

TCS BaNCS™ for Market Infrastructure

Next-Gen | Functional richness | Componentization |
Standardization | Flexibility



Market Infrastructure Institutions (MII) form the backbone of financial markets, laying the foundation for trust and transparency. With the expanding role of MIIs in capital markets and growth of new asset classes, a trusted partner is key for transformation initiatives.

Given the strong emphasis on technology adoption from customers, market infrastructure firms must make timely investment in modern and secure technology systems to stay at the forefront of change while adhering to industry regulations and standards.

TCS BaNCS™ for Market Infrastructure is a modern, proven solution for mission critical needs of Exchanges, Central Securities Depositories (CSDs), Central Counterparties (CCPs), and central banks.

The next-gen TCS BaNCS for Market Infrastructure is built with the vision to provide top-performing financial technology, equipped with unique multi-asset class and multi-market capability. It is perpetually adaptive to evolving technology and customer needs. It features grid computing-based High Performance Transaction Manager (HpTM) as well as 24x7 processing designed for high performance, scalability, and resilience.

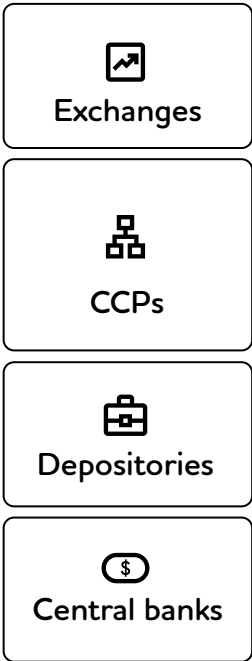
Our solution

TCS BaNCS for Market Infrastructure supports end-to-end trade and post-trade functions, including unified clearing and settlement, integrated real-time risk, and collateral management. It also offers issuance, depository, and registry functions across multiple asset classes in a single solution.

It has been benchmarked to global regulatory standards such as PFMI, GDPR, SMPG, FATCA/CRS, EMIR, CSDR, DORA, SRD-II, ECMS SCoRE, T+1 settlements, and SFTR as well as global messaging standards such as ISO 20022, ISO 15022, FIX, and FIXML, in addition to standard APIs for integration.

Key features

- Next-Gen**
High performance, resilience, security, cloud optimized, 24x7 processing, self-healing, and blockchain and AI enabled
- Modern Technology**
Perpetually adapting to latest technologies. Supports API, standards-based integration, and digital frontend
- Regulatory and Standards Compliance**
Compliant with global regulatory requirements for clearing and settlement, high levels of STP via standardized interfacing mechanisms
- Functional Richness**
End-to-end trade and post-trade functions in a single solution across multiple asset classes, multiple markets, and for multiple currencies
- Componentized, Configurable, and Flexible**
Componentized design and ease of enabling business services; business parameter-driven flows, configurable workflows and dashboards



Designed to meet diverse requirements

Depositories:

The solution features a sophisticated double entry system with support for both omnibus and end investor accounting. It supports multiple settlement models and various settlement efficiency mechanisms to help manage liquidity across both securities and cash. The solution provides comprehensive support for corporate actions, ensuring compliance with CAJWG and SMPG standards as well as SCoRE and SRD-II regulations. It is componentized and supports a range of value-added functions, including cross-border settlement, issuance, ETF processing, workflow management, T2S capabilities, pledge, collateral management, repo and securities lending and borrowing.

Central counterparty clearing:

The solution provides unified clearing across cash and derivatives markets. The trade and position management components are supported over a hierarchical account structure. The CCP services are integrated with risk and collateral management for real-time and intraday margining and monitoring of trades, orders, and limits. Stress testing and back-testing capabilities enable effective management of the guarantee fund. The solution's unique derivative contract generation capability provides the flexibility to launch new futures and options contracts on asset classes with ease, thereby shortening the time to launch new products. The solution also supports a comprehensive delivery management capability on expiry of futures and options markets, including support for early delivery.

Central payments clearing:

The solution allows for clearing of multiple payment rails. It also supports direct and indirect participants, credit push and transfer, payee confirmation, request for pay, bulk payments, integrated timer management, and parameter-driven workflow management. The liquidity and limit management service enables configurable limits, thresholds, and alerts with the capability to support funding and de-funding transactions.

Central banks:

The solution can support both primary and secondary market operations for government securities with comprehensive matching and settlement services for such markets. It provides central bank repo and reverse repo, inter-bank repo and lien functions, and multi-currency transaction management capabilities for a wide range of cash instructions.

Focus on scalability, resilience, and cyber security

TCS BaNCS for Market Infrastructure can be deployed on leading container technologies and provides easy scalability to meet evolving market needs. The solution can be deployed in an active-active configuration with zero RPO. The solution can be deployed across multiple availability zones.

It supports zero-trust security design and follows the 'deny by default' principle. By adopting 'security by design' and 'privacy by design' methodologies, the solution has a robust architecture with protection for data in transit, in rest, and in use.

Additionally, security processes are implemented to protect all layers by using comprehensive set of tools and controls including DMZ implementation, WAF or firewall, encryption for transport channels, hardening at OS and network level, identity management, and SSO supporting SAML and OAuth, SCIM for user federation, SIEM, DAM, EDR, anti-APT and usage of HSM to protect sensitive data.

