The Actuarial Profession
making financial sense of the future

RISK & INVESTMENT CONFERENCE 2011

Dokkie Nel

REASONS FOR INSURANCE COMPANY

21 June 2011

Agenda

- How to define failure
- Why insurers are different from banks
- Model for evaluating bankruptcies
- Case studies
- Lessons from case studies
- Key failure statistics
- Other causes or not of failure
- Does regulation help

Indicators of failures

- According to a tabloid study company failure can be predicted via:
- A company jet
- A company flag, with flagpole at the head office
- A fish tank in reception

How do we define failure

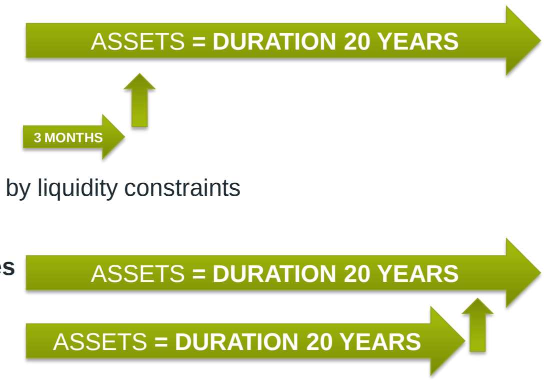
Inability to meet key targets → Dividend cuts → New business closure → Insolvency → Scheme run-off

- FSA definition of reverse stress tests: *a firm's business plan should be assumed unviable at the point that crystallising risks cause the market to lose confidence in it, with the consequence that counterparties and other stakeholders are unwilling to transact with it.* I.e. it is defined as business model failure.

- UK insolvency laws allow for 3 types of failures, with all failures feeding into Schemes of arrangement, i.e.
  1) Cut-off scheme – value assets and liabilities and pay-off of single dividend (short tailed business)
  2) Reserving scheme – run-off with dividend occur over time (long tailed business)

Why insurers are different

- **Bank Asset**
- Mortgage book
- **Bank Liabilities**
- Short term funding
- Insolvency triggered by liquidity constraints



- **Insurance Liabilities**
- Annuity
- **Insurance Assets**
- Bonds

- Insolvency triggered by a lack of capital, followed by orderly run-off.

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FAILURE MODEL
CASE STUDY

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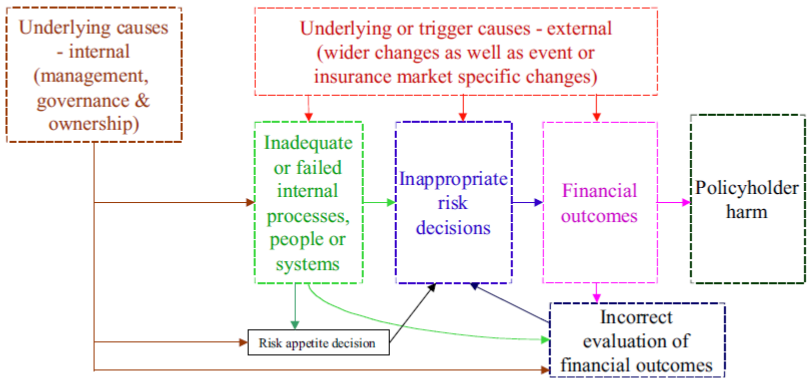
Model for evaluating losses



* From FSA OP20 – Practical lessons from recent failures of EU insurers

Model time lapse

EXTERNAL EVENT – e.g. soft premiums, catastrophe, economic conditions

INTERNAL EVENT – fast expansion, under reserving, fraud, etc.

