

Digital Assets

Future of Fund Management
with Tokenisation

CONTENT

- 1** What are the pain points faced in the current fund management value chain?
- 2** How does blockchain technology help in building a tokenised fund?
- 3** How do tokenised funds differ from traditional funds?
- 4** How can tokenisation address the current fund management pain points?
- 5** What innovations could be made possible as a result of tokenisation?
- 6** What are the benefits of tokenisation of alternative assets?
- 7** What are the recent developments in the tokenised investment space in Singapore and ASEAN?
- 8** What are the prerequisites for the tokenisation of funds to become a mainstream reality?
- 9** What is the likely impact of tokenisation on the current participants?

Information as of 29 January 2024

Global Economics & Markets Research
Email: GlobalEcoMktResearch@UOBgroup.com
URL: www.uob.com.sg/research

Future of Fund Management with Tokenisation

Tokenisation has the potential to address key challenges in the current fund management value chain: high operations cost, long settlement period, high compliance cost, manual fund suitability check, and delay in real-time data availability.

Furthermore, it has the potential to drive innovation in the fund industry by delivering customized fund products, real-time transparency, and convenience that resonates with the tech-savvy younger generation. But the true game changer is the democratized access to high performing alternative assets like private equity, and real estate - seamlessly integrated for enhanced portfolio resilience and potential higher returns - unlocking a \$16 trillion market by 2030.

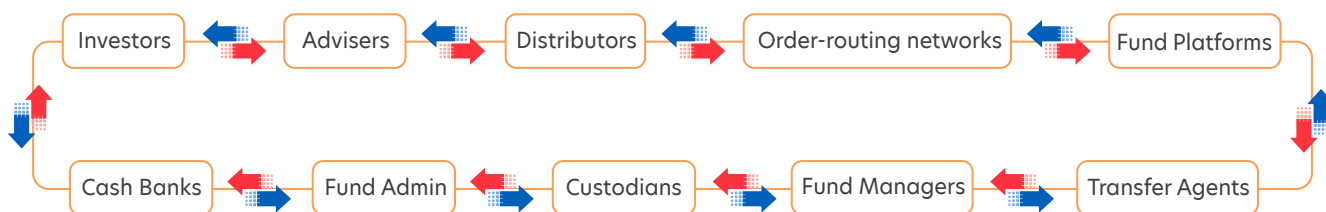
Nikhil Chogle

UOB Blockchain & Digital Assets (BCDA)

1 What are the pain points faced in the current fund management value chain?

The funds industry has not changed much over the years, maintaining a complex structure that separates the fund manager from investors, with numerous intermediaries in between. In this complex structure, participants exchange data and do reconciliation using inefficient methods.

Diagram 1 - Inefficient data exchange and reconciliation in the funds industry



Source: UOB Blockchain & Digital Asset

The key pain points faced in the current fund management flow are:

- **High operations cost** caused by paper-based manual and siloed processes, especially frequent reconciliation and repair of records of the same transactions across different intermediaries such as fund managers, transfer agents, agent banks and custodians.
- **Long settlement period**, which can be 3 or more business days, caused by legacy systems and manual processes, inefficient clearing and settlement procedures, along with regulatory complexities.
- **High compliance cost** of regularly verifying the identities of beneficial fund owners due to AML (Anti Money Laundering) and KYC (Know Your Customer) regulations, which need extensive documentation, ongoing monitoring and legal compliance.
- **Manual fund suitability check** for an investor, which needs in-depth analysis and paperwork, and often involving subjective judgement.
- **Delay in real-time data availability** of net asset value (NAV), price and transactional data caused by manual data entry, reconciliation, and processing.

These pain points present a significant challenge in appealing to younger investors who are accustomed to fast-paced digital experiences that are convenient and transparent and may find inefficiencies of current mutual fund offerings unattractive and cumbersome.

