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Fund tokenisation:

A Singapore field guide



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Regulatory approach

The Monetary Authority of Singapore ("MAS") regulates tokenisation by activity. A digital token that represents equity, debt, or units in a collective investment scheme is a capital markets product, full stop, and as such is regulated under the same Securities and Futures Act 2001 (SFA) that governs every conventional capital markets product.

Pragmatically, the MAS has adopted a framing similar to other jurisdictions, summed up by the "same activity, same risk, same regulatory outcome" mantra that is forming a global regulatory benchmark. Classification is resolved upfront through ordinary analysis of the token's characteristics, intent, structure, and the bundle of rights attached to it, rather than through a bespoke tokenisation regime. That classification determines everything downstream: licensing, offering documents, investor eligibility, custody, and secondary trading arrangements.

The guiding principle in Singapore is classify first, then engineer. There is no tokenisation-specific product code and no tokenisation licence. What tokenisation actually changes is narrower and more precise than the market rhetoric suggests: where the register of ownership can sit, what counts as a valid transfer, who controls the cryptographic keys, and what settles against what. Those four questions are where the legal and operational work concentrates, and they are the axes this guide follows.

Since 2022, Singapore has developed infrastructure for institutional tokenisation alongside its regulatory framework, through regulator-led initiatives such as **Project Guardian** and **Global Layer One ("GL1")**, as well as **Borderless, Liquid, Open, Online, Multi-currency ("BLOOM")**. Several tokenised funds are already live and trading on regulated platforms, and since November 2025 Singapore has had a MAS-authorised, retail-eligible fund whose share register is maintained on-chain. This guide therefore describes an established, if still-maturing, market rather than an imminent regulatory unlock.

This guide covers custody, issuance, and trading, as well as where the Financial Services and Markets Act 2022 ("FSMA") and Payment Services Act 2019 ("PSA") may apply alongside the Securities and Futures Act 2001 ("SFA"). Two appendices provide practical guidance: a roadmap for launching a tokenised Singapore Variable Capital Company ("VCC"), and a note on the digital transfer agent model. In this model, the blockchain holds the authoritative ownership register, while the investment book of record ("IBOR") and transfer agency ("TA") functions remain off-chain.



Overview and comparison of conventional versus tokenised funds

	Conventional fund	Tokenised fund (Singapore)
Legal status of the interest	Register entry (fund/share register) is the definitive record of title.	Depends on the register model chosen. MAS's own Project Guardian analysis leaves open whether an on-chain register satisfies the VCC Act's "kept at the registered office" requirement (ss.66(9)/71(9)), or whether an on-chain instruction satisfies the "proper instrument of transfer" requirement (s.40(3)). Both a digital twin design (off-chain register definitive) and a digital native design (on-chain register definitive) are in live use in Singapore - see Issuance and Appendix B.
Record of ownership	Transfer agent/registrar maintains the register.	Varies by register model - digital mirror, digital twin (distributor or feeder), or digital native. The register is maintained by the VCC itself, or by a transfer agent or licensed platform operating the on-chain investor record via smart contract, with access restricted to wallets approved through know your customer/anti-money laundering ("KYC/AML") checks.
Custody objects	One: the underlying assets (custodian/fund administrator).	Two: the underlying assets (unchanged) and the unit-tokens themselves. MAS defines "control" of a token broadly enough that holding a single key-shard capable of co-authorising a transaction can trigger Capital Markets Services ("CMS") custodial-services licensing - see Custody.
Primary dealing	Subscribe/redeem at net asset value ("NAV") via the dealing cycle.	Same NAV mechanics, executed by minting and burning tokens. Most offerings are restricted schemes for accredited or institutional investors under s.305(5), but this is a structuring choice, not a ceiling: sgBENJI is authorised under s.286 and retail-eligible, with a US$20 minimum.
Secondary trading	Open-ended fund: none (deal at NAV). Listed vehicles trade continuously on an exchange.	Permitted where the venue is an approved exchange or holds a Recognised Market Operator ("RMO") licence; Over-the-counter ("OTC") between qualified parties is also possible. Wellington ULTRA has traded on DigiFT's regulated exchange since July 2025.
Settlement finality	Statutory. Book-entry securities settle through Central Depository ("CDP"), which binds participants to a common rulebook.	Not statutory. MAS's Guardian analysis notes there is no equivalent legislation binding participants for token transfers and no central counterparty performing CDP's role - finality has to be constructed contractually.
Governing instruments	SFA and the Code on Collective Investment Schemes ("CIS").	The same SFA / CIS Code framework, plus MAS's Guide on the Tokenisation of Capital Markets Products, MAS Notices SFA04-N02 and VCC-N01, the CIS Code's Chapter 2A custodian provisions, and the issuing platform's CMS/ Recognised Market Operator ("RMO") licensing conditions. FSMA Part 9 sits adjacent to the perimeter but generally does not apply to a Singapore-facing fund - see the regulatory perimeter.

Custody

Conventional baseline. Fund assets are held through traditional channels: licensed custodians, fund administrators, or secure storage providers for physical assets. *Tokenisation does not change how the underlying assets are held. What changes is how the fund interests representing those assets are recorded and transferred.*

When using a "digital twin" model, the token layer adds a second custody object. Once units are tokenised there are two things to safeguard rather than one: the underlying assets, unchanged, and the unit-tokens themselves. Two arrangements are used in practice: self-custody, where the investor holds their own private keys, with full control and no recovery mechanism if they are lost; or a licensed digital asset custodian using institutional-grade controls (MPC, HSMs, multi-signature). Project Guardian's own worked examples include DB International Trust (Singapore) Limited and a Phillip Securities nominee structure.

The threshold question is who controls the token, because MAS sets that bar low. Paragraph 4.6 of the **Tokenisation Guide** defines control as the ability to control access to a token or to execute transactions involving it, including control of instruments associated with the token such as private cryptographic keys—and states expressly that such control *need not be absolute or exclusive.*

Holding one of several private keys, or one shard of a key, is enough, provided that key or shard may be used to co-authorise a transaction, *which can trigger the requirement for a CMS licence for providing custodial services unless an exemption applies.* This is a structuring decision that has to be settled and opined on before the key control and design is made final, not discovered after launch.

