the ValueExchange

The future of financial advice in Asia

How tokenised portfolios can transform the Asian wealth landscape

In partnership with

HSBC CALASTONE

MARKETNODE NORTHERN TRUST

Contents

Introduction

What is the case for the Asian asset management industry to harness the power of tokenisation to provide high net-worth individuals (HNWIs) across the region with greater personalisation in their investments?

With over USD 11 trillion held by Asia's HNWIs today, Asia represents a vast wealth opportunity for many firms as they look to provide increasingly bespoke investment advice and administration.

But whilst the personalisation of portfolios has rapidly gathered momentum in North America, key challenges and considerations remain in Asia that are, today, holding back service providers from offering the benefits of investment alpha and operational beta to their customers. Chief amongst these are the prohibitively high operating costs faced by asset managers across the region, which put true portfolio personalisation out of reach for many.

This white paper, led by HSBC, Calastone, Marketnode and Northern Trust, sets out the case for and path towards the personalisation of investments for over 6.6 million HNWIs across Asia. With up to USD3.3 trillion in new assets available to those able to offer higher levels of customisation, this paper explains how asset and wealth managers can leverage the power of tokenisation to create an industry ecosystem that reshapes operating costs and accelerates the convergence of institutional and wealth management markets. Whilst challenges to adoption exist (notably in the form of regional fragmentation across Asia), the introduction of this digital ecosystem has the potential to do more than just reduce costs – it can drive portfolio performance, increase fund managers' revenues by over 25% and it can form the basis for a safer and more liquid capital market across Asia.

Key points

- Over **6.6 million HNWI** investors in Asia today (with **USD1-5 million** in assets), growing by over **300,000 per year.**
- **40% of Asian HNWI** investors (representing **USD1.1 trillion** in AUM) are unhappy with the levels of personalisation that they receive today.
- Most global banks face a minimum threshold for customised portfolios of **USD 2-10 million**, due to high operating costs of fund operations
- **USD 3.3 trillion** in AUM **(held by 30% of Asia's HNWIs)** would change their wealth management provider if greater personalisation was available to them.
- **One-third** of fund managers believe that tokenisation would help them to grow their revenues by **over 25%.**
- Key challenges lie ahead in ensuring that the benefits of tokenisation can be realised on an Asian-scale – overcoming the fractionalisation of market liquidity that prevails across the region today.

This research has been conducted by the ValueExchange, in partnership with HSBC, Calastone, Marketnode, and Northern Trust. It is based on extensive survey data (from over 158 asset managers and HNWIs, gathered by the ValueExchange in June – August 2024) and on insights from 19 interviews with leading market experts globally.

The market opportunity

Personalized investment management in Asia

1. What does an investor with USD2-10 million in investible assets do in Asia?

The Asian investment landscape is highly polarised.

The region's institutional investors are some of the most sought-after asset owners in the world, receiving highly tailored investment management support that leads the world in sophistication. In an effort to serve some of the world's most advanced investors, institutional-grade services are developed and extensively tailored with Asia's largest investors in mind – helping them to optimise returns, risk and visibility.

At the other end of the spectrum, 1.7 billion retail investors in Asia are able to subscribe to over 19,000 funds available for distribution across Asian markets. With a focus on simplicity and easy distribution through banking channels, investors with up to approximately USD1 million are able to choose from a vast array of domestic and international fund vehicles, as well as from over 730[1] ETFs listed in Asian exchanges.

In between these two tiers is a growing body of business owners and high net-worth individuals, who have specific needs but who are unable to service them today. With sophisticated and dynamic investment requirements that go beyond standardised mutual fund products, this group is currently considered to be sub-scale for many asset management providers in Asia. In the face of high platform costs and operating overheads, those with USD2 million or more in investible assets are today seen as too large for mass distribution and too small for institutional-grade customisation of investments and services, leaving them unable to maximise their investment performance and returns and compelled to manage their exposures through generic products.

In this context, the key question is how to facilitate a convergence of these highly separated markets. How can asset managers combine the institutional-grade capabilities of the world's top tier investors with the vast scale of high net-worth individuals, in order to deliver a customer proposition that is best-in-class, scalable and cost-efficient?

2. Who are these investors?

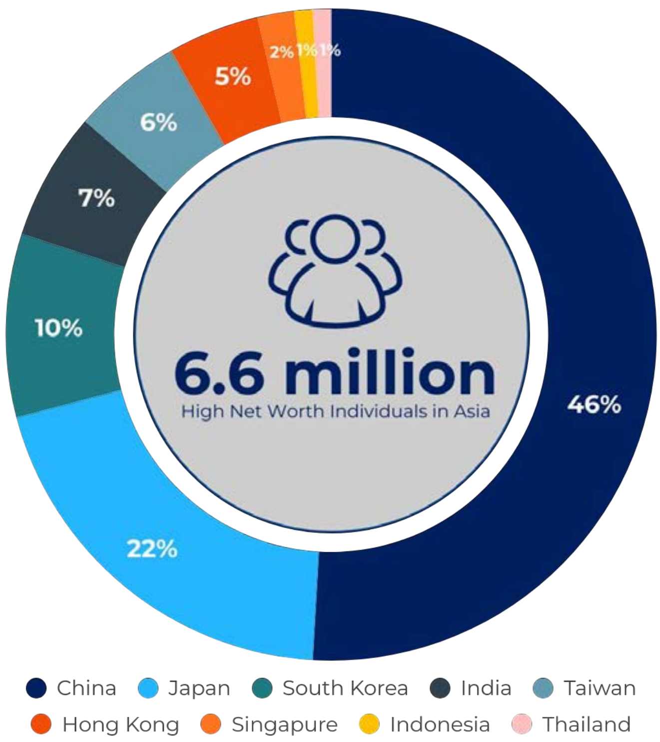
Today, there are 6.6 million of these HNWIs in Asia - with USD1-5 million in investible assets[2]. Holding a combined total of USD11.1 trillion, this group makes up 43% of the region's total HNWI wealth. This is an asset pool equivalent to the combined gross domestic products of Japan and South Korea.

And it is growing fast. Growing at an average of 5.4% per annum or 343,000 new HNWIs in Asia each year, the segment of USD1-5 million investors is the fastest growing of any wealth tier in Asia today. In China, HNWI growth rates exceed 12%, whilst even Japan's HNWI wealth grew by 6.5% in 2023.

From almost 7 million across Asia today in 2025, HSBC estimates that there will be 11 million adults in India alone with over USD1m in assets by 2035 – as well as 9 million in ASEAN[3].

For this rapidly growing profile, there is little doubt that customisation is front-of-mind today. On a global basis, 80% of asset managers[4] believe that customisation for the masses will be an important investment strategy in the next five years.

2023 USD millionaires in Asian countries

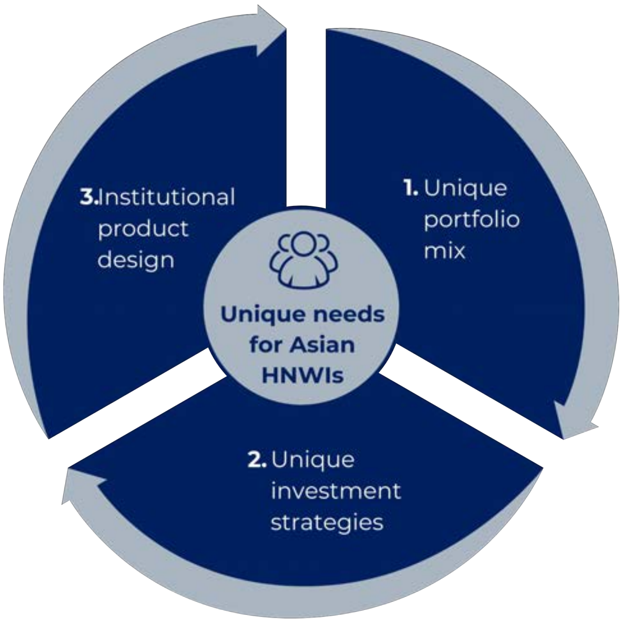


Source: Global Wealth Report 2024, UBS

3. What do these investors need today?

In contrast with the personalisation needs of American and European investors (which most often focus on tax considerations, rather than portfolio choice) the needs of the Asian investor are unique in a number of portfolio, strategy and design considerations. Requiring extensive tailoring in their asset reach and services, Asia's high net-worth clients are today demanding a series of capabilities that would traditionally only be available to institutional investors.

This raises a challenge and an opportunity for today's asset managers – who are highly familiar with these requirements in an institutional context. Can they successfully combine the worlds of institutional and wealth platforms, so that they can offer the portfolio reach and strategy support that Asian HNWIs expect?



a. A unique portfolio mix

Within a typical portfolio allocation, an Asian HNWI is likely to need exposure to a range of private and specific asset classes that stretch the limits of standardisation:

Cash (and equivalents):	Private market and alternative investents:	Real Estate:	Equities:	Fixed income:
5 to 25%	**10 – 20%**	**10 – 25%**	**15-20%**	**20 to 45%**

i. Private market investments

- Many HNWIs in Asia have significant allocations to private and alternative assets, which are hard to invest into today within a typical wealth management structure.
- Many private securities are in local or family-owned businesses, which can be highly personalised and specific to each market or region. These assets are inherently outside the limits of any standardised investment products today, requiring bespoke and manual administration (including not only reporting and valuations but also safe-keeping), often a high cost.
- Equally, many of these investments are impossible to subscribe to with less than approximately USD1 million in funding, putting them out of reach for many investors in the USD2-5 million total asset range today.
- Finally, many private market investments require extensive account segregation, which add to wealth managers' overheads and can erode investor returns.

ii. Real estate

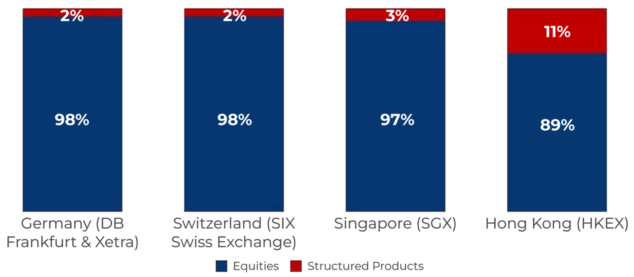
- Equally, investment allocations towards physical real-estate investments are higher in Asia than in other parts of the world.
- Similarly to private market securities, these investments are personalised, immobile and require a range of bespoke services to support their administration.

