



Society of Actuaries in Ireland

**Solvency II 2020 Review –
Impact Assessment**

Tuesday, 3rd March, 2020

Disclaimer

The views expressed in this presentation are those of the presenter(s) and not necessarily those of the Society of Actuaries in Ireland or their employers.



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Solvency II 2020 Review - Intro

David O'Shea

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Background

- Solvency II Directive requires that, by 1 January 2021, the Commission shall review:

LTG measures and
equity risk measures

Methods, assumptions
& parameters used in
calculating standard
formula SCR

Calculation of the MCR

Group supervision &
capital management

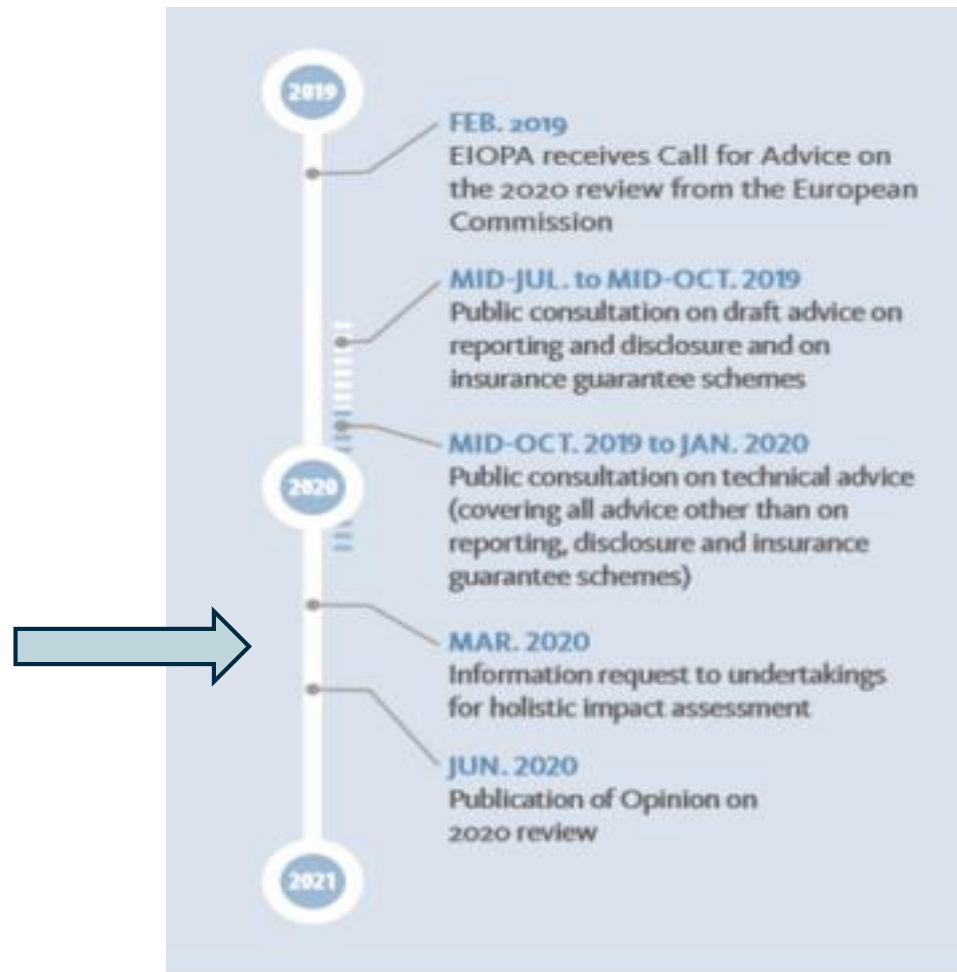


Background

- 11 February 2019 – Commission call for Advice to EIOPA:
 - Risk margin
 - Capital Markets Union aspects
 - Macro prudential issues
 - Recovery and resolution
 - Insurance guarantee schemes
 - FoS/FoE supervisory powers
 - Reporting and disclosure
 - Proportionality and thresholds
 - Best estimate
 - Own funds
 - Reliance on external ratings



