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# Tokenization:

Realizing the vision of a  
future financial ecosystem

April 2024



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# Introduction

A growing number of business and thought leaders in financial services are extolling the transformative opportunities tokenization offers the industry. Its basics are relatively simple: the linking of financial assets to digital tokens traded on distributed ledgers, including blockchains, whereby the tokens reflect the fair value of the underlying assets.<sup>1</sup>

The question is: How does one break down the challenges and opportunities of tokenization? Let's begin by offering several broad perspectives on the matter.

## 1. Eating the elephant one bite at a time

A consensus seems to be forming that tokenization represents an important opportunity for the financial services industry and markets alike. It's not unusual, however, for technical realities to lag a vision for the future and for change to come gradually rather than in leaps and bounds.

*Here's the challenge: How will you start your tokenization efforts and maintain systematic focus and progress?*

## 2. Regulatory openness

Financial regulators should provide the fulsome guidance institutions need to engage wholeheartedly with blockchain and digital assets. There appears to be an openness to the possibilities of modernizing certain fundamentals of finance through tokenization. But that, too, awaits the appropriate regulatory pathway to adoption.

*Here's the challenge: How will you engage regulators in a discussion about the appropriate path forward?*

## 3. Not crypto

There is an important distinction to be made: Tokenization is not crypto. Tokens reflect the fair value of the underlying assets behind them. Crypto, on the other hand, is not immediately supported by such underlying assets. And while crypto may have long-term potential, the recent stain of high-profile enforcement actions and the complexity involved with decentralized governance have given regulators reason to hesitate.<sup>2</sup>

*Here's the opportunity: How will you convert your tokenization experiments into products worthy of commercialization? And what is the potential impact of tokenization products on your organization?*

## 4. Side effects

Tokenization has many potential benefits, such as faster speed of settlement, greater transparency and control, and lower operational costs. However, increasing the velocity of money may have some unintended or unexpected consequences. These might include:

- more rapid onset of financial crises
- faster execution of financial frauds
- smaller windows of opportunity to make monetary policy decisions.

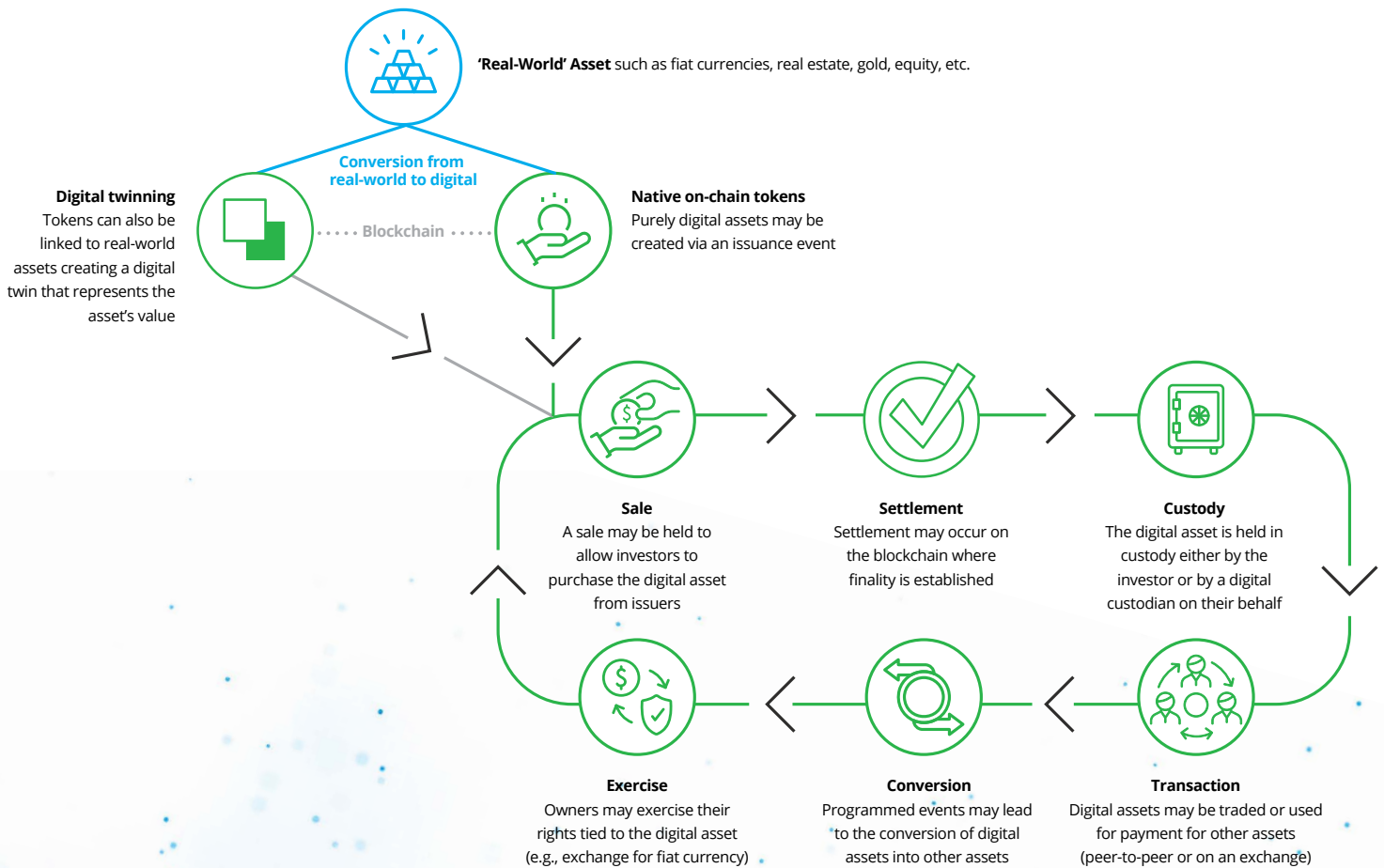
Acting Comptroller of the Currency Michael Hsu sees these risks, too, and believes the financial system needs "better brakes" to be ready.<sup>3</sup> And there's another powerful emerging crosscurrent: Generative Artificial Intelligence (AI). While it is still too soon to predict any specifics, there is little doubt that AI will change the way consumers and institutions manage money.

