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**CIGI 2018**

**IFRS 17**

**Managing the Risk Adjustment in practice**

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on behalf of the

IFoA IFRS 17 for General Insurance working party

# Agenda

## The requirements

- What is the Risk Adjustment and where does it fit in?
- What are the key requirements for the Risk Adjustment?
- What are the ambiguities about how to apply the new standard?

## Practical issues

- Role of actuaries vs management
- How will the RA compare to other measures of reserve uncertainty?
- What lessons can we learn?
- A possible framework for setting the RA



# A work in progress

This presentation represents the views of the working party members and does not represent the views of the members' respective employers.

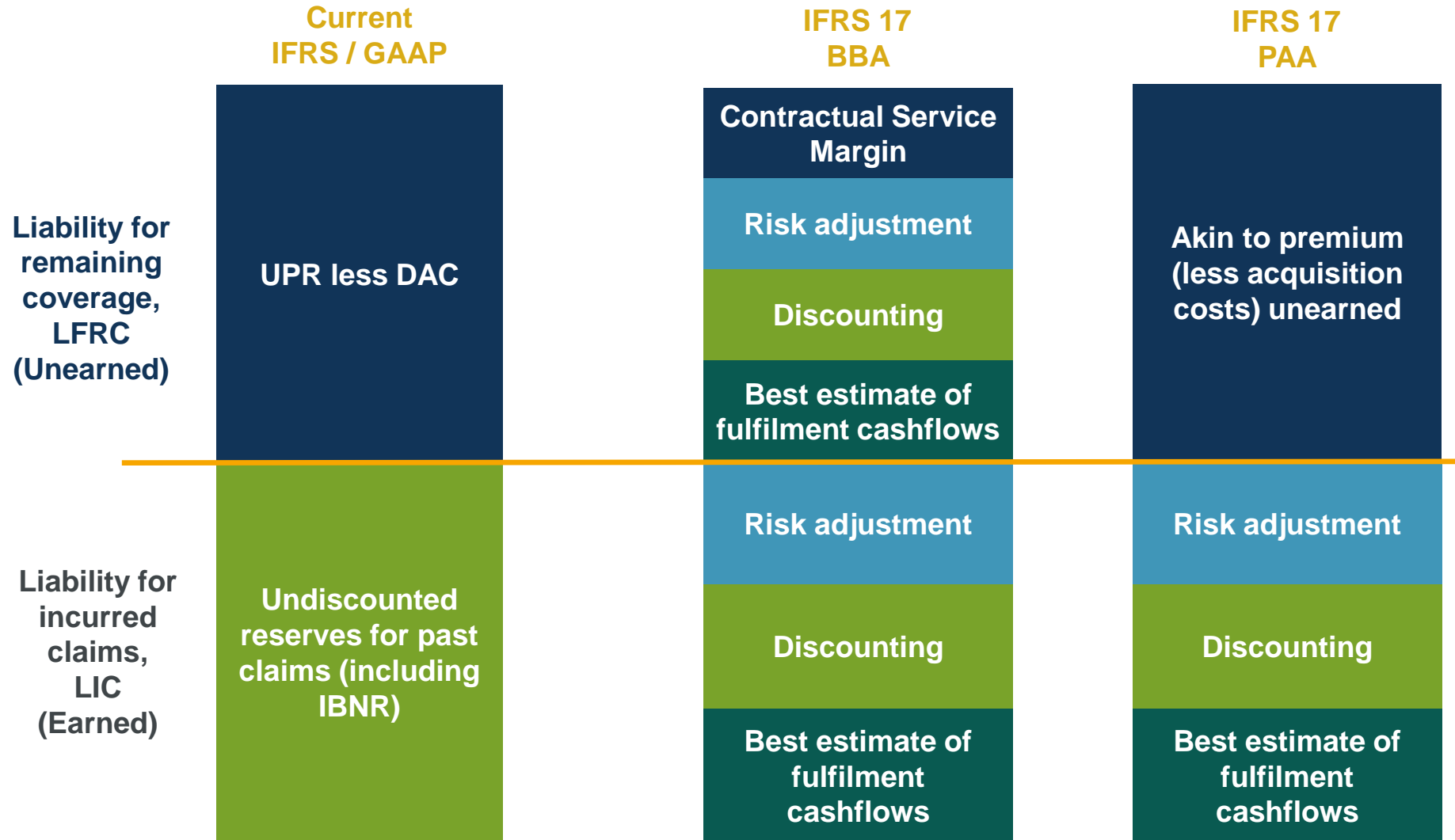
Our thinking is still a work in progress rather than agreed consensus views.