EIOPA Timetable



Source: EIOPA Fact sheet on the 2020 review of Solvency II



EIOPA Consultation Papers – First Set

Reporting and Disclosure

- General Issues on Supervisory Reporting and Public Disclosure (55 pages)
- QRTs (131 pages + Annexes)
- SFCR (60 pages)
- Financial Stability Reporting (9 pages)

To be reviewed later in 2019:

- Group QRTs
- RSR
- Technical aspects of the reporting and disclosure process
- Data quality aspects
- Issues linked to other areas of the Solvency II 2020 review, including long-term guarantees templates.

Insurance Guarantee Schemes

- Harmonisation of National Insurance Guarantee Schemes (67 pages)

**Deadline: was
18 October 2019**



EIOPA Consultation Papers – Second Set

One 878 page paper covering:

- LTG measures and measures on equity risk (258 pages)
- Technical provisions (43 pages)
- Own funds (27 pages)
- Standard Formula SCR (76 pages)
- MCR (14 pages)
- Reporting and disclosure (34 pages)
- Proportionality (37 pages)
- Group supervision (106 pages)
- FoS/FoE (11 pages)
- Macroprudential policy (41 pages)
- Recovery and resolution (48 pages)
- Insurance Guarantee schemes (1 pages)
- Other topics (16 pages)
- Annex with additional info on some of the above (151 pages)

**Deadline: was
15 January 2020**



SAI Activity

- Life and Non-Life Working Groups established to respond on consultations, via AAE

Life

Cherith Caffrey
Vanda Glorias
Liam Hannigan
Eoin Murphy
Sarah Manning
Patricia Murphy
Matthew McCaffrey
Luca Pattaconi
Aoife Quinn
Katja Rettig
Eoin King (co-chair)
Dave O'Shea (co-chair)

Non - Life

Junaid Akram
Paula Burke
Tanya Burke
John Fallows
Aaron Kenny
Eoin Ó Baoighill
Gerard Power
Catherine Murphy (co-chair)
Ursula Sherlock (co-chair)



SAI Activity

- Forum:

<https://web.actuaries.ie/forum/eiopa-2020-review-2020-impact-assessment/eiopa-2020-review-2020-impact-assessment>

- Open to HoAFs by default
- Access can be granted to other members – contact Society directly
- Purpose is to enable members to share observations, issues or insights that may emerge with regard to the assessment



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2020 Review of Solvency II – Holistic Impact Assessment

Christopher Joyce

Content

- Solvency II 2020 Review – Background
- Holistic Impact Assessment
 - Overview – why we are doing this now, what is the purpose
 - Technical information on proposed changes
- Next steps