*Here's the opportunity: How can you capitalize on the standardization and programmability of tokenized systems and the power of AI to envision and then create new products and synergies for your organization?*

Various financial services providers are projecting that tokenization could generate trillions of dollars in new value for the financial services industry this decade.<sup>4</sup> And while these estimates may elicit skepticism among some, they would likely represent just a tiny fraction of the global market of assets that has the potential of being tokenized. Think of the many sectors with assets that have that possibility: real estate, private equity and venture capital funds, exchange-traded products, and many others.

The foundations of a tokenized future are already in the works (figure 1). Several financial institutions have launched pilots and proofs of concept (PoCs) and are joining industry consortia that are dedicated to developing rigorous cross-industry standards, practices, and solutions. This progress has been developing for years, with a 2021 survey undertaken by BNY Mellon reporting that more than 70% of institutional asset managers had plans to develop solutions for the tokenization of assets.<sup>5</sup>

**Figure 1.** Lifecycle of a tokenized asset



Source: Deloitte

## What benefits can financial institutions see in tokenization?

There are several relatively immediate possibilities:

1. The introduction of new financial products and services would be possible thanks to the digital representation of conventional assets (see, for example, tokenizing exchange-traded funds [ETFs] to create digital funds)<sup>6</sup> that traditionally have been illiquid; or through the creation of new digital assets represented as tokens, such as nonfungible tokens (NFTs).
2. Tokenization is likely to help reach new customers thanks to its ability to allow for fractional trading in illiquid assets. These assets might include real estate, artwork, or other valued collectibles. Moreover, tokenization could allow investors themselves to gain access to markets previously closed to them.<sup>7</sup>
3. Tokenization offers the possibility of new operational efficiencies. That's because the process would in all likelihood be anchored to a ledger that facilitates smart contracts. These, in turn, serve to automate and streamline the trading of the underlying assets and facilitate the flows of programmable funds. Furthermore, tokenization could support improvements to the legacy infrastructure of financial services companies.

While this may all be very compelling, let's bear in mind that many of the financial services players in this space are still in the early stages of their thinking and experimenting. And, as is often the case, protracted experimentation can lead to PoC fatigue. Hence the likelihood of a heightened focus on commercialization and the determination of asset managers to realize a concrete return on investments for their efforts. According to a survey conducted in 2023, more than 50% of asset managers and 30% of asset servicers indicated that they had specific plans to launch tokenized assets in the next 12 months.<sup>8</sup>

These and other indicators suggest that the industry may well be on the cusp of major change and that leaders driving tokenization efforts are likely to press for concrete commercial wins in the months ahead. While that occurs, the market and regulatory environment could evolve to be more conducive to the tokenization process, as some global trends already indicate.<sup>9</sup> Those institutions that score early commercial wins could gain a substantial advantage over the competition in terms of knowledge, connections, and branding in the eyes of tech-savvy clients.

The goals of this brief are several:

1. Describe some of the main benefits of tokenization for financial institutions.
2. Explain some of the main challenges such institutions are likely to face to realize those benefits.
3. Address some of the identified challenges to the extent that possible solutions are in the offing.

It's important to bear in mind that, although the vast territory and potential of tokenization remain in good measure uncharted, tactics and leading practices are nevertheless gradually emerging.

# Near-term opportunities in the tokenization of assets

A number of publications discussing use cases for asset tokenization have already entered into broad circulation. Some of the case studies presented face severe uphill climbs to adoption in the immediate future. Others, however, hold out the promise of providing real value for early adopters in the next few years.

Let's briefly consider some of the use cases:

## Bonds issuance

Issuing bonds as tokenized assets via blockchain protocols carries the advantage of improved transparency and faster settlement times.<sup>10</sup> The European Investment Bank has issued several tokenized bonds using tokenization platforms provided by HSBC, Goldman Sachs, and more. As secondary markets develop (see more below), tokenized bonds could also help improve liquidity and accessibility.<sup>11</sup> More opportunities are sure to be found in the field of fixed income.

