BANK OF ENGLAND
PRUDENTIAL REGULATION AUTHORITY

2022 PRA Insurance Stress Test

Requirements for the "Results and basis of preparation" report

To be finalised in May 2022

Contents

Introduction

This document sets out information that firms will need to provide as part of their Insurance Stress Test (IST) submissions. Specifically, firms will be required to include a qualitative report, referred to as the 'Results and basis of preparation' (RBP), which will complement the quantitative results and is an integral part of the IST exercise.

The purpose of the RBP is to provide guidance on the level of governance and quality assurance as well as additional information required to support the quantitative results (quantitative data templates are published at: https://www.bankofengland.co.uk/prudential-regulation/letter/2022/january/insurance-stress-test-2022-request-for-technical-input).

The PRA will use the RBP to assess the comparability and robustness of the results, and hence the plausibility of forming an assessment of sector resilience based on aggregating firm results. The report will also be used to gather information about firms' risk management capabilities, and hence inform the PRA's supervisory approach.

The RBP requires firms to provide a narrative of their scenario results including perspectives on the conclusions, limitations, data and modelling issues, and any management actions taken and assumptions made (beyond those set out by the PRA).

The governance and quality assurance section requires firms to set out details of their processes and approach to coordination of activities to provide assurance that their assumptions, methodologies, and results have had internal challenge and discussion.

A SMF is required to provide a written confirmation that:

i. **the results have had internal challenge and discussion and the CRO has provided the SMF with assurance that the results are of sufficient standard for the Board to be able to make use of them in their strategic planning and/or assessment of their risk appetite; and**
ii. **the results are of a standard equivalent to that which is sufficient for external unaudited public disclosure (eg forward-looking financial statements).**

Although firms may choose to use external validation as part of their assurance process this is not a requirement. The SMF providing the confirmation should satisfy themselves as to the adequacy of the process followed.

It is envisaged that most of the inputs for this report already exist in firms' documentation inventories, or is expected to be a natural by-product as firms complete their data templates prior to submission to the PRA.

IST2022: Governance, quality assurance and operational insights

Applicable to all participants

Governance

A1. Please describe your internal governance process for responding to this exercise including:

a. the committees which considered and approved stress testing methodologies, assumptions, scenario variables and stress testing results;
b. key issues that were challenged by committees and changes that were made in response.

A2. Please explain the extent to which this governance process differs or aligns with the processes in reporting other unaudited public or private external disclosures, for example capital market forward-looking financial statements or perspective of the business model?

Quality assurance

A3. Please provide details of your approach to coordinating the calculation and review of the stressed balance sheet following each of the relevant scenarios, including:

a. the level of resources;
b. the level of independence achieved between the analysis team and reviewers;
c. the scope and area of focus of the quality assurance;
d. the results of any validation checks performed.

Operational insights

A4. To what extent has this exercise highlighted any potential operational issues following the specified scenarios? For example, reliance on an outsourced provider to be able to respond in meeting policyholder obligations, or a third party assessor in establishing the claims outstanding?

Life Insurers scenario

Results narrative

B1. Please provide a narrative response that supports the quantitative results. This should include: (1) the implied impacts on capital, statutory solvency and liquidity at each scenario stage relative to your risk appetite; (2) the reliance on and security of any reinsurance where relevant; (3) the key drivers of the capital losses; (4) the extent and impact of asset trading, for example any changes made to the matching adjustment fund asset credit rating profile; and (5) the implications, if any, to your business model.

Management actions

B2. Please provide information on the extent that the permitted management actions have been applied at each stage. For example, asset trading limitations on illiquid assets has been adhered to in Stages 3 and 4.

B3. Please provide information for each scenario stage on whether the firm had sufficient eligible collateral to meet the firm's collateralisation requirements, for example on derivatives or reinsurances. Please include information on whether it was necessary to draw on the firm's prearranged liquidity facilities and the extent that they were likely to be drawn on. For Stages 1 and 2, please set out whether it would have been necessary to draw on liquidity in excess of prearranged liquidity facilitates due to the scenario limiting external trading management actions (note this is permitted for Stages 1 and 2 so that Matching Adjustment (MA) fund can have adequate assets and that there is no loss of protection from derivatives).

B4. Please provide for each scenario stage information on the management actions applied between applying the scenario stage stress to the base balance sheet and calculation of the scenario stage balance sheet, SCR and own funds. This should include information on the asset trading management actions applied. Information on whether the management actions taken were consistent with the firm's risk capital status and implementation time frame consistent with scenario stage horizon.

B5. Please provide summary information on additional management actions not included within the results that a firm could consider following this scenario. This should include management actions beyond those that have been permitted to be recognised in the scenario.

