



EIOPA REGULAR USE
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Insurance Stress Test 2021 Technical specifications **- DRAFT -**

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TECHNICAL DRAFT NOT YET SUBMITTED TO INTERNAL DISCUSSION AND APPROVAL

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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

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.

for governments with potential downgrades of sovereign bonds for the most indebted countries and subsequent increase in the interest rate expenses.

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. In this respect, downgrades of the credit ratings are expected, in particular for most vulnerable sectors to the current COVID-19 outbreak.
10. The population, besides the suffer caused by increased death toll, is facing losses or reductions of income with consequent erosion of savings (if available), reduction in consumption, inability to meet payments.
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 increased volatility in the markets, whereas potential impact on the liability side are expected in a longer time horizon. Frequency and severity of the claims related to health coverages, 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.
14. 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 triple-hit scenario where:
15. On the assets side the repricing of the risk premia might be accompanied by a generalised downgrade of corporate debts with severe impact on the excess of assets over liabilities and eligible own funds;
16. On the liabilities side the best estimate assumptions shall be revised according to the foreseen increase in claims and in lapses due to the prolonged recession which drains savings from policyholders making the redemption of policy contracts needed;
17. 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.
18. 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

19. 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.
20. Scope, scenarios and disclosure are treated in detail in sections 3, 5, and **Error! Reference source not found.** respectively.

2.1 Objective

21. 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 ECA audit recommendations, EIOPA enhanced the transparency of the exercise including it in the objectives (ref. to 2018 edition of the exercise). The 2021ST will adhere to these principles.
22. The objective(s) of the 2021ST 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.
23. 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.
24. 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.
25. The 2021ST enhances the macroprudential dimension of the framework complementing the standard fixed balance sheet approach with a constrained balance sheet approach where participants are allowed to apply reactive management actions in the calculation of their post-stress position.
26. 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.
27. The 2021ST 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

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

- capital (OF, SCR), similar to the 2018 and according to the approved methodological improvements;⁵ and
- (simplified) liquidity, based on the approved approach⁶ and the experience gained in the current COVID-19 liquidity assessment.

29. 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 |
|---|---|
| <ul style="list-style-type: none"> • Combined scenarios with Market and Insurance specific shocks • Approach: <ul style="list-style-type: none"> • Instantaneous shocks • Fixed balance sheet (no reactive Management Actions) • Constrained balance sheet (with guided reactive Management Actions) • Metrics: <ul style="list-style-type: none"> • Balance sheet based (Excess of Assets over Liabilities) • Solvency based (OF, SCR) | <ul style="list-style-type: none"> • Approach: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 90 days • Metrics: <ul style="list-style-type: none"> • Liquidity sources / Liquidity needs |

2.3 Scope

30. 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.

31. 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.

32. The target sample defined in cooperation with NCAs encompasses xx undertakings, xx groups and x 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.

2.4 Narrative

33. The scenario is based on a low for long and COVID-19 aftermath.

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) ADD REFERENCE WHEN AVAILABLE

34. Lingering concerns about the exit from and the aftermath of the COVID-19 pandemic trigger adverse confidence effects worldwide and generate a slower than expected economic recovery marked by an increase in unemployment and drop in GDP. The accompanying worsening of economic prospects is reflected in declining long-term risk free rates globally from an already historically low level.
35. The re-assessment of market participants' expectations amid the continued weak fundamentals and a decline in corporate earnings, lead to an abrupt and sizeable adjustment of financial asset valuations, triggering a wave of widespread corporate bankruptcies and business downsizing. Market volatility spikes, correlations of returns of assets increase and borrowing costs surge on expectations of widespread defaults.
36. The shift in risk sentiment among market participants triggers significant capital outflows from EMEs, further exacerbating the slowdown of economic activity worldwide. A more protracted contraction in global growth has a sustained negative impact on EU exports, investment, and consumption. These risks could be aggravated by the re-emergence of protectionist actions or intensifying geopolitical tensions, further contributing to the decline in domestic economic activity in the EU.
37. Against this background, EU economies slow down and countries' fiscal positions weaken. Resurfacing concerns about the sustainability of public debt amid weakening domestic demand lead to a sharp increase in sovereign spreads, in particular but not only for high-spread economies. The dispersion of government bond yields across the EU exacerbates and slows down the convergence process.
38. Already high corporate sector indebtedness paired with a sharp decline in profits exerts pressure on corporate balance sheets. Increasing concerns about the sustainability of corporate debt raise corporate credit spreads and tighten credit standards limiting corporates' access to loans for the financing of investments. The adverse developments trigger a significant increase in corporate losses, and a wave of downsizing of businesses.
39. The economic slowdown leads to a higher unemployment rate and paired with high macroeconomic uncertainty has an adverse impact on the aggregate demand, consumer confidence and household debt servicing capacity. A protracted and correlated decline in asset prices further erodes household wealth and weighs on consumption growth.
40. A slowdown in commercial and residential property market activities triggers sharp and sizeable price corrections. The decline in demand for property by certain industries leads to an abrupt and sustained drop in commercial real estate market activity and substantial price corrections.

2.5 Approach

41. The approach for the estimation of the post stress position is twofold: capital and liquidity.
42. 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 (Solvency Capital Requirement and Own Funds), which ensure the comparability of the baseline positions and serve as guidance for recalculating the post-stress capital positions.