Contact details – Risk Adjustment work stream:

- Laura McMaster
- David Menezes
- Martin White



# IFRS 17 balance sheet overview



# IFRS17 Risk Adjustment

## Definition and key requirements

The compensation required by an entity for bearing the uncertainty about the amount and timing of the cash flows that arises from non-financial risk

- + **Entity's view of uncertainty** based on their own risk appetite
- + NOT a market value of the liabilities
- + **Ultimate view of uncertainty**, not the one-year view of Solvency II

Method

Scope

Reinsurance

Granularity

Diversification

Disclosure



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# Method and characteristics

## *IFRS17 Risk Adjustment – further requirements*

### Method not defined - but “confidence level” must be disclosed

The standard expects a relatively higher RA in the following cases:

- + Low frequency, high severity business
- + Longer-tailed business
- + Wider probability distribution
- + Less known about best estimate and trends

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## More on this later...



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# Scope

## IFRS17 Risk Adjustment – further requirements

### Covers “non-financial” risks, including

- + Claim amounts, development and trends (including inflation risk)
- + Lapse, surrender and other policy holder actions
- + Expense risk including inflation associated with servicing the contract

### Excludes

- + Asset liability mismatch risk
- + Price or credit risk on underlying variables
- + Operational risk

? Different from SII risk margin

? Currently tend not to include expenses when measuring uncertainties

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# Reinsurance

## IFRS17 Risk Adjustment – further requirements

**Both gross business and outwards reinsurance risk adjustments are required**

+ The reinsurance risk adjustment must represent the amount of risk being transferred by the holder of the reinsurance contracts to the issuer of those contracts

- ? **Gross and reinsurance explicitly**
- ? **Something more involved considering attritional and large claims separately**
- ? **Difference gross and net to get reinsurance**
- ? **Gross explicitly and simple gross to net ratios**

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# Granularity and diversification

## IFRS17 Risk Adjustment – further requirements

### Granularity

- + Required for LIC (earned) plus, where using BBA, for LFRC (unearned)
- + For BBA, required at the level at which the Contractual Service Margin is determined
- + Allocated to contract level to meet allow assessment of onerous contracts

### Diversification

- + RA must reflect the degree of diversification benefit the entity includes when determining the compensation it requires for bearing the risk

? Level of aggregation and approach to diversification not specified

? Will firms set RA at a fairly high level – say overall corporate entity / subsidiary / major division level

? Will firms aim to avoid considering diversification explicitly

TRG meeting on 2 May

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# Disclosures

## IFRS17 Risk Adjustment – further requirements

### Disclosure requirements

- + **EITHER** confidence level used to set the RA
- + **OR** alternative technique used and corresponding confidence level
- + Qualitative information about inputs
- + Changes in methods with reasons
- + Reconciliation between accounting periods

- ? **Gross and reinsurance or just net**
- ? **Earned and unearned or combined**
- ? **Separately for PAA and BBA or combined**

