# Life Insurance Stress Test 2022: Second and final request for technical input

What does it cover and what will it mean for insurers?

Florin Ginghină, FIA
Jessica Crowson, FIA
Gibson Thuita

On 20 January 2022, the Prudential Regulation Authority (PRA) launched the second and final request for technical input for the Insurance Stress Test (IST 2022)[1]. In this paper, we summarise the key considerations and potential challenges for life insurance firms completing the Life Insurance Stress Test (LIST 2022) exercise.

In 2019, the PRA conducted the first stress testing exercise for life insurers (LIST 2019)[2]. In 2020, the PRA provided several areas of feedback[3]. One of the key areas of PRA feedback was around the use of approximations and simplifications used by firms in completing the exercise, including on, but not limited to, the Matching Adjustment ("**MA**"), Solvency Capital Requirement ("**SCR**"), Risk Margin ("**RM**") and Transitional Measure on Technical Provisions ("**TMTP**") under stress. Firms will therefore need to be aware of these areas when determining their methodologies and the appropriateness of any simplifications used for LIST 2022. Milliman consultants published a summary paper on the feedback from the LIST 2019 exercise which can be found here.

The LIST 2022 was launched in August 2021 in a "Dear CEO" letter[4], addressed to the largest UK regulated life insurers. The letter sets out the timetables and high-level scope for the exercise. The PRA seeks to assess the resilience of insurers to adverse scenarios; for life insurers the focus is on economic stresses.

The first request for technical input on the IST 2022 was in September 2021, which set out the stresses and overall structure of the exercise.

For the second and final request for technical input launched in January 2022, firms have until 17 March 2022 to provide responses, prior to the formal launch of the LIST 2022 in May 2022 for submissions by September 2022. In this final request, the PRA is seeking feedback from participating firms on three areas:

- Plausibility of the scenario calibration
- Clarity of the instructions and completeness of the scenario assumptions to be provided by the PRA
- The governance and quality assurance requirements for the stress test submissions

The request includes updated scenarios, together with the scenario calibration, specifications and guidance, and a quantitative data template as well as a "Results and Basis of Preparation" ("**RBP**") report.

In this paper we cover the objectives and scope of the exercise, analyse the key documents provided, look in detail at the structure and calibration of the stresses, perform a deep dive into management actions, and consider the next steps for providing feedback. Where relevant we compare the requirements of LIST 2022 with LIST 2019.

## Objectives and scope

The PRA has stated three key objectives for the LIST 2022 exercise. They are as follows:

- **To assess resilience of insurers to a severe but plausible adverse scenario**. The exercise will focus on the consequences of severe disruption in financial markets, affecting both interest rates and market liquidity, followed by an additional longevity shock.
- **To guide supervisory activity**. The exercise will be a useful tool for the PRA to assess firms' modelling and risk management capabilities.

[1] Insurance Stress Test 2022- Request for technical input

[2] PRA (18 June 2019). June 2019.Life Insurance Stress Test 2019 – Scenario Specification, Guidelines and Instructions.

[3] Insurance Stress Test 2019: feedback for general and life insurers

[4] PRA (4 August 2021). Dear CEO – Insurance Stress Test 2022 (IST 2022).

- **To improve the ability of the PRA and insurers to respond to shocks**. The exercise will enable the PRA to understand the sector's resilience to shocks and determine how to respond if such a scenario were to occur and will also enhance the understanding of the impact of firms' assumed management actions.

The PRA included 17 firms belonging to 12 separate insurance groups in scope for the LIST 2022 exercise, choosing large UK life insurance companies with significant exposure to annuities.

# Structure of LIST 2022

The LIST 2022 consists of four stages that examine the impact of a severe financial market shock in three stages, followed by an additional longevity shock in the fourth stage.

Although the four stages are assumed to cover a one-year period shock, firms should assess the impact as an instantaneous stress to their year-end 2021 Solvency II balance sheet.

