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Delivering on consumers’ payment needs in the digital age

Central Bank Digital Currencies (CBDCs) and stablecoins backed 1:1 by fiat currencies, are an evolution of money brought about by changes in commerce and technology. Both of these financial instruments have the potential to be used for global commerce, much like other fiat currencies, and can help minimize the inefficiencies in dealing with cash and cross-border retail payments. They can also foster financial

inclusion for people that do not have bank accounts, or are underbanked, or access to a currency that is stable.

For new forms of digital money such as stablecoins to be widely used for retail payments, convertibility into fiat currency and maintain a stable value is essential to ensure consumer trust. Conversely, crypto-assets like Bitcoin are predominantly held as assets, and given their volatility are not used for retail payments in a significant way.

While stablecoins and CBDCs raise questions about future forms and underlying technology of digital money, we know that the future of payments is digital and mobile. However, we should not only think about the future

of money, but we should equally remain focused on what consumers want and need when they pay in a digital age.

Above all consumers have come to expect trust and security with payments. That requires advanced risk management capabilities and investments in fraud prevention and anti-money laundering control mechanisms by any issuer of digital currencies. In case of a CBDC, consumer expectations will be no different, and the solution should be to work with private intermediaries that have expertise in this area and can help manage security of transactions.

Security also means that consumers know what happens when something goes wrong with a retail payment. Stablecoins and CBDCs should have an equivalent consumer protection standard as e-money if used for retail payment purposes, following the principle of same service, same rules. This will also ensure consumers can use them with confidence.

When considering the potential benefits of new technologies in a retail payment context, it is important to consider what resilience looks like in a digital age.

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For retail payment transactions it means the ability to securely process and authorise tens of thousands transactions in milli-seconds. It also means payment network uptime, and that is why we continue to make significant investments in resilience of our network to achieve 6 9s or higher availability, or differently put no more than 32 seconds of downtime per year.

Regulators must continue to promote the use of international standards to enable technical interoperability, whereas international alignment around regulatory principles for stablecoins or CBDCs will allow systems to connect across different jurisdictions. More broadly, we believe that open and interoperable payment networks can enhance both innovation and resilience across payment flows.

Finally, stablecoins and CBDCs will form part of a broader digital retail payment mix with multiple payment networks and payment service providers continuously looking to address consumer needs. We believe that making good use of digital currencies can contribute to the development of new forms of commerce and popularize digital payments.

Above all, it has a chance to create greater consumer choice for paying and accepting payments.

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