

To: Solvency II WG
From: Prudential Team
cc:
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Subject: High-Level summary of EIOPA Prudent Harmonized Reduced Set of Scenarios workshop

Comments

The secretariat has prepared a high-level summary of EIOPA's Workshop "Prudent Harmonized Reduced Set of Scenarios (PHRSS)". During the workshop EIOPA presented its proposed approach and way forward as well as further questions for stakeholders on PHRSS ([ECO-SLV-22-316](#)) and the secretariat presented the some preliminary views on the PHRSS ([ECO-SLV-22-317](#)).

Summary

General

On 15 September 2022, EIOPA organised a workshop on the "Prudent Harmonized Reduced Set of Scenarios (PHRSS)". PHRSS introduces a simpler methodology to assess materiality in the valuation of options and guarantees for Low Risk Profile Undertakings (LRPU). The aim of the workshop was to receive initial feedback from stakeholders.

EIOPA considers there to be excessive complexity in the current methods to assess the materiality of options and guarantee. Therefore, in line the EC's SII 2020 review proposals, EIOPA proposes a practical simplification in the methodology to assess the materiality of these instruments through a limited set of scenarios.

During the workshop, the secretariat provided some high level initial views on the topic, highlighting in particular the difficulty to obtain input given that the scope of PHRSS is not clear yet (LRPU criteria are still under discussion). Other issues pointed out were the risk factor to be included, the burden these new calculations would bring and the reasoning behind 5% the threshold.

Next steps

- The meeting was intended as a kick off meeting and EIOPA will continue to engage with stakeholders in the future.
- EIOPA has asked stakeholders for written feedback by 29 September (See [ECO-SLV-22-318](#))
- The selection of methodological options will be followed by two impact assessments:
 - The first impact assessment compares PHRSS Technical Provisions (TP) with a full ESG TP (Q1 2023)
 - The second impact assessment compares PHRSS TP with LRPU TP calculated deterministically (Q3 2023).
- EIOPA aims to finalize the methodology by Q3 2023 and the framework by Q1 2024.

METHODOLOGICAL APPROACH AND IMPACT ASSESMENT PRESENTED BY EIOPA

EIOPA's objective is to generate a limited set of risk-neutral scenarios (around 10) which can be used to assess the materiality of an undertakings' time value of options and guarantees (TVOG). EIOPA presented three steps to be discussed (Generation of raw scenarios, Scenario adjustments and Deterministic TP correction).

Generation of raw scenarios

- Generation of an initial set of scenarios (+/- 10 scenarios) by using risk-neutral models or real-world scenarios. The generation of raw scenarios considers five methods, which were discussed with stakeholders, the first three are based on the calibration of a reference risk-neutral / real-world ESG with spot market data or prudent assumptions:
 - **Method 1.1 Pure stochastic trajectories** – Calibrate and stochastically generate 10 random scenarios
 - **Method 1.2 Percentiles level lines** – Calibrate a reference risk-neutral/real world ESG and thereafter generate a full set of scenarios. And finally define percentile trajectories for almost 10 thresholds by considering the percentile values of each risk factor over the projection horizon (*Methodology scored green by EIOPA*).
 - **Method 1.3 Ranked scenarios** – use of a theoretical portfolio of assets to measure the adversity level of each scenario and to rank them consequently.
 - **Method 1.4 Alternative approach** – This method considers conditional expectations of risk factors given percentiles of reference portfolio (*Methodology scored green by EIOPA*).
 - **Method 1.5 Real-world scenarios** - defined "by hand" by experts.

Scenario adjustments

- Correction of raw scenarios to meet martingale/market consistency properties (avoiding differences between liabilities and assets valuation in the model projection) and to meet market consistency properties (model volatility is in line with market expectations). The following two adjustments are considered to achieve martingale properties and market consistency:
 - **Adjustment A** – Computation of moment matching techniques to adjust risk factors simulations in order to ensure convergence towards martingale tests targets.
 - **Adjustment B** – Scenarios reweighting to ensure the replication of derivative instruments prices targets (assessed by using spot market data or prudent assumptions on underlying volatilities).
- Both adjustments could be applied in different order/combinations obtaining different results.

Deterministic TP correction

- **Time Value of Options and Guarantees (TVOG) criterion:**
 - TVOG < 5% SCR (with TVOG = Stochastic (PHRSS) Best Estimate – Deterministic (single scenario) Best Estimate).
 - For LRPV meeting the TVOG criterion: adjustment of deterministic BE, with a supplement equal to 5% of SCR or an ad-hoc stochastic supplement using PHRSS.

QUESTIONS RAISED BY EIOPA AND STAKEHOLDERS DURING THE PRESENTATION

EIOPA presented three sets of questions to the stakeholders. EIOPA provided background comments on each topic and asked for feedback. As stakeholders were not yet in the position to provide relevant feedback, stakeholders were given the opportunity to follow up with written feedback.

- Undertaking selection – EIOPA emphasized the comparison between full ESG and the PHRSS (LRPU with deterministic scenario is less relevant). These comparisons are necessary to obtain a model fit for purpose.
- Impact assessment requirements and granularity– EIOPA will ask for the full ESG compared with the PHRSS results (in between results to understand the differences would also be useful).
- Parameterization of PHRSS scenarios – EIOPA requested feedback around type of risk factors, types of currencies, time step, length of time horizon, calibration of scenarios or ways to present the information.

The following further topics were mentioned during the call:

- Calibration targets – ESG and PHRSS should use the same calibrations targets, EIOPA added that it would be interesting to provide volatility targets.
- Transparency– EIOPA will publish the impact assessment together with the methodology behind each scenario.
- Presentation of the information – Stakeholders confirmed the need for tables and tools.
- NSA use of methodology – A supervisor noted that PHRSS could also be used to challenge an undertaking’s TVOG’s calculation. This approach could also be used to push medium-sized undertakings with undervaluation on options and guarantees to full ESG models.
- Scope issue – Stakeholders expressed support for Insurance Europe’s initial comment around unclarity on the scope due to the LRPV criteria that are still under discussion.