Insurance Stress Test 2021 Technical specifications

Version	Reference	Amendment
V0.1	1st draft	-
V0.2	2nd draft	Redraft of the insurance specific shocks sections
V0.3	3rd draft	Feedbacks from stakeholders and BoS Members comments
V1.0	Par.98 - Perimeter of application for the shocks	Additional specifications on the treatment of entities / businesses excluded from the scope of application of the shocks
V1.1	Par. 84, 93, 221	Clarification on the application of haircuts and weights to the stock to be reported for the liquidity component

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Abbreviations

0	Baseline scenario
BOS	Board of Supervisors
BE	Best Estimate
BS	Balance Sheet
CBS	Constrained Balance Sheet
D&A	Deduction and Aggregation
EA	Euro Area
ECB	European Central Bank
ESRB	European Systemic Risk Board
EU	European Union
FBS	Fixed Balance Sheet
LACDT	Loss Absorbing Capacity of Deferred Taxes
LACTP	Loss Absorbing Capacity of Technical Provisions
LLP	Last Liquid Point
LTG	Long-Term Guarantee
MA	Matching Adjustment
NCAs	National Competent Authorities
OF	Own Funds
ORSA	Own Risk and Solvency Assessment
PG	2021 Stress Test Project Group
QRT	Quantitative Reporting Templates
REIT	Real Estate Investment Trust
RFR	Risk Free Rate
RMBS	Residential Mortgage-Backed Security
SCR	Solvency Capital Requirement
SF	Standard Formula
ST	Stress Test
TP	Technical Provisions
TS	Technical Specifications
UFR	Ultimate Forward Rate
USP	Undertaking Specific Parameters
VA	Volatility Adjustment

1 Background

1. This is the fifth Union-wide exercise run by EIOPA.[1] As with each of the previous exercises, the overall objective is assessing the resilience of the European insurance industry against adverse market developments. EIOPA tailors the goal, scope and scenarios of each exercise according to the foreseen evolutions in market conditions and their potential negative implications for insurers.

1.1 Legal framework

2. EIOPA's legal stress testing framework is constituted of the following main pillars:

3. "EIOPA shall, in consultation with the ESRB, develop criteria for the identification and measurement of systemic risk and an adequate stress testing regime which includes an evaluation of the potential for systemic risk that may be posed by financial institutions to increase in situations of stress. This stress testing regime shall help to identify those financial institutions that may pose a systemic risk".[2]

4. "Systemic risk should be defined as a risk of disruption in the financial system with the potential to have serious negative consequences for the internal market and the real economy. All types of financial intermediaries, markets and infrastructures may be potentially systemically important to some degree".[3]

5. "EIOPA shall, in cooperation with the ESRB, initiate and coordinate Union-wide assessments of the resilience of financial institutions to adverse market developments".[4] To that end, "EIOPA shall develop the following, for application by the competent authorities:

   - common methodologies for assessing the effect of economic scenarios on an institution's financial position.

   - common approaches to communication on the outcomes of these assessments of the resilience of financial institutions."

1.2 Market conditions

6. The COVID-19 outbreak exposed the financial market to unprecedented shocks in the recent history. From the 2008 sub-prime crisis onward, crisis followed a pattern where events originated within the financial system and subsequently propagated to the real economy escalating the distress in the financial system to a systemic dimension.

7. The novelty of the COVID-19 situation is that the crisis originates from the real economy with disruption in the production and in the supply chain of goods and services. Immediate and long term consequences are on the governments, on the non-financial industry and households.

8. Public expenditures boomed due to the increased expenses in the health system and massive economic support provided to firms and households. The contextual drop in the production led to a widespread deterioration of the debt to GDP ratio for governments with potential downgrades of sovereign bonds for the most indebted countries and subsequent increase in the interest rate expenses.

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[1] EIOPA ran Insurance Stress Test exercises in 2011, 2014, 2016, and 2018.

[2] Art. 23 (1) EIOPA Regulation (EU) No. 1094/2010.

[3] Recital 14 EIOPA Regulation (EU) No. 1094/2010.

[4] Art. 21 (2) b and 32 (2) EIOPA Regulation (EU) No. 1094/2010.

9. The financial position of firms is severely threatened by the economic lockdown and subsequent disruption in supply chains. Immediate consequences stem from liquidity related aspects with firms unable to fulfil their financial obligations towards employees and debtholders, with subsequent threats to the whole sustainability of the businesses and therefore to their risk premiums.

10. Besides the suffer caused by increased death toll, part of the population is facing losses or reductions of income with consequent erosion of savings. The part of the population that is not experiencing or experiencing reduction in the source of income increased its propensity to save against the uncertainty. Both behaviors lead to a reduction in consumption, and further contraction of the economy.

11. In the attempt of mitigating the effect of the crisis, central banks are deploying non-conventional monetary policy measures to support the economy and central and local governments are taking or discussing steps in the same direction.

12. Despite the exogenous nature of the crisis, the financial system is already affected by the spill-over effects from the real economy. Furthermore, the uncertainty regarding the evolution of the pandemic and the plans for a back to normal (or new-normal) do not allow a full estimation of the future implications and risks.

13. Focusing on the insurance industry, undertakings already experienced a deterioration of their balance sheets and solvency positions due to the repricing of risk premia and observed in 2020. Impact might be more severe in case of slow unwinding of the economic situation or intensification of the outbreak of the pandemic. Insurers, whose financial position is already under pressure due to the current situation might not be sufficiently capitalised to face a severe scenario where:

14. On the assets side the repricing of the risk premia and the deterioration in equity and other markets might severely impact the excess of assets over liabilities and eligible own funds;

15. On the liabilities side, variances in the claims materialise. The potential absence of generalized lock-down accompanied by a slower than expected vaccination campaign can abruptly increase the mortality rate across different age-cohorts. The evolution of frequency and severity of the claims related to health, income protection, and other business lines affected by COVID-19 might experience higher than expected variances, due to claims inflation and increased litigation costs. Additionally, potential increased requests for lapses, event cancellation claims or claims related to business interruptions, appear on the balance sheet with a lag with respect to the changes in the assets valuation and might pile-up in case of a prolonged crisis.

16. The ultra-low/negative interest rates decrease the discount rates in the calculation of insurance liabilities, effectively increasing the technical provisions, and increase reinvestment risk.

17. Additionally, liquidity risk might become an issue in case the level of claims and surrenders of the business lines more affected by the crisis overcome the expectations while the written premia shrinks due to the contraction of the economy.

2 Overview

18. This section explains the structure, the different building blocks of the exercise, and the interrelations among them allowing a better understanding of the choices made in the design of each of the component separately.

19. Scope, scenarios and disclosure are treated in detail in sections 3, 5, and 6 respectively.

2.1 Objective

20. The EIOPA stress test exercises have never been characterised by a pass-fail nature, namely, any potential weakness emerged in the post-stress position of the participants never automatically triggered actions aimed at strengthening the financial position of the insurers. The information collected and produced under the stress test process were utilised in an aggregated way to issue recommendations to the EU insurance industry and in an individual way to enrich the analysis on jurisdictions and individual undertakings. Over time, also upon the European Court of Auditors' audit recommendations, EIOPA enhanced the transparency of the exercise including it in the objectives (ref. to 2018 edition of the exercise). The 2021 ST will adhere to these principles.

21. The objective(s) of the 2021 ST is primarily to assess the resilience of the participants to the adverse scenario(s), providing supervisors with information on whether these insurers are able to withstand severe shocks.

22. This microprudential-oriented approach allows the issuance of recommendations to the industry and also supervisors to request remedial action if necessary to be taken by undertakings in order to improve their resilience.

23. The aggregated outcome of concerted microprudential stress test exercises will be used to assess market-wide risks. By aggregating the impact for individual entities, market-wide developments can be inferred; hence, this assessment can be used for evaluating potential vulnerabilities in the insurance sector.

24. The 2021 ST enhances the macroprudential dimension of the framework complementing the standard fixed balance sheet (FBS) approach with a constrained balance (CBS) sheet approach where participants are allowed to apply reactive management actions in the calculation of their post-stress position.

25. The additional approach allows the assessment of the resilience of the insurance sector by a different perspective and through the aggregation of the impacts of the reactive management action provides an overview of potential spillover to other markets generated or amplified by the insurance sector against the prescribed scenario.

26. The 2021 ST for the first time will complement the assessment of the pre and post stress capital positions with the assessment of the pre and post stress liquidity positions of the participants over a 90 days time horizon.

2.2 Structure

27. The structure of the 2021 ST is twofold and aims at assessing the position of the participants by two perspectives:

   - capital (Own Funds - OF, Solvency Capital Requirement - SCR), similar to the 2018 and according to the approved methodological improvements;[5] and

   - (simplified) liquidity, based on the approved approach[6] and the experience gained in the current COVID-19 liquidity assessment.

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[5] EIOPA (2019) Methodological principles of insurance stress testing. Available at: https://www.eiopa.europa.eu/sites/default/files/publications/methodological-principles-insurance-stress-testing.pdf

[6] EIOPA (2021) EIOPA (2021) Methodological principles of insurance stress testing - Liquidity component. Available at: https://www.eiopa.europa.eu/sites/default/files/financial_stability/insurance_stress_test/methodological-principles-liquidity.pdf.

28. The two components are based on a common narrative, a common scenario, a common set of shocks but are clearly separated in terms of application of the shocks, data collection, assessment and disclosure. Figure 1 presents the structure of the two components.

Figure 1- Structure of the exercise

Capital Component	Liquidity Component

• Combined scenarios with Market and Insurance specific shocks
• Approach:
  • Instantaneous shocks
  • Fixed balance sheet (no reactive Management Actions)
  • Constrained balance sheet (with guided reactive Management Actions)
• Metrics:
  • Balance sheet based (Excess of Assets over Liabilities)
  • Solvency based (OF, SCR)
	• Approach:
	  • Instantaneous shocks
	  • Fixed balance sheet (no reactive Management Actions)
	  • Constrained balance sheet (with guided reactive Management Actions)
	  • Stylised flow based evaluation
	  • Stock based evaluation
	• Time Horizon:
	  • 90 days
	• Metrics:
	  • Liquidity sources / Liquidity needs

2.3 Scope

29. Consistent with the objectives and the requirements that the 2021 insurance stress test implies, this exercise targets large European (re)insurance groups. The selection of the participating entities was, primarily based on:

- size;

- EU wide market coverage;

- business lines conducted (life and non-life business);

- number of represented jurisdiction.

30. The local market coverage was taken into account in a second stage while retaining the total assets criteria to ensure a certain degree of homogeneity as regards to size.

31. The target sample defined in cooperation with the National Competent Authorities (NCAs) encompasses 44 undertakings, 43 groups and 1 solo, registered in 20 European jurisdictions and operating globally. The selected sample covers 75% of the EU-wide market based on total assets in the Solvency II.

32. A specific approach is applied for the definition of the scope for the liquidity component of the exercise as described in section 3.1.

