



Industry

Banking

Business Issue

Automate risk assessment

Solution

Credit scoring solution with SAS

Benefits

Improved risk & asset positions



“We can adapt the scoring variables ourselves whenever the need arises, without any advanced IT knowledge. This provides us with the daily flexibility we need when assessing credit demands.”

Sophie Labenne,
Risk Manager at Dexia Bank

The Power to Know.

Dexia Bank uses SAS for fast and accurate credit scoring

End-to-end usage of SAS technology improves risk management

Dexia Bank receives up to 700 requests for consumer loans a day - obviously too much to process by hand. Instead, the bank relies on an automated risk assessment tool. Thanks to the end-to-end use of SAS technology - from model building and data extraction to decision support - 85% of loan requests are processed automatically. Scoring parameters can be easily adjusted based on new legislations, market evolutions, or litigation rates. As a result, the productivity of risk management is on the rise, while the improved risk position benefits the bank's overall financial health.

With a broad offering of banking and insurance products and services, Dexia is Belgium's second largest financial group. Like many other financial institutions, Dexia Bank uses a credit scoring procedure to assess the risk of granting a loan to a customer. The sheer number of parameters involved makes this a time-consuming exercise.

Assessing expected default

Dexia Bank uses two different methods to assess solvency. The choice of method depends upon whether the applicant is already a customer or not. For new applicants, the bank uses a product scorecard based on static variables such as age, marital status, profession, type of product, loan duration, or income. For existing customers, it relies on a behavioral scoring method that is used to estimate the expected default as required by the Basel II legislation. This gives the probability that a customer will be unable to pay back their debt within the next twelve months. It takes into account a greater number of variables including excess overdrafts, credit card usage, timeliness of reimbursements, and movements on the bank account.

“Our credit scoring method based on expected default analyzes all the information we have on existing customers”, explains Sophie Labenne, Risk Manager at Dexia Bank. “The more we know about the applicant, the better

we can assess their ability to pay back the loan. In addition, we must take into account the requirements set out by the Basel II legislation regarding the amount of capital and reserves a bank must keep to cover loan risks.”

SAS scores high

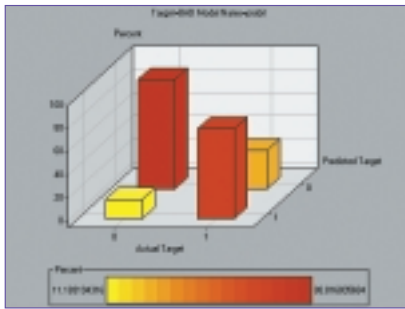
Given the vast number of parameters involved and the quantity of applications Dexia receives, they needed powerful software to help them make the right decisions faster. The application had to lighten the load for analysts by enabling the highest possible degree of automation in deciding whether to grant a loan or not.

Dexia Bank chose to build their scorecard with SAS. “We had been using SAS technology since the late eighties for data gathering purposes”, notes Sophie. “Over the years, we added complementary SAS tools to exploit data and produce reports. With the recent addition of modules to develop, model, and monitor scoring systems, we now rely on an end-to-end SAS solution that meets all of our requirements perfectly.”

From raw data to decision support

In the SAS configuration implemented in the Risk Management Department of Dexia Bank, raw data are first extracted from all customer, product, and financial databases. All this information is then merged into a central server running SAS Mainframe. All programs and applications also run on this server, which increases processing speed and automation. In addition, SAS® Enterprise Miner™ is used to develop and fine-tune the scoring systems.

To assess the risk related to each customer, Dexia Bank has developed the so-called ERIC (“Evaluation Risque Client”) application. The ERIC reports are generated by SAS/EIS®. Depending on the scoring model, ERIC generates an automatic response: yes, no, or undetermined. In the latter case, the request is forwarded to a classical system based on a product scorecard or to an



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expert analyst. The target is to limit the number of undetermined cases in order to increase automation. At the same time, Dexia needs to maximize the acceptance rate while minimizing recovery litigations. According to Sophie, Dexia currently has up to 700 loan requests a day. The model developed with SAS generates an automatic response for 85% of loan demands.

Close monitoring

Monthly reports are generated in SAS to monitor product profitability and acceptance rates, and to follow up on the number of recovery actions. This rate is analyzed in detail for each scoring category. Whenever it becomes too high for a given score, the relevant variables are adjusted in the customer scoring application. These parameters are also adapted following evolutions in payment habits. For instance, the growing use of credit cards for online transactions and the gradual decline in the use of checks are both factors that influence the risk assessment of an applicant.

Rapid adjustment to changing demands

“An important benefit of SAS is that it reduces the need for training to a minimum”, adds Sophie. “SAS® Enterprise Miner™, for instance, is a point-and-click

application that is very easy to use. It allows us to create powerful scoring models without the need for advanced IT knowledge. We make the scoring models ourselves, choose the variables, and then ask the IT department to put the model into production. This is an extremely important feature since our scoring models need to be fine-tuned continuously in the face of growing competition and major changes in legislation such as IFRS and Basel II. In this respect, SAS provides us all the flexibility we need. The query features are equally simple to use. Graphic visualizations enable us to instantly spot which ratios and trends we need to focus on.”

Preparing the ground for marketing campaigns

The behavioral scoring system is also used by the marketing department for customer segmentation. It is extremely useful, for instance, in helping identify the most suitable customer profiles for commercial mailings. The system allows detailed profile analyses based on a customer’s total assets and also enables correlation analyses between risk and return.

“With over 2.2 million Dexia customers, many of whom have several cards and accounts, you can imagine the quantity of information our marketing department

has to deal with”, stresses Sophie. “SAS Data Mining helps us identify which of these customers are likely to be interested in a specific product. This significantly increases the success rate of our marketing campaigns, and prevents us from alienating customers that have no interest in certain products or services.”

Optimal balance between risks and available funds

The risk assessment application also benefits the entire institution by helping the Bank stand on more solid ground. “All banks must comply with the Basel II requirements, but we try to go a step further by continuously improving both our asset and risk positions”, Sophie concludes. “After all, an improved risk management enables us to block less reserves. And that freed up capital can be invested in turn to generate more revenue. It’s a winning loop.”



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