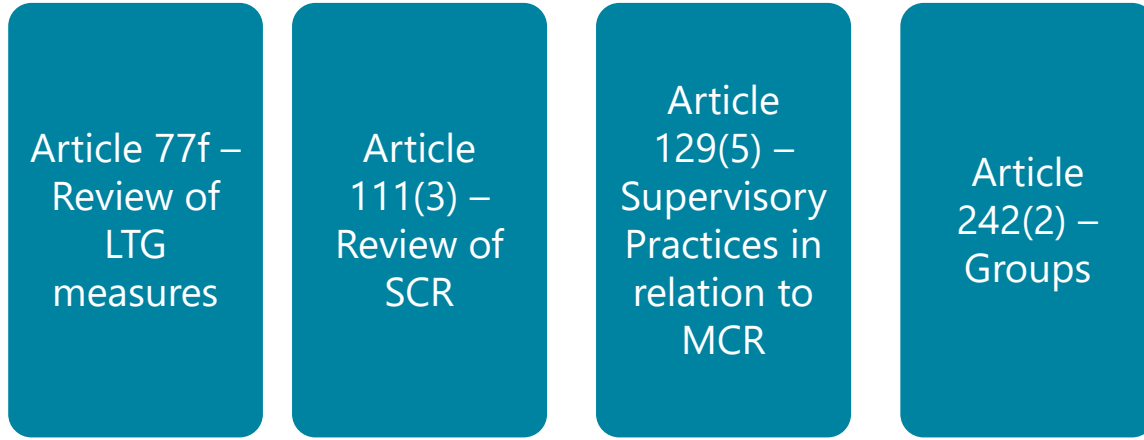


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What is the Solvency II 2020 Review

Legislation
(SII Directive)



Call for
Information –
April 2018

Requests from EU
Commission



Call for Advice –
Feb 2019

Background to Solvency II 2020 Review - purpose

Proper recognition of the economic context

- Low / negative interest rates

Balance update to regulatory framework

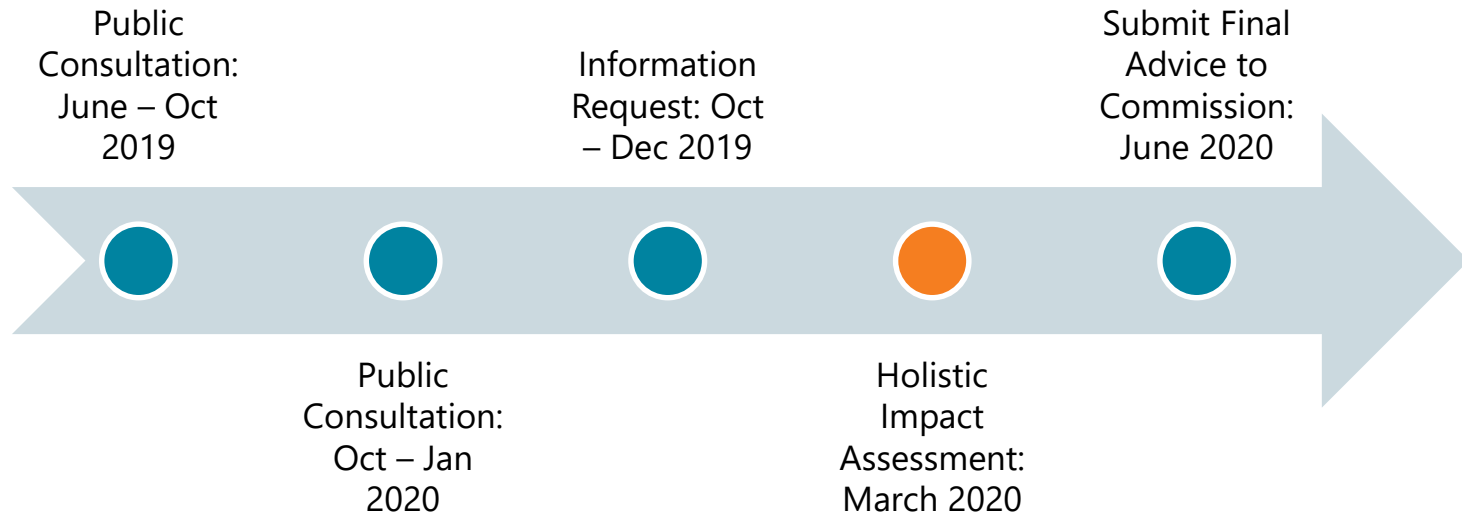
- “Evolution not revolution”
- Availability of products with long term guarantees
- Appropriate treatment of investments and the liabilities they back
- Proportionality

Complete the regulatory toolbox

- Macro-prudential Tools
- Recovery & Resolution
- Insurance Guarantee Schemes



Background to Solvency II 2020 review - timeline



“Evolution not Revolution”

“Beyond the changes on interest rate risk EIOPA aims in general for a balanced impact of the proposals”



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Holistic Impact Assessment



Test the combined impact of a package of changes, plus a small number of additional items



Focus on the technical items which are expected to materially impact the solvency position of insurers.