The four stages are summarised in Figure 1 below:

**FIGURE 1: SUMMARY OF LIST 2022**

| | **Stage 1 Initial Market Shock** | **Stage 2 Developing Market Shock** | **Stage 3 Protracted Market Shock** | **Stage 4 Protracted Market & Longevity Shock** |
|---|---|---|---|---|
| Market stresses | Initial market stresses and no downgrades | Further market stresses and downgrades | No further market stresses | No further market stress |
| Counterparty defaults (including reinsurance) | No | Yes | Yes | Yes |
| Longevity stress | No | No | No | Yes |
| Equity Release Mortgages (ERMs) | No | Internal ratings reassessed | Re-securitisation | Re-securitisation |
| Trading | No | Swaps only | Swaps and current liquid secondary markets | Swaps and current liquid secondary markets |

We have not included in Figure 1 the following items which the PRA does not expect or propose to change:

- Fundamental Spread ("**FS**") will not be stressed in any of the four stages. However, the PRA will update the FS to reflect the basic risk-free rate stress (this is discussed in the following sections).
- Where relevant, participating firms are required to re-assess the Effective Value Test on Equity Release Mortgages ("**ERMs**") in each stage.
- Also where relevant, participating firms are required to recalculate the TMTP at each stage.

In the following sections, we examine the four stages of the LIST 2022 in more detail.

### STAGE 1: INITIAL MARKET SHOCK

This stage represents an instantaneous market shock involving adverse movements in interest rates, credit spreads, equities, and interest rate and inflation option volatilities. It does not include any credit rating downgrades or changes to longevity assumptions.

The impact is assessed without the application of any management actions relating to external trading (e.g., derivatives) or new reinsurance.

The basic risk-free rates will reflect a stress of -0.5%. Depending on the biting interest rate stress on their SCR, participating firms may wish to consider confirming with the PRA that the interest rate stress remains relevant.

The FS parameters will be updated to reflect the basic risk-free rate stress, but no changes are proposed to probabilities of default ("**PD**") or long-term average spreads ("**LTAS**").

### STAGE 2: DEVELOPING MARKET SHOCK

This stage follows on from Stage 1 to capture a lagging shock over one month to credit ratings, commercial property, and residential property.

Firms will be expected to re-assess their internal ratings for ERM securitisations post-shock.

The only permittable management action that can be applied at this stage is external trading in interest rate and inflation swaps.

The PRA will provide risk free rates (with volatility adjustment if applicable) that are stressed to reflect the Stage 2 spread stress, but with no changes to the assumed volatility adjustment portfolios.

### STAGE 3: PROTRACTED MARKET SHOCK

This stage reflects economic conditions and asset prices remaining at the stressed level, as defined in the previous two stages, for 12 months.

In this stage, firms are allowed to reflect the impact of certain management actions, including the external trading of financial investments and restructuring of ERM portfolios.

The PRA intends to apply some simplifications to ensure that the Solvency II technical information and symmetric adjustment to the equity capital charge remains unchanged from Stage 2.

### STAGE 4: PROTRACTED MARKET AND LONGEVITY SHOCK

This is the final stage of the test, which involves a decrease in expected mortality.

Like Stage 3, firms should not assume that any new reinsurance is put in place, but they can reflect external trading of financial investments, including derivatives.

## Scenario calibration summary

In line with the previous LIST 2019 exercise, LIST 2022 comprises a set of multivariate market stresses. The stresses for each stage apply at time 0, with the same shocks applying to all currencies. The time frame for each stage is relevant for applying appropriate management actions.

The following market stresses apply for Stage 1:

- An interest rate stress (-50 basis points ("**bps**"));
- Interest and inflation rate option implied volatilities (+700bps);
- Equity prices (-33%);
- Equity option volatilities (+700bps);
- Corporate credit spread stresses (varying by credit rating).

In Stage 1, no property (commercial or residential) and no downgrade stresses are applied, as they will apply in Stage 2.

The PRA will update and provide to participating firms relevant Solvency II technical information. The update is the result of stresses applied to underlying market factors (such as interest rates) with no changes to the standard calculation approach.

The following additional market stresses apply for Stage 2:

- Commercial and residential property stresses (-33%)
- A downgrade of one credit quality step ("**CQS**") for corporate bonds impacting 30% of the portfolio in each CQS
- Updated corporate credit spread stresses, now varying between downgraded and non-downgraded assets
- A downgrade of one CQS for reinsurance and other counterparty credit ratings impacting 30% of the portfolio in each CQS

In Stage 3 no additional stresses apply. In Stage 4, a longevity shock applies (7.5% base table stress).