DECISIVE ACTION (Transparent)– address problems early on, ensuring optimal return for all stakeholders

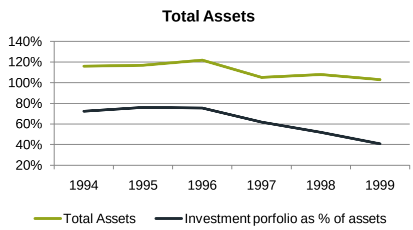
DECISIVE ACTION (Gamble) – Attempt binary strategy (high risk / reward). Can lead to worse outcomes

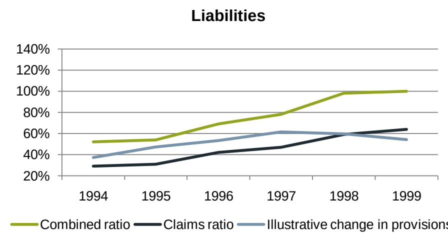
NO ACTION – Management unaware or to slow to react to changing circumstances

Case Study 1

Independent Insurance Company Limited

- Founded 1987, Insurer of the year 1999, Bankrupt 2001
- Sold mainly personal lines insurance, with a small commercial book.





- Discovered poor standards of administration and premium collection in 1998 (annual report)
- Increased written premium in 1999. Separate accounting for high losses (fraud)
- Weakened reserving policy; premium collection turnover worsened.
- 2001 – claims holiday and bankruptcy (initial estimates of <70% recoverable)

Source: When insurance companies go bust (Guillaume Plantin and Jean-Charles Rochet)

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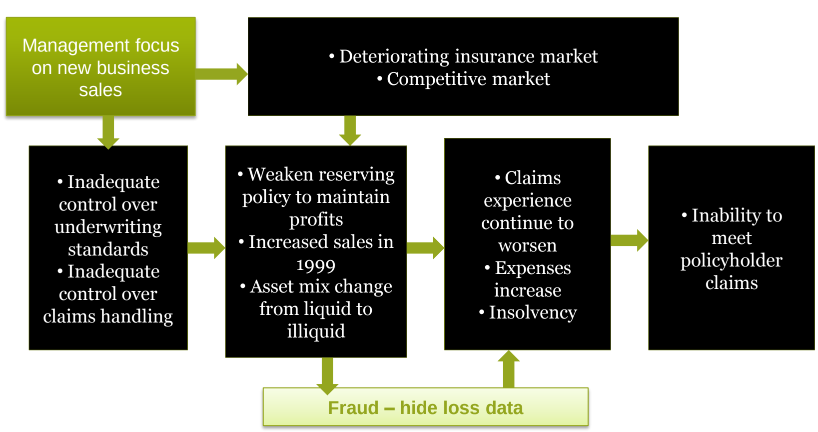
Case Study 1

Model

- Model update of where each element should go



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Case Study 2
Confidential Companies

- Life companies (foreign and local) enter new PMI market with limited UK experience, but cash rich parent.
- PMI sales based on innovative new model
- Quickly gain market share in concentrated market, but with large expense overruns. Pressure to build volume.
- Number of cases of commission fraud / FSA breaches. Inability to control IFA volume and quality of business.
- Material use of reinsurance to finance new business strain, but not for pricing information. Slow drain on capital.
- Discover data error which leads to revaluation of reserves and highlights material weaknesses in pricing model.
- MI review reveals further weaknesses in tracking of risk factors
- Material capital call on parent and breach of reinsurance covenants

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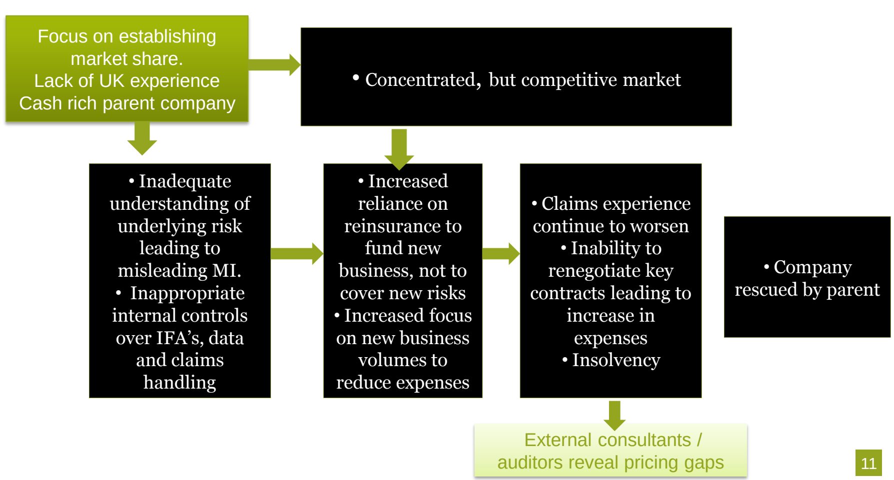
Case study 2
Model