2.4 Narrative

33. The narrative elaborates on a prolonged COVID-19 scenario in a "lower for longer" interest rate environment.

34. In the adverse scenario, ongoing concerns about the possible evolution of the COVID-19 pandemic and its economic ramifications trigger adverse confidence effects worldwide and prolong the economic contraction. The accompanying worsening of economic prospects is reflected in a global decline in long-term risk-free rates from an already historically low level. The economic slowdown results in a sustained drop in GDP and leads to a substantial rise in the EU unemployment rate due to material business downsizing and corporate defaults over the scenario horizon. Paired with high macroeconomic uncertainty, these developments have an adverse impact on aggregate demand, consumer confidence and household debt servicing capacity. A protracted decline in asset prices further erodes household sector financial wealth and weighs on consumption growth.

35. The reassessment of market participants' expectations amid declining corporate earnings leads to an abrupt and sizeable adjustment of financial asset valuations. Market volatility spikes, asset return correlations increase, and borrowing costs surge on expectations of widespread non-financial corporate sector defaults. The shift in risk sentiment among market participants triggers significant capital outflows from emerging market economies, further exacerbating the slowdown in economic activity worldwide. A more protracted contraction in global growth has a sustained negative impact on EU exports, investment and consumption. This, alongside adverse domestic factors, puts further strain on the corporate sector, which endures a sharp contraction in profits, leading to significant downsizing of businesses and corporate insolvencies.

36. Corporate sector indebtedness, already at a high level, paired with the sharp decline in profits, exerts pressure on corporate sector balance sheets. Increasing concerns about the sustainability of corporate debt leads to a widening of corporate credit spreads and a tightening of credit standards and limits corporates' access to funding for their investments and operations. The impact on the different sectors is asymmetrical, with the hardest-hit sectors being those that are most severely affected by the containment measures (e.g. travel, air transport, accommodation services, food, and film and media) and those that experience sharp reductions in supply capacity (e.g. sectors engaged in labour-intensive manufacturing, such as textiles and apparel, or those depending strongly on global value chains, such as automotive).

37. A slowdown in commercial and residential property market activities triggers sharp and sizeable price corrections. Commercial real estate sector faces particularly adverse conditions due to lock down and extensive teleworking. Lower income and higher unemployment make it challenging for homeowners to service their mortgages, especially in an environment where policy support is absent. This results in significantly higher mortgage defaults, which exerts downward pressure on residential real estate prices.

2.5 Approach

38. The approach for the estimation of the post stress position is twofold: capital and liquidity.

39. The capital component relies on the Solvency II framework as common ground for the assessment of the resilience of the insurance industry against adverse developments. Solvency II offers common and shared principles for the evaluation and reporting of balance sheets and solvency positions (SCR and OF), which ensure the comparability of the baseline positions and serve as guidance for recalculating the post-stress capital positions.

40. The methodological approach to assess the pre- and post-stress liquidity positions of the participants is based on the hybrid stocks / flows assessment of the liquidity sources and liquidity needs proposed in the recently published methodological paper on the liquidity stress test[7].

41. To grant a consistent approach to the stressed scenario, the set of market and insurance specific shocks derived from the narrative will be applied to assess both the post-stress capital and liquidity position of the participants. The features of the

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[7] EIOPA (2021) Methodological principles of insurance stress testing - Liquidity component. Available at: https://www.eiopa.europa.eu/sites/default/files/financial_stability/insurance_stress_test/methodological-principles-liquidity.pdf.

two assessment will be reflected in the technical specification on the application of the shocks, which will be specific to the two assessments.

42. The post-stress capital and liquidity positions should be calculated under two different assumptions:

    a) Fixed balance sheet;

    b) Constrained balance sheet.

43. For option a) the post stress positions should be calculated considering only the embedded management actions[8], whereas in option b) the fixed balance sheet assumption is, within specific boundaries, relaxed allowing for the application of plausible and realistic reactive management actions. Reactive management actions, if applied, can differ for the capital and liquidity assessment and should be accompanied by a thorough explanation on their application process, plausibility and impacts. It is worth specifying that the decision on the application of any reactive management action is in the full capacity of the participants. In case a participant considers reactive management actions against the prescribed scenario not needed, it can limit the exercise to the fixed balance sheet assumption. In case a participant opt to apply reactive management actions these shall be discussed with the NCA during the pre-validation phase.

2.6 Data collection

44. Results will be collected through ad-hoc templates that containing information to be used for analysis and validation purposes (ref. to section 6). The template for the capital component will rely to the maximum extent to the regular QRT reporting, whereas templates for the liquidity component will be specifically developed.

45. For the assessment of the capital position, as a general principle, the templates are be kept aligned to the regular Solvency II reporting where possible. Divergences are justified, in line with the first methodological paper approved by the BoS and published on the EIOPA website, by the needed analysis and validations.

46. For the liquidity component the information collected should cover the pre- and post-stress position. The information for analysis and validation purposes are kept to the minimum.

47. The subset of information subject to individual disclosure (upon participant's consent) will be clearly identified and will be limited to the capital component.

2.7 Disclosure

48. In disclosing the results of the 2021 stress test exercise EIOPA will pursue its goal of increasing the transparency towards policyholders and citizens. In line with what was proposed in 2018 and following the recommendation of the European Court of Auditors Audit on stress test initiatives[9], the communication of the outcome of the 2021 ST exercise will be twofold:

    - Publication of a report based on aggregated data covering both the capital and the liquidity component;

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[8] For a thorough treatment of the classification and use of the management action please refer to section 2.3.3 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

[9] European Court of Auditors (2018) Special report No 29/2018: EIOPA made an important contribution to supervision and stability in the insurance sector, but significant challenges remain Available at: https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=47562

- Publication (upon consent of the participants) of a subset of capital based indicators.

49. It is worth to clarify that the request for individual disclosure will only cover the impact of the scenarios on the group balance sheet with and without the application of reactive management actions. No disclosure of the solvency position (OF and SCR) and of the liquidity position pre- and post-stress is envisaged.

50. The rationale for pursuing the individual disclosure is to improve market discipline, namely to increase the reliability of the analysis and conclusions and to ensure a better quality of the data and results. Additionally the individual disclosure will support the stress test participating entities in their follow-up to the ST exercise and will enhance their abilities to compare their results with those of their peers ("know your competitor") and refine their own assessment of the results (including potential follow-up measures) directly to the public.

51. The results of those participating entities which do not consent for the public disclosure of their results will be incorporated in the aggregated figures to the extent that they cannot be individually identified.

52. The public report, will include the full set of capital indicators (e.g. balance sheet and solvency) and of liquidity indicator based on the collected information. In presenting the aggregated results, EIOPA will avoid that figures from individual participants can be inferred or recalculated.

53. The stress test report will contain the disclosure of the pre- and post-stress impacts of Long Term Guarantees (LTG) measures and transitional measures in line with the regular Solvency II reporting obligations.

54. The process to collect the consent for the individual disclosure will be initiated after the validation phase (ref. to Section 7). Participants will be provided with the template of the indicators to be disclosed (ref to Section 6) filled with their baseline position and post-stress position calculated with and without the application of management actions. Based on this set of data, participants should express their consent. EIOPA will publish on its website only the shared individual data and in the same format for those participants agreeing to the publication.

3 Scope

55. The 2021 ST target large European insurance groups selected in accordance with NCAs based on a set of criteria centrally defined by EIOPA that can be summarized as follows:

   a) Stability with the former exercise: Include the groups of the 2018 Stress test exercise (excluding groups domiciled in UK);

   b) Enlargement of the involved jurisdictions: In addition to point a), for each jurisdiction the largest group based on total assets which is domiciled in this jurisdiction.

56. NCAs had the possibility to propose changes (replacement/inclusion/exclusion) in the list of groups domiciled in their own jurisdictions based on size, type of business, risk exposure and overall relevance in terms of financial stability.

57. The process allowed to identify 44 entities and to reach a coverage of the European insurance market based on Total Assets of 75%.[10] The list of entities included in the 2021 ST is reported in Figure 2- List of entities.[11]

Figure 2- List of entities

Entity name	Domicile	Entity name	Domicile
Vienna	AT	Groupama	FR
Ageas	BE	Natixis	FR
KBC	BE	Croatia Osiguranje	HR
Allianz	DE	MetLife EU Holding	IE
Münchener Rück	DE	Sjova-Almennar	IS
HDI	DE	Assicurazioni Generali	IT
R+V	DE	Gruppo Intesa Sanpaolo	IT
Alte Leipziger - Hallesche	DE	Poste Vita	IT
PFA	DK	Unipol	IT
Forsikringsselskabet Danica	DK	Lombard International	LU
The Ethniki Hellenic	EL	QIC Europe Limited	MT
Vida Caixa	ES	NN	NL
Mapfre	ES	Aegon	NL
OP Osuuskunta	FI	Achmea	NL
Sampo	FI	Kommunal Landspensjonskasse	NO
AXA	FR	Storebrand	NO
CNP Assurances	FR	Gjensidige	NO
CAA	FR	Powszechny Zaklad Ubezpieczen	PL
BNP Paribas Cardif	FR	LongRun Portugal	PT
SOGECAP	FR	Skandia Försäkringsgrupp	SE
Assurances du Credit Mutuel	FR	Nordea Life	SE
Covéa	FR	Skupina Triglav	SI

3.1 Liquidity

58. The liquidity component targets the same insurance entities as the capital component, however, in absence of a commonly adopted framework for the assessment and the consolidation of the liquidity positions at group level participating entities have to approach the liquidity component based on the in-force liquidity management practices.

59. Following the principle of "assessing the risk where it is managed", participating entities should be clustered in the following buckets:

   a. Groups that centrally manage liquidity;[12]

   b. Groups that manage liquidity on a solo-level.[13]

60. For all those groups that use a hybrid or blended approach for managing their liquidity, the criteria for deciding at what level apply the liquidity exercise should

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[10] Market coverage calculated as Sum of total assets of participants in scope / Sum of total assets of all groups in EAA.

[11] Adopted by the EIOPA Board of Supervisors via Written Process BoS-2020-104.

[12] For example, centralised liquidity management system, binding intra-group agreement which implies liquidity support in place among entities of the group (e.g. Liquidity Risk Management Plan). Such agreements shall be in place at the reference date (e.g. adopted by group's relevant bodies).

[13] The liquidity component follows a solo level view for those groups which manage liquidity on a solo level or have non-binding agreements in place at the reference date to exchange liquidity between subsidiaries.

follow the principle of the substance over form. EIOPA, in cooperation with the Group Supervisors, will grant the homogeneity of the approach.

61. The bucketing of the participating entities will be done before the launch of the exercise.

62. For all the groups, independently by the liquidity management practices, the assessment has to be conducted at solo level and limited to those entities in the perimeter that are more relevant by a liquidity risk perspective. In this case, undertakings that are outside the scope of European insurance supervision (non-insurance entities and solos outside EEA), shall be excluded.

63. The selection of relevant solos is a joint Participant / NCAs / Project Group (PG) effort. Participants will be requested to submit to the NCAs a list of solos selected according to quali/quantitative risk-based criteria (e.g. liquidity of the assets and of the liabilities) and to provide rationales for their selection. The final list is eventually discussed at PG level.

