



FAC

FAC Operating Model Overview

Contents

- What does FAC do?
- Consensus-Based Transactions on an Enterprise Distributed Ledger
- Funds Servicing and the Operational Consequences of Tokenisation
- Changing Face of Fund Servicing
- Settlement Optimisation
- Cash Exchange Operation

What does FAC do?

FAC connect fund market participants

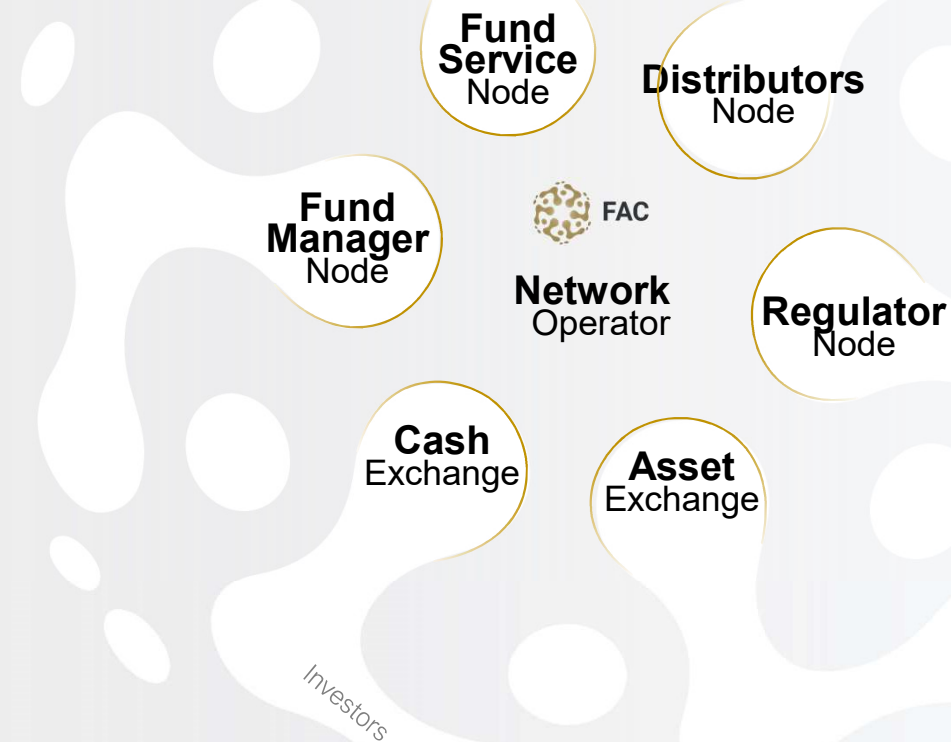
customers, distributors, fund managers, regulators and service providers

on a distributed ledger-based network

allowing them to share the same information on ownership and transactions at the same time

that is a digital representation of assets, cash and transactions

this reduces the layers of intermediation between the investor and the product

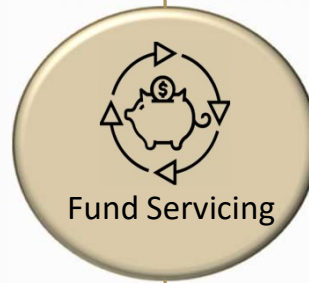
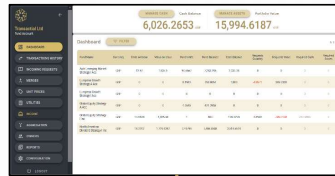


FAC Network Nodes

Investors - Tokenise cash to invest in funds



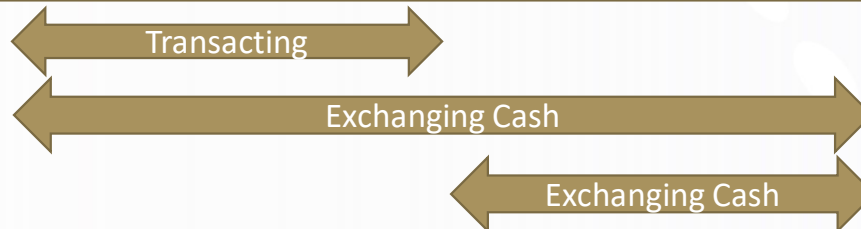
Fund Servicers - Validates orders, manages pricing, fund token issuance and settlement.



