

Beyond asset tokenisation

The evolving role of asset servicing



Working together with



Outline

The current state: how far have we come?	4
New entrants	5
Rise of regulation	5
The rise of new asset classes	6
Non-fungible tokens	7
Real estate and private assets	7
Bonds and liquid markets	7
Infrastructure	7
Spotlight on ESG	8
Asset servicers 4.0	11
Collaborations	15
Looking to the future	16

Authors:



Dan J Sleep
Specialist,
Digital Assets and Financial
Markets, Northern Trust



Rachel Roch
Product Manager,
Digital, Data and Innovation,
Securities Services, HSBC



Xin Yi Tan
Product Manager,
Digital, Data and Innovation,
Securities Services, HSBC



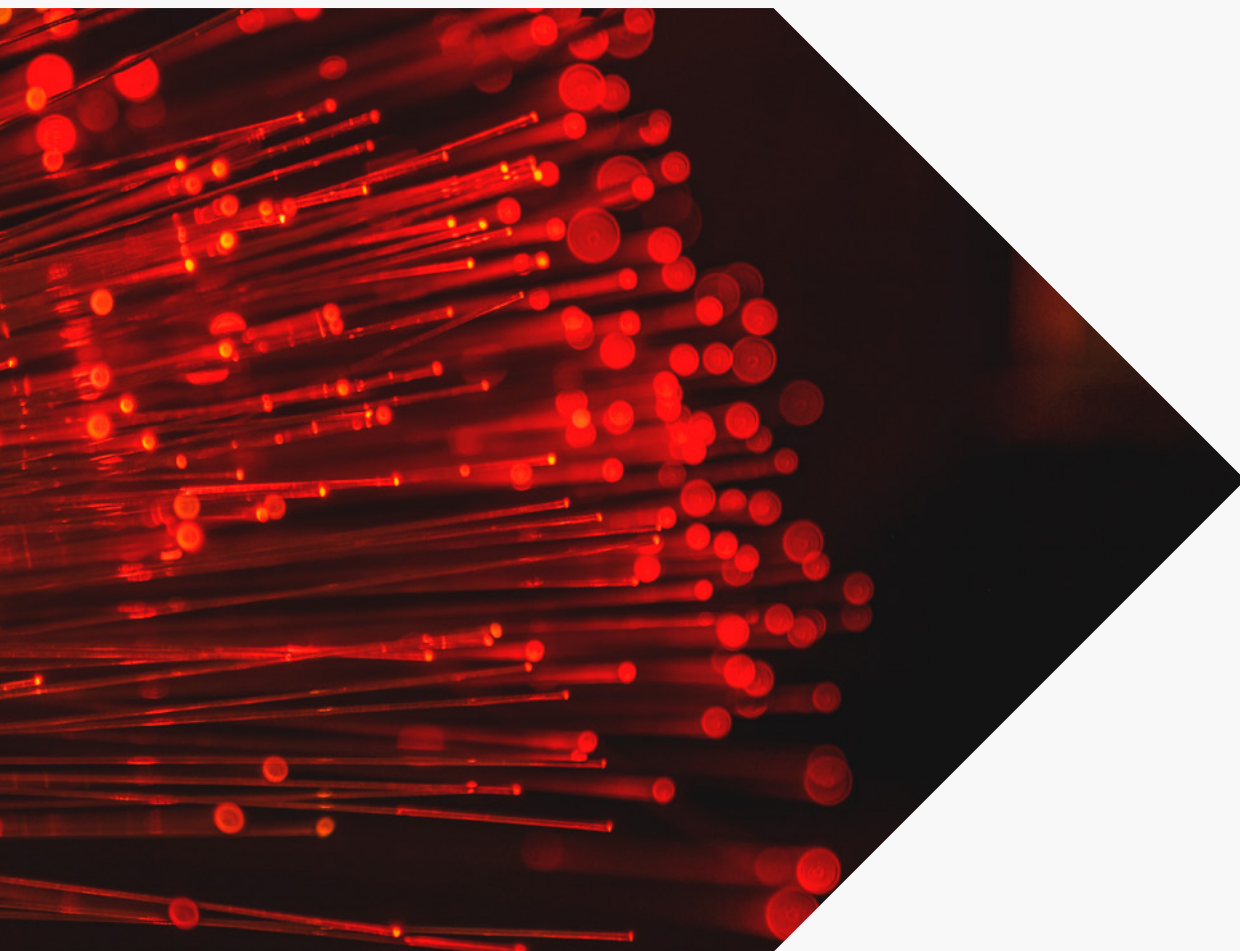
Maria Cabanting
Head of Digital Client Engagement,
Digital, Data and Innovation,
Securities Services, HSBC



Jing Yu Wong
Product Manager,
Digital, Data and Innovation,
Securities Services, HSBC

Executive summary:

- Investors are turning to digital assets in growing numbers as new technologies and innovations expand market size and opportunity sets.
- This has implications for all stakeholders in the investment industry. New ecosystems are emerging in this space with new participants and infrastructure.
- Tokenisation has the power to be a true disrupter. It has the potential to transform existing asset lifecycles, accelerate product innovation and create customised, hyper personalised options for investors.
- For regulators, these developments are offering both challenges and opportunities. Ultimately, regulation will support the maturation of the industry.
- For asset servicers, this is a period of true transition. Asset servicers must act as digital conduits for the clients. They must be flexible, adaptable, and evolutionary in order to provide truly innovative and customised solutions.
- Partnership is key in this ecosystem. There is a significant opportunity for asset servicers to collaborate – from joint experimentation to co-creating new platform-based solutions.





