



# Cryptoassets - Weighing the opportunities and risks

**The world of finance is undergoing a radical sea change as digitalisation makes exponential headway, and is thus facing immense challenges. Blockchain technology is causing a huge stir, and cryptoassets are enjoying ever greater attention. Bitcoin and other “cryptocurrencies“ as well as the incipient trend towards tokenisation are also gaining increasing importance for investors. A wake-up call - for central banks around the world as well - has been the project initiated by Facebook to establish a stable cryptocurrency (“stablecoin”). In addition, China is testing a digital version of the yuan (“e-CNY”) via various pilot projects. It is important to sharpen one’s gaze here and to keep a close eye on the differences between the new instruments as well as on their opportunity-risk profile.**

- “Cryptocurrencies” now have a combined market capitalisation of approximately USD 2 trillion, which is about twice as high as at the beginning of the year; the number of crypto coins now runs well into the thousands.
- Central banks around the world are exploring blockchain technology or else working to implement central bank digital currencies (CBDCs). In June the European Central Bank announced the launch of a 24-month CBDC project starting in Q4 2021.
- Tokenization of assets as a new trend opens up a wide variety of investment options, creating opportunities but also entailing risks.

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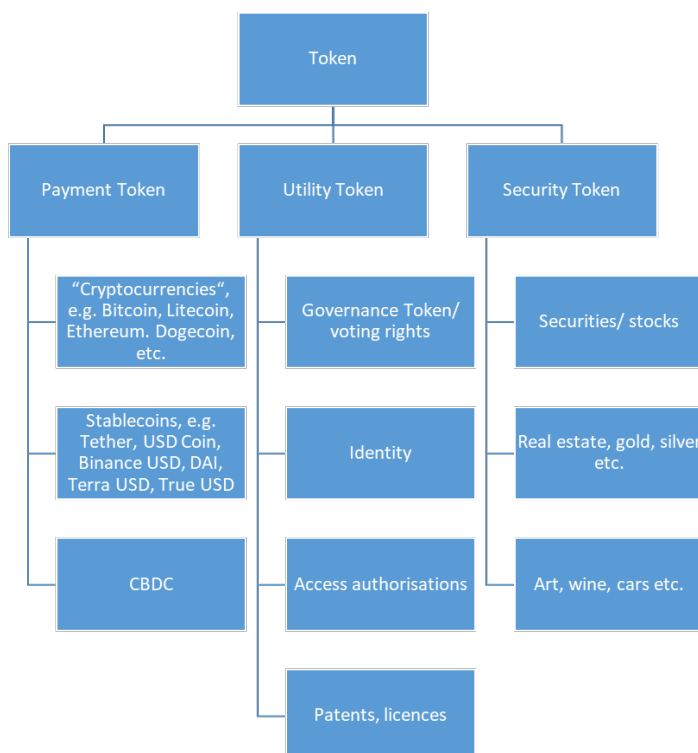
## Not all cryptoassets are equal

According to the DSGV Wealth Barometer 2021, around seven percent of retail investors consider “cryptocurrencies“ to be suitable for asset-allocation / wealth-accumulation purposes - a surge from just three percent last year. The success story staged by Bitcoin has definitely had a share in this. Yet caution is advised. The term “currency” suggests that crypto is a recognised means of payment. This is not the case, though, and so it would be more appropriate to speak of cryptoassets. The term cryptoassets also encompasses much more than the multitude of “cryptocurrencies“ that now exist. The onset of tokenisation is creating a further plethora of crypto investment opportunities in this space, and so it makes sense to classify the various cryptoassets, which is our objective in this study.

*"Assets" versus  
"Currencies"*

Basically, cryptoassets are conceived as so-called "tokens". According to Germany's financial supervisory authority Bafin, a token is an asset stored on a blockchain. Economically speaking, tokens serve to "fractionalise" assets, as they provide a blockchain reference for the asset concerned. Tokens thus represent quasi-securitisations, i.e. rights to digitised assets. The central advantage enjoyed by tokenisation technology is the almost unlimited divisibility of digital images of assets, which reduces lot sizes and thus the capital requirements necessary for individual investments, right down to microinvestments. This allows new investor groups to be tapped and thus contributes towards a "democratisation" of asset classes. In addition to issuing tokens, the so-called smart contracts can be used for automated and conditional payments.