## Repo transactions

JPMorgan reported last year that its Onyx platform had helped facilitate more than \$300 billion in intraday repo transactions.<sup>12</sup> That came on the heels of piloting efforts in conjunction with several global financial institutions such as Goldman Sachs and Singapore's DBS Bank.<sup>13</sup> In addition, Broadridge's global Distributed Ledger Repo platform across both sell-side and buy-side firms captures \$1 trillion in monthly volumes from the global repo market.<sup>14</sup>

## Exchange-traded products

Tokenizing ETFs offers faster settlement times and greater efficiencies for issuers and improved transparency and broader access for traditional investors.<sup>15</sup> Several DeFi companies have launched tokens on permissionless blockchains that track ETFs.<sup>16</sup> Major ETF issuers, such as State Street, among others, have announced their intention to explore tokenization of their funds for stocks and bonds.<sup>17</sup>

## Commodities

A number of digital assets startups have issued more than \$1 billion worth of tokens that represent ownership in physical gold, and traditional commodities traders are following suit.<sup>18</sup> As for commercial banks, last year, Santander Bank launched a pilot to issue loans to Argentinian farmers that were collateralized with tokenized agricultural commodities including soybeans, corn, and wheat.<sup>19</sup>

Other options and possibilities will probably soon emerge with mutual funds, private equity, and cross-border payments and cash deposits, among others.

# Navigating the path to commercialization

The path to commercialization and the realization of near-term value may not be easy for early adopters. Yet, while they will be traveling in uncharted territory, for some of their challenges there are already indications that solutions may be at hand. For other challenges, these early adopters should collaborate with more traditional financial institutions, technology vendors, and regulators to unlock the value that they anticipate. The growing momentum already alluded to above and increased interest from more conventional players in financial services will likely serve as the catalyst for that collaboration.

In this section, we'll provide an overview of some of the main challenges early adopters are likely to face, why these challenges are likely to be important for success, and some suggestions and guidance on how to address them.

## Interoperability and secondary markets

So far, major financial services institutions experimenting with tokenization have been testing on their own permissioned platforms that provide them with a safe space to play out use cases knowing they have complete control from administrative, security, and compliance perspectives.<sup>20</sup> As a consequence, they have been able to avoid many of the challenges they might well face outside of their own carefully controlled platforms.

Yet, to unlock and maximize the potential of these tokenization use cases, these institutions should go outside their walls and cultivate vibrant secondary markets that trade in tokens. To create those secondary markets, interested institutions should connect their separate environments by relying on shared technical standards for interoperability. While interoperability standards do not yet exist, efforts to achieve it are in progress, and institutions should continue to participate in order to create the needed infrastructure and standards.

Here are some of the challenges and obstacles that lie ahead on the road to interoperability:

- At the moment, most tokens cannot be traded or redeemed outside the platform used or created by the issuing entity. For investors who work with multiple financial institutions, such constraints can be an obstacle to adoption.

- Those limitations, in turn, mean that only a small percentage of the issuer's customers are likely to be enticed to use/trade these tokens. Hence, the absence of any broad secondary markets for such tokens.
- In the absence of such secondary markets, issuers can only tokenize assets that can realize their value in the short term. For example, most of the early activity associated with bond issuance involved only three-to-six-month debt.<sup>21</sup> With that kind of short time horizon, there is little need for a secondary market since buyers tend to hold on to these debt instruments until their maturity. Needless to say, in the world of debt markets, the demand for short-term debt is far less than that for longer-term debt, such as that with a five- or 10-year maturity date.<sup>22</sup> That bigger potential opportunity still awaits the creation of a vibrant secondary market for the buying and selling of such longer-term debt.

Realizing the full benefits of tokenization largely depends then on the emergence of thriving secondary markets so that regulated financial services providers and their customers can buy and sell tokens. And only with the creation of appropriate application programming interfaces (APIs) and common technical standards can institutions break out of their silos and secure connections among all interested parties and participants.

Beyond these considerations, there are several significant challenges to building interoperable networks that can support secondary markets. They include:

- Creating a consensus about transaction processes and controls for interoperable networks.
- Ensuring a sustainable value for tokens on secondary markets.
- Bringing the appropriate collaborative mindset to consortia efforts.

The good news is that such collaboration is already underway. For example, the [Regulated Liability Network \(RLN\) industry initiative](#) has proposed a framework and protocol for settling payments using tokens and relying on an interbank network that could also function for other use cases, including tokenized securities.<sup>23</sup>

