

The Actuarial Profession
making financial sense of the future

General Insurance Pricing Seminar
Mark Jones – Director, CIFAS The UK Fraud Prevention Service

The Influence of Cross Sector Fraud on Pricing

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Today's Presentation

- Background
- What is CIFAS?
- Operating in the UK
- How CIFAS works
- Fraud types and trends
- Cross sector matching
- Predictive use of data
- Testing – scenario 1
- Testing - scenario 2
- Conclusions



Mark Jones CFM MIOD MICM MIMI



Background

- ♦ Mark has formerly held a variety of senior management and consultancy roles at NatWest, Abbey and Royal Bank of Scotland/Direct Line.
- ♦ Founder of Conversant Data Ltd
- ♦ One of the first civilians certified in Fraud Management Mark has over 20 years of Financial Services experience.
- ♦ Mark holds MIMI, MICM a PGcert in Fraud Management and is a member of the Institute of Directors.



Experience

- ♦ Mark created Conversant data Ltd with Paul Stanley in 2003 and built the most advanced fraud risk management business process outsourcing operation in the UK. This included the negotiation and delivery of a three year exclusive contract with CSC (Computer Sciences Corporation) and a partnership with Liverpool University and a number of other pre-eminent academics in the field of psychology and criminal studies. During it's first three years revenue grew from start up to £1.2m and culminated in Conversant working with many blue chip clients in the financial services sector. Mark was instrumental in it's sale to Innovation Group plc in April 2007 for £4.0m.
- ♦ Mark led Conversant's expansion into other sectors and emerging territories with an particular focus upon Central Eastern Europe (Poland/Belarus/Ukraine and Russian Federation).
- ♦ Mark's career has spanned roles in Operational and Risk Management, collections, Sales and Underwriting both in Retail and Corporate environments. Mark won the Success in Action award in Lombard/NatWest for his innovation in underwriting processing.
- ♦ Mark has been involved in Fraud management for nearly 20 years as Head of Fraud at Lombard Motor Finance, First National Motor Finance and Direct Line Group (latterly RBS Insurance). He has been instrumental in creating teams of people to deliver fraud savings in excess of £20m per annum.
- ♦ Mark has been a non-executive director of CIFAS Ltd the UK's fraud prevention service for around 10 years and sits on the remuneration and audit committee. CIFAS is a not for profit membership entity with a turnover of £4m per annum. Mark presided over Lombard/First National and Direct Line becoming the first Accredited CIFAS members in the sector.
- ♦ Mark has advised on a number of industry wide initiatives with the ABI, FLA and government fraud busting groups.
- ♦ Mark is a regular speaker at conferences, on radio and in the national press on fraud, financial crime and in particular insurance fraud prevention and technology/outourcing.
- ♦ Mark has chaired a cross sector working group on the use of Automatic Number Plate Recognition Technology within the private sector.
- ♦ Mark regularly lectures at the Defence Academy on Criminal Profiling, Technology and Data Matching and Mining.
- ♦ Mark has given evidence at many high profile criminal trials and has received thanks and plaudits from judges and police officers alike.

Background and history

- Late 1980s – UK recession
- Founded by 8 providers of retail finance (store cards)
- Formed in 1988 as the **Credit Industry Fraud Avoidance System – CIFAS**
- Police: “treat fraud as NON-COMPETITIVE”



What is CIFAS?

- A UK wide fraud prevention association
- The world's first fraud data sharing scheme to share information on confirmed frauds
- A “Not-for-Profit” company funded by its Members
- Over 265 Members share data on confirmed fraud



Core Principles of CIFAS

- Fraud is a non-competitive issue
- Information sharing on confirmed fraud to prevent further fraud
- A ‘burden of proof’ must be established
- Cross-Sector Data-Sharing **and** Reciprocation
- Detection, Prevention **and** Deterrence

CIFAS Membership

265+ Members:

- Banks / Building Societies
- Mortgage Lenders
- Credit cards
- Retail credit (store cards)
- Mobile phones
- Asset Finance (vehicles)
- Insurance
- Mail Order
- Share dealing

Participating Agencies:

- Fraud prevention agencies: Callcredit, Equifax, Experian, EDA and Synectics

Affiliate Members

- Companies who are not able to join CIFAS, but work closely with CIFAS and its Members

Working inside the UK

There are many other bodies whose work is fundamental to the fight against fraud in the UK

- **ICO:**
Information Commissioner's Office
- **NFA:**
National Fraud Authority
- **NFIB:**
National Fraud Intelligence Bureau
- **NFRC:**
National Fraud Reporting Centre
- **IFCAG**
(run via the Home Office)

- **FSA:**
Financial Services Authority
- **Credit Reference Agencies:**
e.g. Callcredit, Equifax, Experian
- **Private Sector Associations:**
e.g. British Bankers' Association
- **Commercial companies:**
e.g. VeriSign, Ordnance Survey
- **The Police**

UK Fraud Figures

Some facts and figures:

British Crime Survey 2008-2009

- 80,104 robberies/muggings
- 163,283 fraud/forgery offences

700+ data-breaches reported to the ICO*

- 450+ by the public sector
- 200+ by the private sector
- 46 by others (e.g. charities)

* since November 2007

The NFA estimates the cost of fraud to the UK economy to be:

£30 billion per year!

That means?



£621 per year for every man, woman and child in the UK!

How CIFAS works

The basics

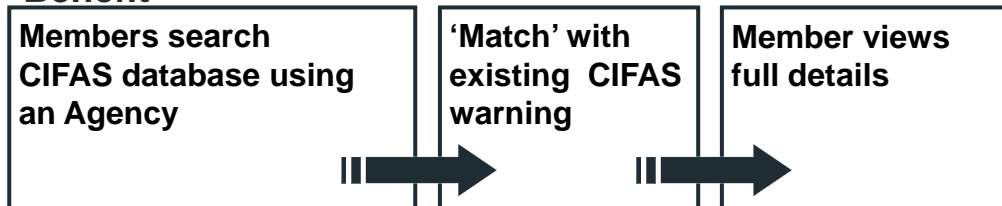
- **FIND** - **F**raud **I**nvestigations **D**atabase
- **250,000+** confirmed frauds currently on **FIND**
- Members check applications against **FIND**
- Record remains on **FIND** for as long as proof of fraud remains
- Internet-based and available 24/7 for Members

Searching the Database

Contribution



Benefit



Protecting business

Data sharing saves £££s

- Members record and search
 - ✓ Subject details – full names, DOB
 - ✓ Contact details - mobile phone, email
 - ✓ Financial Details, account, card numbers
 - ✓ Addresses – all recorded addresses
- Members report fewer losses
 - ✓ 78% of cases result in NO LOSS to the company
- Non Members experience more fraud than Members
 - ✓ Members have to notify customers that they are CIFAS Members
 - ✓ Deters fraudsters from trying to defraud CIFAS Members
- Audits ensure fairness
 - ✓ Checks performed annually
 - ✓ Ensures that Members contribute data too