2 How does blockchain technology help in building a tokenised fund?

The following feature of blockchain technology could transform the way we invest in funds:

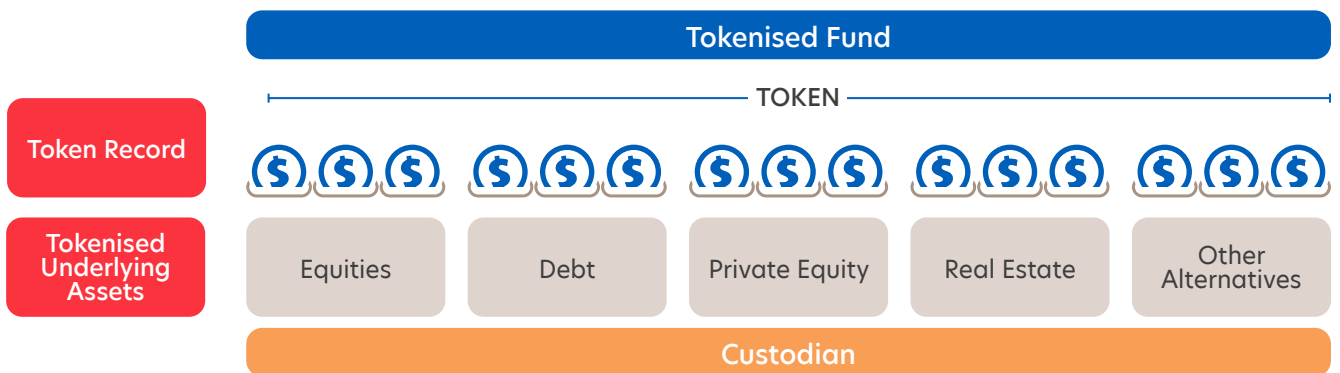
- **Enhanced Transparency:** Blockchain acts as a tamper-proof, distributed ledger that records all transactions and ownership information related to the tokenised fund. This creates an auditable and transparent system.
- **Faster Settlement:** Blockchain transactions settle almost instantly, eliminating the need for lengthy clearing and settlement processes that can delay access to invested funds.
- **Programmable Features:** Blockchain technology allows for the integration of smart contracts, self-executing code that defines certain rules and actions within the tokenised system. This enables features like automatic dividend distributions, redemption procedures, and even customized investment strategies based on investor preferences.
- **Improved Security:** Blockchain transactions are secured by advanced cryptography, making them incredibly difficult to tamper with or compromise. This significantly reduces the risk of theft or fraud compared to traditional paper-based systems.

3 How do tokenised funds differ from traditional funds?

A traditional fund's composition is decided by its fund manager, who considers the fund's objective, horizon, risk tolerance, asset allocation, sector allocation, and security selection. The fund manager diversifies the fund's assets across asset classes to reduce risk, allocates to undervalued or promising sectors, and selects individual securities based on financial performance, valuation, and management quality. The fund manager regularly monitors the portfolio and adjusts as needed.

Tokenised funds are a new type of investment fund that use blockchain technology to represent ownership of the fund's underlying assets. In a tokenised fund, investors purchase tokens instead of shares or units. These tokens are digital representations of ownership of the fund's underlying assets like equities, fixed income, alternatives etc.

Diagram 2 - Structure of a tokenised fund



Source: UOB Blockchain & Digital Asset

The key differences between traditional funds and tokenised funds are:

- **Underlying asset custody:** In a traditional fund, the underlying assets are held by the fund's custodian, which is typically a bank or trust company. In a tokenised fund, the underlying assets are digitally represented on a distributed ledger.
- **Asset transferability:** Traditional fund assets can only be transferred through the fund's custodian. Tokenised fund assets can be traded on a digital asset exchange.
- **Settlement:** Settlement of trades in traditional funds can take many days. Settlement of trades in tokenised funds is typically instantaneous.
- **Shareholder register:** Traditional funds maintain a central shareholder register. Tokenised funds do not maintain a central shareholder register; instead, the distributed ledger maintains a record of the tokens that have been issued.

4 How can tokenisation address the current fund management pain points?

Tokenisation could help address the pain points faced by the current fund management process.

