



How Actuaries can Add Value to GI Companies in Asia

Prepared for CAS Conference

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Automation and anxiety...

Catalogue of fears

Probability of computerisation of different occupations, 2013
(1 = certain)

Job	Probability
Recreational therapists	0.003
Dentists	0.004
Athletic trainers	0.007
Clergy	0.008
Chemical engineers	0.02
Editors	0.06
Firefighters	0.17
Actors	0.37
Health technologists	0.40
Economists	0.43
Commercial pilots	0.55
Machinists	0.65
Word processors and typists	0.81
Real-estate sales agents	0.86
Technical writers	0.89
Retail salespeople	0.92
Accountants and auditors	0.94
Telemarketers	0.99

Source: "The Future of Employment: How Susceptible are Jobs to Computerisation?", by C. Frey and M. Osborne (2013)

How to stave off Computerisation?

1) Work in the real world with people

Recreational Therapists, Dentists, Athletic Trainers

2) Maintain an 'air of mysticism' or deal in beliefs

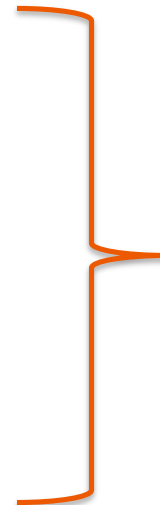
Clergy

3) Create new Ideas / Research

Designers, Artists

4) Apply Judgement

Editors



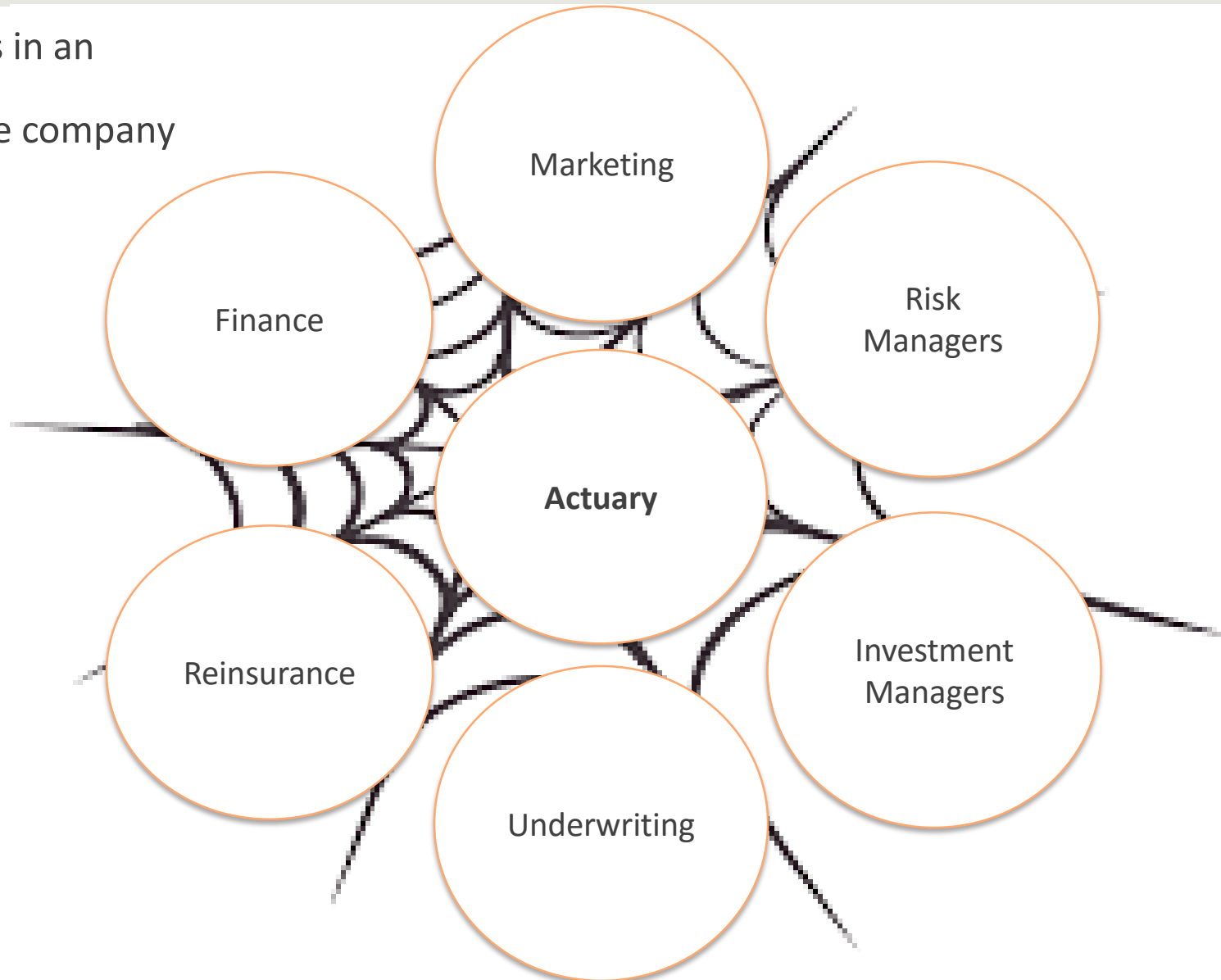
**Non Routine,
Cognitive
Add Value?**

The role of the Actuary 1.0?



