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Critical Illness Pricing: Can Prices get any Lower?

Matthew Smith, Pacific Life Re



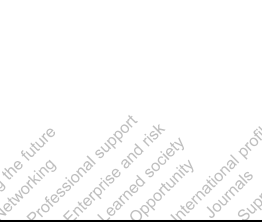
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Critical Illness Pricing

Can Prices get any lower?




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Advice
Sponsorship
Thought leadership
The Actuary's Community
Professional Meetings
Education
Working parties
Volunteering
Research
Shaping the future
Networking
Professional support
Enterprise and risk
Learned society
Opportunity
International profile
Journals
Support

Themes...

- How critical illness pricing compares with term assurance
- Historic changes in attitude to critical illness pricing
- Potential drivers to tumbling CI prices
- Are we missing anything. Definition creep, trend risk and more...
- Lessons from around the Globe

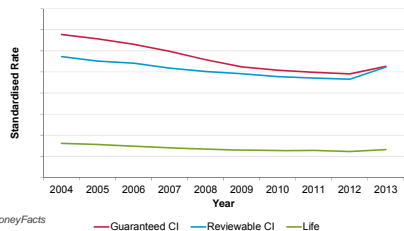


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Critical Illness Pricing

- Premium Rates in the Recent Past



Source: MoneyFacts

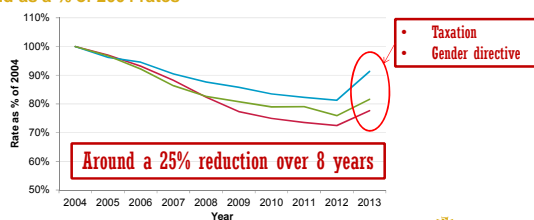
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Critical Illness Pricing

- And as a % of 2004 rates



Source: MoneyFacts

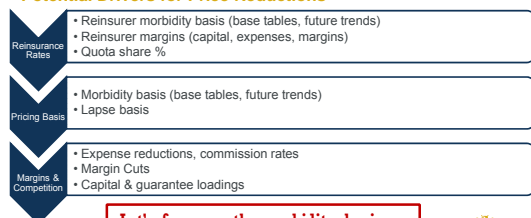
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Critical Illness Pricing

- Potential Drivers for Price Reductions

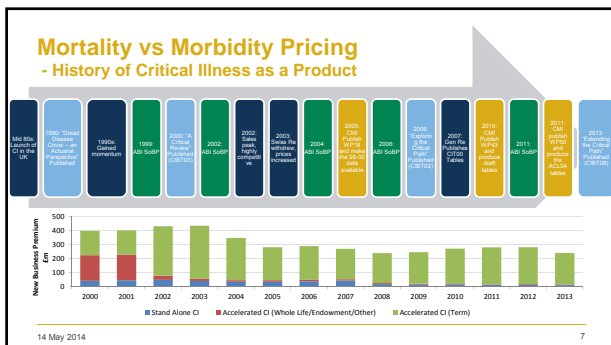


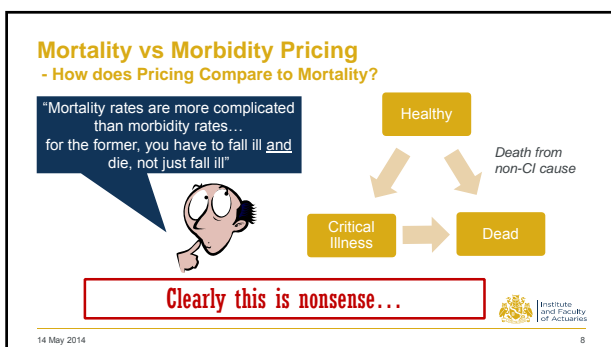
Let's focus on the morbidity basis...