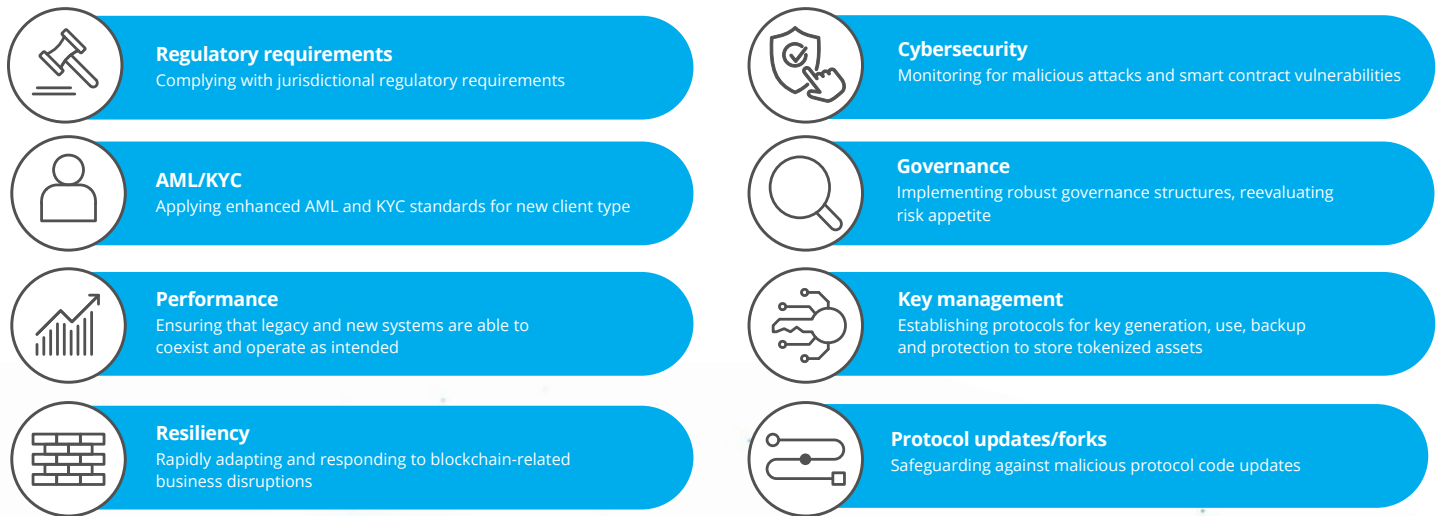
The way forward is likely to see the adapting of rules from existing industrywide transaction networks, such as SWIFT, to create a consensus on the processes and controls the industry requires. Beyond that, there is the need to incentivize and educate potential users about how tokens can serve their needs and provide lasting value. Finally, in terms of the financial services players, there should be a clear understanding and acceptance of the notion that cooperation is essential to

creating and maintaining network effects from tokenization and that no one platform can dominate. It is likely that collaborative efforts, such as RLN, could help work through some of these challenges in terms of technical standards and could serve to facilitate interoperability and the creation of secondary markets.

### Regulation and risk management

While interoperability and secondary markets are important, as we noted earlier, institutions have limited their tokenization efforts to their own permissioned environments so far<sup>24</sup>—and that is for a good reason. Tokenization introduces a broad range of new risks across technology, operations, strategy, tax and accounting, and regulatory compliance. Some examples are set forth in figure 2.

**Figure 2.** Risks introduced with tokenization



Source: Deloitte



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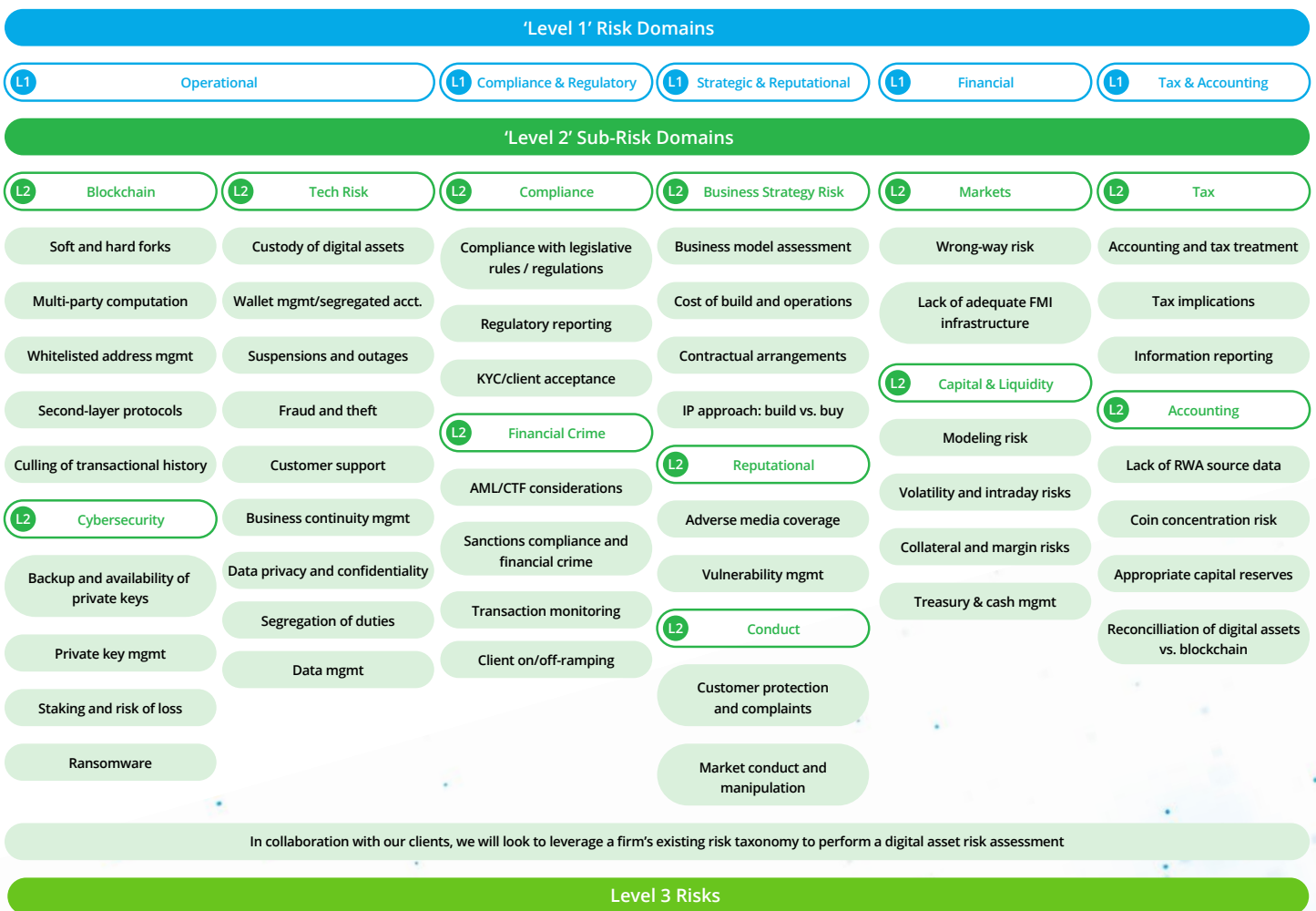
Risks associated with regulatory compliance are likely the largest obstacle to adoption of asset tokenization by regulated financial institutions. One issue is there often are a large number of regulatory bodies that have a hand in defining regulations, which can make compliance complex. Today, many jurisdictions lack regulatory clarity where regulators have yet to establish rules for how tokenized securities can operate on asset exchanges and interbank networks. It remains unclear when such rules might be promulgated. Their absence tends to increase regulatory risk for institutions since it remains unclear which risk controls they should implement for compliance purposes.