64. The selected solos should cover a relevant part of the total assets of insurance EEA solos belonging to the group (approximately 80%).

65. Liquidity shocks shall be applied at solo level, the differentiation between groups managing liquidity centrally (bucket a) and groups managing liquidity at solo level (bucket b) will be done through the treatment of the intra-group liquidity support:

   - Bucket a) any liquidity triggered intra group transaction driven by the prescribed shocks will be treated as an embedded management action, hence to be included in the fixed balance sheet assessment as defined in section 2.5;

   - Bucket b) any liquidity triggered intra group transaction driven by the prescribed shocks will be treated as a reactive management action, hence to be excluded from the fixed balance sheet assessment and included only in the constrained balance sheet assessment as defined in section 2.5.

4   Methodology

66. EIOPA Stress Test exercises rely on the Solvency II framework as common ground for the assessment of the resilience of the insurance industry against adverse developments. Solvency II offers common and shared principles for the evaluation and reporting of balance sheets and solvency positions (SCR and OF), which ensure the comparability of the baseline positions and serve as guidance for recalculating the post-stress capital positions.

67. The reference date is 31 December 2020. The base case is the pre-stress financial situation of the participant at the reference date and should be fully aligned with the 2020 annual Solvency II group reporting (to be) submitted to the NCA. The pre- and post-stress valuations have to be done at the specified reference date according to Solvency II framework and the current technical specifications.

68. Market shocks and insurance specific shocks are assumed to be applied as one-off shocks to the balance sheet at a reference date. To properly reflect the narrative and to ensure its homogeneous application, participants are requested to apply the shocks following a specific sequence when calculating their post-stress balance sheet and solvency position in the capital component:

   • Step 1. Application of market shocks;

   • Step 2. Application of insurance specific shocks (shocks to: lapse, mortality, and cost of claims).

69. All the insurance specific shocks are designed to be applied simultaneously (no specific order is needed). Participants are requested to modify their best estimate assumptions against the prescribed shocks and to have a single run of recalculation of the TP.

70. Specifications on the application of the shocks might differ in the capital and liquidity assessment. Details are provided for each shock in section 5. Given the structure of the liquidity component and the specifications and the simplifications therein, the sequence of application of the shocks is not relevant.

4.1 Capital component

71. Shocks prescribed in the stressed scenarios shall be applied to the entire in force business at the reference date with the highest possible accuracy in term of recalculation of the post stress position and in term of granularity:

    - The post-stress figures shall be generated coherently with the model(s) applied by the participating entities for Solvency II valuation purposes. The use of (partial) internal models and undertaking specific parameters (USPs) should have been approved by the group supervisor at reference date.[14]

    - The look-through approach should be applied when calculating the impact of the scenarios (e.g. for Collective Investment Undertakings).[15]

72. The shocks shall be applied to the whole perimeter of the group. The value of the participations in non-insurance entities and related undertakings (e.g. credit institutions or ancillary service undertakings) held by the groups shall be stressed according to the shocks prescribed to the stock prices.

73. The approach for the consolidation of the results for the group balance sheet post stress shall be consistent with the baseline situation (e.g. with regard to third country (re)insurance undertakings consolidation).

74. Participating entities shall apply the prescribed stresses to the solo entities aggregated via Deduction & Aggregation (D&A) according to the methodology used for the standard reporting with subsequent identification of the marginal impact on the OF and on the SCR.

75. Potential simplifications in the approach to the calculation of the post stress position and on the perimeter of application of the shocks (e.g. portfolios, entities) can be applied upon discussion with the NCAs and in line with what prescribed in section 4.3.

76. In principle, no recalculation of the baseline is expected. The recalculation of the baseline position will be requested only in exceptional circumstances. This would apply where there has been a change in the undertaking's structure and/or valuation model that would materially affect the regulatory financial position and the outcome of the Stress Test exercise (e.g. a change in the perimeter of the entity through restructuring or mergers and acquisitions, a change in the risk model used for the calculation of the SCR — standard formula, undertaking-specific parameters or

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[14] In case of model changes occurred between the calculation of the baseline and the stressed scenarios, participating entities are requested to liaise with their Group Supervisors and EIOPA. Furthermore, only models used for the regular QRT submission are allowed.

[15] Any residual 'collective investments undertakings' (i.e. for those for which look-through was not feasible) should be shocked according to the asset shocks most closely resembling the collective investment undertakings. The application of the shocks depends on specific assets included in the balance sheet items.

(partial) internal models — and major model changes). Any potential recalculation of the baseline will be assessed and discussed on a case-by-case basis in the pre-validation phase.[16]

77. As mentioned, the Solvency II framework is taken as common ground for the exercise, hence, as LTG measures represent an integral element of the Solvency II framework, they will be included in the analysis of the 2021 ST. Participating entities are requested to apply any LTG and Transitional measures they used at reference date. When the application of a measure requires a prior approval by the NCA or group supervisor this measure can only be used insofar approval at reference date has been granted.

78. Calibration of the LTG measures should be assumed to be unchanged with respect to the baseline if not specified differently. However, if the shocks prescribed under the stress scenario trigger a material change in the LTG measures, their values are recalibrated in accordance with EIOPA's methodology. In detail:

- the impact, in absolute terms, of the transitional measure on the Technical Provisions should be calculated in the pre-stress scenario and then kept constant in the post-stress scenario;

- the transitional measure on the risk-free interest rates should be re-evaluated under the stressed scenarios and applied consistently with the baseline case;

- transitional measures on equity shall be applied consistently with the baseline scenario;

- matching adjustments should be re-evaluated under stressed scenarios and applied consistently with the baseline case;

- recalculated VA are provided by EIOPA under the stress scenario;

- a symmetric adjustment mechanism for the equity risk charge under the stressed scenario is provided by EIOPA.

79. The impact of the LTG and Transitional measures on the post-stress technical provisions, basic OF, eligible OF and SCR has to be calculated.

80. The consistency with the Solvency II framework will be granted also in the calibration of the Ultimate Forward Rate which will remain unchanged with respect to the value to be used in 2021 for the calculation of the regular Solvency II position (3.6% for Euro, other currencies are treated accordingly)[17]. This approach is in line with the microprudential objective of the 2021 Stress Test exercise and its strive to an increased transparency (e.g. individual public disclosure of the results). Please note that no recalculation of the baseline is triggered by the change of the UFR between the baseline and the post stress situation.

81. NCAs have in their capacity to request and collect additional information, including the impact of a shocked UFR. This ancillary information will be treated at jurisdiction level, and will not be included in the EIOPA individual and aggregated reporting.

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[16] For the treatment of the recalculation of baseline please refer to section 2.3.1 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

[17] For additional information please refer to: Technical information relating to risk-free interest rate (RFR) term structures is used for the calculation of the technical provisions for (re)insurance obligations. Available at: https://www.eiopa.europa.eu/tools-and-data/risk-free-interest-rate-term-structures_en.

4.2 Liquidity component

82. The methodology applied for the 2021 ST regarding the liquidity component is based on the second methodological paper[18].

83. The methodological approach to the assessment of the baseline and post stress liquidity position is based on a hybrid stocks / flows assessment of the liquidity sources and liquidity needs. The calculation of the liquidity position of the participants undertaking will account for the full stack of the liquidity sources and of the liquidity needs in a holistic perspective according to the key metric represented by the *sustainability indicator* (absolute and relative):

$$Net\ flows_t + Liquid\ Assets_t$$

$$\frac{Net\ flows_t}{Liquid\ assets_t}$$

84. Liquid assets will be estimated both in the baseline and in the post-stress position via liquidity haircuts automatically applied to the different asset classes as reported in Figure 3. Therefore, the amounts of the assets should be reported in each scenario without application of haircuts.

Figure 3- Classification of assets

		Weights
S.1	**Cash & Bank Deposits & Bank Commercial Paper/Certificates of Deposits**	1.00
S.1.1	of which stemming from repo agreements	
	Assets (excluding assets held for UL/IL, MA portfolios and Ring Fenced Funds)	
S.2	**Government-Related Securities (Central governments & affiliates)**	
S.2.1	issued/guaranteed by EU member states (all CQSs) and issued by highly rated non-EU countries (CQS0/1)	1.00
S.2.1	Issued or guaranteed by highly rated non-EU countries (CQS2/3)	0.85
S.3	**Exposures to ECB, Central banks, multilateral development banks & international organisations**	
S.3.1	issued or guaranteed by ECB, EU central banks, supranational institutions (BIS, IMF, EC,..) or Multilateral Development Banks	1.00
S.3.2	issued or guaranteed by central banks of non-EU countries (CQS0/1)	0.85
S.4	**High Quality Covered bonds**	
S.4.1	Extremely high quality covered bonds - CQS0/1	0.93
S.4.2	High quality covered bonds - CQS2	0.85
S.5	**Corporate bonds not issued by a financial institution or its affiliate**	
S.5.1	Corporate debt securities (CQS0/1)	0.85
S.5.2	Corporate debt securities (CQS2/3)	0.50
S.6	**Listed Equity not issued by a financial institution or its affiliate**	0.50
S.7	**Collateralised securities (CQS0/1)**	0.65
S.8	**Collective Inverstment Undertakings**	0.60

85. Liquidity haircuts will be kept constant under baseline and stressed scenario and will be applied on the baseline and post stress reported exposure. The liquidity position is shocked in the adverse scenario through the reduction in the values of the assets against the prescribed market shocks. Haircuts for each bucket are calibrated according to the widely recognised practices applied in other industries (e.g. LCR approach used in banking).[19] Additionally, only unencumbered assets should be considered.

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[18] EIOPA (2021) Methodological principles of insurance stress testing - Liquidity component. Available at: https://www.eiopa.europa.eu/sites/default/files/financial_stability/insurance_stress_test/methodological-principles-liquidity.pdf.

[19] As an example, cash is the most liquid exposure on the balance sheet. It is always available as a liquidity source (a 100% factor applies or a 0% haircut). Real estate exposures on the other hand are not liquid over a short time horizon therefore a 0% factor would apply, reflecting that this exposure can't be used as a source of liquidity over the prescribed time horizon.

86. Net-flows should be computed over a time horizon of 90 days starting from the reference date 31 December 2020. Under this hypothesis the baseline net-flow position should be based on the actual in- and out-flows registered in the first quarter of 2021. The stressed net-flow should be estimated via the reassessment of cash in- and out-flows against the prescribed market and insurance specific shocks according to the provisions in section 5.

87. It is worth to be noted that the flow analysis is not based on detailed cash flows, but on the relevant flows registered over the 90 days time horizon (ref. to Figure 4 for an example limited to life business.

Figure 4- Exemplificative flow analysis for life business[20]

		In 90 days Volume
	Life (excluding UL/IL, MA portfolios and RFF) business	
C.1.1	Premium (written)*	
C.1.2	Claims and other technical outflows (excluding surrender)*	
C.1.3	Surrender	
C.1.4	Reinsurance inflows	
C.1.5	Reinsurance outflows	
C.1	**Net Cash Flows**	

88. In principle the assessment of the liquidity flows could be based on the present value of the cash in- and out-flows over the prescribed time horizon discounted at the risk free rate curve. Given the short time horizon (90 days) and the current level of the risk free rate, a simple sum of the cash in- and out-outflows is requested.