The current state: how far have we come?

The investment landscape is always evolving, now faster than ever with new innovations that are transforming the ecosystem in profound ways. The rise of digital assets and the development of digital infrastructure and a wider digital ecosystem are impacting almost every aspect of the investment industry. Whether it is the way that investors access technology, the rapid growth of regulation, shifting client business models, new distribution platforms, the development of more innovative sustainability approaches, or more broadly, the way the industry thinks and operates, digitalisation has changed the game.

Within that digital lens, tokenisation has emerged as one key catalyst of change. It is enabling the industry to become more disintermediated and democratised. It is increasing transparency, building cost efficiencies, and impacting everything from trading, pricing, and the liquidity of securities, and potentially creating more efficient clearing and settlement.¹

It is a disrupter, one that has implications for all stakeholders in the industry, not least of all asset servicers. Tokenisation, and the broader growth of the digital world is challenging how asset servicers operate, fostering an environment that is far more collaborative, as asset servicers seek to build sustainable solutions for the future.

Key terms

Distributed Ledger Technology (DLT):

A decentralised digital system that records asset transactions at numerous places simultaneously. The DLT model invites all stakeholders to share access to the same secure reference record set.²

Blockchain: A 'digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain.'³ It is essentially a type DLT that keeps track of transactions and allows for online digital assets to have verifiable validity and proof of ownership that is immutable.

Tokenisation: The process of issuing a token that represents an asset. A token acts as a digital certificate of authenticity, enabled by DLT. Tokens essentially exist as strings of code on the blockchain.

Fractionalisation: Any asset unit divided into smaller tokens for multiple ownership.

Non-Fungible Tokens (NFTs): Any digital offering that purports to be unique and non-interchangeable, the majority of which are on the Ethereum blockchain.⁴ They are encrypted units of data.

¹ <https://www.oecd.org/finance/The-Tokenisation-of-Assets-and-Potential-Implications-for-Financial-Markets.pdf>

² <https://www.northerntrust.com/netherlands/insights-research/2022/cis/blockchain-beyond-crypto>

³ <https://www.euromoney.com/learning/blockchain-explained/what-is-blockchain>

⁴ <https://www.cnbctv18.com/cryptocurrency/ethereum-so-popular-for-nft-cryptocurrency-projects-13693202.htm>

New entrants

As a result, new players have emerged to provide the market with services, protocols and use cases. It is hard to imagine that companies like Coinbase, Fireblocks and ConsenSys did not exist a decade ago. Now, they are both competing and collaborating with traditional players to build and provide the infrastructure needed to service digital assets. The digital assets ecosystem currently includes several broad categories of providers such as trading venues and exchanges, custodians, issuers, digital transfer agents and broker-dealers and capital advisors.⁵ Although new entrants have cornered growth so far, traditional players are increasingly looking to expand their service offering to securely store, buy and sell digital assets.

Rise of regulation

As the industry continues to innovate, regulators around the world have focused their attention on digital assets and have introduced legislation in recent years which aims to build a solid foundation for digital asset development. It is no surprise that this novel asset class will eventually be regulated just like any other financial asset.

The current regulatory picture remains fragmented at a global level with a wide range of regulatory approaches, including China taking a critical view of cryptocurrencies⁶ and the Hong Kong government creating a new licensing regime for virtual asset service providers (VASPs), which will come into effect in March 2023.⁷ Singapore is preparing its own legislation, which will require all VASPs with a place of business in Singapore to be licensed.⁸ The European Union (EU), meanwhile, is bringing crypto assets, crypto assets insurers, and crypto assets service providers under a regulatory framework for the first time under the **markets in crypto-assets (MiCA)** proposal,⁹ while the Financial Action Task Force (FATF) released updated guidance addressing compliance risks related to virtual assets, in order to help governments build regulatory responses to virtual assets and to VASPs.¹⁰

In broad terms, it is clear that regulators are taking a progressive regulatory approach to digital assets, and there should be more regulatory clarity in this space moving forward. By reducing the regulatory uncertainty that exists today, we expect to see more widespread acceptance and use of digital assets globally.¹¹

⁵ <https://medium.com/vertalo/key-players-in-the-digital-asset-ecosystem-7db535f463f1>

⁶ <https://www.bbc.com/news/technology-58678907>

⁷ <https://www.charltonslaw.com/hong-kong-licensing-regime-for-virtual-asset-exchanges-to-take-effect-on-1-march-2023/>

⁸ <https://www.nasdaq.com/articles/the-role-of-market-surveillance%3A-building-trust-in-crypto-markets>

⁹ <https://www.consiliium.europa.eu/en/press/press-releases/2022/06/30/digital-finance-agreement-reached-on-european-crypto-assets-regulation-mica/>

¹⁰ <https://www.skadden.com/insights/publications/2021/11/recent-developments-in-the-regulation-of-virtual-assets/fatf-updates-its-global-guidelines>

¹¹ <https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/FinancialServices/NSE-FS-DigitalAssetSurvey-23092021.pdf>



The rise of new asset classes

DLT and tokenisation have the potential to reshape financial markets by creating new asset classes and enabling new business models, both of which will accelerate change.

