

Technical Specifications: Data Collection on the Prudential Treatment of Climate-Related Adaptation Measures in Non-Life Insurance

EIOPA REGULAR USE
EIOPA-BoS-22/194
04 April 2022

Handling instructions for documents with security markings:

https://www.eiopa.europa.eu/sites/default/files/publications/other_documents/summary_eiopa_information.pdf



eiopa

European Insurance and
Occupational Pensions Authority

PUBLIC
EIOPA-BoS-22-194

CONTENTS

1. Introduction	3
2. Timeline of the Data Collection	4
3. Q&A Procedure	5
4. Specification of the sample of participating undertakings	6
5. General approach of the analysis	6
6. Details of the premium risk analysis	8
6.1. Data Requirements	8
6.1.1. Raw data gross of reinsurance	8
6.1.4. Information on the data provided	9
6.2. Exclusion of catastrophe claims and related expenses	9
6.3. Other data adjustments	9
ANNEX	10

PUBLIC

EIOPA-BoS-22-194

1. Introduction

1. Climate change constitutes a serious risk for societies and economies. Global temperature is now around 1°C higher compared to the pre-industrial era and if adequate mitigation strategies are not introduced, global warming could reach 3°C or more by the end of this century.¹ The detrimental impact of global warming on natural and human systems is already visible today and without further international climate action, global average temperature and associated physical risks will continue to increase.²
2. Insurance undertakings play an important role in the mitigation and adaptation to climate change through their investments, products and services. Through its ongoing work on sustainable finance, EIOPA aims to ensure that (re)insurers integrate sustainability risks, and in particular climate risks, in their risk management to protect consumers and secure financial stability. This contributes to securing a sustainable and resilient insurance sector, providing relevant and affordable insurance coverage to consumers and firms.
3. Following EIOPA's recent [pilot exercise](#) on climate change adaptation in non-life underwriting and pricing, EIOPA aims to launch a data collection to assess the potential for a dedicated Pillar 1 treatment of climate-related adaptation measures in Solvency II's standard formula for non-life underwriting risk. The focus of the data collection lies on the influence of climate-related adaptation measures on premium risk, and it is supplemented by qualitative questions on reserve risk and natural catastrophe risk.
4. For the purpose of this data collection, climate-related adaptation measures are defined as structural measures and services that are implemented by (re)insurance undertakings and/or policyholders ex-ante to a loss event, which reduce the policyholder's physical risk exposure to climate-related hazards through i) lowering the frequency of climate-related losses and/or ii) lowering the intensity of climate-related losses.³
5. The scope of climate-related hazards for this data collection is set out in Annex A of the EU Taxonomy Climate Delegated Act supplementing Regulation (EU) 2020/852. Table 2 in the "Definitions"-sheet of the data collection template provides an overview.

¹ [JRC, \(2020\). Peseta IV](#) – Climate change impacts and adaptation in Europe

² [IPCC, \(2018\) Global warming of 1.5°C](#) – An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty

³ One should note that, according to the definition set, the present study does not consider climate-related adaptation measures that are publicly funded, such as, for example, flood defenses like dikes implemented by local governments.

PUBLIC

EIOPA-BoS-22-194

6. Climate-related adaptation measures can differ substantially with regard to their form and ability to protect against climate-related hazards. Potential examples of adaptation measures include: building improvements like water-resistant walls, windows and doors or non-return valves on main sewer pipes against flood risk, sandbags or domestic flood protection walls against flood risk, heat- and fire-resistive construction materials for buildings against exterior fire exposure, irrigation of crop fields against drought risk and heat waves, forecasting and warning systems (e.g. sms) to support the protection of goods against severe weather events. The "Definitions"-sheet of the data collection template provides further examples.
7. Implementing climate-related adaptation measures in insurance products is expected to substantially lower the frequency and intensity of climate-related losses. As a result, insurance products with and without climate-related adaptation measures might show a significantly different underwriting risk profile. The data collected will be used by EIOPA to consider the potential for a dedicated prudential treatment of climate-related adaptation measures in Solvency II's standard formula for non-life underwriting.

