THE TOKENISATION OF ILLIQUID ASSETS BY FINANCIAL INSTITUTIONS – AN OVERVIEW OF THE IMPLEMENTATION STATUS

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Abstract: The publication examines the current implementation status of financial institutions in the implementation of block chain-based tokenisation of illiquid assets. A qualitative research design in the form of guided expert interviews was chosen to reflect the exploratory nature of the study. Nine experts were selected and interviewed.

Germany is still in early stages of developing and implementing blockchain technology in general. The digital euro, the tokenisation of bonds and liquid financial products and the custody of private keys are currently the most common use cases. There is still a lot of room for improvement compared to the USA and Asia.

Keywords: DLT, blockchain, tokenisation, financial institutions, illiquid assets.

Introduction

Tokenisation, i.e. the digitalisation of illiquid assets based on distributed ledger technology and blockchain technology, can represent a new business segment for financial institutions. Blockchain is generally considered to be a basic technology that is characterised in particular by the fact that the technology has a significant influence and broad acceptance in society[1].

This is also confirmed in a survey published by the German industry association Bitkom e.V. in October 2023 regarding the implementation of the blockchain technology in the German economy. 54% of all 653 companies surveyed in Germany stated that blockchain is an important future technology. However, only 5% of companies have implemented the blockchain technology to date. Compared to a similar survey in 2021, this is still an increase of 4 percentage points. The trend is much clearer in the percentage of companies that have at least started using it or are even in the analysis or test phase of initial projects. This figure has increased from 6% to 26% between 2021 and 2023. It can therefore be concluded that the blockchain technology is continuing to move, albeit slowly, into the consciousness of companies. In terms of the potential of blockchain for the securitisation (tokenisation) of real assets and financial securities, 85% of respondents see very high or high potential. In addition, 68% of companies believe they can create new business models with the help of the blockchain technology. The biggest hurdles identified by companies are a lack of qualified personnel and employees' lack of knowledge and experience, legal uncertainties and requirements for IT security and data

protection, as well as the lack of robust potential use cases for this new technology[2].

To understand this publication, it is important to understand the basics of the technology. Distributed Ledger Technology ('DLT') is a special type of electronic data processing and storage. It is a decentralised database that allows each network participant to add new data records to the network. The other participants are informed about the addition of new elements via implemented processes and the local storage of the database is updated[3]. One use case of DLT is the blockchain technology.

In addition to the properties described under DLT, the blockchain technology is characterised by the fact that the entries are stored in blocks. These are then validated by a consensus mechanism. All blocks are combined into a chain. The consensus mechanism, which is used on all participating computers, ensures that the blockchain is authentic and forgery-proof. This enables the blockchain to be used to organise property rights digitally[4].

While Bitkom e.V. includes German companies from all economic sectors in its surveys, this publication refers exclusively to financial institutions. According to the German Banking Act, the definition of financial institutions essentially includes credit institutions and financial services institutions (KWG, §1). Financial institutions play an important role as intermediaries in the German economy. However, the use of DLT and the blockchain technology means that intermediaries are no longer absolutely necessary. It is therefore interesting to see how financial institutions are adapting to these new innovative technologies. After all, DLT and the blockchain have the disruptive potential to undermine the business model of financial institutions or even render it completely absurd.

This publication is further limited to the implementation status of tokenisation of illiquid assets. Tokenisation is understood to be the digital representation of an asset including the rights and obligations contained in this asset as well as its transferability enabled by this[5]. The term illiquid assets refers to financial investments or valuables that cannot be converted into cash in a short period of time and without high costs, as there is no corresponding market or certain conditions have to be met before they can be sold[6]. Examples of illiquid assets include real estate, works of art, vintage cars, watches, but also private equity investments, etc.

This publication shows whether and how financial institutions are adapting to the new DLT and and blockchain technology or are actively participating in the development of these technologies. It will also explain which projects using these technologies are planned or are already being implemented or have been realized.

