



ACTUARIAL ASSOCIATION OF EUROPE

3.1 Solvency II

Risk Management Committee

Cologne

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5 October 2023

Agenda

- 1) Process
- 2) SII-Review: Changed frame conditions
- 3) Proposed amendments to SII - Directive
- 4) IRRD: Short update
- 5) ICS: International Capital Standards

Trilogue: First meeting on 18 September 2023

Commission (22 September 2021)



- a) Proposal amending the Solvency II-Directive
- b) Proposal to establish a new Directive for the recovery and resolution of insurance undertakings (IRRDR)

EU-Council:

2 June 2022: Proposal for amendments to the SII-Directive
16 December 2022: Proposal for amendment to the IRRDR

Parliament

ECON approved on 18 July 2023:

- a) Proposal for amendments to SII Directive
- b) Proposal for amendments to IRRDR

Parliament approved both proposals on 13 September 2023
(Committee decision to enter into interinstitutional negotiations confirmed by plenary (Rule 71))



Political frame conditions to consider

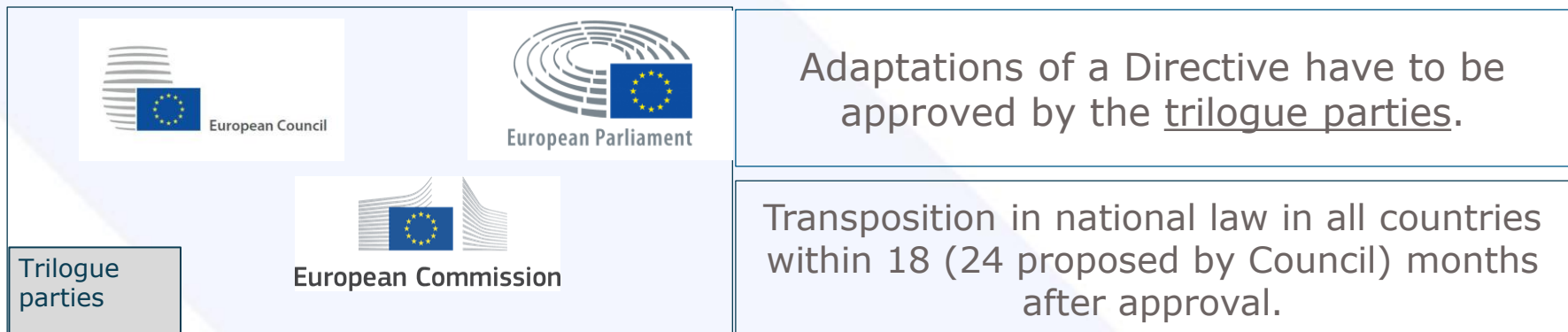
Council presidency

- July 2023 – December 2023 Spain
- January 2024 – June 2024 Belgium
- July 2024 – December 2024 Hungary

European election: June 2024 (!)

Risk for the review: Trilogue parties don't come to a compromise before end of legislative period

Steps to a new framework



Entering into force of amended Directive in **2026 at the earliest!**

Both Directives contain a considerable number of empowerments for Commission to concretise aspects of the Directive in subordinated regulation.

Existing Delegated Regulations or Technical Standards may need adaptations.

Other - especially regarding the IRRD – have to be developed for the first time.

The whole framework should be available when Directives enter into force.

Entering into force in 2026: Consequences

Assume the Directives to be applicable as of 2026.

Implications:

Some Delegated Regulations and Technical Standards might be finalised earlier

Even without a legal basis in each of the member states law these can become effective earlier

Guidance notes or opinions published by EIOPA need consideration in a thorough analysis of risks already now