2. Timeline of the Data Collection

8. The data collection is based on the Excel-file "EIOPA-BoS-22-195".
9. Insurance and reinsurance undertakings participating in the data collection should submit results to their national competent authorities (NCAs). After validating the submissions, national competent authorities will report this information to EIOPA.
 - NCAs will focus their validation process on the correctness of the assumptions used by the undertakings to differentiate the underwriting data for insurance pools with and without adaptation measures. In particular, clear explanations on the assumptions used should be mentioned by undertakings in the qualitative questionnaire.
 - EIOPA will be available to provide assistance during the validation process, if considered useful by NCAs.
10. Special provisions are made to ensure the confidentiality of the submitted data, and access to the centralized database is restricted to EIOPA exclusively and will only be carried out by the EIOPA or NCA members.
11. EIOPA plans to disclose results from the data collection as part of an upcoming report on the prudential treatment of sustainability-related factors in Solvency II. Results will only be disclosed in anonymised or aggregated way in order to ensure the confidentiality of company data.

PUBLIC

EIOPA-BoS-22-194

12. The timeline concerning the data collection is as follows:

6 April 2022	Launch of the data collection
April 2022	EIOPA Workshop on the data collection
1 June 2022	Deadline for participants to submit results to their national competent authorities
2 to 10 June 2022	Validation of results by national competent authorities, with support by EIOPA
10 June 2022	Deadline for reporting of information from national competent authorities to EIOPA

13. Participants should be available to reply to possible requests of their national competent authorities for clarifications or resubmissions until 01 July 2022.

3. Q&A Procedure

14. Undertakings participating in the data collection are invited to contact EIOPA directly for questions concerning the technical specifications of the data collection and the completion of the quantitative template or the qualitative questionnaire.
15. Undertakings should submit their questions by filling out the Q&A template (EIOPA-BoS-22-211) and sending it to EIOPA via email at: impactuw@eiopa.europa.eu. Undertakings should also copy their respective supervisor in their emails to EIOPA.
16. Undertakings are invited to formulate their questions as early as possible in the course of the exercise. The questions received by EIOPA will be posted on EIOPA's website to inform the undertakings of the questions already raised and to avoid duplication. All questions will be published anonymously.
17. EIOPA will only respond to technical questions on the data collection. Questions on policy issues will not be addressed.

PUBLIC

EIOPA-BoS-22-194

4. Specification of the sample of participating undertakings

18. The basis for the insurer sample are the insurance undertakings that have participated on a voluntary basis in EIOPA's Pilot Exercise on Climate Change Adaptation in Non-Life Pricing and Underwriting.
19. Each national competent authority should aim at selecting at least two (re)insurance undertakings likely to be able to submit data for insurance products with and without climate-related adaptation measures. Where NCAs believe that participation would produce undue burden to the relevant undertakings, namely due to operational strains arising from the current geopolitical situation, NCAs should contact EIOPA Staff to discuss a potential exemption from participation in the data collection. NCAs are free to choose the insurance and reinsurance undertakings from their country to be included in the data collection and there is no restriction on the country-specific maximum number of participants.
20. The participation of an EEA-wide sample of solo undertakings (of all legal types and sizes) is strongly encouraged to ensure that the data collected is reflecting country-specific differences in climate-related underwriting exposures.