Customer asset rules follow the product, not the format. A CMS licensee holding tokenised capital markets products ("CMPs") on account of a customer is caught by Division 3 of Part III ("Customer's Assets") of the Securities and Futures (Licensing and Conduct of Business) Regulations. The Tokenisation Guide confirms this at footnote 19, *which says the requirements apply even if the CMPs are in tokenised form.*

Where the fund is a VCC, Chapter 2A of the CIS Code (revised November 28, 2024) governs the VCC Custodian: independence from the VCC and the manager, presumptively compromised at 20% or more common shareholding; dealings at arm's length; delegation permitted only where the custodian exercises due skill and care in selecting and monitoring the delegate and the delegate is itself licensed as a custodian in its own jurisdiction, with the VCC Custodian remaining ultimately responsible; and notification to MAS within three business days of any breach of Code limits. The Code as revised contains no digital-asset-specific custody provisions - custody of tokenised interests is read across from the Tokenisation Guide by analogy.

The PSA does not reach the fund interest. The PSA's digital payment token custody rules – including the cold-storage and trust-account regime under PS-G03 – apply only where a digital payment token ("DPT") service provider sits in the fund's settlement chain, for example a stablecoin-denominated subscription handled by a PSA-licensed exchange or custodian. They do not apply to custody of the tokenised fund interest itself, which is governed by the Tokenisation Guide and the SF(LCB)R.

Technology baseline. Singapore's national reference for the underlying technology is Enterprise Singapore's draft Baseline Security Requirements for Blockchain and Distributed Ledger Technology Systems. This is a technical reference issued for a three-year industry trial, not yet a full Singapore Standard and not a MAS instrument. It is nonetheless the natural yardstick a manager's technology and risk committee would use to test a custodian's or vendor's security protocol: governance and role accountability, secure development and third-party assessment before production deployment, identity and access management, cryptographic key-lifecycle management with multi-party control for high-risk operations, and resilience and incident-management playbooks.

Apex infrastructure. The T-REX Ledger operating the **ERC-3643** standard originally designed by Tokeny, provides a permissioned, identity-bound compliance model: an Identity Registry, a Claim Topics Registry, a Trusted Issuers Registry, and a Compliance Contract that blocks a transfer where credentials have lapsed or a jurisdiction's requirements are not met, with **ONCHAINID** binding wallets to verified legal persons. Apex positions the multi-jurisdictional claim topology as an advantage for institutions operating across several regimes at once.

Issuance

Token classification. A tokenised fund that pools investor capital and distributes returns is generally classified as units in a collective investment scheme under the SFA. MAS resolves this holistically: characteristics, intent, structure, and the bundle of rights the token carries by illustrating each with worked case studies in Appendix 1 of the Tokenisation Guide. Getting this classification memo right before any platform or technology decision is the single biggest driver of downstream cost and time.

Most tokenised fund offerings today are structured as restricted schemes under Division 2 of Part 13 of the SFA, offered only to accredited or institutional investors as relevant persons under s.305(5) *with an exemption from the full prospectus requirement*, though offering documents and investor disclosures are still required. That is a commercial choice rather than a regulatory ceiling: sgBENJI is authorised under s.286 and available to retail investors.

Where a prospectus is required, MAS expects it to address the tokenised nature of the product specifically, because distributed ledger technology ("DLT") introduces technologies, processes, and operating environments that are not present in a conventional issue (Tokenisation Guide, para 3.6).

Disclosure is where the novel legal question surfaces. Paragraph 3.7 of the Guide sets out illustrative areas of material disclosure. Three of them do the real work: the bundle of rights attaching to the token, including whether it confers legal or beneficial title; how ownership rights are recorded, whether on or off the DLT network, and when a transfer is considered final - with the express requirement that where there is more than one record of ownership rights, the issuer must disclose which records are definitive of legal ownership rights; and the rights of the issuer or any other party to amend or override records on the DLT network, together with the circumstances in which those rights may be exercised.

Any register design has to be able to answer these conditions in the offering document.

Complexity classification is product-driven. Tokenised CMPs sit inside the same complex products framework as everything else, and the assessment turns on the product-specific characteristics of the underlying CMP, not on the fact that it is in token form (Guide, paras 3.8–3.9). Tokenisation neither raises nor lowers that bar.

Licensing. Manager licensing is the load-bearing precondition. A VCC cannot manage itself (VCC Act s.46(3)); it must appoint a Capital Markets Services-licensed fund manager, and MAS review for a new licence runs around six months. The Registered Fund Management Company route, once a lighter-touch alternative, was repealed with effect from August 1, 2024 and is not available for new structuring.

Separately, a platform that both offers tokens to investors and facilitates secondary trading needs CMS and RMO licensing, or must route trading through an approved exchange or RMO-licensed venue; a manager working with such a licensed platform does not need its own platform licence.

The sandbox is generally not the route. The Guide notes at footnote 32 that offerings of tokenised CMPs would ordinarily fall outside the FinTech Regulatory Sandbox. Managers sometimes assume the sandbox is available as a soft-launch mechanism for a tokenised fund; on MAS's own framing, it is not.

Three fund structures in use

Feeder fund. A specific share class of an existing fund is digitised and offered as tokens to qualified investors without restructuring the underlying vehicle. The most common route for established managers tokenising part of an existing product; Hamilton Lane, Apollo, and Franklin Templeton have all used variations. It limits operational change but may not support full on-chain liquidity.

Tokenised SPV. Fund assets are held by a special purpose vehicle ("SPV") and tokens representing interests in the SPV are issued to investors, who hold the assets indirectly through it. Fits inside existing securities regulation and suits new structures or assets requiring ring-fencing.

Variable Capital Company. Singapore's VCC framework allows multiple ring-fenced sub-funds under a single legal entity (VCC Act s.29), supporting open- and closed-ended strategies. Its architecture is the most blockchain-native of the three routes, largely because the register of members is maintained privately by the VCC itself and is not publicly searchable on Singapore's Accounting and Corporate Regulatory Authority ("ACRA") registry - which is what makes an on-chain register conceivable at all. It is also the route with the most unresolved legal questions.