Assumptions, data and methodology for assessing the scenario

B6. Please provide information on whether the MA fund matching tests were satisfied for each scenario stage and whether it was necessary to remove any liabilities from the MA funds for any scenario stages.

B7. Please provide information on whether the financial strength of individual with-profit funds has materially changed and if this has resulted in a material impact on the firm's solvency position.

B8. Please provide information on any firm specificities agreed with the PRA. For example, some firms apply look through credit counterparty risk assessments for internal reinsurances.

B9. Please provide details explaining the firm's approach and methods for the calculation of the scenario. This should include:

a. information on sources of uncertainty over the accuracy of results and how the uncertainty has been dealt with in the calculations;
b. any material assumptions on which the calculations or judgements are based and any differences in these between the scenario stages;
c. where proxy models or other approximations are used, please include information on the materiality and accuracy of such approximations. Our expectation is that this information will be based on a firm's existing information for the fitting and validation of proxy models.

B10. Please provide information on ERMs IFRS valuation methodology and key assumptions applied for the base balance sheet at each scenario stage. A summary of the ERM valuation stress for each scenario stage with additional granularity if a firm has ERM cohorts with significantly different valuation stresses.

B11. Please provide information on ERM securitisations including credit ratings for notes and information on the ERM securitisation restructuring management action if utilised.

B12. Please provide details of any material capital raising during 2021 and any material changes in capital from year end 2021 up to the submission date, eg capital raised, capital repaid, dividends, etc.

B13. Please provide information on the risk capital status (for example RAG rating) of the firm at each scenario stage. Please include a summary of the firm's risk capital appetite thresholds.

Natural catastrophe scenarios

Results narrative

C1. Please provide a narrative response that supports the quantitative results. This should include: (1) the implied gross and net losses relative to your risk appetite; (2) the key drivers of the gross losses; (3) the reliance on and security of your reinsurance; and (4) the implications, if any, to your business model.

Management actions

C2. For each scenario, please specify the management actions you would anticipate taking in the event of such a scenario? And, if appropriate, please provide estimates of the quantitative expected benefit, including any supporting analysis.

Assumptions, data and methodology for assessing the gross and net losses

C3. For each scenario and event, please provide details of additional key assumptions and parameters beyond those specified in the "Scenario Specifications, Guidelines and Instructions" document and any other aspects that could distort cross-firm comparisons (beyond exposure and reinsurance differences). The following provides a comprehensive although not exhaustive list of information that we would expect participants to include where relevant to the scenario and a firm's modelling approach:

Assessing the gross losses:

- Details of the underlying vendor model implementation for each region-peril model: including model version (or versions if adopting a blended approach), the standard settings applied (for example fire-following for USEQ).
- Adjustments in assessing insurance losses, including:
    1. adjustments for post loss amplification (PLA) (eg reflecting possible supply chain challenges, increased price of raw materials, energy and labour costs). Your response should include how you have assessed the appropriateness of the PLA within the vendor model (where applicable) and how you have established any loading (whether that is positive or negative);
    2. adjustments for non-modelled secondary perils (eg landslide, escape of water, sprinkler leakage). This may include the development of in-house tools or adjustment of third-party model;
    3. adjustments for any other uncaptured exposures or data limitations (eg Additional Living Expenses (ALE) allowance by loading exposures or amendment of sums insured values based on third party databases);
    4. adjustments for non-modelled coverages (eg contingent business interruption) and lines of business;
    5. assessment of Assignment of Benefits (for US Hurricane scenario only).
    6. adjustments for claim leakage, stating the allowances made (for the second US Hurricane event only). Please include any adjustments of exposures or loss to better align contractual terms & conditions with expected claims paid;
    7. adjustment for potential underestimation of rebuild costs.

Where feasible, please provide a perspective on the materiality of the adjustment. **For the first 3 adjustments** (items 1-3 above) please include additional material on the methodology and assumptions (focusing on adjustments made to vendor models beyond standard settings or development of in-house tools), and any supporting data, for example comparison with historic experience.

Assessing the net losses:

- details of any simplification or assumptions used in assessing the reinsurance recoveries;
- details of the extent to which each scenario results in reinsurance recoverables that are expected to reach or are close to the vertical and horizontal limits of the current reinsurance programme;
- details of the extent to which reinsurance recoverables are expected from a group reinsurance programme, and hence subject to additional uncertainty dependent on the loss experience of other group entities.

Assessing Risk Modelling and Risk Management capabilities

C4. Please provide details of any material differences in your model set-up – including assumptions and parameters used in completing this exercise – with those used within your day-to-day risk management, including production of the Internal Model Outputs and exposure monitoring.