43. 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 test⁷.
44. 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 two assessment will be reflected in the technical specification on the application of the shocks, which will be specific to the two assessments.
45. The post-stress capital and liquidity positions should be calculated under two different assumptions:
- a) Fixed balance sheet
 - b) Constrained balance sheet
46. For option a) the post stress positions should be calculated considering only the embedded management actions⁸, 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.

2.6 Data collection

47. Results will be collected through ad-hoc templates that containing information to be used for analysis and validation purposes. 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.
48. 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.
49. 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.
50. 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

51. In disclosing the results of the 2021 stress test exercise EIOPA, while remaining in the boundary of its mandate, will pursue its goal of increasing the transparency towards policyholders and citizens. In line with what proposed in 2018 and

⁷ ADD LINK WHEN AVAILABLE

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).

following the recommendation of the ECA Audit on stress test initiatives⁹, the communication of the outcome of the 2021ST exercise will be twofold:

52. Publication of a report based on aggregated data covering both the capital and the liquidity component;
53. Publication (upon consent of the participants) of a subset of capital based indicators.
54. It is worth to clarify that the individual disclosure will only cover the impact of the scenarios on the group balance sheet including the excess of assets over liabilities. No disclosure of the capital and of the liquidity position pre- and post-stress is envisaged.
55. 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 stress test 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.
56. As the liquidity analysis is at an early stage, EIOPA will not require the individual disclosure of liquidity based indicators.
57. 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.
58. 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.
59. 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.

3 Scope

60. The 2021ST 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 follow:
 - 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.
61. 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 motivations.

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>

62. The process allowed to identify xx 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 2021ST is reported in Figure 2- List of entities.¹¹

Figure 2- List of entities

[TO BE ADDED]

3.1 Liquidity

63. 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.

64. 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 (cash-pooling or binding agreement)¹²
- b. Groups that manage liquidity on a solo-level (or non-binding agreement)¹³

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

66. In case a group manages liquidity centrally (bucket a.) the liquidity shocks shall be applied at group level and the post stress position reported at a group consolidated level.

67. In case a group manages liquidity at solo level (bucket b.), 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. The selection of relevant solos can follow two criteria:

- 1) Top-down: EIOPA, in cooperation with the Group Supervisors, selects the solos for each participating entity. The list of solos will be bilaterally shared with each group in advance of the launch of the exercise to allow them to better organise the activities in the calculation period;
- 2) Bottom-up: Participating entities are provided with the criteria for the selection of the solos and select their relevant entities to be included in the assessment. The list can be discussed with the NCA preferably before the initiation of the calculation phase, or at the latest in an early stage of the pre-validation phase.

68. The selected solos should respect a total assets coverage criteria: (total assets of solos selected / total assets of solos in the belonging to the group) > 80%.

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

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

¹² This can either be cash-pooling or a 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 groups 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.

Questions:

Q1: In case of liquidity managed at solo level, between the top-down and bottom-up approach in the selection of the entities, what is in your opinion the most viable solution?

Q2: Please provide your view on the proposed criteria for the identification of the solos.

4 Methodology

69. 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 (Solvency Capital Requirement and Own Funds), which ensure the comparability of the baseline positions and serve as guidance for recalculating the post-stress capital positions.

70. 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.

71. Market shocks are assumed to be applied as one-off shocks to the balance sheet at a reference date. Insurance specific shocks can be stretched out over a longer time horizon, in such a case, the impact on the key metric will be only analysed at the valuation date.¹⁴ The different time horizon in the unwinding of the shocks requires a specific sequence in their application:

- T_0 instantaneous and permanent shocks to:
 - o Market shocks;
 - o Reduction in written premia (new business);
- T_{0+1} : Insurance specific shocks
 - o Lapse shock;
 - o Mortality shock;
 - o Increase in cost of claim;
 - o Morbidity shock.
- T_{0+2} : Shocks to the reinsurance recoverables/receivables: to be applied after all other shocks.

72. Specifications on the application of the shocks might differ in the capital and liquidity assessment. Details are provided for each shock in section 5.

4.1 Capital component

73. 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:

¹⁴ For the treatment on the time horizon please refer to section 2.3.2 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

- 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.¹⁵
 - The look-through approach should be applied when calculating the impact of the scenarios (e.g. for Collective Investment Undertakings).¹⁶
74. 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.
75. 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).
76. 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 Own Funds and on the SCR.
77. 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.
78. 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 solvency capital requirement — standard formula, undertaking-specific parameters or 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.¹⁷
79. 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 2021ST. 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.

¹⁵ 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.

¹⁶ 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.

¹⁷ 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).

80. 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 TP 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.

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

82. 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. This approach is in line with the 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).¹⁸ [TO BE DEFINED]

4.2 Liquidity component

83. The methodology applied for the 2021ST regarding the liquidity component is based on the second methodological paper¹⁹.

