

# NSE Clearing: A Transformative Journey of Innovation and Reform



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Over the past three decades, NSE Clearing (NCL) has been steadfast in its journey to bring in global best practices in the risk management and clearing and settlement space, providing counterparty guarantee to trades matched on exchange platform and ensuring efficient settlements. NCL has not allowed its systemically critical role to be a limitation in embracing innovation, accelerating reform, and modernizing its infrastructure to meet the evolving demands

of a dynamic financial ecosystem. Instead, it has embraced a bold, innovation-driven transformation, evolving at a pace that rivals agile startups. Without compromising its foundational commitment to market integrity and risk resilience, NCL has redefined its role in the financial ecosystem: evolving from a in-house captive clearinghouse to one that serves multiple markets, leading the global shift to accelerated T+1 settlement, taking the investor protection mandate to the next level by offering fully segregated account structure to millions of investors, putting in place safeguards in settlements to guard against mishandling of client securities, and achieving highest degree of operational resiliency and reliability through one-of-its-kind software-as-a-service portability model.

This transformation has not been driven by a single initiative, but by a series of carefully orchestrated reforms that reflect NCL's commitment to innovation, investor protection, and operational excellence. Each step in this journey has been marked by a forward-looking approach to technology, governance, and market needs and with complete regulatory support and guidance. The following sections delve into the key initiatives that have defined NCL's transformation, with each one incrementally contributing to a more resilient, efficient, and investor-centric post-trade ecosystem.

## 1. Interoperability Among Clearing Corporations (2019)

In 2019, NCL, guided by the regulator, led the implementation of interoperability among clearing corporations in equity and derivatives markets. This initiative allowed market participants to trade on multiple exchanges and settle through a CCP of their choice, thereby enhancing flexibility, competition, and efficiency in the Indian capital markets.

The project required seamless coordination across exchanges, CCPs, stockbrokers, custodians, and regulators. Despite its scale and complexity, the implementation was completed within nine months of

regulatory announcement. The approach emphasized rapid execution through structured collaboration, rigorous testing, and phased integration. The success of this initiative demonstrated NCL's ability to deliver transformative change without compromising systemic stability.

## 2. Individual Segregation of Collateral (2020–2022)

In alignment with global best practices and investor protection mandates, NCL implemented individual segregation of collateral across all customer accounts. This initiative, primarily regulatory driven, provided complete visibility of collateral holdings down to the end-investor level, an unprecedented achievement in a market with over 200 million investors.

The project required coordinated changes across CCs, Central Securities Depositories (CSDs), and stockbrokers. It involved reengineering collateral management systems, redefining allocation logic, and ensuring real-time traceability. The initiative reinforced investor confidence and regulatory transparency, while showcasing NCL's commitment to safeguarding client assets through technology-led governance.

## 3. Transition to T+1 Settlement in Cash Equities (2022–2023)

India became the first major jurisdiction to successfully transition from T+2 to T+1 settlement in cash equities. This move was driven by the need for capital efficiency, faster fund availability, and alignment with global trends. A number of challenges needed to be overcome, particularly for foreign institutional investors (FIIs), who faced time zone differences, currency conversion constraints, and operational bottlenecks.

Phased implementation strategy was adopted with incrementally migrating securities to T+1 on a monthly basis over a period of one year starting February 2022. This allowed custodians and clearing members to adapt gradually, test systems, and resolve issues in real time. The final tranche, comprising the most actively traded securities, was completed in January 2023.

Throughout the transition, NCL maintained close coordination with custodians, clearing members, and regulators. It ensured that settlement timings remained unchanged, preserving investor utility and liquidity flows. The initiative exemplified NCL's ability to manage complex stakeholder dynamics while delivering systemic upgrades.

## 4. SaaS Portability Model for Business Continuity (2023–2024)

In response to evolving regulatory expectations around operational resilience, NCL developed a unique Software-as-a-Service (SaaS) portability model in collaboration with the other interoperable CCP. Under this framework, NCL and its interoperable CCP maintain a separate instance of their risk management system (RMS) which can be utilized by the other in the event of software failure of its RMS.

The model involves NCL maintaining its own hardware within the partner CCP's data center, allowing for rapid switchover within 30 minutes. It was rigorously tested through mock drills and live trading scenarios, validating its robustness and reliability.

This initiative represents a second line of defense, complementing NCL's disaster recovery site located 1,600 miles away in a different seismic zone. It enhances systemic resilience, assures regulators of continuity, and sets a benchmark for technological preparedness in financial market infrastructure.

#### **5. Investor Asset Protection Through Settlement Safeguards (2024-2025)**

As part of its broader transformation agenda, NCL implemented two foundational mechanisms to strengthen investor asset protection and ensure settlement integrity in India's high-volume, retail-driven securities market. These included a pay-in validation and direct client payout.

To avoid the situation where intermediaries could divert one client's securities to fulfill obligations of another client or the broker's proprietary trades, a pay-in validation mechanism was jointly developed by CSDs and CCs, including NCL. Under this system, the NCL provides client-level settlement obligations to the depositories, which then validate that only the securities corresponding to each client's obligation are debited. Any excess holdings

remain protected, ensuring that settlement is executed with precision and transparency.

Complementing this safeguard, NCL also implemented a direct payout mechanism, wherein securities are credited directly to the investor's account at the depository, bypassing intermediaries such as clearing members. Historically, payouts were routed through clearing members, who were responsible for transferring securities to the end investor accounts. This model carried risks of delay or misallocation. The new mechanism eliminates these risks, reinforces investor ownership, and aligns with the regulator's vision of direct client asset protection.

Together, these initiatives represent a significant leap forward in post-trade transparency and investor trust. By embedding client-level controls into both the pay-in and payout processes, NCL has redefined settlement architecture to be more secure, accountable, and investor-centric.

These marquee initiatives demonstrate how the securities market in the Indian landscape has successfully balanced the two conflicting asks of digitization and modernization without impacting market stability. The initiatives have transformed the clearing and settlement space and, to a great extent, made the post trade systems more investor centric assuring safety and bolstering trust in the market.