With tokenisation, the possibilities in terms of asset structuring are aplenty:

- ◆ Illiquid assets such as real estate or infrastructure can be tokenised, which improves the asset's liquidity due to fractionalisation, and hence tradability
- ◆ New product structures can be created as tokens, with smart contracts governing the asset servicing for various asset combinations

As a result, tokenisation is, or has the potential to become a key consideration in the future development of asset classes. In addition to the liquidity and accessibility opportunities, tokenisation can also lower transaction costs and provide greater transparency.¹²

¹² https://www.ey.com/en_ch/real-estate-hospitality-construction/tokenisation-from-illiquid-to-liquid-real-estate-ownership



Non-fungible tokens

An obvious example is non-fungible tokens (NFTs) which have been getting a great deal of media attention recently. The sale of NFTs reached about \$25 billion across tokenised games, art, tweets and more.¹³

This reflects a market embracing tokenisation as a means to monetise assets and digital tokens (including cryptocurrencies), and this is only the beginning in terms of growth potential. The global NFT market size is expected to grow from \$3 billion in 2022 to \$13.6 billion by 2027, at a Compound Annual Growth Rate (CAGR) of 35.0% from 2022 to 2027.¹⁴



Real estate and private assets

Some asset classes are further ahead than others. Real estate, for example, has been initiating tokenised deals for several years. 41 companies in 17 countries have been trialling the tokenisation of property.¹⁵

Tokenisation in private markets has generally grown more slowly than real estate, though demand for private assets has never been higher. 86% of investors plan to invest the same or more in private capital over the next 12 months, according to data from Preqin.¹⁶

Tokenisation of real estate and private assets is particularly attractive due to illiquidity and high capital investment requirements of these assets. Through fractionalisation, tokenisation can enable access to these assets for a much wider range of investors. Institutions such as Singapore's ADDX, a blockchain-based technology firm is providing accredited investors with access to private equity funds at sizes that would normally be considered too small for investors, as little as \$10,000.¹⁷



Bonds and liquid markets

The tokenisation of bonds and more liquid assets is also starting to gain traction.

In 2020, Northern Trust and BondEvalue completed the first fractionalised blockchain-based bond, known as BondbloX, in Singapore.¹⁸ In 2021, HSBC Singapore and Marketnode, the joint venture between Singapore Exchange (SGX) and Temasek, successfully completed 10 digital bond issuances, including a US\$ billion perpetual securities issue by Singtel Group Treasury Pte. Ltd.¹⁹



Infrastructure

Investment firms have also been looking at how to leverage tokenisation in the world of infrastructure.²⁰

These initiatives are only the tip of the iceberg. Digitalisation and tokenisation are removing intermediaries from the process, reducing the need for reliance on legacy systems and processes, and streamlining efficiencies that are both cleaner and cheaper.

Against this landscape, asset owner and asset manager community are looking for product innovation pathways in pursuit of new sources of diversification, alpha and growth. For clients in the wealth segment, the advent of decentralised finance (DeFi) - decentralised systems, processes, and products that seek to disintermediate finance by removing friction via intermediaries such as brokerages or banks from transactions - is bringing forward a new age of investing and liquidity. Total value locked into DeFi increased from \$601 million at the start of 2020 to \$239 billion by April 2022, a 40,000% rise.²¹ As this space matures, providers will move to provision greater access to these instruments which are driving a convergence of institutional and wealth segments.

¹³ <https://www.reuters.com/markets/europe/nft-sales-hit-25-billion-2021-growth-shows-signs-slowing-2022-01-10/>

¹⁴ <https://www.globenewswire.com/news-release/2022/06/14/2461868/0/en/Global-Non-Fungible-Tokens-NFT-Market-Report-2022-Increasing-Influence-of-Celebrities-Revolutionizing-the-Gaming-Industry-and-Continuing-Rise-in-Demand-for-Digital-Artworks.html>

¹⁵ <https://www.hcob-bank.de/en/editorial/pages-2021/editorial-page-ppa-studie-0/>

¹⁶ <https://www.preqin.com/LinkClick.aspx?fileticket=Jd7u8FD7lbo%3D&portalid=0>

¹⁷ <https://www.privateequityinternational.com/tokenisation-a-new-frontier-in-the-democratisation-of-pe/>

¹⁸ <https://www.northerntrust.com/africa/pr/2020/bondevalue-northern-trust-first-blockchain-based-bond-trade>

¹⁹ <https://www.about.hsbc.com.sg/news-and-media/hsbc-marketnode-complete-digital-bond-issuance-with-singtel>

²⁰ <https://www.ledgerinsights.com/pontoro-to-tokenise-bank-infrastructure-loans-backed-by-franklin-templeton/>

²¹ <https://blockworks.co/news/large-institutional-transactions-push-total-value-locked-in-defi-to-239b>



Spotlight on ESG

Both retail and institutional clients are looking for greater Environmental, Social, and Governance (ESG) products from their providers, and that demand will shift the landscape even further.

Global ESG assets may surpass \$41 trillion at the end of 2022, one third of projected total assets under management globally (AUM). It is anticipated that ESG assets will hit \$50 trillion by 2025.²² Nearly half (49%) of European institutional asset owners plan to make a formal net-zero commitment within the next two years, compared to 31% in Asia and 29% in the US.²³

In Asia, investors are becoming increasingly sophisticated in their approaches. According to Schroders' latest Institutional Investor Survey,²⁴ APAC investors are looking for new energy transition opportunities and want to generate high returns with sustainable investing. Active ownership is becoming significantly more important, as is prioritising net zero.

