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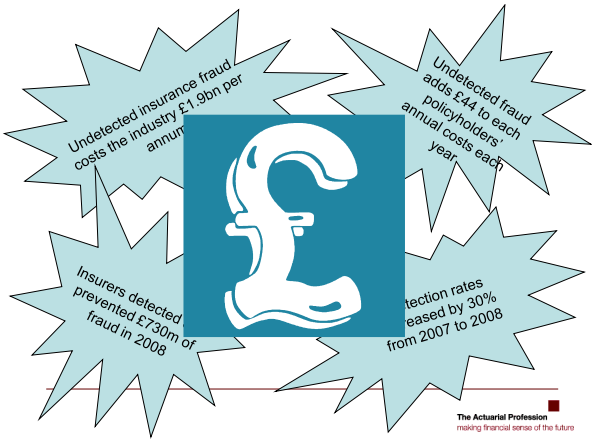
Outwitting the Fraudsters: The story so far

Members of the Insurance Fraud Working Party



The working party: who we are

- **Catherine Barton (chair)**
- **David Buckle**
- **Sarah Clark**
- **Lynn Day**
- **Kendra Felisky**
- **Rachel Jackson**
- **Douglas Morgan**
- **Elena Papadopoulou**
- **Tony Ray**
- **Mark Rothwell**

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What you expect to hear about today...

(Source: 2009 GIRO Brochure)

Interim findings from a two year working party which will consider:

- What is the financial impact of fraud on the general insurance market?
- How do insurers detect fraud and what is best practice in the market?
- What is the fraud detection spend vs benefits for non-life insurers?
- How can actuaries help reduce insurance fraud?
- How does fraud incidence compare for different classes of business?
- What can be learnt from other industries/professions in the battle against fraud?

Agenda for today's session

- **Working Party Terms of Reference & Objectives**
- **What do we mean by fraud?**
- **Some interesting facts & figures**
- **Key themes from our survey**
- **What do other industries do?**
- **What do actuaries need to know?**
- **How might actuaries help?**
- **What happens next?**

Working Party Terms of Reference

It is difficult to quantify the cost of fraud in the UK but recent estimates place the cost at around £20 billion per year, with insurance fraud contributing around £2 billion to this amount. There are clearly significant financial incentives for insurers to invest time, money and energy to detect and combat fraud perpetrated against them.

This working party is being set up with the intention of collecting information on fraud reducing initiatives currently in place within the market and improving actuarial techniques aimed at reducing fraud. It is envisaged that full investigation of fraud in the non-life insurance industry necessitates a two year working party with the aims in each year as follows:

Year 1: Understand fraud in the non-life insurance market and the areas in which actuaries can help reduce insurance fraud.

Year 2: Improve the toolkit of the non-life actuary for fraud detection and reduction.

THE BIG QUESTION:

How can actuaries add value to an area which is impacting the insurance industry by £2.6bn per annum?

What do we mean by fraud?

"Insurance fraud is any act committed with the intent to fraudulently obtain payment from an insurer."

(Source: www.wikipedia.org)

Hard fraud vs soft fraud

Hard fraud

- Deliberately planned or invented loss in order to receive payment for damages from insurance policy
- E.g. collision, auto theft, or fire that is covered by an insurance policy
- Criminal rings are sometimes involved

Soft fraud - claims

- Opportunistic fraud
- More common than hard fraud
- Policyholders exaggerate otherwise legitimate claims
- e.g. Following a legitimate accident, claiming for more damage than actually happened

Soft fraud - underwriting

- Misreporting of previous or existing conditions to get a lower premium

(Source: www.wikipedia.org (abridged))

Hard/soft fraud – survey observations

"Claims would interpret this [hard vs soft fraud] as the difference between a deliberate staging of an accident versus a genuine accident with some exaggerated features."

"I disagree with the suggestion that there is hard and soft fraud. Fraud is fraud no matter what the scale."

(Source: GIRO 2009 Fraud Survey Respondents)

The creativity of fraudsters...what are they actually doing?