- Model update of where each element should go



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Case Study 3

Equitable Life Assurance Society

- Sold products since 1963 which had guaranteed annuity rates attached (GAR). The guarantees were out of the money and offered for free.
- Guarantees starting to become close to the money in 1988 and eventually in the money in 1993. No technical provisions were established between 1988 and 1993 to reserve for the for guarantees.
- From 1993 to 2000 guarantees to the GAR policies were paid by non-GAR policies (with lower guarantees) via an explicit allowance. High court decided that despite Equitable bye-laws it was unfair to the non-GAR,
- Non-GAR policies were declaring substantial bonuses further increasing new business volume and capital strain.
- Market crash in 2001 revealed material underestimate in reserve. Closure to new business followed and adopted prudent investment strategy.
- Actuarial function was operated as black box. Both the CEO and Chief Actuary were actuaries with strong characters and a firm view of the future – no independent challenge.

Source: When insurance companies go bust (Guillaume Plantin and Jean-Charles Rochet)

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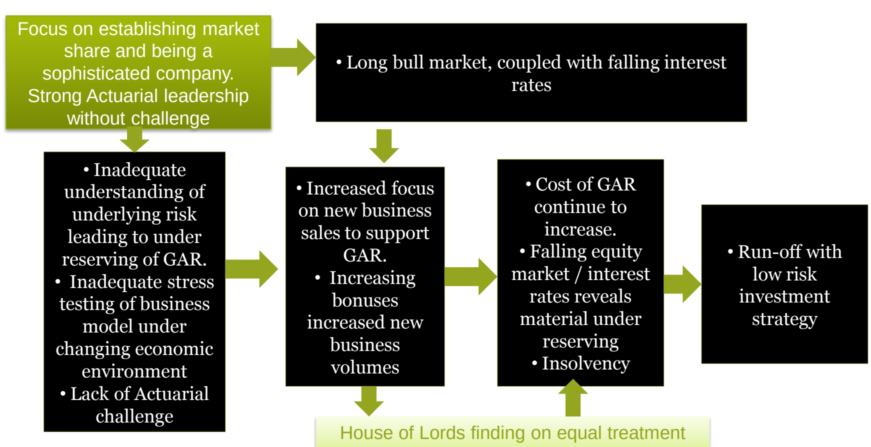
Case study 3

Model

- Model update of where each element should go



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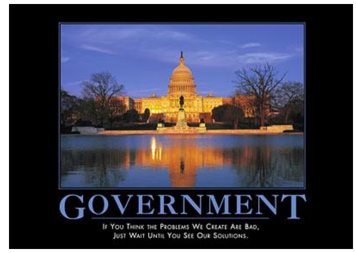
Lessons from case studies



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Lessons from case studies

WEAK OR FLAWED GOVERNANCE:

Weak or flawed central governance is key in all cases

1. Management has a firm view of the future and often attain high level of success
2. Lack of independent challenge of business plan and risks
3. Lack of emphasis on internal controls and data.

EXTERNAL FACTORS:

Governance gaps are triggered by external events, e.g.

