



Market Risk Measurement Stress Testing

Client

Regional Credit Union in
Portland, Oregon

Industry

Credit Union Financial
Services

Solution

Market Risk Analytics Stress
Testing Platform

Challenge

Regional credit union faced increasing interest rate risk exposure, potential significant losses from rate movements based on basic analysis, manual stress testing processes taking months to complete, limited ability to model various economic scenarios and their impact on the balance sheet, and regulatory pressure to enhance risk measurement and stress testing capabilities.

AI Consulting Approach

- **Balance Sheet Analysis:** Risk consultants analyzed asset-liability composition, interest rate sensitivities, and market risk exposures to identify measurement opportunities using quantitative risk modeling and stress testing techniques.
- **Enhanced Risk Platform:** Analytics system processing balance sheet data, market conditions, and economic scenarios to provide comprehensive market risk measurement and stress testing capabilities.

AI Solution

- **Interest Rate Risk Modeling:** Analytics platform measuring interest rate sensitivity across all balance sheet components with scenario analysis for various rate environments
- **Asset-Liability Management:** System optimizing balance sheet composition and hedging strategies based on risk tolerance and market conditions
- **Stress Testing Automation:** Platform conducting regulatory stress tests and custom economic scenarios with automated reporting and analysis
- **Risk Limit Monitoring:** Real-time system tracking market risk exposures against board-approved limits with automated alerting for threshold breaches



Implementation (24 weeks total)

- Risk Modeling (6 weeks)
- Platform Development (9 weeks)
- Scenario Integration (7 weeks)
- Validation Testing (2 weeks)

Key Results

Risk Management:

- \$1.2M reduction in potential interest rate losses through better hedging strategies, improved balance sheet optimization, enhanced risk measurement accuracy

Regulatory Compliance:

- 90% reduction in stress testing preparation time, enhanced regulatory reporting capabilities, improved examination results

Business Impact:

- \$1.8M annual value creation, strengthened market risk management, 165% consulting ROI, better strategic planning and decision-making

Technologies:

- Market risk analytics platform
- stress testing engines
- asset-liability management tools
- scenario modeling systems
- risk limit monitoring