89. The calculation of the post-stress liquidity position should be performed under fixed balance sheet and constraint balance sheet assumptions, namely:

- in the first case no reactive management actions are allowed and the sales/purchase of assets should include only "business as usual" transactions, e.g. (i) transactions in line with the in-force investment plan (if any); (ii) transactions in line with the investment mandate for UL/IL business (if any);

- in the second case the constraints will be relaxed and the impact of the reactive management actions can be included. Any applied reactive management action should be consistent with the stressed scenario and documented.

90. When computing the post stress liquidity position, companies shall not take into account potential mitigation effects stemming from local micro- or macro-prudential regulatory regime e.g. temporary suspension of the redemption rights.

91. The key metric of the liquidity component will be complemented by additional indicators such as:

- Liquid assets / total assets;

- Liquid liabilities / total liabilities;

- Surrender ratios;

- Net Cash-flows (total and business specific).

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[20] Detailed instruction on the information to be provided for each item can be found in the liquidity template tab. I.Information.

92. The assessment of the liquidity of the liabilities for life business is based on the classification of the best estimates according to a criteria based on the economic penalties (contractual and fiscal) to lapse as displayed in Figure 5. Specific reporting is requested for ring-fenced funds and matching portfolios.

Figure 5- Classification of the life best estimate liabilities[21]

	Liabilities	Weights
	Life (excluding UL/IL, MA portfolios and RFF portfolios)	
S.11.1	Without surrender option	0.00
S.11.2	Surrender value equal to or bigger than the 100% of best estimates/statutory reserves	0.50
S.11.3	Surrender value between 100% (exclusively) and 80% of the best estimates/statutory reserves	0.25
S.11.4	Surrender value lower than 80% of the best estimates/statutory reserves	0.05
S.11	**Total**	
	UL/IL	
S.12.1	Without surrender option	0.00
S.12.2	Surrender value equal to or bigger than the 100% of best estimates/statutory reserves	0.75
S.12.3	Surrender value between 100% (exclusively) and 80% of the best estimates/statutory reserves	0.50
S.12.4	Surrender value lower than 80% of the best estimates/statutory reserves	0.10
S.12	**Total**	
	MA portfolio/Ring fenced funds	
S.13.1	Without surrender option-MA	0.00
S.13.2	With surrender value limited to the value of the assets- MA	0.50
S.13.3	Without surrender option -RFF	0.00
S.13.4	Surrender value equal to or bigger than the 100% of best estimates/statutory reserves -RFF	0.50
S.13.5	Surrender value between 100% (exclusively) and 80% of the best estimates/statutory reserves -RFF	0.25
S.13.6	Surrender value lower than 80% of the best estimates/statutory reserves- RFF	0.05
S.13	**Total**	

93. A specific liquidity weights is automatically applied to each bucket, therefore the amounts of the liabilities should be reported in each scenario without application of liquidity weights. Weights will be kept unchanged in the pre and post stress scenario.

94. The liquidity component does not require the calculation of the post-stress standard Solvency II metrics (e.g. Excess of Assets over Liabilities or SCR).

4.3 Simplifications and approximations

95. In the recalculation of the post stress balance sheet and liquidity position, simplifications/approximations can be allowed within the limits and the provisions described in this section. Simplifications and approximations that make specific reference to group perimeter and consolidation related aspects do not apply to solo entities included in the scope.

96. The use of simplifications for the post-stress Solvency II balance sheet, capital position and liquidity position shall be implemented after a discussion with the group supervisor. This should take place as early as possible after the start of the calculation phase so that the group supervisor can assess how the group will incorporate these simplifications in order to limit or avoid exchanges related to their use, after the final results have been submitted. During this discussion, the participating entities should demonstrate how they intend to respect the principles on the basis of the applied simplifications.

97. All approximations and simplifications used for the calculation of the post-stress results (that go beyond those used for the pre-stress calculations) should be clearly identified, and detailed (e.g. why is this simplification needed? What is the exact simplification and how is it applied?). The participants should also be able to give a quantitative or at least qualitative indication of the materiality of the deviations

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[21] Detailed instruction on the information to be provided for each item can be found in the liquidity template tab. I.Information.

created by the use of the simplification. This information should allow the supervisor to judge the suitability of each of the simplifications and will be evaluated on a case by case basis (ref. to pre-validation activity in section 7). This refer in particular to the following aspects.

98. <u>Perimeter of application for the shocks</u>[22]: EIOPA stress test exercises are based on the SII framework and hence on a full balance sheet approach. Participants are expected to re-evaluate their balance sheet items against the provided yield curve and the specific shocks (if any). In principle, shocks should be applied to the entire business in force, hence to the full balance sheet (assets and liabilities), and to each element of the solvency position. However, based on relevance and materiality criteria, participants can be allowed to reduce the perimeter of application of the shocks to a subset of their activities, using a scaling approach for the remaining part. The post-stress values of the part of the business excluded in line with the above-mentioned criteria should be scaled according to the change in the corresponding items calculated for the business being treated. This is only allowed if the remaining part is marginally impacted by the prescribed shocks and if limited vulnerability to the shock is demonstrated. Groups might also opt to exclude one or more non-material / marginally-impacted entities from the scope of application of the shocks. In consideration of the operational burden in applying the scaling approach to the whole balance sheet of the excluded entities and the approximation needed for the recalculation of the OF and of the sub-modules of the SCR including the diversification effects, groups are allowed to keep the position of these entities unchanged with respect to the baseline. Beside the element of the relevance, the exclusion of part of the in-force business is subject to a materiality criterion. To avoid large approximations in the post-stress position, participants are allowed to apply a simplified treatment to only a portion of the business that is not material in terms of the pre-stress value of:

   - (net) Group OF;
   - Group SCR.

   In case participants want to exclude specific asset classes or specific liability portfolios, the scaling approach should be applied and the templates should be filled in accordingly.

   The approach chosen has to be discussed with the NCAs during the pre-validation phase.

99. Calculation of specific balance sheet items:

   - Deferred tax assets and liabilities: The preferred approach should be the same as the method already applied in the baseline. Proxies could be considered especially for companies operating in different jurisdictions. As an example, with respect to the classification of the DTA based on the enacted tax regime, it can be assumed that all impacts which relates to cash outflows on the economic balance sheet are directly transferred into income tax payable and receivable, while all other elements are transferred to deferred tax assets or liabilities.

   - Best Estimates: in case the best estimate is calculated via regression techniques[23] the parameters used in the baseline scenario can be kept constant also for the

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[22] For the perimeter related simplifications please refer to section 5.4.1 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

[23] For the regression technique related simplifications please refer to section 5.4.3 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

estimations in the post-stress scenario. Companies should be able to provide credible quantitative or qualitative arguments that the approximations are appropriate with regard to the quality of the results. This information should form a central component of the pre-validation process. This dialogue should happen at an early stage of the 2021 ST process.

- Risk margin[24]: SII allows different methodologies for this calculation based on a hierarchy of four methods going from the full computation to the scaling approach (calculating the risk margin as a percentage of the best estimates). To ensure comparability with the baseline, the post-stress risk margin should be computed, as a default option, using the same method used for the calculation of the 2020 balance sheet. As a simplification, participants are allowed to recalculate the post–stress RM using a more simplified method, namely dropping one notch down in the hierarchy of methods provided in EIOPA guideline 61[25] with respect to the method used in the baseline calculation.

100. Approach to consolidation at group level. The SII Directive (2009/138/EC) allows groups to consolidate their solo's positions using one of two calculation methods: (i) the accounting consolidation-based method[26]; and (ii) the deduction and aggregation method (D&A)[27]. In principle, the balance sheet and the capital need at group level under stressed scenarios should be estimated according to the consolidation method used for the standard year-end reporting without any simplification.

101. Potential simplifications might be applied to the calculation of the post-stress positions of solos according to the principle of materiality as specified in the section on the perimeter of application of the shocks.

102. Groups can approach the calculation of the post-stress figures according two main approaches:

a. full reassessment of the solos' positions followed by a consolidation at group level. The full solo reassessment approach consists in applying all the shocks on each insurance undertaking followed by an exhaustive consolidation of all liabilities and assets at the group level. This approach can be mixed or complemented with any group consolidated-based approach. Any proxies deviating from the year-end procedure shall be discussed with the group supervisors as stated in section 7 and should be mentioned in the qualitative questionnaire and justified;

b. the use of a group consolidated-based approach. A pure group consolidated-based approach to this exercise consists of the use of a group model granting the assessment of companies' balance sheet positions. In this concern balance sheet calculations involved should give a prudential picture of the group with, at least, the same reliability than any quarterly reporting. Therefore, this group consolidated-based approach should guarantee a calculation of the post stress group balance sheet with enough precision to fill in the 2021 stress test reporting templates. Holistic approximation via sensitivity analysis should not be allowed regarding the magnitude of the shocks. All simplifications should consist in, for example, grouping liabilities in tractable quantities instead of breaking them

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[24] For the post stress risk margin related simplifications please refer to section 5.4.5 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

[25] EIOPA, 2015, 'Guidelines on valuation of technical provisions' (guideline 61). Available at: https://www.eiopa.europa.eu/content/guidelines-valuation-technical-provisions_en.

[26] Directive 2009/138/EC, Art. 230, Method 1 (default method): accounting consolidation-based method.

[27] Directive 2009/138/EC, Art. 233, Method 2 (alternative method): deduction and aggregation method.

down at solo level. Therefore, participating entities are allowed to apply their own model points (or model units or segments) and are requested to describe them in the qualitative questionnaire;

   c. Combinations of those two approaches are also allowed for the purpose of this exercise. The selected approach to produce the scenario's figures shall be discussed with the group supervisor as well.

103. It is worth noting that, a pure group consolidated-based approach which consists of the use of a single or of a limited number of model points (with respect to the complexity of the business) for the evaluation of companies' their balance sheet positions (e.g. technical provisions) should in principle not be allowed.

4.3.1 SCR recalculation

104. Given the complexity of the post-stress SCR calculation and the innovation brought by the treatment of the post stress management actions, additional methodological assumptions and potential allowances for simplifications are envisaged.

105. It should be re-emphasized that the insurance stress test is not a pass-or-fail exercise; hence the recalculation of SCR ratios after stress is not intended to be used as a basis to impose any additional capital requirement. That would imply a 'de-facto' recalibration of the solvency regime which is entirely out of the scope of this exercise.

106. The post-stress SCR shall be calculated following the same approach used for the calculation of the regular Solvency II submission and specifically the submission of the 2020 year-end reporting used as a reference for this exercise.

107. Conscious of the complexity of the SCR recalculation, participants are allowed to apply the simplifications and/or approximations previously described on:

- Relevance of the risk drivers: given that the prescribed shocks of a scenario may not materially affect each and every risk factor, the recalculation of the group SCR could exclude certain risk factors (SCR submodules) that are assumed not to change materially following the shocks.

