Client
One of the largest investment banks in the world.

Goal
Design and Implement end-to-end testing solution for the trading of Interest Rate Swaps on SEF

Business Impact
Validation of the integration of client systems with the Swap Execution Facility within Dodd-Frank Act deadlines enhanced the firm's ability to expand business.

SEF Trading Mandate for Interest Rate Swaps

Iris tested the integration of Swap Execution Facility (SEF) for trading Interest Rate Swaps designated as Made-Available-To-Trade (MAT).

Overview

A leading investment bank engaged Iris to test the execution workflow for mandatory trading of Made-Available-to-trade (MAT) Interest rate swaps on the Swap Execution Facility (SEF). SEF is a regulated platform for trading swaps which provides pre-trade information (bid and offer) and the execution mechanism for swap transactions among eligible participants.

Iris testers designed business scenarios for verifying the (bid & offer) price publication and Limit Order Book & Request for Quote SEF execution models. They also verified the post-trade Straight-Through Processing (STP) connectivity towards the clearing for these executed swap trades.

The challenge

Under the Commodity Futures Trading Commission (CFTC) SEF rules, every clearing member must carry out pre-trade credit checks on trades prior to execution. To accomplish this mandate, the SEF connects to Traiana-Creditlink which performs pre-trade & post-trade credit checks. This integration is critical for the interest rate swaps business on SEF.

The SEF connectivity to clearing houses (CME, LCH) & affirmation vendors (MarkitSERV) apart from integration with the bank's trading application needs to be established for verifying the complete trade flow. Additionally, all SEF on-boarding formalities need to be completed to send accurate account details to downstream systems for trade booking.

The solution

Iris examined the pre-trade, trade execution & post-trade workflows for Interest Rate Swaps on SEF and proposed methodical approach to verify bid/offer price publication, credit limit checks, trade execution and trade flow to Clearing Houses. Stubs were used for testing the flow during the initial phases. Testing was planned in phases as illustrated below:

	When	Testing Activities
Phase 1	•SEF integrated with Bank application for Publishing Bid/Offer price for some IRS.	•Verify Bid & Offer Price Publication for small set of IRS
Phase 2	•Connectivity with Traiana-Creditlink established •Connectivity with one Clearing house established	•Execution of trades on SEF for Limit Order Book & RFQ models •Credit limit checks with trade volume within & outside credit limit . Re-setting of credit limits •Trade Accept/Reject from clearing houses & notification verification •Verify & document mismatched fields between post trade feeds of SEF and bank application.
Phase 3	•SEF integrated with Bank application for Publishing Bid/Offer price for all IRS Made-Available-To-Trade on SEF	•Verify Bid & Offer Price Publication for all Interest Rate Swaps. •Execution of trades on SEF for Limit Order Book & RFQ models •Verify & document mismatched fields between post trade feeds of SEF and bank application.
Phase 4	•Client Onboarding procedures complete •Connectivity with affirmation vendor established •Connectivity with other clearing house established	•End-to-end testing with focus on correct trade flow to clearing houses •Verified all mismatch field values have been fixed & no new mismatches exist. •Verified correct account details being sent to downstream systems & clearing houses after successful client onboarding

Technical highlights

- Created test strategy oriented towards testing of credit limits , price publication , Limit Order Book and RFQ executions , Clearing house and affirmation vendors connectivity

- Production data replication while retaining data security with the help of data masking and synthetic test data.

- Use of right metrics and reports to ensure timely defect closure.

- End-to-End traceability to ensure functional coverage

The Iris advantage

Vision to Reality: The client's need for end to end testing of the Interest Rate Swaps on SEF was achieved with strategic planning and in phases to ensure all pre-trade, trade execution and post-trade flows were rigorously tested.

Speed to market: Iris tested and delivered the solution within 6 months from start meeting the Dodd-Frank deadlines for mandatory execution on SEF.

Execution excellence: With Iris' expertise on the Fixed Income Domain, the Iris team was able to execute and document the end-to-end trade flow for the interest rate swaps on the SEF, accurately, the first time around. Stubs were used for applications that were not fully integrated to overcome technical and operational roadblocks.

Collaborative problem solving: Iris worked extensively with the client's business analysts and technical teams and also established co-ordination with the third party application teams to test the end-to-end trade flow.

Predictable paybacks: The solution was delivered with high quality, on time and budget.

SEF Workflow
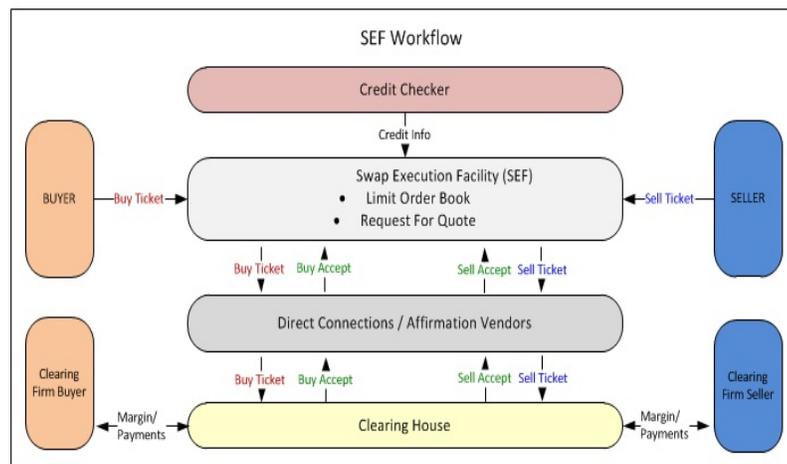
About Iris

Iris (www.irissoftware.com) is a professional software services organization providing its customers with high-quality, cost-effective solutions and developing mutually beneficial relationships. Iris does this through comprehensive solution offerings with best-of-breed technologies, rapidly deployable solutions, flexible engagement models and proven methodologies. This allows customers to focus on their core competencies, and concentrate IT resources on projects that directly impact their bottom-line.