84. 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):

$$Net\ flows_t + Liquid\ Assets_t$$

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

85. Liquid assets should be estimated both in the baseline and in the post-stress position via liquidity haircuts to be applied to the different asset classes as reported in

¹⁸ For the treatment of the UFR under stressed scenarios please refer to section 4.3.2 and 4.3.5 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

¹⁹ [ADD LINK](#) when available

86. Figure 3.

Figure 3- Classification of assets

| |
|--|
| Assets (excluding assets held for UL/IL) |
| Cash & Bank Deposits & Bank Commercial Paper/Certificates of Deposits) |
| of which stemming from repo agreements |
| Government-Related Securities (Central governments & affiliates) |
| issued/guaranteed by EU member states (all CQSs) and issued by highly rated non-EU countries (CQS0/1) |
| Issued or guaranteed by highly rated non-EU countries (CQS2/3) |
| Exposures to ECB, Central banks, multilateral development banks & international organisations |
| issued or guaranteed by ECB, EU central banks, supranational institutions (BIS, IMF, EC,...) or Multilateral Development Banks |
| issued or guaranteed by central banks of non-EU countries (CQS0/1) |
| High Quality Covered bonds |
| Extremely high quality covered bonds - CQS0/1 |
| High quality covered bonds - CQS2 |
| Corporate bonds (not issued by a financial institution or its affiliate) |
| Corporate debt securities (CQS0/1) |
| Corporate debt securities (CQS2/3) |
| Listed Equity (not issued by a financial institution or its affiliate) |
| Collateralised securities (CQS0/1) |
| Collective Investment Undertakings |
| Off-balance sheet or contingent financial liabilities to third parties |
| Assets held for UL/IL |

87. Liquidity haircuts will be kept constant under baseline and stressed scenario and should be applied to the baseline and shocked balance sheet values. 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 would be calibrated according to the widely recognised practices applied in other industries (e.g. LCR approach used in banking).²⁰ Additionally, only unencumbered assets should be considered.

88. 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.

89. 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 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.

Life (excluding UL/IL) business

| |
|--|
| Premium (written)* |
| Claims and other technical outflows (excluding surrender)* |
| Surrender |
| Reinsurance inflows |
| Reinsurance outflows |
| Net Cash Flows |

90. 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 could be deemed as reasonable.

91. 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.

92. 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.

93. 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).

94. 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 to lapse as displayed in Figure 5.

Figure 5- Classification of the life best estimate liabilities

| |
|---|
| Without surrender penalties |
| Surrender value equal to the 100% of best estimates/statutory reserves |
| Surrender value between 100% (exclusively) and 80% of the best estimates/statutory reserves |
| Surrender value lower than 80% of the best estimates/statutory reserves |

95. A specific liquidity weights is assigned to each bucket. Weights will be kept unchanged in the pre and post stress scenario.

96. Additionally, for non-life business, information on the best estimate and its duration will be requested.

97. The liquidity component will 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

98. 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.
99. 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.
100. 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 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 refers in particular to the following aspects.
101. Perimeter of application for the shocks²¹: 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. This is only allowed if the remaining part is insensitive to the prescribed shocks and if non-vulnerability to the shock is demonstrated. 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 Own Funds;
 - Group Solvency Capital Requirement.

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.

102. Calculation of specific balance sheet items:
- Deferred tax assets and liabilities.

²¹ For the perimeter related simplifications please refer to section 5.4.1 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568).

- Best Estimates: in case the best estimate is calculated via regression techniques²² the parameters used in the baseline scenario can be kept constant also for the 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 2021ST process.
- Risk margin²³: 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 61²⁴ with respect to the method used in the baseline calculation.

Questions:

Q3: Do you have suggestions on alternative approaches to the calculation of the post-stress DTA/DTL which simplify the process and at the same time preserve the level playing field of the exercise and the comparability of the results?

103. 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 method²⁵; and (ii) the deduction and aggregation method (D&A)²⁶. 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.
104. 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.
105. 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

²² 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).

²³ 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).

²⁴ EIOPA, 2015, 'Guidelines on valuation of technical provisions' (guideline 61). Available at: https://www.eiopa.europa.eu/content/guidelines-valuation-technical-provisions_en.

²⁵ Directive 2009/138/EC, Art. 230, Method 1 (default method): accounting consolidation-based method.

²⁶ Directive 2009/138/EC, Art. 233, Method 2 (alternative method): deduction and aggregation method.

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 financial stability 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 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.

106. 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

107. 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.

108. 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.

109. 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.

110. 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.

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

112. 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.²⁷

113. 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:

- 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.

114. This approach is formalised in the following equation:

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

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

4.4 Management actions

116. Consistently with its micro- 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).

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

118. 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. This includes e.g. dynamic hedging, de-risking strategies and any future action taken in the context of a recovery plan.²⁸ In this simulation, only the embedded management actions should be considered and the reactive post-stress management actions should not be applied.²⁹

²⁷ For the LACDT please refer to section 5.4.2 of the Methodological principle for insurance stress testing (EIOPA-BoS_19/568)

²⁸ Reassessment of the "foreseeable dividends or other foreseeable distributions" under stressed scenario is included in the allowed actions.

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).

119. 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.
120. The applied reactive management actions should be part of the governance framework adopted by the group (e.g. risk management plans, investment strategies) and not specifically defined and implemented in this specific exercise.
121. 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 them and any expenses arising from them. 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).
122. 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).

5 Scenario, shocks and their application

123. The scenario combining market and insurance specific risk reflects the current EIOPA/ESRB assessment of prevailing systemic risks to the financial system. Both of these combined scenarios were developed in cooperation with ESRB.

