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Digital Economy – Cross Region

Tokenization could boost liquidity for alternative assets

Summary

Alternative investments – a wide range of assets beyond traditional stocks and bonds, including natural resources, art or private equity – have grown popular among investors seeking higher returns and lower volatility. However, these assets often have large minimum investment requirements, liquidity constraints that lock up capital for extended periods, and lack transparency. Tokenization[1] – the process of converting a traditional asset into a digital token that is storable and transferable using blockchain[2] technology – can mitigate some of these limiting factors and help develop a liquid secondary market for alternative assets.

Secondary markets powered by blockchain could improve alternative assets' liquidity. Blockchain networks could offer a clearer view into the relatively opaque world of alternative assets thanks to token holders' real-time information on their tokenized assets. Additionally, tokenization, through fractionalized ownership, would lower barriers to accessing certain types of alternative assets, making these illiquid assets much easier to trade. As secondary markets develop and the investor base widens, alternative assets could become much more liquid.

Tokenization of alternative assets could lower costs for investors and distributors. For investors, efficiencies gained through tokenization, such as lower issuance costs, could translate into higher returns, as asset managers pass on some of their savings. Distributors benefit from lighter overhead and less administrative burden, freeing up resources to deepen client relationships and innovate with new products. The integration of AI into financial institutions' operations could amplify tokenization's advantages.

Small-scale transactions are already underway in the tokenized alternative assets space. Traditional financial institutions have already made some of their private equity and private credit investment opportunities available on private and public blockchains[3] through feeder funds. Minimum investment thresholds for these tokenized funds are significantly lower than for their traditional counterparts. In decentralized finance[4], a few platforms are facilitating private credit transactions through the use of smart contracts[5].

Tokenization of alternative assets faces several hurdles. There are several factors limiting widespread adoption of tokenized assets. Regulatory and legal uncertainty stands as a principal barrier, with many aspects of tokenization still in a legal gray area. There are technical hurdles, particularly the critical need for seamless integration between on-chain and off-chain operations. Lack of a reliable digital cash option and interoperability[6] among blockchain platforms also impede the development of a robust secondary market.

Tokenization, powered by blockchain, could build up secondary markets for alternative assets

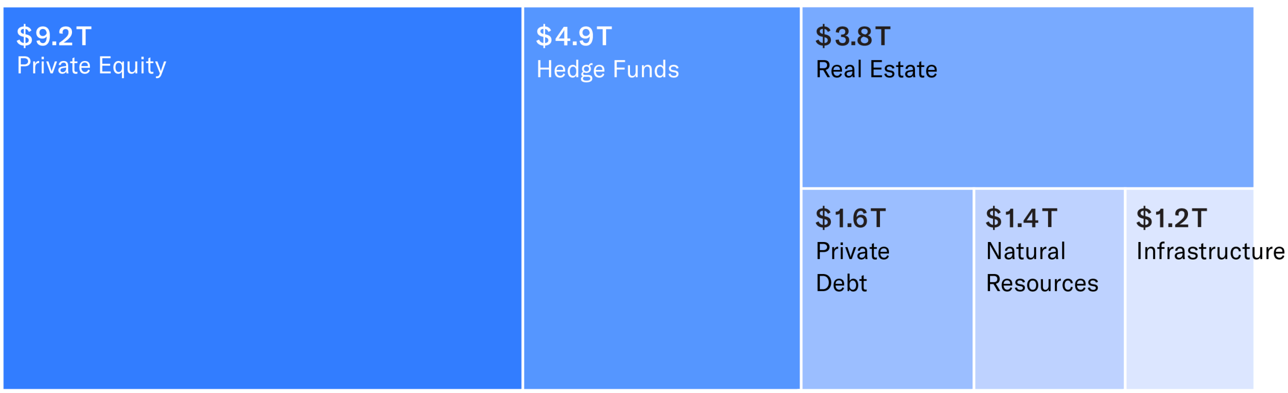
At the end of 2023, institutionally adopted alternative investment assets under management (AUM) totaled $22 trillion, or 15% of global AUM across all investment classes, a share that could increase to as much as 24% by 2025, according to the Chartered Alternative Investment Analyst (CAIA) Association.[7]

Alternative investments include a wide range of asset classes beyond publicly traded stocks and bonds, including hedge funds, private equity, venture capital and private debt investments as well as real assets such as real estate, infrastructure, and natural resources. Alternative assets offer diversification benefits, less correlated returns, and frequently high yields; however, they come with several drawbacks.