A full description of the calibration of LIST 2022 is set out in Appendix A of this paper.

It is worth noting that the stresses at each stage are multivariate. Participating firms may benefit from previous similar exercises such as LIST 2019, or internal analyses that employ multivariate stresses. However, these analyses can be complex and challenging to perform.

### COMPARISON WITH LIST 2019

LIST 2022 incorporates some notable changes following feedback on the previous IST 2019 exercise. These changes are summarised below:

- LIST 2022 comprises four stages, with various permitted management actions at each stage.
- Participating firms will be required to categorise management actions into three time horizons: one day, one month and one year, consistent with the expected implementation lead time.
- Counterparty risk added to the risks assessed in the test.
- The amount and granularity of data captured in the quantitative templates has been reduced.
- Firms will be required to provide a "Results and Basis of Preparation" ("**RBP**") report which sets out the firm's governance and quality assurance process.

In addition, the PRA has stressed that it expects firms to complete the exercise to a high standard, as the detail it received in the LIST 2019 was insufficient to carry out meaningful aggregate analysis.

For many firms the exercise may therefore require the commitment of a considerable level of time and resource to complete the LIST 2022 to the required standard.

A more detailed comparison of the calibration of LIST 2022 with LIST 2019 is set out in Appendix B of this paper.

## Management actions

Within the LIST 2022 exercise, firms can apply certain management actions when assessing the impact of the shocks. The management actions must be in line with the time horizon of the relevant stress. Firms will therefore be required to determine the time horizon of the available management actions available to them, as well as determining the suitability of the action for use in the LIST 2022 exercise and consistency with other SCR internal models and stress and scenario tests.

Firms will also need to consider whether the management actions to be included within the LIST 2022 exercise, and their timing, are consistent with those previously agreed with their Board, or whether any additional Board approvals are needed. Firms will also need to consider how any management actions to be included in the LIST 2022 exercise interact with any management actions already included in the SCR, given that many management actions can only be used or counted once.

A summary of management actions in LIST 2022 and their permissibility is shown in Figure 2 below.

## TIME HORIZON OF MANAGEMENT ACTIONS

The management actions that can be used in each stage of the test must be of a time horizon consistent with the shock itself, with the permitted horizons as shown in Figure 2 above of immediate (day one), within one month or within 12 months.

It should be noted that these time horizons differ from those specified in LIST 2019, which were within two months[5], two to six months and over six months.

The categorisation of management actions into these time horizons may prove challenging for firms, as this information is unlikely to be readily available and will require analysis. Previous Board approvals on management actions and intervention ladders may not have gone into this degree of sequencing, or may have followed a different approach to sequencing.

### FIGURE 2: MANAGEMENT ACTIONS LIST 2022

| | Stage 1<br>Initial Market Shock | Stage 2<br>Developing Market Shock | Stage 3<br>Protracted Market Shock | Stage 4<br>Protracted Market & Longevity Shock |
|---|---|---|---|---|
| **Time horizon** | Day one | Within one month | Within one year | |
| **Re-collateralisation requirements** | Only exposures with daily settlement | Only exposures with settlement in three months | Only exposures with settlement in 12 months | |
| **Permissibility of available management actions** | | | | |
| Use of pre-arranged external liquidity facilities [a] | Permitted | | | |
| Inject assets in MA funds | Permitted | Permitted | N/A | |
| External trading, including derivatives | Not permitted | Interest rate and inflation swaps only [c] | Permitted | |
| Restructure of ERM securitisations | Not permitted | | Permitted | |
| New reinsurance | Not permitted | | | |
| Movement of assets within ring-fenced funds [d] | Permitted | | | |
| Movement of assets between ring-fenced funds or ring-fenced funds and shareholder funds [d] | Not permitted | | | |

Figure 2 Notes:

[a] Firms are permitted to assume they can draw on pre-arranged external liquidity facilities. Firms can use these facilities it they have insufficient amount and quality of capital to meet daily margins or collateral calls, to avoid the failure of those arrangements.

Pre-arranged external liquidity facilities can also be used where firms have insufficient assets in Component A and B[6] to cover best estimate liabilities (see Note [b] below).