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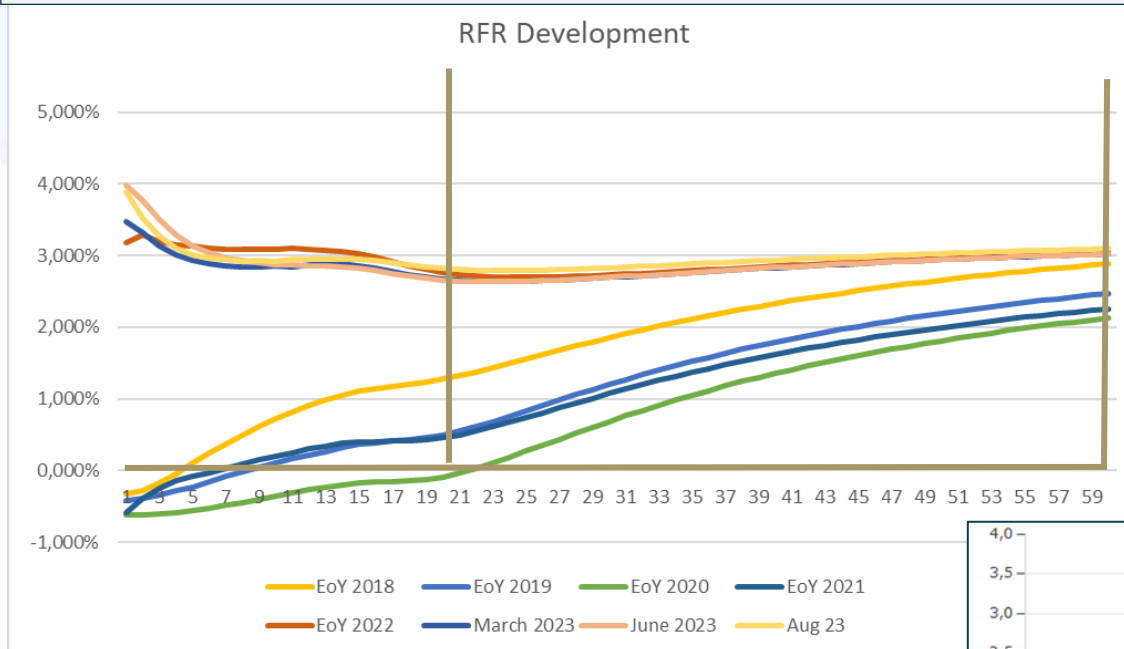
Paradigms changed since 2016

- 1) A very low interest rate environment with even negative interest rates is superseded by inflationary tendencies
- 2) Climate change risk gained significantly in importance
- 3) Sustainability and ESG-aspects are of growing importance
- 4) Macroprudential tools to prevent increasing systemic risk
- 5) IRRD will establish a new regime
- 6) Political objectives impact on the review process

Interest level impacts on RFR and SCR

End of low interest rate environment?
Inverse interest rate term structures indicate uncertainty

Ultimate forward rate

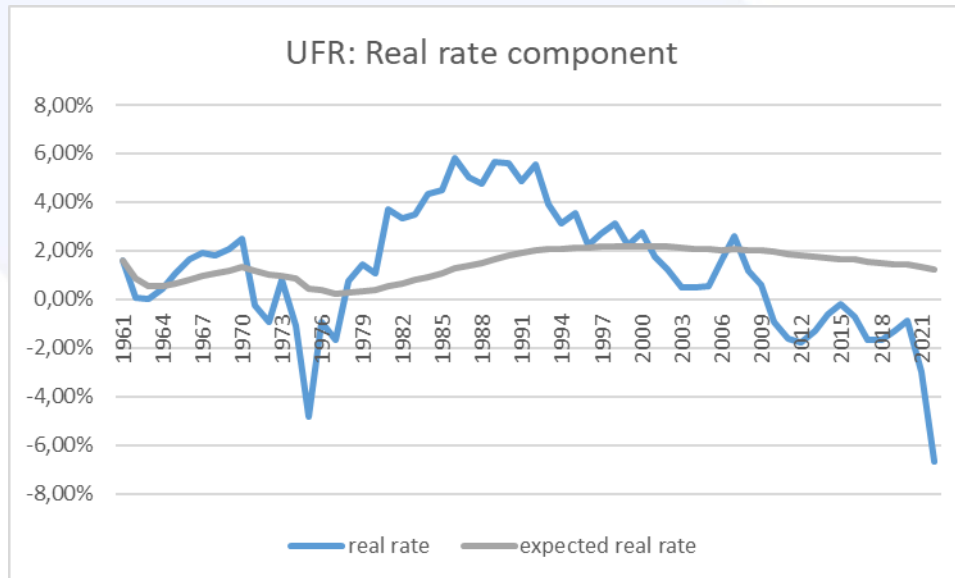


Year	UFR
2015	4.20%
2016	4.20%
2017	4.20%
2018	4.05%
2019	3.90%
2020	3.75%
2021	3.60%
2022	3.45%
2023	3.45%
2024	3.30%

