



Industry

Banking

Business Issue

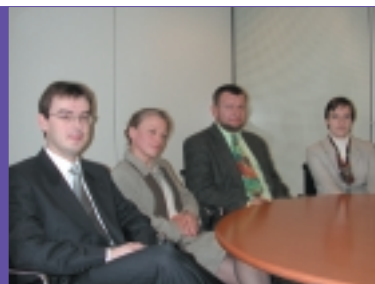
Standardization of credit risk measurement through ING and raising new Capital Adequacy Directives

Solution

SAS® Enterprise Miner™

Benefits

Reduced time needed to fine-tune or update rating models, standard model available to the whole ING Group



Some members of the ING SWE (South-West Europe) Credit Risk Management Team, from left to right:

Jurgen Tistaert,
Head of Credit Models, ING SWE

Tamar Joulia-Paris,
Global Head of Credit Risk, ING SWE

Philippe Meunier,
Head of Credit Systems & Models,
ING SWE

Anne Willocx,
Head of Large Corporate Rating Agency,
ING SWE

The Power to Know.

ING Building a Large Corporate Risk Rating Model with SAS

The corporate strategy of ING Group is one of focusing on Centers of Excellence and encouraging each entity to capitalize on its strengths. An excellent example is ING's Rating Department, at the time located within BBL Brussels. This department acts for ING Group as an internal Large Corporate Rating Agency and a Large Corporate Rating Modeling team. The team has worked with ING Group on the construction of a Large Corporate Rating Model. This SAS-based Large Corporate Risk Rating Model delivers a series of benefits to support the process of building, testing and assessing a rating model, not only by reducing time and effort but also by operating as a common means of communication between ING's modeling teams.

Since 1998 Bank Brussels Lambert was a member of ING Group, a leader in integrated financial services and ranked seventh among European financial institutions. The core business areas of the former BBL were retail banking and insurance, corporate and institutional banking, financial markets and investment banking, and asset management and private banking. BBL also provided leasing, factoring and travel services through specialist subsidiary companies.

A common rating language

As part of a global standardization program implemented after the 1998 merger, ING Group decided to extend the Risk Rating expertise already used by BBL throughout the entire group. BBL had been developing and using its risk rating system since 1992 (five risk rating scales per customer segment, a credit research service and a rating model for the Middle Market segment), but did not yet have a rating model for large corporate customers.

The primary objective of the ING Group program was to develop a standardized common rating system for global segments, to replace the various different risk rating methodologies used previously (each unit of the Group had its own

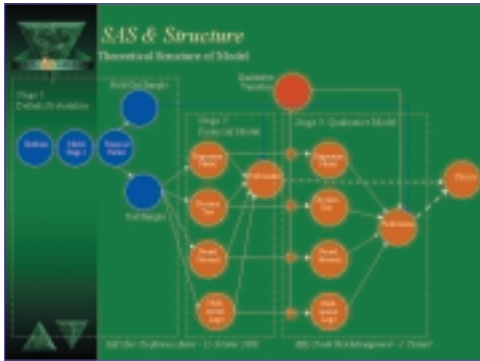
methods). The main drivers are twofold: standardization of credit risk measurement through the ING organization and raising the new Capital Adequacy Directives. In the first phase, the agency was to provide credit research and rating services for ING Group's 600 largest corporate customers. According to Philippe Meunier, Managing Director with special responsibility for Credit Systems & Models, the biggest challenges were to establish a correct classification, grading and rating model, to extend the system to ING Group's almost 10,000 corporate customers, and finally to ensure the correct follow-up of credit quality. The Rating Service was subsequently to be made accessible to all ING Group units via an intranet-based application.

Starting almost from scratch

Although BBL already had extensive experience of its own risk rating system, the much larger scale on which the new model was to operate meant that almost everything had to be started again from zero. ING's corporate portfolio covers not only European, but also Asian and South American customers.

The project team decided to go for a "quasi-default" model, built in three stages: generation of default probability, construction of a financial model which explains the default probability, and then the final stage of adding qualitative factors to the model. The tool's output would be not only the predicted probability of default or the predicted rating, it would also be used for scenario analysis.

"One of the weak links in the basic model we produced was the hybrid nature of the data sources," concluded Jurgen Tistaert, Head of Credit Risk Models. "We were able to improve that aspect – and, indeed, the entire data handling – significantly by using SAS® Enterprise Miner™. We already had excellent experience with SAS within BBL. Now we had the opportunity to try out different hypotheses and assess the various models straight away."



"The flexibility, robustness and integration possibilities of SAS Enterprise Miner™ motivated us to use it to develop the Large Corporate Risk Rating Model for ING Group."

Jurgen Tistaert,
Head of Credit Models, ING SWE

Flexibility and integration

The models were tested and improved, and finally one model was selected for testing on a few pilot sites in the ING organization. Work began simultaneously on implementation of the model into an intranet application.

"Our previous knowledge and experience of SAS enabled us to adapt certain components of SAS® Enterprise Miner™ ourselves. We were extremely satisfied with the smooth integration of the standard modules with the statistical modules we developed ourselves. This is one of the points where SAS® Enterprise Miner™ has great flexibility," confirmed Jurgen Tistaert.

Trading off quality and time

"The exemplary robustness and strong statistical foundation of the SAS system provides a guarantee of high quality results," said Philippe Meunier. However, time limitations are an important factor too: "Previously, we worked with a chain of more than 10 files, with various statistical procedures. It could easily take several days to produce and assess different models, and the entire procedure had to be repeated if we discovered subsequently that a particular element was

missing. Housing the model in SAS® Enterprise Miner™ reduces the time needed to fine-tune or update a version of a rating model to a maximum of a few hours, with the results available for display on-screen immediately, thanks to the excellent direct visualization facilities of SAS."

The flexibility of SAS also ensures that the whole system can evolve. "It allows us to exchange templates easily. As such, it enables us to share the work between modeling teams very easily, because everything - data, modeling, and performance testing - is integrated into one single SAS structure," said Jurgen Tistaert.

Validating and extending the model

Implementation of the risk-rating model in the in-house intranet application makes the large corporate rating available to the whole of the ING Group. This application functions as the ING Corporate Rating Database, including the use of the rating model. Using the rating model enables financial and qualitative factors to be captured. This will allow the rating model to be improved continuously, and extended towards a pure default model and/or a pure rating model in SAS.

"While the Large Corporate Rating Agency itself consists of some 20 people, the rating model will be used increasingly throughout the ING Group by a couple of hundred users as a decision support platform and a communication tool," concluded Philippe Meunier.



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