The growth of ESG is likely to fuel the growth of tokenisation, for example through tokenised green and social impact bonds, sustainability-linked loans, or tokenised carbon credits.²⁵

Elsewhere, Verra, the non-profit organisation that runs the world's biggest registry by numbers of carbon credits

issued, said that it was proposing rules for trading carbon credits on cryptocurrency exchanges to address concerns about the anonymity of digital token holders.²⁷

Green bond token initiatives are also underway. The Bank of International Settlements (BIS) Innovation Hub and the Hong Kong Monetary Authority have developed two prototype digital platforms for green bond tokenisation through Project Genesis, in conjunction with private sector consortiums.²⁸

Other regulatory and government initiatives are further supporting the evolution of ESG. One example is the Monetary Authority of Singapore (MAS)'s Project Greenprint, a collection of initiatives that aim to harness technology and corporate digital identities to create a more transparent and efficient ESG ecosystem to enable green and sustainable finance.²⁹

These innovations are only at their early stages but raise interesting questions about the future of digitalisation and ESG. Could digital identity, corporate accountability, and granular ESG data analysis exist side by side? If so, that evolution in an era of climate crisis and need for financial inclusion may see ESG imperatives embedded into commercial impacts and opportunities in a much more substantial way, with proof of ESG impact and transparency enabled via the use of emerging technologies such as DLT.

²² <https://www.bloomberg.com/company/press/esg-may-surpass-41-trillion-assets-in-2022-but-not-without-challenges-finds-bloomberg-intelligence/>

²³ <https://www.cerulli.com/knowledge/white-paper-net-zero-investment>

²⁴ <https://www.asianinvestor.net/article/institutional-investors-eye-impact-as-esg-approaches-broaden-in-asia-pacific/480798>

²⁵ <https://earth.org/tokenised-carbon-credits/>

²⁷ <https://www.wsj.com/articles/carbon-credit-registry-proposes-rules-for-crypto-tokens-11659542384>

²⁸ https://www.bis.org/about/bisih/topics/green_finance/green_bonds.htm

²⁹ <https://www.mas.gov.sg/development/fintech/Green-FinTech>

³⁰ <https://www.mas.gov.sg/news/media-releases/2022/mas-and-google-cloud-launch-point-carbon-zero-programme--to-catalyse-climate-fintech-solutions>

Case study – a deeper role in voluntary carbon markets

The background

A voluntary carbon unit (VCU) is a token representation of 1 Tonne (T) of CO₂ (or equivalent) removed from the environment or prevented from entering the atmosphere in the first place. The carbon credit can then be retired (removed from circulation) against an individual's or corporate's CO₂e footprint to "recognise" the offset. This carbon token can also be traded if necessary via a secondary market. Carbon credit units themselves are generated from a diverse array of carbon project types and sizes across vast geographies, these generally require funding to build, operate and scale.

As the world is in the middle of a climate crisis, Voluntary Carbon Markets (VCMs) may serve as a vehicle for corporations to meet net zero commitments. Once firms have exhausted their ability to reduce their CO₂e footprint directly, they pursue VCU's in order to offset their impact in alignment with their objectives.

VCMs continue to grow significantly. McKinsey estimates that demand for voluntary carbon credit markets (VCC) could increase by a factor of 15 or more by 2030 and by a factor of up to 100 by 2050. Overall, the market for carbon credits could be worth upward of \$50 billion in 2030.³¹

The quality vs cost dilemma

It's important to understand here that not all carbon credits are equal. Consider a spectrum of carbon reducing and removing methods which produce varying effectiveness and scale of impact in reducing or removing CO₂ from the environment. The better a project, technology or method is at removing the most CO₂ and the most effective long-term storage (known as permanence) or reuse of the CO₂, then the greater the value placed on the units produced.

The challenges

Here is the problem: the demand for high quality VCUs outstrips current supply by some distance. Supply is low at the top end of the quality spectrum due to demands of the early-stage investment, process evolution and technological complexity of the most effective methods such as Direct Air Capture (DAC).

To produce high quality VCUs on a larger scale, carbon projects require a substantial runway to producing at full capacity. For example, Direct Air Capture (DAC) firms such as Storegga and Climeworks have active projects with production of VCUs due for delivery from the year 2025 onward. Climeworks capacity is 4000 T per annum in the existing plant, their 18th project and second commercial DAC project named Mammoth is in development and has a target of 36,000 T capacity when fully operational.³² The Storegga project is 1 Mega Tonne (MT) when at scale but that is not likely to be until 2025 plus.³³

Sheer lead times and the complexity of the production process have necessitated the advent of Projected Emissions Reductions (PERs), these allow for a risk adjusted representation of future expected VCU creation and delivery. These tools can both enable funding of current project activities as well aid in securing demand for corporates on their decarbonisation journeys. These types of innovation will require close governance and oversight in order to administer, track and help drive the developmental pipeline for projects.

Whilst wide scale efforts are being made to nurture the development of standards and tools by the likes of the Taskforce for Scaling Voluntary Carbon Markets (TSVCM), these markets are often fragmented and lacking in transparency, as well as in the tools to operate at scale and across jurisdictions.

³¹ <https://www.mckinsey.com/capabilities/sustainability/our-insights/putting-carbon-markets-to-work-on-the-path-to-net-zero>

³² <https://climeworks.com/roadmap/mammoth>

³³ <https://www.energyvoice.com/renewables-energy-transition/332107/storegga-dac-facility/>

The broader value chain however remains challenged with maintaining the trust, integrity of the system in the form of preventing greenwashing and providing fair value back to the underlying carbon projects that the credits originate.

The path forward

We believe that with VCMs developing in the form they currently take, there are a variety of roles that asset servicers can play in securing and enabling the VCU ecosystem forward and across the value chain.