Based on the consultation paper launched in October 2019 but with some changes



NOT THE FINAL VIEW OF EIOPA



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Undertakings in Scope

- Representative sample of undertakings - 50% of IE market by TP (life), GWP (non-life)
- Life / Non-Life / Reinsurance
- Standard Formula and Internal Model users
- CBI sample selected based on risk exposure to key changes
 - VA users
 - Undertakings with long-term liabilities
 - Exposure to certain SCR stresses
 - Size of Risk Margin



Holistic Impact Assessment - Scenarios

Scenario 1: Overall Impact

- Impact of all proposed changes

Scenario 2: Balanced Package

- Same as Scenario 1, but excluding the impact of Interest rate risk changes

Additional Scenarios

- Symmetric Volatility Adjustment
- Dynamic VA in the standard formula
- Interest rate risk - (-1.25% floor)
- Interest rate risk - (extrapolation)



Technical Specification - Content

- Risk free interest rates
- Volatility Adjustment
- Risk Margin
- SCR – interest rate risk
- Other items

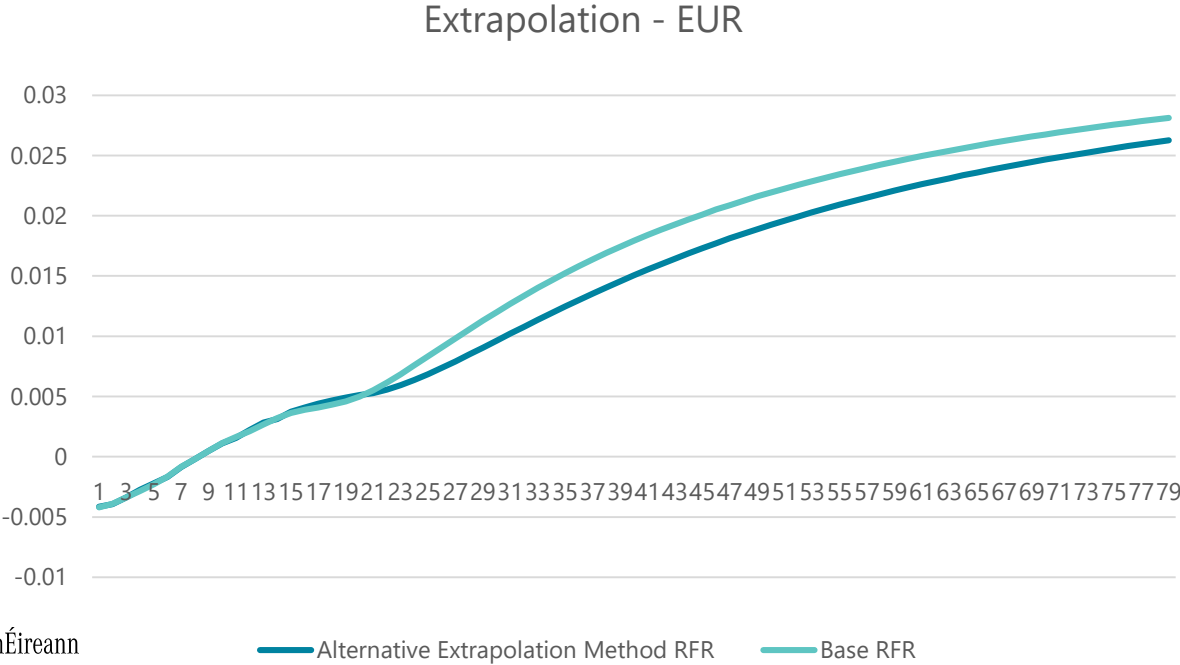


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Basic Risk Free Interest Rates