Claims fraud examples

- **Motor insurance**
  - Organised fraud rings
  - Staged accidents
  - Induced road traffic accidents
  - Phantom passengers claims
  - Fraudulent injury and special damage claims
  - Fictitious hire charges, repair estimates and storage charges

The creativity of fraudsters...what are they actually doing?

Claims fraud examples (continued)

- **Private medical insurance**
  - Submitting false documentation
  - Unnecessary treatment scams.
- **Household**
  - Exaggerated theft/damage
  - "Accidental" damage
  - Staged burglary
- **Travel**
  - "Lost" items
  - Medical bill claims
- **Employers' liability and public liability claims**
  - Fictitious claims
  - Fraudulent exaggeration
- **Commercial insurance**
  - Arson claims
  - Business interruption
  - Loss of rent
- **Marine insurance**
  - Arranged theft of vessel or cargo
  - False representation of cargo
  - Sinking vessel

The creativity of fraudsters...what are they actually doing?

Underwriting fraud examples

- **Reducing premium paid by providing better risk information**
  - Non-disclosure of convictions
  - Non-disclosure of claims
  - Misrepresentation of policy information
  - "Sales staff encouraged" underwriting fraud
- **Taking out policies in order to make fraudulent claims**
  - Reducing premium by providing information leading to better price
- **Similar issues apply across all classes**

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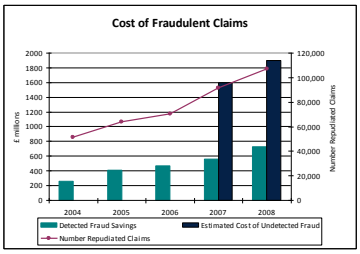
Some interesting facts & figures: what does fraud cost the market?



Source: ABI, 2008

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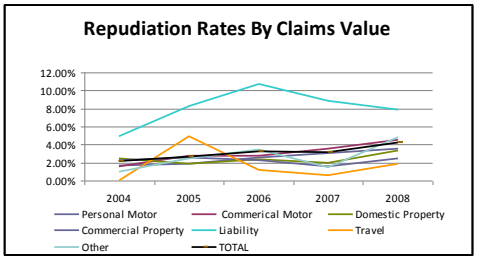
Repudiation rates by claims value



Source: ABI, 2008

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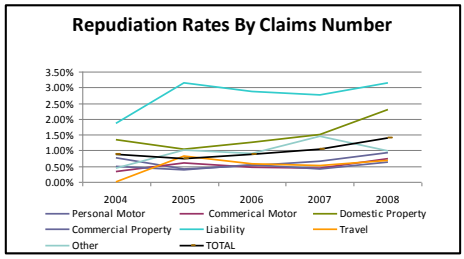
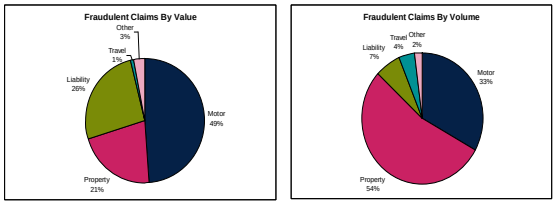
Repudiation rates by claims volume



Source: ABI, 2008

Fraud claims split by class of business



Source: ABI, 2008

Cost of fraudulent claims

Class of Business	Fraudulent Claims Value £m	Fraudulent Claims Number	Average Cost Per Fraudulent Claim	Average Cost Per Claim ALL Claims
Motor	357.7	35,310	10,130	1,935
Property	153.3	57,780	2,653	1,164
Liability	189.8	7,490	25,340	
Travel	7.3	4,280	1,706	493
Other	21.9	2,140	10,234	
TOTAL	**730**	**107,000**	**6,822**	

£ Unless Otherwise Stated
Source: ABI

Class	Total Net Claims £bn	Detected Fraudulent Claims as Proportion of Total Claims
Motor	8.7	4.1%
Property	4.8	3.2%
Accident & Health	3.2	5.9%
General Liability	2.7	0.3%
Misc & Pecuniary Loss	1.5	1.5%
TOTAL	**20.9**	**3.5%**

