



Institute  
and Faculty  
of Actuaries

# Solvency II Standard Formula Is Changing

Richard Williams & Steven Fisher

DRAFT

26 September 2019



# Good Morning!



Institute  
and Faculty  
of Actuaries

# Battle for attention



IFRS 17

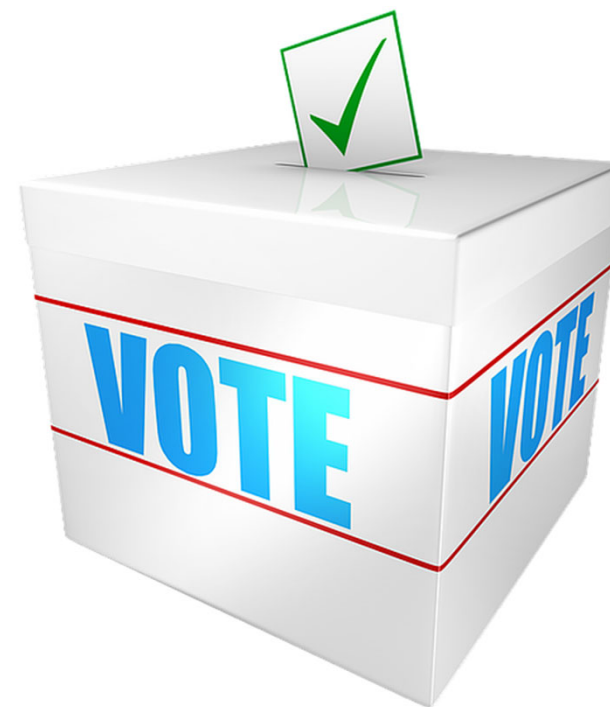
Solvency II



Institute  
and Faculty  
of Actuaries

# Question

- Who knows anything about the Solvency II standard formula changes?



Institute  
and Faculty  
of Actuaries

# Purpose of workshop

- The Solvency II standard formula has changed a number of times since it was first brought in.
- More changes expected this year, next year and after that.
- General process has been:
  - EU asks EIOPA for advice on an area of regulation.
  - EIOPA holds consultations.
  - EIOPA gives advice to the EU.
  - The EU either accept or don't accept EIOPA's advice and legislate accordingly.
- We've gone through the documentation produced by the EU and EIOPA to try to understand:
  - What they're changing.
  - Why they're changing it.

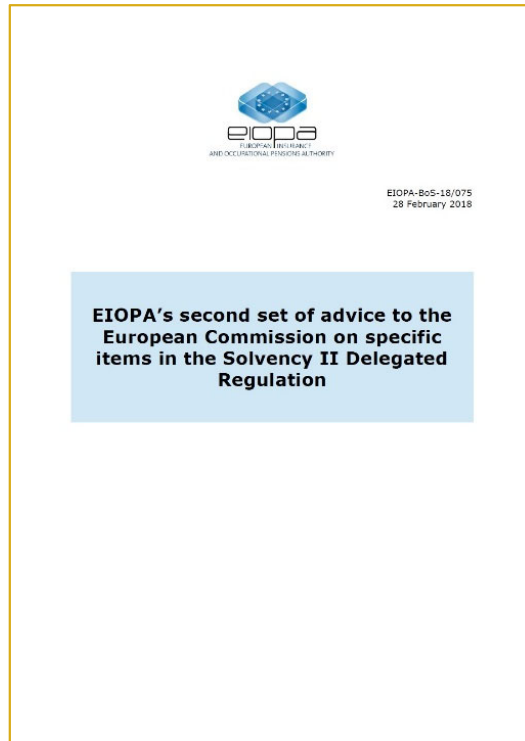


# Purpose of workshop

- A reasonable prior understanding of the standard formula is useful.
- The workshop is positioned at a relatively high level.
- We have not covered all the changes set out in the act.
  - For example:
    - Biggest area of change we've not included is around tax.
    - Also not looked at changes affecting Health or Life charges or own funds.
- Usual caveats apply:
  - You shouldn't rely on this document when making any business decisions.
  - This is our interpretation. Your, your organisation's or the regulator's interpretation may differ from ours.
  - ALWAYS refer to the official publications before deciding on a course of action.
  - Anything which looks like a quote in here may have been changed to be less wordy. We don't think we've changed the meaning doing this, but please look up the original.

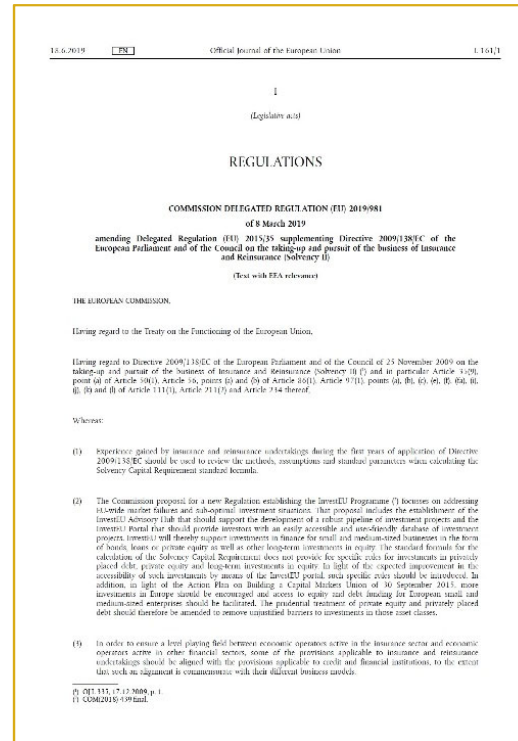


# Main Sources



[https://eiopa.europa.eu/Publications/Consultations/EIOPA-18-075-EIOPA Second set of Advice on SII DR Review.pdf](https://eiopa.europa.eu/Publications/Consultations/EIOPA-18-075-EIOPA%20Second%20set%20of%20Advice%20on%20SII%20DR%20Review.pdf)

Referenced as “[EIOPA x]”



<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0981>

Referenced as “[DA x]”

## Main Sources – Not nice

11. Exposures other than those to which a credit quality step is assigned under paragraphs 5 to 10 shall, for the purpose of paragraph 4, be assigned to credit quality step 5.;

(40) in Article 184, paragraph 3 is replaced by the following:

‘3. The exposure at default on a single name exposure  $i$  shall be reduced by the amount of the exposure at default to counterparties belonging to that single name exposure and for which the risk factor for market risk concentration referred to in Articles 186 and 187 is 0 %.’;

(41) in Article 186, paragraphs 2 to 6 are deleted;

(42) Article 187 is amended as follows:

(a) in paragraph 3, the following subparagraph is added:

‘For the purposes of point (b), exposures that are fully, unconditionally and irrevocably guaranteed by regional governments and local authorities listed in Article 1 of Implementing Regulation (EU) 2015/2011, where the guarantee meets the requirements set out in Article 215 of this Regulation, shall be treated as exposures to the



Institute  
and Faculty  
of Actuaries



# Please stand up!



Institute  
and Faculty  
of Actuaries

# Question

- Please sit down if you didn't know the standard formula has already been changed.