- Alternative Extrapolation Method
 - Last liquid point → First Smoothing Point
 - Market rates are used after the first smoothing point, in proportion to the liquidity of the maturity (based on the existing DLT assessment)
 - Impact all currencies



Volatility Adjustment

- $VA = \text{Permanent VA} + \text{Macroeconomic VA}$
- Macroeconomic VA = 0 at YE 2019

$$VA = GAR \cdot AR_4 \cdot AR_5 \cdot Scale_c \cdot RC_Sc$$

Undertaking Specific

Application Ratio 4
(AR_4)—fixed income
mismatch

Application Ratio 5 (AR_5)
— Illiquidity characteristics

Provided by EIOPA

General Application Ratio
— GAR = 85%

Scaling factor

Risk Corrected spreads —
representative portfolio



Volatility Adjustment – AR₄

Sensitivity of fixed income investments to change in interest rates

Same calculation as autumn information request

$$AR_4 = \min \left\{ \frac{PVBP(MV_{i,c}^{FI})}{PVBP(BEL_{i,c})}; 1 \right\}$$

Sensitivity of best estimate to change in interest rates



Volatility Adjustment – AR₅

1. High illiquidity – 100% AR₅

- No surrender options / surrender options never lead to a loss
- Low best estimate mortality risk

2. Medium illiquidity – 75% AR₅

- Low best estimate impact of lapse rates
- Low best estimate impact of mortality risk

3. Low illiquidity – 60% AR₅

- Contracts that do not fall into 1. or 2.

Calculation performed for each HRG
Final AR₅ is calculated as a weighted average

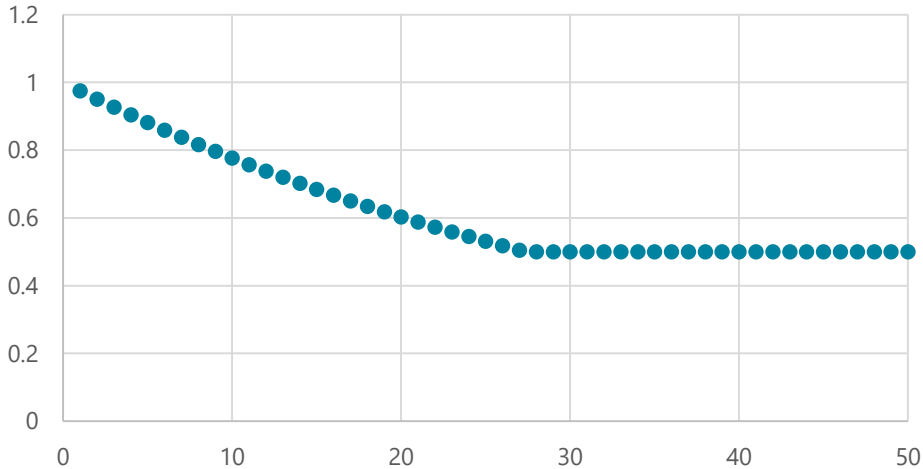


Risk Margin

- New lambda factor
- Reflects
 - Dependencies of SCR projected cashflows
 - Reduces sensitivity to interest rates – for long term business
- Undertakings required to submit projected SCR values



