Digital Assets and Distributed Ledger Technology Financial Industry Outlook for 2025

March 2022
Table of contents

- State of the Industry and Outlook 3
- Banking, Capital Markets & Asset Management 5
- Custody 10
- Operations & Distributed Ledger Technology 12
- Opportunities to lead market 2025 15
State of the Industry and Outlook

This white paper examines different perspectives of and areas of application for digital assets and DLT in the financial industry, with a view to the year 2025.
Introduction

In recent years, more and more financial institutions have recognized the importance of digital transformation. The changes we see in asset trading are twofold: The trading processes themselves are changing on the one hand, and digital transformation is also changing the way we perform these processes on the other. Digital assets are defined as digital representations of values made possible through these advances in technology.

To gain a better understanding of digital assets, we first need to distinguish between the different types. Two kinds of digital assets have properties similar to currencies: digital coins and digital tokens. Digital coins can be used as a means of payment, with their value determined either independently or based on an existing currency, and divided into three main subcategories: cryptocurrencies, stablecoins and CBDCs.

Digital tokens, by contrast, refer to assets that transfer to the holder full, partial or potential ownership of another asset, the right to use a service or the right of execution. These tokens are created through smart contracts on a public blockchain or approved distributed ledger and are divided into four main subcategories: utility tokens, security tokens, governance tokens and non-fungible tokens.

Digital assets first gained relevance in the wake of the 2008 financial crisis. After many people lost trust in centralized financial intermediaries, "Bitcoin" was created at the beginning of 2009 as the first decentralized cryptocurrency based on distributed ledger technology. Demand for the decentralized, anonymized cryptocurrency grew steadily, prompting many other cryptocurrencies to enter the game, such as Diem or Ether, albeit with different design features. Since 2017, the market for cryptocurrencies has more than tripled due to soaring demand.

Because of the intense volatility of cryptocurrencies, stablecoins, which are pegged to stable assets such as fiat currencies or gold, have become a less volatile digital coin option. More and more national banks, central banks and asset managers around the world are recognizing the market relevance of offering digital assets such as stablecoins or central bank digital currencies (CBDCs). Renowned players such as JP Morgan or Goldman Sachs were among the first banks to launch their own stablecoins, and the Chinese Central Bank issued CBDCs to test a digital renminbi/yuan. In line with these global developments, the ECB has also recently initiated a pilot project testing the technical implementation options for a digital euro.

We have seen both an easing and a more detailed specification of the regulatory requirements for stakeholders of digital assets in recent years. As demonstrated by the relaxation of laws related to issuing, trading and storing digital assets, many financial institutions are betting that blockchain-based systems will become the preferred technology of the future. Among the accelerators for this trend in Germany and the licenses granted by BaFin for the custody of digital assets and the recently introduced Electronic Securities Act (Gesetz über elektronische Wertpapiere, eWpG) that allows securities to be issued without a mandatory physical certificate.

The digital asset ecosystem is extremely complex in terms of the variety of offerings and technology platforms, e.g., Blockchain or distributed ledger technology (DLT), which challenges financial intermediaries to choose which instrument they will use transparently in the future.

This paper uses the following definitions as adopted by German regulatory authorities:

Electronic securities are securities that are not backed by a physical certificate as originally required by German law but exist only in digital form. However, as the traditional physical certificates are already stored in central securities depositories and transferred using digital means, the authorities have in fact already dematerialized these securities in practice.

According to the German Banking Act (Kreditwesengesetz, KWG), crypto-assets or cryptocurrencies can be defined as digital representations of values or rights that can be transferred and stored electronically using distributed ledger technology or similar systems. One example here is the blockchain-based "tokenization" of assets, whereby the crypto-assets do not have the status of currency and are not guaranteed by any central bank.