*The "token" concept*



In the case of crypto tokens, a distinction must be made between exchangeable (fungible tokens) and non-exchangeable (non-fungible tokens, NFT). It is also important to distinguish between payment, utility and security tokens.

Media attention is focused primarily on cryptoassets such as Bitcoin. This sub-category involves payment tokens for the respective blockchain platforms. Stablecoins and central bank digital currencies (CBDCs) are likewise subsumed into the payment-token class, but they possess very different characteristics than the former, and so a clear distinction needs to be made. While stablecoins contain some monetary properties by being pegged to the US-Dollar, for example, other "cryptocurrencies" do not fulfill all or any monetary properties so far. CBDCs are generally still in the project, planning or discussion phase (with the exception of the Sand-Dollar in the Bahamas).

*Bitcoin is the most prominent crypto flagship*

By contrast, utility tokens can, for instance, represent digital identities or else store access authorisations in digital form. The boundaries between the individual token types are fluid and need to be redefined on a case-by-case basis. Investments in utility tokens may also be speculative in nature and geared to price appreciation. However, in the context of the token economy, they can play important roles.

The tokenisation of tangible assets, i.e. the digital replication of assets on a blockchain, enables them to be disaggregated into almost any number of digital parts. A significant difference to "cryptocurrencies" in the case of so-called "security tokens" is that these contain rights similar to securities or represent these in digital form (already possible for debt securities in Germany under the Electronic Securities Act). The development of the share price is therefore essentially determined by the cash flow of the issuer or the increase in the value of the share.

### **"Cryptocurrencies" – a kind of amputated money**

Cryptoassets like Bitcoin are usually referred to as "cryptocurrencies" or else digital money. This may also have been the goal of the initiators. However, reality shows that even Bitcoin, the undisputed top dog among cryptoassets, has not achieved money status, but has rather morphed into a virtual asset. The question of whether it possesses long-term intrinsic value remains unresolved. Bitcoin and its brethren are not a generally recognised means of payment, let alone legal tender, either in the USA or in Europe. It is true that Bitcoin became legal tender in El Salvador in September in order to reduce the South American country's dependence on the US dollar. However, BTC's enormous exchange-rate fluctuations ensure high risks when using it, and the jury is still out regarding the lasting success of the project. El Salvador's Bitcoin adoption does not serve as a blueprint for developed countries, but other developing countries could very well follow suit.

The acceptance of a good as a universal medium of exchange is essentially based on its function as a store of value. In addition, it has to be able to be used as a unit of account, because a comparison between the value of various goods is made in relation to the interposed medium of exchange and store of value. Conversion to another, additional unit of account then becomes obsolete. In the aggregate, existing “cryptocurrencies” fail to fulfill such money functions.

*Cryptoassets do not fulfil money functions*

In this connection, it needs to be clarified that Bitcoin, unlike the euro, is neither a universal means of payment nor does it establish a claim against an institution. The book money and cash denominated in euros constitute legal titles. A Bitcoin, or more precisely the private key to a Bitcoin wallet, merely legitimises a transfer of a Bitcoin amount to another address. Bitcoins exist only as long as the Bitcoin network exists. On the one hand, network decentralisation is aspired to by Bitcoiners; on the other hand, however, there is no guarantee that there is going to be a sufficient number of nodes maintaining the decentralised ledger.

One particular disadvantage of Bitcoin and its clones (Bitcoin Cash, Bitcoin Gold, Litecoin, and many others) is their high energy consumption, which is all the more dramatic depending on the type of energy source being utilised. So much energy is consumed due to the underlying consensus mechanism (proof of work). In our opinion, the surge in the number of computing operations (hashrate) in contrast to the low number of transactions is one of the main problems entailed by these “cryptocurrencies”. It is true that proof of work (PoW) is not the sole approach: with proof-of-stake (PoS) mechanisms, more transactions can be carried out on the basis of lower energy consumption. One example of PoS is the Ethereum ecosystem, which is planning to switch from proof of work to proof of stake (“Ethereum 2.0”).