Source: ABI

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Our survey

- **Objective:**
  - Gain a practical understanding of current practices in insurance fraud detection and analysis in the UK
- **Participation:**
  - Approached around 15 companies in UK spread across direct/reinsurance & company market/Lloyd's
  - Targeted insurers writing a range of lines of business
  - 14 questions – designed not to be too daunting!
  - Responses received from around 10 companies

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Some of the questions we asked

- What is your approach for identifying fraud?
- What makes you think a claim is fraudulent?
- What analytical techniques do you use?
- Do you make use of actuarial analysis? If so, how?
- What is the remit of your anti-fraud department? Underwriting/claims/both?
- What are the typical types of fraud you identify?
- What has the impact been of the recession?
- What cost benefit analysis do you carry out for your anti-fraud activities?
- How much money do you save as a percentage of claims cost by identifying fraud?
- What do you do internally to identify fraudulent actions of your own staff?
- What needs to be done in the insurance market to tackle the cost of fraudulent claims?

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Fraud identification approach

Question: What is your approach for identifying fraud? How does this vary for underwriting vs claims, by line of business, type of claim, size of claim, soft vs hard fraud?

- Most companies focus fraud detection on claims rather than underwriting
- Similar approach across most lines of business
- Check retrospectively for underwriting fraud at point of claim
- Less time spent on small claims where review is more likely desk-based.
- Some companies follow the same approach for soft and hard fraud
- Others vary their approach depending on whether the fraud is opportunistic or premeditated (including organised crime)

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Anti-fraud departments

Question: Do you have a designated anti-fraud department? What it is remit? Underwriting/claims?

- **A range of responses here:**
  - Most respondents have a dedicated anti-fraud team for claims
  - One company has a dedicated team for underwriting-related fraud in addition to its claims team
  - Another company has a single team which deals with claims and underwriting related frauds
  - For reinsurers and business underwriting via coverholders, typically no separate in-house fraud claims team
- **Headcount in teams going up or staying level**

Conclusion: More to be done in relation to underwriting fraud?

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External data sources

Question: Do you use external data sources to assist in the identification of fraud?

- **Yes**
- **Examples varied by respondent and included:**

  IDSL, IFIG CUE, Net foil, Insurance Hunter, Insurance Fraud Bureau (IFB), Motor Insurance Anti Fraud Theft Register (MIAFTR), Experian products, CIFAS, Companies House, 192.com, Electoral Rolls, Social Networking sites

Conclusion: Wide range of data used: what more can be done with it?

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Internal analysis

Question: Do you use data mining/cluster analysis/pattern analysis?

- **Wide range of responses including:**
  - **Yes**
  - **No**
    - Key issue raised was lack of systems/data
  - **On the cards?**
    - In the testing phase for a data mining tool
    - Have done pilots in the past and plan to explore in next year
    - Limited use, but looking to expand capabilities

Conclusion: Scope to do more here

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Use of actuarial analysis

Question: Do you make use of actuarial analysis? If so, how?

- **Best practice response:**
  - Scorecards developed using statistical methods to identify likely fraud characteristics/trends. Used at the underwriting stage
- **Examples of other responses:**
  - Not yet
  - No
  - Not currently
  - Rarely
  - Not on a regular basis
  - A project is under consideration

Conclusion: Opportunity for actuaries to get more involved

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Staff fraud

Question: What do you internally to identify actions of your own staff who could be acting fraudulently?

- **Common theme across all responses:**
  - Various controls in place e.g.
    - Segregation of duties
    - Key control reports
    - Data mining on previous modes of fraudulent activity
- **Other responses:**
  - Monthly audits of various secure aspects of process
  - Vigilance and awareness
  - Staff claims identified and managed through the complex claims unit

Conclusion: An area where actuaries could add value?

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Industry level action

Question: What needs to be done in the insurance market to tackle the cost of fraudulent claims?