The crypto-security (Kryptowertpapier) is a special type of digital asset that does not constitute a central register security (as defined in Section 4(2) eWpG). In contrast to cryptocurrencies, security tokens and similar digital assets that must be held in a licensed crypto custody business (Kryptoverwahrgeschäft, as defined in Section 1(1a) sentence 2 no. 6 KWG), crypto-securities fall under standard custody regulations (Depotgeschäft as defined in Section 1(1) sentence 2 no. 5 KWG).
Banking, Capital Markets & Asset Management

A variety of products have emerged in the digital trading space.
In addition to easing access to existing digital assets, private individuals and investors have further opportunities to trade in digital assets on the market side. So far, despite the liberalization of the market for certain asset classes, e.g., through the eWpG or by granting crypto custody licenses, there is no single state-of-the-art solution on the market side being promoted by all relevant market participants. Moreover, we still have no uniform set of regulatory requirements from legislators and associations across the globe, which means that the digital assets introduced by central banks, e.g., CBDCs, are likely to become relevant on the market in the medium term.

From a capital market perspective, there is already a diversified range of digital assets on offer. Four possible product solutions have already emerged as state-of-the-art, market-relevant securities based on cryptographic infrastructure: equity funds, ETP variants, special investment funds and securities denominated in digital currency.

Equity funds, which rely on existing technology infrastructure, consist of balanced or hybrid funds based on companies invested in crypto-based digital assets. Coinbase, a US trading platform, is already offering equity funds with companies such as Tesla in the equity portfolio. Tesla was an early adopter in accepting digital payments, as its CEO Elon Musk is a strong proponent of this innovation.

Similar to equity funds, so-called ETP variants are based on Exchange-Traded Notes (ETN) or Exchange-Traded Commodities (ETC), i.e., exchange traded products offered as listed bearer bonds that represent popular cryptocurrencies such as Bitcoin or Ethereum. These assets can be stored in individual digital “wallets”, which can be either server-based wallets or actual physical devices.

Investment funds or alternative investment funds (AIF) are, by contrast, managed by capital management companies that invest in crypto-based assets not traded on the stock exchange. We should make a fundamental distinction here between open-ended and closed-ended funds. Alternative investment funds are not regulated at the EU level by the UCITS Directive but are subject to BaFin oversight.

At present, many securities denominated in digital currency are still under development. There are regulatory barriers, such as the existing eWpG legislation, that still prevent trading in digital debt securities. However, the German government is already taking the first steps towards updating its existing securities legislation. The ECB has also announced that it is considering launching a digital euro to enable trading in digital securities in digital real economy currencies as well as non-real economy currencies. We are still lacking the trading platforms and the technologies based on them due to the current state of implementation, but there have already been initial attempts based on DLT to transfer securities using digital currencies.

We examine DLT technology in more detail in the next chapter, using relevant use cases as a basis.

Lighthouse projects preparing the way for additional use cases

Depending on the specific financial instrument in question, it is important to consider the underlying economic driver of a particular use case. These drivers relate to specific customer demands or the potential for increased revenues through new business models. It is important to note that the technology, e.g., Blockchain or DLT, acts as a vehicle and not the main trigger in this economic use case.

Distributed ledger technology has emerged as a market-relevant technology. DLT allows users to distribute transactions across several participants and their network nodes, without the need for a central authority to administer the trades. Based on this concept, copies of the specific transaction data is distributed among a network of equal parties in a decentralized fashion. Each participant in a DLT network stores and verifies the transactions, contributing to the integrity of the transaction history.

With regard to the identified types of digital assets, we have already seen the first lighthouse projects put forward by participants positioning themselves as early adopters on the capital market. The different infrastructures and economic intentions of the respective asset classes have resulted in two distinct categories of use cases.
For starters, based on the relevance and application of DLT infrastructure, many financial intermediaries have positioned themselves as pioneers in decentralized technology, either independently or as a consortium. The “Marco Polo” trading platform, which represents a banking syndicate with participants like Commerzbank or ING, is one example of the latter. In addition to trading platforms, Deutsche Börse and the Bundesbank have developed an interface solution that allows DLT-based securities to be settled in central bank money. These examples serve as an important bridge between crypto-based technology and conventional payment transactions.