"Everyone knows real estate in Asia. It's very difficult for global investment managers to offer value in this space today."

(Head of Wealth Management, ASEAN)

iii. Structured products

The role (and % share) **of structured products in key Asian markets** (June 2024)



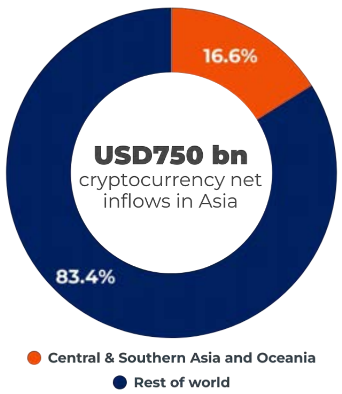
Source: DB, SIX, SGX and HKEX

- Leading Asian markets (notably Hong Kong and Singapore) are some of the world's largest for warrants, equity-linked-notes and other structured products.
- With short issuance cycles and high turnover, these securities are held and transacted in high volumes, creating a significant, ongoing overhead for those administering wealth portfolios.

iv. Digital assets

- Levels of digital asset adoption in Asia lead the world. With conducive regulatory regimes across the region, 31% of banks in Asia are offering live, digital asset services to their clients today. According to HSBC's "Beyond Asset Tokenisation paper", 5-10% of all assets will be digital by 2030[5].
- With very few traditional fund structures offering exposures to crypto- and digital assets in Asia today, these assets today reside outside of traditional investment portfolios and hence need bespoke support (often through a parallel technology stack). In many cases, cryptocurrency assets are also outside of traditional custody structures and are ineligible for funding and margining – making them high risk and costly to hold in today's portfolio.

Cryptocurrency value received by markets in Central & Southern Asia and Oceania, compared to the rest of the world



Source: The 2024 Geography of Cryptocurrency Report, Chainalysis

b. Unique investment strategies

Beyond just the asset mix, Asian HNWIs also require a range of capabilities that would be familiar to many institutional investors (and their service providers) today. Whilst frequently supported in asset management operations, these capabilities stretch well beyond the range of many traditional wealth management products today. These include:

i. Market reactivity / The IPO mentality

- Even in the world of listed securities, Asian investment dynamics can be very short term, with highly desirable securities lasting for only weeks or months before they leave the portfolio (as per the below example). Most often driven by IPOs, these highly topical stocks need to be included quickly and outside of standard rebalancing cycles for many fund structures.

ii. Yield enhancement strategies: Margining and lending

- Margin financing is a core part of any Asian portfolio. With many of the above asset classes outside the reach of the typical wealth management product, the availability of funding and margining for investors is highly diminished today, leading to reduced returns and performance.
- Add to that a lack of securities lending, and you have a significant performance gap versus other, institutional portfolios investing in the same assets. To support the lending and borrowing of holdings by Asian HNWIs against other wealth or institutional clients, wealth or fund managers need to maintain extensive trade and inventory management capabilities across potentially hundreds of thousands of accounts - creating an operational burden that keeps securities lending out of the hands of many wealth clients today.

iii. New investment strategies: purpose investing

- Today, 68% of HNWIs are likely to ask for an ESG score before investing, up from 63% in 2023[6].
- This growing trend is creating a significant pressure on wealth managers as they struggle to derive even basic comparability of ESG data across multiple investment vehicles.
- With many investors now expecting not only 'green' reporting but green investment management decisions, the pressures on Asian wealth managers are significant.

iv. Islamic and Shariah compliance

- With over 220,000 USD millionaires in Indonesia and Malaysia by 2022[7] and over 30% projected growth rate in the future[8], the importance of shariah compliant investment administration and reporting is also growing in Asia.
- These investors are likely to expect transparency in investment types and in the management of interest earnings, for example, creating yet another lens through which wealth managers must manage and report to investors.

v. Real-time actionability

- Asian investors' expectations around the visibility and control that they have over their investments have transformed in recent decades – and now stretch well beyond the periodic reporting or static data via apps that would be acceptable elsewhere in the world.
- Driven by uniquely strong customer requirements, Asian providers lead the way in providing not just visibility but actionability on the portfolio. With Asian investors heavily focused on global markets (notably the USA), the provision of live, real-time trading and decision-support throughout the day and night is now a baseline requirement for many in Asia, for example, as is the provision of underlying performance analytics (including attribution analysis, VaR and others).

Put together, these requirements are highly bespoke and hard to satisfy within the traditional investment structures available to HNWIs today.

c. Institutional product design: Getting to know investors not distributors

> "Asian funds are sold, not bought today – meaning that the majority of focus is on what distributors need and want. We need to start understanding what is really driving the end investor."
>
> (Head of Sales, Asia-Pacific – Leading Global Asset Manager)

Less discussed today is also the challenge that asset managers face in offering truly customised portfolio and product design, in a highly intermediated distribution model.

At an advisory level, few wealth managers and distributors maintain a truly in-depth view of their investors today. Research shows that very few wealth managers collect or maintain more than essential asset allocation and KYC information on their investor clients, with little intelligence on specific preferences or lifestyle choices that could determine investment choices. As a result, these same wealth managers are today unable to define more precise criteria for portfolio customisation, based on lifestyle or personal choices.

At a manufacturing level, fund product design is then further impeded by the fact that asset managers are unable to see the profile of end investors. Often transacted through omnibus accounts, investor subscriptions (and their dynamics) are often invisible to the product manufacturer, making them unable to refine and adapt their product design based on the end-investor's needs.

In a highly intermediated world, where Asian funds are "sold, not bought," products are designed for distributors and not for end investors – and they are designed for scale, not for personalisation. A fund will grow because a distributor can sell thousands of units – but one that is needed by a small collection of highly sophisticated investors will not ever see a launch.

So, who is designing products for the wealth client? In today's market structure, no one.

Based on these factors, 6.6 million investors are today looking for a unique range of investible assets, supported by unique capabilities, with products designed expressly with them in mind. The question is whether they are getting what they want.

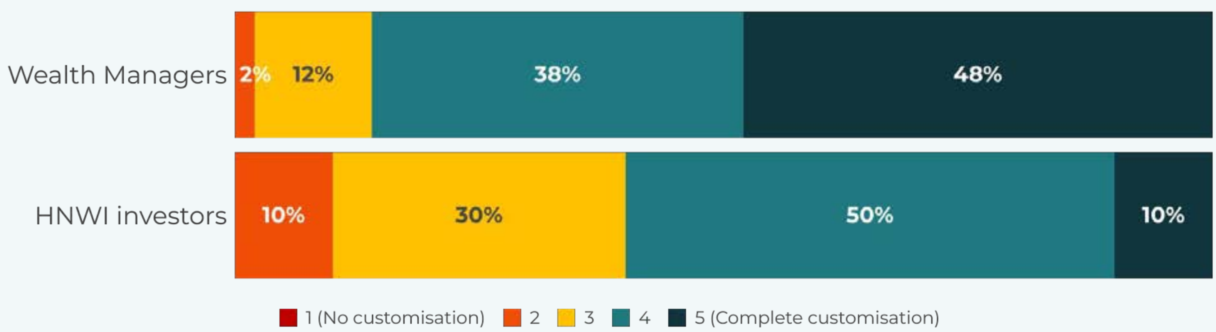
Why can't investors have personalised portfolios today?

1. Personalisation: Out of reach

Whilst the wealth market in the USA has seen significant growth in "personalised portfolio" solutions to fit this group, the challenge is one of scale in Asia – how to satisfy the above needs in a way that can be cost effective for wealth and asset managers?

Views differ today on how acute this need may be in Asia. Whilst 86% of wealth managers believe that they are offering their clients high levels of customisation in their investment management, only 60% of their HNWI investor clients appear to agree – highlighting a notable difference in urgency between provider and customer in this space. More importantly, with 40% of investor clients considering their levels of investment customisation to be low today, there appear to be around 660,000 investors in Asia today who are ready to see more personalisation in their portfolios in the near future.

How would you rate the level of personalisation that you are providing / receiving today in your investments?



Despite the differences in urgency, most global asset and wealth managers are acutely aware of how excluded they are from servicing large volumes of these investors. With guideline requirements for personalisation only to begin (anecdotally) at USD 10 to 25 million AUM, the typical USD2-10 million investor in Asia simply does not fit in the global operating model of a tier-one, investment product provider.

This threshold creates significant challenges for the investor, for the wealth manager and for the asset manager.

For the investor, the absence of sophisticated, customisable holding structures compels them to use a range of sub-par investment vehicles, including Separately Managed Accounts (SMAs) and Fund of Funds strategies.

For the wealth manager, this means less customisation, less AUM captured within the relationship and more income left on the table. Short of capabilities to cover the whole HWNI portfolio, wealth managers are forced to fractionalise the relationship and service only the parts that their current capabilities enable.