Exhibit 1

The alternative investments space includes a wide variety of structures and instruments

Data in $ trillion



Source: Chartered Alternative Investment Analyst (CAIA) Association

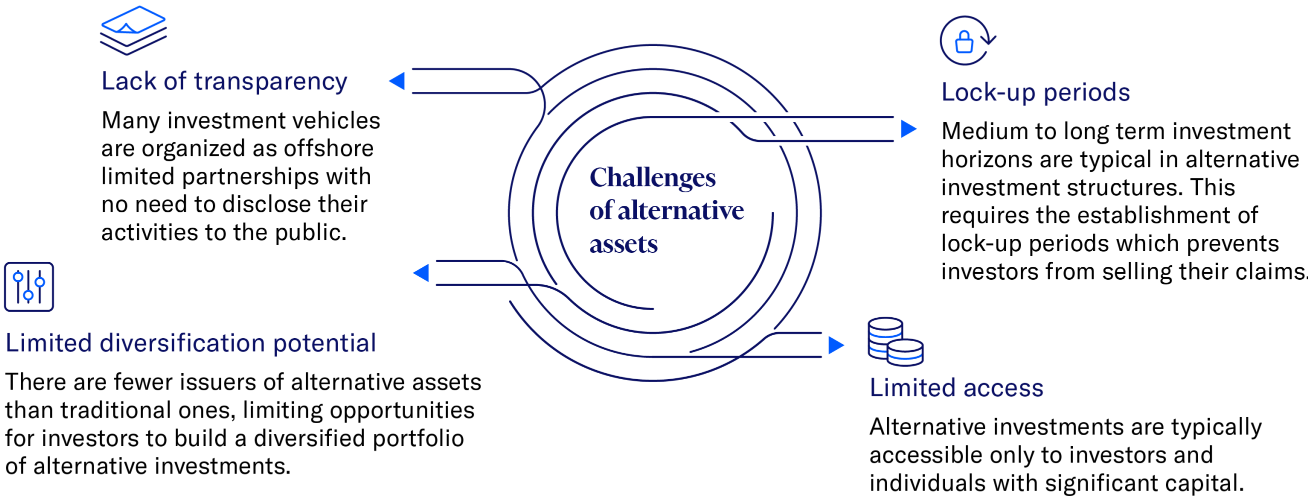
One of the primary difficulties investors in alternative assets face is their investments' limited liquidity compared to traditional assets such as stocks and bonds. Many alternative investments, including private equity, hedge funds, and certain real estate holdings, have long lockup periods, meaning investors cannot always access their capital when needed. Illiquidity can pose significant risks, particularly during periods of market distress or unexpected financial needs.

Valuing alternative investments can also be inherently complex because of these investments' unique characteristics and lack of standard pricing mechanisms. Unlike publicly traded securities with readily available market prices, alternative assets often require specialized valuation techniques. Determining the fair value of private equity holdings, real estate properties, or venture capital investments involves subjective judgments, and valuations can be influenced by factors such as market conditions, asset performance, and investor sentiment.

Information about alternative investments' performance or underlying assets may not be readily available to investors, especially in private markets where information disclosure may be limited. Although this lack of transparency is, to some extent, inherently related to the very nature of the private assets sector, it could undermine investor confidence and hinder effective decision-making.

Access to alternative investments is typically restricted to accredited or institutional investors, which excludes retail investors from potentially lucrative opportunities. High minimum investment requirements and management fees associated with some alternative investment vehicles may also present affordability obstacles for individual investors. Innovative platforms and investment structures – tokenization, for example – could help overcome these barriers.

Exhibit 2
Structural challenges of alternative assets are limiting their mainstream adoption



Source: Moody's Ratings

Tokenization, through its innovative use of blockchain technology and smart contracts, could introduce multiple benefits and practical use cases for alternative investments, reshaping the way assets are managed, traded, and owned. At its core, tokenization is the conversion of physical assets or financial instruments into digital tokens on a blockchain, offering a new layer of efficiency, accessibility, and flexibility previously unattainable in traditional investment structures.