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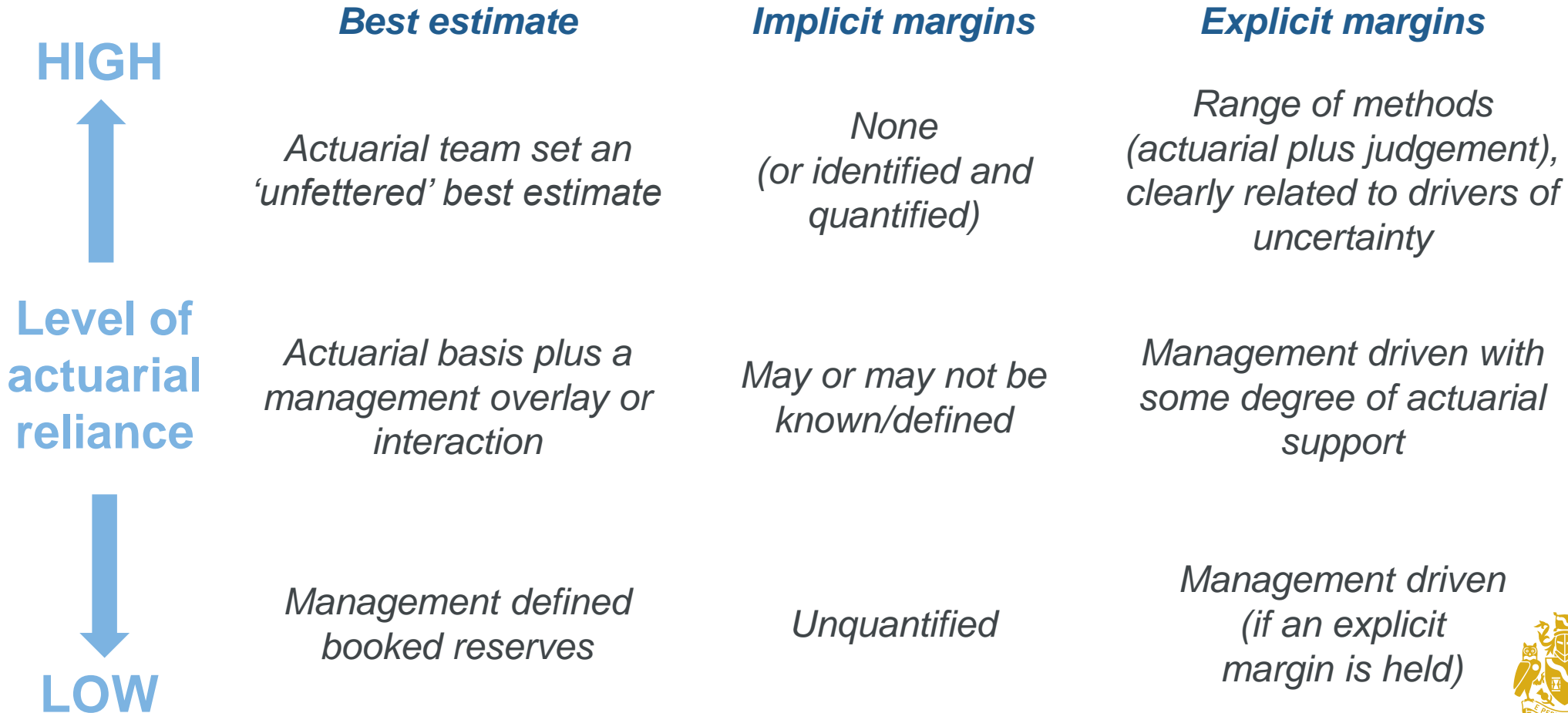
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# Management vs actuarial input into accounting figures

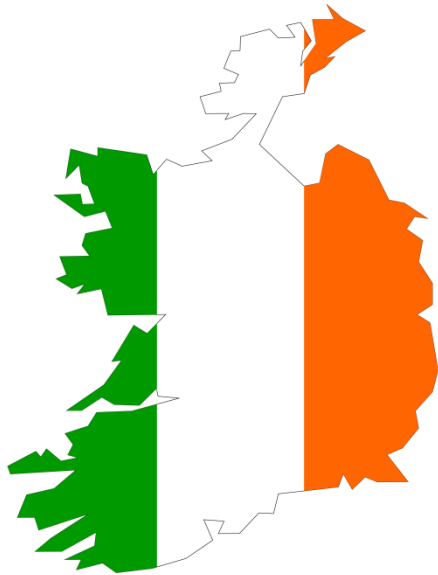
*Where does your firm sit on the spectrum?*



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# What lessons can we learn from elsewhere

*Approaches to reserve uncertainty - Ireland, UK, Australia*



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# Ireland

*Central Bank of Ireland : Guidance on Best Estimate and Margin for Uncertainty 2014*



“Stress and scenario testing are key techniques that should be used in determining the Margin for Uncertainty. Where appropriate, statistical methods.... should also be employed.”