[b] In Stage 1, if an MA fund has insufficient Component A and B assets to cover the best estimate liability after drawing on available MA-eligible assets, it may assume it can make additional drawings of cash (from pre-arranged external liquidity facilities). Breaches of MA cash flow tests[7] are accepted without loss of MA provided Component A and B assets are greater than or equal to the best estimate liability.

[c] In Stage 2, in addition to management actions in Stage 1, firms may use interest rate and inflation swaps to restore the MA cash flow tests.

[d] For the purposes of the LIST, MA funds are not considered to be ring-fenced funds.

[5] Two months is the timeframe within which the PRA expects firms to restore MA compliance with MA matching tests (paragraph 4.8 in Supervisory Statement 7/18 Solvency II: Matching adjustment).

[6] Components A, B and C of an MA fund are defined in paragraph 4.5 in Supervisory Statement 7/18 Solvency II: Matching adjustment). For an MA fund, the assets in Component A and B should equal the best estimate liability.

[7] Matching tests are defined in Appendix 1 Cash Flow Tests in Supervisory Statement 7/18 Solvency II: Matching adjustment.

### EFFECTIVENESS AND SUITABILITY OF MANAGEMENT ACTIONS

In addition to considering the time horizon of management actions, firms will need to consider the particular impact of each management action, and therefore apply the action at the appropriate stage in the LIST. In particular, firms will need to determine what is driving each management action, how long it takes to implement, implementation costs, and the quantum of the impact of the action.

Firms will also need to decide whether the action is reasonable in a stressed environment and will likely need to justify their reasoning in this regard.

As described in Figure 2, some management actions are not permitted under the stresses due to the unexpected results of carrying out these actions in times of stress. This may be challenging for some firms, for example for insurers who had included these management actions in their internal stress testing. However, the PRA believes this will result in greater consistency in the results between firms to assist in aggregation. There may therefore be some inconsistency between the PRA's desire for consistency and the reality of what a firm may believe is realistic.

### CONSISTENCY WITH OTHER MODELS

Firms are likely to take the initial list of management actions for the LIST 2022 from their internal model results, or from internal stress testing for standard formula firms, and assess each action for suitability for use in the LIST 2022 exercise as described in the preceding section.

Regardless of approach, firms will need to consider whether the management actions they plan to include in the LIST 2022 are consistent with those included in other modelling across the business.

The management actions assumed at the relevant stage of the test must be disclosed and described in the RBP, as well as the expected impact on the SCR and own funds and the lead time of each action. Firms should also outline in the report the management actions they may expect to take beyond those permitted under the LIST 2022. As a result of the four stage structure of LIST 2022, we expect firms will wish to have a clear overview of how available management actions are first allowed for in the current SCR and subsequently applied in each of the 4 stages.

If re-capitalisation plans are anticipated, then this information should be provided. However, unless there are existing contractual arrangements in place it should not be assumed that new capital can be in place prior to year-end 2022. This should again be described in the RBP report.

The management actions recognised in each stage of LIST 2022, in particular in Stages 1 and 2 are restricted where the decision time, cost, time to implement or impact including on financial markets are most uncertain.

When considering suitable management actions and determining the financial impact at each stage, firms must consider the shocks sequentially, as in a real-world adverse event firms would not have clear foresight of upcoming market shocks.

## Key documents

There are three key documents included in LIST 2022. Firms are required to submit two of them to the PRA, as part of the exercise. The third document sets out the instructions and guidelines for participating firms.

The three documents are summarised in Figure 3 below:

FIGURE 3: SUMMARY OF KEY DOCUMENTS

| Document name | Summary description | Included in LIST 2019? |
|---|---|---|
| Life Insurance Stress Test 2022 – Template | Excel template, summarising all the results of LIST 2022. | Recurring document. |
| Results and Basis of Preparation (RBP) report | This document sets out information that participating firms will need to provide as part of their submission. | New document. |
| Scenario Specification, Guidelines and Instructions | This document provides instructions for completing LIST 2022, outlining the updated scenarios together with the scenario calibration, specifications, and guidance. | Recurring document |

The key documents are discussed in more detail in the following sections.

### LIFE INSURANCE STRESS TEST 2022 – TEMPLATE

All participating firms are required to submit the LIST 2022 template file as part of the exercise. This is a recurring document from LIST 2019, but the amount and granularity of data captured in the template has been reduced.