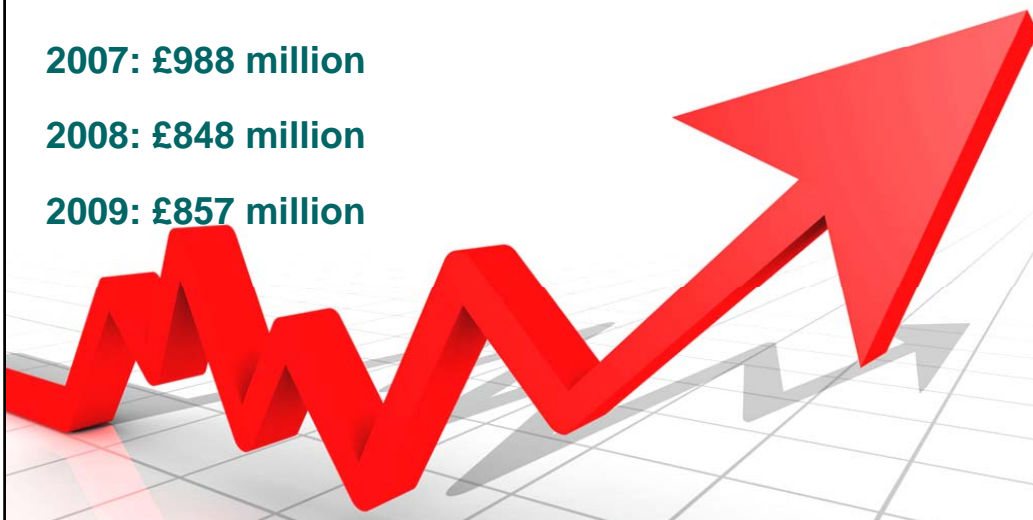
Benefits reported by Members

2006: £790 million

2007: £988 million

2008: £848 million

2009: £857 million



Protecting the consumer

CIFAS also benefits the public:

- Helps to protect against identity theft
- Protective Registration: a service to help those who are at increased risk of Identity Fraud
- Fair Processing Notices
- Public Awareness
- Keeps costs down for consumers

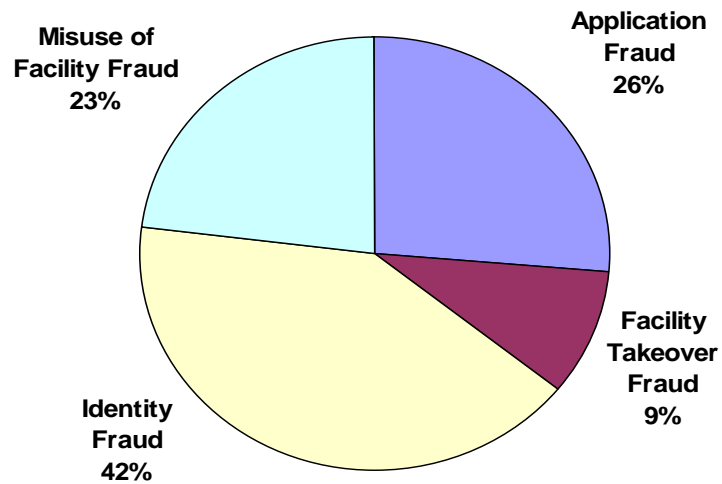


Different types of fraud

There are various ways that fraud is committed and therefore, different types of fraud:

- **Identity Fraud**
Includes cases of identity theft and the use of a false identity
- **Facility Takeover Fraud/Account Takeover**
Where the fraudster hi-jacks and uses the accounts of a victim
- **Application Fraud**
Application containing lies and/or fake documentation
- **Misuse of Facility Fraud**
Using an account or facility fraudulently

CIFAS Fraud Breakdown



A quick question

What do the following people have in common?



They have ALL been victims of Identity Fraud

CIFAS: Recent Fraud Trends

- **Pre 2007: Identity fraud** rises steeply during early part of the 2000s
(21% increase in 2006 compared with 2005)
- **2007: The year of Application Fraud**
(Identity fraud decreases as Application Fraud increases to record levels)
- **2008: The year of Facility Takeover Fraud**
(As recession bites, a 207% increase from 2007 as fraudsters try new ways to get money)
- **2009: The return of Identity Fraud**
(Identity Fraud comes back with a 32% increase from 2008)

Keeping ahead ...

- **Public/Private data-sharing**
Serious Crime Act 2007, CIFAS appointed a Specified Anti-Fraud Organisation.
- **Expanding Membership**
Currently over 265 Members, looking to increase this in new areas: online and retail, utilities and public sector.
- **New data-matching services**
New services being introduced to help Members detect and prevent more fraud.
- **Co-operation**
With private and public sector organisations, nationally and internationally, to share best practice.