- Improve collaboration across the industry e.g. More, more timely, data sharing
- Increase publicity to educate policyholders that this is not a victimless crime; change "nothing to lose" attitude
- Continue to refine fraud detection processes and practices: the fraudsters will continue to refine theirs
- More focus on front end fraud prevention rather than fraud detection and investigation
- More needs to be done on prevention. Publish successes and penalties if caught
- Lobby government to highlight issues with the courts in relation to third party claims for injury, where current process allows tainted claims to receive some compensation
- Lobby for more police interest in prosecution

Conclusion: An area where the working party could add value?

An idea

- The ABI has suggested that a useful piece of further research would be to do some more work to estimate the cost of detected and undetected claims fraud
- This would involve the review of a large random sample of unprocessed claims and identifying suspicious claims
- Insurers largely supportive in principle
- BUT concern was raised that the cost of such an industry-wide exercise may be high

- Is this be something that the working party should aim to do, alongside other bodies, e.g. IFB and ABI?

What do other industries do?

What other industries have external fraud?

- Credit card
- Mortgage

How much does it cost them?

- Mortgage – almost £1bn per annum

How do they deal with it?

- Mortgage
  - Risk based strategies to highlight fraud cases earlier and resolve them more effectively
  - Embedding data analytics and interrogation tools to prevent & detect fraud.
- Credit card
  - Sophisticated methodologies including neural networks, data mining, transaction analyses, fraud scoring based on artificial intelligence.

What do actuaries need to know?

- **How is fraud affecting the data?**
  - Is there an underlying change in fraudulent claims experience?
  - What new, clever things are fraudsters doing? How are they changing?
  - What impact do changes in the economic climate have?
  - How is the data distorted when people misrepresent risk?
- **What is the impact of improved detection techniques...**
  - On claims frequencies?
  - On claims severities?
  - On claims development patterns?
  - On reporting patterns?
  - On fraud detection rates?
  - On claims handling expenses?

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What actuaries need to know

Pricing, reserving and capital actuaries need to communicate with underwriting and claims teams – and each other – to have a clear understanding of how fraudulent behaviour is changing and may affect their work

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How might actuaries help?

- **Bringing the actuarial perspective to identifying predictive indicators for fraudulent behaviour...**
  - Is the claims handling team's deep understanding of claimant behaviour being used to inform data mining and predictive analysis?
  - Are their "clever" predictive indicators which are not being considered?
  - Is all the data which could be used actually being used? What value could be added from transaction data/underwriting data/external data, etc?
  - Are the findings from analytical work being embedded into the claims and underwriting processes?
  - Can actuaries help with the assessment of the operational risk of fraud?
  - What value, at an industry level, can the actuarial profession add?
  - ...

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How actuaries might help

Claims data analysis is a key area of general insurance actuaries' work yet currently we are not heavily involved in applying our skills to fraud analysis. Is there therefore room to add value here?

What happens next?

"The second year will focus more on the role of the actuary in fraud reduction. The information collated in the first year will form the basis for exploring and defining investigations to detect and reduce non-life insurance fraud.

The investigations may range from measures to reduce operational risk within an insurer to detailed analytical investigations like predictive modelling."

(Source: Working Party Terms of Reference)

Some ideas about what we might do...

- Producing a market-wide list of fraud indicators
- Understanding more about how actuaries use underwriting and claims behaviour information in their work
- Producing a "guide" to how actuaries might embed the output from fraud analysis into business processes – target audience of actuaries and business operations
- Doing some analysis to respond to the suggested brief in the ABI research project
- Doing more on underwriting fraud, e.g. impact of change in distribution channels on underwriting fraud
- Applying actuarial analysis to the operational risk estimation e.g. staff fraud

Goal: a paper for next year's GIRO?

Outwitting the fraudsters needs us all to be involved!

"Some companies are more advanced on this [fraud analysis] than others, and ultimately we are only as strong as the weakest link. Therefore responsibility to improve fraud detection is everywhere throughout the market as all benefit."

(Source: GIRO Fraud Survey Respondent 2009)

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So, over to you...

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Interested in getting involved in Year 2?

Then sign up on the board outside!

Kick-off meeting this afternoon at 5pm.

Do join us if you would like to be part of this work!

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