Fraud: the analytical approach

Using data already available to you - such as CIFAS data - can be a cost effective way to slash underwriting costs and reduce reliance on third-party systems. Martin Smith explains how.

In the fight against fraud, it can appear that the market is awash with systems and processes to aid detection. System-based solutions can be adept at piecing together suspicious applications or high risk transactions. Each has its own strengths and benefits, and is often targeted at different aspects of fraud. Importantly, they can throw some much needed caseflow management around the fraud investigation, to add some structure.

The holy grail of fraud detection

But system tools on their own are not always the most cost-effective way of detecting fraud; the profusion of different services and approaches can result in fraud departments having to deal with huge levels of complexity, both in terms of systems architecture, and in dealing with the sometimes competing outputs of these approaches.

The real holy grail of fraud detection lies in the smart use of data to ensure that you're not missing a trick within your own operation, using combinations of internal and external data to deliver a predictive ranking for each case. The typical patterns of application or transactional activity that underpin many of the commercially available systems can often be found within your own application data; while a "high risk" event may merit further investigation, the presence of a one-off indicator in isolation may not point to the existence of fraudulent activity. Some level of sophistication is needed to work out where your fraud hotspots are.

Take a rounded view

In fact, as with credit scoring, the best approach to fraud detection is to implement some advanced statistical models or scorecards which take a rounded view of the emerging fraud patterns and respond to often nebulous triggers by pushing suspicious activity higher and higher up the priority list. By identifying extremely high risk and extremely low risk groups, you can target your resource at those pockets of cases most likely to result in fraud, whilst reducing your external systems cost on those cases where the fraud rate is minimal. Your underwriters won't have to work every case in the system, and you won't need to make as many expensive bureau calls. Underwriters will quickly gain an intuitive understanding of the fraud scoring bands. And so, in the process, you can reduce your underwriting cost.

Four golden rules

There are a few golden rules to follow in moving towards an analytical approach.

- Firstly, you do need access to a good source of confirmed fraudulent cases on which to base your models. Ideally, this should be your own data if you have it, or it could be external sources such as CIFAS. Predictive data sets such as Jaywing's **smartfraud** can help here too. However, it's important to understand the dynamics of the scores you're using, which is why you should ensure that third party scores and data - whether embedded in the system or provided separately - are as transparent and well-understood as your own.
- Secondly, you need to make sure that the way data is captured and used is sufficiently granular. The more detail you can throw into your model, the more chance it has of predicting fraud. And in particular, if your data contains information about different types of confirmed fraud, your models can be tailored around these different predictive needs.
- Thirdly, make sure you're looking in the right place. Some systems try to detect fraud by studying the victims' profiles rather than those of the perpetrators. Needless to say, their success is limited.
- Finally, you obviously need a way to deploy your fraud models. Most application or transactional systems should enable the deployment of scorecards based on any of the data in play, and once these models are in place you can quickly use the outputs to determine which cases you wish to review. Fraud patterns can change quickly, so it's important to monitor performance, adjust and recalibrate the models in response to the changing impact on your organisation.

Modelling with CIFAS data
CIFAS members are now able to incorporate the CIFAS data within their own scoring models. This is a relatively recent development: previously, organisations could only manually review those cases where adverse CIFAS data was registered. In our experience, stepping CIFAS information into fraud models can have a very positive impact on detection rates, and so if you are a CIFAS member, it is worth contemplating this step. However, it is important to ensure that the analyst building the model has a detailed understanding of the data: it is all too easy to build a fraud model from the wrong assumptions.

An effective approach is to use CIFAS data alongside fraud application models to create a two-dimensional score matrix, which highlights pockets of high risk activity amongst your applicants, driving differentiated strategies to reflect the different risk levels and giving useful guidance to your underwriters through the use of identifiable risk segments.

In the lowest risk segments, you can safely choose to proceed with virtually no intervention, electronic or manual. You will find the vast majority of your fraud cases in the highest risk segments (up to 84% in the bottom scoring 5% of applications), where the combination of bureau, CIFAS and application data is ringing very loud alarm bells. Here you can safely decline the cases or apply much more rigorous fraud checks.

Make use of available data
The route to enhanced fraud detection does not always lie in further system investment. Making use of data already accessible to you can slash underwriting costs and reduce reliance on third-party systems.

Jaywing can help you move towards taking an analytical approach to your fraud detection, through bespoke consultancy or use of our syndicate-based fraud products such as **Foil** and **Foil 4D**. Additionally, **smartfraud** - a postcode level fraud score - assists your fight against fraud at any stage of the customer lifecycle by overlaying confirmed fraud data with a large number of predictive data sets.

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