

Settlements

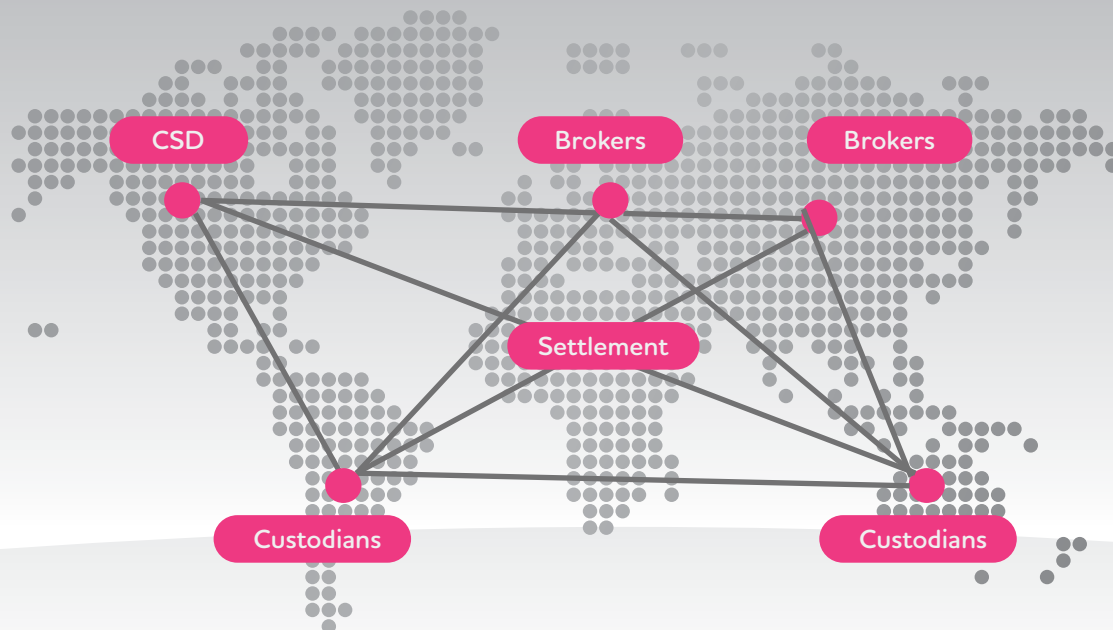


Background

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 Command Center
- Restricted access to ensure greater data security, combined with robust Data privacy features

Quartz - The Smart Ledgers

Quartz comprises an Intelligent smart contract development toolkit, Integration solutions and 'Designed for DLT' business solutions that help organizations leverage the power of DLT in their businesses. Built on the core principles of **Coexistence**, **Integration** and **Interoperability**, Quartz enables existing systems to coexist and integrate with blockchain platforms and other messaging networks.

To know more about Quartz, please write to us at tcs.quartz@tcs.com, or visit our website <https://www.tcs.com/quartz>

About Tata Consultancy Services Ltd. (TCS)

Tata Consultancy Services is a purpose-led transformation partner to many of the world's largest businesses. For more than 50 years, it has been collaborating with clients and communities to build a greater future through innovation and collective knowledge.

TCS offers an integrated portfolio of cognitive powered business, technology, and engineering services and solutions. The company's 469,000 consultants in 46 countries help empower individuals, enterprises, and societies to build on belief.

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