Tokenization of alternative assets could lower costs for investors and distributors

Tokenization streamlines various operational aspects of asset management, from issuance and trading to settlement and custody. By automating these processes through smart contracts – programs that run automatically when predetermined conditions are met – tokenization reduces the need for intermediaries, lowers transaction costs, and speeds up settlement times. This operational efficiency is beneficial not just for investors but also for issuers and platforms, enabling them to offer more competitive and attractive investment products.

Blockchain provides investors with real-time access to information regarding their investments and underlying assets. However, there is some debate within the asset management industry over to what degree transparency is beneficial for alternative asset investments. Some market participants argue that increased transparency of these investments could undermine asset managers' unique strategies to achieve higher investment yields. Additionally, some argue, more frequent scrutiny of metrics relating to alternative assets could favor a short-term performance focus, detracting from long-term strategies.

Transparency, nonetheless, could yield advantages in areas that may be of mutual interest to both the buy side and sell side of alternative asset products. This visibility could help foster trust and confidence among investors, particularly in markets or asset classes for which information has not been readily available. Additionally, tokenization can simplify compliance with regulatory requirements, because smart contracts can be programmed to enforce investor eligibility, anti-money laundering (AML), and know-your-customer (KYC) regulations automatically.

One of the most significant advantages of tokenization is the enhancement of liquidity for traditionally illiquid assets. By breaking down large assets into smaller, tradable tokens, investors can buy and sell their stakes in dedicated secondary markets with much greater ease, creating opportunities for investment and divestment that were previously limited by the illiquidity of these assets. This increased liquidity not only makes these investments more attractive but also more accessible to a broader range of investors.

Secondary markets facilitate price discovery and risk diversification, allowing investors to more accurately gauge an asset's market value, and to diversify their portfolios by investing in a wider variety of assets through tokenization, reducing overall investment risk.

Exhibit 3
The advantages of tokenization could span the broader alternative investments sector

Low Medium High

	Liquidity	Efficiency	Transparency
Hedge Funds	Medium	High	Low
Private Equity	Medium	High	Medium
Private Credit	High	High	High
Venture Capital	Medium	High	Medium
Real Estate	Medium	High	Low
Infrastructure	Medium	High	Low
Natural resources	High	High	Medium

Source: Moody's Ratings

The convergence of artificial intelligence (AI) and the tokenization of alternative investments could further transform investing.

The combination would enhance market analysis and decision-making, where AI's prowess in parsing extensive market data and trends can significantly benefit investors in the tokenized asset space. Assets like real estate, art, and private equity could be evaluated with a depth previously unattainable, allowing for more nuanced investment decisions.

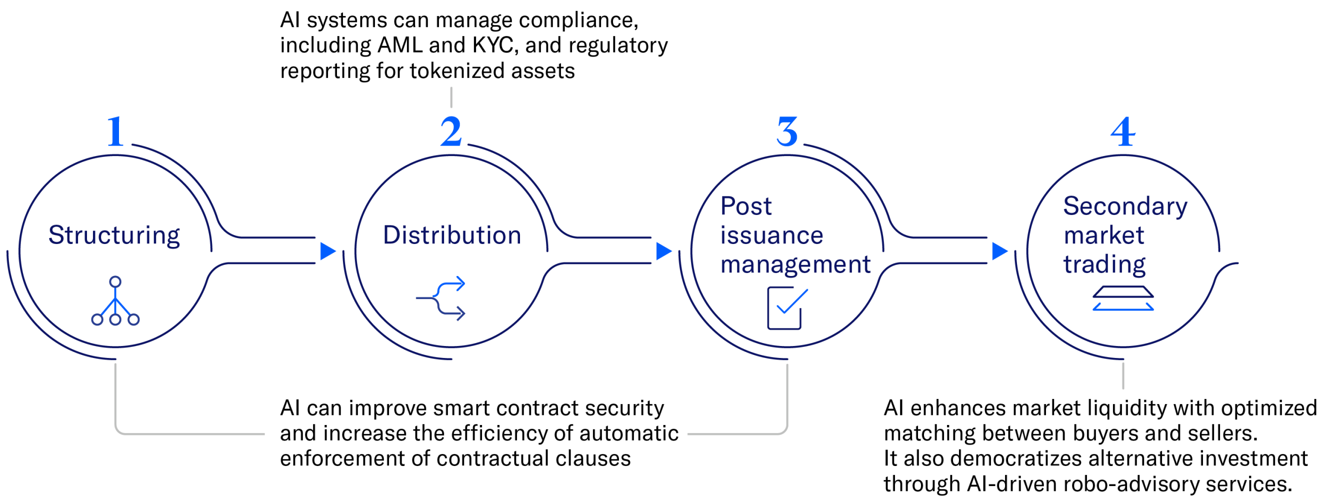
Navigating regulations would also be less daunting with AI-driven automation, ensuring tokenized assets align perfectly with legal standards even across multiple jurisdictions. In regulatory reporting, it could minimize errors and reduce overhead costs.