For the asset manager, this means lost revenues. With a rich and extensive range of capabilities in their global firms, they have the services and knowledge to service the HNWI client-base excellently. Yet, faced with high operating costs (see below) these institutional asset managers are able to provide these capabilities to the 6.6 million investors and the USD600 billion that they create each year.

HNWI portfolios today

Separetely Managed Accounts

Low cost

SMAs provide low-cost access to a broad range of investible assets, often with minimal investment advisory charges.

Extensive investment reach

They also give investors extensive reach to all of the asset classes mentioned above, scaling with the HNWI's investment limits (although potentially excluding specific, private or physical assets).

Direct indexing

With full freedom of investments, holders of SMAs can opt to re-create investments into leading index products and therefore duplicate key fund exposures without the costs of fund wrappers.

Lack of scale

However, being entirely bespoke, they do not offer investors any benefits of scale – which can be a problem in the private and alternative asset markets. For a USD2 million portfolio, for example, only 30% might be allocated to alternatives – and it is hard to find private market investments with minimum investments of only hundreds of thousands of dollars. In the world of debt and private markets, ticket sizes are simply too large for individual investments of this size, meaning that HNWIs acting on their own can end up unable to reach higher-performing, private investments.

Limited yield enhancement

In most cases, SMAs do not offer the full range of (securities) lending and active currency management that an institutional investor may expect – creating a potential drag on investment performance.

No frills

As trading accounts, also lack the ancillary support around investment advice, valuation, reporting and administration that many millionaires would traditionally expect.

This lack of ancillary services extends into the investment management space, where information to support ESG or shariah-based investments, for example, is scarce.

SMAs provide low-cost access to a broad range of investible assets, but without the sophistication and ancillary support that can help to drive investment performance. As a result, they are used by many HNWIs as a means of accessing margin lending, often in duplication with other fund holdings.

Fund of Fund strategies

Investment reach

Managed well, this model can offer significant investment scale through exposure to a global range of fund structures (often well beyond only those registered for local distribution) – meaning extensive global choice and diversification opportunities.

Localisation

Yet what this strategy has in global strengths, it lacks in a local context. Local (private or listed) investments can often be out of scope of mutual fund vehicles, even when they are locally manufactured – and few fund structures are able to keep up with the reactivity demands of the IPO-led Asian investments above.

Personalisation

Equally personalised investments (into specific physical or private assets) can not be catered for.

Financing

From a leverage and financing perspective, fund holdings are often difficult to finance in their own right.

Double-charging

Most importantly, there is a risk of double or multiple-charging, where performance fees are paid to the investment advisor and to the asset manager of each fund – creating an artificial drain on performance and investor returns.

Lack of control

Finally, this model lacks visibility and control. Without standardised data structures across multiple funds, it is almost impossible to "look through" and to manage individual exposures across multiple structures today. And without this capability, management of ESG or other rules-based frameworks is out of the hands of the HNWI.

Operating on a Fund of Funds or model portfolio basis (often through an Externally Managed Fund manager model) can mean greater depth of investment reporting and servicing, but at a higher cost and only within the narrow constraints of a range of standardised portfolios.

2. Personalised fund structures: an expensive middle ground

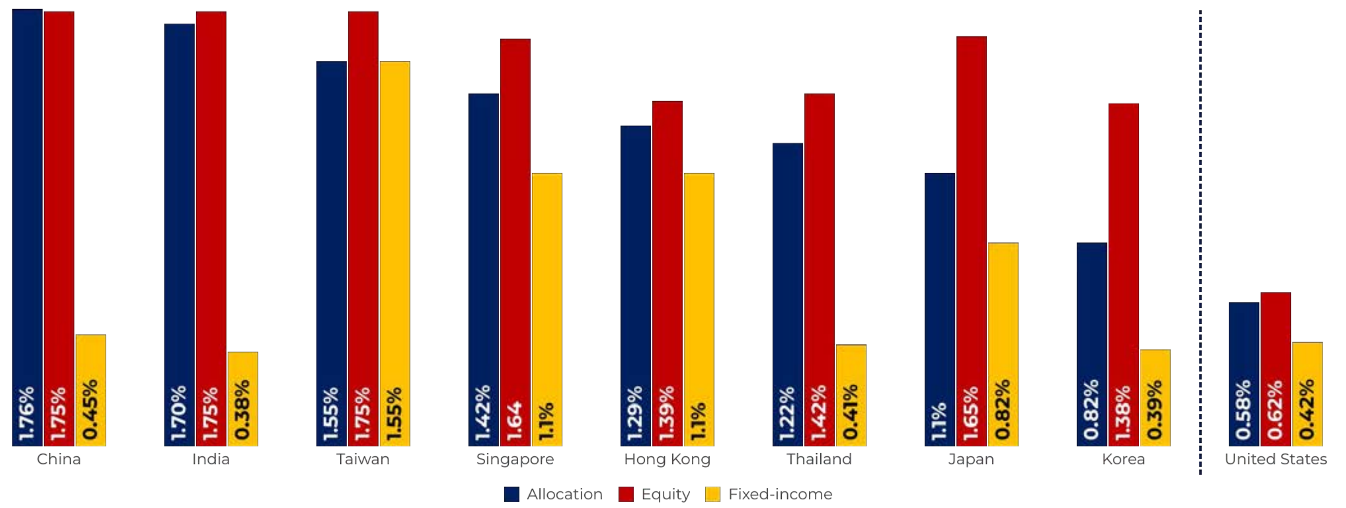
"As the client demand veers towards more personalisation, products strategy needs sophistication and needs to break free from current operating model limitations."

(Rajeev Tummala, Head of Digital & Data - Asia & MENA, HSBC)

Why is the personalisation of portfolios out of reach today? What is preventing local or global asset managers from providing scalable, cost-efficient and bespoke investment management, supported by a platform that is feature-rich and limitless in its investment reach?

The problem is that fund structures are more than twice as expensive to run in Asia as they are in North America - and they are hard to scale. With high start up and ongoing operating costs, many Asian funds can cost hundreds of thousands of dollars to start and maintain, with little regional scale possible.

Asset-weighted Total Expense Ratios for funds (Average, by domicile)



Source: Global Investor Experience Study: Fees and Expenses 2022, Morningstar

a. High start up costs

USD200,000

Minimum fund start up cost in Asia

- With each fund structure managed distinctly, extensive minimum fees from brokers, custodians, administrators, etc. can easily cost USD200,000 before a new fund vehicle makes its first investment – which is clearly prohibitive for a fund of only USD2-5 million in assets.
- Add to that significant start up costs in the appointment of lawyers, external auditors and tax advisors and you have a start up cost that can be prohibitive in all but the most scalable of opportunities.
- Not only do these high start up costs mean a high, minimum investment threshold, they also create a significant time-delay for new product investments which, in Asian terms, can mean lost returns and lost opportunities.

b. High subscription costs

Distribution costs can make up over **50%** of an Asian fund's Total Expense Ratio (TER)

- Even when live, a fund structure can be extensive to grow.
- With high bank distribution charges in Asia, the costs of distributing a fund can run up to being 50% of the fund's TER in some cases.
- In addition, costly onboarding and subscriptions can further reduce reactivity and investment returns. With funds operating on up to T+5 investment cycles in Asia and with each fund subscriber needing to pay several thousand dollars per investor account, the time and financial costs of subscribing to multiple funds can be significant.
- Add to this the cost of managing exceptions and record breaks, often by hand between fund managers, transfer agents and banking distributors and the frictional costs of growing a fund are high.

c. High operating costs

Institutional grade reporting and analytics can cost funds over **0.2% of AUM**

- These same costs then remain high during the lifecycle of the fund, as the costs of servicing, reporting on and maintaining the fund mount quickly.
- On the servicing side, accountants and administrators are required to track and monitor specific movements and expenses in granular detail (often by hand) in order to publish a robust and reliable Net Asset Value calculation.
- These same resources are then needed to investigate complex issues on a daily basis, from cash reconciliations and currency management, drawing in extensive resources and costs at both the asset manager and their service providers.
- On the reporting side, those seeking highly sophisticated portfolio reporting and analytic services for their portfolio can see their costs grow by up to 20 bps today.
- Finally, institutional-grade yield enhancement solutions (such as securities lending and active currency management) are not designed to operate at smaller levels of AUM today, meaning that valuable investment returns can often be left untapped.

d. Lack of scalability

Asian wealth is spread across over **15** local jurisdictions

- Today, investment management is a highly local business in Asia, with no domestic vehicles able to be passported across borders. Even the region's largest fund type (UCITS funds) is subject to feeder-fund requirements in many Asian jurisdictions.
- Furthermore, the provision of investment advice is a locally licensed activity in most markets, meaning that local licenses are required in order for investment products to be distributed to local, HNWI investors.
- Given the capital investment required to set up a fund structure (as above), these cross-border limitations are the single biggest reason for the significant differences in fund operating costs between North America and Asia. They are a clear limitation to scale. Whilst total wealth is equivalent to North America (see below), Asia's wealth is spread across over 15 local markets, each with their own licensing, registration, tax and accounting rules.

"Singapore is just too small. Any platform needs to scale across multiple ecosystems."

(Head of Operations, Leading Asian Bank)

e. High servicing costs

- Finally comes the extensive cost of investor servicing – and of connecting the investment manager with the investor. Given the highly manual nature of portfolio management today, it is cost-prohibitive for fund managers to reach and regularly engage with bespoke investors in the USD2-5 million range, making personalised funds hard to scale.

"The portfolio manager can't make time to sit down with every bespoke investor one by one."