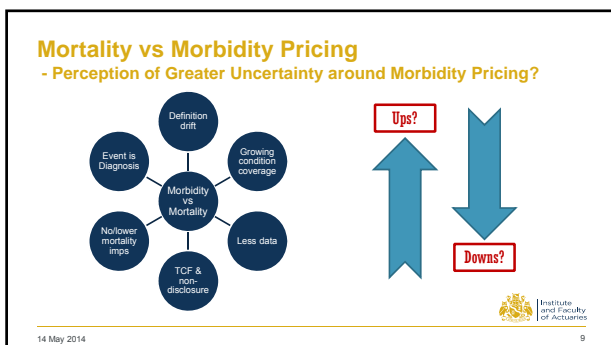
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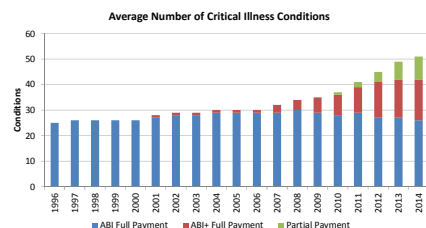






Potential Drivers to Pricing Changes

- Growing coverage... trends



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Potential Drivers to Pricing Changes

- Growing coverage... trends

Phase I	Phase II	Phase III
<ul style="list-style-type: none"> • ABI Conditions • Aplastic Anaemia • Bacterial Meningitis • Creutzfeldt-Jacob Disease • Dementia • Liver Failure 	<ul style="list-style-type: none"> • Cardiomyopathy • Encephalitis • Multiple System Atrophy • Open Heart Surgery • Primary Pulmonary Hypertension • Progressive Supranuclear Palsy • Respiratory Failure • Systematic Lupus Erythematosus 	<ul style="list-style-type: none"> • Partial Payments • Benign Spinal Cord Tumour • Cardiac Arrest • Chronic Rheumatoid Arthritis • Pulmonary artery surgery • Pneumothorax • Devic's Disease • Muscular Dystrophy

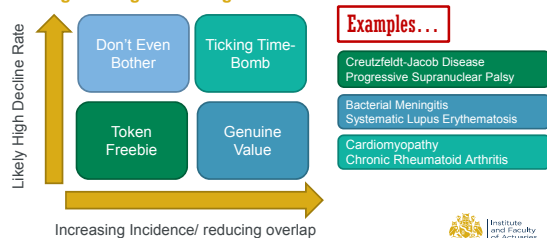
Etcetera...

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Potential Drivers to Pricing Changes

- Growing coverage... costing



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Potential Drivers to Pricing Changes

- Growing coverage... price impact

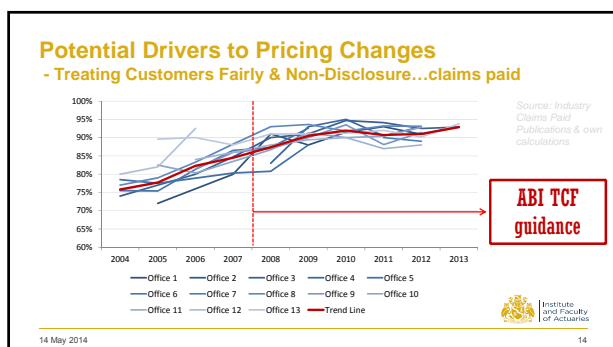
- Conclusion?