Institute  
and Faculty  
of Actuaries

# Please stand up!



Institute  
and Faculty  
of Actuaries

# Question

- Please sit down if you don't work at a firm that calculates a Standard formula (e.g. you're a consultant).



Institute  
and Faculty  
of Actuaries

# Question

- Please sit down if you think the standard formula represents a good fit for the risks of your organisation.

(before any capital add-on)



Institute  
and Faculty  
of Actuaries

# History of changes

- Several changes have already been made to the Delegated Acts by previous amendments.

In Force Date (approx.)	Commission Delegated Regulation	Changes	Website
18/01/2015	2015/35	Original Delegated Regulations.	<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R0035">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32015R0035</a>
02/04/2016	2016/467	Calculation of regulatory capital requirements for several categories of assets held by insurance and reinsurance undertakings.	<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016_.085.01.0006.01.ENG&amp;toc=OJ.L:2016:085:TOC">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016_.085.01.0006.01.ENG&amp;toc=OJ.L:2016:085:TOC</a>
15/09/2017	2017/1542	Calculation of regulatory capital requirements for certain categories of assets held by insurance and reinsurance undertakings (infrastructure corporates).	<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1527257897859&amp;uri=CELEX:32017R1542">https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1527257897859&amp;uri=CELEX:32017R1542</a>
01/01/2019	2018/1221	Calculation of regulatory capital requirements for securitisations and simple, transparent and standardised securitisations held by insurance and reinsurance undertakings.	<a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1554988847429&amp;uri=CELEX:32018R1221">https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1554988847429&amp;uri=CELEX:32018R1221</a>



Institute  
and Faculty  
of Actuaries

# Rationale for current changes

The EU's reasons for the changes:

1. To reflect more recent data.
2. Refinements to existing rules.
3. To reduce the charge on unrated debt and unlisted equity.
4. Made the process more proportionate.
5. To further align Solvency II with rules in the banking sector.
6. To change the process for determining risk-free interest rate term structures to tighten it up to be more rigorous.
7. A number of drafting errors have been corrected.