*Crypto involves an inefficient use of resources*

It is emphasised by supporters of Bitcoin that cryptoassets such as this “first mover” in the crypto space are limited in quantity and that coin creation is in no way correlated with macroeconomic processes. The argument presented by such supporters is that there is an in-built mechanism to prevent inflation caused by money-supply growth. Such advocates then often talk of Bitcoin as “digital gold.” Doubts are warranted. Ultimately, this point is critical from an economic perspective, because a limited money supply would lead to deflationary tendencies emerging in an expanding economy.

*The quantitative-constraint argument is ambivalent*

It becomes clear that “cryptocurrencies” do not amount to money in the sense of a generally accepted means of payment and have no intrinsic value. Their price formation, as traded on crypto exchanges, is primarily speculative in nature and is bound up with considerable risks, especially from a longer-term perspective.

## **Stablecoins are not without risks for both users and the financial system**

Unlike in the case of Bitcoin and similar constructs, the focus of stablecoin users is not on potential increases in value - these are indeed to be explicitly avoided in order to obtain a stable digital means of payment. To this end, bank deposits, money-market paper or short-term government bonds, for example, are held as backing in the respective official currency. With such a setup in place, stablecoins customarily display only minor exchange-rate fluctuations relative to the underlying currency, usually the US dollar. Facebook, one of the tech giants, has launched a project with a number of partners in a bid to introduce a currency of its own. The currency Diem, formerly Libra, was initially planned as a multi-currency token. After massive regulatory headwinds, the project is now focusing on national stablecoins and plans to launch with a USD stablecoin. Meanwhile, Facebook, which is one of Diem's 12 participants, is forging ahead due to the severe delay, launching its payment app "Novi" with the USD stable coin Paxos in an initial pilot.

Ultimately, in the case of Diem, as with other stablecoins, a critical assessment must be made as to whether ownership of the stablecoins actually gives rise to legal claims to the deposited reserves. The fact that there is often too little transparency about reserve holdings also points to risks - especially in the case of the premier stablecoin Tether. Last but not least, the quality and value retention of the securities acquired is critical when it comes to assessing the risks of using stablecoins. In addition, stablecoins could face competition in the form of CBDCs in the coming years if these were to be offered in token form and were thus made blockchain-compatible. Such forms of digital money would be stable per se, as they would be created as legal tender by central banks. However, both forms of money must be seen as competing with the book money held in checking accounts at savings banks and commercial banks (giro money).

On a completely different level lie the risks which stablecoins pose to financial stability. For example, they could turn into huge "asset silos" that absorb government bonds, for instance, which would then no longer be available to other market participants, in the repo market, for example. If a major provider of supposed stablecoins were to run into trouble, mass asset sales could put pressure on government-bond markets. Price and yield distortions could result, which might also spill over into other segments of financial markets as well as causing ructions in the real economy.

## **A European CBDC - new money for Europe's future**

During this summer, the European Central Bank decided to explore the introduction of a euro-denominated CBDC within the framework of a 24-month project. In addition to the requirements arising from increasing digitalisation of business processes and from the desire of citizens for

*How resilient is the backing for stablecoins?*

*Preserving monetary-policy autonomy*

digital means of payment, as demonstrated by the success of "cryptocurrencies," the need to preserve monetary autonomy was probably a key driver behind the decision from Frankfurt's Twin Towers. Furthermore, it is important that Europe's competitiveness in the digitalised economy ("Industry 4.0") should be promoted and safeguarded. Facebook's plans - along with the fact that the Chinese government is expediting the introduction of a digital yuan, which it is already testing in several pilot projects - have increased the pressure on central banks around the world to push ahead with their own CBDC developments. While China is presumably at the same time pursuing the goal of breaking the dominance of the dollar, one of the motivations behind CBDCs, in Europe and the USA especially, is probably to secure monetary independence.

