Memo for action

To: Solvency II Working Group
From: Prudential Team
cc:
Date: 05-09-2017
Reference: ECO-SLV-17-180

Subject: EIOPA CAT WS - September meeting

Summary

Ahead of the September meeting of the EIOPA Catastrophe Workstream (CAT WS), scheduled on 13/14 September, members are requested to review and provide feedback on the following proposals being considered by the CAT WS. Members are kindly requested to provide feedback to prudential@insuranceeurope.eu by **12h00 on 12 September.**

On contractual limits and natural catastrophe risk, a proposal (see ECO-SLV-17-177) has been put forward by EIOPA to increase the risk sensitivity of the natcat submodule for undertakings who write contracts with policy conditions which are below those of an "average" undertaking. The proposal introduces an (optional) adjustment which restricts the capital requirement for each zone in the natcat scenarios to the maximum payable under the policy conditions. Members are requested to review the proposal and provide feedback on:

- If this is an area of concern for their market.
- If the proposed adjustment provides an adequate solution to the problem.
- The degree of complexity the proposed adjustment adds to the calculation.
- Any alternative proposals to increase the risk sensitivity of the standard formula to contractual limits.

On accident concentration risk, a proposal (see ECO-SLV-17-178, slides 13-15) has been put forward to alter the exposure measure to an undertaking's largest collective health insurance contract. Members are requested to review the proposal and confirm:

- If this is an area of concern for their market.
- If they agree with the proposal.
- If they can provide an impact assessment for their market/sample of their market.

Members are further invited to an exchange of views on Tuesday 12 September between 15:00-16:00 CET. As with previous calls, national experts are welcome to attend (please register participation here).

Background

The fourth meeting of the CAT WS took place on 24/25 August (see ECO-SLV-17-145/ECO-SLV-17-146). At the meeting, progress was made on several areas of work. The secretariat provides a summary of the main developments below. Further detail can be found in EIOPA's meeting minutes (see ECO-SLV-17-179).

Recalibrations

- EIOPA's proposed recalibration process was agreed subject to some minor alterations and clarification of the level of data availability to different users (ie CAT WS, supervisors and public).
- A test run of the recalibration process of one of the country factors was undertaken. The secretariat highlights that, based on the result of the test run and subsequent discussion, **there appears to be**

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reluctance from some supervisors to alter parameters where this would result in the reduction of capital**, despite model data supporting a change.
- The recalibration process for all scenarios is expected to be completed during September.

Contractual limits
- In its Call for Advice to EIOPA, the Commission requested EIOPA assess the continued appropriateness of natcat parameters in particular view of the approach on contractual limits as set out in recital 54 of the Delegated Regulation.
- EIOPA believe that additional risk sensitivity implied in recital 54 is difficult to achieve without a fundamental change to the existing standard formula approach.
- However, EIOPA has put forward a proposal, *On contractual limits and natural catastrophe risk* (see ECO-SLV-17-177) to address this issue.
  - The proposal introduces an (optional) adjustment to the natcat SCR calculation which is intended to provide additional risk sensitivity for undertakings who have policy conditions below those of an "average" undertaking.
  - It introduces an additional step in the calculation which restricts the capital requirement for each zone in a natcat scenario to the maximum payable under the undertaking-specific policy conditions.
- **The secretariat has provided a worked example of the calculation in the annex and, based on this, believes it to be applicable to a very limited number of insurers.**

Natcat simplification
- The proposal to provide a simplification which enables undertakings to allocate any unmapped exposures to the highest risk zone (option 5) was agreed to be recommended.

Fire risk submodule
- The proposal to provide a simplification to restrict the identification requirement of an undertaking's fire concentration risk to the 200m radius around the top 5 exposures per risk type (industrial, commercial, residential) was agreed. Some additional work on the design of the underpin for purely residential properties is to be completed ahead of the next meeting.
- The proposal to alter the identification of the fire risk concentration from a gross to a net of reinsurance basis was discussed. It was noted that the different types of reinsurance (treaty/facultative) will impact on this calculation in different ways and that additional consideration of this proposal was required.

Health catastrophe risk
- The proposal to remove the 10yr disability scenario from the mass-accident concentration risk submodule and subsequent recalibration of the other scenarios was agreed.
- A proposal to alter the exposure measure to an undertaking's largest collective health insurance contract was considered. Insurance Europe and AMICE were requested to provide an impact assessment of the proposal.

Annex – Example of Ex-post adjustment to account for contractual limits in natcat submodule of SCR.

EIOPA's proposal

- Calculate, for each zone, the corresponding gross loss by applying the following formula: *country factor* times *zonal relativity* times *sum insured gross of deductibles and contractual limits*. Using the notation of the Delegated Regulation, with a region r and a zone i:

$$GrossLoss_{(peril,r,i)} = Q_{(peril,r)} \times W_{(peril,r,i)} \times SI_{(peril,r,i)}$$

- Define the maximum gross exposure in the zone i, using the undertaking-specific policy conditions: $MaxGrossExposure_{(peril,r,i)}$
- Take the minimum between (1) and (2) as the maximum loss for the zone i:
$$MaxLoss_{(peril,r,i)} = \min\left(GrossLoss_{(peril,r,i)}, MaxGrossExposure_{(peril,r,i)}\right)$$
- Calculate the loss for the region r by using the aggregation matrix:
$$L_{(peril,r)} = \sqrt{\sum_{(i,j)} Corr_{(peril,r,i,j)} \times MaxLoss_{(peril,r,i)} \times MaxLoss_{(peril,r,j)}}$$

Worked example

An insurer has property exposure in zone 67 of Italy. This has a sum insured of €100 but a contractual limit of €40.

Therefore, the ex-post-adjustment for earthquake risk is calculated as follows:

- GrossLoss (peril,r,i) = Q (peril) X W(peril,r, i) x SI (peril,r,i)
  = 0.80% X 10.9 X 100
  = €8.72

- MaxGrossExposure (peril,r,i) = €40

- MaxLoss(peril,r,i) = min (€40,€8.72) = €8.72

- **The ex-post adjustment in this case is €0.**

For exposures in zone 67 of Italy, the contractual limits for earthquake risk would need to restrict the maximum payment to below 8.7% of the sum insured for the ex-post adjustment to have an offsetting effect.

Consistent calculation for other risk zones and perils suggest that contractual limits would need to restrict the maximum payment significantly for the adjustment to have positive effect on an undertaking's SCR.