C5. Having completed this exercise, do you expect to make any changes to your capital, exposure management, underwriting or pricing models or approach? (including any changes to identified non-modelled exposures)

C6. What, in your opinion, are the most material non-modelled risk elements following the PRA scenarios to your organisation?

C7. Peril specific areas:

- **Scenario A1: US hurricane set of events:**

    1. To the extent the cat model you use provides a range of hurricane frequencies that underpin the stochastic catalogues, please state which view of hurricane rates do you adopt?

- **Scenario A2: California earthquakes:**

    1. To the extent the cat model you use provides with a correlated and independent set of events, please state which set you adopted and briefly outline the rationale.
    2. Does the stochastic catalogue that you use in formulating your view of risk include multi-fault ruptures? If not, please state whether you have assessed the materiality of multi-fault ruptures to the model results and briefly list the conclusions from such a study if applicable.
    3. Have you assessed the adequacy of your cat model to represent dynamic earthquake triggering (ie modelling of event clustering)? If yes, please briefly outline your conclusions in terms of materiality.
    4. For event 1, firms are required to assess the impact on the loss estimate of assuming the ground motion estimation one standard deviation above the

average. Please provide the methodology and assumptions used for this calculation.

- **Scenario A3: UK windstorm and UK flood:**

    1. Have you undertaken a materiality assessment of the coastal model coverage limitation as far as an impact to the losses are concerned? If so, please provide a summary of your findings.
    2. When simulating the UK inland flood and UK windstorm losses within your internal model, are those loss distributions regarded as independent or correlated? If the latter, please provide a brief description of their nature of correlation.

- **Scenario A3: Coastal Flood:**

    1. To what extent are there gaps in your data or model when estimating the insured losses from coastal flooding attributable to all the at-risk postcodes? (Note: at-risk postcodes defined in tab 'A3 Event 2 Hazard Information' in the data template).

Cyber underwriting scenarios

Results narrative

D1. Please provide a narrative response that supports the quantitative results. This should include: (1) the implied gross and net losses relative to your risk appetite; (2) the key drivers of the gross losses; (3) the reliance on and security of your reinsurance; and (4) the implications, if any, to your business model.

Management actions

D2. For each scenario, please specify the management actions you anticipate taking in the event of such a scenario? And, if appropriate, please provide estimates of the quantitative expected benefit, including any supporting analysis.

Assumptions, data and methodology for assessing the gross and net losses

D3. For each scenario, please provide details of additional key assumptions and parameters beyond those specified in the "Scenario Specifications, Guidelines and Instructions" document and any other aspects that could distort cross-firm comparisons (beyond exposure and reinsurance differences). The following provides a non-exhaustive list of information that we would expect participants to include where relevant to the scenario and a firm's modelling approach:

Assessing the gross losses:

- description of any proprietary models used in quantifying the insured losses;
- model vendor and model version(s) (depending on whether firms have adopted a blended approach);
- description of any additional external data sources used to derive at the gross loss impact of the specified scenario;
- additional assumptions (beyond those specified in the guidance). For example, if you did not use **Annex 4** in "Scenario Specifications, Guidelines and Instructions" document, please specify the percentage of policyholders and Total Sum Insured where you have sufficient information to assess the reliance of business critical functions on cloud service providers (CSP) or not, and details of the CSP if known;
- material simplifications and approximations made.

Assessing the net losses:

- details of any simplification or assumptions used in assessing the reinsurance recoveries;
- details of the extent to which each scenario results in reinsurance recoverables that are expected to reach or are close to the vertical and horizontal limits of the current reinsurance programme.

Assessing Risk Modelling and Risk Management capabilities

D4. Please provide details of any material differences in your model set-up – including assumptions and parameters used in completing this exercise – with those used within your day-to-day risk management, including for assessing capital requirements and exposure monitoring.

D5. Having completed this exercise, do you expect to make any changes to your capital, exposure management, risk appetite, underwriting or pricing models or approach (including any changes to identified non-modelled exposures)?

D6. Please comment on the extent to which these scenarios could also have implication on your operations? What measures have you already taken to prepare your firm for such events and what actions would you take if your firm were to be impacted by such events?

Annex 1: Abbreviations used

ALE	Additional Living Expenses
CSP	Cloud Service Provider
CRO	Chief Risk Officer
ERM	Equity Release Mortgages
IST	Insurance Stress Test
MA	Matching Adjustment
MCR	Minimum Capital Requirement
PLA	Post Loss Amplification
PRA	Prudential Regulatory Authority
RBP	Results and Basis of Preparation Report
SCR	Solvency Capital Requirement
SMF	Senior Management Function
SII	Solvency II