Institute  
and Faculty  
of Actuaries

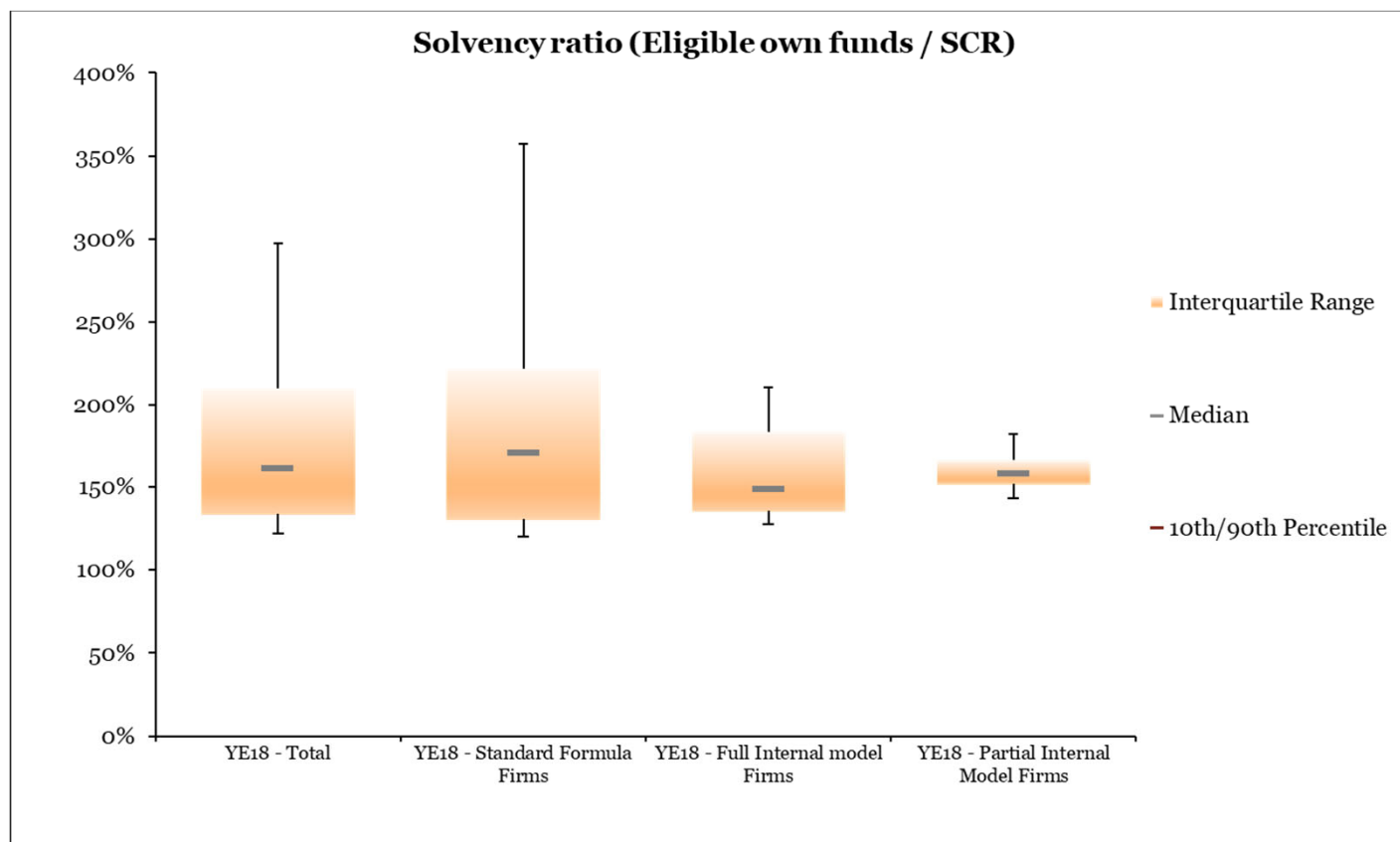
# Implementation

- The proposed amendment to the Delegated Acts was released on 8 November 2018.
- On Monday 8 July 2019 many of the changes came into effect.
- However: *“In order to avoid disruptions in the non-life and health insurance market, in particular for insurers... operating only in one line of business, sufficient time should be given to enable insurers... to prepare for the changes in the calculation of the non-life and health premium and reserve risk. Those changes should therefore not apply before 1 January 2020.”* [DA P42]
- It's unclear how Brexit might affect the implementation of these changes in the UK, or how the PRA will respond to the changes.





# Background



Source:  
Publicly available SFCR & QRTs  
at YE 2018

- Standard formula firms have a much wider interquartile range than non-standard formula firms, but are slightly better capitalised.



Institute  
and Faculty  
of Actuaries

# Underwriting Risk



Institute  
and Faculty  
of Actuaries

# Please stand up!



Institute  
and Faculty  
of Actuaries

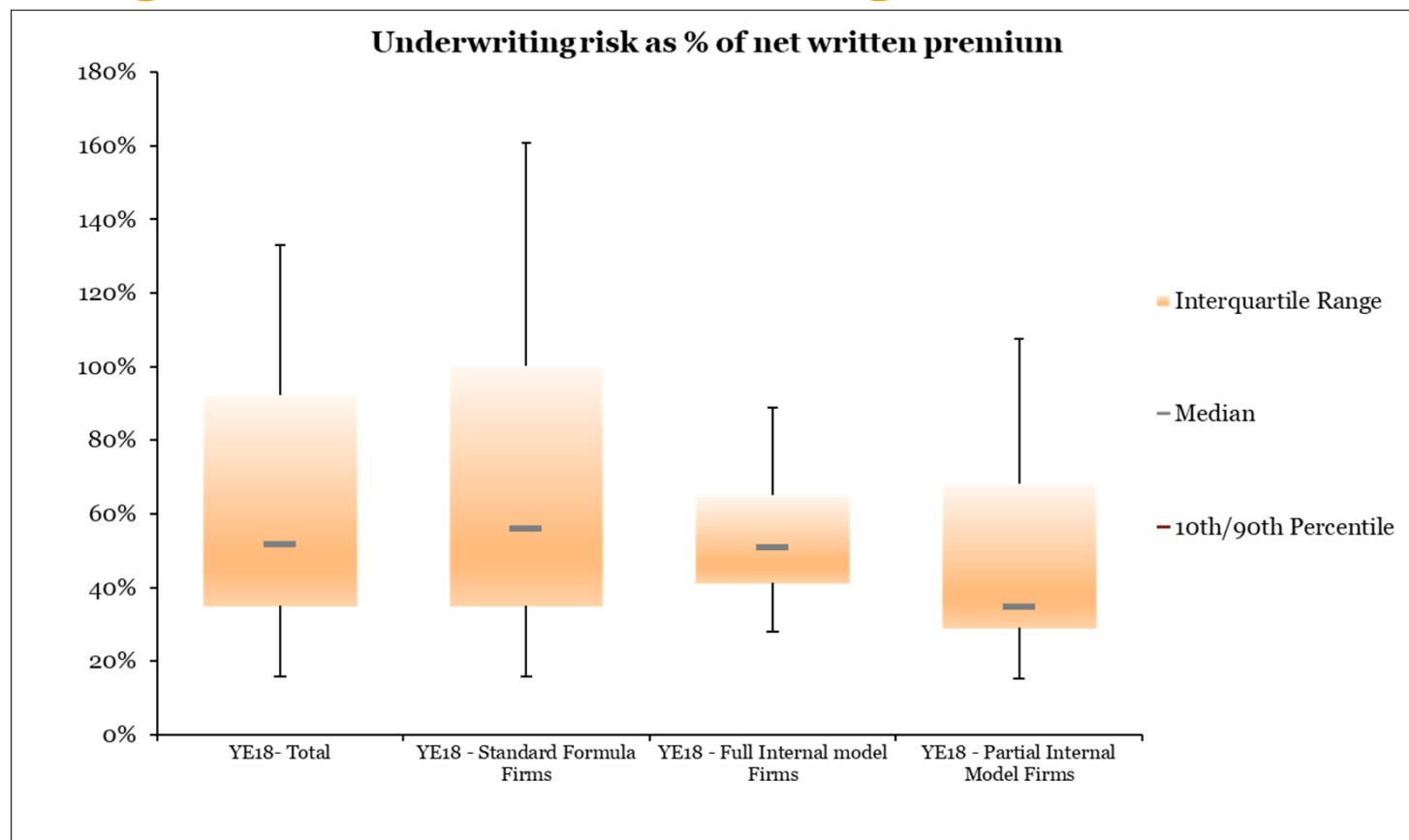
# Question

- Sit down if you think the premium and reserve risk module is a good reflection of the relevant risk in an organisation.



Institute  
and Faculty  
of Actuaries

# Background – Underwriting risk



Source:  
Publicly available SFCR & QRTs  
at YE 2018

- Underwriting risk as a percentage of premium appears larger for standard formula firms than non-standard formula firms.



