

Bank of England

Prudential Regulation Authority

Insurance Stress Test 2022

Requirements for the “Results and basis of preparation” report

4 May 2022



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Introduction

This document sets out information that firms will need to provide as part of their Insurance Stress Test (IST) submissions. Specifically, firms are 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 deadline for submission for this exercise is: 5pm, Wednesday 28 September 2022

The purpose of the RBP report is to provide information on the level of governance and quality assurance as well as additional information required to support the quantitative results.

The RBP report requires a firm to provide a narrative of its 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 PRA will use the RBP reports 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 reports will also be used to gather information about firms' risk management capabilities, and hence inform the PRA's supervisory approach.

For life insurers, the RBP report will also support the PRA's supervisory objectives in areas including management actions, liquidity risk management, Equity Release Mortgages (ERMs) and annuity counterparty risk.

For general insurers, the RBP report includes questions on catastrophe risk modelling and risk management capabilities to inform exposure management reviews across firms.

The governance and quality assurance section requires a firm to set out details of its processes and approach to coordination of activities, in order to provide assurance that its assumptions, methodologies and results have had internal challenge and discussion. *Note: for a general insurer, the RBP request does not cover scenarios that, given the firm's specific risk coverage, are immaterial.*

A holder of a Senior Management Function (SMF) is required to provide a written confirmation that:

- i. the results have had internal challenge and discussion and the CRO has provided the holder of the SMF with assurance that the results are of sufficient standard for the Board to be able to place reliance on them as providing a reasonable representation of the firm's financial position following the PRA scenarios; 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 holder of 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 are expected to be a natural by-product as firms complete their data templates prior to submission to the PRA.

Firms are asked to limit their responses to maximum 500 words per question and 500 words per question per scenario for General Insurance scenarios, unless a different limit is specified. However, it is acceptable for a firm to exceed the limit if it would be unable to provide a materially complete and accurate answer without doing so.

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. specifying the committees that considered and approved stress testing methodologies, assumptions, scenario variables and stress testing results; and
- b. setting out the key issues that were challenged by committees and any changes that were made in response.

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

[Suggested word limit: 250]

A3. Please provide copies of the Board and/or committee paper(s) relating to the consideration and approval of the stress testing results.

[No word limit applies to question A3]

Quality assurance

A4. Please provide details of your approach to coordinating the completion and review of each of the relevant scenarios, including:

- a. the level and nature 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; and
- d. the nature of any validation checks performed.

Operational insights

A5. To what extent has this exercise highlighted any existing operational issues, or highlighted any new potential operational issues, following the specified scenarios? For example, is there any reliance on an outsourced provider to be able to respond in meeting policyholder obligations, or a third party assessor in establishing the claims outstanding?

IST2022 learnings

A6. To what extent has this exercise highlighted any gaps or the need for changes in your risk management and risk assessment framework (for example, has it informed any further considerations in capital, exposure management, underwriting or pricing models - either for existing exposures or for identified non-modelled exposures)?

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 and movements in the SCR and MCR; (4) the extent and impact of asset trading, for example any changes made to the Matching Adjustment (MA) portfolio asset credit rating profile; and (5) the implications, if any, for your business model.

[Suggested word limit: 1,000 for each stage]

B2. The scenario design and parameters do not incorporate all aspects of current heightened geopolitical and economic risks, such as increased inflationary pressures. To what extent are you exposed to any market or credit risks that are not captured in the scenario? Please also describe in broad terms (ie quantification is not required) how the results of the scenario and your answers in B1 would be impacted if the scenario had been expanded to include any such risks (calibrated to be consistent, in your view, with the rest of the scenario).

Management actions

B3. Please provide information on the extent to which the permitted management actions have been applied at each stage and confirmation that no allowance has been made for management actions that are not permitted.

[Suggested word limit: 250]

B4. Please provide information for each scenario stage on whether the firm had sufficient eligible collateral to meet its collateralisation requirements, for example on derivatives or reinsurance arrangements. Please include information on whether it was necessary to draw on the firm's prearranged liquidity facilities and the extent to which they were assumed to be used. For Stages 1 and 2, please set out whether it would have been necessary to draw on liquidity in excess of prearranged liquidity facilities due to the scenario limiting external trading management actions (note that this is permitted for Stages 1 and 2 so that an MA portfolio can have adequate assets and that there is no loss of protection from derivatives generally). You should explain the firm's liquidity resource management approach including, where relevant, details of assets it holds and would plan to sell in order to satisfy collateral calls.

- B5. Please provide for each scenario stage information on any material management actions applied between applying the scenario stage stress to the base balance sheet and calculation of the scenario stage balance sheet, SCR and eligible own funds. This should include information on the asset trading management actions applied. It is not necessary to quantify the impact of the management actions although guidance should be provided on the extent of them (for example, identifying those with the largest impact). Please provide commentary on whether the management actions taken were consistent with the firm's stressed capital risk appetite position and their implementation time frame consistent with the scenario stage horizon.
- B6. Please provide summary information on additional management actions not included within the results that the firm could consider during 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

- B7. Please provide information on whether the MA portfolio matching tests were satisfied for each scenario stage and whether it was necessary to remove any liabilities from the MA portfolios for any scenario stages (and if so why).
- B8. Please provide information on whether the financial strength of any individual with-profit funds materially changed during the scenario stages and if this resulted in a material impact on the firm's solvency position.
- B9. Please provide information on any firm-specific approaches agreed with the PRA. For example, some firms apply look-through credit counterparty risk assessments for internal reinsurance arrangements.