The four register models

MAS's Guardian Asset & Wealth Management Industry Group report, Operationalising Tokenised Funds (November 2025), sets out four models under three archetypes: **Digital Mirror**, where the token is a back-up record functioning as a digital receipt while ownership is conveyed by traditional fund shares; **Digital Twin** in distributor and feeder fund variants, where the on-chain record runs in parallel to an off-chain register; and **Digital Native**, where the tokenised register by itself authoritatively represents ownership of the fund. The report is explicit that this choice shapes the legal, operational, and regulatory architecture of the whole fund - it is not an implementation detail to be settled by the technology vendor.

The unresolved statutory question. The VCC Act's register and transfer provisions were not drafted with blockchain in mind, and MAS has not resolved the gap. Sections 66(9) and 71(9) require the register to be kept and available for inspection at the registered office, and MAS's own paper records "some uncertainty" as to whether a blockchain-maintained register satisfies that. More interestingly, Section 40(3) requires a proper instrument of transfer before a share transfer can be registered, and MAS states plainly that there is currently no express regulatory guidance on whether an on-chain instruction qualifies. MAS calls for further guidance on both points rather than supplying it. **This is the single most consequential open legal question for a Digital Native design.**

It is being run in practice anyway. The Franklin OnChain U.S. Dollar Short-Term Money Market Fund – sgBENJI – is a sub-fund of Franklin Templeton Investments VCC, approved and registered as an authorised scheme under s.286 of the SFA, launched with DBS Bank in November 2025 and opened to retail investors from the first quarter of 2026 at a US$20 minimum. In Franklin Templeton's own submission to Project Guardian, the tokenised registry is the only record of share ownership; wallet addresses are whitelisted post-KYC; smart contracts enforce transfer restrictions, investor-type eligibility, and jurisdictional constraints on ERC-3643; non-public investor data is held in an internal database joined to the chain by the platform; and most importantly: Franklin Templeton retains the ability to correct any error in share recordation, including any error on the blockchain. A digital native register is not an uncorrectable one.

Project e-VCC, a MAS-supported proof of concept involving InvestaX, UBS Asset Management, State Street, and PwC, took the same architecture through a closed-ended private equity sub-fund and published its findings.

The risk-mitigated default, and the alternative. Given the ss.40(3)/66(9) uncertainty, it pays to lean toward the conservative structuring position. This is a digital twin-leaning hybrid: keep the statutory register of members off-chain at the Singapore registered office, satisfying ss.66(9)/71(9) beyond argument, while the on-chain ledger operates as a synchronised record contractually treated as the day-to-day operative record for subscriptions, redemptions, and transfers. The constitution and subscription agreement then state explicitly which record is legally definitive, answering Guide para 3.7(ii) directly. Appendix B sets out the alternative: an on-chain golden record operated by a digital transfer agent, with the IBOR and the transfer agency apparatus off-chain—and what has to be true before it should replace the hybrid as the recommended design.

VCCs carry one structural advantage other vehicles lack: statutory rectification lets register errors be corrected by the Registrar or the courts without a full court application in limited circumstances (s.81(9)). One constraint applies regardless of the register model: the Personal Data Protection Act's retention-limitation and correction obligations sit awkwardly with blockchain immutability, so personal data must stay off-chain, with only hashes or pointers referenced on-chain.

Network choice. MAS is technology-agnostic and does not mandate a network. Most institutional tokenisations to date have used public networks – Ethereum, Polygon, Hedera – alongside private or permissioned networks for particular initiatives. In April 2026, MAS consulted on a risk-sensitive prudential framework for cryptoassets issued on permissionless blockchains, which bears on bank counterparties in the chain rather than on the fund directly.

Trading

Secondary trading is permitted where the venue is an approved exchange or holds an RMO licence: OTC arrangements between qualified parties are also possible. A person establishing or operating a trading platform for tokenised CMPs in Singapore may be operating an organised market and must be approved or recognised accordingly (Guide, para 4.4). Unlike Hong Kong, this capability was not switched on by a single regulatory event—it was built out incrementally by licensed venues as institutional programmes matured.

Live activity. Wellington ULTRA (Wellington/FundBridge /Libeara) was tokenised on Ethereum in November 2024 and expanded to DigiFT's regulated exchange in July 2025. UBS uMINT launched on public Ethereum in November 2024, and in November 2025 UBS and DigiFT completed an end-to-end tokenised fund workflow on-chain using the Chainlink Digital Transfer Agent standard. Phillip Capital's tokenised money market fund launched under Project Guardian with stablecoin subscription and redemption via market makers. The availability of secondary liquidity still depends on investor demand and distribution reach, not on the token wrapper. Liquidity is evolving, but the Singapore choice of using the RMO platforms has shown benefits in consolidating the marketplace and providing price discovery.

Settlement finality is the unglamorous gap. For book-entry securities, CDP acts as central counterparty and binds all participants to a common rulebook. MAS's Guardian analysis observes that no equivalent legislation currently applies to transfers of tokens, and there may be no equivalent central party. Finality, therefore, has to be engineered through the fund's constitutive documents and the venue's rulebook rather than assumed from statute. This is similar to the Hong Kong SFC requirement laid out in the April 2026 circular, which puts the burden on the issuer and the documentation of the fund.

Institutional settlement infrastructure. GL1 has changed shape since its 2024 whitepaper and the change matters. It is no longer presented as a ledger MAS will build; it is a standards and toolkit body. In November 2025 it published two toolkits – market infrastructure controls and programmable compliance – with Euroclear, HSBC, Kinexys by J.P. Morgan, MUFG, and Société Générale-FORGE participating alongside the central banks of England, France, and Singapore. On June 22, 2026, GL1 published the **Programmable Compliance white paper** and network operators began attesting to **Market Infrastructure Toolkit v2.0**. The toolkit permits operators to demonstrate observance either by self-attestation or by independent auditor verification; those two are not equivalent, and external language should always name which was used.