In this context, the introduction of a retail CBDC must not lead to a disintermediation of banks. The reason is that such disintermediation could result in a restriction on lending while pushing up the financing costs of the economy as a whole. Negative growth and negative wealth effects would be unavoidable. A quantitative limit on the amount of CBDC circulating among private individuals would therefore seem sensible, and has, in fact, already been successfully tested by the ECB in conjunction with the automatic conversion of surplus CBDC into book money. A CBDC is primarily intended to meet the needs of citizens to supplement cash use in a meaningful and state-of-the-art manner. Privacy and data security are playing major roles in the ECB's considerations, and there have repeatedly been calls, in public discussions too, for a CBDC to possess a cash-like character. Ultimately, a CBDC is intended to serve as a supplement to the existing ecosystem of cash and fiat money in order to exploit the opportunities offered by a new technology without undermining the existing two-tier banking system.

*Maintaining tried-and-tested structures and safeguarding data security*

## **Blockchain technology is on the rise**

Blockchain technology is destined to permeate more and more economic processes in the coming years, and it is important to decisively guide this development at an early stage in order not to fall behind technologically, especially relative to China and the USA. In this sphere, tokenisation offers many advantages and opportunities for process optimisation and cost reduction. The first tokenisation projects, involving the digitalisation of real-estate assets for instance, are already on the market and it can be assumed that more will follow.

## **Opportunities and risks of real-estate tokenization**

In an environment of very low, and in some cases negative, interest rates and yields, demand for real-estate investments has surged sharply in recent years. However, market access to individual real-estate properties is often reserved for a limited group of large investors due to the high capital commitment and cost-intensive transaction processes entailed, combined

with a simultaneously high degree of illiquidity. Within the framework of traditional financial products, the liquidity of real-estate investments can be improved by vehicles such as open or closed-end real-estate funds. Such funds have attracted strong inflows in recent years. This trend toward tapping new investor groups is likely to continue in the coming years in view of the prospect of negative real interest rates, and will gain new momentum on the wings of digitalisation.

Blockchain technology is likely to change this area of the financial market significantly, even revolutionise it. However, the regulatory framework in Germany does not yet permit the tokenisation of ownership in the narrower sense. There are two ways to circumvent this obstacle. In the broader sense, it is usual to speak in the "tokenisation of real estate" context of "security tokens". Such tradable tokens represent a share in a financial instrument carrying a promise of payment. In Germany, the Electronic Securities Act (eWpG) has put in place a framework that provides greater regulatory support for the issuance of tokenised debt instruments and their legally secure management. Another option often used in the commercial-real-estate segment involves so-called special purpose vehicles (SPVs) or property companies domiciled e.g. in Liechtenstein, which hold the title to the real estate concerned, and whose company shares thus indirectly serve as a vehicle for a real-estate investment. Direct tokenisation of the ownership of real estate has not been possible to date due to the difficulty of effecting the simultaneously required transfer in the land register ("Grundbuch"). As a way round this problem, issuers frequently make use of subordinated debt securities, which offer a variable interest rate and thus an option to participate in the appreciation in value of the underlying real estate. The point of departure for this form of tokenisation is therefore traditional financial products that are issued on a new infrastructure platform and subsequently traded there.

The advantage of these developments and of the round-the-clock tradability they entail lies in the increase in market depth in otherwise comparatively illiquid markets. Increased process efficiency likewise lowers transaction costs, by reducing manual intervention, and creates opportunities for future automation. In addition, any amount of individual information can be inscribed into the token, such as value, maturity, and yield claims, as well as other rights, obligations, and additional functions (e.g. voting rights, vouchers, or discounts for known issuers/properties). All the same, the situation concerning already existing token-based real-estate investments is still unclear and therefore difficult to assess. Appropriate regulation could help to clarify the picture, especially if a large number of new tokenisation projects are launched in the future.

Another benefit is that investors can diversify their investments much better, i.e. invest in many smaller-scale real-estate assets that differ in

*Use of the technical instrument is broadly conceivable*

*Broader diversification becomes possible*



terms of location, market segment and risk profile. In addition, token trading can be conducted in real time, thereby reducing counterparty risk.