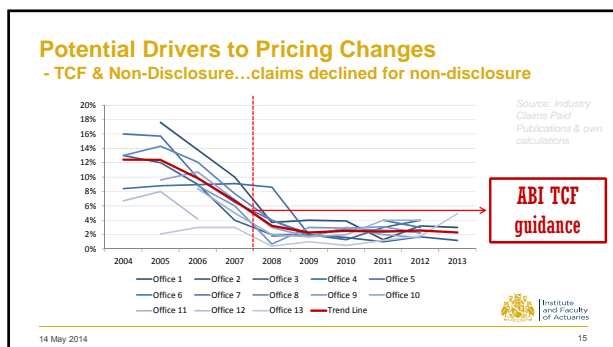


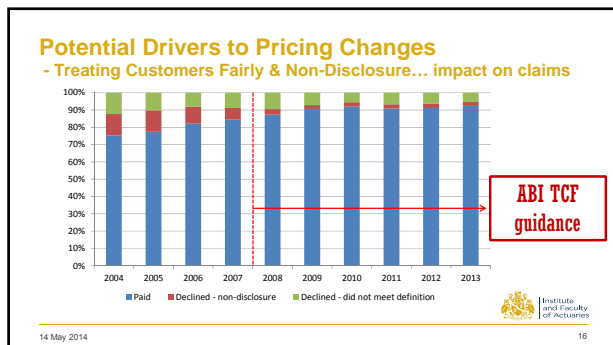
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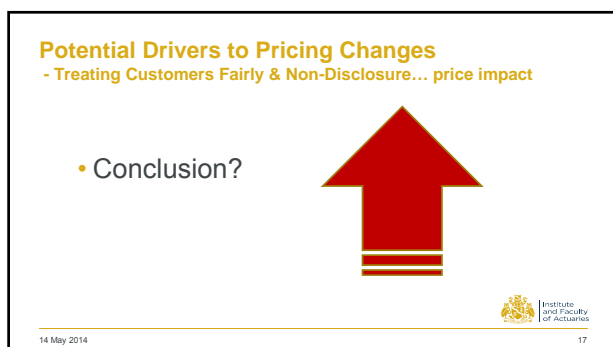
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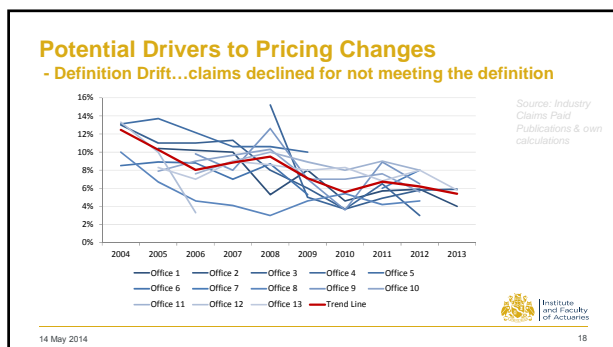
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Potential Drivers to Pricing Changes

- Definition Drift... claims paid examples where definition not met

Case Study	% Paid Where definition failed
MI - Infero basal hypokinesia	100%
MI - Mildly impaired systolic function	75%
Dilated cardiomyopathy - controlled well	56%
Sub-arachnoid - no sequelae	55%
Acoustic neuroma with surgery	45%
Possible MS (some kind of neurological disorder)	40%
One episode definite MS - full recovery	27%
Inoperable Glioma - no symptoms	25%



Increasing
Severity

Source: Pacific Life Re's "Grey Claims" Survey 2010



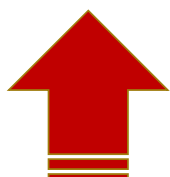
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Potential Drivers to Pricing Changes

- Definition Drift ... price impact

• Conclusion?



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Potential Drivers to Pricing Changes

- Data & Pricing Uncertainty...comparison with Mortality

Mortality	Morbidity
<ul style="list-style-type: none"> Established CMI investigation History of mortality tables High volumes of internal data 	<ul style="list-style-type: none"> Early reliance of population data Growing CMI investigation Tables in their infancy Anti-selection unclear Growing condition coverage

Is this changing?

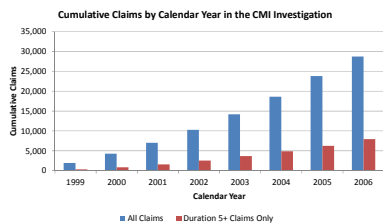


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Potential Drivers to Pricing Changes

- Data & Pricing Uncertainty...Growing CMI Dataset



Source: CMI

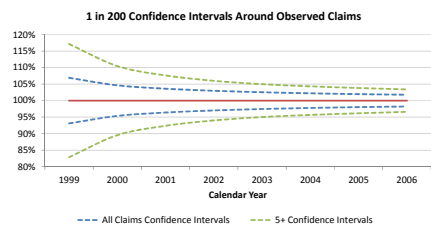


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Potential Drivers to Pricing Changes

- Data & Pricing Uncertainty...Growing CMI Dataset



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Potential Drivers to Pricing Changes

- Data & Pricing Uncertainty...but not that simple

Mix of products, underwriting years	Relevance to prospective experience is not clear
CMI methodology not perfect	Continually evolving
Select shape	Limited ultimate claims, and particularly difficult to quantify given above
Age shape	Credibility is limited at the table extremes and experience for minor conditions yet to emerge




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Potential Drivers to Pricing Changes

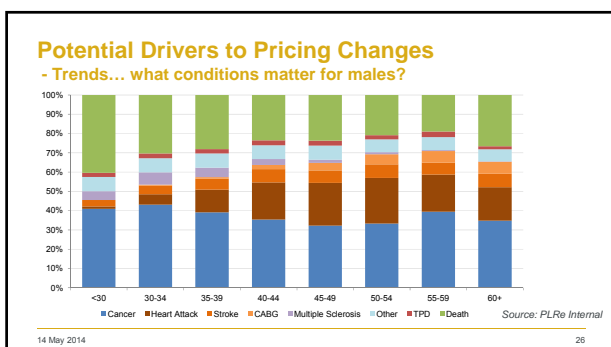
- Data & Pricing Uncertainty... price impact