BLOOM was **launched by MAS on October 16, 2025** to extend the settlement capabilities offered by financial institutions, and is to apply GL1's Programmable Compliance Toolkit in jurisdiction-specific contexts. Initial workstream members named by MAS include Ant International and StraitsX on cross-border wholesale settlement, and Coinbase and DBS on agentic payments.

MAS has since established the Future of Finance Institute as a coordinating body to move Guardian and Orchid workstreams from experimentation to deployment.

Legal treatment of tokens. Singapore's courts have begun testing token-specific questions directly. In Fantom Foundation Ltd v Multichain Foundation Ltd [2024] SGHC 173 the High Court accepted expert valuation for damages rather than a fixed breach-date valuation, acknowledging that a fixed-date approach can produce unfair results in a volatile market. More broadly, Singapore courts have affirmed that cryptoassets may be treated as property, and that the jurisdiction in which the person controlling the private keys resides may determine a cryptoasset's location for jurisdictional purposes. Neither point is fund-specific, but both bear on recovery claims and trust remedies for lost or misappropriated tokens - which is precisely why key-custody architecture is a legal design question, not only an operational one.

The regulatory perimeter: FSMA Part 9, the PSA boundary, and AML/CFT

Singapore does not run a Hong Kong-style dual stack, with one regulator for the fund wrapper and a separate regime for virtual assets the fund holds directly. The SFA does the primary work, and the adjacent statutes activate narrowly and at identifiable points. Getting this right is mostly a matter of not over-worrying about the wrong one.

FSMA Part 9. Since June 30, 2025, Part 9 of the FSMA has imposed a licensing regime on digital token service providers ("DTSPs"). Its scope is narrow. It bites only for Singapore-incorporated companies, wherever they operate, or individuals and partnerships with a Singapore place of business, providing digital token services – which squarely includes tokenised CMPs, not only cryptocurrency – to customers wholly outside Singapore, and only where the activity is not otherwise licensed or exempt under the SFA, PSA, or Financial Advisers Act. A manager licensed under the SFA to manage and distribute a tokenised VCC to Singapore accredited or institutional investors needs no separate DTSP licence for that activity. MAS has confirmed that digital token services provided in Singapore are regulated under the PSA, SFA, or Financial Advisers Act ("FAA"); Part 9 exists to close the gap for Singapore-nexus persons serving customers entirely outside Singapore who would otherwise escape regulation altogether.

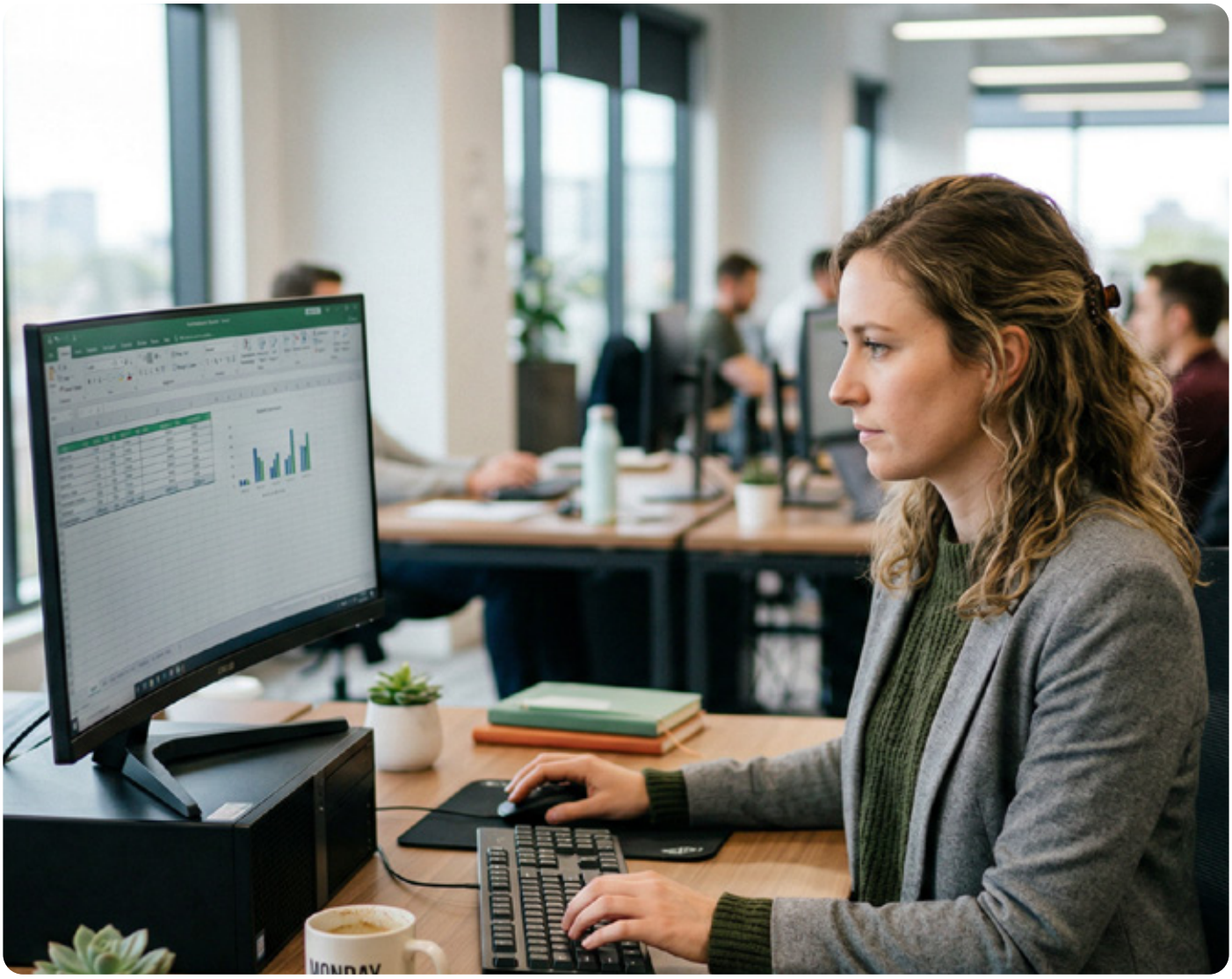
Where this needs active management is any residual, genuinely overseas-only touchpoint - i.e., a custody or dealing function around the token not captured by the existing SFA licence. MAS has said it will grant DTSP licences only in "extremely limited circumstances", with no transitional relief from the June 30, 2025 effective date; an in-scope entity without a licence must cease the activity outright. The practical governance rule is to keep every digital-token-service touchpoint – custody, dealing, exchange facilitation, advisory – either wholly inside the SFA-licensed Singapore-facing perimeter or wholly outside any Singapore nexus, and to treat anything falling between the two as presumptively unlicensable pending immediate legal review.

