

Case study

Risk management transformation at a global bank

Stress testing to achieve efficiency and generate enhanced risk insights with Murex

Objective



A global bank wanted to migrate from its legacy trade booking and risk reporting system to the **Murex platform** to enhance trade capture, data integrity, stress testing and reporting. This entailed:

- Streamlining front-, middle- and back-office operations across asset classes
- Migrating trade and market data with validation from data vendors such as Bloomberg and Reuters
- Designing a **robust stress-testing framework** to assess portfolio resilience in adverse market conditions
- Ensuring consistency between legacy-system and Murex outputs during the transition

Our solution



We executed the project in **two phases**: Phase 1 covered derivatives, and Phase 2 extended to other products. Our team carried out the following tasks:

- **Data integration:** Performed clean-up, migration and validation of trade data; integrated APIs for market data feeds
- **Stress-testing framework:**
 - Designed six interest-rate scenarios (e.g., curve flattening, steepening at varying horizons) and six forex scenarios (spot and volatility shifts across tenures) to meet the bank's internal stress-testing policy requirements
 - Performed data collection, PV validation, scenario generation and scenario management within Murex
- **Execution and validation:** Executed stress scenarios on migrated trades, compared results against legacy systems and validated outputs
- **Reporting:** Generated comprehensive outputs—base P&L, stress P&L and factor-wise impact analysis

Client impact



- **Enhanced risk insights:** Clear visibility of portfolio sensitivity in multiple stress environments
- **Efficiency gains:** A streamlined stress-testing cycle (daily instead of monthly previously) with reduced manual intervention; accurate report generation in minutes (versus ~1 hour previously) after execution of stress scenarios, providing sufficient time for analysis of the output generated
- **System reliability:** End-to-end validation ensured accuracy of migrated data and reports
- **Strategic risk management:** Assessment of mild-to-extreme stress impacts by specific risk factor improved regulatory preparedness and internal decision-making

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