The benefits of tokenisation extend not only to investors but also to issuers. Apart from marketing effects, the expected return is boosted above all by lower costs for administration and issuance of the property as a token or security and by the lower number of intermediaries needed.

The fact that the market for tokenised assets is currently still growing at a subdued pace is due in particular to the lack of infrastructure made available by well-known and trustworthy providers. In addition, the fact that a secondary market is still virtually non-existent is hampering trading of the corresponding tokens. Investors therefore still lack the necessary confidence in these new forms of investment. This problem is compounded by the fact that the regulatory framework has not yet been finalised, leaving issuers, providers and investors alike shrouded in legal uncertainty.

Once there is increasing legal certainty, it can be assumed that more offerings from established institutions will evolve - offerings which are likely to meet with brisk demand on the investor side in times of persistently low interest rates. This will ultimately be reflected in a growing supply of tokenisations. Going forward, it is therefore important for interested parties to position themselves specifically with regard to the infrastructure and configuration of tokenisation and to follow what is a dynamic market development. In this context, it is imperative to strive for suitable regulatory framework conditions that enable tokenisation over and above the conferral of securitisation rights, pertaining to the entire life cycle of a property. In this regard, security and interoperability between all parties involved need to be taken into account in equal measure.

*A dynamic market development is on the cards*

### **Tangible asset tokenization - is everything going to turn into a token?**

The use of the blockchain opens up great potential for the development of innovative financial products, and this is not just limited to real-estate investments. There is already, it should be noted, a market for the tokenisation of other tangible assets such as art, wine, watches, fashion items or vintage cars.

The limits of tokenisation cannot be defined at present. Looking beyond the existing offerings, basically any real - but also any more intangible - asset could be converted into a productive investment. The advantages of further diversification in the asset-allocation / wealth-accumulation domain are obvious, and sellers could rely on a massively broadened investment base. However, it is also important to keep an eye on the risks attached to the respective assets. The need for intensive analysis and counselling on the price opportunities of various investment vehicles should not be lost sight of. Especially in the initial phase, there is a risk that the fashionable topic

*Keeping an eye on risks*



"crypto investment" will dazzle interested parties, blinding them to the actual performance of the tangible assets that are being tokenised.

## Conclusion

In regard to cryptoassets, it should be noted that a very clear distinction must be made between tokens that have securities characteristics or are at least backed by financial assets and those that are issued as pure payment tokens in circulation. The latter have no intrinsic value and have to be classified as highly speculative. These "cryptocurrencies" have not achieved monetary status. They are, as it were, amputated money, because the money functions are virtually not fulfilled. Nor can it be expected to be fulfilled in the foreseeable future. So-called stablecoins are also not devoid of risks, even if the speculative dimension is not the main focus here, but rather the transaction function. In the case of "stablecoins," it is not only the lack of transparency of the backing assets that must be viewed critically but, in particular, the possibility of negative knock-on effects on financial stability. The introduction of CBDCs and book-money tokens could cause "cryptocurrencies" as a whole to lose in importance, even though banks and central banks will encounter competition from "non-banks" issuing such stablecoins. In this respect, opportunities and risks definitely need to be weighed against each other in the medium and long term.

The growth potential for the tokenisation of tangible assets, on the other hand, is enormous and the associated opportunities need to be exploited and kept in view, as do the risks, which in our opinion include information asymmetries in particular. Especially in the case of microinvestments, the costs of obtaining information can exceed potential price gains or returns, which can prove problematic. Analysis and counselling by experts may well become even more important than before. For Germany's Landesbanken and savings banks, therefore, new opportunities are going to be unlocked to provide customer service and to promote customer loyalty.

Another problem with the token economy is that it still lacks a broad legal foundation. In particular, there is a need for appropriate regulation in the future that confers legal certainty, especially on investors, but also on real-estate companies and/or infrastructure providers. It would be desirable if these activities did not take place at a national level, but were instead brought to life directly at the pan-EU level as part of the Capital Markets Union project.

## Disclaimer

This position paper by the Chief Economists does not necessarily reflect the position of DekaBank or the stance of the respective Landesbanken and savings banks.

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