Extra-territoriality cuts the other way too. Where an issuance, offering, or regulated activity involving tokenised CMPs is carried on partly in and partly outside Singapore, or outside Singapore with a substantial and reasonably foreseeable effect in Singapore, the SFA may apply extra-territorially under s.339 (see Guidelines SFA15-G01). A structure designed to sit outside the Singapore perimeter has to survive that test, not merely the incorporation test.

The PSA boundary. The PSA's DPT rules activate only at specific points. Where a DPT service provider sits in the settlement chain – a stablecoin-denominated subscription or redemption handled by a PSA-licensed exchange or custodian – that counterparty's own DPT holdings are subject to the PSA's cold-storage and segregation rules, and MAS Notice PSN02's Travel Rule applies to it, with originator and beneficiary information required above S$1,500. Custody of the tokenised fund interest itself is not a PSA matter. MAS's stablecoin consultation P015-2026, which closed on October 16, 2026, is the live policy process to watch here.

AML/CFT runs on two tracks that both apply and cannot substitute for each other. MAS Notice VCC-N01 applies to the VCC entity, which cannot perform AML/CFT functions internally. It must appoint an eligible financial institution to do so; its members are treated as its customers; and it must maintain a register of beneficial owners and nominee directors beyond the standard corporate registers. MAS Notice SFA04-N02 applies to the CMS-licensed manager; it was reissued with effect from July 1, 2025 and introduces a digital CMP token transaction concept carrying Financial Action Task Force ("FATF") travel rule-style value-transfer terminology, with enhanced measures required for transfers to or from non-financial-institution entities. The Tokenisation Guide reinforces the same obligation at para 4.8(v). Missing either track is a structural gap, not a minor omission.

A realistic path from initial decision to first close for a straightforward VCC structure runs roughly twelve months, with legal structuring and licensing review the longer stretch, not the technology build. Appendix A sets out the phase-by-phase breakdown.



What to look for next

- Whether MAS issues the further guidance it has itself flagged as needed on VCC Act ss.40(3)/66(9), or whether market practice settles the question by default in the meantime - sgBENJI operating a digital native register inside an authorised scheme is doing exactly that.
- Whether statutory settlement finality is extended to token transfers, or whether contractual construction remains the only route. This is the closest Singapore analogue to Hong Kong's LEAP legal review.
- Whether GL1 attestations to the Market Infrastructure Toolkit start being independently audited rather than self-attested, and whether BLOOM's application of the Programmable Compliance Toolkit produces jurisdiction-specific compliance templates usable by fund issuers.
- Whether MAS turns the November 2025 Operationalising Tokenised Funds report into binding rules, or leaves it as voluntary best practice.
- Whether the conflicting 13O/13U minimum-AUM figures are resolved—MAS's published S$20 million against a third-party claim of S$5 million. This affects fund economics and should be locked down at structuring, not retrofitted.
- The outcome of MAS consultation P015-2026 on stablecoins (closed October 16, 2026), which determines how much of the settlement leg sits inside the PSA perimeter.

Compared with Hong Kong

The sections above describe Singapore on its own terms. In short: Singapore classifies tokenised fund interests as CIS units upfront through ordinary SFA analysis, and has allowed a digital native register to operate inside an authorised retail scheme; Hong Kong retrofits a technology layer onto the existing Securities and Futures Ordinance and defers the harder question of on-chain title to a later statutory review under its LEAP framework. That does not mean Singapore has resolved what Hong Kong left open - the VCC Act's own register question and the absence of statutory settlement finality for token transfers are live, separate uncertainties. Singapore's GL1 and BLOOM work is also broader and multi-jurisdictional by design, where Hong Kong's Project Ensemble is narrower and, so far, focused mainly on tokenised money-market-fund settlement. For the fuller cross-jurisdiction picture, see the companion guide, **Tokenised vs. conventional funds: A Hong Kong field guide.**

References

- Monetary Authority of Singapore, Guide on the Tokenisation of Capital Markets Products (last updated November 14, 2025)—read directly for this draft; paras 2.1, 3.6–3.10, 4.3–4.6, 4.8, 5.1, and Appendices 1–2.
- MAS Project Guardian, Guardian Asset & Wealth Management Industry Group, Operationalising Tokenised Funds (November 2025)—four register models, the ss.40(3)/66(9) analysis, the settlement-finality observation, and the sgBENJI case study.
- Franklin Templeton/DBS Bank, Singapore's first money market fund with a tokenised register (press release, November 10, 2025).
- Global Layer One, Programmable Compliance: Compliance Architecture for Regulated Tokenised Assets (June 22, 2026), and Market Infrastructure Toolkit v2.0; MAS/IMF, GL1 Whitepaper (May 2024).
- MAS media release, MAS Launches BLOOM Initiative to Extend Settlement Capabilities (October 16, 2025).
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- Bird & Bird ATMD LLP, client alert on Part 9 of the Financial Services and Markets Act (digital token service provider licensing), June 23, 2025.
- Enterprise Singapore/Singapore Standards Council, draft Technical Reference — Baseline Security Requirements for Blockchain and DLT Systems (industry-trial edition, 2026).
- Tokenised Singapore VCC Fund — Regulatory Roadmap and Compliance Checklist — a citation-dense working structuring roadmap drawing on MAS primary sources, Singapore Statutes Online, ACRA, IRAS, PDPC and named law-firm briefings (Allen & Gledhill, Linklaters, Rajah & Tann, Baker McKenzie, Bird & Bird).
- Lexology Panoramic, Cryptoassets & Blockchain — Singapore chapter (Drew & Napier LLC, law stated October 3, 2025)—cross-check on general crypto-legal architecture and the Fantom Foundation citation.
- InvestaX public market tracking — source for live tokenised-fund issuance examples only; InvestaX's own process and licensing framing is not otherwise relied on.



