

> Lloyds TSB

Financial services company fights credit card fraud

Situation

Lloyds TSB is part of the Lloyds TSB Group—one of the leading U.K.-based financial services groups, whose businesses provide a comprehensive range of banking and financial services in the U.K. and overseas.

Due to the industry-wide increase in credit card fraud, Lloyds TSB, along with most other major issuers, recognized the need for improved proactive fraud detection to limit customer and shareholder impact. Fraud is a small percentage of Lloyds TSB's total business, but it is costly to the bank, and inconvenient to customers whose confidence in the payment process is paramount. Lloyds TSB already had detection systems in place but recognized the need to fully exploit these systems in order to combat a fast-growing problem. To this end, the group established a dedicated section within the main fraud department with the sole purpose of using data analysis to reduce card fraud from the account-recruitment stage through to card-delivery methods and transaction profiling.

Critical Issue

The main issue with fraud detection is trying to differentiate between genuine and fraudulent spend. Identifying fraud has been likened to finding a small, but very sharp, needle in a haystack. The base detection systems that are installed improve that analogy to a needle in a bale of hay. Data analysis has enabled Lloyds to improve the detection process.

It would be easy for Lloyds TSB to stop virtually all card fraud by simply speaking directly to the cardholder every time a transaction was made, but with several million credit cards in circulation, this is not possible. Lloyds TSB set a target of trying to identify at least 65 percent of fraud at a false/positive ratio of no worse than five to one. In other words, for every six transactions that are intercepted in real time, at least one of them will be fraudulent. By doing this, Lloyds TSB planned to identify and prevent at least 65 percent of the fraud that it suffers.

At a glance

Country: United Kingdom
Industry: Financial services
Founded: 1765
Company Type: Public
Revenues: €17 billion (2001)
Employees: 71,500

Application

Fraud detection and prevention

Solutions Used

PASW® Statistics*

*PASW Statistics, formerly called SPSS Statistics, is part of SPSS Inc.'s Predictive Analytics Software portfolio.

■ Fraud detection and prevention

Solution

A member of the analysis team who used the same software at a previous card issuer chose an PASW Statistics data analysis solution. The ease with which decision trees can be built and then translated into “if...then...else” statements made it ideal for integration into Lloyds TSB’s base fraud detection systems.

The main requirement of the software was that it was easy to use and supported dynamic interaction with the data. Only one member of the nine-person analyst team had any experience with the package, and although there was some one-to-one coaching, analysts were very much encouraged to “play” with the software and data as part of the training module.

During the summer of 2000, various areas within the division piloted a small data warehouse with the sole objective of clearly demonstrating the benefits of data mining and analysis using their own data. The warehouse pilot allowed Lloyds to have full interaction with all of its transaction data, and PASW Statistics was the software of choice.

□ “Within the two-week pilot period, we had built 24 fully working predictive models with an estimated annual savings of approximately € 3.5 million.”

– David Cooper
Head of Fraud Strategy
Lloyds TSB

Results

Going into the warehouse pilot, Lloyds TSB already had some success with PASW Statistics on small subsets of data. The company knew, therefore, that it would get some benefit from the software. However, the warehouse gave Lloyds TSB all of the data on powerful machines and in a working environment that was conducive to analysis.

In addition to the financial benefits, the time needed for an analyst to develop a complex rule was reduced from a few days to a few hours. Furthermore, the software enables models to be simulated prior to implementation in order to quantify the data in advance.

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