# IORP STRESS TEST 2025
# TECHNICAL SPECIFICATIONS

| Version | Reference | Amendment(s) |
|---|---|---|
| V0.1 | 07/04/2025 | - |
| V0.2 | 28/04/2025 | - Paragraph 103 amended<br>- Paragraph 121 a) added |

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# ABBREVIATIONS

| | |
|---|---|
| ABS | Asset-backed Securities |
| BoS | Board of Supervisors |
| CLO | Collateralised Loan Obligations |
| CMBS | Commercial Mortgage-backed Securities |
| CQS | Credit Quality Step |
| DB | Defined Benefit |
| DC | Defined Contribution |
| EA | Euro Area |
| ECB | European Central Bank |
| ESRB | European Systemic Risk Board |
| EU | European Union |
| FX | Foreign Exchange |
| IAIS | International Association of Insurance Supervisors |
| IORP(s) | Institution(s) for Occupational Retirement Provision |
| IRS | Interest Rate Swap |
| NCAs | National Competent Authorities |
| MA | Management Action |
| PG | 2025 Stress Test Project Group |
| QRT | Quantitative Reporting Templates |
| REIT | Real Estate Investment Trust |
| RMBS | Residential Mortgage-Backed Security |
| ST | Stress Test |
| TS | Technical Specifications |
| YCD | Yield Curve Down |
| YCU | Yield Curve Up |

# 1 BACKGROUND

1. This document sets out the technical specifications for the 2025 stress test of Institutions for Occupational Retirement Provision (IORPs). It is the fifth Union-wide stress test exercise for IORPs run by EIOPA[1]. As with each of the previous exercises, the overall objective is assessing the resilience of the European IORP sector against adverse market developments. The exercise will focus on liquidity risk. The proposed scenarios are deemed to be severe but plausible and the shocks therein are designed and calibrated preserving economic consistency (i.e., not contradicting economic theories). Like previous stress tests, the 2025 exercise will not be of a pass or fail nature, hence, any potential weaknesses emerging in the post-stress position of the participants do not automatically trigger actions aimed at strengthening their liquidity position.

## 1.1 LEGAL FRAMEWORK

2. EIOPA's legal stress testing framework is based on the following pillars:

3. "The Authority 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 posed by, or to, financial market participants to increase in situations of stress, including potential environmental-related 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. "The Authority shall initiate and coordinate Union-wide assessments of the resilience of financial institutions to adverse market developments. To that end, it shall develop:

- common methodologies for assessing the effect of economic scenarios on an institution's financial position;
- common methodologies for identifying financial institutions to be included in Union-wide assessments;
- common approaches to communication on the outcomes of these assessments of the resilience of financial institutions;

[1] EIOPA ran IORP stress test exercises in 2015, 2017, 2019 and 2022.

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

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

For the purposes of this paragraph, the Authority shall cooperate with the ESRB."[4]

6. In 2019, the EIOPA Board of Supervisors decided to set the frequency of the Union-wide IORP Stress Tests to 3 years and given that the last exercise was in 2022 (based on the methodological framework for stress testing IORPs drafted in 2021), the next one is now in 2025.

## 1.2 MOTIVATION

7. Given the heterogeneity of the European IORP sector, in terms of structures, regulatory frameworks and relative importance for the citizens' future retirement income, monitoring the sector's potential impact on financial stability is a crucial exercise for EIOPA. The recent and current macroeconomic scenario shaped by high (though decreasing) interest rates and potential volatility in interest rate swaps and foreign exchange rates amid geopolitical tensions has the potential to generate tensions in the liquidity position of IORPs, as observed during the UK Gilt crisis[5]. Against this, EIOPA opted to conduct in 2025 a focused exercise based on the assessment of liquidity risk.