(COO, Leading Asian Asset Manager)

For all of the above reasons, the costs of a bespoke investment fund in Asia today can quickly exceed USD200k in start-up costs and then the same in annual operating costs. For a HNWI looking to invest USD2m, for example, this would mean a starting TER of no less than 10% before any investment management, advisory or distribution fees are even included – making this level of customisation entirely unviable at this level of wealth.

3. The costs of poor customisation

High costs are keeping personalisation off the table for HNWIs with USD2-5 million to invest – creating costs and inefficiencies across the investment cycle.

For investors...

The inability to create tailored fund structures for their needs means having to accept the costs inherent in SMAs and fund-of-fund strategies – including the costs of duplication across multiple layers of investment accounts and managers.

Whilst many Asian investors may prefer to keep their portfolios fractionalised (in order to avoid any one firm having a complete perspective), the costs of this fractionalisation are a need not a choice today.

And despite these costs, investors are unable to receive any level of sophistication of reporting or yield enhancement solutions – leaving them not only poorer but less informed.

For fund managers...

The inability to service this market in a cost-efficient way can create a lose-lose situation. Either they service the smaller investor today with a bespoke solution (and then risk being left with a host of sub-scale fund vehicles for years to come) or they decline to service the client and avoid the possibility of ever reaching critical mass in their Asian operations.

Today's market landscape includes local and global asset managers who fall into both of these categories – all of whom are failing to profitably service the clients that matter so much.

For the market as a whole...

There is a lack of liquidity.

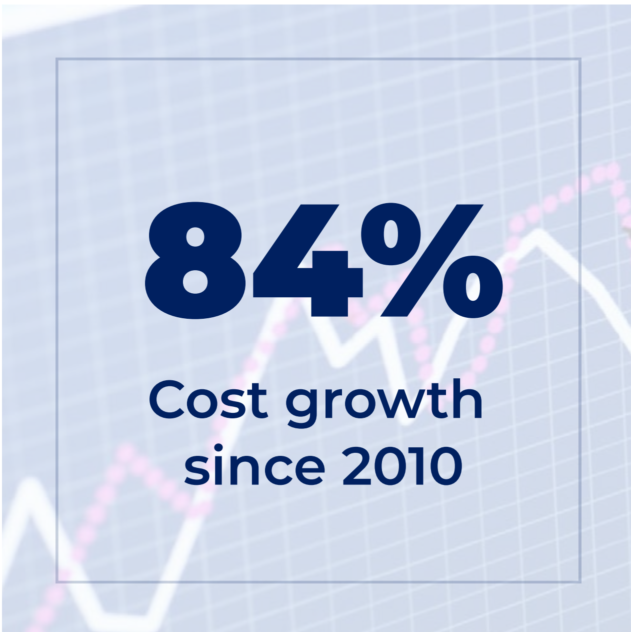
With Asian HNWI investors being encouraged to invest into offshore debt or listed markets simply because it is more cost efficient, local debt and private security markets are compelled to continue without a large proportion of the USD11 trillion in liquidity that these investors generate across the Asia region.

4. An urgent issue for Asian asset managers

To make matters worse, these costs are rising. Since 2010, fund costs have grown by 84%, fees have declined by 5 basis points and the average duration of a fund has reduced significantly.

With capex-intensive requirements (such as the global transition to T+1, new reporting requirements such as SFTR, SFDR and 10-c-1a) coming at an increasing rate and driving up investment operation budgets across the region, the margin for asset managers is fast diminishing.

If asset managers are struggling to scale into personalised funds today, growing costs and declining fees look set to make any customisation even less viable in the future.[9]



The tokenised portfolio

The scalable solution

What does the solution look like that can enable the benefits of personalisation to be felt by the 6.6 million of investors whose portfolio investment and strategy needs are **currently under-served?**

1. Introducing the tokenised portfolio

The HSBC / Northern Trust “Future of Funds” paper sets out the core principles for a new form of tokenised portfolio ecosystem, which would[10] enable cost-efficient scalability by addressing many of the blockages currently faced by managers.

By leveraging the power of tokenisation, the existing investment management model in Asia could be transformed by building on the following, core characteristics:

Mobility and transferability: near-instant mobility

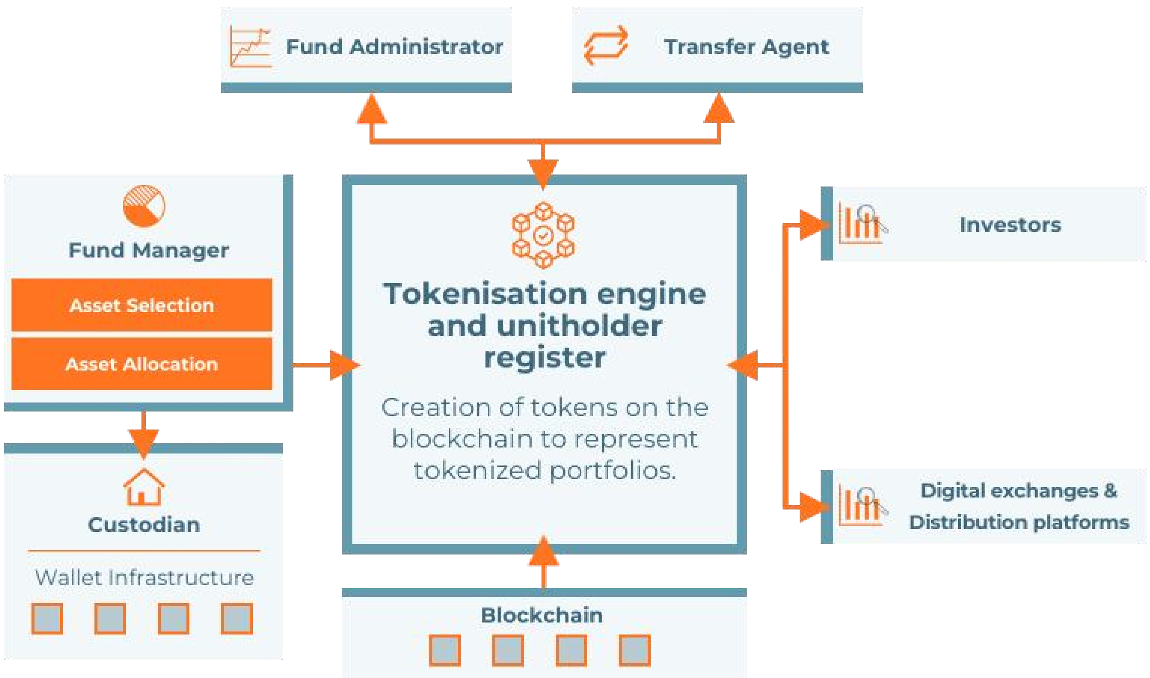
Near-instant mobility and transfer of all types of asset, regardless of provenance.

Fractionalisation

The ability to sub-divide securities holdings into fractional parts, to be held and used by multiple investors individually.

Data-based management capabilities and programmability

Automation of manual processes using smart contracts, to drive intelligent decision-making on the basis of investor- and asset manager-defined criteria.



Under this model, investors' underlying assets would be entirely digitalised – either in the form of tokenised (traditional) securities or as natively digital assets (including both cryptocurrency and natively digital securities such as government bonds or structured products), enabling faster and more seamless mobility of securities through the ecosystem (both in their current form and in fractionalised form).

This would mean that:

Function	Role
Wealth managers	Would onboard clients, provide regulated accounts and (licensed) investment advice, as they do today.
Transfer agents	Would receive and process subscription and redemption orders (instantly and with no reconciliations) over the blockchain ecosystem.
Exchanges and tokenisation providers	Would provide support in tokenising all different profiles of asset (including private and physical assets), whilst also facilitating the issuance of natively digital securities.
Custodians	Would provide digital wallet infrastructures to safekeep tokenised and digitally-issued assets.
Fund administrators	Would perform their accounting and oversight functions by leveraging the real-time and immutable data available on the blockchain ecosystem.
Other service providers (such as lawyers, etc.)	Would provide oversight and service support directly into the blockchain ecosystem – ensuring total data transparency, programmability and security..

2. Empowering asset managers to scale

With these foundations in place, asset managers would then be fully empowered to provide transformational levels of personalisation, supported by institutional grade services, unique levels of customisation and investment reach – all within a simplified, low cost legal structure.

The benefits of tokenisation in this structure would be felt across the entire wealth management lifecycle, including:

Lifecycle stages

Client profiling and advisory	Portfolio creation	Portfolio manage-ment	Trade execution	Settle-ments	Asset Servicing	Funding	Valuations	Reporting
Live, data-rich customer profiles	Instant creation and subscriptions	Total market reach	Automatic best execution and netting	Precision settlements and netting	Programmable events	Automated cash deployment	Automated, real time accounting	Personalised performance monitoring

FEATURES	BENEFITS
Client profiling and advisory	
• Data-rich connectivity to social media and other sources to define in-depth customer profiling	• Extensive, lifecycle-driven KYC to define investment allocations and management rules based on deep, personal information – at an individual level
• Continuing connectivity and profiling	• Ongoing monitoring and evolution of allocations based on personal circumstances
Portfolio creation	
• Instant portfolio creation	• Instant creation of digital fund structures at zero incremental cost • Zero (or minimal) incremental cost of portfolio creation within umbrella legal structure (hence no need for lawyers or accountants)
• Instant subscriptions	• Real-time, instantaneous duplication of existing portfolio structures (replacing subscriptions), reducing costs and time delays
• No distribution	• Dramatic expense improvements through the removal of distribution fees from portfolio costs
Portfolio management / asset allocation	
• Total market reach	• Complete reach to all asset classes: including natively digital (crypto) assets and tokenised securities for all traditional securities (including private and physical assets)
• Single, integrated visibility	• A single asset-allocation view across all investments, allowing (institution-grade) asset allocation monitoring
• Robust data permissioning	• Investor-defined data access rights, helping to ensure that no one sees a complete view (without authorisation), without having to fractionalise the portfolio

