

THE
INVESTMENT
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Tokenised funds series

Paper 1 - What, why and how

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The Investment Association
in partnership with CMS



About this paper

This is the first paper in a new series that the IA will be producing on tokenised funds in collaboration with CMS. In this paper, we explore the basics of tokenised funds: what they are, why they can add value and how they work. Future papers will go into more depth on some of the technical aspects that the industry needs to consider to make them an effective proposition for use by members.

1. What is tokenisation?

Tokenisation is a much used expression alongside digitalisation and blockchain. Innovation and disruption are also accompanying themes which apply generally and are also relevant to investments, investment funds and fund managers. Tokens can relate to cryptoassets, exchanges of information, payment processes or representation of assets. In each case they are virtual assets which use “tokens”. These digital tokens can then be transferred, stored, or managed on a blockchain (a type of distributed ledger technology (“DLT”)). Once issued, depending on the type of tokens and associated regulatory requirements, tokens can be traded in the secondary markets.



The role of DLT

In short, DLT is a digital ledger which records transactions and in which the transactions and their details are recorded in multiple places at the same time by different people. There is no central authority or administration functionality (i.e. it is decentralised), and the data can normally be publicly available and viewed.

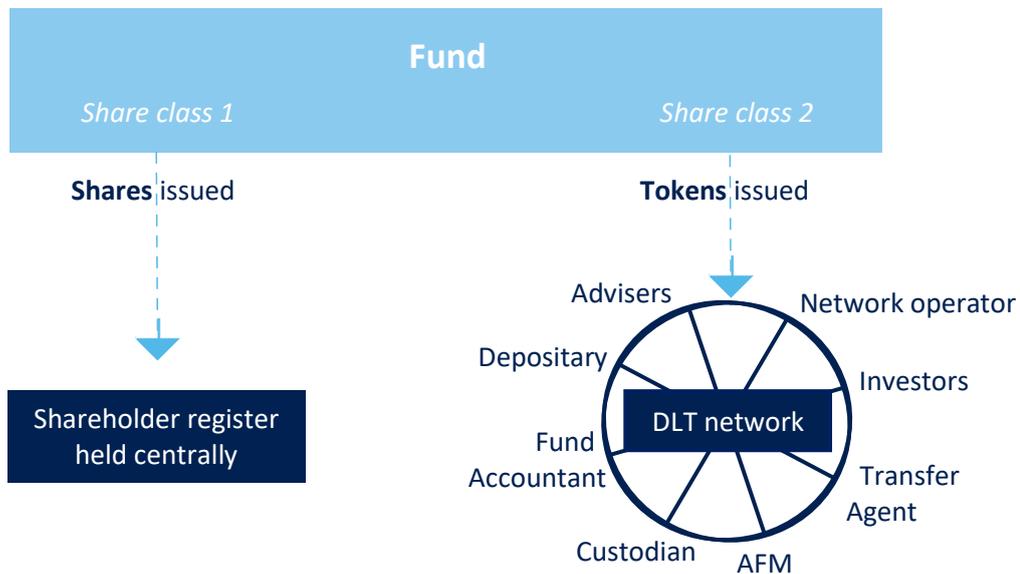
Tokens which represent traditional assets such as shares, debt or units in a fund, are issued through a security token offering. The security token in turn represents the specific right, for example participation in an investment fund. Tokenisation can be applied not only to financial instruments such as shares and bonds, but to tangible assets such as real estate, revenue streams such as a loan, and even to intellectual property such as copyright of music.

One difference in the manner of ownership is that tokenisation allows a more innovative approach for fractional ownership or funding of relatively illiquid assets, such as real estate. Although fractional ownership is not a novel concept, maintaining the information on the blockchain makes the management of fractional ownership more efficient and allows fractional ownership to be securely managed.

2. What are tokenised funds and how do they differ to traditional funds?

A tokenised fund, which may also be known as a digital fund or a BTF (blockchain-traded fund) is one where shares or units in the fund, or a feeder fund for it, are digitally represented and can be traded and recorded on a distributed ledger. It uses code to mimic the functionalities of a traditional fund and replaces shares or units with tokens. It is not a form of uncertificated security recorded by the fund itself, but by the DLT ledger. Because of this, the differences between investing in a fund and owning the tokens that represent shares or units in the fund are not substantial. However, the costs associated with maintaining investor registers, for example, including where there is secondary market trading, should be greatly reduced where ownership is represented using a token.

The diagram below shows an OEIC fund containing two share classes, one operating in the traditional manner as we are used to today (“off-chain”) and the second in tokenised form (“on-chain”). A mixed model such as this may be an interim step until fully tokenised/on-chain funds operate in the longer-term.



Tokenisation of a fund does not change the way a fund is valued. The valuation of a fund continues to be determined by its net asset value (“NAV”). However, in a tokenised fund model, “NAV per token” rather than “NAV per share” would be the relevant calculation by dividing the NAV by the number of outstanding tokens. The second share class above therefore issues tokens instead of shares.