Secondly, in the digital coin segment, we have already seen several first movers emerge on the market side. These include cryptocurrencies or CBDCs, as outlined above. The ECB, following Sweden and China, is already working on ideas for the infrastructure needed to develop a digital euro. The Banque de France has emerged here as a pioneer in the development of digital central bank money. The evolution of CBDCs as a payment solution is presented in the roadmap below.

Based on these bridging solutions already in use, we are still in the early stages of a central bank digital currency here in Europe. The ECB’s two-year conceptual project on the digital euro only began in 2021, so realistically, the earliest estimate for a digital euro is 2026.

**Business cases show two main perspectives**

Alongside certain banks focused on integrating digital currencies or adapting DLT networks, there are also several financial intermediaries that already have a basic framework in the Banking as a Service (Baas) segment. The business case for this involves one financial institution providing the technical and regulatory infrastructure that will enable other financial institutions to integrate the products into their existing offerings. Banks such as Solarisbank, fidor Bank or Von der Heydt have already entered the market with a Baas service known as a “white-label platform”. With demand for crypto custody solutions growing, a number of providers have positioned themselves as first movers on this market with Software-as-a-Service (SaaS) solutions or hardware-based solutions for secure key custody. We will address the topic of the safekeeping of crypto-based assets in more detail later, along with its challenges and approaches.

**Asset management firms have identified DLT as an opportunity for a wide range of trading processes**

In recent years, asset management companies have been slow to discover the uses for and the benefits of distributed ledger technologies (DLT) compared to other industries (World Economic Forum, 2021). Leading asset management firms are now recognizing its great potential, advantages and areas of use, as well as the challenges involved in updating their operations and technology to accommodate DLT. Our July 2021 Deloitte Digital Asset Survey of asset managers located in EMEA (Deloitte, 2021) confirmed this. Broadly speaking, there are two complementary starting points for asset managers that use DLT to increase efficiency, revenues and cost-savings.

For starters, based on the relevance and application of DLT infrastructure, many financial intermediaries have positioned themselves as pioneers in decentralized technology, either independently or as a consortium. The “Marco Polo” trading platform, which represents a banking syndicate with participants like Commerzbank or ING, is one example of the latter. In addition to trading platforms, Deutsche Börse and the Bundesbank have developed an interface solution that allows DLT-based securities to be settled in central bank money. These examples serve as an important bridge between crypto-based technology and conventional payment transactions.

Secondly, in the digital coin segment, we have already seen several first movers emerge on the market side. These include cryptocurrencies or CBDCs, as outlined above. The ECB, following Sweden and China, is already working on ideas for the infrastructure needed to develop a digital euro. The Banque de France has emerged here as a pioneer in the development of digital central bank money. The evolution of CBDCs as a payment solution is presented in the roadmap below.

Based on these bridging solutions already in use, we are still in the early stages of a central bank digital currency here in Europe. The ECB’s two-year conceptual project on the digital euro only began in 2021, so realistically, the earliest estimate for a digital euro is 2026.

**Business cases show two main perspectives**

Alongside certain banks focused on integrating digital currencies or adapting DLT networks, there are also several financial intermediaries that already have a basic framework in the Banking as a Service (Baas) segment. The business case for this involves one financial institution providing the technical and regulatory infrastructure that will enable other financial institutions to integrate the products into their existing offerings. Banks such as Solarisbank, fidor Bank or Von der Heydt have already entered the market with a Baas service known as a “white-label platform”. With demand for crypto custody solutions growing, a number of providers have positioned themselves as first movers on this market with Software-as-a-Service (SaaS) solutions or hardware-based solutions for secure key custody. We will address the topic of the safekeeping of crypto-based assets in more detail later, along with its challenges and approaches.