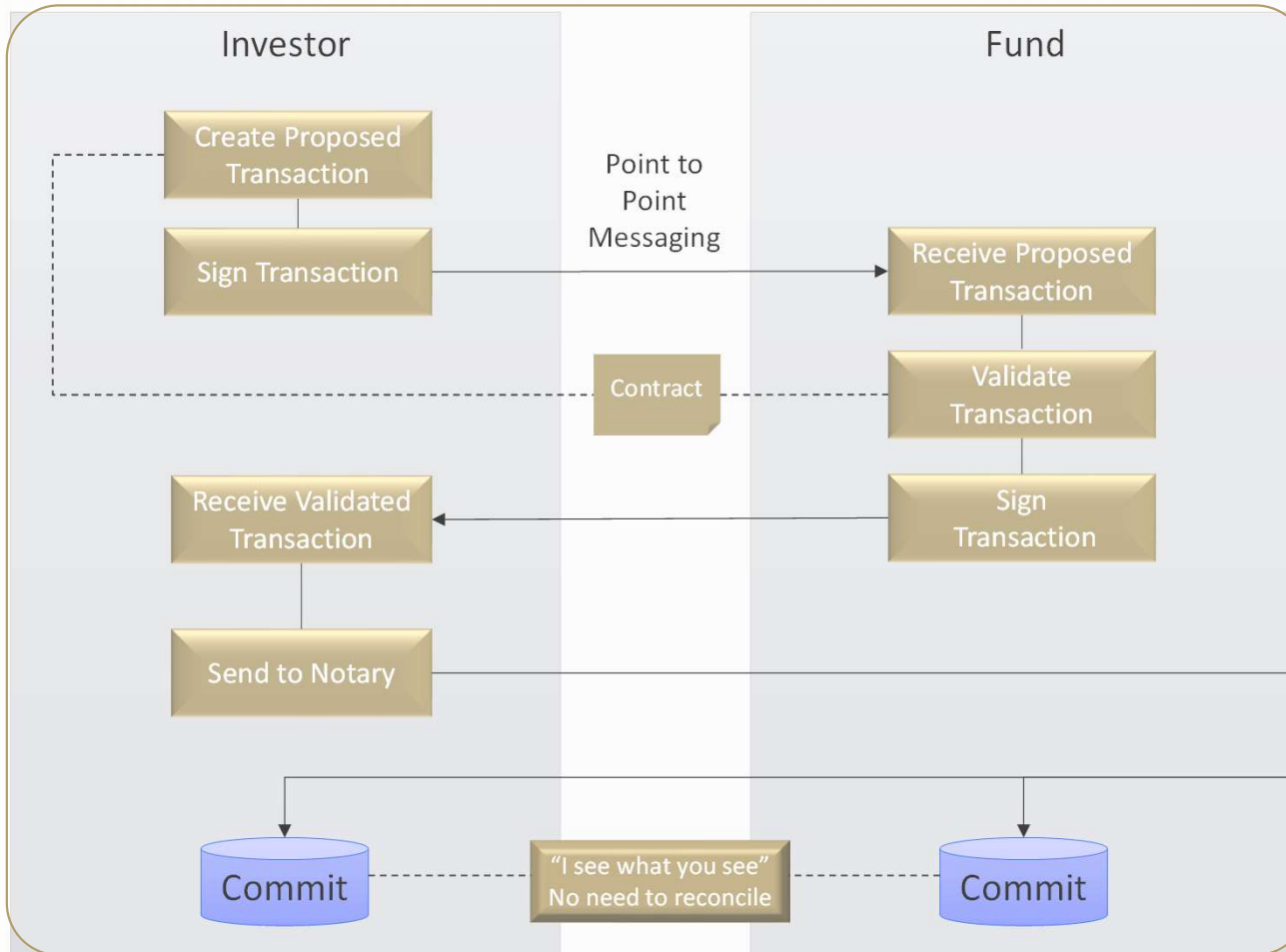
Cash Exchange - Issues cash tokens against delivered fiat currency. Holds fiat cash in safekeeping and delivers fiat cash against cash token redemption