The template includes a total of 26 worksheets, summarised below:

- A "List of Contents" and a "Firm Info" worksheet. The latter worksheet requires senior management sign off.
- A "Summary" worksheet, which consolidates the financial results at year-end 2021 and the results of each of the four stages;
- Six worksheets summarising the Solvency II results (four worksheets), Matching Adjustment ("**MA**") info (one worksheet) and reinsurer counterparty exposures (one worksheet). All results are as at 31 December 2021.

  The Solvency II results worksheets for each stage are:
  - Solvency II balance sheet after stress
  - Modelled balance sheet after stress
  - SCR and Minimum Capital Requirement ("**MCR**") after stress
  - Own Funds and Reconciliation Reserve after stress.

The results in the Solvency II balance sheet and Own Funds and Reconciliation Reserve after stress worksheets need to be prepared after the TMTP recalculation. Where firms use simplifications for the calculation of the TMTP, they could confirm with the PRA that these simplifications can be applied in the LIST 2022.

The MA info worksheet requires a breakdown of the FS, with the probability of default used to de-risk cash flows shown as a separate item.

- Sixteen worksheets summarising the Solvency II results (three worksheets for each of the four stages) and MA info (one worksheet for each of the four stages).
- An additional reinsurer counterparty exposure worksheet, required for Stage 4 only.

### RESULTS AND BASIS OF PREPARATION REPORT

LIST 2022 is the first insurance stress test for which participating firms have been required to submit a results narrative to the PRA, although some firms might have submitted a results narrative in their LIST 2019 submissions.

Firms should provide, in the RBP report, a narrative of their scenario results including conclusions, limitations, data and modelling issues, and any management actions included and assumptions made (beyond those set out by the PRA).

The RBP report should include the following two key sections:

- A section that covers the governance, quality assurance and operational insights.
- A section that covers the results narrative, management actions and assumptions, data and methodology for assessing the scenarios.

  In this section firms must provide information on ERM portfolio valuation, and details on their securitisations.

  Firms are also required to provide additional information on any capital raises during 2021 and any recent changes in their capital from year-end 2021 up to the submission date.

Given the nature of the RBP Report, we would expect that firms will wish to apply full internal governance and review procedures across both Line 1 and Line 2, similar to that used for an ORSA update. Avoiding inconsistency between the RBP Report and other documentation and results will be key.

### SCENARIO SPECIFICATION, GUIDELINES AND INSTRUCTIONS

This document provides instructions for completing LIST 2022, outlining the scenarios together with the scenario calibration, specifications, and guidance for completing LIST 2022.

It also sets out in detail the four-stage structure of LIST 2022, along with a summary description of management actions that participating firms can assume at each of the four stages.

The detailed scenario specification for each stage is set out in Section A. For each stage, the document also provides the following:

- A description of the stress
- Underlying assumptions (that the PRA will provide to participating firms)
- Requirements and restrictions (including any permitted management actions)
- Specific Solvency II technical information

The PRA has also provided a Q&A (Annex 1) and responses to firm specific feedback from the first request for technical input (Annex 2).

Although the PRA published this document on 20 January 2022, it will be finalised in May 2022.

## Other considerations

### TMTP RECALCULATION

Participating firms with an approval to calculate TMTP may wish to confirm with the PRA the approach to the Financial Resource Requirement limits and whether they should be applied as part of LIST 2022.

Participating firms may also wish to consider whether the level of TMTP in the LIST 2022 scenario would be affordable (i.e., to promote a continuing alignment between the relief afforded by the TMTP and those elements of firms' Solvency II technical provisions for which the TMTP was designed[8]), given their projected business model over the TMTP transition period. We note that the affordability of TMTP was an area included in PRA's feedback on LIST 2019.

### EFFECTIVE VALUE TEST ON ERMS

LIST 2022 instructions require that the minimum deferment rate for the Effective Value Test ("**EVT**") is unchanged. However, participating firms with ERM securitisation notes should recalculate the EVT in each of the four stages. Participating firms may wish to confirm their approaches to EVT recalculation where, for example, a buffer is held over and above the minimum rate published by the PRA.