Institute  
and Faculty  
of Actuaries

# Premium & Reserve Risk

## Recalibration

- “*The standard formula calculation for the non-life premium and reserve risk sub-modules, the health premium and reserve risk sub-modules... should be modified to reflect the recent empirical evidence on premium provisions and provisions for claims outstanding.*” [DA P39]

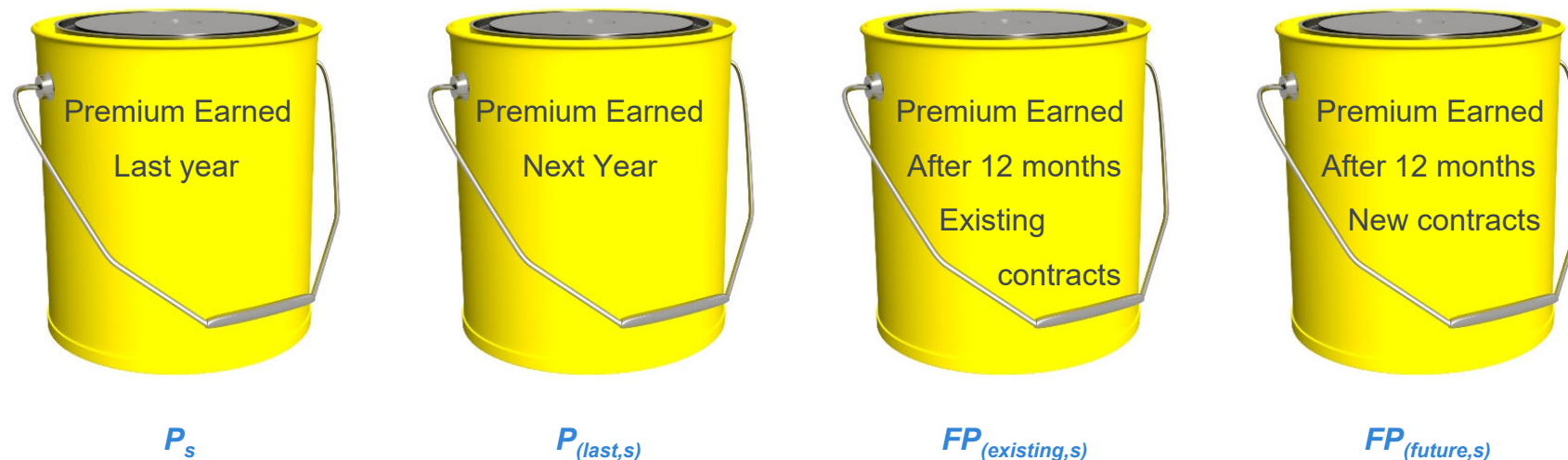
Segment	Lines of business	Standard deviation for gross premium risk (previous)	Standard deviation for gross premium risk (new)	Standard deviation for reserve risk (previous)	Standard deviation for reserve risk (new)
Credit and suretyship	9 and 21	12 %	19%	19 %	17.2%
Legal expenses	10 and 22	7 %	8.3%	12 %	5.5%
Assistance	11 and 23	9 %	6.4%	20 %	22%
Medical expense	1 and 13	5 %	5 %	5 %	5.7%
Workers' compensation	3 and 15	8 %	9.6%	11 %	11 %

- Applies from 1 January 2020.



Institute  
and Faculty  
of Actuaries

# Premium & Reserve Risk



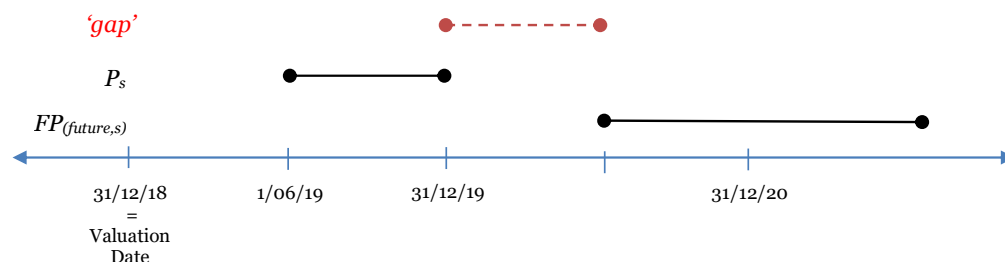
- The inputs into the premium risk part of premium & reserve risk are from four “buckets”.



Institute  
and Faculty  
of Actuaries

# Premium & Reserve Risk

- Issue in original rules was an apparent “gap” in the inclusion of premium into these buckets for multi-year contracts.
- The gap comes from the definition of  $FP_{(future,s)}$



- The diagram above shows a 2 year contract bound and incepting on 1/06/19 and how its premium would be split under the current definitions between the premium buckets of Article 116.
- Six months of the premium is not included in any bucket and is therefore excluded from the premium and reserve risk calculation.
- EIOPA’s reason for this is that : *“the gap was designed in order to approximate the premium capital charge to the 1 year view perspective and at the same time ensure that the volume measure does not depend on where the initial recognition date is within each year.”* [EIOPA 135]



Institute  
and Faculty  
of Actuaries



# Premium & Reserve Risk

- “*The risk charge for premiums for future contracts should not unduly penalise contracts with an initial term of more than one year in order to take into account the lower risk associated to future premiums from contracts with longer terms.*” [DA P21]
- Change to the definition of  $FP_{(future,s)}$ : The new text:
  - Provides no change to the definition for 1 year contracts.
  - Removes the gap and introduces a 30% ‘adjustment factor’ for multi-year policies.
- EIOPA’s reason for this is that : “*the gap is not appropriate for multi-year contracts when excluding the first year of premiums of future business and including the remaining ones and subjecting those to the same risk level as premiums received during the next 12 months.*” [EIOPA 135]
- The purpose of the adjustment factor is to reflect the smaller risk associated with  $FP_{(future,s)}$  relative to  $P_s$ .
- EIOPA calibrated the adjustment factor using real data to look at the average impact on the volume measure for all contracts and selected a value they felt treats the risk stemming from 1 year policies and multi-year policies in a uniform way.



# Lapse Risk

- *“The lapse risk sub-modules require complex calculations based on the level of single insurance policies. Where such complexity is not proportionate to the nature, scale and complexity of the risks falling under those sub- modules, it should be possible to base the calculations for those sub-modules on groupings of insurance policies, rather than on single insurance policies, unless such groupings would lead to a material error.” [DA P13]*
- Currently lapse risk is based on “insurance policies for which discontinuance would result in an increase of technical provisions without the risk margin” [Article 118 of original DA]
- Accepted previous assumption is that this implies you had to consider profitability of individual policies.
- New simplification means you can now make this assessment by looking at groups of policies, provided these are homogenous.