- Relevance of the subsidiaries: given that the prescribed shocks of a scenario may not materially affect all subsidiaries or given that the solo SCR contribution of a subsidiary to the group SCR is not material, the recalculation of the group SCR could exclude certain subsidiaries for which the impact of the scenario is assumed to be not material due to their exposures or their contribution to the group SCR.

108. All the simplifications and approximations shall be subject to the conditions prescribed for the recalculation of the balance sheet position.

109. Additionally, simplification for SCR recalculation concerns the loss absorbing capacity of the deferred taxes. Participants are expected to fully recalculate their LACDT position according to the standard procedure, however, if not, undertakings should calculate LACDT at a level of granularity that reflects all relevant regulations in all applicable tax regimes. When determining the tax consequences of the loss, an approach based on average tax rates might be used, provided that those average tax rates are determined at an appropriate level.[28]

110. In the case that an undertaking would not pursue a full recalculation, it is allowed either to set the post-stress LACDT at zero or to approximate it with reference to the value of post stress net DTL, namely:

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[28] For the LACDT please refer to section 5.4.2 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568)

- if the post-stress net DTL is greater than zero, then participants are allowed to apply a reduction in LACDT by this amount in the calculation of the post-stress SCR;

- if the post-stress net DTL is negative, than this reduction can be set to zero.

111. This approach is formalised in the following equation:

$$LACDT_{post-stress} = \max(0, netDTL_{post-stress})$$

112. Undertakings should be able to provide evidence to support their approach to LACDT post-stress calculations and its appropriateness.

4.4 Management actions

113. Consistently with its micro- and macro-prudential objectives 2021 exercise requires participants to calculate their post-stress capital and liquidity position under two assumptions:

- Fixed balance sheet (microprudential dimension);

- Constrained balance sheet (macroprudential dimension).

114. While all the other elements remain the same under both assumptions, the use of the management actions is treated differently as specified below.

115. Fixed balance sheet: In order to achieve a level playing field and to ensure that the results after stress reflect the instantaneous nature of the stresses, participating entities should not take into account measures, actions or risk mitigating strategies that rely on taking future actions after the reference date (e.g de-risking strategies and any future action taken in the context of a recovery plan). In this simulation, only the embedded management actions should be considered and the reactive post-stress management actions should not be applied.[29]

116. Constrained balance sheet: The inclusion of the management actions, which implies the relaxation of the fixed balance sheet assumption towards a constrained balance sheet approach where, within specific boundaries, reactive management actions should be taken into account in the calculation of the post-stress balance sheet and, if requested in the calculation of the post stress solvency and liquidity position (e.g. de-risking strategies and any future action taken in the context of a recovery plan).[30]

117. The applied reactive management actions should be part of the governance framework adopted by the group (e.g. risk management plans, investment strategies, recovery plans) and not specifically defined and implemented in this specific exercise.

118. Any already planned and approved distribution of dividends has to be included in the fixed BS approach, and it can only be relaxed in the constrained BS approach.

119. The reactive management actions applied by the participants shall be appropriate and plausible and their assessment should form a central component of the pre-validation and validation process. Reactive post-stress management actions need to be realistic and proportionate and take account of the time needed to implement

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[29] For a thorough treatment of the classification and use of the management action please refer to section 2.3.3 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

[30] Reassessment of the "foreseeable dividends or other foreseeable distributions" under stressed scenario is included in the allowed actions.

them and any expenses arising from them.[31] Companies should be able to provide credible explanations on whether and how the post-stress management action could actually be implemented under the adverse conditions of the stress scenario, also taking into account any potential secondary consequences (e.g. availability of assets on the market and potential drop in prices against widespread selling). Against this, an external recapitalization, even if included in the recovery plan of the participant, is unlikely to be implemented in the stressed scenario and, in any case, the cost of this action should reflect the distressed market and economic conditions implied in the narrative.

120. The applied management actions shall be clearly documented qualitatively through the specific questionnaire (ref. to qualitative questionnaire, specifically designed for the capital and liquidity components) and quantitatively providing information on the size of the actions and on their marginal impacts to the post stress balance sheet, solvency and liquidity positions (ref to reporting templates).

121. In case of liquidity managed at central level, any liquidity intragroup transaction should be considered as an embedded management actions, hence included into the fixed BS. In case of liquidity managed at solo level potential liquidity related intragroup transaction should be considered as a reactive management action, therefore included in the constrained BS.

5   Scenario, shocks and their application

122. The narrative presented in section 2.4 is translated in a set of market and insurance specific shocks that identify a so-called "double hit" scenario where the asset holdings are negatively affected by the reduction of prices and the liabilities increases due to the reduced risk free rate and potentially by the prescribed insurance specific shocks.

123. The scenario combining market and insurance specific risk reflects the current EIOPA/ESRB assessment of prevailing systemic risks to the financial system.

124. The key elements of the scenario and its implied shocks follow:

- The worsening of economic prospects is reflected in a global decline in long-term risk-free interest rates from an already historically low level, with nominal short and long-term risk-free rates remaining below zero in the EU. This is reflected in the reduction of the swap rates across all tenors for all the major currencies.

- The economic contraction weakens countries' fiscal positions. Despite the low level of risk-free interest rates, a resurfacing of concerns about the sustainability of public debt amid weakening domestic demand leads to significant increases in credit risk premia on sovereign bonds, especially in high-spread economies. Across EU countries, ten-year sovereign bond yields increase by 28 basis points.

- Corporate profitability is severely undermined by the downturn, which leads to debt sustainability concerns and to widespread insolvencies of non-financial corporations. As a consequence, corporate bond yields in the EU increase on average between 71 and 269 basis points depending on sector and credit rating of the issuer.

- Despite the low level of interest rates, the severity of the contraction in both global and EU economic activity under the adverse scenario leads to a significant repricing

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[31] Management actions enforced in the capital component should have an effect over a time horizon of 1 year, in line with the SCR estimation. Impacts of the management actions enforced in the liquidity component should materialise in the first quarter, in line with the prescribed time horizon.

of equity. Stock prices fall abruptly by 45% in the EU, by, on average, 43% in other advanced economies and by 50% in emerging economies. Similarly, other assets are subject to severe revaluations. Across EU markets, prices of private equity, hedge funds, real estate investment funds and commodities decline on average by 45%, 45%, 51% and 40% respectively.

- A slowdown of residential property market activity leads to significant price corrections. Tighter financial conditions, depressed economic activity and a negative economic outlook, marked by an inversion of the yield curve, amplify the impact of the initial shock. As a consequence, residential real estate prices decline by 8.4% at the EU level.

- Structural changes in commercial real estate demand, exacerbated by COVID-19, trigger a sharp repricing of commercial real estate. The commercial real estate market experiences substantial repricing, which leads to a decline of 17.4% at the EU level.

125. The details of the shocks are provided in the technical information file.

5.1 Market shocks

126. Market shocks are assumed to represent one-off, instantaneous and simultaneous shifts in asset prices relative to their end-2020 levels.

127. A detailed overview of the market stress parameters is contained in the file Technical information, which accompanies these specifications. The market stress parameters refer to the following risk drivers:

- swap rates (according to specific currency and maturities);
- sovereign bond yields;
- corporate bond and covered bond yields;
- equity prices;
- real estate prices (residential and office & commercial);
- residential mortgage-backed securities yields (RMBS);
- other assets prices (private equity, hedge funds, real estate investment trusts (REITs), commodities).

128. Shocks to swaps are utilised to derive the EIOPA risk-free rate curves via the Smith-Wilson model according to the EIOPA methodology following parameters:

a. last liquid point (LLP) defined coherently with the LLP used for the definition of the EIOPA risk-free interest rate term structures (e.g. EUR=20Y; GBP=50Y; CHF=25Y);[32]

b. the ultimate forward rate (UFR) is set at 3.60% for Euro in line with the current Solvency II regulation. The same approach will be used for the other currencies where the curves will be produced using their 2021 UFR levels.[33] In case NCAs

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[32] Technical documentation of the methodology to derive EIOPA's risk-free interest rate term structures. Available at:
https://eiopa.europa.eu/Publications/Standards/Technical%20Documentation%20%2831%20Jan%202018%29.pdf

[33] Risk Free term structures with and without VA are provided for the most used currencies. For the currencies, which are not included in the stressed tables, the baseline term structure shall be used under every scenario.

opt to ask for the simulation of the impact of a shocked UFR, this is set at 0.61% for Euro[34];

c. Credit risk adjustment is kept unchanged with respect to the baseline.

129. RFR term structures for most of the currencies to be used under the stressed scenario are provided in the technical information. Currencies not included in the list are not supposed to be stressed, therefore for these currencies baseline figures shall be used to reevaluate the technical provisions in the post stress situation.

130. Post stress swap rates, provided in the technical information, shall be used as input to:

- Reevaluate post stress position of fixed income assets and other interest rate sensitive positions;

- Reevaluate other asset classes (e.g. derivatives). With specific reference to the liquidity component, the liquidity need stemming from the net IRS position would have to be estimated based on the prescribed shocks to the risk free rate curve;

- The shocks to swaps are also used to derive the RFR curves to be used in the SCR in the Interest rate following the delegated regulation 2015/35 provisions.

131. Shocks to sovereign bonds refer to change in yields against the baseline. Therefore, in order to derive changes in the spreads the shocks applied to the swap rates shall be taken into account as follow:

a. The level after shock of the Euro swap curves are provided by the following equation: $SWAPShock = SWAP + Shock$;

b. The yield level of a bond generally includes a credit spread on top of the swap curve. Therefore, the yield of a bond with a specific maturity can be expressed as $YBond = SWAP + CreditSpreadBond$ (where the swap term equals the maturity of the bond);

c. The shock levels for sovereign or corporate yields prescribed in the Technical Information file refer to a change in the respective yields (and not to a change in credit spreads). The change in credit spreads can also be derived from the Technical Information file by $\Delta CreditSpreadBond = \Delta YBond - \Delta SWAP$

d. In order to provide an illustrative example assume a pre-stress level of the 10 year swap rate of 1.0% and a Belgian 10 year sovereign bond priced with a credit spread of 10 bps are assumed. The yield of this bond before shock therefore amounts to 1.1%. According to the prescribed stresses, the shock on the 10 year swap rate implies a decrease of 63 bps (i.e. $SWAPShock = 0.37\%$) and a yield increase for the sovereign bond of 31 bps (i.e. the yield after shock, it is 1.1%+0.31=1.41%). Using the formula specified in c), the credit spread for this bond under stressed scenario is 104 bps (= 141 bps – 37 bps), increased by 94 bps (104 bps-10 bps) with respect to the baseline.

132. Shocks to sovereign bonds and swaps are provided for selected maturities. Shocks to missing maturities should be derived:

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[34] The ultimate forward rate (UFR) for Euro is derived from the liquid part of the RFR curves by keeping the 1 year forward rate constant based on the information available in the last liquid point and its previous tenor of the EIOPA risk free rate curve. The UFRs for the other currencies is derived by scaling the baseline UFRs with the relative change computed for Euro with respect to its baseline (i.e. 3.75%). As such, the low yield market characteristics of the stressed curve are also translated into the extrapolated part of the risk free discounting curve.