**Asset management firms have identified DLT as an opportunity for a wide range of trading processes**

In recent years, asset management companies have been slow to discover the uses for and the benefits of distributed ledger technologies (DLT) compared to other industries (World Economic Forum, 2021). Leading asset management firms are now recognizing its great potential, advantages and areas of use, as well as the challenges involved in updating their operations and technology to accommodate DLT. Our July 2021 Deloitte Digital Asset Survey of asset managers located in EMEA (Deloitte, 2021) confirmed this. Broadly speaking, there are two complementary starting points for asset managers that use DLT to increase efficiency, revenues and cost-savings.

First, asset managers must consider whether and where to invest in crypto assets. Crypto assets include digital fiat currencies, cryptocurrencies and tokenized securities, both public and private. The benefits of these assets range from shorter processing times to the ability to trade assets in smaller fractions and improved transparency. There are also fewer internal and external parties involved in the settlement process, and that means less effort to reconcile and verify data as well as lower risk and costs than manual processing. There is a growing number of custodians who hold a license and comply with eWpG provisions on storing digital assets, securities and currencies, please see the Custody chapter for more information on this topic.

**For starters, based on the relevance and application of DLT infrastructure, many financial intermediaries have positioned themselves as pioneers in decentralized technology, either independently or as a consortium.**

**Business cases show two main perspectives**

Alongside certain banks focused on integrating digital currencies or adapting DLT networks, there are also several financial intermediaries that already have a basic framework in the Banking as a Service (Baas) segment. The business case for this involves one financial institution providing the technical and regulatory infrastructure that will enable other financial institutions to integrate the products into their existing offerings. Banks such as Solarisbank, fidor Bank or Von der Heydt have already entered the market with a Baas service known as a “white-label platform”. With demand for crypto custody solutions growing, a number of providers have positioned themselves as first movers on this market with Software-as-a-Service (SaaS) solutions or hardware-based solutions for secure key custody. We will address the topic of the safekeeping of crypto-based assets in more detail later, along with its challenges and approaches.

**Asset management firms have identified DLT as an opportunity for a wide range of trading processes**

In recent years, asset management companies have been slow to discover the uses for and the benefits of distributed ledger technologies (DLT) compared to other industries (World Economic Forum, 2021). Leading asset management firms are now recognizing its great potential, advantages and areas of use, as well as the challenges involved in updating their operations and technology to accommodate DLT. Our July 2021 Deloitte Digital Asset Survey of asset managers located in EMEA (Deloitte, 2021) confirmed this. Broadly speaking, there are two complementary starting points for asset managers that use DLT to increase efficiency, revenues and cost-savings.
The European Investment Bank issued its first EUR 100m tokenized bond on the Ethereum blockchain in April of this year, which has prompted many asset managers to evaluate the technological upgrades they need to integrate distributed ledger technology into their operating model. There is a limited benefit to buying tokenized liquid asset classes in a deep market, e.g., access to smaller fractions of securities, but they represent a typical pilot use case for asset managers. Once companies have built internal capacity for and gained expertise in DLT, we expect the biggest benefits from tokenization to come from alternative assets. This is where the market lacks transparency and requires many different internal and external parties for a single transaction, which results in high cost and effort. Specifically, private debt securities in infrastructure and real estate with a huge ticket size often need external banks for bookkeeping and accounts, the transfer agency function as well as invoicing and billing of interest charges. Tokenization of these assets makes it cheaper to pay for and settle trades and easier to trade on the secondary market, which will increase the number of market participants, e.g., boutique firms, family offices, institutional investors, and lead to a more liquid, deeper market with lower spreads.

We have seen a rise in the market volume of cryptocurrencies and rapidly growing interest in this asset class by institutional investors, particularly after regulators announced in May 2021 that alternative investment funds could hold up to 20% of their assets in crypto. This has prompted asset managers to evaluate their capacity for buying and holding crypto-assets. Once cryptocurrencies qualify for inclusion as a UCITS and as soon as an electronic central registry exists, we expect to see demand from professional and retail investors increase further. In July, the SEC chair Gary Gensler suggested that cryptocurrencies might fall under securities law, particularly those that are more dependent on the traditional securities prices.