[PLACEHOLDERS FOR ESRB SCENARIO]

5.1 Market shocks

124. Market shocks are assumed to represent one-off, instantaneous and simultaneous shifts in asset prices relative to their end-2020 levels.
125. 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 residential mortgage-backed securities (RMBS) yields;
 - equity prices;
 - real estate prices (residential and commercial);
 - residential mortgage-backed securities yields;
 - other assets prices (private equity, hedge funds, real estate investment trusts (REITs), commodities);
126. 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);³⁰
- b. the ultimate forward rate (UFR) is set at XX% in line with the current Solvency II regulation;³¹ Or: the UFR is set at XX consistently with the last forward rate derived from the liquid part of the shocked risk free rate term structure; [TO BE DEFINED]
- c. Credit risk adjustment is kept unchanged with respect to the baseline.

127. 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.

128. 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 should be also used to derive the RFR curves to be used in the SCR in the Interest rate following the delegated regulation 2015/35 provisions.

129. 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: $SWAP_{Shock} = SWAP + Shock$;
- 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 $Y_{Bond} = SWAP + CreditSpread_{Bond}$ (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 $\Delta CreditSpread_{Bond} = \Delta Y_{Bond} - \Delta SWAP$
- 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

³⁰ 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>

³¹ 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.

on the 10 year swap rate implies an increase of xx bp (i.e. $SWAPShock = yy\%$) and a yield increase for the sovereign bond of zz bp (i.e. the yield after shock, it is $1.1\% + zz\% = ww\%$). Using the formula specified in c), the credit spread for this bond under stressed scenario is qq bps ($= ww$ bp $- yy$ bp), increased by rr bps (qq bp $- 10$ bp) with respect to the baseline.

130. Shocks to sovereign bonds are provided for selected maturities. Shocks to missing maturities should be derived:

- 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.

131. 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 country 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 converted in the currency of "Country A" by translating the value of "bond 2" from USD to EUR applying the exchange rate registered at the reference date. Finally, values shall be reported in the template in the reporting currency of the Group.

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

133. 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.

134. Shocks to corporate bonds provided in the Technical Information are twofold:

- a) Depending on the geographical area of the exposures, the portfolios are assumed to be downgraded according to the transition matrices provided in the technical information; [TO BE FINALISED]
- b) Subsequently, the resulting holding allocations are further stressed to account for spread increase. These shocks are distinguished in financial / non-financial³² and are grouped by rating (from AAA to CCC) and geographical areas³³. The corporate bond portfolio shall be allocated to the proper group and stressed according the prescribed shock. [TO BE FINALISED]

³² 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"

³³ A reference list for "advanced 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>

135. Shocks to yields should be applied homogeneously to all the maturities. Shocks to corporate bonds shall be treated as prescribed for the government bonds (i.e. no separation of swap and credit spread)
136. 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 "financials".
137. The shocks to structured notes and collateralized securities shall be applied in line with the shocks to corporate bonds.
138. 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.
139. 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. 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 -Z%.
140. Stock indices should be treated according to geographical criteria.
141. 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.
142. Own shares (held directly) and holdings in related undertakings, included participations should be treated as listed equities.
143. The technical information provides the shocks to 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.
144. 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 commercial real estate held for investment purposes, whereas equipment should be kept constant with respect to the baseline.
145. Property other than for own use should be fully shocked according to the shocks provided to the area where they are located.³⁴

³⁴ For rural estate exposures, the residential real estate shock should be applied.

146. 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.³⁵
147. For loans on policies no shocks should be applied.
148. Shocks to RMBS should be used to estimate the post stress value of MPST, CLO, CMBS, ABS exposures.
149. 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

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

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 | | $X_{C,L}$ | $X_{C,L}$ | $X_{C,L}$ |
| <i>Pandemic morbidity</i> | | $X_{C,L}$ | $X_{C,L}$ | |
| <i>Increase in cost of claims</i> | | | | $X_{C,L}$ |
| Reinsurance recoverables and receivables | $X_{C,L}$ | $X_{C,L}$ | $X_{C,L}$ | $X_{C,L}$ |
| Reduction in written premia (New business) | X_L | X_L | X_L | X_L |

C=capital component; L=liquidity component

151. The marginal impact of the insurance specific shocks to the Own Funds and to the Solvency Capital Requirement shall be reported separately.
152. Subsections provide details on the definition and the application of the shocks therein for the capital component and the liquidity component of the exercise.

Questions:

Q4: Do you agree to apply the mortality shocks also in the Health Similar to Life business also in consideration of the additional burden?

5.2.1 Mass Lapse shock

153. After the materialization of the market shocks, the scenario assumes a sudden non-permanent discontinuance of the in force insurance policies. The shock reflects the adverse macroeconomic environment impact on aggregate demand.

³⁵ 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.

154. Participating entities shall apply the lapse shock to the non-mandatory insurances of their in-force life portfolio, as specified in Figure 7.³⁶

Figure 7- Product classification for lapse shock

| Type of product | Applicable | Instantaneous discontinuance |
|---|------------|------------------------------|
| Term insurance | Yes | Q% |
| Endowments | Yes | X% |
| Annuities in deferral phase | - | - |
| Annuities in pay-out phase | - | - |
| Pure unit-linked contracts (without financial guarantees) | Yes | Z% |
| Unit-linked contracts with financial guarantees | Yes | W% |
| Disability | Yes | P% |
| Health | - | - |

155. 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.