Appendix A: Path to launch - Singapore VCC roadmap

A structuring and workplan aid only, not legal advice. Every licensing trigger, filing deadline, notice number, form number, and fee figure below must be verified with Singapore-qualified counsel and against MAS, ACRA, and IRAS primary sources before operational reliance. The Tokenisation Guide was itself reissued in November 2025 without public consultation; treat this as a living document requiring re-validation at each phase gate.

What actually determines launch viability

- Manager licensing is the load-bearing precondition and the largest critical-path item (roughly six months for a new CMS licence). The Registered Fund Management Company ("RFMC") route has been defunct since August 1, 2024.
- Tokenisation does not change the securities-law classification. A tokenised fund unit is a CIS unit; there is no tokenisation-specific licensing shortcut, and the regulatory sandbox is ordinarily unavailable for offerings of tokenised CMPs.
- The register-model decision (Appendix B) is a legal architecture decision taken at Phase 0, not a technology decision deferred to the vendor.
- Custody architecture is a licensing trigger, not merely an operational choice—holding a single key-shard capable of co-authorising a transfer can constitute control under Guide para 4.6 and require a CMS custodial-services licence.
- The Tokenisation Guide is disclosure-based rather than prescriptive on smart contract assurance. Independent audit and kill-switch governance are market-practice expectations, not hard MAS mandates, though adjacent binding rules on cyber hygiene, business continuity, and outsourcing require much of the same rigour in practice.
- AML/CFT runs on two tracks simultaneously: VCC-N01 for the VCC entity through an Eligible Financial Institution, and SFA04-N02 for the manager.
- Tax-incentive eligibility (13O/13U) and the closure of the VCC Grant Scheme (January 15, 2025, no replacement) materially affect fund economics and should be locked in at structuring.
- Personal Data Protection Act ("PDPA") architecture must be settled before any on-chain register design is made final - personal data off-chain, only hashes or pointers on-chain.

Phase-by-phase timeline

Phase	Timing	Focus
0 - Structuring and legal opinions	T-12 to T-9 months	Classification memo; structure and register-model selection; custody control-test opinion; DTSP perimeter and s.339 check; tax structuring; PDPA architecture
1 - Entity and licensing	T-9 to T-4 months	Manager CMS licence; VCC incorporation; directors, secretary, and auditor; VCC Custodian; EFI and MLRO appointment
2 - Technology and smart contract assurance	T-8 to T-4 months (parallel to Phase 1)	Contract architecture; independent audit; penetration testing; key ceremony; upgrade, override, and kill-switch governance
3 - Offering documentation and lodgements	T-5 to T-2 months	Information memorandum; constitution (including the definitive-record clause); CISNet notification; FATCA/CRS registration
4 - Investor onboarding and AML/CFT	T-3 to T-1 month	EWRA; accredited-investor opt-in; CDD/KYC/UBO; wallet whitelisting; sanctions and PEP screening
5 - Launch, NAV and settlement	T-1 month to T	First close and minting; first NAV; reconciliation dry run; incident-response go-live
6 - Ongoing reporting and surveillance	T onwards	Annual filings; continuous AML/CFT monitoring; periodic audit, and penetration testing

Key filings to plan around

Filing	Trigger/deadline
VCC incorporation (ACRA VCC Portal)	14–60 days processing. Incorporation fee stated by ACRA as S$8,000; a third-party figure of S$315 circulates and is inconsistent - confirm on the portal directly
Sub-fund registration	Within seven days of formation (VCC Act s.27(1))
Manager CMS licence application	Approximately six months MAS review for a new A/I LFMC licence
Restricted-scheme notification	Via CISNet, before any offer to relevant persons—form and portal mechanics unverified, confirm with counsel
VCC annual return (ACRA)	Within seven months of financial year end (s.97(1))
Audited financial statements to members	Five months after FYE where no AGM is held (s.105(1)(b)); six months after FYE where an AGM is required (s.77(1))
FATCA annual return	May 31 each year

Verification caveats to raise with counsel early

- The cyber hygiene notice for capital markets firms is FSM-N22, not SFA04-N15 (an unrelated notice on risk fact sheets).
- No MAS Notice SFA04-N03 for sanctions appears to exist. The operative instruments are the FSM Sanctions Regulations and the VCC (Sanctions and Freezing of Assets of Persons) Regulations 2020.
- PSN02 is the correct Travel Rule citation. FSM-N27, sometimes cited, is a different notice covering DTSP AML/CFT.
- 13O/13U minimum AUM: MAS states S$20 million; a third-party claim of S$5 million from January 1, 2025 is not corroborated on MAS's current page.
- MAS Circular IID 04/2025 (June 26, 2025) on VCC governance was issued after the source roadmap was compiled and has not been reflected in it.



Appendix B: The digital transfer agent option

On-chain golden record, with the investment book of record and transfer agency off-chain. Presented as a structuring option capable of replacing the digital twin-leaning default in the body of this guide, not as a future-state aspiration.

B1. What the model actually separates

The debate about on-chain registers usually collapses two distinct questions into one. The first is where title lives and how it moves. The second is where the fund's books and the administrative apparatus live. The digital transfer agent ("DTA") model answers them differently, and the value of the model comes from that separation.

On-chain - the register of members as golden record. The ERC-3643 token is the register entry rather than a representation of one. Ownership, transferability, and eligibility are resolved at the point of transfer: the Identity Registry binds each wallet to an ONCHAINID and therefore to a verified legal person, and the Compliance Contract evaluates jurisdiction, investor category, lock-ups, and concentration rules before a transfer executes. A transfer that would breach an offering rule does not fail a downstream check—it is not a transfer the register will record. There is no off-chain twin to reconcile against.