5. General approach of the analysis

21. The analysis aims to assess the potential for a dedicated prudential treatment of insurance products related to climate change adaptation, having regard to evidence.
22. EIOPA will collect data mainly focused on the analysis of premium risk for insurance products with and without climate-related adaptation measures. The qualitative questions included in the Excel-template are intended to study further aspects with regard to reserve risk and natural catastrophe risk.
23. In particular, for each accident year, EIOPA will be looking at the latest available information on:
 - Premium earned
 - Estimate of ultimate loss based on undertakings own current best estimate of claims provisions and the aggregated claims paid
24. This data will be used to study how the volatility of earned loss ratios is impacted by the implementation of climate-related adaptation measures by the policyholders or by the (re)insurance undertakings. In particular, EIOPA will perform similar analyses compared to the original calibration of

PUBLIC

EIOPA-BoS-22-194

the premium and reserve risk module in 2011 and with regard to the SCR review in 2018.

25. The analysis will be based on comparing underwriting data submitted by the (re)insurance undertakings that has been split into data for insurance products with and without climate-related adaptation measures. Table 1 in the data template gives illustrative examples of insurance products and adaptation measures.
26. (Re)Insurance undertakings are asked to split premium and loss data as requested in the excel data template per line of business into suitable pairs of underwriting pools: one treatment pool of insurance policies with climate-related adaptation measures and one reference underwriting pool without climate-related adaptation measure. Ideally, the treatment and reference underwriting pools reflect a similar underlying risk exposure to climate-related hazards.
27. More specifically, (re)insurance undertakings will fill the premium and loss data in vis-à-vis format per line of business (LoB), i.e. for the treatment pool with climate-related adaptation measures and for the reference pool without adaptation measures. For example regarding property insurance and flood risk: The insurance pool could be split between insurance policies with climate-related adaptation measures, e.g. buildings with water-resistant external walls, and similar insurance policies without such measures against flood risk.
28. The (re)insurance undertakings are invited to submit as many pairs of underwriting pools with and without climate-related adaptation measures as possible, and to specify their data samples and adaptation measure in the relevant text field of the spreadsheet.
29. The (re)insurance undertakings are not expected to submit data if climate-related adaptation measures are not implemented in the underwriting pools or if an underwriting pool cannot be split into comparable sub-pools in terms of the treatment group with adaptation measures and the reference group without adaptation measures.
30. Furthermore, if the split in suitable pairs of underwriting pools requires that data from different business lines need to be aggregated with regard to premiums and losses, then the (re)insurance undertakings are strongly encouraged to provide this aggregated data and provide information on the aggregation in the text field. This situation could emerge, for example, if the (re)insurance undertaking expects that a specific adaptation measure could have a different impact on the risks covered by an insurance policy. For example with regard to property insurance: A specific climate-related adaptation measure might have a different impact on the portion of losses related to physical building damages and losses related to business interruption.

PUBLIC

EIOPA-BoS-22-194

31. To the extent possible, (re)insurance undertakings are expected to exclude from the data submitted all contracts/risks which are not relevant to the objective of this study.

6. Details of the premium risk analysis

6.1. Data Requirements

32. The following data - split by LoB⁴, use of adaptation measures and accident year - shall be submitted:

6.1.1. Raw data gross of reinsurance

33. Volume of earned premium for the accident year gross of acquisition costs. (see column (a) on the template)
34. Acquisition costs / earned commissions (see column (b) on the template) if available
35. Expense information (see column (c) on the template)
36. Current estimate of ultimate loss (see column (d) on the template), comprising:
- Paid claims up until 2021 for that accident year
 - Best estimate claims provisions (including Incurred but not reported - IBNR) as at year end 2021
37. The estimate of ultimate loss should:
- Include Allocated Loss Adjustment Expenses (ALAE)
 - Where practicable, allow for receivables for salvage and subrogation

6.1.2. Adjusted data gross of reinsurance, excluding catastrophe loss

38. Same as gross (point 6.1.1.) but excluding catastrophe loss and including other justifiable adjustments as those included in the annex, where appropriate – see 6.2 and 6.3.

⁴ This comprises all Lines of Business (LoB) in Non-Life and Health Non-SLT insurance relevant to the insurers' business.