20 September 2023:
10-year CMS Swap rate



Impact of inflation on the UFR



Year	UFR
2015	4.20%
2016	4.20%
2017	4.20%
2018	4.05%
2019	3.90%
2020	3.75%
2021	3.60%
2022	3.45%
2023	3.45%
2024	3.30%

Methodology questionable!

2018: Change of methodology to determine expected real rate introduced.

UFR still calculated as expected inflation plus expected real rate.

Expected inflation rate: ECB's target rate 2% unchanged

Harmonised index of consumer prices (HICP)



Sharp increase of inflation in Europe

Historic harmonised inflation Europe – HICP inflation

<https://www.inflation.eu/en/inflation-rates/europe/historic-inflation/hicp-inflation-europe.aspx>

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(Alternative) Extrapolation

Change of methodology not questioned

Kommission,
Council

Art. 77a: (1) Determination of the first smoothing point (FSP)
(2) Transition period until 2032 beginning with effectiveness of the new Directive

Art. 86: Empowerment for Commission: Adopt delegated acts laying down:

- formula for extrapolation, including parameter for convergence speed
- Method for the determination of DLT of bond markets
- Percentage to be used in residual volume criterion
- Transitional mechanism

Parliament

Convergence tolerance for extrapolated forward rates in 77a(1):

- Calculate extrapolated forward rates as a weighted average of a liquid forward rate and the UFR. **For maturities of at least 40 years past FSP the weight of the UFR shall be at least 80%**
- No transition period
- Art. 77a(2a): FSP=20 years for Euro, if conditions comparable to those at entry into force

Questions concerning role of the UFR

Backup

Amendment proposed by Parliament:

The extrapolated forward rates shall be equal to a weighted average of a liquid forward rate and the UFR. For maturities of at least 40 years past the first smoothing point **the weight of the UFR shall be at least 80%.**

Presumed objective: Setting guardrails for convergence tolerance (implicitly based on EIOPA's proposed formula).

$$\begin{aligned} f_{FSP, FSP+h} &= \ln(1+UFR) + (LLFR - \ln(1+UFR)) * B(a, h) \\ &= \ln(1+UFR) * (1 - B(a, h)) + LLFR * B(a, h) \end{aligned}$$

The **weight of the UFR** in this formula $(1-B(a, h))$ would implicitly affect the determination of alpha in level 2.

$$a = 10\%: B(a, 40) = 0,2454 \rightarrow (1 - B(a, 40)) = 75,46\%$$

$$a = 13\%: B(a, 40) = 0,1912 \rightarrow (1 - B(a, 40)) = \mathbf{80,88\%} \leftrightarrow \mathbf{proposal}$$

$$a = 17\%: B(a, 40) = 0,1469 \rightarrow (1 - B(a, 40)) = 85,31\%$$

$$B(a, h) = (1 - e^{-ah}) / ah, \quad h = \text{Duration post FSP}$$

Prescribing this weight could necessitate a change of alpha under adverse conditions.

The formula for the calculation of the extrapolated forward rates proposed by EIOPA could remain unchanged. Only alpha would be adapted.