We expect volatility in this new asset class to remain high and the regulatory framework to remain uncertain, even more so after China ordered banks not to engage in business with crypto companies in June of this year. And yet, it is more likely than not that cryptocurrencies will continue to mature. On the one hand, crypto no longer goes against ESG principles, based on the carbon emission estimates of the Crypto Carbon Rating Institute (CCRI), and on the other, many providers (e.g., Nano, IOTA, Cardano and Chia Network) have started to offset the emissions associated with mining and trading digital assets.

Lastly, we expect cryptocurrencies to become part of an investor’s portfolios as a new form of safe haven and an alternative to fiat currencies and central bank policies.

The total market capitalization of global cryptocurrencies remains small compared with leading global indices including gold, though it is catching up with European indices. Both asset managers and investors are closely watching its future development and asset managers should consider acquiring the technology they need to store digital assets.

In addition to buying and trading tokenized assets, asset managers should assess the benefits of issuing digital funds that include tokenized assets. While it is possible to integrate crypto assets into traditional funds through mirroring and synthetically replicating the asset values, it requires additional effort that asset managers could avoid if they launch digital funds. This is why many asset managers believe that digital Blockchain Traded Funds (BTF) will eventually evolve the way the ETFs did in the early 1990s. With today’s faster rate of digital adoption, we expect worldwide spending on blockchain solutions across all industries to grow by a five-year compound annual growth rate (CAGR) of 48.0% in the 2020-2024 forecast period, as reported in a new update to the International Data Corporation (IDC) Worldwide Blockchain Spending Guide and Gartner 2021.
While we still do not know how quickly BTFs specifically will be adopted, we expect that central bank initiatives to launch digital currencies (CBDC) will increase the number of digital funds on offer, thus enabling holistic end-to-end digital investment processes. Tokenized funds will offer a compelling alternative to existing traditional, alternative and passive funds, not only because they reduce trading and processing times, but primarily because they lower trading and administration costs. This is particularly valuable in a market under constant fee pressure, where leading asset managers with highest assets under management have even started to offer zero-fee funds.

As institutional and retail investors become more cost-conscious, we expect institutional investors to hold a larger volume of tokenized funds, and they are already building in-house capacity. For retail investors, we expect the highest demand to emerge on independent digital investment platforms (e.g., Coinbase, Binance, eToro, etc.).

These platforms could facilitate direct trading in BTFs without involving intermediaries such as banks, brokerages and exchanges, reducing both third-party fees and data reconciliation effort.

Ultimately, the question for asset managers is not whether they are going to adopt distributed ledger technology. The question is where DLT will be most beneficial and whether they build expertise in-house or partner with (and maybe acquire) an existing specialist provider.

Figure 4: The number of funds issued increases and sales become more efficient as the technology evolves (Source: Deloitte (2022))
Custody

The question of introducing Custody Services: make, partner or buy?
Demand for crypto-based assets is growing steadily, and that means investors need secure storage solutions. The more investors try to source safe custody solutions, the better the potential new business case for custody providers will become, particularly for financial institutions.

Custody services allow financial institutions to continue their role as a trusted partner in facilitating global transactions. As we see it, the biggest opportunity for institutions will be to inspire trust within the digital asset space and assure clients that they offer a safe environment for digital asset trading. This will give them a strong foundation for a wide range of future transactions and products to come.

Banks will have to meet several requirements before they can offer custody services and become a safe custodian of crypto-based assets. First, they need to understand exactly what their target customer groups want from them in a business case. Then, they need to ensure they have the right IT infrastructure to offer custody service.

In addition to the knowledge of specific customer demands and the IT infrastructure requirements, there are country-specific regulations for custodians that depend on the circumstances in a particular region, and banks will need to conduct conformity checks. In Germany, the government has already introduced initiatives to reduce regulatory barriers in the custody of crypto-based assets. Financial institutions here must comply with statutory regulations and also be willing to apply for a "BaFin custodian license" that enables them to legally provide custody services.

Given the increased regulatory relevance of the custody option, the following section provides a detailed explanation of regulatory trends on the German crypto market.