# Catastrophe Risk

Man-made Cat  
Marine, Fire & Aviation

- The man-made cat risk charges for Marine, Fire and Aviation rely on identifying the largest risk exposures for the scenarios in each subcharge:
  - For Marine risk, this is the tanker / vessel with maximum sum insured and offshore platform with maximum sum insured;
  - For Aviation risk, this is the aircraft with the maximum sum insured;
  - For Fire risk, it's the buildings within a radius of 200 meters with maximum sum insured.
- Currently this is calculated gross of reinsurance.
- This has now been changed so the identification of the largest risk exposures are carried out “*net of reinsurance where that reinsurance cover alters the relative ranking of the exposure within the undertaking's portfolio, based on the size of the exposure. For example, facultative covers.*”  
[EIOPA 499]



Institute  
and Faculty  
of Actuaries

# Catastrophe Risk

## Man-made Cat Fire

- For man-made fire cat, currently insurers are required to identify the largest fire risk concentration, being the set of buildings with the largest sum insured where the insurer has obligations in the fire or other damage line of business and where all buildings are partly or fully located within a radius of 200 meters.
  - This was considered too complex and many insurers struggled to get the right data.
  - No change has been made to this default approach, but a new simplification has been introduced for the identification of the largest risk concentration.
  - Only need to consider the top five exposures per risk type (residential, commercial, industrial) in the portfolio.
  - This approach assumes that the largest concentration of exposure within any 200m radius will have one of the largest five exposures, per risk type, as a central point.
- In addition, the wording around the reinsurance you can take into consideration has been tightened up to explicitly only include those reinsurance contracts that would actually pay out.



# Catastrophe Risk

## Man-made Cat Marine

- Two changes have been made to the man-made marine cat charge:
  - The ‘tanker’ scenario has been changed to a ‘vessel’ scenario.
  - Vessels where the maximum hull value insured is less than EUR 250,000 have been excluded from the calculation. This prevents very low exposure, such as pleasure craft or rigid inflatable boats (“ribs”), from entering the marine risk SCR.



Institute  
and Faculty  
of Actuaries

# Catastrophe Risk

Man-made Cat  
Marine

- Like Fire, the wording around the reinsurance you can take into consideration has been tightened up:
  - *In determining [the sum insured], insurers... shall only take into account reinsurance contracts... that would pay out in the event of insurance claims related to the vessel. Reinsurance contracts... where payout is dependent on insurance claims that are not related to that vessel shall not be taken into account.* [DA P28]



Institute  
and Faculty  
of Actuaries

# Catastrophe Risk

## Natural Cat Recalibration

- EIOPA has carried out a recalibration exercise on the parameters used to calculate non-life natural cat risk.
  - reasons include the progress in meteorological, physical, engineering and other sciences, as well as progress in modelling, potential changes in vulnerabilities or data availability.
- EIOPA used the expertise of various stakeholders with professional background in Catastrophe risk modelling or management.
- The results are very detailed and many parameters have been adjusted. See EIOPA's second set of advice for specifics.
- It notes the results of its work may differ from vendor models because it includes both qualitative (information provided by experts on natural phenomena, local infrastructure, local policy conditions, etc...) and quantitative (from the results of vendor models, internal models, etc....) information.

	AT	BE	CH	CZ	DE	DK	ES	FI	FR	UK	HU	IE	IS	LU	NL	NO	PL	SE	SI	GU	MA	SM	RE
AT	1.00	0.25	0.50	0.25	0.25	0.00	0.00	0.00	0.25	0.00	0.50	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
BE	0.25	1.00	0.25	0.25	0.50	0.25	0.00	0.00	0.50	0.50	0.00	0.25	0.00	0.75	0.75	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
CH	0.50	0.25	1.00	0.25	0.25	0.00	0.25	0.00	0.50	0.00	0.25	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00
CZ	0.25	0.25	0.25	1.00	0.25	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.25	0.25	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00
DE	0.25	0.50	0.25	0.25	1.00	0.50	0.00	0.00	0.50	0.25	0.00	0.25	0.00	0.50	0.50	0.25	0.50	0.00	0.00	0.00	0.00	0.00	0.00
DK	0.00	0.25	0.00	0.00	0.50	1.00	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.25	0.50	0.50	0.25	0.50	0.00	0.00	0.00	0.00	0.00
ES	0.00	0.00	0.25	0.00	0.00	0.00	1.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.00
FR	0.25	0.50	0.50	0.25	0.50	0.25	0.25	0.00	1.00	0.25	0.00	0.00	0.00	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UK	0.00	0.50	0.00	0.00	0.25	0.25	0.00	0.00	0.25	1.00	0.00	0.50	0.00	0.25	0.50	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HU	0.50	0.00	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
IE	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.50	0.00	1.00	0.00	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LU	0.25	0.75	0.25	0.25	0.50	0.25	0.00	0.00	0.50	0.25	0.00	0.25	0.00	1.00	0.50	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00
NL	0.25	0.75	0.25	0.25	0.50	0.50	0.00	0.00	0.50	0.50	0.00	0.25	0.00	0.50	1.00	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00
NO	0.00	0.00	0.00	0.00	0.25	0.50	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.25	0.25	1.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00
PL	0.00	0.25	0.00	0.25	0.50	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
SE	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	1.00	0.00	0.00	0.00	0.00	0.00
SI	0.50	0.00	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
GU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
MA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
SM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
RE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00



Institute  
and Faculty  
of Actuaries



# Catastrophe Risk

Natural Cat

Groups of CRESTA zones simplification

- “*The calculation of natural catastrophe risk with the standard formula requires that insurers... map their sum insured in risk zones [CRESTA zones]. Not all insurers... have the information on risk zone level required for that calculation in their internal systems, and for those undertakings it may be costly to produce this information. Those undertakings should therefore be able to base their calculation on groupings of risk zones where such grouping is well substantiated and proportionate to the exposure.*” [DA P14]
- A new simplification has been introduced:
  - Insurers may calculate the sum insured for each non-life natural cat risk on the basis of groups of risk zones.
  - All of the risk zones within a group should be within the same particular region (i.e. country).
  - Where the sum insured is calculated on the basis of a group of risk zones, the risk weight should be that for the risk zone within that group with the highest risk weight.