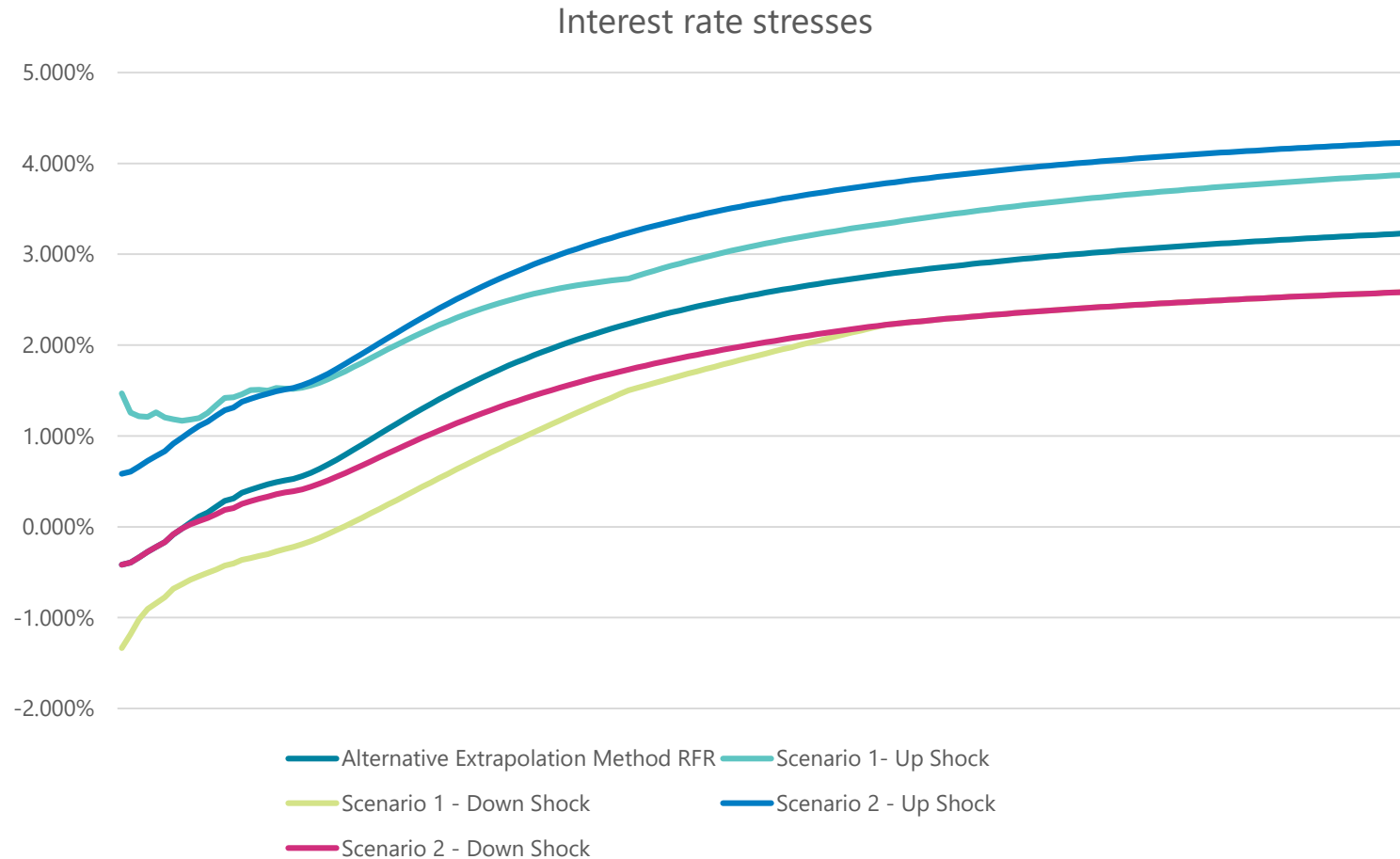
Lambda



$$RM_{scenario} = CoC \times \sum_{t \geq 0} \frac{SCR(t) \times \max(\lambda^t, 0.5)}{(1+r(t+1))^{t+1}} \quad , \text{ where } \lambda = 0.975$$



SCR – interest rate risk



Other SCR Items

- Correlation between interest rate and spread risk – 0.5 → 0.25
- Long-term equity – update to the requirements for use
- Treatment of forborne or defaulted loans
- Recognition of partial guarantees on mortgage loans
- Recognition of risk mitigation techniques – effective transfer of risk
- Non-proportional reinsurance
- MCR – non-life factors
- Expenses - Recognition of realistic new business assumptions in best estimate (Clarification)
- Contract boundaries – no right to repeat the individual assessment (Clarification)
- Dynamic VA in internal models