6.1.3. Adjusted data net of reinsurance, excluding catastrophe loss

39. Same as point 6.1.2, but now net of reinsurance instead of gross – see 6.2 and 6.3.

6.1.4. Information on the data provided

40. When unforeseen and un-modelled external factors – such as changes of regulation – had a material effect on the subsequent development of claims in an individual accident year, please provide any qualitative comment needed for EIOPA to have the relevant background information when analysing your data. However, those effects should not be removed or smoothed in the data submitted.

6.2. Exclusion of catastrophe claims and related expenses

41. The premium risk data referred to 6.1.2 and 6.1.3 shall generally be adjusted to exclude catastrophe claims and related expenses.
42. For this purpose, catastrophe claims cover all events or exceptional losses that would fall within the scope of the relevant catastrophe risk module of the standard formula SCR. This includes natural catastrophe claims, man-made catastrophe claims and health catastrophe claims.
43. Undertakings should explain in the qualitative questionnaire what has been excluded, and what has been left in the data, and all adjustments made to raw data.

6.3. Other data adjustments

44. Other adjustments to the data may be made where these are aimed to ensure that any set of data is made internally consistent and comparable. The annex contains a non-exhaustive list of situations where it may be acceptable to introduce adjustments to historical data.
45. Undertakings should explain and justify all adjustments made in the qualitative questionnaire.

ANNEX

Circumstances where adjustments to historical data may be acceptable

46. The following is a non-exhaustive list of situations where it may be acceptable to introduce adjustments to historical data. These adjustments are aimed to ensure, as far as reasonably possible, that any set of data is made internally consistent and comparable. Undertakings are asked to justify in the qualitative questionnaire any adjustments made, having due regard to the objectives of the calibration exercise.

Reflection of changes in cover (e.g. undertakings may decide to introduce/change/remove an excess in its policies, and the past claims data reflects a different reality in policy covers)

47. One of the reasons for experiencing heavier or lighter claims in some periods may be due to structural changes in the level or scope of coverage of risks. These may be entity specific (e.g. changes in policy design, excesses, perils covered, etc.) or industry-wide (e.g. changes in the minimum capital insured for certain type of policies, such as motor third party liability or in the minimum set of perils covered).
48. Past data may need to be adjusted, to the extent possible, to make it consistent with the current and future policy and coverage characteristics.
49. In practice, these features are likely to be difficult to identify on an aggregate basis, especially when they are entity-specific. In some cases, it may also be impossible to adjust past data on a sufficiently reliable basis because of the unavailability of additional data (e.g. increase in the perils covered by the contracts, reduction of the level of excesses).

Reflection of changes in the reinsurance policies

50. Where the aim is to estimate figures net of reinsurance, it will be necessary to assess the stability of the reinsurance policies in force during the observation period. Where the retention levels remained broadly equivalent no adjustments are needed. However, where this is not the case, it may be necessary to adjust the past data and make it consistent with the reinsurance policies that will be in force during the projection period. This will require reconstructing the past data as if the current and future reinsurance policies were in force.
51. For non-proportional reinsurance, this may be a difficult exercise to perform, but the impact of not adjusting data may be significant if there is

PUBLIC

EIOPA-BoS-22-194

evidence of occurrence of a material number of past claims that triggered outwards reinsurance contracts that are no longer expected to be covered in future, or would be expected to be captured in future.

Occurrence of large or exceptional claims

52. Where claims experience seems to be unusually large for one or a few cohorts, it needs to be investigated if this is caused by a small number of particularly large claims.
53. If the underlying events fall within the definition of catastrophic loss, then the losses would need to be stripped out from the premium risk data.
54. Where the claims are large but not catastrophic, data should be left unmodified, but undertakings are asked to identify separately the amount and characteristics of these claims.

EIOPA

Westhafen Tower, Westhafenplatz 1

60327 Frankfurt – Germany

Tel. + 49 69-951119-20

Mail: info@eiopa.europa.eu

<https://www.eiopa.europa.eu>



eiopa

European Insurance and
Occupational Pensions Authority