Institute  
and Faculty  
of Actuaries



# Catastrophe Risk

## Natural Cat

### Applying contractual limits

- “*The actual risk exposure of the undertaking in the calculation of the SCR for natural catastrophe risk should be reflected in the calculation of the SCR... The calculation of the SCR for natural catastrophe risk with the standard formula should therefore take into account contractual limits for the compensation for natural catastrophes.*” [DA P22]
- The risk weights and risk factors for natural catastrophe risks were calibrated by taking account of national market average contractual limits and deductibles.
  - The intention was to apply the risk factors directly to the sum insured without contractual limits and without deductibles, so that the SCR per peril is calibrated at the appropriate level for each country.
- Insurers can now cap the risk weighted sum insured for a particular risk zone for a particular cat to an amount equal to the sum of the potential gross losses that the insurer could suffer for the natural cat in that risk zone, taking into account the terms and conditions of its specific policies, including any contractual payment limits.
- This adjustment allows taking into account the specific exposure of insurers that sell contract with policy conditions different to the ‘average undertaking’.



# Market Risk



Institute  
and Faculty  
of Actuaries

# Please stand up!



Institute  
and Faculty  
of Actuaries

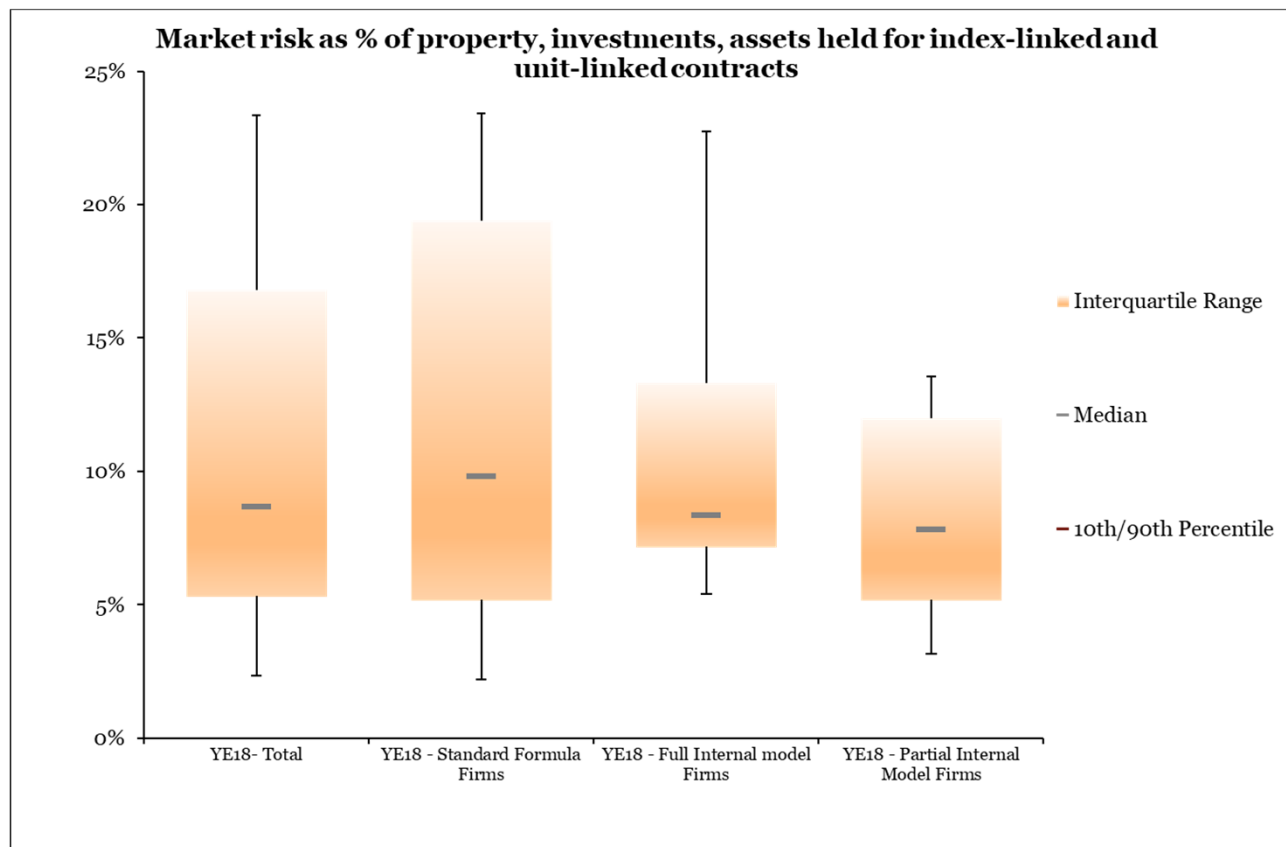
# Question

- Please sit down if you think the market risk module is a good reflection of the market risk in an organisation.



Institute  
and Faculty  
of Actuaries

## Background – Market risk



Source:  
Publicly available SFCR & QRTs  
at YE 2018

- Market risk as a percentage of qualifying assets is larger for standard formula firms.



Institute  
and Faculty  
of Actuaries

# Market Risk

## Interest Rate Risk

- EIOPA strongly advised the European Commission to change the way Interest Rate risk was calculated.
- It said there was strong evidence that the current approach “leads to a severe under-estimation of the risks”.
- EIOPA advised to model interest rate risk in the standard formula with a “relative shift” approach, parameters of which vary with maturity.
  - Shifted approaches are widely used by internal model users.
- Approach could be of form  $[\text{stressed}] = [\text{unstressed}] * (1+[A]) + [B]$
- The Commission has not, at this stage, taken forward EIOPA’s proposal.



# Market Risk

## Equity Risk

### Unlisted Equities

- *“Direct investments by insurers in unlisted equity can contribute to the Union's objective of long-term sustainable growth. Those investments should therefore be facilitated. When calculating the capital requirement for equity risk with the standard formula, portfolios of high-quality unlisted equity investments should therefore be able to benefit from the same treatment as equities that are listed in regulated markets.” [DA P25]*
- Currently, unlisted equities fall into Type 2 in the equity risk calculation, with a higher capital than most other equities.
- Some unlisted equities can now be included as Type 1 and therefore attract a lower capital charge.
- The rules are complex but strongly link such investments to the EU.
- Long term equity investments are also given a lower stress, provided conditions are met.