Additional Scenarios

Dynamic VA in
standard formula

Own funds buffer
when spreads are
compressed

Interest rate risk -
floor

Interest rate risk –
alternative
extrapolation



Dynamic VA in standard formula

- Users of VA only
- Reduction in spread risk stress

$$\text{Stress (DVA)} = \text{Stress} * \max (1 - 42.5\% * AR_5 * AR_4, RF_{CQS})$$

	0	1	2	3	4 and higher
RF _{CQS}	45%	50%	60%	75%	100%



Own funds buffer when spreads are compressed

- Users of VA only
- Build up of buffer when spreads are compressed – can be released when spreads widen
- Own Funds buffer (OFB)

$$\text{OFB} = \text{MV} (\text{Current spread} + \text{Negative spread Adj}) - \text{MV} (\text{Current Spread})$$

Calculated per investment in undertaking fixed income portfolio

Negative spread adjustment per country



Interest rate Scenarios

Interest rate floor

Floor of minus 1.25% in interest rate down stress

Extrapolation

Extrapolated stress curve methodology

Based on alternative method – first smoothing point

Impact for CZK, HRK, HUF, CHF, NOK, PLN, RON, SEK




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EIOPA resources

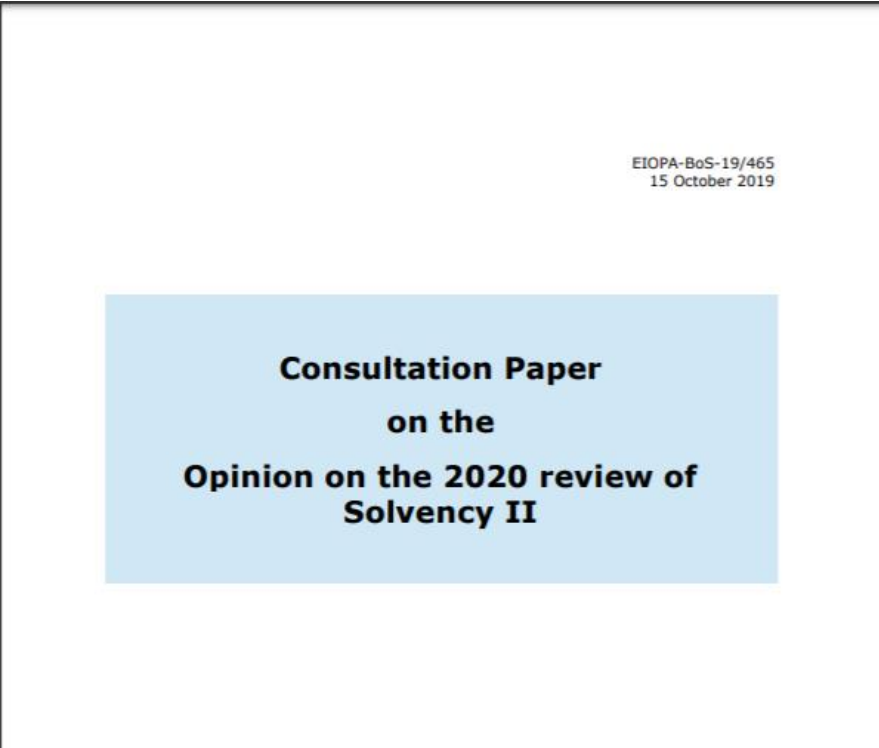
<https://www.eiopa.europa.eu/solvency-ii-review-information-request-national-supervisory-authorities>

https://www.eiopa.europa.eu/sites/default/files/publications/consultations/eiopa-bos-19-465_cp_opinion_2020_review.pdf