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

157. 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.

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

5.2.1.1 Application in the capital component

159. The impact of the instantaneous lapse shock shall be reflected only in an increase 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/full 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

160. 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.

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

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

³⁶ Example: in case the best estimate lapse assumption of the insurer for an endowment is 4%, the instantaneous discontinuance shall be applied as X% (taken from Figure 7) and not as 4% + X % = YY%.

5.2.2 Mortality shock

163. 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 second generic lockdown, more policyholders than anticipated are facing the risk of mortality, in particular, peaking during the first three months following the reference date.

164. 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.

165. The annual mortality rates shall be increased by $X\%$ using the formula

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

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 instantaneous 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.

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

167. 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.

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

5.2.2.1 Application in the capital component

169. 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/full internal model, USP, standard formula users shall apply this approach for the aim of comparability of the results in the stress test exercise.

5.2.2.2 Application in the liquidity component

170. For liquidity component purposes, the projection of the outflows shall take into account all the increase / decrease in payments emerging from the application of the mortality shocks to the in-force portfolio that are assumed to take place in the time horizon of 90 days.

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

5.2.3 Pandemic morbidity shock

172. Simultaneously with the other insurance specific shocks, the scenario assumes an instantaneous increase in medical expenses and income protection claims due to Covid-19.

173. Similar to the narrative in the mortality shock, it captures the risk that, on the absence of a second generic lockdown, more policyholders than anticipated are

facing the risk of increased morbidity peaking during the first three months following the reference date.

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

175. 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.

176. The increase of morbidity is supposed to impact the frequency and the severity of the related claims, hence the shocks will be embedded in the shocks prescribed in the increase of cost of claims (ref. to section 5.2.4). The application of the morbidity shocks should therefore follow the same specification of the increase of non-life cost of claims.

177. Life business offering health coverages should be shocked following the same approach proposed to the non-life applying the shocks provided to medical expenses and income protection insurance (ref. to Figure 5).

5.2.4 Increase of non-life cost of claims

178. The scenario is based on the same narrative of the morbidity shock and the distressed economic situation which is translated into an increase of the frequency and of the severity of the claims affecting to different extent all the non-life business lines. Specifically, all the non-life business lines are supposed to experience an increase in the severity (claims inflation), whereas frequency shock will be limited only to those business lines more impacted by the pandemic as reported in Figure 8.

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

| Line of Business ³⁷ | Shock to frequency | Shock to severity (claims inflation) |
|---|--------------------|--------------------------------------|
| Direct Business (including accepted proportional reinsurance) | | |
| - Medical expense insurance | K | Y |
| - Income protection insurance | X | Y |
| - Workers' compensation insurance | - | Y |
| - Motor vehicle liability insurance | - | Y |
| - Marine, aviation and transport insurance | - | Y |
| - Fire and other damage to property insurance | - | Y |
| - General liability insurance | W | Y |
| - Credit and suretyship insurance | Z | Y |
| - Legal expenses insurance | Q | Y |

³⁷ Business lines are aligned with the Solvency II QRT reporting template S.14.01

| | | |
|---|---|---|
| - Assistance | - | Y |
| - Miscellaneous financial loss | S | Y |
| Accepted non-proportional reinsurance | | |
| - Non-proportional health reinsurance | A | Y |
| - Non-proportional casualty reinsurance | - | Y |
| - Non-proportional marine, aviation and transport reinsurance | - | Y |
| - Non-proportional property reinsurance | I | Y |

Question:

Q5: Based on your experience, is the General liability insurance materially affected by the current crisis?

- 179. Shock to severity (claims inflation) should be applied linearly to the costs of all the incurred and expected claims.
- 180. 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 $I^B = [i_1, i_2, \dots, i_t, \dots, i_n]$ (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 can be applied in three ways:
- 181. 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 $i_t^S = (1 + s)i_t^B$.
- 182. The shock to the inflation shall be considered only as a component of the annual claim inflation. The inflation shock shall not be considered for the valuation of indexed assets under stressed scenarios, namely the baseline situation shall be used.
- 183. Shocks to frequency, set at XX% should be applied in an additive / multiplicative way only to expected claims that are not yet occurred. The increase should be applied to the frequency parameter used to calculate the BE in the baseline reporting.

Question:

Q6: On the application of the shock to frequency, what is your preferred option between additive and multiplicative?

5.2.4.1 Application in the capital component

- 184. The impact of the shocks should be full reflected into the technical provisions as follows:
 - Claims provision: Claims provisions must be revalued on the basis of an increase in inflation.

- Premium provision: Premium provisions are impacted by an increase in the frequency of claims, combined with a shock to inflation, leading to an increase in premium provisions.

5.2.4.2 Application in the liquidity component

185. Following the assumed increase in the frequency and severity of claims, the entity shall project the increased payments that take place during the 90-day time horizon. No changes in the technical provisions should be considered.

5.2.5 Shock in reinsurance recoverables / receivables

186. 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 asset side of insurers, the amount of recoverables and receivables shall be shocked based on what provided in Figure 9.