Fund Managers – Using real time subs and reds data to manage fund liquidity



How Consensus Works – Example Transaction

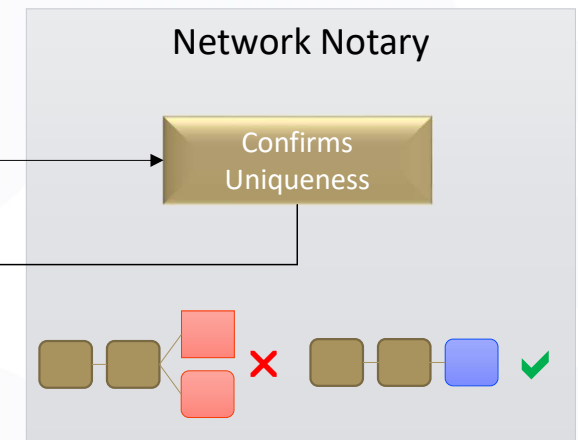


Consensus on FAC

To be committed, transactions must achieve both validity and uniqueness consensus:

- **Validity consensus** requires contractual validity of the transaction and all of its dependencies
- **Uniqueness consensus** ensures validity of tokens and prevents double-spends

‘Agree and commit together’ rather than
‘Commit separately and check if we agree’



Operational Consequences of Fund Tokenisation

1. Investor participation increases and becomes direct

- Investors / Concentrators will be active participants on the network, not at the other end of a Swift connection or a fax machine. They will manage their own data and approve changes or token transfers that impact their node on the ledger.

2. Possession of tokens replaces book-entries

- Mutual fund shares (and most forms of cash) are dematerialised, and exist as book-entries. Tokenisation effectively creates a digital 'certificate', where title is proven by holding the certificate, and is secured by the digital signature of the holder.

3. There is no centralised register of shares

- Having the owner's name on the TA's register does not prove title: the ledger defines the register. A TA can no longer reassign ownership by updating their own records, as tokens have to move and the Investors have to approve that. The Fund nodes have visibility of tokens issued by them, so they can readily construct a view equivalent to 'the register'.

4. The transaction record is the transaction

- On issuance, the fund token is transferred to the Investor node: that is the transaction and the record of the transaction. The token is immobilised at the node, in the Investor's safekeeping, until transferred back to the Fund node at redemption.

5. Tokenisation (of assets AND cash) redefines settlement

- There is no need for intermediate client money accounts as settlement becomes a bilateral exchange of cash and asset tokens where both parties must be present and authorise the transfer together.
- As a consequence the Transfer Agent has significantly less involvement with managing cash: there is no longer a need to match cash receipts to deals or to reconcile banks accounts to ledger transactions and balances.

