

Impact of GenAI on post-trade settlement in investment banking

1 Industry shifts in post-trade operations

Post-trade functions are transitioning from manual, reactive break resolution toward intelligence-enabled, real-time settlement operations. GenAI is emerging as a cornerstone as firms prepare for shorter settlement cycles, stricter controls and heightened expectations for transparency.

2 How leading firms are responding

Leading firms are strengthening their post-settlement environment through:

- A US-based clearing corporation is enhancing clearing and settlement efficiency, strengthening data quality and automating key post-trade processes.
- A major US investing bank modernized post-trade operations through real-time reporting, automated monitoring and streamlined settlement workflows.
- A European depository agency is partnering with technological partners to apply cloud and AI for more scalable and data-driven post-trade services.
- An Asia-Pacific based Fintech firm dealing with wealth and asset management clients offers a cloud-based post-trade engine that automates allocations, confirmations, settlements and asset servicing.

Leading firms are strengthening their post-settlement environment through:

3 Evolution of post-settlement technology architecture

Modern architecture combines:

- A **cognitive layer** where GenAI/ML models extract information, classify breaks and recommend remediation.
- An **execution layer** managing workflows, escalations and custodian interactions.



Event-driven data flows enable earlier detection of settlement risk, while supervised AI ensures regulatory alignment and operational control.



4 COTS platforms adapting and AI integration

COTS systems remain foundational and are increasingly adopting AI such as:

Broadridge (OpsGPT) – GenAI assistant that speeds up exception handling and settlement break analysis across post trade operations.

Goldman Sachs (GS Marquee) – Goldman is modernizing its post-trade environment through API driven workflows, automated confirmations and AI enabled operational controls to streamline clearing and settlement operations.

Euroclear (Euroclear Platform) – Upgrading its market-infrastructure platform using cloud and AI to improve automation and settlement continuity.

Murex (MX.3) – Modular, API-driven platform supporting automated trade lifecycle processing and smoother downstream, integration.

Deutsche Bank (dbACE) – Deutsche Bank is embedding AI and advanced automation into its post-trade processes to reduce manual checks, improve exception handling and enhance settlement accuracy across global markets.

5 Transforming post-settlement practices with GenAI

GenAI is improving settlement outcomes through:



Faster investigations

using automated break summaries.



Higher accuracy

in interpreting unstructured inputs.



Earlier prediction

of settlement failures.



Scalable validation

without additional headcount.

These gains reduce settlement friction and strengthen operational control.

6 High-impact GenAI use cases

GenAI is improving settlement outcomes through:

1

Predictive settlement - failure scoring.

2

Automated exception classification and prioritization.

3

GenAI interpretation of SWIFT, email, PDF and custodian content.

4

SSI and settlement - instruction enrichment.

5

Real-time detection of cash and position anomalies.

6

AI-generated commentary for settlement reporting.

7

Knowledge assistants for operations teams.

7 HCLTech's role in post-settlement modernization

HCLTech modernizes post-settlement operations by adding automation, real-time observability and faster exception handling to support the settlement cycles and reduce settlement breaks. This strengthens accuracy, resilience and operational efficiency across the clearing and settlement lifecycle.



Proven GenAI use cases driving post-trade transformation for HCLTech clients:

S.No.	Use Case / Client	Description	Outcomes / Benefits
1	Modernizing securities / post-trade operations with AI for a leading European clearing house	HCLTech modernized legacy securities operations applying AI/GenAI, automation and modular architecture, enabling higher agility in post-trade (settlement, reconciliation) workflows.	~65% reduction in manual effort during modernization
2	Leveraging GenAI in transforming trade surveillance platform for a global European bank	HCLTech implemented GenAI-enabled solution extracting content from large structured/unstructured datasets, natural language prompts, scaled via Google Gemini model etc.	Efficiency: Time spent on data prep down ~80%; analysis time from ~8.75 hrs. to ~25 min; new analyses ~90% faster.
3	Settlement exception automation for a major German bank	Migrated from IBM BPM to Camunda workflow engine to automate cash-securities pre-settlement exceptions, integrating exception handling with legacy ops in under a day.	Reduced manual effort; stabilized operations during transition; improved exception accuracy
4	T+1 Settlement Readiness, U.S. Capital Markets	Blog provides a blueprint for intraday automation, trade allocation, affirmation, securities lending to meet compressed T+1 cycles.	Supports real-time, resilient settlement flows under T+1

8 Conclusion

GenAI is reshaping post-trade settlement by moving operations from reactive break resolution to predictive, intelligence-driven control. With the shift toward T+1, rising data complexity and stricter regulatory expectations, investment banks must strengthen their exception detection, automate settlement workflows and ensure real-time visibility across the lifecycle.

By combining GenAI with modular architecture, supervised automation and cloud-enabled data flows, firms can materially reduce settlement friction, improve accuracy and enhance operational resilience.

HCLTech's domain-driven accelerators and modernization capabilities help institutions adopt GenAI confidently – integrating AI into settlement processing without disrupting core systems and enabling faster, more compliant and more efficient post-trade operations.

9 About the author



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Jayaraman Mudumbai Ravi is a seasoned professional with over 16 years of experience across banking operations, capital markets processes and enterprise financial platforms. His career includes exposure to trade lifecycle workflows, securities operations and supporting key functions across asset classes within global investment banking and capital markets ecosystems.

He brings a strong analytical and domain-driven perspective, integrating business insight with technology understanding to evaluate platforms, enhancing operating models, and articulating high-clarity strategic assessments. He has consistently developed structured, research-backed viewpoints that strengthen stakeholder decision making. His professional journey reflects a commitment to simplifying complex financial and system landscapes, enabling greater operational resilience and strategic focus.

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