Figure 9- Shocks to reinsurance recoverables / receivables

| CQS | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Not Rated |
|---------|----|----|----|----|----|----|----|-----------|
| Haircut | X% | Y% | Z% | Q% | R% | V% | P% | T% |

5.2.5.1 Application in the capital component

187. The shock affects only the asset side of participating entities.

188. As a simplification, when recalculating the post stress SCR participants should keep the credit worthiness of the reinsurers unchanged with respect to the baseline.

5.2.5.2 Application in the liquidity component

189. The prescribed haircut shall be applied to the in-flows (e.g. reinsurers' share of claims incurred, reinsurer's share of expenses incurred) related to in-force reinsurance treaties in place at the reference date for the 90-day time horizon.

5.2.6 Reduction in written premia

190. The scenario assumes a decrease by the x% of the total cash-in premiums with respect to the baseline figures for all new business (both life and non-life).

5.2.6.1 Application in the capital component

191. 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 could be neglected.

5.2.6.2 Application in the liquidity component

192. The projected cash-in flows related to premiums in the stressed scenario shall reflect the decrease of the written premia to be received in the 90-day time horizon for the new business.

6 Reporting Templates (provisional)

193. Reporting spreadsheet is structured as follow:

[Placeholder for the summary table of the reporting template]

194. Templates are split according to the purpose of the information collected into reporting and validation.

195. The information collected in the reporting templates will be published in the report based on aggregated data covering both the capital and the liquidity component according to the section 2.7.
196. For the purpose of having a sound understanding of the stress test, results and the allowance for a proper data quality assurance process, participating entities are requested to submit additional information (validation templates).

6.1 Capital component

197. 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.
198. Participating entities shall fill in the reporting templates in the provided spreadsheet. The reporting templates are structured in three sections:
- Baseline scenario
 - Stress scenario
 - Stress scenario with reactive management actions

Additionally, participating entities are requested to fill in the qualitative Questionnaire (please refer to Annexes 8.1 and 8.2).

199. 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.
200. For the purpose of having a sound understanding of the stress test, 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).

6.1.1 Templates for reporting purposes

201. The reporting templates as structured as followed:

[To be inserted: summary worksheet from excel file]

202. Indicators ([ref.to template])

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.

203. Balance sheet ([ref.to template])

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".

204. Impact of the long term guarantees measures and transitionals ([ref.to template])

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 own funds and SCR. The templates shall be filled according to the guidance provided by the log-file of the S.22.01.04.

205. Own Funds ([ref.to template])

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

206. Solvency Capital Requirement ([ref.to template])

The templates devoted to the collection of data on the Solvency Capital Requirement based on the standard QRT (S.25.01.04, S.25.02.04, S.25.03.04 / S.25.01.01, S.25.02.01, S.25.03.01) are mutually exclusive. Undertakings shall fill in only the template in line with the approach they regularly utilise to report the capital position to the NCA, namely the XX in case of no authorization for full or partial internal model, or XX and XX in case a partial internal model or a full internal model respectively was approved by the NCA. The 2021 exercise requires the re-calculation of the SCR under stressed scenarios.

207. Asset Characteristics ([ref.to template])

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.³⁸ In particular, details on the decomposition of the exposures and of the modified durations³⁹ 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. 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.⁴⁰

208. Liability description ([ref.to template])

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

³⁸ 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.

³⁹ 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 $D_{Mac} = \frac{1}{P_0(y)} * \sum_{t=1}^T \frac{t * CF_t}{(1+y)^t}$.

⁴⁰ 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

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.⁴¹

209. Duration of technical provisions ([ref.to template])

The templates 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).

6.1.2 Templates for validation purposes

210. Participants are requested to report the aggregated marginal impacts of the insurance specific shocks for the life and non-life business. Qualitative explanations shall be provided in the questionnaires

6.1.3 Questionnaire

211. 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.

212. 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.

213. 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.

214. The first two sections of the questionnaire refer to qualitative information regarding the process and post stress impact on the key metrics under the fixed balance sheet approach:

- a. "I. Process": This section focuses on information regarding potential deviations from regular reporting, along with relevant details.
- b. "II. Stress scenario without reactive management actions": The information requested in this section relate to the impact of the stress on the assets over liabilities, eligible own funds to meet the group SCR and group SCR. Participating entities are also requested to submit their own overall assessment on the impact of the scenario.

215. The third section focuses on identifying insights related to the reactive management actions. The main aspects refer 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.

216. The detailed overview of the questionnaire is contained in the Annex 8.1.

⁴¹ 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.

6.2 Liquidity component

217. 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 COVID-19 Liquidity assessment conducted in spring-autumn 2020.

218. Participating entities that manage liquidity centrally or its selected relevant solos that manage liquidity on a solo-level shall fill in the reporting templates in the provided spreadsheets (see xx). The reporting templates are structured in three sections:

- a. Flows template (baseline and stressed scenarios results)
- b. Stocks template (baseline and stressed scenarios results)
- c. Questionnaire template for liquidity component (please refer to annex 8.2).

6.2.1 Templates for reporting purposes

219. The reporting templates are split into Flows and Stocks.

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;
- non-life business;
- investments;
- other flows.

221. The stock templates are based on the QRT S.06.02 and S.03.01.01.01 and contain detailed information on the assets and their relative movements for life, non-life and UL/IL business. This will be used also to assess the impact of the management actions.