In portfolio management, AI tools could provide personalized, real-time insights and recommendations, enabling investors to optimize their holdings in tokenized assets efficiently, aligning investment strategies more closely with individual goals and risk appetites. AI can also further boost liquidity of tokenized assets by predicting liquidity trends and matching buyers and sellers to ensure more fluid and efficient market operations.

Security is another critical area where AI's integration with blockchain technology can make a significant difference. By monitoring transactions for irregularities and potential threats, AI ensures a safer investment environment, safeguarding against fraud and unauthorized access. It is however worth mentioning that AI could potentially serve as a conduit[8] for malicious actors to bypass the protective measures of an organization. Lastly, the optimization of smart contracts through AI can revolutionize how contractual terms are executed within the blockchain. By analyzing historical data and predicting outcomes, AI can recommend optimal contract terms, adjusting them as market conditions or investor behaviors change.

Exhibit 4

Artificial Intelligence is poised to streamline the whole alternative assets value chain



Source: Moody's Ratings

Small-scale tokenized alternative asset transactions are already underway

Tokenization of alternative assets has attracted some of the largest private asset firms, suggesting smaller peers are likely to follow as competition for investor capital heats up (Exhibit 5). Three major firms – KKR, Hamilton Lane, and Partners Group – have emerged as pioneers in this evolving space. KKR made headlines by tokenizing a portion of its Health Care Strategic Growth Fund on the Avalanche blockchain, a significant step toward making private equity more accessible and liquid.[9] Hamilton Lane followed suit by making its flagship private equity fund available via Securitize, a blockchain platform, showcasing the potential for blockchain technology to streamline investment processes.[10] Lastly, Partners Group has tokenized a private equity fund through digital securities platform ADDX, highlighting blockchain technology's potential to broaden access to investments once only available to a select few.[11] Together, these initiatives highlight a broader trend of integrating blockchain technology into traditional finance.

Exhibit 5

Tokenized private market funds can significantly reduce barriers to entry for investors

	KKR	Hamilton Lane	Partners Group
Asset class	Private equity	Private credit	Private credit
Blockchain network	Avalanche	Polygon	ADDX proprietary blockchain
Network type	Public	Public	Private
Tokenization provider	Securitize	Securitize	ADDX
Traditional fund minimum ticket	$250,000	$2,000,000	$2,000,000
Tokenized fund minimum ticket	$100,000	$10,000	$10,000

Source: Company announcements, Moody's Ratings

Tokenization of alternative investments faces several hurdles

Tokenizing investments on a large scale, and achieving broader market adoption of the technology, presents a range of difficulties, including technical issues, regulatory hurdles, and market dynamics.

Regulatory compliance is one main area of difficulty. Because blockchain technology is decentralized and tokenized assets are globally accessible, there is a need for a regulatory framework that harmonizes standards across diverse jurisdictions. At the moment, there are several jurisdictions that have created frameworks for the treatment of tokenized alternative investments (Exhibit 6).

