

Top Five Investment Bank Reduces Risk and Increases Efficiencies with the MarkLogic® Database

Industry Leader Achieves Agility, 360 View That Were Unattainable with a Relational Database

CUSTOMER

Top Five Investment Bank

INDUSTRY

Financial Services

CHALLENGES

Data integration; prevent data errors; reduce complexity of risk management

CUSTOMER USE CASE

Derivatives Trade Store;
Operational Trade Store

BENEFITS

Agility; faster time to market; reduce complexity, risk and TCO; unified view

Company Overview

This top five investment bank's highly respected derivatives team is responsible for over one-third of the world's total derivatives trades. The derivatives practice has a global footprint with teams that support credit, interest rate, equity and over the counter (OTC) derivatives in every region of the world. The bank has earned numerous industry awards and is recognized for its product innovations.

Challenges

The bank's management recognized the importance of having a real-time comprehensive global view of its positions in order to quickly and cost-effectively make smart business decisions. The existing system, based on a relational database, was comprised of multiple installations around the world. The legacy system was not fast enough to respond to growing requirements, and the data integration was simply not feasible for the bank's needs. For example, the existing system was unable to deliver real-time alerts to manage market and counterparty credit positions in the desired timeframe.

The team was tasked with:

- **Preventing errors.** Frequent cycles were spent correcting incomplete or bad data, which resided in multiple disparate systems. The chosen solution had to provide a single view of the data, reducing the likelihood of duplicated, redundant, incomplete, and inconsistent data.
- **Reducing time and complexity.** Managing risk exposure on high volume derivative trading was both time and resource intensive. The database needed to provide a 360 view so risk managers could quickly assess the true enterprise risk profile and conduct predictive analyses with ease.
- **Creating an agile infrastructure.** The system needed to quickly adapt to changing market conditions and regulatory requirements.

The Solution

After the bank's careful investigation, the choice was clear: Only the MarkLogic® database could address all concerns with additional benefits of improved performance, scalability, faster time to market, and a much lower total cost of ownership (TCO).



The bank built a derivatives trade store based on the MarkLogic database, replacing the 20 disparate batch-processing servers with a single operational trade store.

This single MarkLogic Operational Trade Store seamlessly supports high throughput operationally critical settlements and related processes and concurrently supports ad-hoc queries across all trades from hundreds of users across the bank, as well as a range of large reports and end-of-day analysis processes (such as netting).

Benefits

With the MarkLogic database, the top five investment bank surpassed its goals. Trade data is now aggregated accurately across the bank's entire derivatives portfolio, allowing risk management stakeholders to know the true enterprise risk profile, to conduct predictive analyses using accurate data, and to adopt a forward-looking approach. Additionally, the bank does not need to add resources to meet regulators' escalating demands for more transparency and stress-testing frequency. Specific benefits include:

Agility and Time to Market

Complex changes can be made in hours versus days, weeks, and even months as required by competitors using legacy technologies.

Minimized Risk

Before MarkLogic, it was difficult to identify financial exposure across many systems. Today, the bank can conduct real-time risk monitoring, analyses, and actions, enabling the bank to know its market and credit counterparty positions to act quickly and mitigate risk. Additionally, alerting feature keeps users apprised of up-to-the-minute market and counterparty credit changes so employees can take appropriate actions.

Reduced Costs

With one database, hundreds of thousands of dollars of technology costs are saved each year. Replacing Oracle and Sybase significantly reduced operations costs: The bank now manages one system versus 20, requires one database administrator instead of 10, and experiences lower costs per trade.

High Availability

Derivatives are stored and traded in a single MarkLogic database system requiring no downtime for maintenance, which is a significant competitive advantage.

Enhanced Reporting

The reporting on various positions benefited from a unified view.

Ease of Integration

The MarkLogic NoSQL database enabled that any data structures could be persisted and retrieved with ease and minimal transformation providing an enormous benefit over the traditional RDBMS approach previous used where the data types were required to be strictly defined and normalized.