“The board should enumerate the constituents of the Margin for Uncertainty.”

Statistical buffer  
over best estimate

Impact of various  
scenarios and  
stresses considered

Allowance for  
diversification  
effects

Consideration of the  
Board’s risk Appetite  
Statement

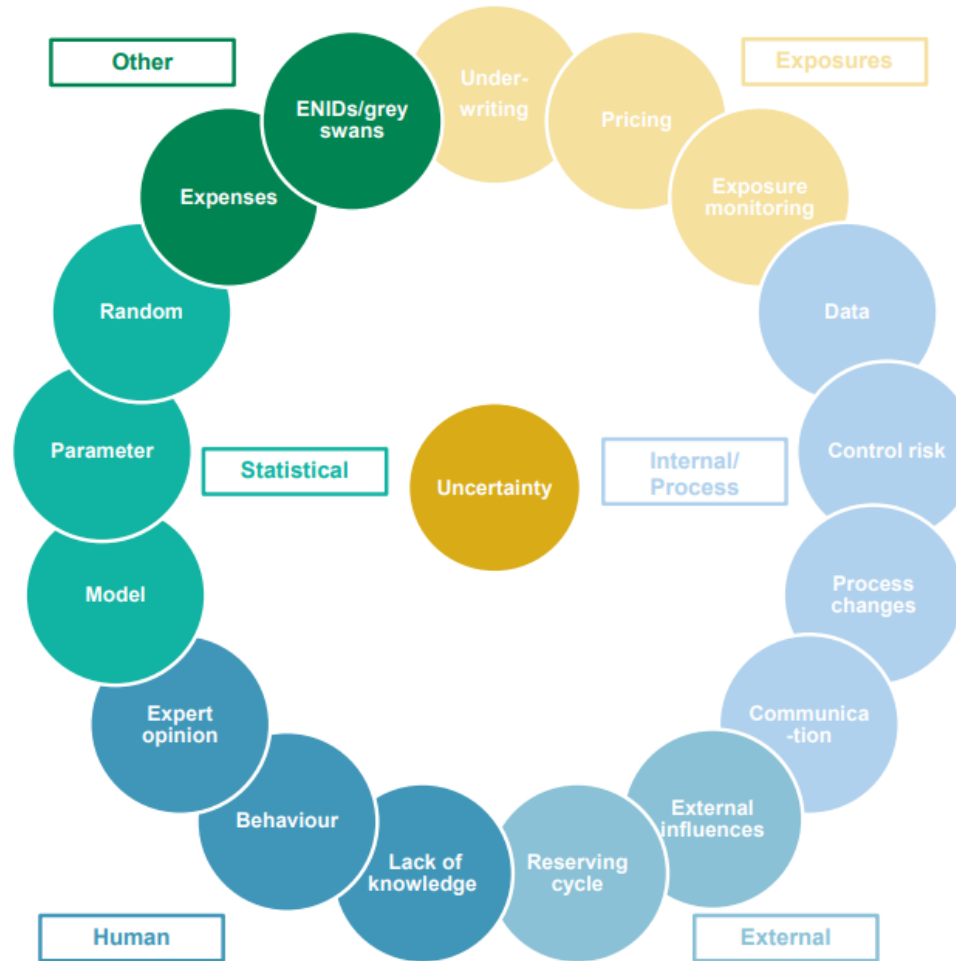


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# UK

## IFoA MUQ Working party: Uncertainty framework

“A best practice approach for thinking about aspects of uncertainty that are not covered by quantitative factors such as percentiles.”