As a consequence, operators in such jurisdictions may have had to work in a piecemeal fashion—use case by use case. This could help demonstrate to regulators that they can put in place the necessary controls to safeguard transactions, assets, and user information.

In an effort to demonstrate to regulators that they indeed have the appropriate controls in place, institutions should undertake a comprehensive risk assessment. That will help enable them to test whether they have the capacity to address the wide range of potential risks associated with tokenizing assets. Deloitte has developed such a [framework for the risk assessments of digital assets](#) that can help. It starts with developing risk taxonomies (figure 3), identifying relevant regulations, and pinpointing and assessing gaps in processes and controls.

It's important to note, however, that regulators in some geographies have been proactive in addressing regulatory issues. The fact that their respective regulatory bodies have already begun to issue regulatory guidelines on the use of digital assets (including tokens) is serving as a catalyst for greater experimentation among industry participants and has helped spur activity around tokenization in some of these geographies.<sup>25</sup>

**Figure 3.** Digital asset risk domains



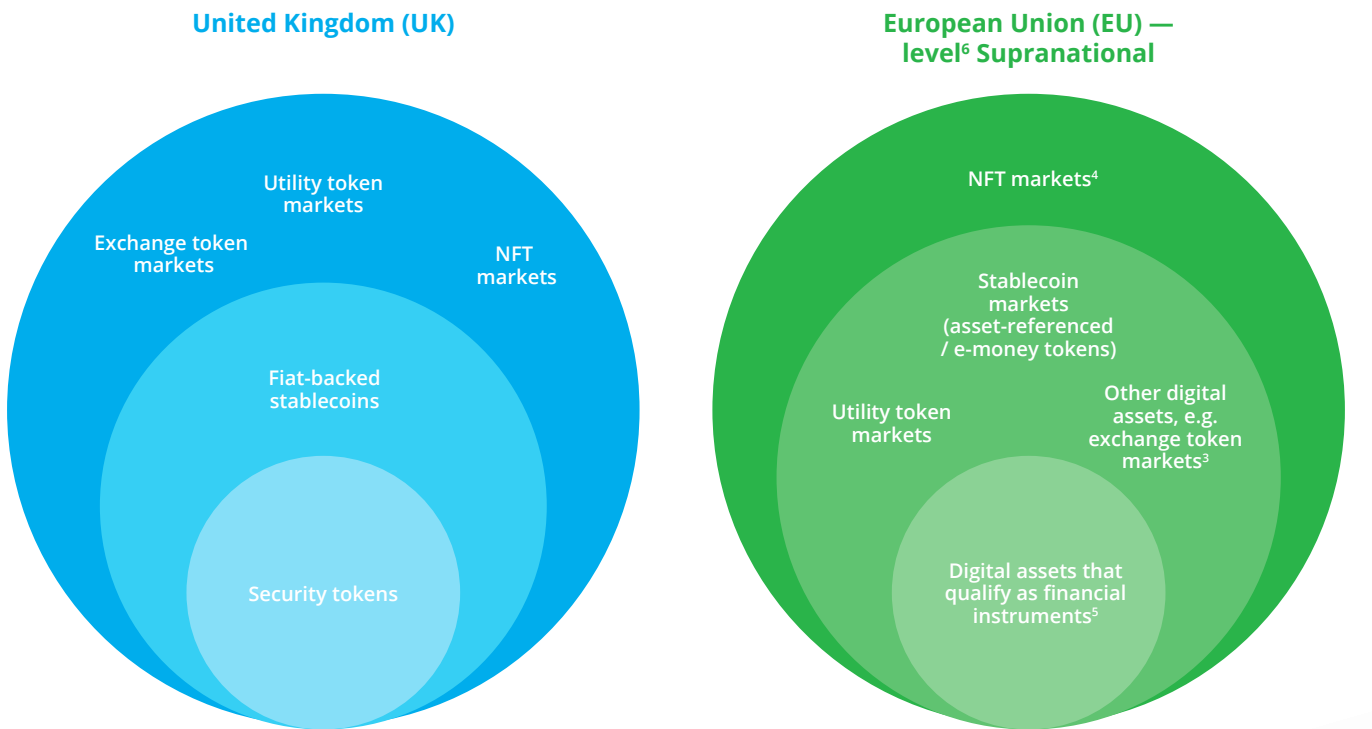
Source: Deloitte

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For example, the Monetary Authority of Singapore, the country's central bank and chief financial regulator, has issued guidance on how digital or tokenized assets will be governed according to existing regulations, primarily the Securities and Futures Act.<sup>26</sup> It has also proposed a framework for interoperable networks to enable the issuing and trading of tokenized assets among institutions and is collaborating with major banks to pilot new use cases, such as tokenizing asset-backed securities, within that framework.<sup>27</sup> The United Kingdom's Financial Conduct Authority has stated that those tokens that provide rights or obligations

similar to traditional regulated financial instruments will fall within the scope of existing securities regulations, such as the UK rules regulating markets in financial instruments (UK MiFID framework). The UK is also developing a regime for stablecoins backed by fiat currencies. Separately, later in 2024 the UK will launch a regulatory sandbox for industry participants to test and experiment with DLT-based infrastructure to trade and settle tokenized securities. Finally, there are ongoing industry-led initiatives to develop a blueprint for fund tokenization in the UK.

**Figure 4.** Evolving EU and UK regulatory structures for digital assets



- Proposals to bring within the regulatory perimeter via phase 2 of UK regulatory approach to digital assets<sup>1,2</sup>
- Proposals to bring within the regulatory perimeter via phase 1 of UK regulatory approach to digital assets<sup>1</sup>
- Captured by existing securities regulation and already within the regulatory perimeter
- Outside the regulatory perimeter for conduct and prudential purposes
- In-scope of EU Markets in Cryptoassets regulation (MiCA) and will come within regulatory perimeter
- Captured by existing securities regulation and already within the regulatory perimeter

1. In the meantime, some rules may already apply. E.g., Financial Conduct Authority (FCA) financial promotions rules, FCA ban on the sale of derivatives that referenced unregulated transferable digital assets (e.g. Bitcoin) to retail customers, and exchange and wallet providers are within the scope of AML/CFT rules.
2. These digital assets are taken from Box 2.A in the UK Government's February 2023 consultation. As the Government sets out, these are a non-exhaustive group of commonly used terms and will not necessarily be aligned to regulatory definitions.