The role of the Actuary 2.0

The roles in an
insurance company



The role of the Actuary 2.0 - Marketing

How to improve the product offering

- Price – low is good. 😊
- Product terms and conditions – what the customers want
- Increase the probability of responding/accepting
- Retention Analyses

The role of the Actuary 2.0 - Underwriting

How to ensure profitability

- Price – expected cost and market rates
- Product terms and conditions – reduce claims
- Motor pricing – the original big data in insurance?
- Segmentation analysis – still a big deal in Asia.

The role of the Actuary 2.0 - Finance

How to ensure profitability

- Liability Valuation work
- Profitability analysis
- Corporate structures, capital modelling

The role of the Actuary 2.0 – Reinsurance

Whose capital should we use

- How much Risk can be transferred?
- How should the risk be retained?
- How to resolve the conflict between Business Line objectives and Company level objectives?
- Who should pay the premium?

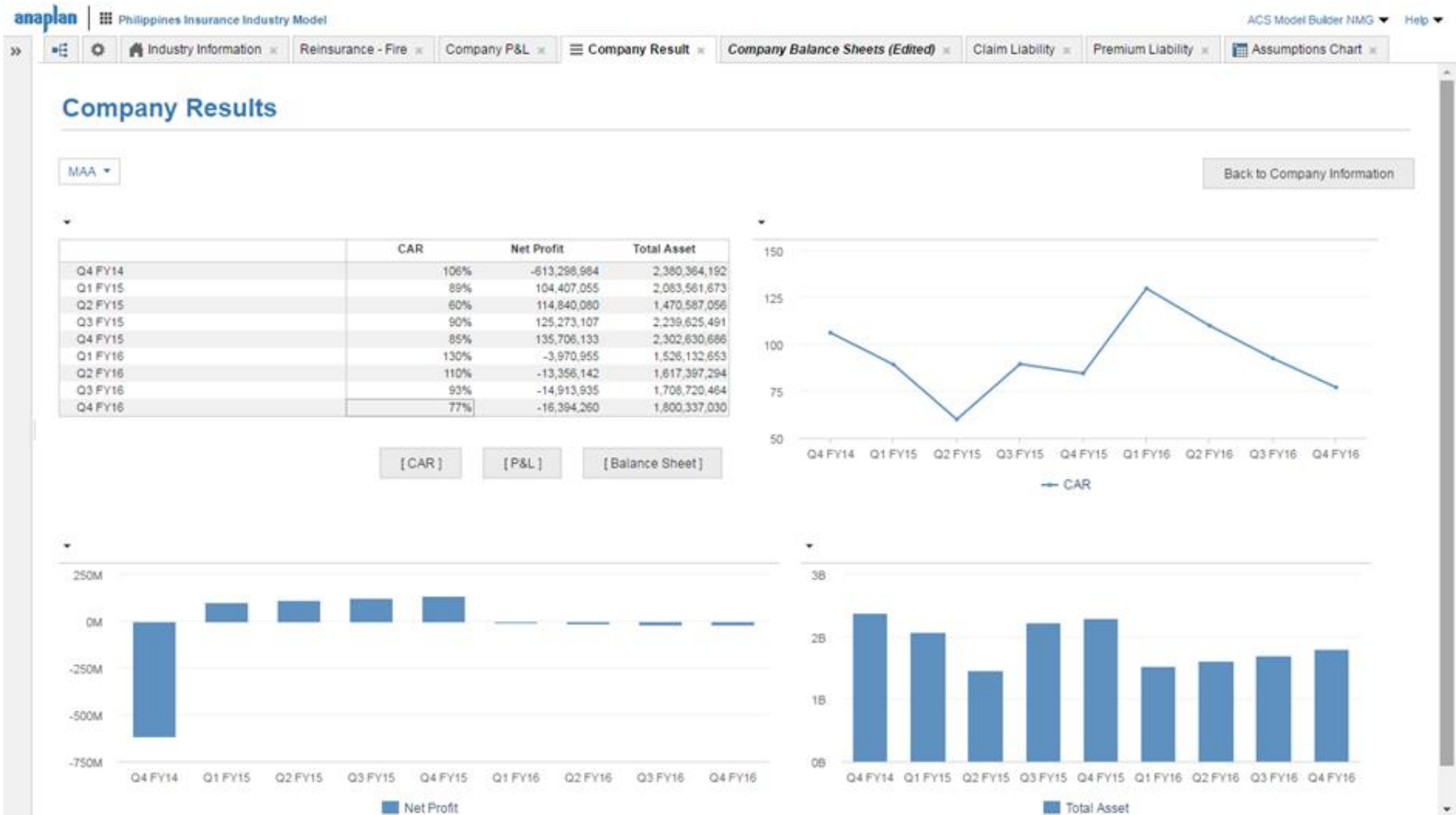
The role of the Actuary 2.0 – Risk Managers

How to ensure sustainability

- How much risk can be retained?
- How much capital do we need?
- Business planning, stress testing?

The role of the Actuary 2.0 – Risk Managers

Business planning example:



The role of the Actuary 2.0 – Investment Managers

How to make the most of what you have

- What is the duration of the liabilities?
- Does the company have enough capital to take a more 'aggressive' investment stance?
 - Mismatch in durations
 - Higher risk assets (equities)

The role of the Actuary 2.0

Cause and Effect

- Many of the questions are around propensity models
 - How likely will someone buy?
 - How likely is someone to make a claim?
 - How likely is a company to go insolvent?
- Need to parameterise and Understand the limitations of the models – need to be evidence based
- Leads to being an Analytics driven company

Thank you

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Matthew Maguire

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