



Credit Risk Modelling

A fresh take on risk and valuation

Credit Risk Models
— do your models
have the highest
possible predictive
power?

CREDIT RISK MODELLING

MACHINE LEARNING

IRB AND IFRS 9 CREDIT MODELS

CREDIT DECISION MODELS

ECONOMIC
CAPITAL CALCULATIONS

Finalyse is a renowned partner for the development of regulatory models. More than 30 years of experience allowed for the excellence in model designs like IRB or IFRS 9. Most notably, we offer the development of scoring models for credit decisioning and monitoring purposes. These models are built with respect for industry-leading methods, including Machine Learning techniques.

Finalyse takes accountability for the entire model development process – starting from data preparation through exploratory data analysis and ending with model development and its validation on an independent sample.

Holding true for all recommendations from European and local authorities, we guarantee the regulatory compliance of the model developed.

Complementary services:

- Control your model risk with Finalyse Credit Risk Modelling toolkit to bridge the talent gap and reduce implementation risks.
- Finalyse Machine Learning Model Validation Framework will help to ensure that your model performs as expected.



For more information, visit

www.finalyse.com/credit-risk-modelling

Benefits

- A model developed to fit your needs. Having completed numerous model development projects for all kinds of institutions across Europe, Finalyse leverages on its vast experience and tailors the offer to each client.
- Make your models compliant with regulatory requirements.

Motivation

Bank's competitive advantage to a great extent depends on the modernity of models in use. Statistical and Machine Learning models with high predictive power become Banks' important asset. They allow to better understand complex reality and are able to make close-to-perfect predictions of the future. Thanks to our expertise in modelling, we can assist you in methodology choices, model development and deployment.

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WARSAW

Credit Risk Modelling

Finalyse Client Cases

IFRS 9 Modelling

LIFETIME PD MODELLING AND IMPLEMENTATION OF ECL CALCULATION ENGINE

IFRS 9 requires ECL provisions to be determined differently compared to IAS39. To help the client (Bank in the Netherlands) become compliant by the application deadline, Finalyse provided the following:

- Lifetime PD modelling (Migration Matrix approach)
- Linking the macro-economy directly to the migration matrices
- Documentation of the Lifetime PD estimation framework
- Linking
- ECL calculator (Calculating lifetime PD, LGD and EAD paths for all exposures in scope)
- Stage determination (implementing the business rules into the ECL calculator)

IRB

IRB METHODOLOGY

Finalyse joined client's credit risk department to improve the group-wide internal ratings-based (IRB) modelling methodology standards with regard to PD, EAD and LGD.

This project had been initiated to:

- Investigate, implement and document possible improvements of the modelling methodology standards with regard to PD, EAD and LGD
- Update the monitoring framework, to align with the new methodologies and ensure more efficient and streamlined monitoring of all models
- Update the model's document templates
- Automate the regulatory compliance tracking

Credit Decision Modelling

SCORECARD MODELLING

Our consultants prepared a scorecard model using logistic regression using Python scripting language. Along with the model, Finalyse provided implementation instruction for our client's business partners.

- Project requirements definition
- Product design
- Data preparation in SQL
- Model development in Python
- Writing implementation instruction

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