Benefits of removing silos

Category one -	False identity fraud
Category two -	Victim of impersonation
Category three -	Application fraud – facility granted
Category four -	Application fraud – facility declined
Category five -	Conversion
Category six -	First party fraud
Category seven -	Aiding and abetting
Category eight -	Insurance claims fraud

	Fraud Categories									Total
	0	1	2	3	4	5	6	7	8	
ASSET FINANCE	0	7	8	4	136	5	4	0	0	164
BANKING	0	46	53	18	207	0	53	0	0	377
TELECOMMUNICATIONS	0	55	46	14	46	0	14	0	0	175
CIFAS	0	2	0	0	0	0	0	0	0	4
FACTORS & DISCOUNTERS	0	0	0	0	0	0	1	0	0	1
INSURANCE	0	0	1	9	1	0	0	0	5	16
MISCELLANEOUS	0	1	0	0	0	0	0	0	0	1
MORTGAGE LENDERS	0	6	15	2	54	0	1	0	0	78
PLASTIC CARDS	0	72	85	3	44	0	21	0	0	225
PERSONAL FINANCE	0	11	13	1	30	0	5	0	0	60
PROTECTIVE REGISTRATION	123	0	0	0	0	0	0	0	0	123
RETAIL FINANCE	0	62	69	16	84	0	18	0	0	249
	123	262	250	67	602	5	117	0	5	1473

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Predictive use of CIFAS data for members

Historically, CIFAS has been used predominantly at the point of application.

We believe that CIFAS data is predictive of various risks – both at application stage and within customer management.

Examples include:-

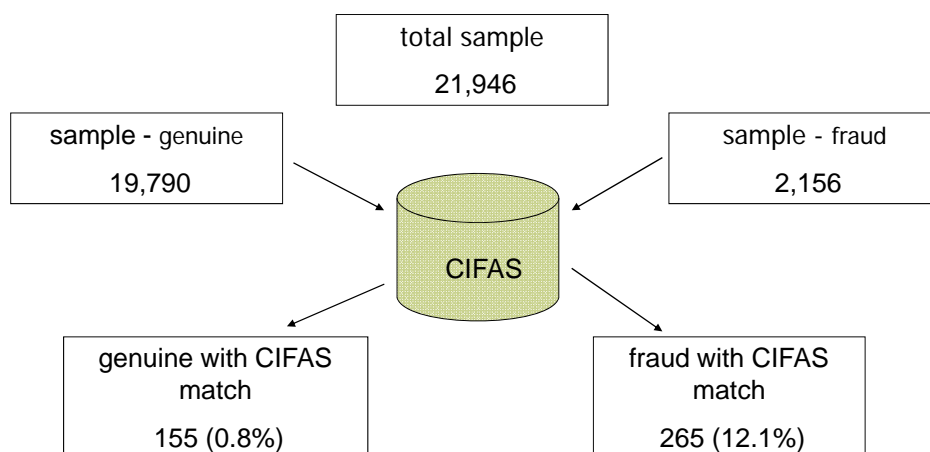
- the risk of a Quote, Policy or Claim with a CIFAS match being fraudulent
- the risk of any Quote, Policy or Claim being fraudulent
- the risk of impersonation on an Quote, Policy or Claim
- the risk of Claims being fraudulent or not
- the risk of a change of address request being fraudulent

Testing – Scenario 1

Anonymous client (CIFAS Member) sample data

- The sample used comprised 21,946 personal loan applications received between August and December 2005
 - 2,156 identified as fraudulent
 - 19,790 genuine
- The sample data was matched to CIFAS data at address only
- In total 1,302 CIFAS cases matched to 600 unique applications from the sample
 - after excluding non-retrospective matches (supply date after the client application date) this reduces to 861 cases belonging to 420 unique client applications

Testing – Scenario 1



an additional 180 client applications were excluded from analysis as the matched CIFAS cases were loaded after the date the credit application was made

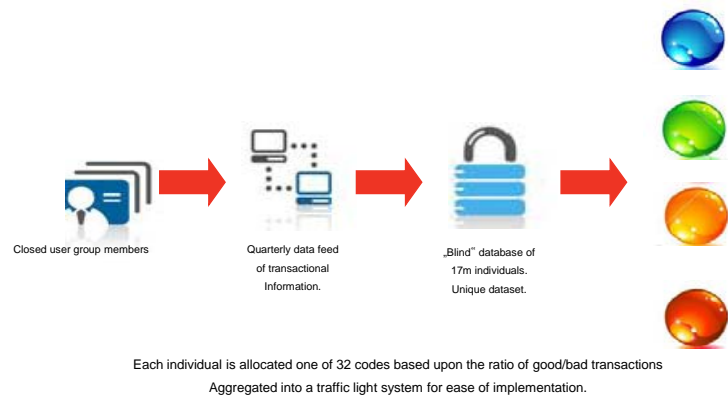
Testing Scenario 1

- For the purpose of illustration the initial data sample was re-weighted to give a fraud rate of 1.0%
- Based on this weighting the fraud rate for those with a CIFAS match is 13.8% reflecting the overall power of the data supplied
- Subsequent analysis is performed only for the 420 sample applications that matched to one or more CIFAS cases to highlight the added value of the additional information over and above the basic match