Pain point	How does tokenisation address it?
High operations cost	Blockchain-recorded digital transactions automatically register ownership changes, eliminating the need for data exchange and reconciliation
Long settlement period	Atomic settlement of fund token against digital currency enables near-instantaneous settlement
High compliance cost	Self-executing smart contracts embedded in fund tokens can automate compliance checks using verifiable identity data from independent sources
Manual fund suitability check	Smart contracts in fund tokens can restrict investments to those that align with the investor's risk profile
Delay in real-time data availability	Blockchain enables real-time visibility into transactions, valuations, and investment performance

Source: UOB Blockchain & Digital Assets

5 What innovations could be made possible as a result of tokenisation?

Tokenisation has the potential to make several innovations possible in the fund industry, including:

- **Programmability:** Tokenised funds could also be used to create funds that are more tailored to the needs of individual investors. Tokenised funds can be programmed using smart contracts to automate investment strategies or to create new financial products.
- **New products and services:** Tokenisation can enable the creation of new and innovative fund products and services. For example, tokenised funds could be used to create funds that invest in alternative assets, such as private equity or real estate. Furthermore, tokenisation allows for the fractional ownership of assets. This means that investors can buy and sell smaller portions of such assets, which were previously only accessible to wealthy investors.

6 What are the benefits of tokenisation of alternative assets?

Access to high-performing alternative assets like private equity, private credit, real estate, and infrastructure, is currently limited to wealthy individuals and institutions due to high minimum investment thresholds, illiquidity, and complex administrative processes. This restricts diversification and potential returns for a broader investor base.

Tokenisation of alternative assets offers a radical paradigm shift. Investment managers can broaden their reach, offering sophisticated alternatives to a wider pool. Investors gain access to diverse assets, building stronger, more resilient portfolios that weather market storms. It's a win-win, democratising high-powered investments for a more secure financial future.

- **Democratized Access:** Smaller investment sizes become feasible, opening these assets to a wider range of investors, including high-net-worth individuals and even mass-affluent segments.
- **Increased Liquidity:** Traditional illiquidity of alternative assets is tackled by fractional ownership represented by easily tradable tokens on secondary markets.
- **Enhanced Efficiency:** Automation via smart contracts streamlines administrative processes, reduces paperwork, and simplifies transactions.
- **Improved Transparency:** Data access through blockchain technology fosters allows real-time NAV reporting.
- **Growth for Asset Managers:** New revenue streams emerge for alternative asset managers through easier distribution and increased investor demand.

7 What are the recent developments in the tokenised investment space in Singapore and ASEAN?

On 15 November 2023, the Monetary Authority of Singapore (MAS) announced that it is working with the financial industry to expand asset tokenisation initiatives and develop foundational capabilities to scale tokenised markets.

There are 2 noteworthy initiatives in the tokenised investment space that cover the traditional and alternative asset investment:

- Exploration of the capabilities of a tokenised investment vehicle which can wrap and issue **traditional investment securities**. This could help achieve more cost-efficient investment allocation for retail and institutional investors while simplifying day-to-day operational processing.
- Exploration on the use of digital assets to enable more seamless investment and management of **discretionary portfolios and alternative assets**, automated portfolio rebalancing and customisation at scale. This will provide time savings and reduction in manual processes for asset servicing.

Amongst the other ASEAN countries, Thailand's real estate market is embracing the future with tokenised REITs, making high-value properties accessible to a wider range of investors.

8 What are the prerequisites for the tokenisation of funds to become a mainstream reality?

The key prerequisites for the tokenisation of funds to become a mainstream reality:

- **A clear and concise regulatory framework for tokenised funds:** This framework should provide guidance on issues such as the issuance, trading, and custody of tokenised funds.
- **The development of robust and secure tokenisation technology:** This technology should be able to support the efficient, secure, and scalable trading of tokenised funds.
- **The adoption of tokenisation by the entire ecosystem i.e. asset managers, investors, and other players in the fund industry:** This means that asset managers need to be willing to issue tokenised funds, investors need to be willing to invest in tokenised funds, and other players in the fund industry need to be willing to adopt tokenisation technology.
- **Educating investors:** Achieving mainstream adoption of tokenised funds hinges on educating both asset managers and investors about their advantages and risk management strategies.