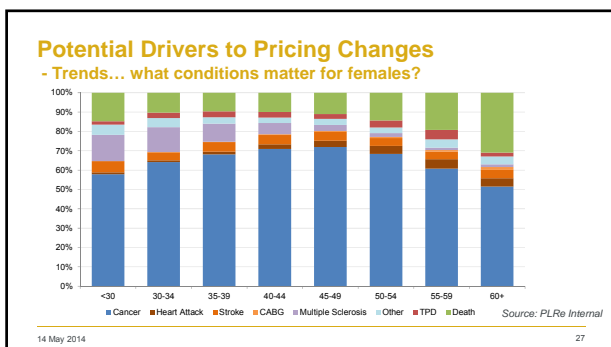
- (Possible) Conclusion?



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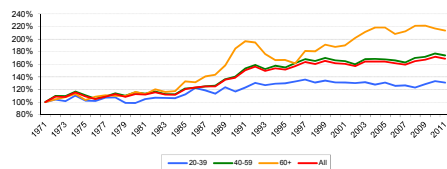




Potential Drivers to Pricing Changes

- Trends... cancer...the ups

Breast Cancer Incidence as % of 1971 (Females)



Source: ONS Cancer Registry

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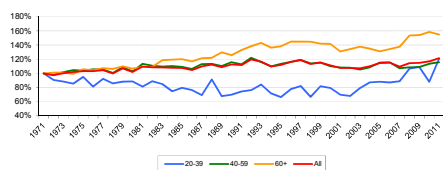


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Potential Drivers to Pricing Changes

- Trends... cancer...the ups

Colorectal Cancer Incidence as % of 1971 (Males)



Source: ONS Cancer Registry

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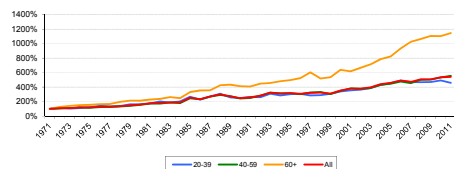


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Potential Drivers to Pricing Changes

- Trends... cancer...the ups

Melanoma Incidence as % of 1971 (Both)



Source: ONS Cancer Registry

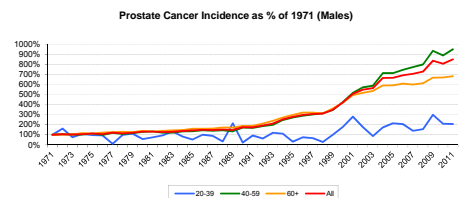
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Potential Drivers to Pricing Changes

- Trends... cancer...the ups



Source: ONS Cancer Registry

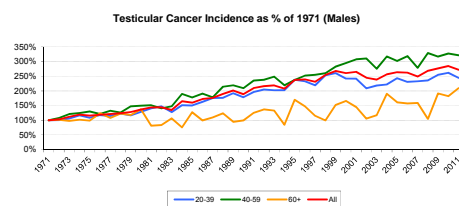
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Potential Drivers to Pricing Changes

- Trends... cancer...the ups



Source: ONS Cancer Registry

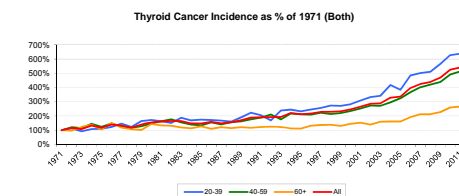
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Potential Drivers to Pricing Changes

- Trends... cancer...the ups



Source: ONS Cancer Registry

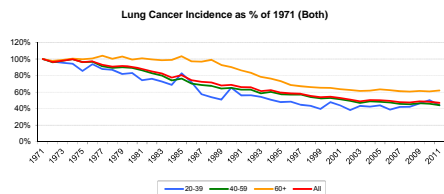
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Potential Drivers to Pricing Changes

- Trends... cancer...the downs



Source: ONS Cancer Registry

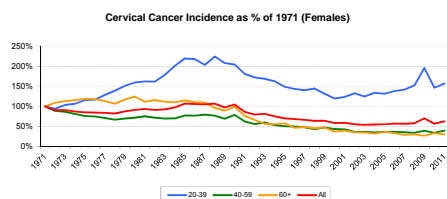
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Potential Drivers to Pricing Changes