8. The findings of the past stress test exercises provided insights into the vulnerabilities and exposures of the IORP sector in terms of current investments and investment behaviour – as well as into the potential effects on security mechanisms and the potential gravity of cuts to members and beneficiaries' retirement income. Due to the long-term nature of pension obligations IORPs can sustain short-term volatility and market downturns for longer periods than other financial institutions, yet the findings highlight the need for supervisory monitoring and the available supervisory tools to be capable of detecting adverse market trends and market developments that can have long-term negative effects.

9. In addition, demographic developments, the shift from Defined Benefit (DB) to Defined Contribution (DC) schemes, new forms of labour - self-employed, part-time, hybrid working arrangements - put pension systems under pressure to find appropriate solutions that are future-proof. Corresponding risk-mitigation techniques in the design of pension schemes, for example the building of reserves and buffers, as well as specific investment/disinvestment strategies for age groups of members, life-cycling, as well as innovative decumulation options may be challenged for their effectiveness under an adverse market scenario.

10. The current economic conditions reflect a significant change that began in 2022. This transition, from nearly a decade of low interest rates to a period of higher rates, continues to have implications for IORPs. Additionally, geopolitical tensions in various regions around the world further contribute to the complexity of the situation.

11. Fluctuations in UK gilt markets and interest rates have triggered substantial margin calls in the British pension fund sector in 2022. Reportedly, pension funds in the UK apply to a significant extent liability-driven investing strategies (LDI) which make extensive use of synthetic leverage obtained through use of interest rate derivatives, repos and LDI funds. These exposures generated

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

[5] On the back of the sudden pressure on the gilts and interest rate movements in 2022, UK pension funds reportedly needed to increase collateral to meet margin calls, which resulted in a further sell-off on the gilt market.

daily margin calls and triggered the liquidation of investments such as long-term gilts, which proved to be illiquid during the crisis.

12. Concerns on whether IORPs can sustain a UK-style crisis in the EEA underline the importance of liquidity monitoring actions also in the EEA and a stress test exercise could support to understand if and where IORPs are vulnerable to liquidity risk in the EEA context.

13. Studies by the EU and national supervisors (ESMA[6], ECB[7] and DNB[8]) provide evidence that in some member states IORPs holding interest rate and foreign exchange derivatives are also vulnerable to interest rate increases and/or an appreciation of foreign currencies, most notably the US dollar, triggering substantial, short-term margin requirements.

14. The Financial Stability Board (FSB) identified weaknesses in risk management and governance as key causes of inadequate liquidity preparedness by some non-bank market participants, including occupational pension funds, during recent incidents of liquidity stress in financial markets. In response, the FSB published[9] eight proposed policy recommendations to enhance the liquidity preparedness of non-bank market participants, including IORPs, for margin and collateral calls in centrally and non-centrally cleared derivatives and securities markets.

15. The increasing materiality of the non-bank financial intermediation (NBFI) advised the European Commission to issue a targeted consultation on NBFIs' macroprudential policies, where the relevant issues identified on IORPs are related to liquidity and potential risks stemming from LDI-exposures[10].

16. EIOPA did a consultation of a draft opinion on the supervision of the liquidity risk management of IORPs in 2024 and is planning to publish the Opinion in 2025.

[6] esma_report_to_the_european_commission_-_central_clearing_obligations_for_pension_scheme_arrangements_-_no_2.pdf (europa.eu)

[7] Financial Stability Review, May 2020 (europa.eu)

[8] https://www.dnb.nl/media/j4tlwfyw/77879-dnb-liquiditeitsrisico-s-derivatenportefeuilles-pensioenfondsen-eng_web.pdf

[9] FSB, Liquidity Preparedness for Margin and Collateral Calls - Consultation report, 17 April 2024

[10] EC (2024) Targeted consultation assessing the adequacy of macroprudential policies for non-bank financial intermediation (NBFI). Available at: Targeted consultation assessing the adequacy of macroprudential policies for non-bank financial intermediation (NBFI) - European Commission (europa.eu)

# 2 OVERVIEW

17. This section explains the structure, the different elements of the exercise and their interrelations, allowing a better understanding of the choices made in the design.