The deployment of digital asset solutions and capability can harness the native governance and transparency required to cultivate trust and growth using institutional grade infrastructure and payment processing rails for transacting. Record keeping and monitoring is already part of the organisational DNA, something that the VCU domain can only benefit from.

Asset servicing firms already possess experience operating and contributing to digital ecosystems but could also play a key role in the facilitation of the supply meeting demand across a multitude of institutional relationships. Ultimately, firms can do good by helping their clients to do good.



Asset servicers 4.0

The emergence of new asset classes and the changes in the way key financial services functions are performed in the digital asset ecosystem, as well as the increasing focus on ESG and sustainability, have major implications for incumbent financial services firms including custodians.

Asset servicers know that they are operating in an evolving world. We expect that by 2030, approximately 5% to 10% of all assets will be digital. Considering that global assets are expected to rise to \$145.4 trillion by 2025³⁴ this is a substantial number, and it will only continue to increase as technological innovation drives change. Already, cryptocurrencies, stablecoins, central bank digital currencies (CBDCs) and infrastructure plays for the digital issuance of securities are shifting the landscape. In addition, as the DeFi ecosystem continues to grow, the safety and integrity of assets across multiple blockchains and protocols will become increasingly important.

The asset servicing business has always been one that is focused on trust. Clients rely on their custodians to safeguard their assets, acting as a trusted third party. Some argue that DLT enables a 'zero trust' ecosystem, where trust is no longer required since the blockchain provides a single record of transactions which is immutable and transparent to all market participants. Our view is that trust will still play an essential role in the smooth operation of financial markets, whether the assets are represented in traditional dematerialised or tokenised form. Custody of digital assets requires infrastructure to protect and manage private keys, which control ownership of the assets. Asset servicers will need to learn to support their clients in a T+0 operational world, where execution and settlement of trades occur simultaneously and the distributed ledger serves as a single, or golden source of data for all counterparties.

³⁴ <https://www.pwc.com/ng/en/press-room/global-assets-under-management-set-to-rise.html>



However, traditional and digital assets will continue to operate in one blended financial ecosystem for a long time to come. Asset servicers will therefore be required to service both traditional and digital asset strategies and ensure both are equally fit for purpose. They will need to enhance their capabilities ahead of the adoption curve and invest in the future. If asset servicers fail to address the needs of digital assets, they may be at risk of losing the rest of their business.

There are already proof of concept initiatives demonstrating that blended financial ecosystems can be successful. In October, for example, SWIFT demonstrated that CBDCs and tokenised assets could move seamlessly on existing financial infrastructure. SWIFT worked with numerous stakeholders, including Northern Trust, and demonstrated, through two separate experiments, that it was possible to bridge different DLT networks and existing payment systems, allowing digital currencies and assets to flow smoothly alongside and interact with their traditional counterparts.³⁵

We believe growing demand and the creation of new products and assets will lead to the evolution of Tokenisation as a Service (TaaS) and Platform as a Service (PaaS). There is increasing demand for issuers to issue assets in tokenised form, and platform-based models are emerging to cater to this demand. An example of this is HSBC Orion – an HSBC proprietary DLT based tokenisation platform created for financial institutions and corporates wanting to issue digital bonds. HSBC Orion has already garnered interest with the European Investment Bank (EIB), as the EIB is looking to issue the market's first-ever GBP tokenised bond for registration and issuance under Luxembourg law.

Custodians have the opportunity to expand their current product proposition and offer clients a seamless custody solution across the entire portfolio of holdings. In order to do this, custodians need to invest in the development of the technology and infrastructure required for safekeeping of digital assets, either internally or through partnership with existing digital assets custody providers. For example, Northern Trust and SC Ventures launched Zodia Custody, which was registered with the Financial Conduct Authority (FCA) in 2021 to provide crypto assets custody solutions to clients around the world.³⁶

As the DeFi ecosystem grows, there will be increasing demand from institutional investors for connectivity to new protocols and applications in a secure, convenient, and compliant way. Custodians can serve as a 'universal adaptor', providing connectivity and access for their clients and bridging the gap between the traditional fiat economy and the decentralised economy. HSBC has taken the first steps towards this in the launch of the MarketSpace platform, which is intended to provide clients with access to a marketplace of services and solutions from HSBC as well as third party service providers. This would include digital assets related applications and solutions.

³⁵ <https://www.swift.com/news-events/press-releases/ground-breaking-swift-innovation-paves-way-global-use-cbdcs-and-tokenised-assets>

³⁶ <https://www.northerntrust.com/africa/pr/2021/zodia-custody-receives-fca-registration>