6.2.2 Templates for validation purposes

[WORK IN PROGRESS]

6.2.3 Questionnaire

222. The detailed overview of the questionnaire is contained in the Annex 8.2.

223. The aim of the questionnaire is to provide information on potential the spill-over stemming from the reactive management actions taken by insurers against the prescribed liquidity shocks with specific reference to:

- the disinvestment strategy:
 - o type and amount of security sold;
 - o sequence and timing of the sale of the securities;
 - o channels (primary, secondary, intra-group).
- cash management;
- liquidity governance;
- nature and quantity of additional liquidity sources which could be used in case of a stress (e.g. credit lines with banks,...);

- if the liquidity is not managed centrally and therefore the scope is related to solo-entities, the level of intra-group support (if any) post stress.

224. A first set of questions aims at assessing the liquidity characteristics of one's participant. For all type of liquid assets, groups or solos (depending on the liquidity management type of governance within the group) must assess their priorities in terms of disinvestment strategy and explain how they would tackle their lack of cash in distressed situation.

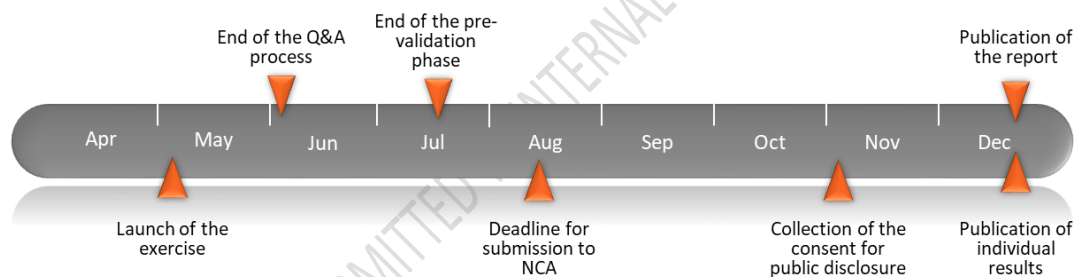
225. The cash management aims at assessing which part of the cash the participating entity is using to cover its policyholder obligations. The liquidity governance gathers information on how the liquidity is managed within the group. Information on the additional liquidity sources tries to assess all other sources of liquidity the participating entity could make use.

226. Moreover, information on the existence (plus short description) of a contingency funding plan and at which level it is set up (undertaking/group) could be asked.

7 Timeline

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

Figure 10- Timeline



228. 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 XX.

229. Beginning of May to beginning of June - Q&A process: the process will take place from the 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. Deadline for participating entities to send questions to the EIOPA Q&A workstream via the national supervisory authorities (NSAs): XX.

230. Beginning of May to mid-July - Pre-validation process. The pre-validation 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.

231. 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 mid-October 2021. Therefore participating entities should stand ready to react to NCAs requests during this period.

232. Last week of October – to the 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.

233. 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

234. Relevant stakeholders have been consulted during the preparation of the stress test package. 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

8 Annexes

8.1 Questionnaire for capital component

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. It should also cover the use of simplifications and approximations for the calculation of the post stress figures, especially for the post stress SCR calculation.

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.

I. Process

1. Please indicate where you deviated from the regular process used during the annual Solvency II reporting.

- Entities in scope
- Consolidation of the data

Please insert your answer here:

2. Please indicate where you deviated from the regular process used for the group solvency calculation during the annual solvency II reporting.

- i. Please indicate whether you excluded specific SCR submodules or risk factors as a simplification, and provide an indication about the materiality of this simplification.

Please insert your answer here:

- ii. Please indicate whether you excluded subsidiaries or other related entities as a simplification, and provide an indication about the materiality of this simplification.

Please insert your answer here:

- iii. Please indicate whether you applied a simplification for the Risk Margin.

Please insert your answer here:

- iv. Please indicate other elements where you deviated from the regular process used for the group solvency calculation (especially the post stress SCR calculation) and provide an indication about the materiality of deviations.

Please insert your answer here:

3. If you intend to apply a group consolidated-based approach, e.g. a method which approximates the impact of the stress on asset over liabilities and SCR on the group as a whole, without aggregating SCR or technical provisions on a solo basis, please attach the technical documentation for this approximation and answer the following questions.

- i. Please describe and discuss where the approximation is applied in practice (for example Sensitivity- or Stress-Test-Analysis in the ORSA).

Please insert your answer here:

- ii. Please describe and discuss the steps undertaken in order to assess the quality of the approximation. Please describe how you measure the quality of the approximation as well as the results of the last quality check.

Please insert your answer here:

- iii. Please describe and discuss whether you amended the approximation for the stress test and why. Please assess the errors which could occur in the stressed environment.

Please insert your answer here:

4. Please indicate other elements where you deviated from the regular process used for the group solvency calculation process (especially the post stress SCR calculation) and provide an indication about the materiality of deviations. Please give a short description of the internal validation process used during this stress test. In what respect does this process deviate from the validation process used for the regular Solvency II reporting?

Please insert your answer here:

5. Please describe the management attention that is given to the results of the stress test. At which committees have (will) these results been discussed?

Please insert your answer here:

II. Stress Scenario without reactive management actions

1. What is your overall assessment of the impact of this scenario on the solvency position of the group? Which new insights or attention points did the results of this scenario provide? Will there be a follow-up on any item or issue as a result of this exercise?