# Australia

A framework for assessing risk margins, 2008



“Quantitative techniques alone are insufficient to enable a complete assessment of the various sources of uncertainty.”

“These techniques must be supplemented by qualitative analysis to ensure that all sources of uncertainty are captured..”



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# Australia

A framework for assessing risk margins, 2008



The sources of uncertainty and whether quantitative techniques capture them

System risk	Internal	Eg model structure, adequacy, parameterisation and data accuracy.	✗
	External	Eg economic, legal, nat cat	
Independent risk	Parameter risk	Ability to select appropriate parameters	✓
	Process risk	Inherent randomness of insurance	



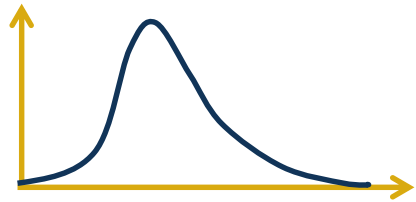
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# RA methodologies

What are some of your options?

**Either**



Independent and past external systemic risk

- ODP Bootstrap
- Mack
- Stochastic chain ladder
- Bespoke stochastic methods
- Stress and scenario tests

Other systemic risk

- Qualitative overlay
- eg Oz score card approach

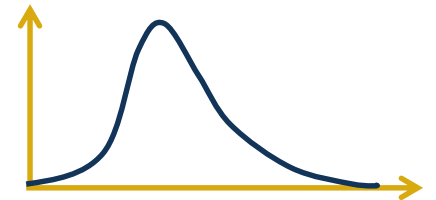
Risk metric

- VaR
- TVaR
- PHT

**Or**

- Cost of capital
- Stressed (deterministic) reserving assumptions

**But then...**



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# RA methodologies

## What are some of your options?

Modelling methods	Advantages include:	Challenges include:
ODP Bootstrap/Mack	Well-known and used for other purposes already	May not capture important elements of risk if these are not adequately represented in the triangle
Bespoke stochastic methods	Can capture a wide range of risks – less need for qualitative overlay.	May not be straightforward to implement/parameterise/validate/explain
Stress and scenario tests	Easier to understand, and may be useful to validate other approaches	Harder to express as confidence level - requires judgement
RA selection methods	Advantages include:	Challenges include:
VaR	Relatively well understood	Doesn't capture skewness. Not additive.
TVaR	Addresses some weaknesses of VaR	Less well understood
Proportional hazards transform	Ability to reflect the risk appetite explicitly in a more sophisticated way	May be difficult to explain to non-actuaries
Cost of capital	Familiarity (SII), could be useful as a benchmarking tool across different firms	What "capital" measure, what rate of return? Also may not reflect how a firm wishes to express risk appetite
Stressed (deterministic) reserving assumptions	Doesn't require a distribution. Relatively straightforward for non-actuaries to understand	Potentially simplistic. Also can't express as a confidence level unless there is a distribution.



# A risk adjustment framework – what could it look like?

## Example where the RA is mainly driven by actuarial rather than by management

### Management toolkit

- A risk appetite statement signed of by the board/audit committee
- Confidence level required in order to be indifferent between cashflows of certain/uncertain amount and timing (possibly expressed as a range)
- The factors (quantitative and qualitative) to be taken into account in setting the risk adjustment
- Policy on business segmentation for the purpose of calculating the risk adjustment, including allocation to more granular levels/aggregation to higher levels
- Defined scope for the actuarial team to use judgement to modify the risk adjustment calculations in particular circumstances
- Mechanism for management to override elements of the actuarial calculation (within reason) to reflect specific uncertainties that might not otherwise be captured

### Actuarial toolkit

- A standard set of risk adjustment uplift factors for each relevant business segment
- Methods including statistical modelling as well as scenarios and qualitative factors
- Approach calibrated to achieve the board's overall confidence level
- Documented rationale for methods and assumptions, as well as for relativities between business segments
- Factors updated periodically
- Policy for reviewing/modifying factors in response to eg significant market events or change in inflation expectations
- Some degree of independent validation (eg from capital modelling team?)
  - Range of validation tools
  - Include benchmarking vs market or vs own SII RM, with explanation for material differences