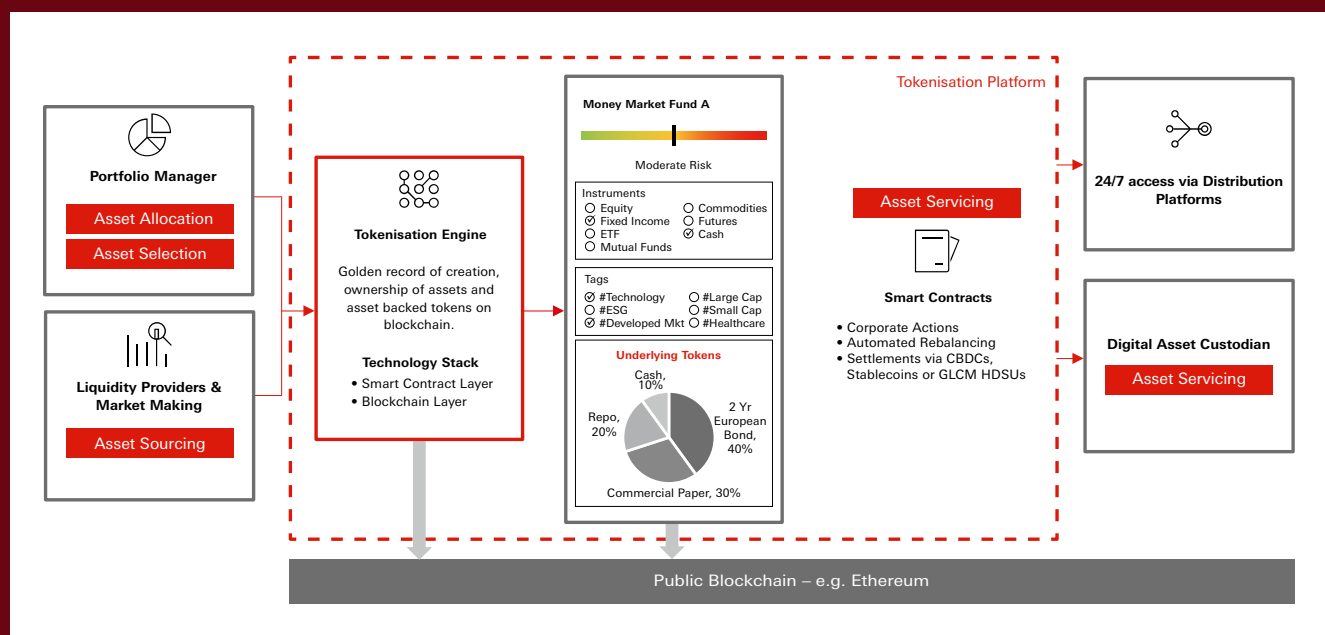
Case study – tokenised portfolios in wealth management

Tokenisation has the potential to accelerate current trends in the wealth space such as direct indexing and customised portfolio management.

Direct indexing

ETFs and mutual funds would typically allow investors access to a whole investment universe through smaller ticket sizes. However, these fund structures do come with their costs (0.5% fee for passive investments on average) – often then passed on to the investor.

However, with tokenisation, investors would be able to partake in direct indexing without requiring a large amount of capital to purchase all the underlying stocks in an index, and also enabling the potential for tax-loss harvesting each position. Tax loss harvesting involves selling securities at a loss and offsetting capital gains tax due on the sale of other securities at a profit. Direct indexing allows more opportunities for this simply because there are more individual stocks.³⁷



In a world where the underlying stocks are tokenised, individual investors can purchase fractions of each stock to track a benchmark. If the underlying stocks are not tokenised, then wealth managers can create portfolios that track a

benchmark and sell tokens representing this actively managed basket. Rebalancing and minimising tracking error can be automated through the use of smart contracts.

³⁷ <https://www.cnbc.com/2022/06/27/direct-indexing-becomes-democratized-as-fees-account-minimums-drop.html>

Customised portfolios

Besides direct indexing, tokenisation can enable portfolio managers to offer customised thematic portfolios. DLT lowers costs due to simplification of multiparty workflows and eliminating the manual effort that exists today. Due to the efficiencies and cost-savings generated by tokenisation, smaller portfolio sizes would become commercially viable for asset managers, enabling the creation of thematic investment options catering to niche themes appealing to smaller investor segments interested in purpose-driven investments.

Smart contracts are used to model the rights and obligations of the tokens, governing the logic behind the portfolios and automating asset allocation, optimisation and rebalancing. The tokens created

would need to be safekept by a trusted custodian. Connectivity to multiple custodians and distributors would be key to creating a viable ecosystem.

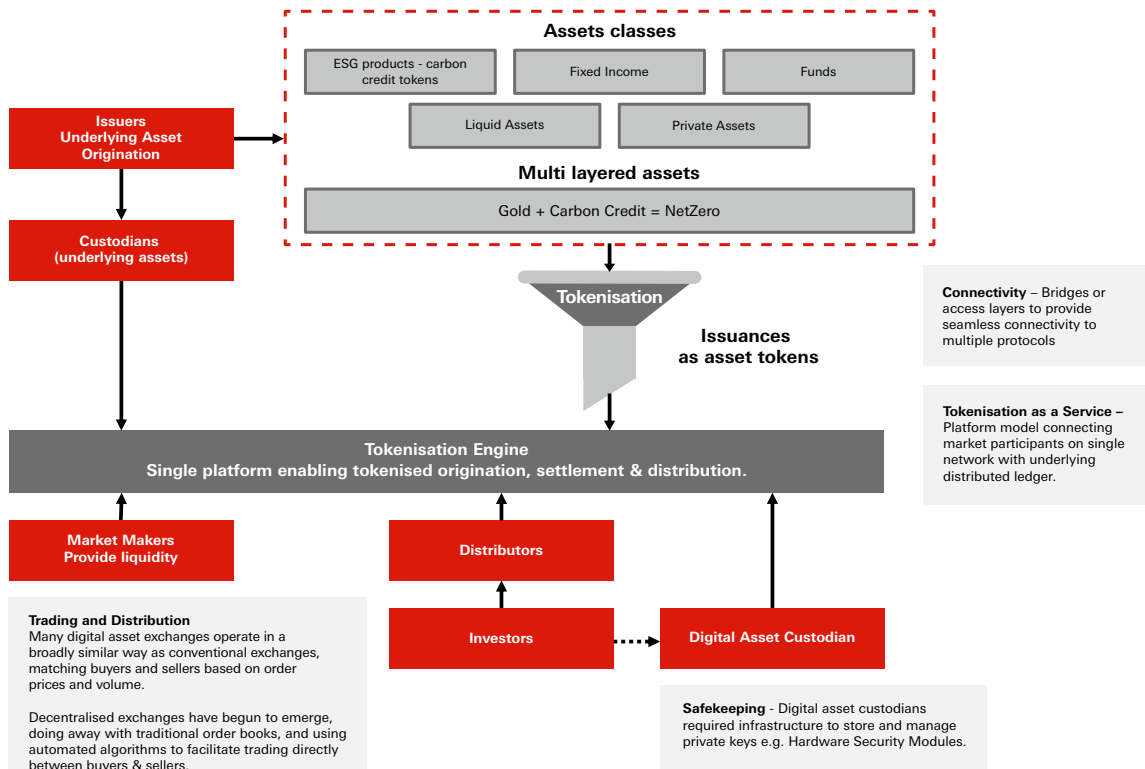
There is an opportunity for asset servicing firms to operate tokenisation platforms to provide portfolio managers with capability to tokenise and distribute their portfolios. An overview of such a platform is illustrated below.