[Suggested word limit: 250]

- B10. 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; and
 - c. where proxy models or other approximations are used, 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.

B11. Please provide information for ERMs on IFRS valuation methodology and key assumptions applied for the base balance sheet at each scenario stage. Please also provide a summary of the key assumptions and impact of the ERM valuation stress for each scenario stage with additional granularity if a firm has ERM cohorts with significantly different valuation stresses.

B12. Please provide information on ERM securitisations at each scenario stage including credit ratings for notes and information on the ERM securitisation restructuring management action if utilised.

B13. 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).

[Suggested word limit: 250]

B14. Please provide information on the capital risk appetite status (for example RAG rating) of the firm at each scenario stage. Please include a summary of the firm's capital risk appetite thresholds and metrics used.

Natural catastrophe scenarios

Results narrative

- C1. Please provide a narrative response that supports the quantitative results. This should include: (1) the 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.
- C2. The scenario design and parameters do not incorporate all aspects of current heightened geopolitical and economic risks, such as increased inflationary pressures. To what extent are you exposed to any additional insurance, market or credit risks that are not captured in the scenario? Please also describe in broad terms (ie quantification is not required) how the results of the scenario and your answers in C1 would be impacted if the scenario had been expanded to include any such risks (calibrated to be consistent, in your view, with the rest of the scenario).

Management actions

- C3. For each scenario, please specify all the management actions you would anticipate taking in the event of such a scenario. Please distinguish between those management actions that are new for this exercise and those that are part of your standard risk mitigation toolkit. 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

- C4. Please provide a schematic of the reinsurance programme relevant for this scenario.
- C5. For each scenario and event, please provide details of additional key assumptions and parameters that you have used 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 gross losses

- a. 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).
- b. Adjustments in assessing insurance losses, including:
 1. adjustments for post loss amplification (PLA) (in particular 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), how you have established any loading (whether that is positive or negative), and what are the most material post loss amplification components;
 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 models;
 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 (eg marine and energy, liability);
 5. assessment of Assignment of Benefits (for US Hurricane scenario only);
 6. For the second US Hurricane only: adjustments for claim/policy leakage, stating the allowances made. Please include any adjustments of exposures or loss to better align contractual terms & conditions with expected claims paid;
 7. rates of exchange to convert projected losses into reporting currency.

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 net losses

- a. details of any simplification or assumptions used in assessing the reinsurance recoveries;
- b. 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;
- c. 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

C6. 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.

C7. Peril specific areas:

1. 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 you adopted.
2. For event 3, the event with significant inland penetration, if you have not relied on catastrophe models to estimate inland state losses, please specify the approach and assumptions used.

2. Scenario A2: California earthquakes

1. To the extent the cat model you use provides 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.

3. Scenario A3: UK windstorm and UK flood

1. For event 2, to what extent are there gaps in your data or model when estimating the insured losses from storm surge attributable to all the at-risk postcodes? (Note: at-risk postcodes are defined in tab 'A3 Event 2 Hazard Information' in the data template). If you have not used catastrophe models to estimate storm surge losses, please specify the approach and assumptions used to estimate losses for the impacted regions of the UK west coast.
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.

Cyber underwriting scenarios

Results narrative

- D1. Please provide a narrative response that supports the quantitative results. This should include: (1) the 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.
- D2. The scenario design and parameters do not incorporate all aspects of current heightened geopolitical and economic risks, such as increased inflationary pressures. To what extent are you exposed to any additional insurance, market or credit risks that are not captured in the scenario? Please also describe in broad terms (ie quantification is not required) how the results of the scenario and your answers in D1 would be impacted if the scenario had been expanded to include any such risks (calibrated to be consistent, in your view, with the rest of the scenario).

Management actions

- D3. For each scenario, please specify all the management actions you would anticipate taking in the event of such a scenario. Please distinguish between those management actions that are new for this exercise and those that are part of your standard risk mitigation toolkit. 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

- D4. Please provide a schematic of the reinsurance programme relevant for this scenario.
- D5. 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 gross losses

- a. description of methodology and models used in quantifying the insured losses

- b. description of any additional external data sources used to derive the gross loss of the specified scenario;
- c. additional assumptions made (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;
- d. description of the most relevant clauses in assessing the loss potential, highlighting those which are likely to be subject to the greatest differences in interpretation;
- e. description of the most relevant exclusions you would be relying upon;
- f. rates of exchange to convert projected losses into reporting currency;
- g. material simplifications and approximations made.

Assessing net losses

- a. details of any simplification or assumptions used in assessing the reinsurance recoveries;
- b. 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

- D6. Please provide details of any material differences between your own view of risk, own scenarios or model set-up – including assumptions and parameters used in completing this exercise – and those used within your day-to-day risk management, including for assessing capital requirements and exposure monitoring.
- D7. Please provide a qualitative description of the key exclusions you rely on to mitigate losses from cyber events like the “Cloud down” and “Data exfiltration” scenarios.
- D8. Please describe qualitatively how you expect your cyber policies to respond and war exclusions to apply, should a foreign nation state involvement be evident.
- D9. If the “Cloud down” scenario was due to a technological failure, ie was non-malicious, how would the loss potential differ?

Annex 1: Abbreviations

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