# Market Risk

## Currency Risk (Groups)

- Groups, when using Method 1 (consolidated data) to consolidate the accounts, need to determine the 'local currency' for the purposes of the currency risk calculation.
- The current approach is to take as the 'local currency' that used for the preparation of the consolidated accounts.
- This has now been amended to say “*where a material amount of the consolidated technical provisions or the consolidated group own funds is denominated in a currency other than the one used for the preparation of the consolidated accounts, this currency may be considered as the local currency*”. [DA Article 337]





# Market Risk

## Spread Risk & Concentration Risk Local Government Debt

- *“The legislation covering the financial sector should be consistent, while taking into account differences in the business model of the sectors, diverging elements in the determination of capital requirements, or other factors. Therefore, the rules for insurers... for the recognition of guarantees that are issued by regional governments and local authorities should be aligned with the rules for credit institutions and investment firms.” [DA P29]*
- Clarification is provided as to when regional government and local authority exposures can be treated as exposures to central government (and attract a 0% risk factor).
- Justification given is to align the rules for insurers with other financial firms.
- These must be exposures that are fully, unconditionally and irrevocably guaranteed by regional governments and local authorities.
- For the UK this would be the Scottish Parliament, the National Assembly for Wales or the Northern Ireland Assembly.



Institute  
and Faculty  
of Actuaries

# Market Risk

Spread Risk

Unrated Bonds & Loans

- *“In order to contribute to the Union's objective of long-term sustainable growth, investments by insurers in privately placed debt should be facilitated.” [DA P5]*
- Criteria have been established that allow the use of the insurer's own internal credit assessment to assign to the investments a credit quality step of 2 or 3.
- There are many, many complex rules around this.
- Where a co-investor exists, using the co-investor's assessment derived from their own internal rating or internal model can be made.



Institute  
and Faculty  
of Actuaries

# Market Risk

## Concentration Risk

- Some refinement has been provided on the treatment of ‘mixed’ exposures.
- These are single name exposures which include, but do not consist exclusively of, exposures to a single solo insurer, credit or financial institution.
- Example:
  - An insurer has exposures to several entities within its own group.
- The credit quality step of the mixed exposure is based on a weighted average of credit quality steps following a new process set out in the Delegated Acts.

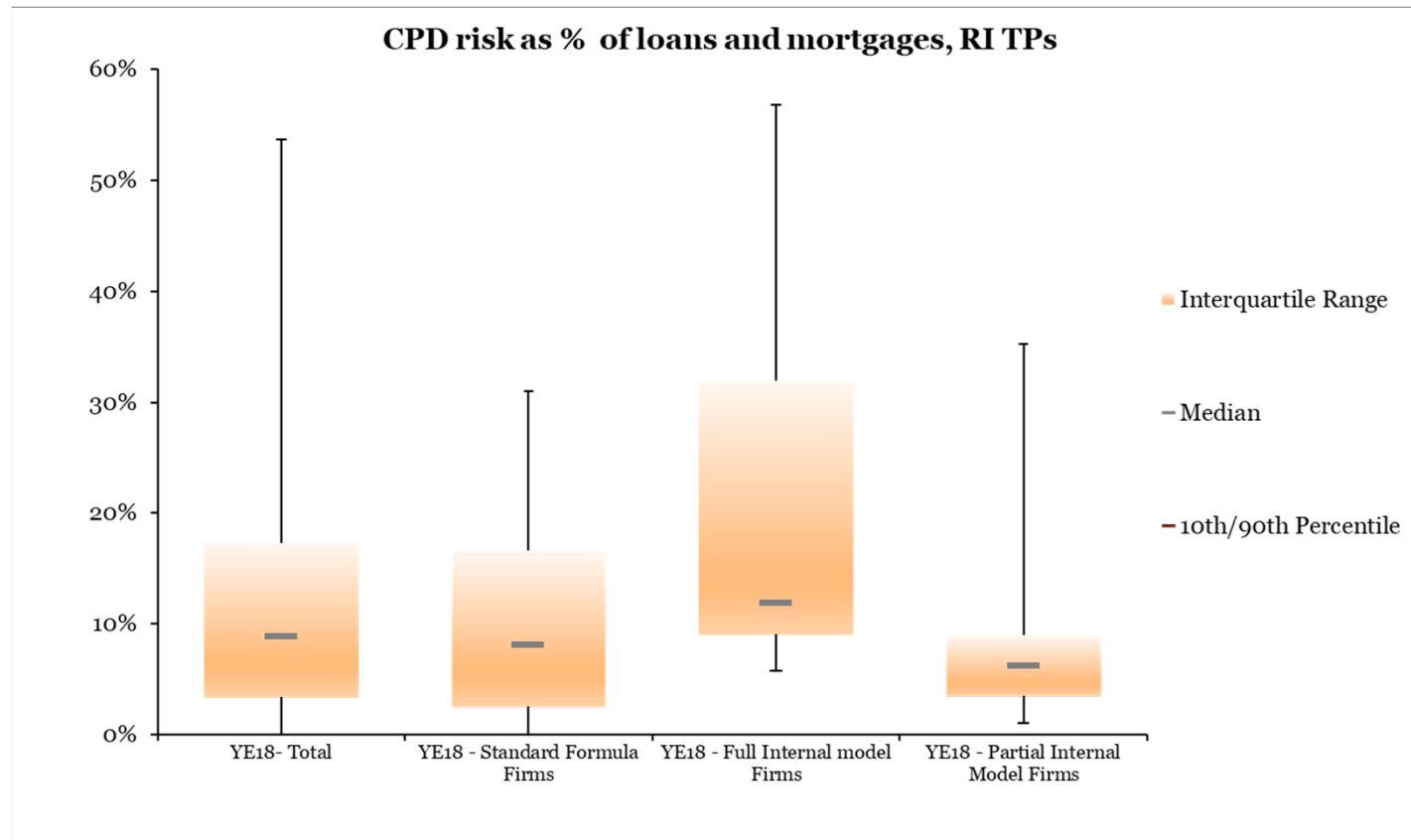


# Counterparty Default Risk



Institute  
and Faculty  
of Actuaries

## Background – Counterparty default risk



Source:  
Publicly available SFCR & QRTs  
at YE 2018

- Counterparty risk as a percentage of qualifying assets is smaller for standard formula firms.