As interest in crypto-based assets grows among institutional investors, a positive dynamic has developed on the market side with regard to regulations.

For example, alternative investment funds (AIFs) are now permitted to hold up to twenty percent of crypto-based assets as of July 2021. We also expect uncertainty regarding taxation of cryptocurrencies and other digital currencies to be resolved on the way to fair and equitable taxation. The EU Commission will address the issue in its action plan for the automatic exchange of information as part of the amendment of the Directive on Administrative Cooperation (DAC6).

It was also the case under previous legislation that financial products deemed securities under civil law had to be backed by a physical certificate. This paper document serves as the conduit for the automatic exchange of information as part of the amendment of the Directive on Administrative Cooperation (DAC6).

Demand for crypto-based assets is growing among institutional investors, a positive dynamic has developed on the market side with regard to regulations.

For example, alternative investment funds (AIFs) are now permitted to hold up to twenty percent of crypto-based assets as of July 2021. We also expect uncertainty regarding taxation of cryptocurrencies and other digital currencies to be resolved on the way to fair and equitable taxation. The EU Commission will address the issue in its action plan for the automatic exchange of information as part of the amendment of the Directive on Administrative Cooperation (DAC6).

It was also the case under previous legislation that financial products deemed securities under civil law had to be backed by a physical certificate. This paper document serves as the conduit for the automatic exchange of information as part of the amendment of the Directive on Administrative Cooperation (DAC6).

In addition to the knowledge of specific customer demands and the IT infrastructure requirements, there are country-specific regulations for custodians that depend on the circumstances in a particular region, and banks will need to conduct conformity checks. In Germany, the government has already introduced initiatives to reduce regulatory barriers in the custody of crypto-based assets. Financial institutions here must comply with statutory regulations and also be willing to apply for a "BaFin custodian license" that enables them to legally provide custody services.

Given the increased regulatory relevance of the custody option, the following section provides a detailed explanation of regulatory trends on the German crypto market.

Following these regulatory initiatives on the German market, different entities have emerged as custodians.

In line with different perspectives regarding the treatment of crypto-based assets and their large-scale adoption at major corporations, custodian services in Germany have so far been offered primarily by small banks or start-ups such as Finoa, Tangany and Upvest. In the banking sector, institutions such as Solarisbank, von der Heydt or Commerzventures have emerged as pioneers. The entities offering customers custody services use different technologies, so there is no dominant state-of-the-art technology solution on the market just yet.

When it comes to meeting the requirements mentioned above, financial institutions are faced with the question of providing the custody themselves, in cooperation with other entities or outsourcing the service to a third-party provider. Financial institutions need to make the decision about managing custody in-house or with a third-party provider on the basis of a differentiated status quo analysis focused on criteria such as practicality, economic efficiency and technical feasibility.
Operations & Distributed Ledger Technology

Operations & Blockchain Technology
Processes, Implementation
A lot of institutions and their key operations support the lifecycle and trading of financial instruments, e.g., bonds, stocks, shares in funds, etc. Some processes are duplicated on the buy and sell side or by the central custodian and the institutional market participant in order to ensure securities transactions are processed properly. This “duplication” of processes requires a lot of technical effort and time-consuming reconciliation of various process steps and increases transaction costs. In recent decades, we have not seen any significant innovation in the process as a whole, even though these transaction costs indicate that there are serious inefficiencies in the traditional settlement and clearing system.

As Distributed Ledger Technology (DLT), and more specifically Blockchain, has become more prevalent, many financial institutions have tested the technology across the value chain. Their trials demonstrate that it increases efficiency by reducing costs, promoting automation and settling transactions faster. Implementing DLT into the end-to-end processing of financial instruments has given rise to a new market infrastructure for financial institutions. The tokenization process, for example, where financial assets such as bonds are represented as digital tokens, has reduced the time it takes to settle an asset from three days to nearly real time. This dynamic shift in the market infrastructure has opened up the market to new participants and new financial assets (financial instruments) will remain the same, from issuers, underwriters and different agent roles to reference, rating and market data providers. When a new digital asset is issued, it is important to provide the structure and market placement for the asset. The role of the asset in an underwriting consortium remains vital for the success of the market placement of the new issuance. New competitors may enter the market by taking over the placement role, for example, and leveraging the existing distribution network and the direct access to (end) customers.