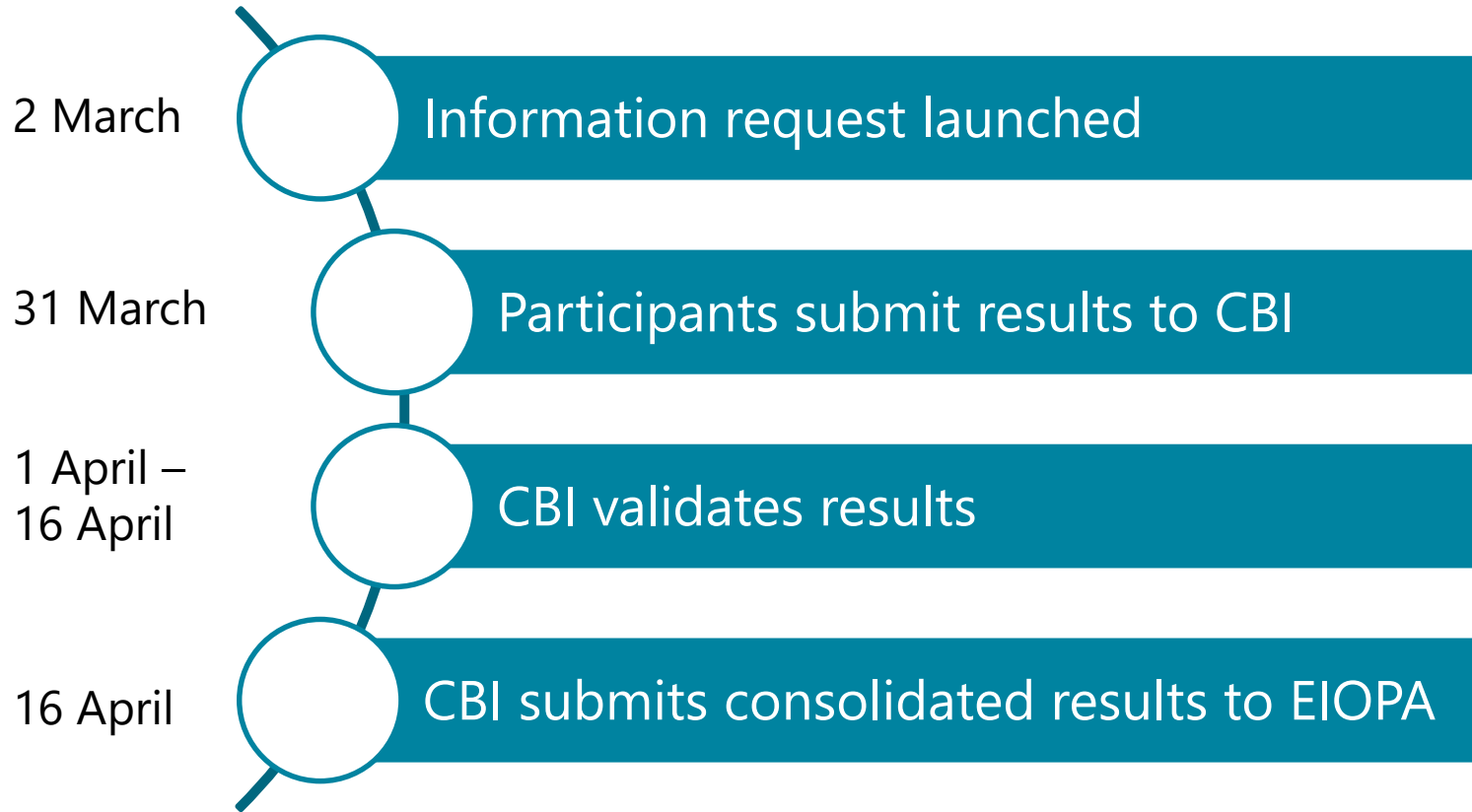
 **Technical specification**
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 **Technical information**
XLSM - 394.99 KB | EN | **NEW FILE**

 **Reporting template**
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Timeline



What you should do

- Read the technical specification in detail
- Review the reporting template
- If you have any questions contact the CBI or SAI forum



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