

Quartz Settlements

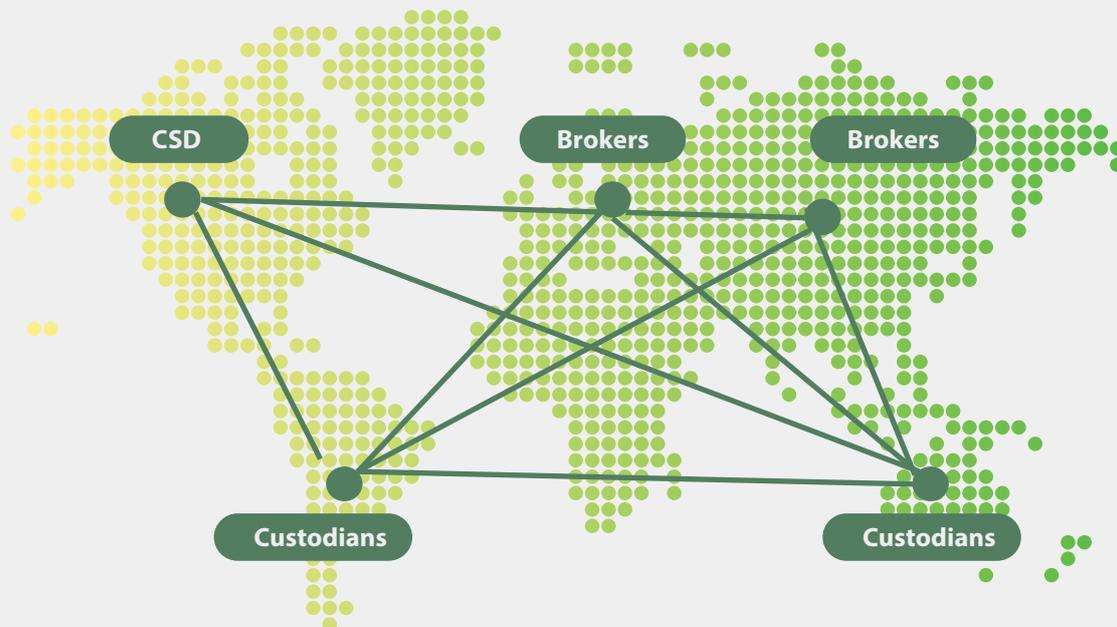


Current processes and Challenges

Globally, OTC trade settlements are typically characterized by a host of challenges that include **delays**, **operational inefficiencies** due to involvement of multiple intermediaries, continuous exchange of messages between these intermediaries and **higher transaction costs**. This problem is further accentuated by **duplication of information** in siloed, legacy platforms and a lack of access to real-time changes in trade status thereby leading to a need for daily reconciliation routines and manual intervention. Importantly, delays in settlement result in increased counterparty risk and in collateral being locked up to service margin obligations arising from unsettled trades. Most regulators are therefore pushing for settlement reforms, including shortened settlement cycles, mandating CCPs, and increased transparency for all stakeholders.

Re-imagining Trade settlement on Blockchain

These challenges can be addressed leveraging blockchain technology, by setting up a **private, permissioned Blockchain ecosystem which allows** market participants to operate as nodes. Such an ecosystem can be set up and run by Market Infrastructure providers such as the Stock Exchange/Central Securities depository/Central banks as they can be natural providers of such an eco-system. Quartz Settlements facilitates Delivery versus Payment (DvP) settlement of tokenized assets held on the ledger. The solution comes with Smart Contracts that enable validation and matching of off market trades as well as real-time, final, irrevocable settlement of these assets on the Quartz blockchain ledger.



Business Benefits

- Ability to process and settle transactions real time (T+0)
- Increased transparency and improved Settlement efficiencies
- Potential to disintermediate intermediaries, leading to simpler process flows, lower costs
- Reduced systemic risk, as the distributed nature of Blockchain eliminates single point of failure
- Eliminates data duplication and hence reduces reconciliation efforts with market participants
- Elimination of messaging overheads, real time access to holdings and transactions

The Quartz Advantage

- Ensures data integrity with cryptographic encryption of data, making it immutable
- Quartz Gateway provides easy connectivity to the blockchain ecosystem, thus facilitating collaboration
- Administration and Monitoring of the ecosystem through the Quartz Command Center
- Restricted access to ensure greater data security, combined with robust Data privacy features

About Tata Consultancy Services Ltd. (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organisation that has been partnering with many of the world's largest businesses in their transformation journeys for the last fifty years. TCS offers a consulting-led, Cognitive powered, integrated portfolio of IT, Business & Technology Services, and engineering. This is delivered through its unique Location Independent Agile delivery model, recognised as a benchmark of excellence in software development.

About Quartz Blockchain Solutions

Quartz Blockchain solutions comprise intelligent Smart contract development kits, and integration solutions to enable development of high quality code for different Blockchain technologies. They help integrate existing solutions easily with ecosystems / industry networks, and enable the deployment of the solution over a robust enterprise class architectural framework called the Quartz Foundation. Quartz also comprises a set of 'Designed for blockchain' business solutions across industries, which enable blockchain-driven transformation.