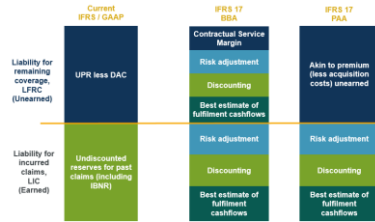


# Key benefits of adopting a framework approach

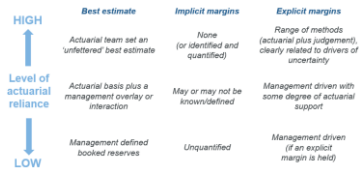
- Management engagement and control
- Satisfy your auditors and investors that you have a robust approach
- Unfettered (or reduced commercial pressure) on actuary to allow them to give a true view
- Broader qualitative thinking about the risks will provide business insight and a better understanding of the reserve risk
- Relying purely on statistical techniques will not capture all uncertainties – not best practice



# Conclusion



- Understand the standard and identify areas requiring interpretation



- Decide on the balance you want to achieve between actuarial and management input to the accounting figures



- Start planning a framework around the actuarial methods that will fit your business and meet the requirements



# IFRS 17 Papers on Risk Adjustment

- 1- page schematic outlining composition of insurance contract liabilities under IFRS17 (IASB)  
<https://www.ifrs.org/-/media/project/insurance-contracts/ifrs-standard/ifrs-17-accounting-model-a3-jan-2018.pdf?la=en&hash=0DCAF2AB556CF92A14062C1904796B4D4637E28B>
- Institute of Actuaries Australia Information Note: AASB 17 Insurance Contracts  
<https://www.actuaries.asn.au/Library/Standards/MultiPractice/2018/AASB17InsuranceContractsINVer10FINAL7318.pdf>
- CBI Guidance on Best estimate and uncertainty  
[https://www.centralbank.ie/docs/default-source/Regulation/insurance-reinsurance/non-solvency-ii-\(life\)/requirements-and-guidance/ongoing-requirements-guidance/may-2014---guidance-on-best-estimate-margin-for-uncertainty.pdf?sfvrsn=2](https://www.centralbank.ie/docs/default-source/Regulation/insurance-reinsurance/non-solvency-ii-(life)/requirements-and-guidance/ongoing-requirements-guidance/may-2014---guidance-on-best-estimate-margin-for-uncertainty.pdf?sfvrsn=2)
- MUQ working party materials  
<https://www.actuaries.org.uk/documents/measuring-uncertainty-qualitatively-muq-framework>
- A Framework for Assessing Risk Margins, Australian Risk Margins Taskforce  
<https://www.actuaries.asn.au/Library/Framework%20for%20assessing%20risk%20margins.pdf>
  - APRA Risk Margins (Collings/White): <https://www.actuaries.asn.au/Library/APRA%20Risk%20Margin%20Analysis%20Report.pdf>
  - Development of Australian Valuation Guidelines (Bateup/Reed): <https://www.actuaries.asn.au/Library/Reports/2001/RelevantDevSGLiabilityValGI.pdf>
- Technical Aspects of IFRS17 , GIRO 2017 (Bulmer / England)  
<https://www.actuaries.org.uk/documents/d4-technical-aspects-ifrs-17-insurance-contract-liabilities>
- LIC RA – Core methods, GIRO 2017 (England / Facey)  
<https://www.actuaries.org.uk/documents/f6-ifrs-17-risk-adjustments-and-risk-margins-using-cost-capital-approach-estimating-future-capital-0>
- Discussion of risk margins for 1 year (S2) vs Ultimate (Traditional) vs IFRS17 (England/ Verral/Wutthrich)  
[https://papers.ssrn.com/sol3/Papers.cfm?abstract\\_id=3141239](https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=3141239)
- LfRC RA – Loss Ratio method (Li)  
<http://www.variancejournal.org/issues/04-02/155.pdf>



# Questions

# Comments

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