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Current Issues in General Insurance: Operational Risk

Gregory Overton, 26th April 2004



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Quantifying Operational Risk in General Insurance Companies

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Presented to the Institute of Actuaries, 22 March 2004

Agenda

- What is Operational Risk
- Our sessional paper
 - Case study
 - Soft Issues
 - Methods
 - Conclusions and messages
- Discussion



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A Fatal Exception OE has occurred at 0028:C001577D in VXD VWIN32(01) +00000AFD.
The current application will be terminated

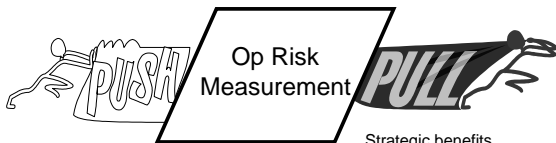
What is Operational Risk?



- 'Operational risk is the risk of loss, resulting from inadequate or failed internal processes, people and systems or from external events' - FSA
 - "External events" doesn't mean insurance losses
 - Needs to be more detailed for effective identification, assessment and modelling

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Drivers for Op Risk measurement



Regulatory pressures

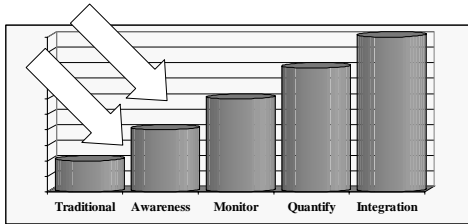
- FSA
 - Solvency I & II
- Basle II

Strategic benefits

- Best practice
- Better risk management
- Better info about organisation
- Smooth earnings

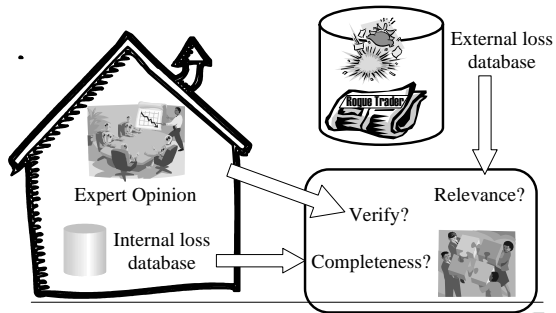
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Evolution of Operational Risk Practices



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Sources of information



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Case Study

- Fictional
- Pragmatic
- Not cutting edge
- Unrealistic
- The only option

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MELG plc

- Started as small life office in Midlands (c1900)
- Taken over by US multinational
- 3 strategic businesses
 - Commercial,
 - Personal intermediary
 - Personal direct
- Several Issues...

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MELG plc – Loss eg 1

Outsourcing of claims handling

- Personal direct claims handling outsourced to Personal intermediary business
- Projected cost- £10m
- Actual cost- £50m
- Due to – attention distracted from underwriting and inadequate monitoring of claims handling

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MELG plc – Loss eg 2

External Supplier fraud

- Fraud of third party service provider went unreported
- Despite junior manager aware of irregularities
- Actual cost- £5m
- Due to – lack of confidence in whistle blowing procedures

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MELG plc – Loss eg 3

Claims leakage

- Investigation into fraudulent and 'misrepresented' claims leakage
- Led to assessment of significant overpayments
- Actual cost- £27m over 7 years

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MELG plc – Loss eg 4

Reinsurance failure to respond

- Grp mgmnt overrode local mgmnt on reinsurance policy
- Major loss recovered less than expected
- Expected recovery- £50m
- Actual recovery- £10m
- Due to – failure of implementation and review process and lack of communication

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MELG plc – Strategy loss

Mgmt want to Increase commercial business

- But personal lines are more profitable
- Strategy leads to poorer results
- Whose fault?
- Is it Operational Risk?

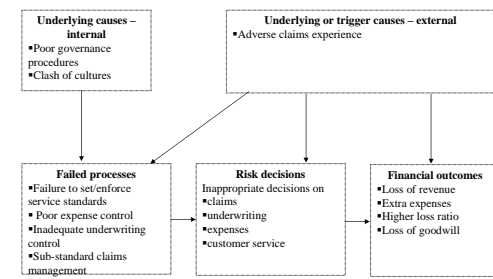
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Soft Issues

- People; people; people
- Understanding
- Communications
- Ownership
- Culture – open, honest, blame free??
- Reward environment

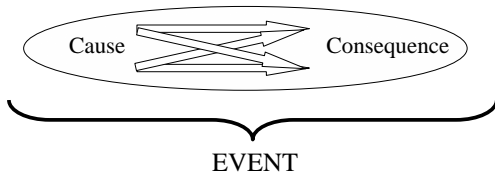
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Risk Maps – Outsourcing of claims handling



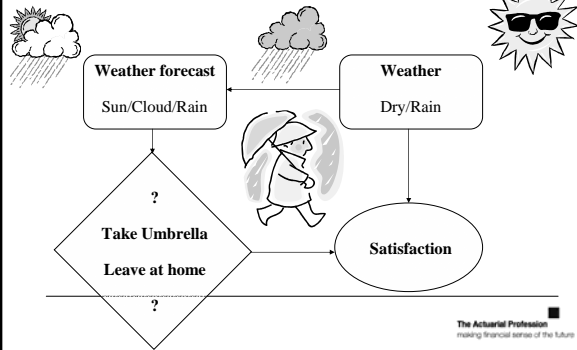
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Causal modelling



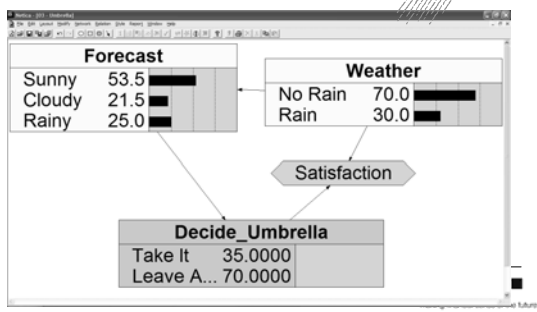
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Bayesian Causal Modelling