The DLT ledger maintains the record of the tokens in issue and updates as transactions occur on the network. Unlike share class 1, there is no central shareholder register and the distributed nature of the ledger enables participants to see their holdings in real time.

As shown in the DLT network for share class 2, the parties in the fund ecosystem remain relatively unchanged, although there will need to be a network operator and some existing parties’ roles will evolve. The transfer agent, for example, will not need to maintain a central shareholder register, and the role of the custodian would additionally involve holding investors’ private keys, overseeing and monitoring the process to approve transactions and updating the ledger. The depository, fund accountant and anyone else reconciling their books and records to the shareholder register will no longer need to do this as they will have direct access to the DLT records via their own network node. Investors will also have a node and this could be tailored dependent on their requirements; direct retail investors may have slightly different requirements to institutional investors, for instance. Advisers could have a view across each of their clients, and platforms via their node as investors would benefit from direct access and the eradication of reconciliation breaks.

Additionally, each token may act as a database and therefore can store additional information which might otherwise be unavailable with a “traditional” security. For example, a security token can both indicate legal ownership and rights, whilst also supplying additional information such as ESG risks, AML & KYC and much more. This additional information can help measure the performance of the fund in line with its objectives and constitutional documents.

3. Potential operational efficiency through the manufacture and distribution process

The application of DLT in tokenised funds could deliver efficiency gains through the removal of duplicative reconciliations, and the automation of processes which in turn can result in faster, cheaper and frictionless transactions which are automated and driven by disintermediation.

From a fund manufacturer perspective, DLT allows identical data sets to be shared across various parties in a transparent, immutable and real-time basis. The approach guarantees the integrity of data across participants and reduces the need for duplicative record-keeping and reconciliation across entities. DLT could be a catalyst for simplified, more efficient workflows and help to improve data accuracy in fund administration and financial services generally (as well as other areas).

In traditional funds, KYC and AML processes can be lengthy and complex, typically required each time an investment into a fund is made and normally through human interaction. However, under a tokenised model, compliance, regulation and governance can be embedded into the token itself, or the underlying protocol to the asset, through a tailor-made programme using DLT. For fund managers and brokers this will help ensure compliance with their legal and regulatory obligations as well as ensure customer on-boarding and monitoring systems are sound.

A graphic icon for 'Private keys' featuring a dark blue arrow pointing up and to the right, with several lighter blue arrows pointing in various directions around it, all set against a light blue background.

Private keys
The key is the electronic mechanism by which the investor's access to the network and their ability to transact are managed. Using a sophisticated form of cryptography, the key ensures that only the genuine investor is able to access their tokens and protects both the investor and the network from unauthorised use.

4. Investor experience - improved access and settlement

As shown in section 2 above, investors will continue to have a choice as to how they access funds and monitor their holdings, be that directly with the fund or through platforms or advisers. The basic needs of retail investors will remain and need to be met, whether that is through an advice channel or a consolidator providing visibility of their whole portfolio. Investors may access the fund directly via a network node which essentially replaces the online account or other non-digital access channels that exist today.

Alternatively, the investor may be running their portfolio via an investment platform and therefore holding their position through a platform's nominee account. Either way the party accessing the network can benefit through real-time access and self-servicing, which produces greater efficiency through the chain.

One other potential advantage is in speed of settlement. Depending of course on the underlying assets contained within the fund, it is possible for a tokenised fund to facilitate T+0 settlement for both subscribing and redeeming investors. Current fund logistics are wedded to a, typically, T+3 settlement cycle. A tokenised fund with a suitable liquidity profile may be able to provide investors with near-immediate market exposure on the way in and speedier access to their proceeds on the way out.

Looking further afield, security tokens could bring investment in hedge funds, private equity funds and venture capital funds to a broader audience, tapping into the investment appetite of smaller investors (subject to regulatory requirements). Reduced minimum investment levels and fewer other hurdles to take part in these types of fund could make them a viable choice.

Additionally, DLT may enable larger investors with the technical capability to invest with less friction and cost, and over time this may develop further making investment smoother and more accessible. Beyond this, market trading for such assets, once tokenised, is vital for liquidity while it also assists in price discovery and promotes further capital formation. The potential indirect benefit of improved liquidity in asset classes could be an increased flow of investment into previously inaccessible funds.

5. Tokenisation and liquidity

There is a difference between liquidity and transferability. Liquidity is a product of active trading in a market between buyers and sellers, which will not result in the use of technology itself. However, investment funds have regularly faced the challenge of managing their transferability. Tokenisation could however help resolve this. By transforming fund units/shares into virtual tokens, investors are able to enter into “traditional” investments, with the additional ability to trade tokens more easily in a secondary market. This should then result in increased liquidity in the tokens concerned. This also applies to fund managers, who can deal with potential illiquidity issues by trading tokens, and thus broadening their investment portfolios.