In the multi-chain model, there are different blockchain networks in place that need to interact with each other outside of the existing settlement and payment processes.

In the medium term, DLT has the potential to create a decentralized network that is accessible in real time to all parties involved in a trade (agent, CSD, custodian, etc.) and can also be used as a communication platform for all participants. This model enables each player to connect to and actively participate in a decentralized network, possibly through their own node.

As interest in crypto-based assets grows among institutional investors, a positive dynamic has developed on the market side with regard to regulations.

Regardless of the various handling processes, the existing business roles involved in issuing digital assets (financial instruments) will remain the same, from issuers, underwriters and different agent roles to reference, rating and market data providers. When a new digital asset is issued, it is important to provide the structure and market placement for the asset. The role of the asset in an underwriting consortium remains vital for the success of the market placement of the new issuance. New competitors may enter the market by taking over the placement role, for example, and leveraging the existing distribution network and the direct access to (end) customers.

The current system, i.e., issuing a typically paper-based certificate deposit to a CSD such as Clearstream or Euroclear using the CSD interface in their system, would be replaced by a system in which the tokenizer issues the token and enters it into the crypto register. The WKN/ISIN system will remain an important requirement for (international) trading, a tokenizer-specific ID would be the only limit to the tradability of this financial instrument.

The liquidity and tradability of an asset is the basis for price efficiency in financial instruments. Generally, traders do not care which settlement system or architecture is used as long as they can obtain competitive prices and settle their trades. A lot of the initiatives currently in place for digital assets only cover OTC trading. The only way to increase liquidity will be to ensure that digital assets are tradeable and that an increasing number of market participants are trading these assets. It is important for the many digital asset initiatives to focus on developing a limited number of dedicated marketplaces as the trading volume of digital assets rises. Targeted incentives could support this vital concentration and development process to keep major existing and new market participants moving in the same direction. This would also ensure market liquidity, easy access and lower settlement costs after a parallel phase operating alongside traditional asset and settlement processes.

Figure 5: Overview of the three main models of DLT for the settlement of securities transactions (Source: Deloitte (2022))
With regard to existing post-trade operations on the market, we need to address the way financial instrument trades are settled and paid for over the long term; in the current environment, the number of trades being settled is falling and the fixed costs are high. We need new settlement and payment solutions for digital assets that offer more automation and reduce complexity so that we can leverage the cost-saving effects as the number of trades increases in the future.

During the parallel phase, we expect the overall costs to increase in the current settlement structure as the number of trades decreases and the fixed costs remain high. The investments in a new settlement structure for digital assets will only cover a low number of trades at the outset, but that will quickly increase and bring the cost per trade to a more attractive level as time goes on. The challenge is to organize this parallel phase in a cost-efficient way, taking into account that we will have to shut down the current settlement processes sooner or later to make the most of these cost reductions.

We expect the different layers of custodians and depository banks in digital asset trading to change significantly in the future, depending on which model ultimately becomes the market standard.

Each layer of the custodian chain that we can make obsolete will result in significant cost savings across the entire end-to-end process.

We expect new companies to enter the market in the custody business as well as more existing custodians and depository service providers to consolidate.

Both digital assets and current assets will require corporate actions moving forward. We should see the emergence of digital assets as a once-in-a-lifetime opportunity to automate more corporate actions, e.g., interest/dividend payments, repayments, any type of changes (increase, termination, asset split, asset merger, exercise of rights), and to reduce the manual effort, process complexity and holding tasks.

We can also see the rise of digital assets as a trigger for broad standardization of know-your-customer and anti-money laundering processes for new and existing customers. It will be vital to comply with the new standards for tokenized digital assets to ensure that they are covered by existing reporting mechanisms and tax accounting.

