Quaternion™ approach to IFRS 9 Structured Loan Pricing

International accounting rules (IFRS 9) detail the requirement for the 'exit price' of a loan (the value at which such an instrument could be sold in the open market), especially where the loan has optional features that can significantly change the future cash flows.

In most situations, there is no liquid market for loans, in particular not structured ones, which reduces the ability to calculate the exit price. Therefore, the calculation relies on relating the loan price to the credit spread of some comparable liquid instrument (such as a bond).

Additionally, the ability to properly price any embedded options (such as prepayments, payment in kind, call rights, options to switch from fixed to floating or vice versa, drawdown options) requires an ability to include interest rate sensitivities based on a hybrid, multi-factor model using Monte Carlo simulation for projecting cash flows and exercise behaviour.

Quaternion Risk Management has developed a loan pricing library, based on the Open Source Risk, that satisfies these requirements and uses well documented, transparent methods for the risk factor simulation.

Using the Quaternion loan pricing tool allows our clients to:

- Value loans with many optional features;
- Do risk analysis on such loans;
- Validate their own pricing models, thus strengthening internal controls and negotiation positions.

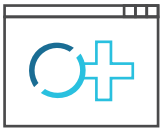
CLIENT MODEL

A client's internal model has been developed by the risk or technical units based on the existing frameworks of the organisation itself

OPEN SOURCE RISK

ORE

Open Source Risk provides an Open Source engine under an open BSD license providing a fully transparent, cutting edge platform for the Quaternion product suite



ORE+

Quaternion has developed a series of libraries integrating with Open Source Risk to deliver superior results in terms of speed and breadth

Features

- Accurately value complex loan structures
- Enable scenario testing on loans s
- Validate internal pricing models
- Built on open source

Benefits

- Transparency of the core model
- Independent model validation
- Regulatory compliance
- Developed by Quaternion experts