- by interpolation (e.g. spline) for maturities that are not explicitly provided and that are not exceeding the last maturity provided with an explicit shock;

- by keeping the shock constant for all maturities exceeding the last maturity provided with an explicit shock.

133. Sovereign bonds denominated in a currency other than the currency of the country of issuance should be first shocked according to the country shock and then, the resulting amount shall be transformed into the reporting currency by applying the exchange rate registered at the reference date. Example: "Country A" currency is EUR and it issues two bonds: "bond 1" denominated in EUR and "bond 2" denominated in USD. Both bonds shall be treated according to the shock prescribed to "Country A" and, where needed, converted in the reporting currency of the Group.

134. The classification and stressing of Municipal/Local Authority bonds should be consistent with how they would be treated under the SII Standard Formula guidance.

135. No specific shock to yields is provided to bonds issued by EU or non-EU supranational institutions. The post stress value of these securities should be calculated only taking into account the change in the risk free rate.

136. Shocks to corporate bonds yields are provided in the Technical Information. Corporate bond holdings should be shocked according to type, credit worthiness, and location of the issuer, namely distinguishing them in financial / non-financial[35], rating (from AAA to CCC) and geographical areas[36].

137. Shocks to yields should be applied homogeneously to all the maturities. Shocks to corporate bonds shall be applied as prescribed for the government bonds.

138. Additional specifications should be followed:

- Bonds issued by corporations based in non-covered geographical areas shall be shocked according to the average shocks provided for larger geographical areas;

- The shocks to CCC rating class shall also be applied to corporate bonds with lower ratings;

- Unrated bonds shall be shocked according to the shocks prescribed to the BBB-rated bonds;

- Covered bonds be treated with the shocks provided to the specific asset class.

139. The shocks to structured notes and collateralized securities shall be applied in line with the shocks to corporate bonds.

140. The shocks for equities are provided in terms of percentage changes in the stock prices per geographical area and should be applied to the SII value of the equity at the reference date.

141. Equities listed in geographical areas whose shocks are not prescribed shall be shocked according to the average shocks provided for larger geographical areas, e.g.

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[35] EIOPA applies ESA 2010 definition for "Financials" which includes the sectors "Central bank", "Deposit-taking corporations except the central bank", "Money market funds", "Non-MMF investment funds", "Other financial intermediaries, except insurance corporations and pension funds (excluding financial vehicle corporations engaged in securitization transactions), "Financial auxiliaries", "Captive financial institutions and money lenders", "Financial vehicle corporations engaged in securitization transactions", "Insurance corporations" and "Pension funds". All other positions would be assigned to "Non-Financials"

[36] A reference list for "advances economies" and "emerging markets" can be retrieved from the IMF World Economic Outlook, October 2020 - statistical appendix - Report available at: https://www.imf.org/-/media/Files/Publications/WEO/2020/October/English/StatApp.ashx

EU, other advanced economies and emerging markets. In the case of equity of companies listed in more than one stock exchange, the average shock over all areas where the equity is listed shall be applied (only the areas for which a shock has been specified as a part of the scenario description should be taken into account). Symmetric adjustment for this scenario is set at -10%.

142. Stock indices should be treated according to geographical criteria.

143. The SII value of an unlisted equity at the reference date should be recalculated by applying the percent change in the listed equity prices per geographical area according to the geographical area where the parent company of the issuing entity is located. The same treatment prescribed for the listed company applies.

144. Own shares (held directly) and holdings in related undertakings, included participations should be treated as listed equities.

145. The technical information provides the shocks to office & commercial and residential real estates for different countries. Investments in real estates located in countries that are not listed shall be shocked according to the average shocks provided to the closest geographical areas, e.g. EU, EA, other advanced economies and emerging markets.

146. Shocks to real estate should be also partially applied to the balance-sheet item "property plant & equipment held for own use". Specifically, real estate property should be treated in line with the office & commercial real estate held for investment purposes, whereas equipment should be kept constant with respect to the baseline.

147. Property other than for own use should be fully shocked according to the shocks provided to the area where they are located.[37]

148. Loans and mortgage portfolios (i.e. loans on mortgages to individuals and other loans and mortgages), should be revaluated according to the shocks provided to residential and mortgage backed securities - RMBS. The technical information provides shocks for geographical areas and credit ratings. Participating entities are expected to apply the appropriate yield increases (in bps) to their portfolios. In case the rating quality of the (different) portfolio(s) cannot be determined, a BBB rating quality has to be assumed.[38]

149. For loans on policies no shocks should be applied.

150. Shocks to RMBS should be used to estimate the post stress value of MPST, CLO, CMBS, ABS exposures.

151. The participating entities shall apply the shock to other asset as percentage of change in the baseline SII value according to the asset (private equity, hedge funds, commodities) and the geographical area (EU, global).

5.2 Insurance specific shocks

152. The exercise encompasses a set of insurance shocks to be applied to specific business lines as presented in Figure 6.

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[37] For rural estate exposures, the residential real estate shock should be applied.

[38] The rationale for this treatment is that when insurers are forced to sell their portfolio of mortgages in a stressed situation, change in RMBS is considered the best proxy for the stressed values.

Figure 6- Insurance specific shocks and their application

	Life	Health similar to life	Health similar to non-life	Non-life other than health
Mass Lapse	$X_{C,L}$			
Mortality	$X_{C,L}$	$X_{C,L}$		
Pandemic morbidity and increase in cost of claims			$X_{C,L}$	$X_{C,L}$
Increase in frequency			X_L	X_L
Increase in severity			$X_{C,L}$	$X_{C,L}$
Reinsurance recoverables and receivables	X_L	X_L	X_L	X_L
Reduction in written premia	X_L	X_L	X_L	X_L

C=capital component; L=liquidity component

153. The marginal impact of the insurance specific shocks to the OF and to the SCR shall be reported separately.

154. Subsections provide details on the definition and the application of the shocks therein for the capital component and the liquidity component of the exercise.

5.2.1 Mass Lapse shock

155. After the materialization of the market shocks, the scenario assumes a sudden non-permanent discontinuance of the in force insurance policies as in Art.142.1 c) of the Delegated Regulation. The shock reflects the adverse macroeconomic environment impact on aggregate demand.

156. Participating entities shall apply the lapse shock to the non-mandatory insurances of their in-force life portfolio, excluding pension schemes (e.g. Defined Benefits and Defined Contributions based products) as specified in Figure 7.[39]

Figure 7- Product classification for lapse shock

Type of product	Instantaneous discontinuance
Term insurance	20%
Endowments	20%
Annuities in deferral phase	-
Annuities in pay-out phase	-
Pure unit-linked contracts (without financial guarantees)	20%
Unit-linked contracts with financial guarantees	20%
Disability	20%
Health	-

157. In case a participating entity applies a dynamic lapse models, the prescribed immediate shocks shall overrule the dynamic adjustment of the lapses potentially generated by the set of prescribed market shocks, namely any dynamic adjustment shall be neutralized.

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[39] Example: in case the best estimate lapse assumption of the insurer for an endowment is 4%, the instantaneous discontinuance shall be applied as 20% (taken from Figure 7) and not as 4% + 20% = 24%.

158. The shock shall be applied to any kind of policyholder lapse option as specified in Art. 142 of the Delegated Regulation.

159. When applying the shocks, companies shall not take into account potential mitigation effects stemming from local micro or macro prudential regulatory regime e.g. temporary suspension of the redemption rights.

160. A detailed overview of the lapse stress parameters is contained in the file Technical Information.

5.2.1.1   Application in the capital component

161. The impact of the instantaneous lapse shock shall be reflected only in a change of the technical provisions with no impact on the assets side (only prescribed market shocks shall be applied, no fire-sales against the lapses). This approach, inspired by article 142 of the delegated acts, shall be applied independently of the approach used by participating entities for the assessment of their capital position. (Partial)internal model, USP, standard formula users shall apply this approach for the aim of comparability of the results in the stress test exercise.

5.2.1.2   Application in the liquidity component

162. For the purposes of the liquidity exercise, all the payments resulting from the discontinuance of the policies are supposed to be paid within the 90 days time horizon. Payments for surrenders shall take into account penalties and other characteristics included in the contracts.

163. In case the post stress projected value of surrenders is lower than the actual value of surrenders paid over the 90 days horizon, the actual value should be used as post-stress value. In case the post stress projected value is higher than the actual value, the actual value should be replaced by the post stress projected value. For example:

$$Surrender_{post-stress} = max(Surrender_{Actual}, Surender_{post-stress,projected})$$

164. No changes to actual claims, actual premia, and actual reinsurance flows should be applied.

165. Shock to lapse should be applied only to the in-force portfolio.

166. No recalculation of the technical provisions over the time horizon is requested.

5.2.2 Mortality shock

167. After the materialization of the market shocks, the scenario assumes a sudden non-permanent instantaneous increase in the mortality rates. This mortality shock is intended to reflect the uncertainty resulting from changes due to Covid-19. It captures the risk that, in the absence of a generic lockdown, more policyholders than anticipated are facing the risk of mortality, in particular, peaking during the first three months following the reference date.

168. The shock should be used to multiply the baseline assumption for each age. In this way the specific characteristics of the mortality parameters of each cohort defined in the baseline are preserved also in the post-stress assessment.

169. The annual mortality rates shall be increased by 10% using the formula

$$q_x * (1 + 10\%) = q'_x$$

where q_x is the annual baseline mortality rate for age x and q'_x is the annual mortality rate to be applied to the same cohort of age in the stressed scenario. The increase of $q'_x - q_x$ shall be applied instantaneously to the mortality rates (expressed as percentages) which are used in the calculation of technical provisions to reflect the mortality experience in the following 12 months.

170. The shock affects all the in-force insurances life portfolio including health similar to life products.

171. When applying the shocks, companies shall not take into account potential mitigation effects stemming from uncertainty regarding exclusion clauses, namely the shock should be properly applied in these cases.

172. A detailed overview of the stress parameters is contained in the file Technical Information.

5.2.2.1 Application in the capital component

173. The impact of the instantaneous mortality shock shall be reflected only in the technical provisions with no impact on the assets side (only prescribed market shocks shall be applied, no asset liquidation against the increased mortality). This approach, inspired by article 143 of the delegated acts, shall be applied independently of the approach used by participating entities for the assessment of their capital position. (Partial)internal model, USP, standard formula users shall apply this approach for the aim of comparability of the results in the stress test exercise. Therefore the increase should be applied only in the 1st year of projection of future cash-flows.

5.2.2.2 Application in the liquidity component

174. For liquidity component purposes, the projection of the outflows shall take into account the annual increase / decrease in payments emerging from the application of the mortality shocks to the in-force portfolio. The annual increase / decrease are assumed to be concentrated in the time horizon of 90 days.