3. Subject to certain exceptions, e.g. MiCA won't apply to issuers of digital assets automatically created as a reward for the maintenance of the DLT or validation of transactions (e.g. Bitcoin).
4. Recitals include key caveats, such that in certain cases NFTs may be captured.
5. Financial instruments as defined in MiFID II.
6. This graphic does not capture existing national EU regimes that will be superseded by MiCA.

The European Union has introduced Markets in Crypto-Assets (MiCA) regulation, which addresses the issuance and trading of most digital assets not caught by existing financial services legislation.<sup>28</sup> Like the UK, in 2023 the EU launched a regulatory sandbox for firms to set-up and test DLT-based trading and settlement venues for tokenized securities, with certain exemptions from securities rules.

In addition, regulators in some geographies are collaborating to develop cross-border standards and best practices for markets in digital assets.<sup>29</sup>

In the coming years, more jurisdictions may clarify their regulatory stance regarding tokenized assets, taking a page from those geographies that have already been proactive. It could be helpful for regulators in those geographies to create sandboxes as EU and UK regulators have done.

Even with the support of the regulators, financial institutions will still need to address additional risks and challenges around tokenizing assets, including privacy risks, challenges attending the transformation and integration of legacy systems and processes, as well as tax and accounting matters.

### **Privacy**

Distributed ledgers tend to present a special conundrum—a conflict between transparency and privacy. Any institution interested in pursuing tokenization efforts should resolve this problem. Doing so comes down to making design choices about what information tokenization networks will share regarding transactions and how they share it.

Distributed ledgers can provide unprecedented transparency to the financial markets, and this can have a significant benefit for financial institutions and their regulators. Operating from a shared single source of “truth” can streamline the approval of transactions, compliance reporting, and responses to suspicious activity.

That said, transparency can come at a cost to privacy. For instance, the original bitcoin blockchain made visible all transactions associated with any wallet to all users. Yet, it did not reveal the identity of the wallet’s owner. Here’s the rub with tokenization. Greater privacy will be required in order to encourage investors to adopt tokenized assets. And naturally, investors will likely want to protect certain kinds of information from a host of parties, including potential competitors. And they will probably not agree to allow participants to see all of their transactions.

For those reasons, the designers of interoperable systems will likely be obliged to address and meet those expectations. One possible approach would be to hide the identities of those

involved in any specific trade, allowing only the counterparties themselves and relevant regulatory bodies to see them. All the other participants on the broader network would have access only to the details of the transaction proper (i.e., its dollar value, time, etc.). Efforts to design these systems are gradually gaining momentum. In one such network, applications connect across institutions to execute trades and settlements using smart contracts derived from the open-source smart contract programming language, Daml, created by Digital Asset, a provider of distributed ledger technology. Daml enables application builders to incorporate easily the rules governing real-world securities transactions, program access, and authorization policies.<sup>30</sup> Additionally, a default setting in Daml keeps user information confidential during transactions.