Exhibit 6
Several jurisdictions are already providing guidance on the treatment of tokenized alternative investments

Jurisdiction	Legislation / Regulatory body	Key provisions
Switzerland	DLT Act (2021) / Swiss Financial Markets Supervisory Authority	Allows tokenized securities to trade on a DLT network with the same legal standing as traditional assets. Ledger-based securities can capture the same legal and ownership rights as conventional securities.
Luxembourg	Blockchain Laws (2019, 2021, 2023) / Commission de Surveillance du Secteur Financier	Established a regulatory framework allowing the native issuance of dematerialized securities using DLT. Transfers recorded in this manner are considered as transfers between securities accounts.
United Arab Emirates (ADGM and DIFC free zones)	DLT Foundations Regime (2023) / Abu Dhabi Global Market Digital Asset Law (2024) / Dubai International Financial Centre	Provides a framework for DLT Foundations and DAOs to operate and issue tokens in a regulated manner. Clarifies digital assets under property law and tokenized securities under the Law of Obligations.
Hong Kong	Circulars on tokenized securities (2023) / Securities and Futures Commission	Tokenized securities are no longer viewed as complex in all cases. Retail and professional investors are allowed to invest in tokenized securities following a see-through analysis of the underlying financial instrument.
Singapore	Securities and Futures Act (2001 – since amended) / Monetary Authority of Singapore	Tokenized securities may fall under the SFA if the tokens qualify as capital markets products. The Monetary Authority of Singapore examines the digital tokens to determine if they fall under the SFA.

Source: Moody's Ratings

The technical intricacies of tokenizing alternative investments are significant, starting with the complex task of ensuring that tokenized assets faithfully mirror their real-world counterparts, especially when dealing with tangible assets like real estate and collectibles. The need for infrastructure to facilitate the digital transformation of assets into blockchain-compatible formats demands substantial investment and specialized expertise.

In traditional markets, verifying ownership of assets relies on established procedures, tangible documentation, and meticulous validation by public and private entities. These entities, including patent and trademark offices for intellectual property and registrars like banks or trust companies for publicly traded securities, play pivotal roles in confirming and maintaining ownership records. Custodians play a pivotal role in the secondary markets by safeguarding assets, facilitating seamless transactions, and ensuring compliance with regulatory standards.

In the context of tokenized alternative investments, custodians are responsible not only for the safekeeping of assets but also for the transition between off-chain and on-chain representations of these assets. Their involvement becomes integral to maintaining the security, efficiency, and regulatory compliance of alternative investment assets within evolving blockchain-based financial systems.

A lack of interoperability among different blockchain systems is another hurdle to widespread adoption of tokenization. Interoperability is necessary for the advantages of tokenized alternative assets, such as liquidity and accessibility, to be realized. Fragmentation of secondary markets for tokenized alternative assets could lead to inaccessibility, increased liquidity requirements, and pricing arbitrage, hindering the new markets' efficient operation and growth. Furthermore, the ability of digital finance networks to interact seamlessly with one another and with existing financial systems is essential to enhance the efficiency and security of financial transactions and to reduce systemic risks.

Endnotes

1 See https://www.moodys.com/research/Decentralized-Finance-and-Digital-Assets-Cross-Region-What-is-asset-Sector-Profile--PBC_1366128

2 A type of distributed ledger technology that consists of a list of records, called blocks, that are securely linked together using cryptography.

3 A blockchain that is open to anyone, with no authorization required.

4 See https://www.moodys.com/research/Decentralized-Finance-and-Digital-Assets-Cross-Region-What-is-decentralized-Sector-Profile--PBC_1366134

5 See https://www.moodys.com/research/Decentralized-Finance-and-Digital-Assets-Cross-Region-Smart-contracts-key-Sector-In-Depth--PBC_1359147

6 Blockchain interoperability refers to the capacity of different blockchain systems to exchange data, messages, and digital assets

7 See: Tokenization of Alternative Investments.

8 See https://www.moodys.com/research/Cybersecurity-Cross-Region-Generative-AI-may-increase-cyber-risk-rather-Sector-In-Depth--PBC_1380691#Summary

9 See: Investment Giant KKR Puts Portion of Private Equity Fund on Avalanche Blockchain.

10 See: Hamilton Lane and Securitize to Tokenize Funds, Expanding Access to Private Markets for a Broader Set of Investors.

11 See: ADDX tokenizes global private equity fund.

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