Testing Scenario 1 – Predictive Variables

Low risk	High risk
Single case	Multiple cases
Older matches	Recent matches
Other lender/s approved	Other lender/s declined
Mail/face to face	Internet/telephone
Applicant name and dob not matched	Applicant name and dob matched
Match different address type	Match same address type

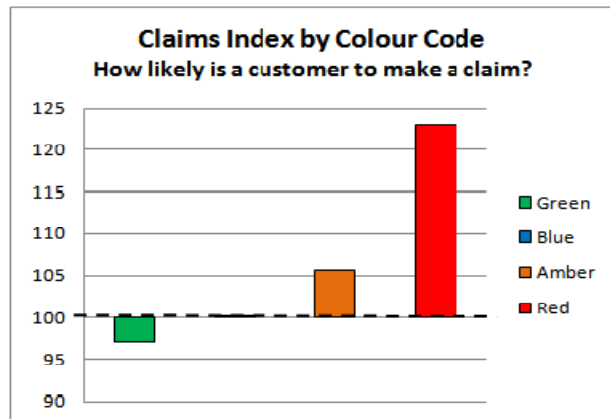
Testing - Scenario 2



Testing – Scenario 2 - External Data Predictability

- **Green Codes** - have only ever traded well = “honesty” indicator
 - **Red Codes** - have only ever traded poorly
 - **Amber Codes** - mixed trading often on the way to red
- A new opportunity to differentiate customer treatment based on risk, particularly for Motor insurance.
 - The **Red Codes** are most likely to claim, and when they do, they claim an extra c50% than average

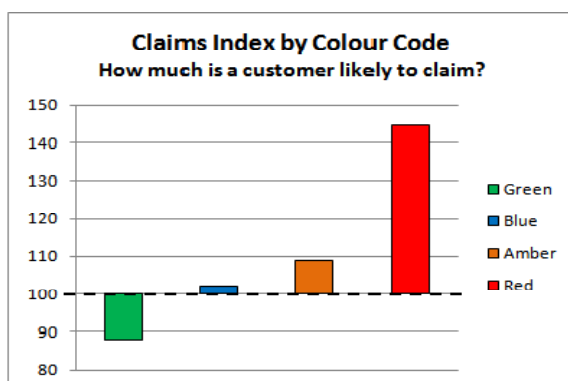
Testing – Scenario 2 - Motor Insurer Study - Likelihood



Red codes are by far the most concerning – their claims index is 23% above average.

Green codes are least likely to make a claim – 5% under indexed average

Testing – Scenario 2 - Motor Insurer Study - Size



➤ Red Codes are again the most concerning – per claim c£1,700 more than average, and c£2,100 more than the Green Codes.

➤ Could the client price higher to account for risk on those customers most likely to over-claim, identified up-front

➤ The safe Green Codes present an opportunity for favourable renewal terms, and prioritisation for x-sell/up-sell

Conclusions

- Fraud data is available (for CIFAS members)
- Cross sector fraud data has value
- First time fraudsters identified
- Victims protected
- Can be modelled and included in scorecards (for CIFAS members)
- Can be applied to marketing as well as pricing

One for you Actuaries

The risk of fraud at any point of entry in to a system can be expressed as

$$R = (o*m) / (c*e)$$

Where r=risk of fraud,
o=opportunity, m= motivation
(need or desire), c=likelihood of
being caught, e=ethical
standpoint on the crime

One for the Philosophers



“Men [seldom] rise from low condition to high rank without employing either force or fraud”.

Niccolo Machiavelli, Discourses [1517]