- Trends... cancer...the downs



Source: ONS Cancer Registry

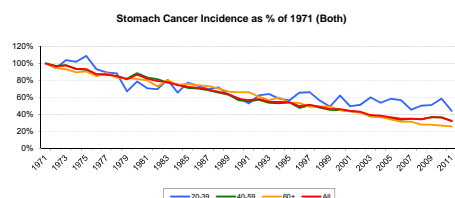
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Potential Drivers to Pricing Changes

- Trends... cancer...the downs



Source: ONS Cancer Registry

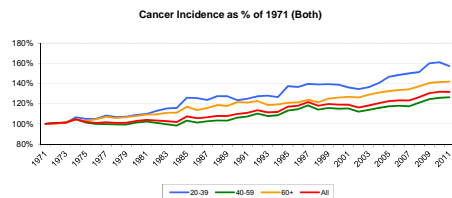
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Potential Drivers to Pricing Changes

- Trends... overall cancer



Source: ONS Cancer Registry

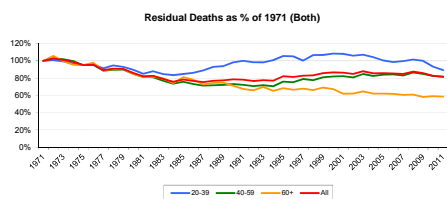


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Potential Drivers to Pricing Changes

- Trends... does the mortality component help?



Source: ONS Cancer Registry



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Potential Drivers to Pricing Changes

- Trends... what about the cardio-vascular conditions

Condition	Trends
Heart Attack	▼ / ►
Stroke	▼ / ►
Coronary Artery Bypass-grafts	▼



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Potential Drivers to Pricing Changes

- Trends... price impact

• Conclusion?



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Potential Drivers to Pricing Changes

- Any others...?

	Impact?
Distribution management	▼
BMI/alcohol	▲
Underwriting Developments	??
Persistence	??

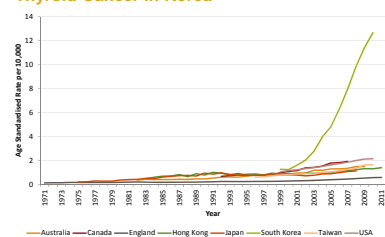


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Lessons from Around the Globe

- Thyroid Cancer in Korea

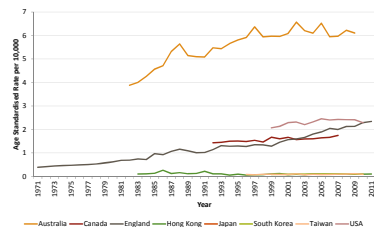


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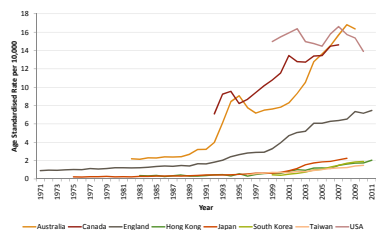
Lessons from Around the Globe

- Melanoma in Australia



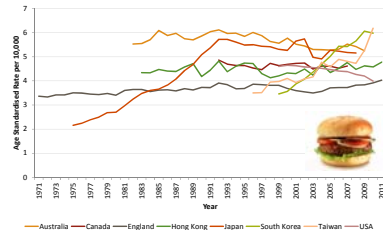
Lessons from Around the Globe

- Prostate Cancer in North America/Australia



Lessons from Around the Globe

- Colorectal Cancer in Asia



Summary

- Can prices get any lower?

It's a surprise they've reduced so much!


- Given the movements in declined claims
- And the increasing coverage/definition drift
- As well as general cancer trends

Still a risky product

- Uncertainties relative to mortality pricing are still present
- Despite the growing volumes of data
- Should note what has happened around the world

Evolving

- Coverage is growing
- Need to be ready for any surprises
- Care required over definition creep and declined claims trends



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Summary

- Possible Conclusions

Pricing Discipline


- Ensure margins vs mortality are sensible
- Emerging experience is uncertain given complexity of select discounts and changing distribution landscape

Definition Maintenance

- Consider size related Thyroid cancer exclusions
- General exclusion of nano-sized cancers
- Tiered definitions

Understanding the Risks

- Internal Model Calibration
- More research (working parties etc)



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Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.



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