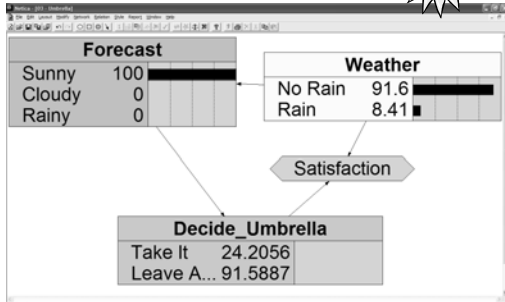


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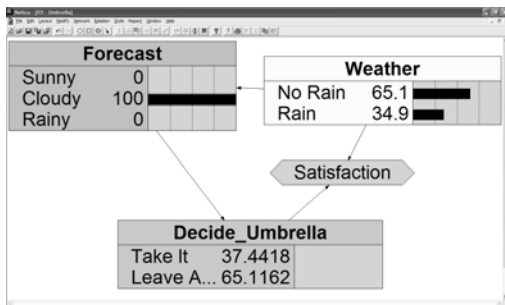
Bayesian Umbrella Decision: untrained causal model



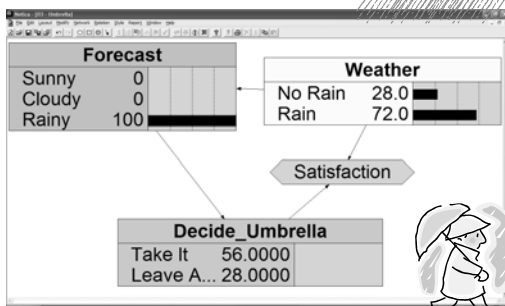
Bayesian Umbrella Decision: if
forecast is Sunny

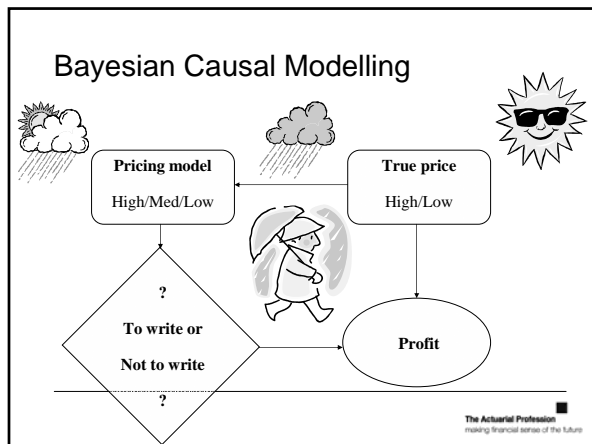


Bayesian Umbrella Decision: if
forecast is Cloudy



Bayesian Umbrella Decision: if
forecast is Rainy





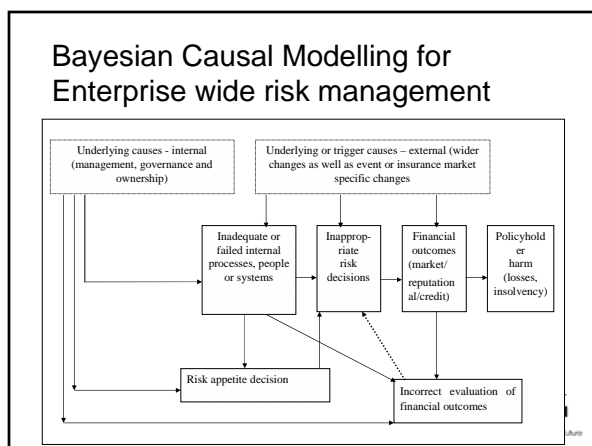
Bayesian Causal Modelling

- A risk map showing cause-effect relationships, a belief network, an influence diagram
- Belief network can be developed via discussion between members of key business units
- Incorporate feedback control loops – Control Cycle

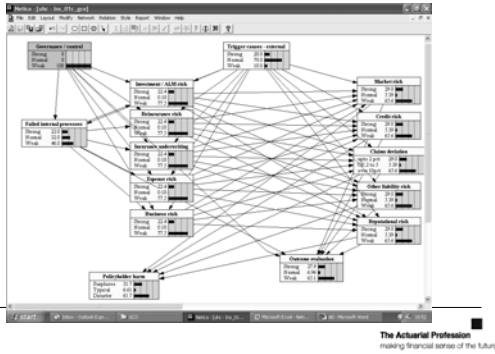
Can help

- Apply beliefs about a system to a model and test fit
- Describe relationships between trigger causes and controls

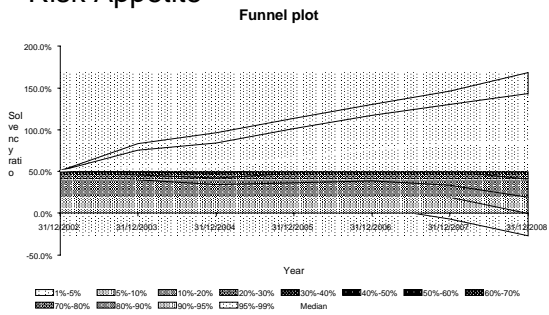
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Bayesian Causal Modelling



Risk Appetite



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Discussion

- Questions & observations?
- Areas of further investigation?
- What are you doing now?
- What should the industry be doing?
- How will Op Risk modelling develop?
 - Measurement accepted?
 - Focus on soft issues and monitoring & controls?

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