Changing Face of Fund Servicing

Reductions in Role of Transfer Agents:

- Onboarding / AML / KYC at network boundary
- Elimination of silo technology / data stores
- Optimised trade management and settlement
- Register self-maintains
- No client money / cash management required
- Messaging and reconciliations eliminated
- Reporting to Fund Managers reduced / eliminated

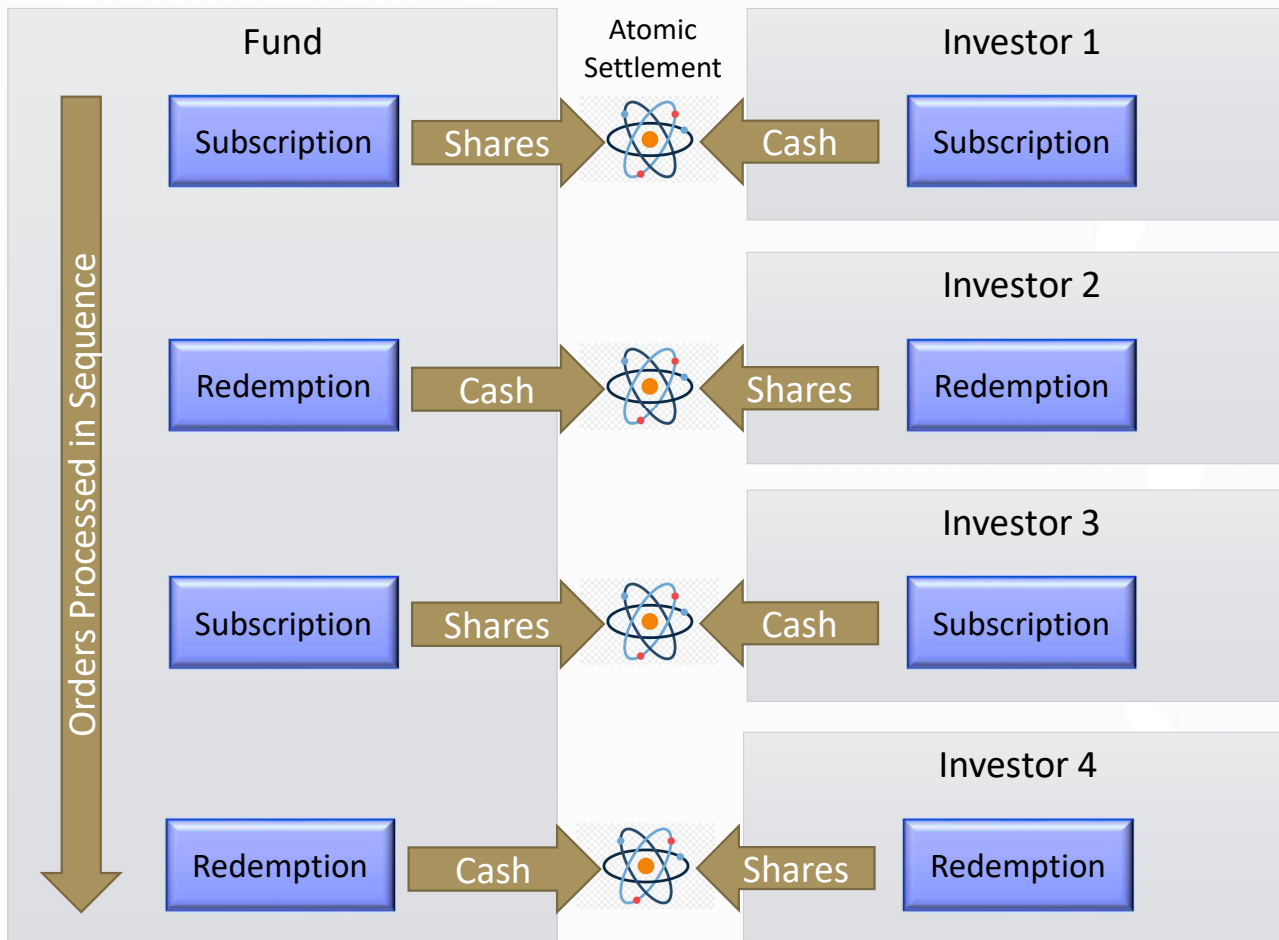
Future Fund Servicing Role:

- Managing issuance of tokenised shares
- Pricing investors' orders
- Operating as principal counterparty for the Fund
- Orchestrating settlement
- Maintaining liquidity with Fund Custodian
- Providing regulatory oversight and tax reporting