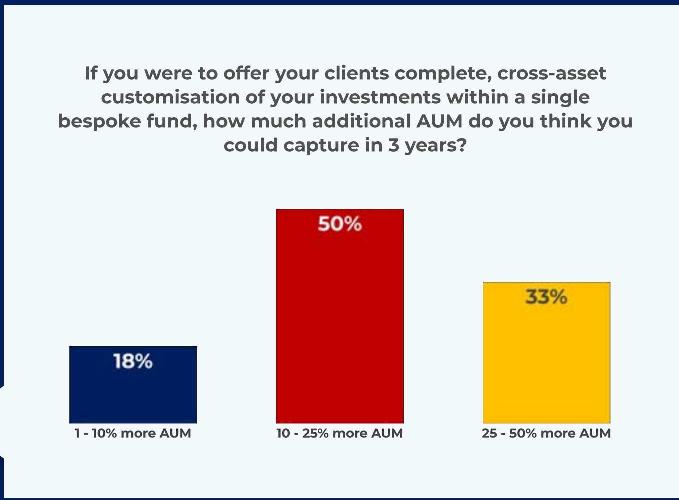
FEATURES	BENEFITS
• Consolidated management fees	• Single, investment management fee and avoidance of duplicative cost structures (i.e. for advisor and fund management)
• Smart contracts to execute investments based on ongoing changes to allocations	• Instant reactivity to market circumstances and dynamics (including IPOs and real-world events) • Removal of advisory costs • Event and principle-based portfolio rules
• Automation of overlay strategies to optimise	• Automated investment optimisation through securities lending, borrowing and currency management
• Automated portfolio rules for principle-based investing	• Bespoke, investor-centric fund rules, including specific principles-based criteria
Trade execution and order management	
• Fractionalisation of shares	• Assignment of fractional ownership rights to investors, enabling greater access to private and immobile assets for smaller investors
• Automated best execution	• Rules-based trade monitoring to ensure best execution
• Automated trade netting	• Netting of all securities and FX trades across multiple portfolios, reducing brokerage and execution costs
• Tax loss harvesting	• Automated calculation and management of tax optimisation within portfolios
Securities settlements	
• Precision settlements	• Investor-defined settlements, enabling faster redeployment of cash investments (and optimisation of all funding / collateral)
• Netting of all positions across personalised vehicles	• Reduced settlement costs through netting of trades across multiple portfolios
Asset servicing	
• Smart contracts for validation and auto-management	• Automated event processing based on portfolio optimisation rules • Automated shareholder participation and voting, based on established behavioural preferences
Funding	
• Smart contracts to maximise cash deployment efficiency	• Automated management and deployment of all cash balances – for full optimisation • Automated management of cash postings and elimination of manual reconciliations
Valuations	
• Automated, real time accounting	• Real-time, auditable valuation data for instant visibility • Automated management of all exceptions and reduction in manual processing costs
Reporting	
• Personalised performance monitoring	• Real time, personalised performance benchmarking (against investor-defined indices), including or excluding specific criteria

Personalised portfolios

Enabling investor returns, safety and market resilience

The market opportunity for personalised portfolios appears to be around USD3.3 trillion in incremental AUM – creating an opportunity for transformational growth by fund managers and their investors.

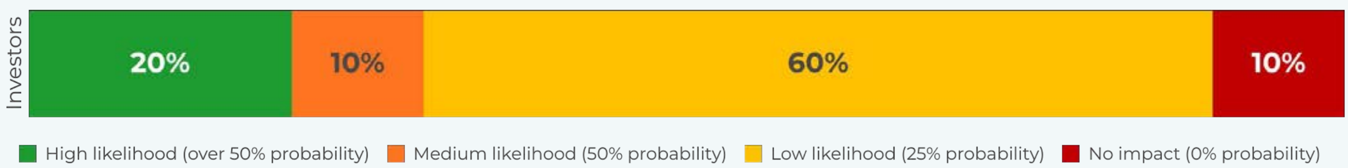
Based on our research, one third of fund managers today believe that this personalisation would enable them to grow their assets under management (AUM) by over 25% – highlighting a strong, industry-wide consensus around the potential value of tokenisation.



And investors agree. 30% of HNWIs in Asia would be highly likely to move their assets to a provider who could offer cross-asset customisation within a bespoke fund structure.

But whilst significant cost efficiencies are appealing, the potential benefits of this ecosystem extend well beyond the portfolio and could potentially help to undermine the safe functioning of entire markets.

If your investment manager were to offer you complete, cross-asset customisation of your investments within a single bespoke fund, what is the likelihood that you would move more of your assets to them?



1. Enabling alpha and operational beta for HNWIs today

"This is about outcomes, not inputs. DLT is an enabler of greater sophistication in product strategy – not manufacturing. The vehicle is redundant in the longer term, but it's prohibitive today."

(Head of Innovation, Leading Universal Bank)

In enabling personalised investments, tokenised portfolios can therefore do far more than remove costs – they can create a significant performance improvement for HNWIs (and their providers) by helping to drive both alpha and operational beta.

In enabling wider investment reach, tokenisation can also help HNWIs to increase their alpha generation by making high-performing (but immobile) assets accessible for investment and financing, without the cost of duplicative fund structures or accounts.

In enabling greater automation across the investment cycle, tokenisation can also help to deliver operational beta. Through seamless and consistent data flows, tokenisation helps to remove the single biggest cost to any fund: Through rules-based smart contracts that then act on that data, automated yield enhancement can then further drive returns, supported by automated and transparent rules.

2. ...and tomorrow

Most importantly, tokenised portfolios can drive a significant change in how investments are managed.

With greater automation and rules-based investment allocations, entirely new strategies become possible. As HSBC / Northern Trust's whitepaper highlighted, carbon overlay strategies stand out as an example of what is possible: with every investment automatically factoring in a carbon offset strategy (using voluntary carbon credits sourced only from markets of the investor's choosing, for example).

Equally, tokenised portfolios can themselves be transacted, pledged and financed – helping to further increase the mobility and total returns from investors' holdings. If today only a small fraction of an investor's (most liquid) holdings can be financed, tomorrow's portfolio could be entirely leveraged – creating a major driver of new performance. And as some investment accounts have even begun demonstrating, portfolio allocations can then be shared (as songs are today on Spotify, for example), turning every investor into a third party portfolio manager.

3. Building safer markets

It's not just the wealthy who benefit from this tokenised ecosystem – all investors can benefit from the increased market safety and resilience that tokenisation can facilitate.

At a micro-level, the immutable and instantly-available data provided across the tokenised ecosystem can be used by regulators as part of their market oversight functions. Through the use of complex smart-contracts and data algorithms, market authorities can significantly enhance the sophistication and breadth of their supervision, identifying AML and other market abuses in real-time and at an individual level.

At a macro-level, the additional (real-time) mobility of tokenised assets can also prove to be a critical factor in the management of money markets during times of stress. As we saw during the UK's Gilt crisis of 2022, the immobility (and slow movement) of bond collateral held by banks and pension funds was a core driver of the market's challenges and concerns. By enabling the instant and secure transfer of this same collateral (in tokenised form), stock collateral can move as fast as cash and therefore avoid unwanted liquidity gaps for leading financial institutions.

Tokenisation doesn't just drive returns, it can make markets safer.

4. Enabling urgently needed scale for fund managers

> "70% of our costs are human costs, mostly in portfolio management and sales. Most technology investment is insignificant by comparison. The only way to drive meaningful cost efficiencies is through automated manufacturing."
>
> (Chief Operating Officer, Leading Asian Asset Manager)

In a world of growing costs and declining fees, the automation and transfer of responsibility for investment management to the investor can create a virtuous circle effect for wealth and asset managers.

By removing the significant start up and operating costs of bespoke fund vehicles, Asia's asset managers stand to increase their total assets under management by up to USD11 trillion across the region. And by increasing their scale in Asia, their unit costs can be reduced and hence they can become even more competitive – as their institutional and growing wealth franchises converge.

More importantly, the increased automation that tokenisation enables can help asset managers to reduce their single most unavoidable cost today: that of sales and portfolio managers. In a world of tokenised portfolios, funds no longer need to be sold at a HNWI level – and in a world where HNWI can customise their own exposures (on the basis of model portfolios), the need for extensive portfolio manager-based interaction and support disappears.

Leveraging tokenisation, the wealth management market of USD2-5 million investors can not only become viable, it can become a major growth engine for the region's fastest growing wealth demographic.

This is real

The personalised, tokenised portfolio is not a distant or theoretical concept. On a global level, the tokenisation of funds is now a practical reality, with over USD 800 million of investor flows into tokenised money market funds offered by Blackrock, Franklin Templeton, Fidelity, Abrdn, Wellington and others in 2024 alone.

In Asia, it is already beginning to take shape through a continuing stream of innovations in Singapore and across the world.