### **Transforming legacy systems**

Tokenization can offer a more efficient method for trading assets and may significantly reduce operating costs for financial institutions. However, one of the more significant technical challenges facing institutions seeking to adopt tokenization involves integrating the technology of distributed ledgers with legacy back-end systems, while also building in the appropriate smart contracts to facilitate automation.

Here are some of the ways in which tokenization can improve efficiencies. By using distributed ledgers and smart contracts, tokenization offers the possibility of the “atomic settlement” of transactions. That means cash and securities are exchanged simultaneously in an automated fashion governed by smart contracts that also facilitate the irreversible transfer of assets or funds between parties. Consequently, atomic settlement operates on the principle that either the entire transaction succeeds or fails as a single, indivisible unit, eliminating the risk of partial or incomplete transactions.<sup>31</sup> Such a process would tend to accelerate settlement times and eliminate the need for, and errors originating from, manual execution. A number of financial institutions are already investigating or working to implement atomic settlement as part of their tokenization efforts, though challenges still remain. Among them are:

- Regulatory approval.
- Legal status of smart contracts.
- Risk of defects or bugs that could lead to failed transactions or security lapses.
- Upgrading systems for real-time account reconciliation.<sup>32</sup>

In addition, smart contracts that automatically enforce rules and requirements can substantially reduce the need for manual efforts to deal with exceptions and compliance enforcement, though the contracts need to continue operating within existing legal frameworks. Consider these two examples:

- Limited Partners (LP) and General Partners (GP) offering agreements often involved hundreds of pages of documents. These could be tokenized and automated, potentially reducing inefficiencies and manual processes between the various groups involved including deal teams, operations, finance, legal, etc.
- Some real estate investment trusts (REITs) have in place rules or limitations restricting who can invest in them. Today, the review of information provided by potential investors generally requires a laborious manual process. Smart contracts could automate monitoring for eligibility and accordingly prohibit excluded investors from participating in the REIT. Further, a tokenized REIT share could allow dividends via programmable funds.

Here's another instance of added efficiency. Currently, financial institutions tend to rely on multiple IT systems to support the trading of different assets, including cash. By abstracting these different assets to tokens, assets could be traded on shared distributed ledgers—and that could both offer significant cost savings and enable institutions to retire many of their separate siloed systems.

Yet, to realize these efficiencies, financial institutions should tackle and resolve all issues related to the integration of the distributed ledgers with their remaining legacy systems. That is likely no mean feat. It will probably require architectural ingenuity and creativity. Moreover, organizations should develop a long-term strategy for fully transitioning to trading anchored to distributed ledgers.

The reality is that many organizations are likely still years away from retiring many of their legacy trading systems in favor of adopting distributed ledger platforms. After all, the market for and regulatory environment around digital assets, and specifically tokenization, has yet to reach full maturity. The crux of the integration problem is this: organizations will likely want to connect the distributed ledger platforms to legacy systems that were designed long before distributed ledger technology existed. To achieve that, from the outset, the IT leaders will likely need to plan for rationalizing these legacy systems, for plotting their retirement sequence, and for anticipating any challenges that might ensue along the way.

## **Tax and accounting**

Tokenization raises a variety of questions and challenges pertaining to accounting, valuation, and taxation. Here are some:

- Tokenizing certain transactions could result in an increase in the institution's capital requirements under the SEC's SAB 121 staff interpretation, which mandates that any SEC registrant safeguarding a crypto asset must record a safeguarding liability and corresponding asset on its balance sheet. When a token is introduced to a transaction, an institution may have to record a separate safeguarding liability and corresponding asset for the token and may also be required to increase its capital holdings depending on any relevant regulatory requirements. Issuing and safeguarding many tokens could require that an institution keep much higher capital reserves.
- Additionally, different challenges may arise depending on the underlying asset and the legal construct of the tokenized asset. The seminal question is whether the tokenized asset conveys rights and obligations upon a holder that might differ from a direct holding of the underlying asset. For example, consider a scenario where secondary markets are available for the tokenized asset that are not available in the underlying asset. Unintended tax consequences may result from creating new liquidity, transaction types, or simply by not adhering to the commonly accepted legal form under which tax analysis typically relies. Tokenization may therefore change the character of the asset held and alter the timing, sourcing, or recognition for income earned.

The way to handle these questions will differ greatly by institution, asset, and the manner in which the asset is tokenized. That's why consulting with knowledgeable tax and accounting professionals could be an important early step in any plan to issue tokenized assets.

Putting challenges aside for a moment, let's now turn briefly to some of the tax and accounting advantages resulting from tokenization.

- Tokenizing certain private instruments could potentially change their designation under Accounting Standards Codification Topic 820, *Fair Value Measurement* (ASC 820), which governs the valuation of assets under generally accepted accounting principles. Now, many private market instruments, such as private equity fund interests or private real estate interests, are designated as "Level 3" fair value measurements under ASC 820. That classification means that their valuations

are largely based on unobservable inputs such as internally generated data, cash flow models, or external pricing services where there is little market activity.