Off-chain - the investment book of record and the transfer agency function. The IBOR (portfolio positions, exposures, accruals, corporate action entitlements) and the accounting book of record that produces NAV stay where they are, in the administrator's systems. So does the entire transfer agency apparatus: CDD, KYC and UBO files, AML/CFT monitoring, dealing instruction capture, distribution and corporate action processing, FATCA and CRS reporting, tax documentation, investor statements and servicing, and register rectification. None of this belongs on a blockchain, and none of it needs to be there for the register itself to be on-chain.

Put plainly: the chain carries title and transferability; the transfer agent carries the books and the obligations. The reconciliation that consumes most of the cost and operational risk in conventional post-trade is between parallel registers - not between a register and an IBOR, which serve different purposes and were never meant to agree line-for-line.

B2. Why this is the right place to draw the line

What the chain can do. Be a single authoritative record of who holds what, readable in real time by the issuer, the administrator, the venue and – where permissioned – the supervisor. Enforce eligibility at the point of transfer, so an ineligible holding never comes into existence. Eliminate register-to-ledger reconciliation entirely, because there is only one register.

What the chain cannot do. It cannot bind an address to a legal person by itself; that binding is an off-chain identity attestation surfaced on-chain as a claim, and its integrity is only as good as the trusted issuer behind it. It cannot hold personal data without colliding with the PDPA's retention-limitation and correction obligations. It cannot produce a NAV or carry the portfolio book. And it cannot, unaided, supply administrative correctability - the ability to fix a mistaken allocation, reverse a fraudulent transfer, reissue against a lost key, or give effect to a court order.

Correctability is the load-bearing point, and it is settled by practice rather than theory. Franklin Templeton runs a digital native register in an MAS-authorised scheme and states in its own Project Guardian submission that it retains the ability to correct any error in share recordation, including errors on the blockchain, and that tokens moved illicitly or lost can be clawed back or replaced. The agent powers in ERC-3643 that make this possible – forced transfer, freeze, burn, and reissue – are not a weakness in the model. They are the mechanism by which an on-chain register remains a legal register rather than merely an immutable one. They must, however, be disclosed: Guide para 3.7(ii) requires disclosure of the rights of the issuer or any other party to amend or override records on the DLT network and the circumstances in which those rights may be exercised.

The efficiency case carries a condition. The settlement compression that justifies tokenisation commercially is conditional on the chain also being the settlement layer. If cash still moves off-chain on a conventional cycle, an on-chain register buys compliance automation, transparency, and distribution reach – real benefits – but not atomic delivery versus payment ("DvP"). Where the settlement asset is a regulated stablecoin or a tokenised deposit, the full case is available. Where it is not, the model should be sold on what it actually delivers.

B3. What has to be true in Singapore

The digital native model is live in Singapore, so the question is not whether it is possible, but what has to be established for a particular fund. There are five conditions:

- **The VCC Act analysis has to be opined on, not assumed.** Sections 66(9) and 71(9) require the register to be kept and available for inspection at the registered office; s.40(3) requires a proper instrument of transfer. MAS records uncertainty on the first and no express guidance on the second. The arguable position is that the VCC register is private and unfiled, unlike a company register on BizFile, so "kept at the registered office" can be satisfied by maintaining authoritative access at that office rather than a physical book, and that an authenticated on-chain instruction executed against the compliance contract is capable of being a proper instrument. That is an argument, not an answer.
- **The constitution has to do the work the statute does not.** The VCC's constitution and subscription documents must state that the on-chain register is definitive of legal ownership, specify when a transfer is final, and set out the override and rectification powers and who may exercise them. This is not boilerplate—it is what satisfies Guide para 3.7(ii) and what a court would read first.
- **Settlement finality has to be constructed.** There is no CDP equivalent and no statutory finality for token transfers. Finality must be defined contractually in the constitution and, where a venue is involved, in its rulebook.
- **The custody control test has to be cleared for the agent role.** Under Guide para 4.6, control need not be absolute or exclusive. A DTA holding a key or key-shard capable of co-authorising a transfer of an investor's tokens may be treated as having control, engaging CMS custodial services licensing. Agent-role permissions over the register – mint, burn, freeze, forced transfer – are conceptually different from custody of an investor's holding, but that distinction has to be the subject of a legal opinion, not an assumption. This is the single most important structuring question in the model.
- **Personal data stays off-chain.** Only hashes, pointers, and claim references on-chain; the identity and CDD files sit in the transfer agent's systems, joined to the chain by the platform.

B4. Digital twin against digital native with a DTA

	Digital twin (body default)	Digital native + DTA (this appendix)
Definitive register	Off-chain statutory register at the registered office; on-chain ledger is the operative record	On-chain register is the golden record; no off-chain twin
Reconciliation	Continuous register-to-ledger reconciliation is a permanent operating cost	None between registers. IBOR and NAV reconcile to the chain as a source, not as a peer
VCC Act exposure	ss.66(9)/71(9) satisfied beyond argument; s.40(3) largely avoided	Both provisions squarely engaged and dependent on counsel opinion
Compliance enforcement	Enforced off-chain, mirrored on-chain; an ineligible transfer can occur and then be unwound	Enforced pre-trade by the compliance contract; an ineligible holding cannot come into existence
Settlement finality	Anchored to the off-chain register, which remains the fallback on any discrepancy	Must be constructed contractually; no statutory backstop
Correctability	Administrative, through the off-chain register	Through retained agent powers (forced transfer, freeze, burn, reissue) plus VCC Act s.81(9) rectification - must be disclosed
Reversibility	Fully reversible; stopping leaves the fund legally unchanged	Not reversible without a register migration and, probably, investor consent
Best suited to	A tokenised sleeve of 5–20% of fund capital; a first proof of concept; a manager unwilling to take statutory risk	A fund tokenised in whole or substantial majority; real secondary transferability; on-chain settlement asset; multi-chain distribution

B5. When to choose native over twin

The honest test is whether the tokenised class is the fund or a subset of it. At 5% to 20% of capital, mirroring is the correct design and the statutory risk of a digital native register is not worth taking for a sleeve. The balance shifts when several of the following hold together.