Other LTG-measures

Art. 77b,c: Matching adjustment

- Delegated acts laying down criteria for eligible assets to be included in portfolio

Art. 106: Symmetric adjustment of equity risk submodule

- Commission and Parliament propose extension of corridor from -10%/+10% to -17%/+17%
- Council: no change of current corridor

Art. 304: Duration based equity risk

- no prolongation

Art. 308c, : Transitional measures on the RFR or on technical provisions

- Stop for new applications; only on two defined conditions still possible
- Extended requirements for disclosure in the SFCR if measures are applied

Risk margin

Risk margin (Article 77, level1 vs. Level 2)

Commission	<p>Communication paper (21 September 2021)</p> <ul style="list-style-type: none"> → Commission considered to base their proposal (Delegated Regulation) on the lambda-approach proposed by EIOPA without the floor of 0.5 → Reduction of CoC-Rate from 6% to 5% considered as well
Council	Not addressed; not included in Commission's proposed amendments.
Parliament	<p>Art.77: The risk margin consists of an exponential and time-dependent element.</p> <p>(5a) The Cost-of-Capital rate shall be assumed to be equal to 4,5 %.</p> <p>New recitals:</p> <p>Recital 33a: Reduction of CoC-Rate considering the protection of policyholders. An exponential and a time-dependent element should be introduced in the formula.</p> <p>Recital 33b: periodical review, to ensure that the Cost-of-Capital rate remains risk-based and is not set at an overly conservative level</p>

Interest rate risk-submodule

Interest rate risk-submodule (Level 1 vs. Level 2)

Commission	<p>Communication paper (21 September 2021):</p> <ul style="list-style-type: none"> – Consider the relative shift approach advised by EIOPA, but extrapolation after FSP in the same manner as the baseline (UFR might be reduced by 15 bp); Phasing-in over 5 years considered
Council	<p>Recital 42a (new): to avoid disruption, such significant changes should be phased-in over a period of no longer than 5 years</p> <p>Art. 111(1) when adopting specifications to the methods, assumptions and standard parameters to be used for calculating the interest rate risk sub-module, such adjustments may be phased in over a transitional period of up to five years. Such phasing-in shall be mandatory.</p>
Parliament	<p>Art. 105(5): Extrapolation of stressed RFR in same manner as basic-RFR</p> <ul style="list-style-type: none"> – A term-dependent negative floor as a lower bound for interest rates. The likelihood of interest rates not being at all times above the negative floor is sufficiently small. – Mandatory phasing-in over a period of not more than five years – Every five years an assessment required, together with methods, assumptions and parameters of the standard formula

VA: Proposal of Commission and Council

Commonality: Spread determined on a currency-specific reference portfolio

Current regulation:

$$VA = 65\% \cdot RCS$$

- RCS risk-corrected spread
- Risk-correction based on long-term average spread (like fundamental spread used for matching adjustment)
- Country component (Euro)

Risk correction:

Currently based on long-term average spread

$$RC_Gov = 30\% \cdot LTAS_G$$

$$RC_Corp = \max(35\% \cdot LTAS_C, PD + CoD)$$

With PD+CoD: probability of default + cost of downgrade

EIOPA's opinion, Commission and Council:

Risk correction as a percentage of spreads S

$$RC_{gov} = 30\% \cdot \min(S^+, LTAS^+) + 20\% \cdot \max(S^+ - LTAS^+, 0)$$

$$RC_{corp} = 50\% \cdot \min(S^+, LTAS^+) + 40\% \cdot \max(S^+ - LTAS^+, 0)$$

EIOPA's proposal

$$VA_{perm} = 85\% \cdot AR_4 \cdot AR_5 \cdot Scale_c \cdot RC_{S_c}$$

- AR_4 Correction of mismatch
- AR_5 considering illiquidity of liabilities
- $Scale_c$ Scaling factor
- RC_{S_c} risk-corrected spread of reference portfolio
- Country component (Euro)

Approval by supervisor required for new users of VA

Proposed by Commission and Council:

$$VA = 85\% \cdot CSSR \cdot RCS$$

- Credit spread sensitivity ratio (CSSR)
- VA equals 85% of risk-corrected spread multiplied by CSSR
- Risk-correction de-coupled from fundamental spread, consider current spread
- Macroeconomic VA (country specificities- euro)