175. In case the post stress projected claims and other technical outflows (excluding surrender) are lower than the actual claims and other technical outflows (excluding surrender) paid over the 90 days horizon, the actual value should be used as post-stress value.

$$Claims_{post-stress}^{Life\ excluding\ UL/IL\ and\ MA}$$
$$= max\left(Claims_{Actual}^{Life\ excluding\ UL/IL\ and\ MA}, Claims_{post-stress,projected}^{Life\ excluding\ UL/IL\ and\ MA}\right)$$

$$Claims_{post-stress}^{UL/IL} = max\left(Claims_{Actual}^{UL/IL}, Claims_{post-stress,projected}^{UL/IL}\right)$$

$$Claims_{post-stress}^{MA\ portfolios} = max\left(Claims_{Actual}^{MA\ protfolios}, Claims_{post-stress,projected}^{MA\ portfolios}\right)$$

176. No changes to actual surrenders, actual premia, and actual reinsurance flows should be applied.

177. No recalculation of the technical provisions over the time horizon is requested.

5.2.3 Pandemic morbidity shock and increase of non-life cost of claims

178. Simultaneously with the other insurance specific shocks, the scenario assumes an instantaneous increase in medical expenses due to deferred regular care, together with a distressed economic situation which is translated into an increase of the frequency and of the severity of the claims affecting to specific non-life business lines.

179. The shock affects all in-force non-life insurances offering such health coverages.

180. When applying the shocks, companies shall not take into account potential mitigation effects stemming from uncertainty regarding exclusion clauses, namely the shock should be properly applied in these cases.

181. Specifically, the non-life business lines more impacted by the assumptions contained in the narrative are supposed to experience an increase of 2% in the

severity (claims inflation) due for example to increased litigation costs, and an increase of 15% in frequency as reported in Figure 8.

Figure 8- Application of shock to non-life cost of claims

Line of Business[40]	Shock to frequency	Shock to severity (claims inflation)
Direct Business, including accepted proportional reinsurance		
- Medical expense insurance	15%	2%
- Income protection insurance	15%	2%
- General liability insurance	15%	2%
- Credit and suretyship insurance	15%	2%
- Legal expenses insurance	15%	2%
- Miscellaneous financial loss	15%	2%
Accepted non-proportional reinsurance		
- Non-proportional health reinsurance (insurance obligations included only in LoB 1 and 2)[41]	15%	2%
- Non-proportional casualty reinsurance (insurance obligations included only LoB 8)	15%	2%
- Non-proportional property reinsurance (insurance obligations included only LoBs 9, 10 and 12)	15%	2%

182. Shock to severity (claims inflation) should be applied linearly to the costs of all the incurred and expected claims as reported in Figure 8.

183. Shocks to frequency, set at 15% should be applied to the expected claims that are not yet occurred.

5.2.3.1   Application in the capital component

184. The impact of the shocks to severity should be fully reflected into the technical provisions of the non-life business lines as reported in Figure 8 by revaluating their BE (both Claims provisions and Premium provisions) on the basis of an increase in claims inflation.

185. Shocks to severity is prescribed as a percentage uplift in the annual claims and expense inflation assumed for the calculation of the non-life BE under the baseline scenario. Using a time vector $I^B = [i_1, i_2, \ldots, i_t, \ldots i_n]$ (where i_t is the value of the inflation at time t) to express the value of the claim inflation used to compute the BE, the shock shall be applied in the following way:

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[40] Business lines are aligned with the Solvency II QRT reporting template S.14.01

[41] The classification of the non-proportional reinsurance treaties refer to the Delegated Regulation (EU) 2015/35 of 10 October 2014 supplementing Directive 2009/138/EC of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II). Annex 1 – Lines of Business.

186. The inflation vector to be used in the calculation of the BE under stressed scenario I^S is derived by multiplying the baseline vector I^B by the prescribed shock s (scalar). Therefore, $I^S = s * I^B$ and hence the claim inflation at time t is $i_t^S = (1+s)i_t^B$.

187. Shock to frequency should not be applied in the capital component.

5.2.3.2 *Application in the liquidity component*

188. In addition to the assumed increase in severity, for the capital component, the shock to frequency shall be applied. The participants shall separate the actual payments that take place during the 90-day time horizon into claims incurred up to 2020 year-end (to which only the severity shock should be applied) and claims incurred afterwards (to which both frequency and severity shocks shall be applied).

189. Participants shall apply the shocks to frequency and severity prescribed in Figure 8.

190. For example, in case of claims incurred as of 2020YE, assuming a relevant actual outflow paid of 100 the post stress outflow should be calculated as 100*(1+2%). In case of claims incurred after, assuming a relevant actual outflow of 100, the post stress outflow should be calculated as 100*(1+15%)*(1+2%) where the first factor captures the shock to frequency and the second factor captures the shock to severity.

191. No changes in the reinsurance flows should be applied.

5.2.4 Shock to reinsurance in-flows

192. The general economic environment and its impact on corporate sector is also reflected to deterioration of the credit worthiness of reinsurers. In order to reflect this effect on the flows of insurers, the amount of actual reinsurance in-flows shall be shocked based on a flat haircut of 5%.

5.2.4.1 *Application in the capital component*

193. The shock to reinsurance recoverable should not be applied in the calculation of the post-stress balance sheet and solvency position, given its non-material impact.

5.2.4.2 *Application in the liquidity component*

194. The prescribed haircut shall be applied to the actual in-flows (e.g. reinsurers' share in sum of claims paid, reinsurers' share in sum of expenses paid) notwithstanding whether these in-flows stem from treaties in place at the reference date or purchased afterwards. For example, assuming a relevant actual inflow of 100 the post stress inflow should be calculated as 100*(1-5%).

5.2.5 Reduction in written premia

195. The scenario assumes a decrease by the 10% of the total cash-in premiums with respect to the actual baseline figures for all non-mandatory in-force and new business (both life and non-life). Pension schemes (Defined Benefits and Defined Contributions based products) are excluded from the application of the shock.

196. No changes to other flows should be applied.

5.2.5.1 *Application in the capital component*

197. Given that the reduction of premia due to the lapse and mortality shocks is already captured in the recalculation of the life technical provisions and that the shock related to the new business is marginally captured by the Solvency II framework, for the sake of simplicity and to reduce the burden of the exercise, the impact of the shock (included the one related to the in-force business) on the capital component is neglected.

Application in the liquidity component

198. The actual cash-in flows related to premiums observed in the 90 days should be recalculated reflecting the decrease of the written premia to be received in the 90-day time horizon. For example, assuming a relevant actual inflow of 100 the post stress inflow should be calculated as $100*(1-10\%)$ where 10% represent the reduction in written premia as prescribed in section 5.2.5.

6 Reporting Templates

199. Reporting templates are split for the two components and are complemented by one qualitative questionnaire each.

6.1 Capital component

200. The set of templates to report the results under baseline and stressed scenarios are broadly based on the Solvency II QRT reporting. Guidance on the content of the templates can be retrieved from the Supervisory Reporting Annex II.

201. Participating entities shall fill in the reporting templates in the provided spreadsheet. The reporting templates are structured in three sections:

   a. Baseline scenario;

   b. Stress scenario;

   c. Stress scenario with reactive management actions.

Additionally, participating entities are requested to fill in the qualitative questionnaire.

202. In case NCAs opt to ask for the simulation of the impact of a shocked UFR, participants are requested to submit the same templates filled with the additional simulation, if not differently specified by the NCA.

203. The collected information will be partly disclosed on an individual basis, upon the consent of the participating entities, and partly on an aggregated basis as described in section 2.7.

204. For the purpose of having a sound understanding of the ST, results and the allowance for a proper data quality assurance process, participating entities are requested to submit additional information in line with the approach utilized to run the calculations (ref. to section 4.3). The structure of the reporting templates for the capital component is provided in Figure 9.

Figure 9- Capital reporting templates

Description	Baseline (0)	Scenario without reactive management actions - Fixed Balance Sheet (FBS)	Scenario with reactive management actions - Constrained Balance Sheet (CBS)
Participating entity information	P.Participant		
Basic infromation - general	P.Gen		
Indicators	Indicators		
Balance sheet reporting template as per QRT data for Groups	0.BS	FBS.BS	CBS.BS
Impact of long term guarantees measures and transitionals as per QRT data for Groups	0.LTG	FBS.LTG	CBS.LTG
Own funds as per QRT data for Groups	0.OF	FBS.OF	CBS.OF
Calculation of Solvency Capital Requirement as per QRT data for Groups	0.SCR.SF	FBS.SCR.SF	CBS.SCR.SF
Solvency Capital Requirement - for groups using the standard formula and partial internal model as per QRT data for Groups	0.SCR.PIM	FBS.SCR.PIM	CBS.SCR.PIM
Solvency Capital Requirement - for groups on Full Internal Models as per QRT data for Groups	0.SCR.FIM	FBS.SCR.FIM	CBS.SCR.FIM
Asset characteristics	0.Assets	FBS.Assets	CBS.Assets
Liabilities description	0.Liabilities.Char	FBS.Liabilities.Char	CBS.Liabilities.Char
Miscellaneous	0.Misc	FBS.Misc	CBS.Misc
Status of the template	Status of the template		

205. Indicators ([Indicators sheet])

Participating entities are requested to report a set of indicators based on key figures computed under baseline and stressed scenarios. The aim of those indicators is to provide a comprehensive picture of the major drivers behind the impact of the prescribed scenarios on the balance sheet and on the capital position of the participating entities. Indicators are based on figures reported by participating entities in the reporting templates. A subset of items, clearly identified in the template will be proposed for the individual public disclosure.

206. Balance sheet ([0.BS, FBS.BS, CBS.BS])

The balance sheet fully replicates the QRT template for groups/solos (S.02.01.02.01). Solvency II figures shall be reported under the baseline, stress scenario and stress scenario with reactive management actions. The template shall be used to report balance sheet data of all the participating entities irrespectively of the method applied for the calculation of group solvency, namely the "accounting consolidation-based method", the "deduction and aggregation method" or a "combination of both methods".

207. Impact of the long term guarantees measures and transitionals ([0.LTG, FBS.LTG, CBS.LTG])

The templates replicate the S.22.01.04 and require the application of the step-by-step approach on the impact of LTG and transitionals on technical provisions, basic and eligible OF and SCR. The templates shall be filled according to the guidance provided by the log-file of the S.22.01.04.

208. Own Funds ([0.OF, FBS.OF, CBS.OF])

Information on the OF is collected under each scenario via template S.23.01.04/ S.23.01.01. The template 0.OF fully replicates the format of the standard QRT, while under stressed scenarios only a subset of the information shall be provided.

209. Solvency Capital Requirement ([0.SCR.SF, FSB.SCR.SF, CBS.SCR.SF, 0.SCR.PIM, FBS.SCR.PIM, CBS.SCR.PIM, 0.SCR.FIM, FBC.SCR.FIM, CBS.SCR.FIM])

Information on capital requirement shall be provided according to the approach used by the participant in their regular reporting. Participants shall fill in only the template in line with the approach they regularly utilise to report the capital position to the NCA calculating their SCR via standard formula or USP should fill-in templates [0.SCR.SF, FBS.SCR.SF, CBS.SCR.SF]. Participants calculating their SCR via partial internal model should fill-in templates [0.SCR.PIM, FBS.SCR.PIM, CBS.SCR.PIM. Participants calculating their SCR via full internal model should fill-in templates [0.SCR.FIM, FBS.SCR.FIM, CBS.SCR.FIM].