Tokenization can create visibility by listing the interests on shared exchanges and providing real-time pricing, historical data of recent transactions involving them, and their rate of return. This could enable issuers and owners to designate them as “Level 1” or “Level 2” fair value measurements under ASC 820. That classification may also simplify the tax reporting process and reduce the required number of disclosures related to the valuation of the interests.

- Tokenization may simplify back-office functions necessary to ensure that the rights and obligations of relevant transactions have been accounted for correctly. This would improve efficiency for the entities that hold these assets.
- Further, tokenization may allow interaction with rule sets that govern withholding taxes as funds cross borders between participants. This added layer of enabled tax compliance could interact with the digitized instrument, the identification of the holder, and the relevant tax rules before directing funds via a smart contract. That said, there are currently no tax treaties that address the flows of money-like digital assets.

# Conclusion: Setting sail amid uncertainty

Resolving the challenges we've outlined above, as well as others only alluded to, will likely require considerable time and effort, as well as collaboration among industry stakeholders. The process will be a gradual, multi-front process, and it is very unlikely that any one party will achieve any monumental breakthrough. It will all be incremental. And thanks to ongoing experimentation and emerging regulations, markets, financial institutions, and investors will likely come to realize the broad benefits of the commercialization of tokenized assets.

Those institutions that support a culture of "early movers" may well be in a position to benefit from bringing new tokenized offerings to market sooner rather than later. The possible benefits include:

- A role in shaping industry standards and best practices.
- Establishing a reputation and stature in the emerging ecosystem of tokenization technology vendors.
- Gaining favor and making an impact with tech-savvy early adopters — both institutional and retail investors—who might be attracted to this new innovative technology.

Commercial success of tokenization could usher in a new era for the financial services industry. With the path yet to be defined, organizations will likely need to work through complex and diverse challenges including interoperability and secondary markets, regulation and risk management, privacy, legacy systems, and tax and accounting. Early movers that can assess the tokenization effort holistically while tackling each of these hurdles could lead their industry in the future.

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Learn more at [deloitte.com/us/blockchainanddigitalassets](https://deloitte.com/us/blockchainanddigitalassets).

# Appendix: Keys to success in fostering secondary markets

As explained earlier in the body of this brief, vibrant secondary markets for tokenized assets will likely be important to the successful commercialization of tokens and the realization of their benefits.

Currently, teams may be forging ahead to achieve interoperability and dismantle the challenges that siloed platforms present to the trading of tokens between institutions and the creation of secondary markets. But in the final analysis, the success of those efforts could depend largely on resolving three challenges:

## 1. Forming consensus around transaction processes and controls.

Implicit in the building of these interoperable networks for tokenized assets is the need for institutions to exchange their competitive mindset for one that prioritizes cooperation so they can agree on the rules governing the conduct of transactions and the sharing of customer information.

Existing industrywide, long-established networks, such as SWIFT, may provide a road map for tokenization networks to adapt some of their rules. These networks, however, have traditionally been closed proprietary systems. Tokenization would likely benefit from a more open approach, one that allows any participant on the network to build bespoke applications on top of its infrastructure. This could help to speed innovation and to realize the full benefits of a shared infrastructure based on distributed ledgers.

Needless to say, to determine who could participate and build applications on these regulated tokenization networks some oversight would be in order. It could take some time for the industry and regulators to find the appropriate balance between open innovation and the secure compliant networks necessary for trading tokenized assets.

## 2. Ensuring that tokens will have lasting value for users.

Given the precariousness of current markets, some digital assets have seen their value crash after release. This has been, for example, a major issue in the NFT market. After a brief period of irrational exuberance during the pandemic, most NFTs are now worthless.<sup>33</sup>

One way to create lasting value is to build broad and informed interest among a large pool of potential and serious investors. For their part, institutions can start generating greater interest among their own clients by educating them about the benefits tokenization offers. For retail investors, the chief benefit is evident: potential access to new assets in which traditionally only institutional investors and high-net-worth individuals could invest. As for institutional investors, the real issues tend to relate to improving security, cost, and liquidity.

Partnerships with other entities, and not just other traditional financial institutions, might also be an avenue to access more users. Some crypto exchanges, for example, are already know-your-customer (KYC) and AML certified and host a large number of users who are both knowledgeable about and interested in trading digital assets. That said, institutions should provide the right incentives to foster demand among users. Incentives could include the benefits to investors discussed above, as well as new models drawn from the world of DeFi. Notable among these are the dynamic incentives that change with market conditions and cross-protocol incentives that benefit users who participate in multiple distributed ledger ecosystems.<sup>38</sup>

## 3. Bringing an appropriate collaborative mindset.

In order for tokenization to take hold and secondary markets to thrive, industry participants may have to forgo any ambition of being the dominant platform provider.

While some institutions have invested heavily in their own permissioned distributed ledger platforms, the wider industry will likely not move forward with tokenization if the benefits accrue to just a few dominant platforms. To build successful markets and gain positive network effects tends to require connecting these different platforms to facilitate better experiences for more users. Absent such cooperation, the ultimate success of tokenization networks could be in jeopardy.



## Endnotes

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