Approval by supervisor required for new users of VA

VA: Interactions – Pillar 1, Pillars 2 and 3

Article 44: **Risk management**

- Consider VA in LRMP
- Sensitivity of TP to change of RCS
- Consideration of VA in written policy

Article 45: **ORSA**

- Significance of deviation of own risk profile from assumptions underlying VA

Article 122: **Calibration standards**

- Use of credit spread movements on the VA in internal model (DVA)
(Required conditions listed)

Article 51: **SFCR**

addressed to market participants:

- Impact of a change of VA to zero on the financial position
- for each relevant currency the VA and the corresponding best estimates for insurance obligations

Art.77d: **Volatility adjustment** $VA = 85\% \cdot CSSR \cdot RCS$

Article 77e: **Information produced by EIOPA**

- Risk corrected spread
- For each member state: percentage of investments in debt instruments relative to total assets held by insurance undertakings
- Currency-specific reference portfolio

Article 86: **Delegated acts**

- formula for calculation of spread
- formula for calculation of the CSSR
- for each relevant asset class, the percentage of spread attributable to expected losses or unexpected credit or other risks of the assets

Article 144a (5): **Liquidity risk management**

Combination of LRMPs possible

Commission will consider EIOPA's advice and possibly change the Delegated Regulation to address overshooting due to differences in the credit spread sensitivity of assets and the interest-rate sensitivity of liabilities.

Climate change

Analysis of risk of climate change (Art. 45a new)

Commission
, Council

If exposure to risk of climate change is material: demonstrate materiality
If material undertakings should specify at least two long-term climate change scenarios:

- Increase of temperature remains below 2 degrees
- Global temperature increase 2 degrees or more

Review of scenarios at least every three years and update where necessary

At regular intervals: ORSA shall contain an analysis of the impact on the business of the long-term climate change scenarios

Recitals 26, (79)

Parliament

Largely like Commission

Second scenario: Increase should be significantly higher than 2 degrees

When reviewing the scenarios, the performance of tools and principles used in previous climate change scenarios should be taken into account, so as to enhance their effectiveness

→ Disclosure requirements added in Article 51.

Sustainability

Sustainability (Art. 304a)	
Commission	<p>Mandate for EIOPA: assess the potential effects of a dedicated prudential treatment of exposures related to assets and activities associated substantially with EI and/or S objectives or which are associated substantially with harm to such objectives on the protection of policy holders and financial stability in the Union. Submit a report on its findings to Commission by 28 June 2023 → date postponed</p> <p>Review scope and calibration of standard parameters of NatCat-risk every 3 years.</p>
Council	<p>In line with Commission. But review of NatCat-risk every 5 years.</p> <p>In addition: EIOPA shall evaluate to what extent risks related to biodiversity loss are part of the ORSA.</p> <p>Subsequently: Which actions could be taken to ensure that they do so.</p> <p>ESAs shall develop guidelines to ensure that consistency, long-term considerations and common standards for assessment methodologies are integrated into the stress testing of ESG risks. Supervisory stress testing of ESG risks should start with climate-related factors. Explore how S and G related risks can be integrated into stress testing.</p>
Parliament	<p>In line with Council: Include risk of biodiversity losses and requirements concerning stress tests. No limitation to climate-related factors for the start.</p> <p>Article 51: extension of disclosure requirements</p>

Solvency Financial and Condition Report

Solvency and Financial Condition Report - SFCR (Art. 51)

Commission	<p>Two separate parts::</p> <ul style="list-style-type: none"> - First part addressed to policyholders and beneficiaries: brief descriptions of business and performance, a brief description of capital management and risk profile - Second part for other market participants: extended by additional requirements, capital management and risk profile now in one part
Council	<p>Power of supervisor to temporarily extend deadline for submission (in case of exceptional events). Where relevant: Disclose impact of any transitional measure (incl. 77a(2)) Disclose the combined impact of not applying the measures set out in Articles 77a, 308c and 308d and, where relevant, Article 111(1) [second] subparagraph.</p>
Parliament	<ul style="list-style-type: none"> - If climate change scenario analysis (Art. 45a) are conducted, a description of the latest results of it; - description of the implementation of the plan described in Art. 44(2b), including the targets and milestones defined in the undertaking's plan. - The part on capital management and the risk profile shall include a brief description of the relation to sustainability risks and the principal adverse impacts of the undertaking on sustainability factors