Research methodology

The research community and industry associations have not yet sufficiently investigated financial institutions in the context of the tokenisation of illiquid assets. The results of this publication were obtained using a qualitative research design in the form of guided expert interviews. Expert interviews do justice to the explorative nature of the research design. An interview guide was created from the defined interview objectives with the help of a mind map, which was subject to critical reflection in a pre-test. Once the experts had been selected, the expert interviews were conducted, followed by transcription and paraphrasing. The interviews were analysed using Mayring's qualitative content analysis method and the results subsequently interpreted.

Nine experts from banks and asset managers were interviewed, as well as lawyers and service providers who advise financial institutions on DLT and blockchain or provide corresponding services. An important factor in the selection of experts was their link to tokenisation. In detail, the expert panel is composed as follows:

Table 1. Selected experts

Expert	Category	Description of the expert
E1	Major bank	Senior executive at a major international bank with a focus on Europe. The expert is a specialist for tokenisation and digital assets in the custodian business of the major bank.
E2	Major bank	Expert at a major international bank with a focus on Europe. The expert deals almost exclusively with the tokenisation of assets, in particular the tokenisation of bonds.
E3	Major bank	Senior executive at a major international bank with a focus on Europe. The expert heads the infrastructure division for open banking and DLT initiatives.
E4 & E5	Asset manager	Both interviewees are shareholders and managing directors of an asset management company in Luxembourg with a predominantly German clientele.
E6	Lawyer	Lawyer for regulatory aspects at a German law firm specialising in regulatory law in the financial sector. The expert is also a board member of the Blockchain Association of the European Commission and has contributed to the legislation on Market in Crypto Asset Regulation.

Expert	Category	Description of the expert
E7	Service provider	Founder and Managing Director of a service provider for financial institutions in the context of blockchain transactions. The company offers a one-stop ecosystem for institutional property investments.
E8	Lawyer	Lawyer for capital markets regulatory law at an international law firm. He works at the interface to digitalisation, i.e. tokenisation, digital assets, DLT.
E9	Asset manager	The expert is a shareholder and managing director of an asset management company in Munich.

Qualitative content analysis according to Mayring as a structured, qualitative method is particularly suitable for evaluating the communicative, but also partially standardized expert interviews [1].

The results presented in this publication relate exclusively to the implementation status of financial institutions with regard to the tokenisation of illiquid assets.

Results

The major bank, for which Expert E1 works, has already developed two tokenisation platforms, although these are still at the testing stage. The bank has already issued its first token, including in the area of project financing. Furthermore, Expert E1's bank is preparing to offer its customers the wholesale CBDC (Central bank digital currency) launched by the European Central Bank. This is a digital currency that can be used by banks and other licensed financial institutions for interbank payments and securities transactions. The management of private keys is another field that the Bank of Expert E1 is developing. In the area of digital assets, the bank has entered into partnerships with two fintechs. Expert E1 also stated that tokenisation plays a major role in his company, but the tokenisation of real estate, art, vintage cars or other such assets is less important. The bank implements the tokenisation of fund shares in its home country by connecting to a platform.

Expert E2 explains that the bank has already developed various use cases to utilise the blockchain technology. One of these use cases is the tokenisation of assets, primarily in the liquid sector. In particular, the tokenisation of financial products that are already traded on stock exchanges or OTC. Another service that the bank of Expert E2 would like to offer is the safekeeping of private keys, i.e. so-called ‘crypto custody’ in connection with payments via the blockchain. The digital euro would also fall into this category. Expert E2's bank

is also looking at other use cases, such as the metaverse. In conclusion, however, expert E2 notes that tokenisation is currently mainly used for issuing bonds.

Expert E3's bank is currently working on two projects relating to the blockchain technology. One project is using smart contracts to improve supply chain processes. Another project is aimed at speeding up payment processes with the help of a stablecoin. In addition, crypto custody is currently being put into production. Another initiative in the area of tokenisation was carried out with the Swiss stock exchange SIX. Here, tokenised bonds were issued. FinTech 360X was also founded a few years ago in a joint venture with Deutsche Börse. FinTech 360X enables the issuance and trading of non-fungible tokens (NFTs).