The benefit of a tokenised fund is that investors potentially have more freedom to exit their positions in a secondary market. This will particularly be the case for funds that are not listed or traded on a regulated market, such as venture capital funds. In such funds, tokenisation can offer a significant benefit, as issuing security tokens could provide a degree of transferability, attracting more investors to the funds and enabling more investment into start-ups and other businesses.

6. Transparency

By issuing a security token there is the ability for a token holder’s rights and obligations to be embedded into the token itself, along with a unique and immutable record of ownership. This will make transactions in funds more transparent, allowing all parties involved to understand the rights and obligations of each other. It also enables insight into past ownership of the token which in turn results in a clear, transparent and definitive chain of ownership. This in turn has the potential to reduce information asymmetries and improve the price discovery mechanism as there is clear information regarding transactional data and information around the issuer and the asset characteristics.

7. Regulatory scrutiny for tokenised funds

The UK regulator, the Financial Conduct Authority (“FCA”), takes a technology-neutral view on regulation and as such the considerations that apply to tokenised funds will be the same as those which apply to traditional funds. For example, managing a tokenised fund would amount to a regulated activity, in the same as managing a “traditional” fund. It is the underlying activity or underlying asset which may fall within the regulatory perimeter.

As tokens are simply another way of recording ownership of an interest in a fund, the regulatory rules and requirements relating to the marketing of them will be similar to those which apply to traditional funds. The financial promotion regime and the prospectus/COLL fund documentation regime will generally apply in the same way to a tokenised fund and a traditional fund.

8. Potential challenges with tokenised funds

While they may bring many benefits, tokenised funds also face inevitable challenges, including:

- **Uncertainty with regulation:** While the FCA has offered guidance, firms may be wary of the fact that no certainty exists in this area yet. Where market participants are unsure and require regulatory feedback, the FCA has stated that its Innovate support functions such as the Sandbox or Direct Support can provide this help for requests that meet the eligibility criteria for support. However, this might not be satisfactory for some firms and investors at this stage.
- **Legal status:** There is very little case law, specific legislation or regulation which addresses tokens and smart contracts. As a result, the uncertainty that surrounds them may deter some firms from using them. The laws of countries are changing to meet the opportunities to create fintech driven economies (for example through e-money and payment services regulations) but there is still work to be done in this area.

Readers may be interested to review the LawTech Delivery Panel legal statement on crypto assets and smart contracts. The Law Commission has also recently announced that it has started working on two new projects to ensure that English law can accommodate new technologies, relating to smart

contracts and digital assets.

- **Perceived risks related to AML/KYC:** Tokenisation is often linked to a high risk of fraud and fraudulent transactions, limited traceability of transactions, and inconsistency of AML and KYC procedures. However, it is possible to avert these issues by creating tokens which have compliance with AML and KYC baked into them (see above). There are also specialised compliance solutions which can be used for these purposes.
- **Financial institutions having to adapt:** While a slightly controversial statement, some firms may have to adapt to play a different role if they want to remain relevant in the token economy. New fund managers, especially with the numbers of users and trusted reputations, may also emerge and disrupt. Tokenisation makes it easier to trade with a direct counterparty to a transaction (typically an asset manager or fund administrator) and is likely to reduce costs, and thus changes in roles are inevitable.
- **Cross-border regulatory issues:** As secondary markets for tokens would be global, due to the nature of DLT, there may be regulatory issues to consider in various jurisdictions.
- **Market volatility:** Greater accessibility may result in investors making decisions without seeking expert advice or opinion, potentially creating volatility in the markets.
- **Cyber and data security:** As with other technologies there will be the risk of cyber hacks and data security breaches. Ensuring the security of investor's private keys will need to be a critical focus.
- **Liability:** The decentralised nature raises questions regarding liability and accountability.

9. What is the future outlook for tokenised funds?

Tokenisation of funds has great potential to transform the financial infrastructure of today and solve many common problems. Its benefits in bringing more liquidity and improving efficiencies, among other things, are wide-reaching.

However, it is important to bear in mind that there must be sufficient demand for regular trading for the full benefits of tokenisation to be achieved. Investors and fund managers must see efficiency gains of a tokenised form of funds and there must be sufficient economics of the transaction. Market readiness is also key, and this will require a shift in mindset of investors and fund managers who may have reservations in participating in blockchain-based systems.

As with any novel innovation, there remains some regulatory uncertainty which may deter market participants. However, the FCA has made a commitment to assist firms seeking clarity on the regulatory treatment of their products and services. While there are undoubtedly challenges associated with the tokenisation of funds, a well-designed token could increase efficiency and fairness in the financial world, while reducing unnecessary friction in accessing funds. These numerous benefits make it a compelling development in the financial industry and position tokenised funds as a viable, professional, and a potential disruptor and alternative to the traditional fund operational architecture.



Tokenised funds series

This paper provides a straightforward guide to tokenised funds and future papers will delve into more technical detail. We are keen to hear from members on what is important to them – contact us with requests and suggestions at john.allan@theia.org



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