Figure 6: Example of a DLT implementation in the OTC trading business (Source: Deloitte (2022))
Opportunities to lead market 2025

By 2025, we expect leading financial firms to have the necessary infrastructure in place and a strong, secure position for the future.
We are seeing new products emerge as well as increasing digitalization and modernization of existing financial products based on DLT and blockchain technology. This promises to make investing more attractive for (digital) investors.

To secure a leading position and competitive advantage in this emerging industry, financial services firms will need to become early adopters and start developing the necessary infrastructure for issuing, trading and investing in digital assets and currencies today. It is vital that investors gain trust in the new roles played by market participants in the digital asset environment; success will depend on the safeguards in place as well as the regulation of certain new market roles. We need the continued support of the regulators to help this new sector of financial products and interaction grow and mature.

The key to success will be to increase the liquidity of digital assets in a distinct number of marketplaces that are currently experiencing higher costs and a lack of transparency.

Companies will need to find a solution for the rising intermediate costs while the two different systems are operating in parallel. The transaction cost per trade of the “new” asset model will be very high at first. Once more participants join the market and we can achieve economies of scale, the cost per transactions will go down. The only way to achieve cost efficiency is to establish a new digital asset settlement and payment infrastructure with a high degree of automation and increase the number of trades settled, while also shutting down the old obsolete settlement and payment system.

Deloitte helps banks, asset managers, custodians and exchanges build their in-house expertise in digital assets and DLT, first assessing and evaluating different use cases and potential benefits to their business and then designing prototypes tailored to the firm’s needs. We stay by our clients’ sides throughout their transformation journey and help them become strong, competitive businesses for the future.
Contacts

Jürgen Lademann
Partner, Consulting
Deloitte Digital
jlademann@deloitte.de

Prof. Dr. Alexander Schroff
Director, Consulting
Lead Capital Markets
aschroff@deloitte.de

Tilmann Bolze
Director, Consulting
Core Banking Solutions
tbolze@deloitte.de

Ramona Rueckbel, CFA
Senior Manager, Consulting
Asset Management
rrueckbel@deloitte.de

Jens H. Paulsen
Senior Manager, Consulting
Lead Blockchain
jpaulsen@deloitte.de

We hereby thank Laurenz Gartzke, Simon Stich, Can Oeger from Deloitte Germany for their contributions, engagement and commitment to this white paper.
Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms, and their related entities (collectively, the "Deloitte organization"). DTTL (also referred to as "Deloitte Global") and each of its member firms and related entities are legally separate and independent entities, which cannot obligate or bind each other in respect of third parties. DTTL and each DTTL member firm and related entity is liable only for its own acts and omissions, and not those of each other. DTTL does not provide services to clients. Please see www.deloitte.com/de/ueberUns to learn more.

Deloitte provides industry-leading audit and assurance, tax and legal, consulting, financial advisory, and risk advisory services to nearly 90% of the Fortune Global 500® and thousands of private companies; legal advisory services in Germany are provided by Deloitte Legal. Our professionals deliver measurable and lasting results that help reinforce public trust in capital markets, enable clients to transform and thrive, and lead the way toward a stronger economy, a more equitable society and a sustainable world. Building on its 175-plus year history, Deloitte spans more than 150 countries and territories. Learn how Deloitte's more than 345,000 people worldwide make an impact that matters at www.deloitte.com/de.

This communication contains general information only, and none of Deloitte Consulting GmbH or Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms or their related entities (collectively, the "Deloitte organization") is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

No representations, warranties or undertakings (express or implied) are given as to the accuracy or completeness of the information in this communication, and none of DTTL, its member firms, related entities, employees or agents shall be liable or responsible for any loss or damage whatsoever arising directly or indirectly in connection with any person relying on this communication. DTTL and each of its member firms, and their related entities, are legally separate and independent entities.

Issue 03/2022
Designed by CoFe Creative Services. RITM913501