These include:

Fund settlement platform
(Marketnode)

Tokenised bonds and gold
(HSBC Orion)

Carbon credit management
(Northern Trust)

Tokenised fundsas collateral
(Calastone)

MARKETNODE

Blockchain-based fund settlement platform in Singapore

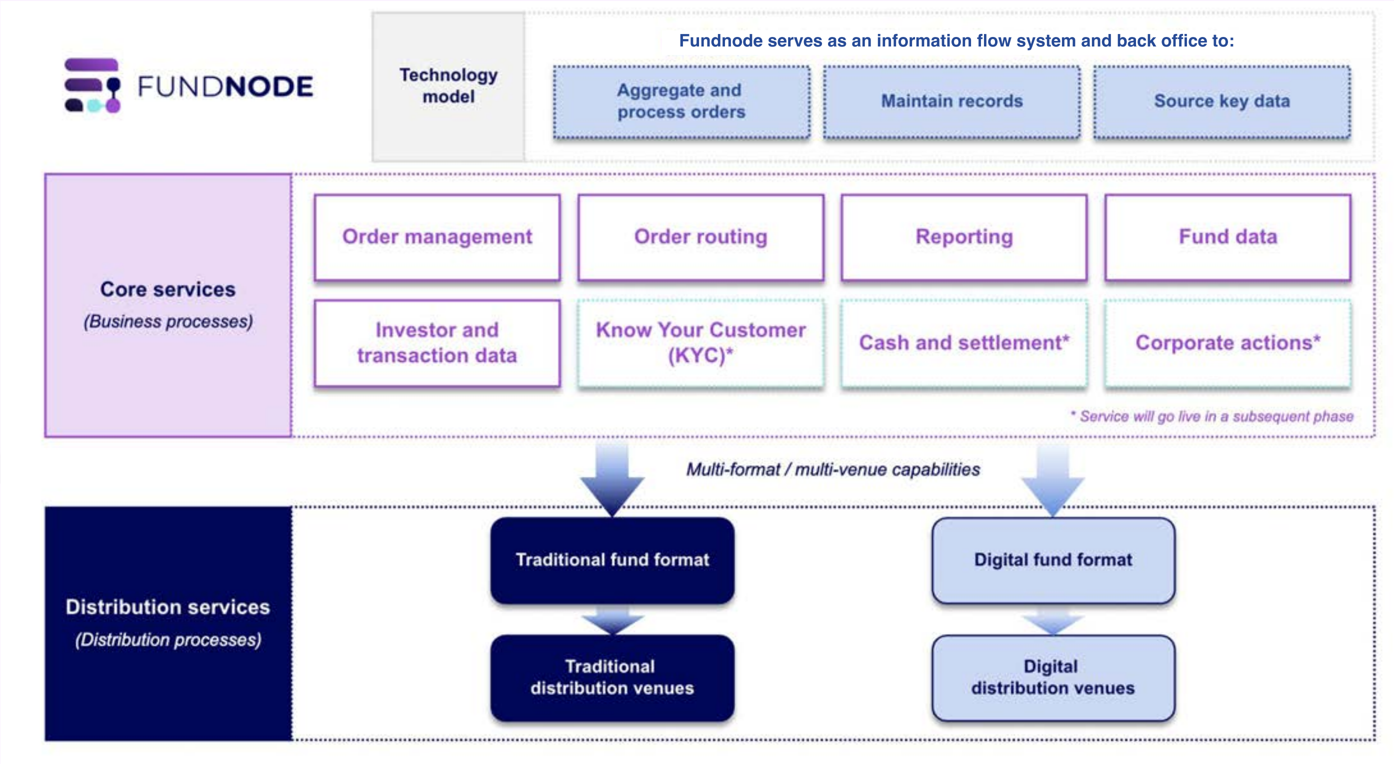
Singapore is a leading international financial centre in Asia-Pacific, with USD4.1 trillion of AUM in 2023[11]. In order to strengthen and maintain Singapore's position as a full-service international fund domiciliation and asset management hub, several national initiatives are underway. Within funds, the need to improve funds settlement infrastructure was identified as a key need by the industry.

In August 2022, Marketnode was announced as the operator for Fundnode, a blockchain-based fund settlement platform in Singapore. Fundnode subsequently went live on June 2024.

Today, market participants leverage Fundnode for straight-through processing and settling of fund orders. Additionally, the platform uses a common ledger architecture to provide a single source of truth for transactions and record-keeping. Through Fundnode, participants experience shorter settlement times, reduced errors, and streamlined workflows.

In future phases, Fundnode will add support for additional fund formats, such as Singapore Variable Capital Companies and Collective Investment Schemes. The infrastructure will also support a wide range of distribution models, allowing for distribution into traditional venues, digital venues, and hybrid approaches.

> "Fundnode's successful launch and reception represents an important milestone towards a future tokenised asset paradigm in Singapore and beyond. We envision a world where traditional and digital asset management value chains interact seamlessly, offering investors enhanced access to financial services and investment opportunities."
>
> (Rehan Ahmed, CEO, Marketnode)



Fundnode's end-state: Multi-format, multi-venue

HSBC

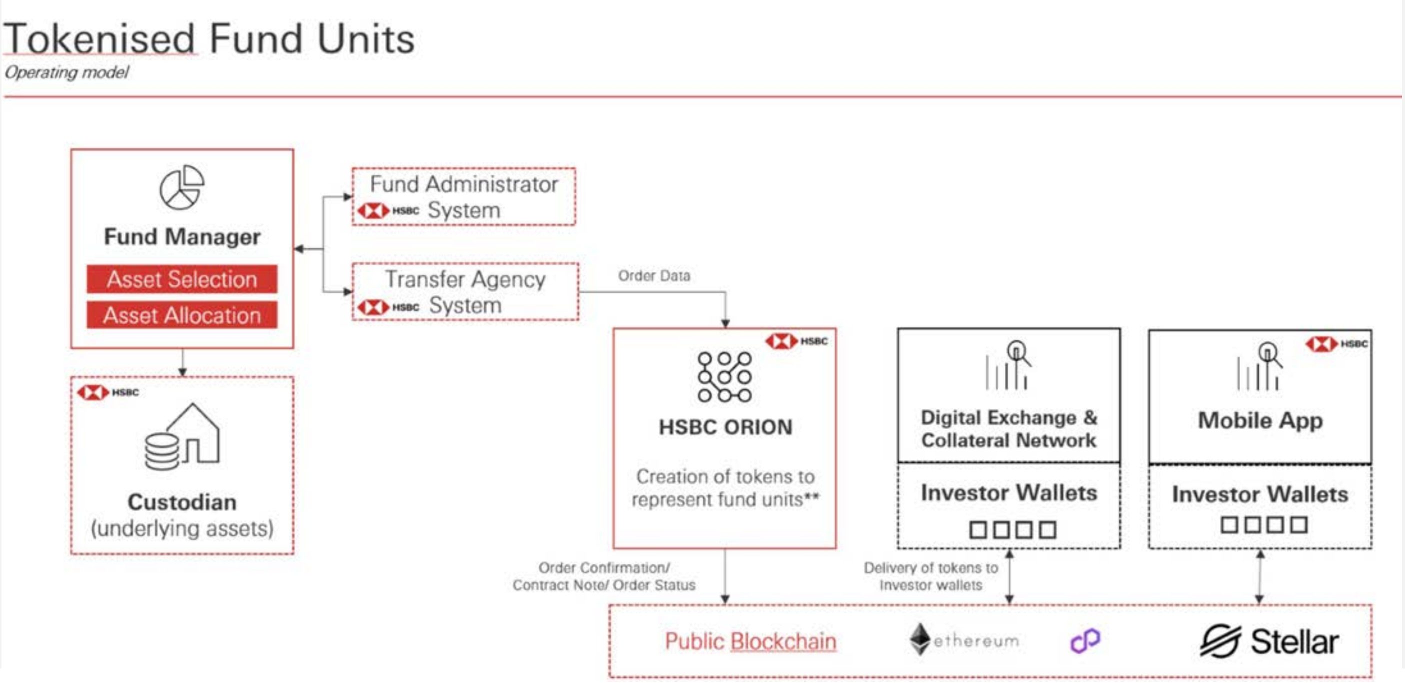
A tokenised ecosystem of funds and cash

Since the initial launch of HSBC Orion (HSBC's proprietary tokenization platform), HSBC has continued to enhance our platform capabilities to broaden access to a diverse range of assets for a new demographic of investors.

1. Tokenised Fund Units (Money Market Fund)

- Currently, HSBC is actively working with its clients·on tokenizing Money Market Funds (MMFs) in collaboration with industry partners to address the growing needs of institutional clients.
- Fund tokenisation has shown to be the fastest growing segment with the asset management industry looking to democratize MMF into tokenized form. HSBC is seizing this opportunity by investing into Marketnode (leading fund tokenisation platform) to leverage on its capability to manufacture, manage and distribute tokenized fund units. This is part of the strategic expansion for HSBC Orion, putting it in a unique position to tokenise funds, help the franchise grow across the value chain to bring capital efficiency, mobility and untap new sources of liquidity.
- For MMF tokenization, HSBC is focusing on the Last Mile tokenization model, where tokens are minted only at the final stage of the MMF lifecycle and it allows listing of token on regulated distribution platforms, therefore reducing cost of distribution to Exchange Trade platforms (ETP) and supports fractionalized distribution.

> "Tokenization of funds and specifically of MMFs is merely a first step in setting up the foundation for increased utility of funds; This opens up new opportunities and sets the stage for creating & distributing discretionary portfolios addressing the demand for custom solutions."
>
> (Rajeev Tummala, Head of Digital & Data - Asia & MENA, HSBC)



2. HKMA Project Ensemble

- HSBC is among the first group of financial institutions to have completed its proof of concept use cases for the HKMA-led Project Ensemble.
- HSBC has completed three PoC use cases within Project Ensemble Sandbox. These use cases aimed to demonstrate the feasibility of exchange of tokenised deposits and digital assets, as well as the transfer of deposit tokens between blockchains of different financial institutions [10]:

    - A purchase of digital bonds issued on HSBC Orion using tokenised deposits recorded on HSBC's ledger;

    - Settlement of tokenised electronic bills of lading (eBL) against tokenised deposits via the Ensemble interoperability platform by working with Ant Digital Technologies and GSBN;

    - Interbank transfer of tokenised deposits between HSBC and Hang Seng Bank via the Ensemble interoperability platform

- HSBC has always been on the forefront on the asset tokenisation evolution. It will continue to take a co-creation approach with its clients and other industry partners to address the growing needs of clients as and when the demand and regulatory clarity emerges, and seek solutions in unlocking higher investment, widening distribution channels , driving capital and operational efficiency.