### SIMILAR REGULATORY LED MARKET RISK SENSITIVITIES

Participating firms may wish to consider synergies with similar regulatory led market risk sensitivities, such as those in SS7/17 "Solvency II: Data collection of market risk sensitivities".

[8] TMTP affordability is referred to in paragraph 4.1 in Supervisory Statement 6/16 Maintenance of the 'transitional measure on technical provisions' under Solvency II.

### GOVERNANCE AND RISK MANAGEMENT

We note that there are now more stringent requirements and expectations around governance and risk management in LIST 2022 compared with LIST 2019. For example, a narrative report is now part of the submission, including sign off from senior management. However, this feels appropriate due to the nature and complexity of the exercise.

### SUBORDINATED DEBT

Participating firms with subordinated debt may wish to confirm with the PRA the approach to revaluing any subordinated debt, and whether tiering restrictions under Solvency II rules are required to be reassessed under each of the four stages.

It is worth noting that other areas such as *use of additional liquidity facilities, trading of illiquid assets, treatment of ERMs in stress* and *use of proxy models* are part of the Q&A included in Annex 1 in the Scenario Specification, Guidelines and Instructions document published on the PRA website.

## How Milliman Can Help

Milliman consultants have firsthand experience of completing the LIST 2019 and have practical knowledge on the challenging elements of the test, including the categorisation of suitable management actions for the exercise.

Milliman can provide an external expert view on the results of the LIST 2022 exercise, by running sample numbers through our asset, annuity and ERM models to verify results. This can help with checking for inconsistencies in results.

Milliman can assist with the categorisation of management actions, and/or a review of the categorisation, including consistency with other models (internal model, internal stress and scenario testing). Also benchmarking of management actions against other firms.

Milliman can assist with reviewing the RBP Report for overall coherence, and consistency with other documentation and results.

Milliman would be happy to discuss with firms how best to approach the LIST 2022 exercise and can offer a wide range of services, including:

- Assist in performing the LIST 2022 exercise, including:
  - Performing part or all of the exercise, including assessment of management actions.
  - Working on a consulting or seconded basis.
  - Quantifying balance sheet impacts using Milliman's sample business portfolios.
  - Reviewing the work carried out by the firm's internal teams.
  - Supporting first and/or second line teams.
  - Sense checking results for consistency, and knock-on implications.
  - Provide insight for the drafting of materials for the board.
- Providing "backfill" resource to free up team members to carry out the exercise.

Please get in contact with your usual Milliman consultant if you wish to discuss further.

Milliman



**CONTACT**

Florin Ginghină
florin.ginghina@milliman.com

Jessica Crowson
jessica.crowson@milliman.com

Gibson Thuita
gibson.thuita@milliman.com

# Appendix A – Summary of the LIST 2022 Calibration

**TABLE A.1 SUMMARY OF THE LIST 2022 CALIBRATION**

| ID | Risk Factor | LIST 2022 | |
|---|---|---|---|
| | | **Initial Market Shock (Stage 1)** | **Developing Market Shock Onwards (Stages 2 – 4)** |
| 1 | Interest rates (real and nominal) | -50bps | -50bps |
| 2 | Interest rates - Ultimate forward rate | None | None |
| 3 | Interest and inflation rate option implied volatilities | +700bps | +700bps |
| 4 | Equities | -33% | -33% |
| 5 | Equities option implied volatilities | +700bps | +700bps |
| 6 | Property commercial and residential | N/A | -33% |
| 7 | Property optional implied volatilities | N/A | None |
| 8 | Corporate credit spread stress and downgrades: | | |
| | Downgrades | No downgrades | 30% 1CQS |
| | AAA | +115bps | Non-downgraded assets: +100bps<br>Downgraded assets: +145bps |
| | AA | +160bps | Non-downgraded assets: +130bps<br>Downgraded assets: +230bps |
| | A | +225bps | Non-downgraded assets: +200bps<br>Downgraded assets: +295bps |
| | BBB | +325bps | Non-downgraded assets: +240bps<br>Downgraded assets: +520bps |
| | BB and lower | +400bps | Non-downgraded assets: +360bps<br>Downgraded assets: +520bps |
| 9 | Sovereign credit ratings | No downgrades | |
| 10 | Reinsurance and other counterparties credit ratings | No downgrades | 30% 1CQS |
| 11 | ERM mortgages | Revalued based on shock and firm's own Solvency II valuation approach agreed with their auditors | |
| 12 | FS | No change to standard calculations | |
| 13 | VA | Increased – No change to standard calculations | |
| 14 | Symmetric adjustment to the equity capital charge | No change to standard calculations | |
| 15 | Minimum deferment rate for EVT | No change | |
| 16 | Longevity shock | N/A | Stages 2 and 3: N/A<br>Stage 4: 7.5% base table stress |