The path towards defining new business models and platforms to meet changing client expectations will not be straight forward for incumbent asset servicing firms. We believe that partnerships between firms will play a key role in easing the road ahead and maximising the network benefits that can be generated from decentralised ecosystems.

A new ecosystem to support digital assets

Custodians, trading venues and distributors, play an essential role for both traditional and digital assets. However, the way these functions are performed in terms of channels, technology

and business models is significantly different for digital assets. A brief overview of key financial services required in the digital asset ecosystem is illustrated in the diagram below.





Collaborations

As the digital market evolves, industry participants will need to collaborate far more efficiently. Traditional and emerging players will need to partner with digital exchanges and distribution platforms to create new ecosystems that can support innovation. Digital exchanges have been developing for some years now, in Australia,³⁸ the US,³⁹ Germany, and Switzerland, amongst others.⁴⁰

There are also significant opportunities for asset servicing firms to partner – from joint experimentation with new technologies to developing new business models and solutions. Platform operating models are likely to take hold in this new ecosystem. Asset servicers can consider partnering to launch and jointly operate tokenisation platforms that offer digital asset issuance and servicing capabilities. Partnership can increase the number of market participants connecting to the platform and widen the potential client base. For firms with established and complementary client bases, this can maximise the benefits of network effects that can be achieved.

Developing inter-operability between existing platforms is another opportunity for collaboration. Several asset servicers have launched products or platforms for digital assets custody or tokenisation.

Establishing connectivity between these platforms could result in significant benefits for clients if they are able to easily trade, settle and borrow or lend their digital assets across platforms. Portability of tokens across networks is a key feature of the DeFi ecosystem and has helped to incentivise participation by investors. Similarly, establishing inter-operability between platforms operated by different asset servicing firms can accelerate institutional adoption in this space and contribute towards the development of a robust ecosystem. An example of a current collaborative initiative that aims to encourage the development of inter-operable networks is Project Guardian, which was launched by the MAS in 2022 to explore the potential of asset tokenisation.⁴¹

Asset servicers can also collaborate to establish industry standards and governance frameworks for the digital assets space. Shared industry standards can provide assurance to clients and catalyse adoption. The International Securities Services Association, an industry association, has released several reports and guidance papers on digital assets.

³⁸ <https://smallcaps.com.au/asx-blockchain-technology-australian-stock-market/>

³⁹ <https://www.cnn.com/2021/10/24/what-first-bitcoin-futures-etf-means-for-cryptocurrency-industry.html>

⁴⁰ <https://www.tradersmagazine.com/am/exchanges-look-to-the-digital-asset-market-opportunity/>

⁴¹ <https://www.mas.gov.sg/schemes-and-initiatives/project-guardian>

Looking to the future

Investors are embracing digitalisation in new and innovative ways. They want a future that is accessible, transparent, and adaptable.

The creation of digital infrastructure and the adoption of digital ecosystems are helping to build that future. Whether it is through the development of new asset classes, or the fact that digital assets are gaining maturity, whether it is because of regulatory frameworks, government and industry initiatives, sustainability drivers, or the power of tokenisation as a force for change, the investment industry is moving forward.

For asset servicers, there has never been a more important time to innovate, to collaborate, and to create change. Asset servicers have an opportunity to drive the digital future by offering both traditional and digital solutions in new and exciting ways. The future is already here, it is up to the industry to embrace it. As the African proverb goes, *if you want to go fast, go alone, if you want to go far, go together.*



Disclaimer

This document is issued by HSBC Bank plc ("HSBC"). HSBC is authorised by the Prudential Regulation Authority (PRA) and regulated by the Financial Conduct Authority (FCA) and the PRA and is a member of the HSBC Group of companies ("HSBC Group").