NORTHERN TRUST

Carbon as an investment strategy

Asset tokenisation enables innovation across a diverse range of asset classes. This can be particularly powerful in cases where all market participants can stand to benefit from the trust and transparency of managing data and assets digitally through the blockchain ledger technology. In addition, firms can drive incremental business value via efficiencies, automation and governance afforded by the sheer composability of smart contracts. These component capabilities allow for industry level problem solving, addressing challenges in maintaining books of record and providing secure and efficient payment solutions. Each of these challenges are fitting for an institutional grade infrastructure solution and a stable supporting ecosystem.

While we continue to progress our support capabilities for strong use cases in the digital bonds, private markets and tokenised fund space, one more diverse but equally compelling use case can be found in the sustainability space, with the Voluntary Carbon Markets (VCM) ecosystem. The VCM is a domain where companies, governments, and individuals can voluntarily offset their CO2 or Greenhouse Gas (GHG) emissions by purchasing carbon credits; typically in pursuit of Net Zero goals. These markets play an increasingly important role in channeling green finance to support climate action and conservation efforts globally.

These markets and asset classes continue to show promise as a vital instrument in the broader climate financing paradigm. However, the VCM has had a turbulent couple of years following some well publicised challenges around trusting the integrity and quality of credits being purchased. The reality is that the VCM is a financial market in its infancy and has remained vulnerable to a lack of standards, infrastructure tooling and quality assurance. As a result it has struggled to gain institutional traction.

These battles in establishing trust, transparency and integrity through multiple parts of the value-chain from source to sale and associated record keeping have presented industry spectators and media with reason for caution and to question the integrity of credits and projects. This paired with a lack of legal clarity surrounding the treatment of voluntary carbon credits as an asset class and well formed international standards in support of this continue to create headwinds for the VCM.

As a result, firms have gravitated toward the removal of carbon credits because they are generally more reliably verified than avoidance credits, allowing for better attestation to the quality and integrity of the credits. Work is also being done across the industry with new standard bodies assembled under the likes of the Integrity Council for Voluntary Carbon Markets (ICVCM) and a recent rollout of their Core Carbon Principles (CCP) seeking to raise the bar on requirements for project verification.

In tandem with these efforts, foundational disciplines, practices and governance drawn from institutional grade blockchain technologies and governance can now be leveraged and deployed into this market. These tools are often valued for their ability to ensure immutability and transparency, which can be particularly powerful in solving for issues in the provenance and accounting for carbon credits; this also helps to combat a well known issue of double accounting of carbon credits. Solving for these critical pieces can enable significant new capital flows.

We recently announced the formal launch of the Northern Trust Carbon Ecosystem™, with the first live transactions completed in August 2024 on the blockchain-based platform which enables institutional buyers to digitally access carbon credits from leading project developers.

The ecosystem is powered by Northern Trust's digital assets platform, Northern Trust Matrix Zenith™, to connect institutional buyers with project developers focused on climate solutions to avoid, reduce, or remove greenhouse gases in the atmosphere. Supported by private ledger digital blockchain technology, buyers can purchase digital carbon credits directly from project developers and retire these against their emissions footprint. Northern Trust acts on instruction to record, transfer and settle digital carbon credits in its capacity as the designated custodian.

The Northern Trust Carbon Ecosystem™

This demonstrates meaningful progress in one of a number of areas of innovation in the carbon space, other potentially exciting developments in this space could see the embracing of carbon assets, climate trade and sustainability imperatives with more integrated and customised goal based outcomes embedded into financial products and portfolios.

With this accomplished, we see significant potential for progress in the following:

- Carbon assets being brought into portfolios to managing downside risk, as well as potentially accreting carbon credits which can be held or distributed to investors. Rebalancing to align with sustainability goals and capitalize on lower-carbon transition opportunities is essential for building diversified and climate-resilient portfolios.
- We could also see the advent and deployment of concepts such as "carbon overlays" into portfolios, helping to gear, tilt and manage aspects of carbon intensity and greenness, across a whole portfolio view. Reducing the need for divestment and holistic rebalancing exercises to position book for future agility given the changing geo-political landscape and low carbon transition imperatives.
- Funds products can evolve from their traditional ways and utilise the structural integrity of digital tokens and their blockchain infrastructure as a vehicle for delivering data, insights and governance back into the portfolio as well as the broader carbon and sustainability ecosystem.
- Emissions tracking and monitoring could also become much more closely integrated into portfolio analysis and help to steer purpose-driven outcomes. Trusted off-chain data can be brought on-chain to drive smart contract automation and enhance accountability. All while building more climate resilient returns.

CALASTONE

Tokenised funds and digital collateral

Calastone is the world's largest funds network, connecting over 4,000 participants in the global funds ecosystem across 56 territories, enabling the efficient manufacturing, servicing and distribution of funds.

Since 2014 Calastone have been working with clients on the benefits of distributed ledger technology (DLT), working on many industry use cases, moving the industry forward to where we are today.

Calastone's core digital product, Calastone Digital Investments, provides a platform which completely reimagines the asset management ecosystem using the latest technologies to provide a new efficient market environment for asset managers to launch tokenised products at scale in a singular, connected environment.
The platform enables asset managers to serve clients with truly bespoke, personalised portfolios of assets based on the asset managers' key expertise. These portfolios can then be wrapped appropriately to meet investor requirements. This can be anything from a more efficient mutual fund with much lower seed money requirements, through to ETFs and ultimately bespoke retail portfolios based on asset manager indexes.

Reimagining asset management

"Tokenisation's major advantages include "synchronised data and heightened automation. Moreover, it expands accessibility and enables customisation, providing investors with more options. Managed in a responsible way, we think this is good for clients and for the market."

(Schroders)

In 2023, Schroders launched a new initiative to create a 'digital' fund using the Singapore Variable Capital Company (VCC) structure, in partnership with Calastone. Whilst many asset managers are pioneering the tokenisation of traditional financial assets by placing them in digital wrappers, this innovative approach aims to unlock new products free from conventional constraints such as long settlement times and restrictive trading hours.

This form of tokenisation offers several key benefits.

First, it allows for improved efficiency as certain assets, including funds, are particularly well-suited due to potential improvements in settlement time, distribution efficiency and intermediary reduction.

The second is enhanced transparency. In the asset management space, firms are trying to translate what is done in portfolio management entirely on-chain. This includes developing on-chain capabilities for record-keeping, valuation, execution, and client servicing. Blockchain's immutable transaction records provide valuable holding information, aiding issuers in liability management exercises with a clear, indisputable history of asset ownership and movements.

Additionally, tokenisation will reduce value leakage across the financial value chain, eliminating the need for constant data conversion between systems, dramatically lowering ownership costs and boosting scalability.

Finally, the knock-on effect of tokenisation will potentially drive job creation in the finance and fintech sectors, spur financial product innovation, and contribute to economic inclusion by providing access to a broader range of investment products.

Transforming distribution and driving collateral liquidity

Looking further ahead, Calastone have been working with asset managers to help extend their global distribution networks so that they can reach investors holding digital wallets – leveraging DLT to offer tokenised versions of traditional investment products.

The most immediate use case centres around yield-bearing assets like money market funds, which have long been a staple for investors seeking to manage their short-term liquidity needs. In particular, money market funds offer an invaluable cash management vehicle for larger corporate and institutional investors (such as pension funds) who have limited options for managing cash needs due to constraints on unsecured exposure to bank deposits. Using money market funds, they can diversify their credit risk and achieve returns aligned with short-term money market rates – at minimal market risk (given their same-day settlement cycles).

However, money market funds are not typically used as collateral, due to operational and, in some regions, regulatory barriers – meaning that they often need to be converted to cash before they can be used as collateral. Indeed, around three quarters of collateral is posted as cash. But the process for doing so is hobbled by inefficiencies. Tokenisation can simplify it.

Where money market funds are tokenised, the investor can simply pledge their tokens to the counterparty as collateral without needing to redeem them for cash first. The assets can be posted to an account in the investors name for the benefit of the receiver of the collateral, meaning the investor retains the yield. When no longer required they are posted back to the main account of the investor – all executed on a single, efficient set of digital rails.

This offers significant benefits to both investors and the whole ecosystem.

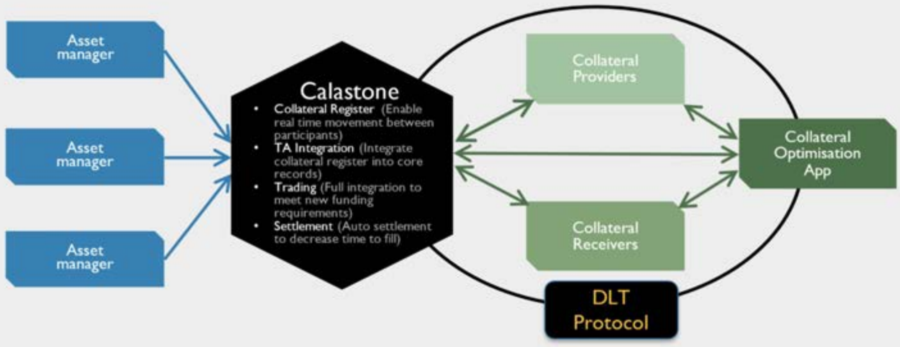
> It makes operations more efficient, because tokenised assets can be transferred between accounts with full transparency to all parties in real time on distributed ledger technology (DLT) networks.
>
> It offers greater liquidity, because tokenised money market fund units can be transferred instantly, freeing up capital during clearing and reducing intraday exposure banking fees.
>
> The shortened settlement cycles also diminish counterparty credit risk, bankruptcy risk, and performance risk.
>
> Asset managers benefit from the increased stickiness of assets, as investors are no longer required to redeem their units for cash, thus keeping the assets within the fund.
>
> And, crucially, investors can continue earning returns on their assets while they are used as collateral.

