PREDICTIVE ANALYTICS AND THE COMBAT OF FRAUD

Darren McCauley

10th June 2014



- Why am I here?
- Fraud impact on the industry



Three things you will need to solve most problems

- Curiosity
- Imagination / Commerciality
- Data



- Customer service
- Is it easy to predict?
- Process



BROKERS

- Are all Brokers equal?
- Entrepreneurs
- 80 / 20 rule
- Understand the issue and do something about it!





- Do you really understand who you are about to lend money too?
- More importantly do you know who is least likely to pay
- Use your data
- What happened when we modelled



PAYMENT (2)

Results

We had four types of customer





PAYMENT (3)

Results

We had four types of customer



Completing this exercise we ended up with more customers, less Bad Debt, and more premium being financed



Predicting who to lend to is clearly only part of the problem

- To truly understand you also need to model default
- What happened when we modelled





CLAIMS FRAUD

- The model has a relatively high strength (181%).
- The model has a Gini coefficient of 0.596
- over 60% of fraudulent claims are contained in the 20% of exposure data
- We were able to fit a multi factor model that predicted claims fraud well
- This is deployed along side our normal neural tool.
- This was the first iteration we believe it can be improved significantly



TESCO Underwriting

CLAIMS FRAUD MODEL

- We found an interesting factor with mileage
- Garaging has similar impact on fraud risk
- The following segments have a lower propensity for fraudulent claims
 - Customers with risk address in Scotland
 - Low ABI groups
 - 4x4 Vehicles
 - Drivers who include cover for commuting



TESCO Underwriting Limited

What happens if you don't fight Fraud

TESCO Underwriting Limited

TWO TYPES OF FRAUD

TESCO Underwriting Limited

THE ULTIMATE TARGET

Underwriting approach

Considerations

B

- UW & pricing is first line of defence
- Predict who you don't want and screen them out.
- Use industry or commercially available data to corroborate key factors
- No action / Additional Premium / Void or Cancel
- Ensure follow up & links with claims
- Management Information is key
- Track, analyse, predict
- Use insight to refine approach
 - This is a war not a battle you need to win the battle many times to win the war

TESCO Underwriting Limited

- The innovation in Fraud is amazing. Doing something once isn't going to work, you need to evolve
- Ultimately it comes back to curiosity, imagination and data.
- In my experience in insurance people seek out new data and don't exploit what they already have.
- People don't think about the problems properly and design solutions for the minority not majority
- The point of today's discussion was not to tell you the answers but to hopefully get you thinking.....as an audience you are well equipped to do that

Thank you.

Questions?...