Risk management

Risk management (Art. 44)

Commission	<p>VA</p> <ul style="list-style-type: none"> – Consider VA in liquidity risk management plan – Sensitivity analysis – Consider in risk management plan (written policy) required by Art. 41 <p>Consider cyber risk as operational risk</p>
Council	<p>In line with Commission</p> <p>New Recital 52a:liquidity plan suitable to manage liquidity risks</p>
Parliament	<ul style="list-style-type: none"> – Cover ESG-risks in relation to investment portfolio and the management thereof – Undertakings shall have strategies, policies and processes and systems for the identification, measurement, management and monitoring of ESG-risks over an appropriate set of time horizons – Develop specific plans, quantifiable targets, and processes to monitor and address the risks arising in the short, medium, and long-term ESG factors, including those arising from the transition towards a sustainable economy in relation to ESG-factors, in particular with the objective to achieve climate neutrality by 2050. – The targets and measures to address the ESG risks included in the plans shall consider the latest reports and measures prescribed by the European Scientific Advisory Board on Climate Change. – The plans shall be consistent with the plans referred to in Art. 19a or 29a of Directive 2013/34/EU

Macroprudential tools

Liquidity risk (Art. 144a - 144c)

Commission

Undertakings shall develop liquidity risk management plans (LRMP) and submit these plans to supervisor (Art. 144a). To ensure consistency: EIOPA shall develop technical standards to specify content and frequency.

Art. 144b: Powers to remedy liquidity vulnerabilities in exceptional circumstances: Temporary suspension of redemption rights. No payment of bonuses, variable remuneration, ..during this period. In scope: all undertakings

Art. 144c: Measures to preserve the financial position of undertakings during exceptional sector-wide shocks. Require undertakings with vulnerable risk profile to take measures to preserve the financial position of the undertaking.

EIOPA shall develop RTS to specify the existence of exceptional sector-wide shocks (after consulting ESRB)

Council

Some amendments to Commission's proposals.

LRMP only after request of supervisors. To ensure consistency: Develop guidelines to specify content and frequency.

144b: Scope relativised / concretised. Proportionality!

Parliament

- Concretisation of powers of supervisor (Art. 144b)
- No excessive exercise of measures by local supervisor (EIOPA shall issue an opinion)
- Take into account proportionality
- The application of measures shall take into account the evidence resulting from the supervisory process and a forward-looking assessment of the solvency and financial position of the undertakings concerned, in line with the ORSA.
- EIOPA shall develop draft RTS for further specification

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Insurance Recovery and Resolution Directive

Solvency II is not a zero-failure regime!

Reasons for a separate directive

- Disorderly failure can pose risks to financial stability and to policyholders
- Regular insolvency procedure might be cumbersome and unable to manage a failure of an insurer in an orderly fashion. E.g., the settlement of policyholders' claims could be considerably delayed
- A specialized authority, familiar with the challenges of resolution, and equipped with a set of specific tools, would be best placed to deal with situations of distress and default.

Objectives:

- Preparedness to cope with significant financial distress and to mitigate fallouts
- Prevent policyholder detriment e.g., by continuing to pay out claims and pensions
- Provide national authorities with tools to safeguard policyholders and protect real economy, financial stability and taxpayers through an orderly resolution process for failing insurers

IRR shall

- be fully consistent with the SII framework
- complement the revised SII framework, strengthen the trust in the insurance sector
- prevent failure - and if not possible - facilitate an orderly market exit (ultimate goal)

Resolution: objectives and tools

Objectives of resolution (IRRD, Article 18)

- (a) protecting policyholders, beneficiaries and claimants;
- (b) maintaining financial stability, in particular, by preventing contagion and by maintaining market discipline;
- (c) ensuring the continuity of critical functions;
- (d) protecting public funds by minimising reliance on extraordinary public financial support.