# Appendix B – Comparison of scenarios in LIST 2019 and stages in LIST 2022

### TABLE B.1 COMPARISON OF SCENARIOS IN LIST 2019 AND STAGES IN LIST 2022

| | | LIST 2019 Scenarios | | | | LIST 2022 Scenario Stages | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Scenario / Stage** | **Section A: Scenario 1** | **Section B: Scenario 2** | **Section B: Scenario 3** | **Section B: Scenario 4** | **Stage 1: Initial Market Shock** | **Stage 2: Developing market shock** | **Stage 3: Protracted market shock** | **Stage 4: as Stage 3 & longevity shock** |
| | **Description** | Economic downturn scenario | Increase in FS occurs simultaneously with Scenario 1 | Increase in longevity expectations occurs simultaneously with Scenario 1 | Reverse stress test, applied as an extension of Scenario 3 | Initial severe economic and financial shocks (no management actions). | Lagging shock (1 month) to the credit rating, commercial and residential property. | This stage 12 months after initial shock. Firms can reflect trading of financial investments. | This stage reflects material changes to longevity improvement trend assumptions. |
| | **Interest rates** | -100bps | | | | -50bps | | | |
| | **Equities**: | -30% | | | | -33% | | | |
| | **Commercial Property** | -40% | | | | | -33% | | |
| | **Residential Property** | -30% | | | | | -33% | | |
| | **EVT** | | | | | Recalculate | Recalculate | Recalculate | Recalculate |
| | **Reinsurance & other counterparty downgrades** | | | | | | 30% 1CQS | | |
| | **Corporate downgrades** | 50% 1CQS | | | | | 30% 1CQS | | |
| **Corporate credit spread increases (by credit rating):** | AAA | 150bps | | | | 115bps | ND* assets: 100bps<br>D* assets: 145bps | | |
| | AA | 170bps | | | | 160bps | ND* assets: 130bps<br>D* assets: 230bps | | |
| | A | 200bps | | | | 225bps | ND* assets: 200bps<br>D* assets: 295bps | | |
| | BBB | 300bps | | | | 325bps | ND* assets: 240bps<br>D* assets: 520bps | | |
| | BB and lower and unrated | 400bps | | | | 400bps | ND* assets: 360bps<br>D* assets: 520bps | | |
| **Derivatives** | • **Option implied volatilities**: | +700bps | | | | +700bps | | | |
| | • **Swap values:** | Moves in line with stress to the yield curve | | | | Similar approach as that of 2019 | | | |
| | • **CDS derivatives:** | Changes consistently with changes to underlying assets. | | | | Similar approach as that of 2019 | | | |
| | **Solvency II technical information: FS** | No change. | FS widened by 20bps to 30bps by CQS | | | PRA to update the FS parameters (to reflect the risk-free rates stress). No change to standard calculations. | No change to standard calculations | | |
| | **TMTP recalculation?** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | **Other Solvency II technical information** | | | | | | All other SII technical information to remain unchanged. | Most of the technical information to remain unchanged from Stage 2. | |
| | **Symmetric adjustment to the equity capital charge information** | | | | | This will be updated to reflect the immediate equity price shock. | Remains unchanged. | Expected to remain unchanged from Stage 2. | |
| | **Longevity stress** | | | 15% fall in base mortality table. | % fall in base mortality table that would result in SCR coverage ratio of 100% | | | | 7.5% fall in base mortality table. |
| | **ERM securitisations** | | | | | | ERM securitisations re-rated | ERM securitisations can be restructured | ERM securitisations can be restructured |

**Legend**: cells indicate no change to the approach from the previous scenario or stage / no stress applicable.

**ND*, D*** Non-downgraded assets and Downgraded assets respectively.