Companies go bust at the:

- At top of the non-life insurance market
- Bottom of the asset markets

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Lessons from case studies (2)

FOCUS ON WRONG KPI'S:

Governance is exacerbated by focus on wrong KPI's

- Excessive focus on new business volumes versus available capital
- Volume is seen as management success,
- Inability to recognise internal flaw, e.g. volume growth in very competitive market; Equitable paper on "With-profits without mystery"
- Underlying drivers of volume growth is not challenged, until too late.
- Focus on core KPI's remove focus from holistic view of risk.

http://www.actuaries.org.uk/sites/all/files/documents/pdf/0139-0186.pdf

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Key reasons for insurance losses

A.M BEST ANALYSIS OF FAILURES

Primary Causes	Number of Companies	% of Total Identified
Insufficient Reserves	145	34%
Rapid Growth (Under Pricing)	86	20%
Alleged Fraud	44	10%
Overstated Assets	39	9%
Catastrophe Losses	36	8%
Significant Change in Business	28	7%
Impaired Affiliate	26	6%
Reinsurance Failure	22	5%
Total Identified	426	100%

Source: A.M.Best

- Focus predominantly on non-life companies
- Data going back to 1960
- Structure would have changed due to historical lessons learned
- One bankruptcy can be attributed to many of these findings

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Other factors to consider

Factors	Descriptions
Catastrophes	Increased understanding due to better modelling means it plays less of a role
Company structure (Shareholder versus Mutual)	Overall governance flaws play a role – rather than structure
Company structure - Conglomerates	Increased risk of contagion far from centre
Regular regulatory breaches	Indicative of weak control environment
Outsourcing	Loss of control over key processes
Concentration of assets or liabilities	Liquidity / large loss from single event
Poor data quality systems and lack of IT infrastructure (IT spend)	Increased risk of mispricing / inability to analyse data

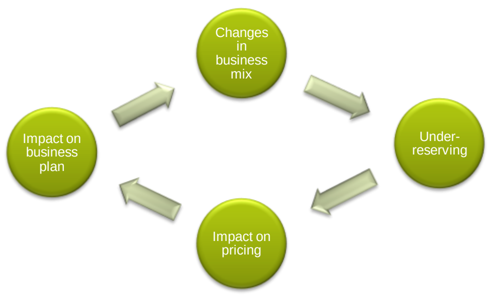
GOVERNANCE WEAKNESSES ARE CRITICAL

Does regulation help?

"When it comes to the children I believe in light-touch regulation."

Stress & Scenario testing

- Stress tests should consider events over business planning horizon.



Outcomes should be embedded in company

Address key concerns:

- Data quality leading to under reserving and inappropriate pricing
- Lack of appreciation of the underlying risks

But only if independent challenge

Solvency 2

Solvency 2 focus	Impact against key criteria
Risk based decision	KPI focus on risk and capital will address failure factor
3 lines of defence	Will address oversight issues, if not box ticking
ORSA evaluation of risk	Create detailed understanding of risks
Data quality	Strong data quality focus helps to address data weaknesses
System of governance	Strong governance focus, with emphasis on controls, if accompanied by strong oversight
Standard formula	Can lose benefits of internal model which will weaken impact

ADDRESS KEY RISK FACTORS – substance over style

Questions

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Appendix - Other case studies

- **GAN** – French privatised conglomerate. Expanded quickly in new fields (innovative motor insurance, overseas), with weak central management and focus on buying strategic assets.
- 3 out 4 divisions suffered losses simultaneously as 1) motor insurance under priced, 2) overseas territories under priced and 3) concentrated banking assets collapse in value.
- **Taisei Marine and Fire** – Japanese insurer collapsed after Sept 11. Collapse due to sharp falls in investment portfolio and unexpected exposure to the WTC – without appropriate reinsurance cover.
- **Europavie –** French life insurer – guaranteed 8% interest on UL funds backed by real estate. Real estate market collapse, leading to buy out by Thinet. Thinet used assets for strategic investments, including setting up German banking subsidiary. Subsidiary was used for managing of UL funds. When the bank when bankrupt, German law lead to foreclosure of the whole Group.
- **AIG -** Financial product Group selling credit default swaps, using the AAA rating. Key man dependency and inappropriate underlying systems meant an inability to monitor exposures on a regular basis. Management unfamiliar with underlying risks and economic requirements. Concentration leading to company contagion.

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