The way to resolution: Supervisor's assessment will start the process if

- 1) an undertaking is assessed as likely to fail or in case of a failure
- 2) No reasonable prospect of recovery is identified

Resolution authority involved: To decide: Liquidation of the undertaking or go into resolution

(To respect: "no creditor worse off than under normal insolvency proceedings" principle).

Appropriate calculations required! Before deciding on a resolution tool and after resolution.

Resolution: objectives and tools

Five resolution tools considered:

- (a) the solvent run-off tool;
- (b) the sale of business tool;
- (c) the bridge undertaking tool;
- (d) the asset and liability separation tool;
- (e) the write-down or conversion tool.

Member States: Ensure that resolution authorities have the necessary powers to apply these resolution tools.

Cross-border business: Resolution colleges required, EIOPA invited to attend

Not part of the IRRD:

→ Consideration of insurance guarantee schemes (IGS)

Parliament proposed new Article 91 a: EIOPA shall submit a report to Parliament and Council outlining **necessary steps to introduce minimum common standards for IGS within the Union**. Due date 1 January 2024. Report shall be accompanied by legislative proposals.

AAE's position

AAE published a position paper on insurance recovery and resolution

<https://actuary.eu/wp-content/uploads/2023/02/20230208-position-IRR-D-FINAL.pdf>

Recovery: a risk management and not a legal process

- SII regime contains already powerful tools to monitor the risk position (ORSA) and to inform shareholder and supervisors about possible risks
- IRRD should not compete with Solvency II
- Formal requirement to provide recovery plans might be excluded

Resolution: harmonisation could be beneficial for policyholders

- Not agreed: Resolution Authorities should provide resolution plans based on a coverage percentage of the market. It should be based on risk factors (of failure, or the impact of failure)
- Some parts too close to BRRD
- Financial stability considerations should not override policyholder protection considerations
- Costs of resolution authority should be kept low
- IGS not included; funding of resolution process unclear

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Long way to International Capital Standards

Background

Goal:

- a unified path to convergence of group capital standards
- a single ICS that achieves comparable outcomes across jurisdictions.

Implementation of ICS Version 2.0 in two phases:

- A five-year “monitoring period”, ICS 2.0 used for confidential reporting
- Adoption planned for December 2024
- Implementation of the ICS as a group-wide PCR.

May 2018	Launch of 2018 Quantitative Field Testin
July 2018	Publication of ICS Version 2.0 CD and comprehensive ComFrame consultation
Sep 18	Field Testing submissions due
October 2018	Feedback on ICS Version 2.0 CD and comprehensive ComFrame consultation due
Apr 19	Launch of final round of ICS Field Testing
July 2019	Data due for 2019 Field Testing
IAIS 2019 General Meeting	Adoption of ComFrame, including ICS Version 2.0 for the monitoring period
Early-2020 to Late-2024	Five-year monitoring period
December 2024	Adoption of the ICS Version 2.0 for implementation as a group-wide consolidated PCR

PCR= Prescribed Capital Requirement

ICS – Insurance capital standards

International active insurance groups are in the scope of the ICS. ICS determine the calculation of the Prescribed Capital Requirement (PCR)

A consultation paper on ICS was published on 23 June 2023.

[ICS-as-a-PCR-Public-consultation-document.pdf \(iaisweb.org\)](#)

The AAE submitted a response on 21 September 2023

[Consultation on Insurance Capital Standard as a Prescribed Capital Requirement \(actuary.eu\)](#)

Risk for European insurers: Conflicting requirements in ICS and SII

Important objective: achieving comparability, equivalence

Criticism (excerpt) included in the AAE response concerns:

- Material lack of rigor and consistency in the ICS
- Internal model must be part of ICS standard
- Economically sound and actuarially rigid approach needed to the MOCE (margin over current estimate) → corresponds to risk margin in SII
- Calculation of risk charges for Life

By the way: ICS includes the use of Smith-Wilson method for extrapolation towards a long-term forward rate (corresponding to UFR) with a convergence tolerance of 0.1 base points at the end of extrapolation period (segment 2).

Solvency II

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