Please insert your answer here:

A. Impact on excess of assets over liabilities

2. Please identify and discuss the underlying drivers behind the change in excess of assets over liabilities.

Please insert your answer here:

3. Please identify and discuss the underlying drivers behind the change in total assets.

- Please identify and discuss the underlying drivers behind the most important changes on the asset side of the balance sheet.
- Please identify and discuss the underlying drivers behind the change in deferred tax assets as well as the valuation of the deferred tax assets after stress.

Please insert your answer here:

4. Please identify and discuss the underlying drivers behind the change in total liabilities.

- Please identify and discuss the underlying drivers behind the most important changes on the liability side of the balance sheet. In case of positive effect after applying a shock, please clearly identify and discuss the magnitude and drivers.
- Please identify and discuss the underlying drivers behind the change in deferred tax liabilities as well as the valuation of the deferred tax liabilities after stress.

Please insert your answer here:

- Please identify and discuss the impact of the use of LTG and Transitional measures on the technical provisions.

Please insert your answer here:

B. Impact on total eligible own funds to meet the group SCR

5. Please identify and discuss the underlying drivers behind material changes in own funds coming from other financial sectors and/or undertakings included via D&A.

Please insert your answer here:

6. Please identify and discuss the underlying drivers behind material changes in eligible own funds to meet the consolidated group SCR.

- Please discuss the impact on the availability at group level of solo eligible own funds.

Please insert your answer here:

7. Please identify and discuss the underlying drivers behind the most important changes in own fund items part of total basic own funds after deductions and ancillary own funds.

Please insert your answer here:

8. Please identify and discuss the underlying drivers behind material changes in the tiering of the total eligible own funds to meet the group SCR.

Please insert your answer here:

C. Impact of group SCR

9. Please identify and discuss the underlying drivers behind material changes in the group SCR coming from entities included with the D&A method.

Please insert your answer here:

10. Please identify and discuss the underlying drivers behind material changes in the group SCR coming from the consolidated group SCR.

- Please discuss the impact of the diversification effect following the consolidation.

Please insert your answer here:

- Please discuss material changes in the consolidated group SCR coming from other financial sectors, non-controlled participations or residual undertakings.

Please insert your answer here:

11. Please identify and discuss the underlying drivers behind material changes in the Basic SCR or the total undiversified components.

- Please identify and discuss the underlying drivers behind the most important changes in the SCR modules or components.

Please insert your answer here:

12. Please identify and discuss the underlying drivers behind the changes in the LAC TP and LAC DT

Please insert your answer here:

13. Please describe the methodology used for the calculation of the LAC DT after stress. In what respect does this methodology deviate from the methodology used for the regular Solvency II reporting?

Please insert your answer here:

14. Please describe and justify the key assumptions used for the calculation of the LAC DT after stress. In particular, if the amount of the LAC DT is bigger than the amount of the DTL before shock, explain how the amount of LAC DT exceeding the DTL pre-shock is justified by probable future profits.

Please address the following issues (as a minimum)

- Role of compliance with the SCR after shock loss

- How have the assumptions used for your projections of future profits been adapted to reflect the increased uncertainty and the extent of compliance with the capital requirements after the shock loss?
- Future profits stemming from new business
 - What time horizon did you use in relation with the number of years' worth of new business after the shock loss that is recognised by the projection?
 - How did you adapt the projections of the business plan to take into account the new financial conditions?
 - What time horizon did you use in relation with the projection horizon within which profits for that given new business will, fiscally, emerge?
 - How did you link economic profits with fiscal profits?
- Future profits from returns on assets
 - How did you adapt the post-shock assumptions on returns on assets?
- Future Management Actions
 - How did you adapt the future management actions?

Please insert your answer here:

15. Please identify and discuss the impact of the use of LTG and Transitional measures on the group SCR.

Please insert your answer here:

III. Reactive management actions

1. Please clearly document the reactive management actions taken.

Please insert your answer here:

2. Please indicate, and provide the underlying drivers on, which shock(s) triggered the application of the reactive management actions.

Please refer explicitly, and to the highest granularity, to the shocks as mentioned in the technical specifications or to specific points in the narrative.

In case a management action was triggered due to more than one shocks, indicate clearly the triggering set of shocks and please answer the question accordingly.

Please insert your answer here:

For each reactive management action identified:

3. Please provide details and discuss:
 - a. The internal policies/processes based on which the decision would have been *taken*.

- b. The internal committees and other stakeholders that would have been required for the decision to be *taken*.

Please insert your answer here:

4. Please provide details and discuss:
 - a. The steps foreseen to be required to follow to *implement* the management action.
 - b. The estimated time required for the action to be *implemented*, clearly indicating the underlying justifications/assumptions of this estimation.

Please insert your answer here:

5. Please indicate the expenses you foresee to be required and/or arise from the reactive management actions.

Please insert your answer here:

6. Please provide details and discuss why the actions taken are appropriate and plausible in the context of the adverse conditions of the stress scenario.

Please clearly identify all relevant assumptions made.

When the management action is of long-term/strategic nature, please clearly discuss and document its estimated long-term impact.

Please insert your answer here:

7. Please provide other relevant comments.

Please insert your answer here:

IV. Stress Scenario with reactive management actions

[WORK IN PROGRESS]

8.2 Questionnaire for liquidity component

[WORK IN PROGRESS]