- The tokenised class is the whole fund or a substantial majority of it, so there is no conventional register that has to exist anyway.
- Secondary transferability is a real requirement with an identified venue or counterparty set, not an aspiration in a pitch deck.
- The settlement asset is on-chain – a regulated stablecoin or tokenised deposit – so the atomicity gain is actually available.
- Distribution is multi-chain or cross-border, where maintaining one compliance and identity state is worth more than the statutory certainty given up.
- Counsel is comfortable on ss.40(3)/66(9) and the constitution is drafted for a native register from the outset, rather than retrofitted.
- The manager is prepared to disclose and govern the override powers, because a native register without them is not a legally operable register.

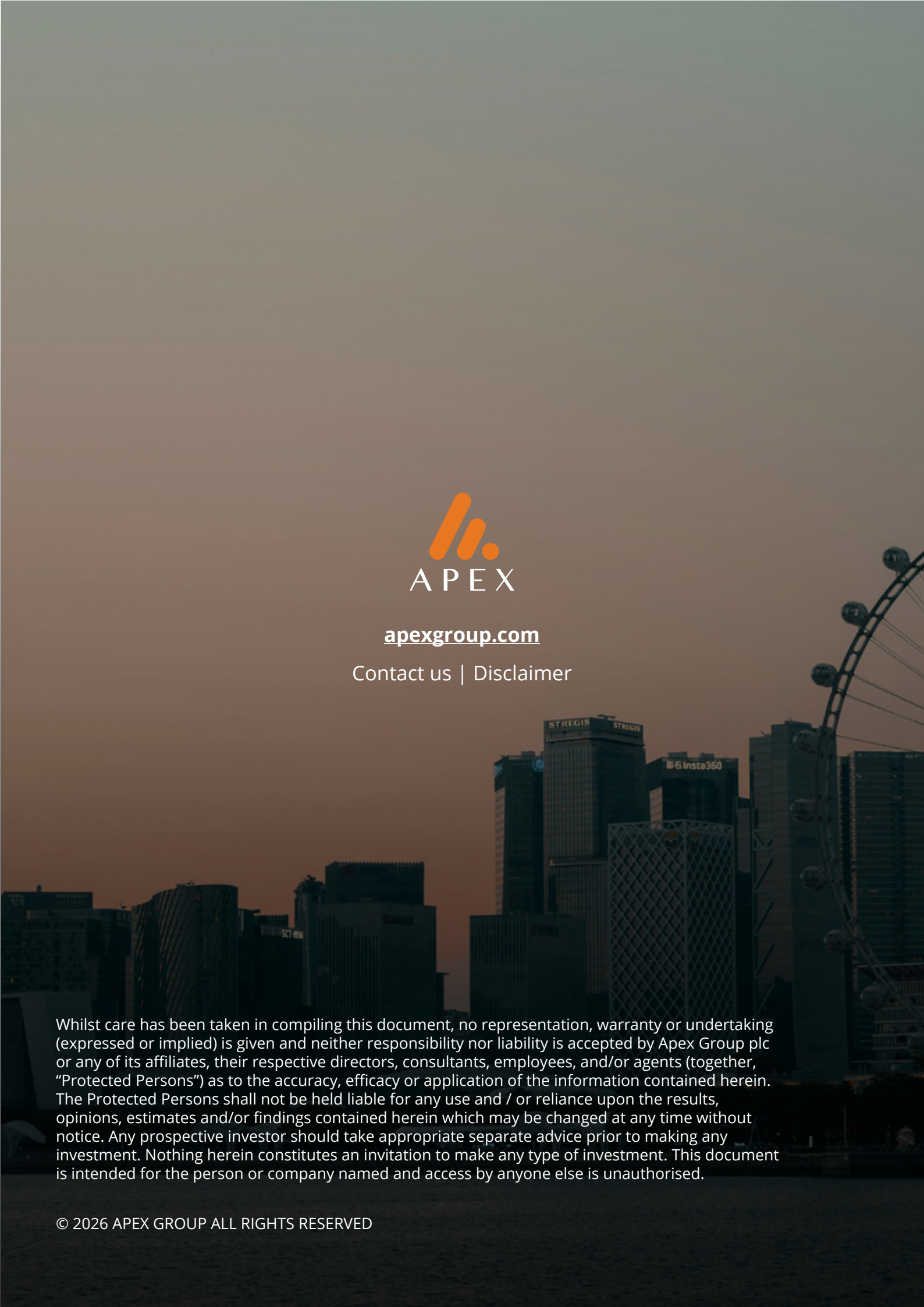
B6. Where the transfer agent sits, and our position as Apex

On-chain, the DTA operates the register. It deploys and administers the token contracts, holds the agent role under defined key governance, mints and burns at subscription and redemption, maintains the Identity Registry and the Trusted Issuers Registry, executes forced transfers and rectifications, and writes NAV and corporate action data on-chain.

Off-chain, it runs the conventional transfer agency book. CDD and investor records, AML/CFT under SFA04-N02 with coordination to the VCC's Eligible Financial Institution under VCC-N01, dealing capture, distributions, tax and FATCA/CRS reporting, statements, and investor servicing. This is the part of transfer agency that regulators actually supervise, and it does not become simpler because the register moved.

The governance shape differs from the live Singapore precedent, and that is the commercial point. Franklin Templeton operates sgBENJI's tokenised register on its own proprietary Benji platform - manager and transfer agent inside the same group. The alternative configuration puts an independent, regulated transfer agent between the manager and the register. FILQ, the Fidelity International USD Digital Liquidity Fund launched May 6, 2026, is the credential for that shape: Apex as transfer agent, tokenisation on Sygnum's Desygnate platform rather than Tokeny, J.P. Morgan on custody and fund administration, Chainlink publishing NAV on-chain, Moody's Aaa-mf rated. It is worth stating plainly why that matters: it demonstrates the transfer agency capability sits above the token standard and is not dependent on ERC-3643. The stack-fit assessment in this appendix is Apex Digital 3.0's own, not a MAS endorsement.





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