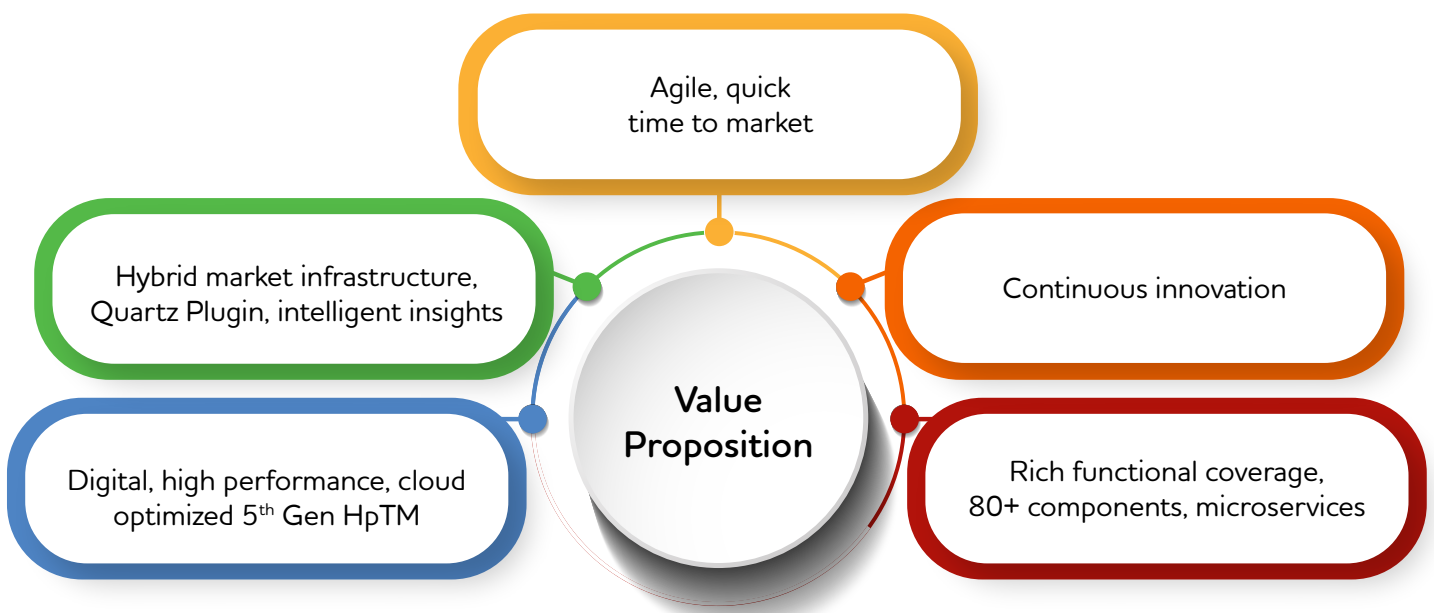
Integration with Quartz™ and support for tokenized assets

- The Intelligent Insights solution from Quartz, is a generative AI-based reporting solution for creating reports using multimodal data sets, including from conventional database, blockchain ledgers as well as unstructured data from public sources.
- Quartz for Markets offers end-to-end next generation services around tokenized securities to drive future growth for MIs.
- Quartz for Crypto Services can streamline crypto asset transfer by seamless integration with multiple public blockchains like Bitcoin and Ethereum.
- Quartz Smart Solution for NFTs provides a secure, blockchain-enabled solution for issuance and custody of NFTs on Ethereum platform. It offers a choice of wallets and interfaces with third-party wallet providers, marketplaces & IPFS (Inter-Planetary File System) for decentralized storage.

API, standards-based integration, and digital frontend

The solution supports APIs for integration with external systems. It offers an intuitive, digital user interface for market participants and provides full support for ISO 20022 standards for securities settlement, cash settlement, corporate actions and statements. The co-existence approach, for supporting both ISO 15022 and ISO 20022, enables a seamless and efficient transition to ISO 20022 across the market.

The TCS advantage



The solution is compliant with global regulatory standards and ensures high levels of STP, operational efficiency, interoperability, and global acceptance. It is ready to be deployed on a wide range of public and private cloud platforms, thereby offering an efficient way to manage the total cost of ownership (TCO). It is not just a technology solution—it is a strategic enabler for the capital markets of tomorrow.

About TCS BaNCS™

The TCS BaNCS™ solution is designed to help financial services institutions enhance end-customer experience, enabling them to embrace open and innovative technologies that embody true digital customer engagement by deploying at more than 450 installations worldwide.

To know more about TCS BaNCS, please visit: <https://www.tcs.com/bancs> or write to us at tcs.bancs@tcs.com

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services (TCS) (BSE: 532540, NSE: TCS) is a digital transformation and technology partner of choice for industry-leading organizations worldwide. Since its inception in 1968, TCS has upheld the highest standards of innovation, engineering excellence and customer service.

Rooted in the heritage of the Tata Group, TCS is focused on creating long term value for its clients, its investors, its employees, and the community at large. With a highly skilled workforce of over 607,000 consultants in 55 countries and 180 service delivery centres across the world, the company has been recognized as a top employer in six continents. With the ability to rapidly apply and scale new technologies, the company has built long term partnerships with its clients – helping them emerge as perpetually adaptive enterprises. Many of these relationships have endured into decades and navigated every technology cycle, from mainframes in the 1970s to Artificial Intelligence today.

TCS sponsors 14 of the world's most prestigious marathons and endurance events, including the TCS New York City Marathon, TCS London Marathon and TCS Sydney Marathon with a focus on promoting health, sustainability, and community empowerment. TCS generated consolidated revenues of US \$30 billion in the fiscal year ended March 31, 2025.

For more information, visit www.tcs.com

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