9 What is the likely impact of tokenisation on the current participants?

Tokenisation could have a significant impact on the current players in the fund flow. This is because tokenisation can eliminate the need for some of the services that these intermediaries currently provide. However, intermediaries could also adapt to the new environment by offering new products and services related to tokenised funds.

Participant	Impact
Asset managers	Asset managers could offer new and innovative products and services directly to the end investor with reduced costs and improved efficiency.
Custodians	Will need to develop the capabilities to become digital asset custodian and adopt new technologies and processes to adapt to the new role.
Order-routing networks	Point-to-point messaging services would become redundant since subscription and redemption orders are shared directly between the transacting parties, eliminating the need for transmission through them.
Banks	Investors can securely store digital currency in an electronic wallet, bypassing the need for a bank to collect/ pay money from a bank account. Banks can play the role of converting fiat money to digital currency and vice versa.
Transfer agents	Traditional functions in settlement, registration and reporting will undergo significant changes. However, they can seize new opportunities by becoming data managers, aggregating and presenting customer and market data, and serving as technology partners for fund managers navigating blockchain networks.

Source: UOB Blockchain & Digital Assets

Sources:

www.ssctech.com/resources/view/tokenization-funds-mapping-way-forward
www.theia.org/sites/default/files/2020-11/Tokenised%20funds%20-%20What%20why%20how.pdf
www.mas.gov.sg/news/media-releases/2023/mas-proposes-framework-for-digital-asset-networks
www2.calastone.com/tokenisationinassetmanagement
www.jpmorgan.com/onyx/project-guardian
addx.co/insights/bcg-addx-report-asset-tokenization-to-grow-50x-into-us-16-trillion-opportunity-by-2030/
addx.co/en/index.html

The Team



Nikhil Chogle

SVP, Blockchain and Digital Assets

Nikhil.Chogle@uobgroup.com



Heng Koon How, CAIA

Head of Markets Strategy

Heng.KoonHow@uobgroup.com



Tan Lena

Business Data Designer

Lena.Tan@uobgroup.com



Right By You

This publication is strictly for informational purposes only and shall not be transmitted, disclosed, copied or relied upon by any person for whatever purpose, and is also not intended for distribution to, or use by, any person in any country where such distribution or use would be contrary to its laws or regulations. This publication is not an offer, recommendation, solicitation or advice to buy or sell any investment product/securities/instruments. Nothing in this publication constitutes accounting, legal, regulatory, tax, financial or other advice. Please consult your own professional advisors about the suitability of any investment product/securities/ instruments for your investment objectives, financial situation and particular needs.

The information contained in this publication is based on certain assumptions and analysis of publicly available information and reflects prevailing conditions as of the date of the publication. Any opinions, projections and other forward-looking statements regarding future events or performance of, including but not limited to, countries, markets or companies are not necessarily indicative of, and may differ from actual events or results. The views expressed within this publication are solely those of the author's and are independent of the actual trading positions of United Overseas Bank Limited, its subsidiaries, affiliates, directors, officers and employees ("UOB Group"). Views expressed reflect the author's judgment as at the date of this publication and are subject to change.

UOB Group may have positions or other interests in, and may effect transactions in the securities/instruments mentioned in the publication. UOB Group may have also issued other reports, publications or documents expressing views which are different from those stated in this publication. Although every reasonable care has been taken to ensure the accuracy, completeness and objectivity of the information contained in this publication, UOB Group makes no representation or warranty, whether express or implied, as to its accuracy, completeness and objectivity and accept no responsibility or liability relating to any losses or damages howsoever suffered by any person arising from any reliance on the views expressed or information in this publication.



Right By You

Head Office
80 Raffles Place
UOB Plaza
Singapore 048624
Telephone: (65) 6533 9898
Facsimile: (65) 6534 2334

www.uobgroup.com