The future of collateral management lies in the tokenisation of yield-bearing assets and Calastone is committed to leading this transformation. Calastone's Money Market Services currently facilitate transaction movements, and Calastone is extending its network to support multiple blockchains. This integration allows the network to connect traditional fund processes with real time tokenised asset movements, enhancing transparency and efficiency.

With its experience in building DLT systems and connecting funds, Calastone is collaborating with clients to integrate traditional financial systems with innovative DLT solutions, creating systems that leverage the benefits of tokenisation. This is how this technology will find real purchase in asset management and markets – concrete, bounded use cases where the benefits of tokenisation are tangible, immediate and, crucially, achievable. Calastone is actively building out a tokenised yield-bearing asset collateral system with asset managers, clients, and collateral providers, and invites others to join them in this journey.

CALASTONE COLLATERAL NETWORK

REAL TIME COLLATERAL NETWORK UTILISING TRADITIONAL MONEY MARKET FUNDS



What do we need to do to get there?

There are however several key considerations that need to be addressed in order to begin reaching the levels of transformational benefit that are possible for Asian investors.

1. Cross-border distribution

As highlighted above, the absence of regional scale for asset managers in Asia is a critical and unique limitation. With no single market holding an out-size percentage of Asia's wealth, there is no natural or evident concentration of wealth in any one market.

Given the extensive capital investment required to build the foundations of a tokenised ecosystem for personalised funds, it is essential that any ecosystem span more than one individual market and, hence cater to the regional needs of regulators, market authorities and locally licensed organisations across the region.

With significant momentum in cross-border cooperation Greater China and in ASEAN, there is early scope for this to happen – but it will require the active support and endorsement of multiple parties in order to proceed to a point of scale.

> "Given the speed of adoption and likely market share, we need a digital ecosystem to connect us to several markets before this becomes worth it."
>
> (Head of Operations for Asia, Global Asset Manager)

2. Clarity of regulation

Whilst significant progress is being made across Asia in the regulation of investments and fund vehicles, much is still to be decided before a tokenised fund ecosystem can be operational at scale.

As highlighted above, Singapore has demonstrated its early leadership through the many stages of Project Guardian and through Schroders' recently tokenised VCC structure. Similarly, authorities in Hong Kong, Malaysia and Thailand have all provided continued support (both in rule books and in pilot programmes) – generating significant momentum in digital adoption across the region.

Several key aspects remain to be clarified though in the funds space – most of all:

- The legal validity and accounting treatment for tokenised assets (in many Asian jurisdictions) as well as natively digital securities.
- The legal validity of on-chain fund registers (versus their traditional equivalents).
- The legal and compliance frameworks required to launch and run smart contracts across multiple third parties.

Given the essential role of these factors in the building and operationalising any kind of digital infrastructure, these factors must be addressed as part of Asian markets' digital roadmaps.

3. Connectivity

> "The business case for tokenisation is tied to how many people are tokenising. We need all of our core service providers to be connected if we are going to see the benefits that we need on day one."
>
> (Head of Digital Innovation, Global Asset Manager)

The tokenised portfolio operating model relies on seamless and consistent data connectivity between all steps in the investment cycle – including HNWIs, their wealth managers, custodians, third party service providers, exchanges and other trading venues.

With highly disparate data models and networks today across the region, the tokenised portfolio model needs time to build one step at a time – on the basis of common network connectivity and interoperable data models.

On the network connectivity side, this means the region's banks, wealth manager and investors all reaching agreement on the nature and type of network to be used. Over 55% of Asian firms are looking to use private blockchain networks today[13] is indication of how complex this question can be – with network security concerns seeming to predominate over considerations of liquidity and reach today.

Managed poorly, this network divergence risks making things worse before they get better.

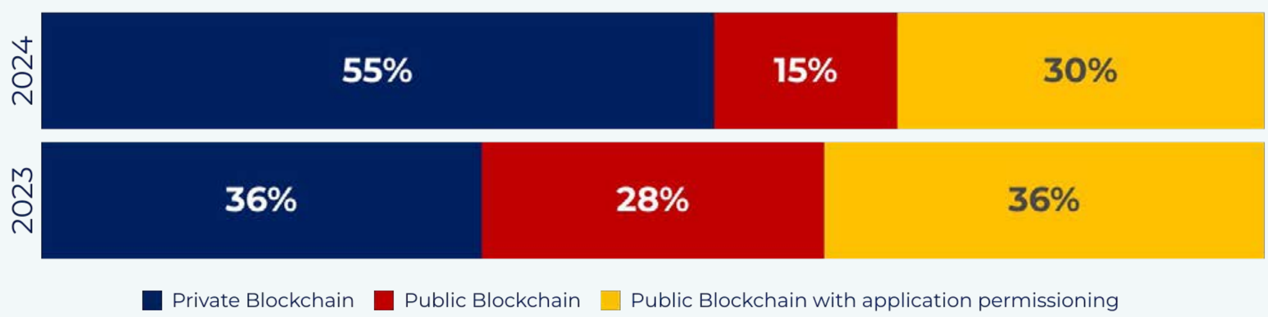
As with all operating model transformations, the creation of an ecosystem to support tokenised portfolios risks increasing industry costs before it reduces them – as firms operate a new, parallel and sub-scale infrastructure for years before unit costs surpass traditional equivalents.

Equally, there is little value in one part of the investment cycle being ready to tokenise a portfolio if other parts of the chain are not. What value is there in an exchange tokenising an asset, if the bank is not able to even hold the digital asset?

In Asia, the timing of this transition is critical – as any transition will need to be seamless to investors not only in functional terms but also in economic terms.

But with 37% of Asian firms[14], comprising asset managers, fund administrators, custodians and management companies, already implementing tokenisation projects (compared with only 29% Europe), the work in building this ecosystem appears to be well underway.

What network type are you using for your DLT / digital asset deployment?



4. Clients

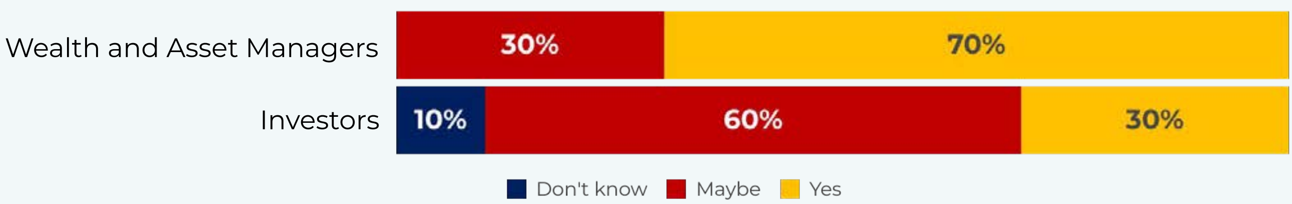
> "We need to have a ready, lower-cost ecosystem **before** we use it."
> (Head of Distribution, Leading Asian Asset Manager)

Are Asian investors ready to see their hard-earned investments and wealth tokenised?

Whilst 70% of asset and wealth managers see the value in tokenisation as a means of unlocking the significant revenue gains today, it appears that the educational challenge still lies ahead for many investors – with the same volume of investors (i.e. 70%) still unsure as to whether they would be happy to see their portfolios tokenised.

In this context, the transition to a tokenised ecosystem should be entirely seamless to investors. With little disturbance to their safe custody locations, valuations and regulatory rules, investors must be able to reap the benefits of this new ecosystem without ever having to concern themselves with the technological infrastructure upon which it relies.

Would you be happy to use Distributed Ledger to Tokenise your investments
if that meant more personalised portfolios and better performance?



5. Costs

Underpinning all of these considerations is cost. A tokenised ecosystem would not only remove costs for different players, it would also significantly rebalance costs – to the point where existing fee structures would quickly become invalid.

In order to ensure that all participants have a valid incentive to participate in this new ecosystem, it is critical that its cost structures provide an equal and fair distribution of the rewards available.

Asia's 5G moment

Over the last twenty years, Asia has repeatedly demonstrated its ability to embrace and rapidly adopt new technologies at scale. The use of mobile wallet technologies in 2008, instant payments in 2011 and then the subsequent adoption of cryptocurrencies across the region are all excellent examples of Asia's capacity to innovate when the case is right.

Given the significant performance and cost limitations that today's 6.6 million HNWIs face across the region today, the case for a tokenised portfolio ecosystem to support USD11 trillion in assets appears to be highly compelling – in driving alpha and beta, all the while empowering the end investor with institutional-grade visibility and control.

With 86% of Asia firms[15] expecting to offer tokenised funds as part of their product range in less than three years, there are clear signs that the technology and model is viable. The key question now is how to create an industry environment and landscape that can help to accelerate this innovation.

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13 - DLT in the Real World 2024 (The ValueExchange and ISSA) - https://thevx.io/campaign/digital-assets

14 - https://www.calastone.com/insights/asian-asset-managers-taking-the-global-lead-on-tokenisation/

15 -https://www.calastone.com/insights/asian-asset-managers-taking-the-global-lead-on-tokenisation/

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