210. Asset Characteristics ([0.Assets, FBS.Assets, CBS.Assets])

Participating entities are requested to provide a breakdown of their asset allocation under the baseline and the two market scenarios. The reported assets shall refer only to the solo entities consolidated via Method 1 in order to grant consistency with the values of the asset classes reported in the balance sheet.[42] In particular, details on the decomposition of the exposures and of the modified durations[43] for sovereign bonds, corporate bonds, collateralised securities, structured notes and loans and mortgages is requested. In addition, participating entities shall provide information on the decomposition of the equity portfolio according to the geographical area of issuance as well as the split between office & commercial and residential real estate. When completing the templates, participating entities shall exclude the asset held for unit and index linked portfolios. No look-through approach to report collective investments is requested. The credit quality of the assets, when requested, is defined according to iBoxx rating and Credit quality step.[44]

211. Liability description ([0.Liabilities.Char, FBS.Liabilities.Char, CBS.Liabilities.Char])

The template elaborates on the annual Solvency II technical provisions reporting for life and health (S.12.01.01) and for Non-Life (S.17.01.01). The reported liabilities shall refer only to the entities consolidated via Method 1 in order to grant consistency with the values of the technical provisions reported in the balance sheet.[45]

212. Duration of technical provisions, guaranteed rates, and impact of the insurance specific shocks ([0.Mics, FBS.Mics, CBS. Mics])

The information on duration of technical provisions should be filled consistently with QRT S.38.01.10 of the Financial Stability Reporting (i.e. the term "duration" refers to Macaulay duration). Additionally, based on S.14.01.10 - Life obligations analysis, the participants are requested to provide a breakdown of the guaranteed technical rate by residual maturity of contracts in the baseline and under the stressed scenarios. In the

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[42] Assets held by entities consolidated via D&A that are included in the balance sheet under the item "Holdings in related undertakings, including participations" shall not be reported.

[43] Modified duration defined as percentage change in the price of a bond for a 1% change in the yield to maturity (in %): $D^{mod} = \frac{1}{1+y} * D_{Mac}$, where $D_{Mac} = \frac{1}{P_0(y)} * \sum_{t=1}^{T} \frac{t*CF_t}{(1+y)^t}$.

[44] The approach to the credit quality applied by iBoxx is available at:
http://content.markitcdn.com/corporate/Company/Files/DownloadDocument?CMSID=25329378592f431c9765becda11544f3
Conversion table between credit ratings and Credit Quality Steps is available at http://eur-lex.europa.eu/eli/reg_impl/2016/1800/oj

[45] Taking as a reference the QRT template S.17.01.01.01 the allocation of the business lines follows:
i) Type 1 liabilities: Medical expense insurance, Income protection insurance, Workers' compensation insurance, Motor vehicle liability insurance, General liability insurance, Legal expenses insurance.
ii) Type 2 liabilities: Other motor insurance, Marine, aviation and transport insurance, Fire and other damage to property insurance, Credit and suretyship insurance, Assistance, Miscellaneous financial loss, Non-proportional health reinsurance, Non-proportional casualty reinsurance, Non-proportional marine, aviation and transport reinsurance, Non-proportional property reinsurance.

stressed scenarios, participants are also requested to report the aggregated marginal impacts of the insurance specific shocks on the technical provisions, excess of assets over liabilities and own funds. Qualitative explanations shall be provided in the questionnaires.

213. Status of the template ([Status of the template]),

The tab contains a set of automatic checks on the formatting and consistency of the data filled in the template. Participants are requested to submit templates without warning signals or, if any, to explain the background motivation.

6.1.1 Questionnaire

214. The aim of this questionnaire is to provide additional insights on the drivers of the impact of the stress test and should address the 'story behind the figures' that have been submitted by the group.

215. The questionnaire also covers the use of simplifications and approximations for the calculation of the post stress figures, especially for the post stress SCR calculation.

216. Distinct part of the questionnaire refers to the reactive management actions and it aims to provide the further insights and comprehensive understanding on the selection and application of the actions.

217. The questionnaire covers qualitative and quantitative information regarding the process and post stress impact on the key metrics under the fixed balance sheet approach and the constrained balance sheet approach:

a. "I. Simplifications and approximations": This section focuses on information regarding potential deviations from regular reporting, along with relevant details.

b. "II. Reactive management actions": the section collects information on the identification and application of the reactive management actions enforced against the prescribed scenario. Participants are requested to identifying the management actions and their triggering shocks as well as on the underlying rationale for participating entities to select them. Finally, further information in terms of the internal governance to take and implement the actions is requested, accompanied with an estimation of time, steps and potential additional expenses

c. "III. Stress scenario with and without reactive management actions": The information requested in this section relate to the impact of the stress on the assets over liabilities, eligible OF to meet the group SCR and group SCR including an estimation of the marginal impact of the implementation of the enforced reactive management actions. Participating entities are also requested to submit their own overall assessment on the impact of the scenario and on the marginal impacts of the insurance specific shocks.

d. "IV. Other": the section collects information on the internal process run by participants to produce the post-stress results.

6.2 Liquidity component

218. The set of templates to report the results under baseline and stressed scenarios are based on the second methodological paper as well as on the experience gained during the EIOPA liquidity monitoring exercise.

219. Participating groups should collect and submit to the NCA one liquidity template for each of the identified relevant solos. The reporting templates are structured in two sections:

    a. Flows template (baseline and stressed scenarios results);

    b. Stocks template (baseline and stressed scenarios results);

    c. Questionnaire (ref. to section 6.2.1).

220. The flows template collects a set of information on the net cash position of the undertakings over 90-day time horizon starting from QRT S.05.01 focusing on the inflows and outflows stemming from:

- life business (excluding UL/IL business);

- UL/IL business;

- MA and ring fenced portfolios;

- non-life business;

- investments;

- other flows.

The template collects also information on the impact of the investment flows on the asset allocation of the participants.

221. The stock template is based on the QRT S.06.02 and contains *i*) detailed information on the assets allocation for life, non-life, MA / ring fenced portfolios and UL/IL business; *ii*) a breakdown of the life best estimates into traditional life, UL/IL, MA and ring-fenced funds.[46] The amounts of assets and liabilities should be reported in each scenario without application of haircuts.

222. Given the absence of a reference framework, the file includes detailed instruction on how to populate the templates (tab I_Instruction).

223. A tab labelled Status of the template contains a set of automatic checks on the formatting and consistency of the data filled in the template.

6.2.1 Questionnaire

224. The aim of the questionnaire is to collect information on the management of the liquidity position with specific reference to:

- the disinvestment strategy;

- other sources of liquidity;

- reactive management actions taken against the prescribed shocks to liquidity;

- cash management;

- liquidity governance;

- simplifications.

225. Additionally, information on the existence (plus short description) of a liquidity risk management plan and a contingency funding plan and the inclusion of liquidity stress test in the ORSA report is requested.
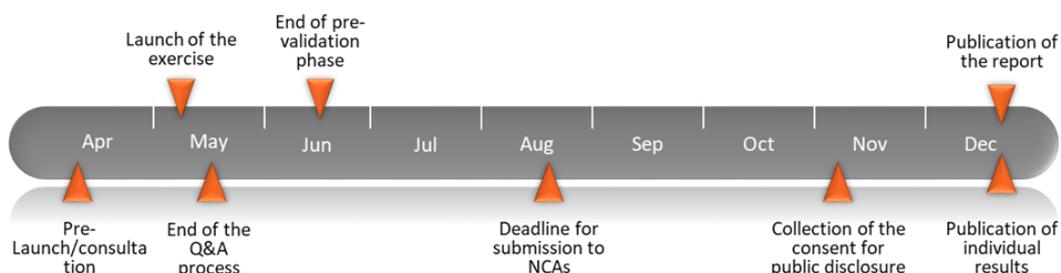
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[46] Potential simplification on the split of assets between life and non-life portfolios should be discussed with the NCA.

7 Timeline

226. The timeline for the 2021 insurance stress test is tailored to account for its essential features and it is as follows:

Figure 10- Timeline

227. Beginning of May to mid-August - Calculation phase: participants are requested to calculate the results and indicators according to the prescribed scenarios. Participants are requested to submit filled in templates to NCAs by 13 August 2021. The calculation phase is preceded by a consultation phase (also referred as pre-launch) where the full draft package will be distributed to the participants in order to anticipate the Q&A phase and the pre-validation phase. While keeping the time extension of the Q&A and pre-validation phases unchanged, their anticipation allow participants for a longer period of calculation on a stable framework.

228. Beginning of April to mid-May - Q&A process: the process will take place from the consultation / pre-launch of the exercise for four weeks. This timeline is deemed appropriate and strikes the right balance between the need to have enough time to request potential clarifications and the need to have a stable stress test framework (e.g. technical specifications, templates and scenarios) as soon as possible in the process. Participating entities can send questions to the EIOPA Q&A workstream via the national supervisory authorities (NSAs) at any time during the Q&A process. The deadline for the submission is 10 May 2021.

229. Beginning of April to mid-June - Pre-validation process. The pre-validation initiate in the consultation / pre-launch phase and implies an interaction between the NCAs and the participants during the calculation phase. The pre-validation process, based on bilateral discussions between participant and NCA, aims at assessing whether approaches, simplifications and approximations proposed by the participants are in line with the provisions of the Technical Specifications and allow to maintain a sufficient level of comparability of the results.

230. Mid-August to end October - Quality assurance of the results: the envisaged process follows a two-step approach divided into *i*) local quality assurance step and *ii*) central quality assurance step. At local level, the proximity between NCA and groups allows a thorough analysis of the consistency of the reporting; the central level process will focus on cross-sectional consistency. Potential resubmissions requested by NCAs or EIOPA in case the submitted information appears inconsistent or implausible (based on findings in the local or central validation) will take place between mid-August and end-October 2021. Therefore participating entities should stand ready to react to NCAs requests during this period.

231. 1st week of November 2021 - Collection of consent for publication. EIOPA will liaise with participating entities in order to gather the consensus for the individual publication with regard to the reported data and calculated indicators.

232. November to December – Drafting: The two-month time window will be devoted to draft the stress test report and to the approval process. The aim is allowing the disclosure of the individual results by the participating entities and the publication of the insurance stress test report before the end of the year.

7.1 Consultation process

233. Relevant stakeholders and participants have been consulted during the preparation of the stress test package through interactions at technical level and through the consultation / pre-launch phase. Ahead of the launching of the exercise, EIOPA engaged in discussions on the main elements of the exercise such as: the potential approaches for calculation of the balance sheet figures as well as the capital position and the liquidity position post stress, the indicators and stress test results to be publicly disclosed, the number and design of the stress scenarios, the timeline and the technical specifications