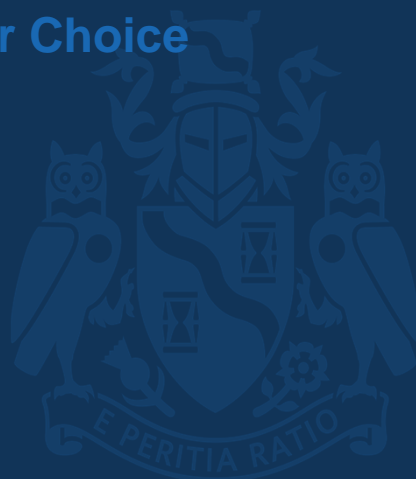




Institute
and Faculty
of Actuaries

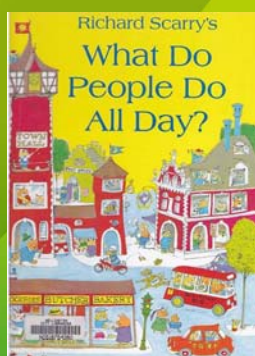
Actuary as a Career Choice

Dr Yan Liu



Institute
and Faculty
of Actuaries

Actuary as a Career Choice



About Me

- Current employer: LV= (Head of Technical Modelling and Analytics)
- Previous jobs: postdoctoral research 5 years and various roles in general insurance (20+ years, pricing, reserving, capital modelling, forecasting and monitoring)
- Education: BSc and PhD in Engineering
- Qualified as an Actuary in 2001
- Members of
 - 400 Club,
 - Solvency II Steering Group, and
 - Third Party Working Party
- Committee Member of [Chinese Actuarial Network UK \(CANUK\)](#)



Tree of Life : Labour and Capital



■ From bottom right, anti-clockwise:-

- Infancy, childhood, youth, adulthood (East) and
- old age (West)

■ 7 stages in <As You Like It> by William Shakespeare

- infant, schoolboy, lover, soldier, justice, pantaloone and second childhood

Making Financial Sense of the Future

- The 19th century financial crisis of life assurance companies in Britain gave birth to
 - Institute of Actuaries 1848 (actuarial exams started in 1850)
 - Faculty of Actuaries 1856
- The Life and Adventures of Martin Chuzzlewit by Charles Dickens
- The ultimate risk – Lloyds of London – 1990s
- The recent financial crises 2008
- Crisis = danger + opportunity in Chinese (危机)
 - Opportunity for actuaries everytime
 - Actuaries moving into wider fields, accelerated
 - Risk management (not just insurance industry)

What Does An Actuary Do?

- 33% life insurance
- 27% pensions
- 18% general insurance
- 7% investment
- 4% emerging fields
- 5% other
- 6% retired



Who Are Members of Institute and Faculty of Actuaries (2013)?

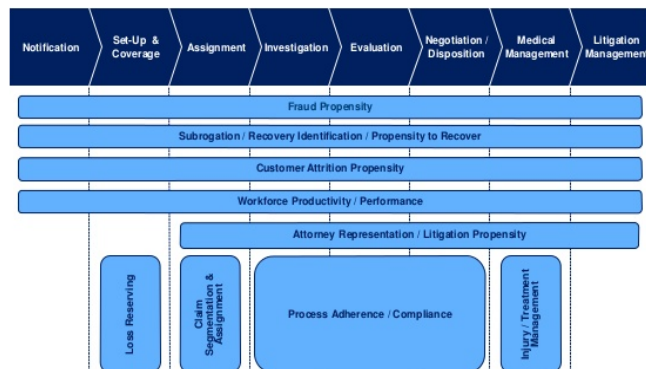
- Student Members 13,097
 - 57% under the age of 30,
 - 55% are based outside the UK, and
 - 38% are female.
- Fellowship 11,340
 - 65% under the age of 45,
 - 28% are based outside the UK, and
 - 25% are female.

The top 5 degree subjects among actuarial trainees are below:

- Maths
- Actuarial Science
- Economics
- Physics
- MORSE

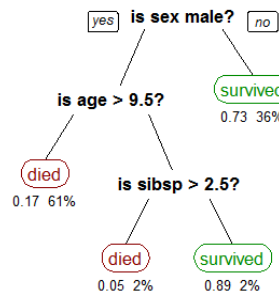
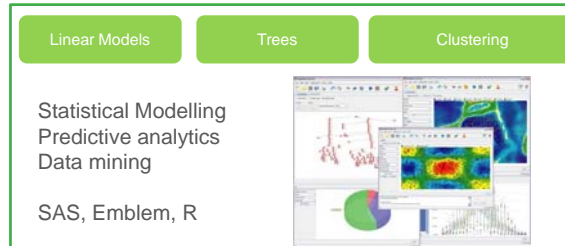
Claims Analytics

- Claims Triangles
- Claims Fraud Detection
- Claims Service Satisfaction Analytics
- Process Improvement, Benchmarking
- Operations Research



Pricing Analytics

- Pure Risk Premium
 - Expected claims per policy
- Customer retention and cancellation rates
- Competitiveness and sales conversion
- Expense modelling
- Optimisation
 - Customer Lifetime Value
 - Return on investment



A tree showing survival of passengers on the *Titanic* ("sibsp" is the number of spouses or siblings aboard). The figures under the leaves show the probability of survival and the percentage of observations in the leaf.

Sales and Marketing Analytics

- Market Mix Modelling
- Campaign Analytics
- Customer Satisfaction Analytics
- Channel Productivity Analysis
- Advertisement impact measurement



"Marketing Analytics allows companies to measure the effectiveness of marketing campaigns from the initial offer to a closed sales opportunity. Managers can assess the effectiveness of marketing campaigns relative to budget, channel, expected revenue and win rate to gain a full picture of how marketing programs impact the sales pipeline."

Some Considerations

- Example Interview Questions
 - How many petrol stations are there in Beijing or in China?
 - How many mid-wives are there in Shanghai or China?
- Specialist or Generalist or Management ?
- Career developments: upward or side-ways ?
- Where do you want to go from here?
 - In 5 years' time
 - In 15 years' time
 - In 25 years' time
 - In 40 years' time
 - In 60 years' time

Nurse or Actuary?

“Susan is a shy, conservative individual with a need for order and structure. She has a passion for detail and logic and is sometimes uncomfortable around people.”

Is Susan an Actuary or Nurse?