The Experts E4&E5 state that their company does not offer any tokenisation or blockchain-based products. The asset management company has only included an ETF focussing on blockchain in managed portfolios to reflect megatrends. In addition, a consultant has trained the asset managers on the blockchain technology and tokenisation. There are no initiatives planned to use blockchain technology or tokenisation.

Expert E6 explains that larger banks have specialised ‘expert teams’ that work very intensively on tokenisation. Smaller institutions are increasingly trying to enter the market by cooperating with third parties, either because they lack the relevant expertise for the product or the technology or because they want to accelerate their market entry. The Expert E6 also sees tokenisation as a way of attracting new investor groups. While traditional investors continue to invest in listed companies, Expert E6 sees a trend towards younger investors wanting to invest in tokenisation. Expert E6 considers this to be particularly due to the fact that they are familiar with the investment objects (e.g. Nike sneakers, watches, etc.) and also understand them. According to Expert E6, younger investor groups perceive traditional investments as complex and less exciting. They also don't want to deal with the world of finance. Sales via social media also tend to attract the younger generation. However, this poses a challenge for institutions to modernise their external presentation while still adhering to regulatory requirements (such as risk disclosures). Many institutions still struggle with this.

Expert E7 explains that the technological innovations generate the most added value, particularly in the private client segment. Accordingly, there are individual pilot projects in the area of tokenisation for private clients in German-speaking countries. Expert E7 cites two property projects by a German savings bank as an example. However, due to regulation and a lack of risk appetite, German financial institutions are not very advanced. There is a lack of suitable wallet infrastructure, for example. In most cases, there are individual isolated solutions that are not yet ready for the market. FinTechs or the Asian region are often further ahead in product development in these areas.

Expert E8 essentially sees initiatives on the market for the tokenisation of fund shares, but also the tokenisation of real assets such as vintage cars, diamonds, gold or traditional real estate. However, digitalisation must also fulfil a purpose. This can be, for example, an improved user experience or simplified use of the products. There are also examples of the intensification of digital sales. From a legal perspective, many tokenisations are 'only' bonds on different underlying assets.

The expert E9 states that there are currently no initiatives to use the blockchain technology or tokenisation in his asset management company.

Conclusions/discussion

Overall, there are major differences in the different categories of financial institutions regarding the implementation of blockchain projects. Asset management companies with few employees are very reluctant to implement blockchain projects. The experts surveyed have not yet planned any projects. Banks, on the other hand, are already working on this topic and have often set up smaller departments with appropriately trained employees. Overall, it can be stated that German financial institutions are only in the implementation or test phase if they do not rely on the expertise of a third-party provider. Due to the generally rather risk-averse attitude of German banks, there have been only a few projects and relatively small departments for the introduction of blockchain-based projects to date.

Table 2. Use cases mentioned by the experts

Use case	Number of entries	Expert(s)
Digital euro, CBDC, stablecoins	3	E1, E2, E3
Safekeeping of private keys	2	E1, E2
Tokenisation of fund units	2	E1, E8
Tokenisation Financial products/bonds	2	E2, E3
Tokenisation of real assets (watches, sneakers)	2	E6, E8
Real estate tokenisation	2	E7, E8
Financing of projects	1	E1
Smart Contracts Supply Chain	1	E3
Custody of crypto securities	1	E3
Trading of non-fungible tokens (NFTs)	1	E3

Most of the use cases focus on the tokenisation of bonds and liquid financial products or fund units.

The implementation of a digital euro, the European Central Bank's wholesale CBDC and the use of these or other stablecoins to speed up payment transactions is most popular with financial institutions. The tokenisation of real assets such as watches, vintage cars, etc. is still in its infancy and is not the

primary focus of financial institutions, nor is trading in NFTs. However, there are additional efforts to offer other services, such as the custody of private keys or crypto securities custody based on the blockchain technology.

Overall, it should be noted that Germany is still in the early stages of the blockchain development and does not have the same momentum for the implementation of the blockchain technology in financial institutions, especially in comparison to Asia and the USA.

Notes

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