



KXEN at Lefco-Bank – managing risk in an automated credit rating system

Russia's banking sector faces multiple challenges as it strives to catch up with competition in Europe and beyond. Not least among them is how to safely address the emerging local market for consumer credit.

In parts of the world where consumerism is long-established, lenders can usually turn to a network of information sources to help establish the credit worthiness and risk posed by an individual applicant. But in the Russian Federation and CIS countries such a facility is rare. A prospective borrower may be asking for a bank loan for the first time in his or her life. Making a safe judgment can therefore be particularly difficult for the lender.

It was the need to resolve this problem that led Moscow's Lefco Bank to adopt KXEN's next-generation analytics software. With the help of Russian software reseller Ksema Tern Group, Lefco Bank integrated KXEN with RS-Loans – a key component of the RS-Bank Automated Bank System (ABS). The result is an innovative loan application and scoring system that enables the bank to make an informed decision on whether to grant a loan within just 15 minutes of receiving a request.

So successful has the project been that Lefco Bank is now looking at further leveraging KXEN, deploying it next within the marketing department on programmes focused on customer acquisition and retention.

The context

Lefco Bank was founded in 1991, growing to become a high-ranking provider of predominantly corporate banking services. But the bank's management was watching with interest the emergence of retail credit as an increasingly strong factor in the Russian economy and at the end of 2003 it decided to explore this segment seriously.

A retail department was established, initially to develop or procure the methodologies and systems needed to operate efficiently within the new market. Solutions were needed for everything from how loan applications forms would look and integrate with other bank systems right down to where retail specialists would be physically accommodated. But at the centre of the new department's challenges was that of creating a reliable mechanism for estimating credit capacity and bad debt risks.

The retail team examined a number of options including a simplified scoring system. This was quickly rejected as being too subjective.

The simple formulas did not allow consideration of all potentially relevant parameters and it was further handicapped by the inability of most applicants to prove a credit history – both vital elements in the building of a robust scoring model.

The team then considered buying scoring cards but this option was also discounted on the grounds of

cost, the short life of the data, and because it too failed to accommodate the consideration of other relevant parameters.

In common with many other indigenous and foreign banks in the Russian Federation and the CIS, Lefco Bank was already a major user of RS-Bank, the banking automation suite developed and supported by R-Style Software Laboratories. The suite's RS-Loans module offered much of the automated functionality required by Lefco Bank, including the ability to create and process loan application forms. What it lacked was a component able to speed and accurise the yes/no decision-making process, and to integrate seamlessly with RS-Loans.

The retail team came to the conclusion that they needed to find such a tool – an analytics engine – which would allow them to build scoring models on their own, and to correct and renew them as often as necessary.

The list of essential attributes was daunting. The analytics software would have to deliver high quality, accurate models which generated confidence. It would have to enable models to be built and operated very quickly if the loan application process was to be fast and painless for bank customers. It would have to enable models to be renewed even while data was being inputted. And, finally, it would have to be easy to use. Lefco-Bank did not want to have to recruit more costly statisticians and analysts, and neither did it want retail banking specialists to spend an uneconomic amount of time on repetitive but vital tasks.

The Solution

After comparison of several rival analytic tools, KXEN software, introduced by KXEN integration partner Ksema Tern Group, was selected as the optimal solution.

"Quite simply, KXEN put ticks in all the boxes," says Mikhail Avetisov, Ksema Tern Group's deputy director. "It offered Lefco Bank flexibility in the management of models, very high quality results, automation of the most routine and laborious steps of modelling, smooth integration with the RS-Bank suite, and it did not need to be operated by highly-skilled – and highly costly – analytics experts."

Tern Group's role in the project was central, with its consultants and specialists providing comprehensive services including implementation of the server version of KXEN, enabling the later building of advanced models for regression and cluster analysis.

Tern also carried out integration with RS-Loans and Lefco Bank's Automated Bank System (ABS), as well as training.

Since there was initially little or no data on potential borrowers, Lefco-Bank's first models were based on expert evaluating formulas. Then, as real data was accumulated, the models – including credit rating, probability of default, probability of early payment, recommended sum of credit, recommended volume of initial payment – were rebuilt and corrected. Thanks to KXEN, this was not the major task that it would have been with an old-generation statistical analytics package.

Lefco Bank proved KXEN's claims to be true: models can be built in a matter of hours, rather than many weeks – and the resulting data is more accurate.

The Results

The solution is working as expected. An applicant completes a loan form by hand. **The data fields are keyed into the RS-Loans/ABS system and a Lefco Bank retail banking expert then uses the appropriate KXEN models to generate all required ratings before making a decision on the requested loan.** The customer is then invited to sign a credit contract.

The whole process takes on average 15 minutes from start to finish and, says Lefco Bank, could even be fully automated in the future.

With a growing body of experience, and rapidly accumulating customer data, it will soon be possible to identify which factors are key and perhaps exclude the less important ones in order to reduce the complexity of the application form. Moreover, as the culture of retail borrowing grows in Russian society, the accumulated credit history of bank clients will enable the calculation of additional ratings and the inclusion of borrowers' history of behaviour into models.

About Ksema

"Ksema" Company specializes on modeling and prediction analysis solutions as well as on solutions for automated budgeting processes. It was established in 2002 by the division the part of Tern Company specialists, who began to develop these business directions since 1998. "Ksema" is a partner of KXEN in Russia and CIS. KXEN direction: realized projects on building scoring systems, bad debts analysis, churn management. SHART direction: budgeting, financial-economical modeling and data consolidation projects. . Visit the Ksema Web site at www.ksema.ru.

About KXEN

KXEN provides next generation business analytics software to drive better corporate decisions. KXEN's unmatched speed, ease of use and scalability enable leading companies around the world to expand the use of predictive analytics and enhance corporate performance. Based on breakthrough mathematical theory, KXEN's products offer reliable predictions and deep insight for achieving critical business goals. The company partners with leading systems integrators and software vendors to integrate advanced analytics into enterprise

applications and business processes. Founded in 1998, KXEN is headquartered in San Francisco, California, with offices in the USA, UK, and France, and distributors throughout the world. Visit the KXEN Web site at www.kxen.com.

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