HSBC has based this document on information obtained from sources it believes to be reliable but which have not been independently verified. Any charts and graphs included are from publicly available sources or proprietary data. Except in the case of fraudulent misrepresentation, no liability is accepted whatsoever for any direct, indirect or consequential loss arising from the use of this document. HSBC is under no obligation to keep current the information in this document. You are solely responsible for making your own independent appraisal of and investigations into the products, investments and transactions referred to in this document and you should not rely on any information in this document as constituting investment advice. Neither HSBC nor any of its affiliates are responsible for providing you with legal, tax or other specialist advice and you should make your own arrangements in respect of this accordingly. The issuance of and details contained in this document, which is not for public circulation, does not constitute an offer or solicitation for, or advice that you should enter into, the purchase or sale of any security, commodity or other investment product or investment agreement, or any other contract, agreement or structure whatsoever. This document is intended for the use of clients who are professional clients or eligible counterparties under the rules of the FCA only and is not intended for retail clients. This document is intended to be distributed in its entirety. Reproduction of this document, in whole or in part, or disclosure of any of its contents, without prior consent of HSBC or any associate, is prohibited. Unless governing law permits otherwise, you must contact a HSBC Group member in your home jurisdiction if you wish to use HSBC Group services in effecting a transaction in any investment mentioned in this document. Nothing herein excludes or restricts any duty or liability of HSBC to a customer under the Financial Services and Markets Act 2000 or the rules of the FCA.

This presentation is not a "financial promotion" within the scope of the rules of the Financial Conduct Authority.

HSBC Bank plc is authorised by the Prudential Regulation Authority and regulated by the Financial

Conduct Authority and the Prudential Regulation Authority. Registered in England No. 14259

Registered Office: 8 Canada Square, London, E14 5HQ, United Kingdom

Member of the HSBC Group

Important Information - Northern Trust

Confidentiality Notice: This communication is confidential, may be privileged, and is meant only for the intended recipient. If you are not the intended recipient, please notify the sender as soon as possible. All materials contained in this presentation, including the description of Northern Trust, its systems, processes and pricing methodology, are proprietary information of Northern Trust. In consideration of acceptance of these materials, the recipient agrees that it will keep all such materials strictly confidential and that it will not, without the prior written consent of Northern Trust, distribute such materials or any part thereof to any person outside the recipient's organization or to any individual within the recipient's organization who is not directly involved in reviewing this presentation, unless required to do so by applicable law. If the recipient is a consultant acting on behalf of a third party client, the recipient may share such materials with its client if it includes a copy of these restrictions with such materials. In such event, the client agrees to comply with these restrictions in consideration of its accepting such materials.

© 2023 Northern Trust Corporation. Head Office: 50 South La Salle Street, Chicago, Illinois 60603 U.S.A. Incorporated with limited liability as an Illinois corporation under number 0014019. Products and services provided by subsidiaries of Northern Trust Corporation may vary in different markets and are offered in accordance with local regulation. **This material is directed to professional clients only and is not intended for retail clients. For Asia-Pacific markets, it is directed to expert, institutional, professional and wholesale clients or investors only and should not be relied upon by retail clients or investors. For legal and regulatory information about our offices and legal entities, visit northerntrust.com/disclosures.** The views, thoughts, and opinions expressed in the text belong solely to the author, and not necessarily to the author's employer, organization, committee or other group or individual. The following information is provided to comply with local disclosure requirements: The Northern Trust Company, London Branch, Northern Trust Global Investments Limited, Northern Trust Securities LLP and Northern Trust Investor Services Limited, 50 Bank Street, London E14 5NT. Northern Trust Global Services SE, 10 rue du Château d'Eau, L-3364 Leudelange, Grand-Duché de Luxembourg, incorporated with limited liability in Luxembourg at the RCS under number B232281; authorised by the ECB and subject to the prudential supervision of the ECB and the CSSF; Northern Trust Global Services SE UK Branch, 50 Bank Street, London E14 5NT; Northern Trust Global Services SE Sweden Bankfilial, Ingmar Bergmans gata 4, 1st Floor, 114 34 Stockholm, Sweden, registered with the Swedish Companies Registration Office (Sw. Bolagsverket) with registration number 516405-3786 and the Swedish Financial Supervisory Authority (Sw. Finansinspektionen) with institution number 11654; Northern Trust Global Services SE Netherlands Branch, Viñoly 7th floor, Claude Debussylaan 18 A, 1082 MD Amsterdam; Northern Trust Global Services SE Abu Dhabi Branch, registration Number 000000519 licenced by ADGM under FSRA #160018; Northern Trust Global Services SE Norway Branch, org. no. 925 952 567 (Foretaksregisteret) [VAT if applicable], address Third Floor, Haakon VII's gate 6 0161 Oslo, is a Norwegian branch of Northern Trust Global Services SE supervised by Finanstilsynet. Northern Trust Global Services SE Leudelange, Luxembourg, Zweigniederlassung Basel is a branch of Northern Trust Global Services SE. The Branch has its registered office at Grosspeter Tower, Grosspeteranlage 29, 4052 Basel, Switzerland, and is authorised and regulated by the Swiss Financial Market Supervisory Authority FINMA. The Northern Trust Company Saudi Arabia, PO Box 7508, Level 20, Kingdom Tower, Al Urubah Road, Olaya District, Riyadh, Kingdom of Saudi Arabia 11214-9597, a Saudi Joint Stock Company – capital 52 million SAR. Regulated and Authorised by the Capital Market Authority License #12163-26 CR 1010366439. Northern Trust (Guernsey) Limited (2651)/Northern Trust Fiduciary Services (Guernsey) Limited (29806)/Northern Trust International Fund Administration Services (Guernsey) Limited (15532) are licensed by the Guernsey Financial Services Commission. Registered Office: Trafalgar Court, Les Banques, St Peter Port, Guernsey GY1 3DA. Northern Trust International Fund Administration Services (Ireland) Limited (160579)/Northern Trust Fiduciary Services (Ireland) Limited (161386), Registered Office: Georges Court, 54-62 Townsend Street, Dublin 2, D02 R156, Ireland.

Working together with