Institute  
and Faculty  
of Actuaries

# Counterparty Default Risk

## Background

- EIOPA pointed out that:
  - Counterparty default risk is a higher percentage of the BSCR for small general insurers (22%) than large general insurers (12%) [EIOPA 1371].
  - The module has a higher relative significance than previously observed, however, on average, the counterparty default risk is not a major risk for the undertakings. [EIOPA 1374]
- It continued on simplifications:
  - 14% of (non IM) undertakings use one or more simplifications in the counterparty risk module [EIOPA 1377].
  - Small insurers use them less (7%) than large insurers (14%).
- From this is concluded “Since the simplifications are used to a wide extent, this could indicate that new simplifications would be used as well.”



# Counterparty Default Risk

## Simplifications

- The new delegated acts introduced a number of new simplifications.
- Many of these simplifications aim to reduce the complexity of the calculation at the cost of higher capital.
- Example 1 : the SCR for type 1 counterparties is either increased by a factor of 3 or 5, depending on whether the calculated standard deviation is above or below a fixed threshold.
  - This introduces volatility if the calculated standard deviation moves above or below the threshold from one calculation to the next.
  - The new simplification allows you to use the (higher) 5 factor in either case.
  - So although this is less volatile, it's also potentially more punitive.
- Example 2 : the LGD is higher when more than 60% of the counterparty's assets are subject to collateral arrangements [Original Article 192(2)]
  - You can now trade in the need to assess the 60% condition for using the higher LGD in all circumstances.



# Counterparty Default Risk

## Risk Mitigation

- In the QIS5 technical specification, there was an approximation for the risk mitigation effect of reinsurance when the reinsurance only affected one line of business.
- This simplification was missing from the Delegated Acts.
- A new simplification, along the lines of (but different from) that in QIS5 has now been introduced.
- This sets the risk mitigation for the reinsurance contract as a function of the standard deviation for the line of business, the reinsurer's share of cat losses, the reinsurance premium and the reinsurance recoverables.





# Counterparty Default Risk

## Derivatives

- *“Derivatives expose insurers... to counterparty default risk, irrespective of whether those derivatives are held for hedging or speculation. All derivatives should therefore be treated as type 1 exposures in the counterparty default risk module of the standard formula.” [DA P30]*
  - This is clarifying that all included derivatives should be classed as Type 1 (rated and not diversified) for this module.
  - This is irrespective of whether the derivative is used for risk mitigation or not.



# Risk Margin

- EIOPA reported after their consultation “*The stakeholders expressed their discontent regarding the level and the current formula of the risk margin. Therefore, many changes were proposed by stakeholders...*” [EIOPA 1900]
- Only the cost of capital was considered for change.
- Using the same approach that was used in the original calibration in 2009, it concluded:
  - the cost of capital should be in the range from 6.7% to 7.8% and
  - therefore the current 6% continued to be appropriate.



# Look-through approach

- EIOPA was asked to suggest refinements to the existing simplification to the look-through approach for when it cannot currently be applied. [EIOPA 1586]
- The delegated acts have been changed so that where the look-through approach cannot be applied to:
  - collective investment undertakings or
  - investments packaged as funds,the SCR may be calculated on the basis of the collective investment's:
  - target underlying asset allocation (as current rules allow), or
  - last reported asset allocation (if the target underlying asset allocation is not available to the undertaking),
- Conditions apply.



## And some of the rest...

- There's a new USP.
  - *“Stop loss reinsurance contracts should receive a similar treatment as excess of loss reinsurance contracts in the calculation of the [SCR] with the standard formula. Insurers... should therefore be able to take into account the risk mitigation provided by stop loss reinsurance contracts in the SCR standard formula calculation with USPs by laying down a standardised method to calculate an USP to replace the standard parameter for non-proportional reinsurance.” [DA P35]*
- There are changes relating to the loss absorbing capacity of deferred tax.



# The next review...

- The Solvency II Directive requires that certain areas of the framework should be reviewed.
- See [https://eiopa.europa.eu/Publications/Requests%20for%20advice/RH\\_SRAnnex%20-%20CfA%202020%20SII%20review.pdf](https://eiopa.europa.eu/Publications/Requests%20for%20advice/RH_SRAnnex%20-%20CfA%202020%20SII%20review.pdf)
- EIOPA has been invited to provide technical information on a number of items, including (but not limited to):
  - Transitional measures;
  - Appropriateness of the design of the risk margin (but not the approach based on the cost-of-capital);
    - design of the risk margin;
    - assumptions regarding the asset mix of the receiving undertaking;
    - use of a fixed cost-of-capital rate for all insurers;
    - assumptions used to derive the cost of capital rate.
  - Treatment of long-term investments under Solvency II;



# The next review...

- EIOPA has been invited to provide technical information on a number of items, including:
  - Standard formula:
    - *Interest rate risk;*
    - *A comprehensive review of the equity risk calculation;*
    - *Counterparty default risk;*
    - *Simplified calculation of the non-life lapse risk;*
    - *Calibration of underwriting risk.*
  - Risk-mitigation techniques and other techniques used to reduce Solvency Capital Requirements.
    - advise on methods for the recognition of the most common non-proportional reinsurance covers for non-life underwriting risks in the standard formula, as well as for adverse development covers and finite reinsurance covers.



# What next?

- Go through the changes yourself.
- Identify which will affect you.
- Update your model.
- Assess the impact.
- If appropriate, discuss with your auditors.
- Go and sort out IFRS 17.



# Questions

# Comments

The views expressed in this presentation are those of invited contributors and not necessarily those of the IFoA. The IFoA do not endorse any of the views stated, nor any claims or representations made in this presentation. Neither the IFoA nor the contributors accept any responsibility or liability to any person for loss or damage suffered as a consequence of their placing reliance upon any view, claim or representation made in this presentation.

The information and expressions of opinion contained in this publication are not intended to be a comprehensive study, nor to provide actuarial advice or advice of any nature and should not be treated as a substitute for specific advice concerning individual situations. On no account may any part of this presentation be reproduced without the written permission of the IFoA and authors.



Institute  
and Faculty  
of Actuaries