New Relationships / Functions:

- Cash Exchange
- Business Network Operator / Network Governance

How Settlement Works

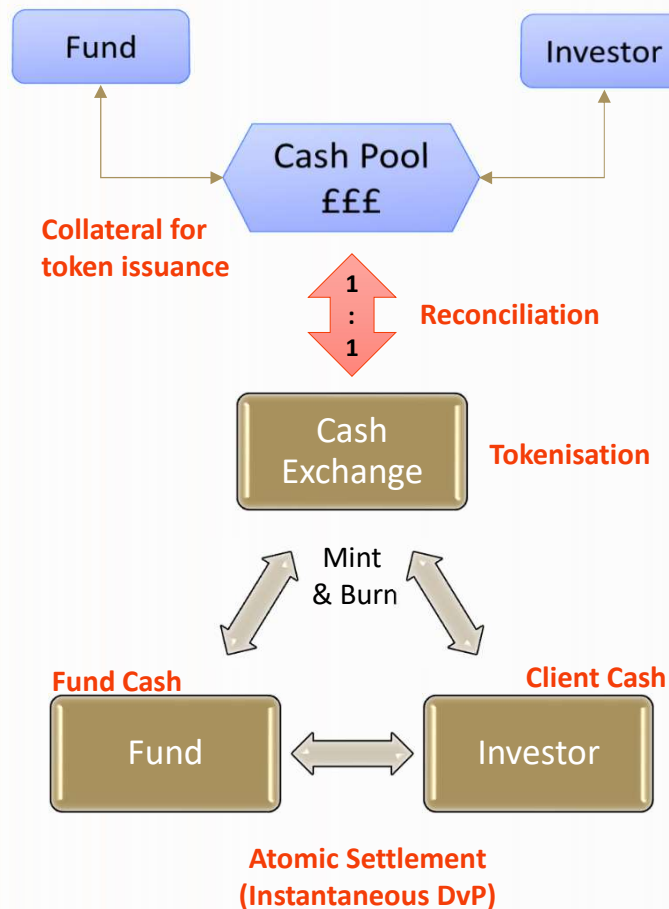


- Settlement is no longer a separate book entry and a bank instruction. It is a co-ordinated bilateral DvP with shares and cash being exchange digitally through token transfer.
- Orders are processed sequentially with the proceeds of one trade available to settle the next.
- Running out of available tokens will stop the settlement process.
- Before starting the node operator must ensure sufficient tokens (cash and shares) are available to ensure completion.
- On completion residual cash tokens would be returned to the fund and residual shares tokens cancelled

Settlement Optimisation – What It Achieves

1. Avoids 100% of potential settlement failures
2. Maximises what can be settled as early as possible (if we want to)
3. Minimises the movements of (and requirement for) tokens across Funds and Investors
4. Minimises the need for asset issuance at the Fund Nodes
5. Minimises the need for tokenisation of cash at the Fund Nodes
6. Allows the Investors to fund subscriptions with redemptions, without cash movements
7. Allows the Funds to fund redemptions with subscriptions, without cash movements
8. Achieves this without inflating the number of settlement cycles
9. Establishes 'dry-run' to prove equivalence to principal settlement prior to actual settlement

Cash Exchange Operating Model



The cash exchange operates a node on the FAC network which is responsible for issuing and redeeming cash tokens and maintaining a record of all tokens issued. This node will need to be integrated into a conventional bank account and payments service for off-ledger transactions. The cash exchange operator is responsible for operating both the conventional and on-ledger parts of the process, ensuring a strict 1:1 relationship between fiat cash collateral and tokens issued on the network.

The exchange process is expected to be highly automated with workflows for processing receipts and payments through the exchange and maintaining the reconciliation.

Once cash is tokenised it can then be used by network participants to atomically settle fund trades.