18. Scope, scenarios and disclosure are treated in detail in sections below.

## 2.1 OBJECTIVE

19. The primary objective of the EIOPA's stress test is to assess the impact of adverse scenarios on the liquidity position of IORPs and on the overall sector. Aggregated responses of IORPs to shocks, including these stemming from the application of management actions, are also used to assess potential spillover effects to other sectors with inherent financial stability implications.

20. Following up on the findings of the 2019 IORP stress test, the objective of the 2025 exercise is to assess the liquidity position of IORPs under adverse scenarios in line with the methodological paper on IORP Stress Testing and leveraging on the liquidity framework developed and applied for the insurance sector as well as on the Methodological Framework for Stress-Testing IORPs. Focusing on liquidity risk also takes into consideration the assessments and results of the IORP's risk dashboard and the evidence collected by the EIOPA work on IORP liquidity risk when the future retirement income is linked to the performance of the IORP's investments.

## 2.2 SCOPE

21. All types of IORPs and schemes (simplified to DB and DC schemes) are within the scope of this exercise.

22. The 2025 stress test exercise targets EEA IORPs based on the following criteria defined by EIOPA:

- Step a): inclusion of the member state with a relevant IORP market, based on the sum of the total assets of the registered IORPs – quantitative criterion;
- Step b): inclusion of the IORPs based on a market coverage criterion (based on total assets) for the joint market share of all types of schemes – quantitative criterion;
- Step c): analysis for the inclusion of IORPs based on derivatives usage – expert judgement.

23. The quantitative threshold sets are:

- Step a) EUR 600 million by year-end 2023;
- Step b) 60% market coverage at the same reference date.

24. In addition to the quantitative criteria, National Competent Authorities (NCAs) should ensure that IORPs with material derivative exposures are captured within the target sample (qualitative criteria, see step c) above).

25. A lower coverage than 60%, yet not lower than 50%, is acceptable if, after including the largest IORPs, IORPs with less than EUR 25 million balance sheet total or less than 100 members and beneficiaries would need to be included in the exercise. In addition, a lower coverage than 60% could be acceptable in case of exceptional national circumstances or extraordinary national specificities. An example of the latter is the very high number of very small DC IORPs in IE, which can be addressed in a proportionate manner as set out in the Methodological framework for IORPs stress testing. As a general principle, EIOPA aims at striking the right balance between increasing participation and ensuring anonymity of participants on the one hand, while avoiding overburdening small IORPs on the other hand[11].

26. As a consequence, the 2025 stress test exercise will be carried out in 18 countries (AT, BE, CY, DE, DK, ES, FI, FR, IE, IT, LI, LU, NL, NO, PT, SE, SI, SK).

27. The corresponding NCAs will choose the representative sample of IORPs in their member state. Those participating IORPs will carry out the calculations requested for this exercise and will report their results using the reporting templates provided by EIOPA.

## 2.3 APPROACH

28. In line with the methodological framework for IORPs stress-testing, analytical approaches and tools are identified according to the narrative and perspective of the stress test exercise.

29. The exercise focuses on testing the liquidity position of IORPs against two adverse scenarios that could trigger margin call requirements. The time horizon of the assessment is set to 3 months with shocks frontloaded at the beginning of the period, which makes margin calls on derivative positions and repo agreements, both in cash and other collateral as the main sources of liquidity risk. However, cash-flow information on transfers, contributions and paid benefits are also captured.

30. The methodological approach to the assessment of the baseline and post stress liquidity position will be based on an assessment of the liquidity sources and liquidity needs, which include the analysis of stocks and flows. The calculation of the liquidity position of the participating IORPs will account for the full stack of the liquidity sources and of the liquidity needs in an as much holistic perspective as possible. Net-flows should be computed over a time horizon of 90 days from the reference date 31 December 2024 in line with these technical specifications.

31. 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. Haircuts will be kept constant under baseline and stressed scenario and should be applied to the baseline and shocked values of assets.

32. Where applicable, the exercise considers the different types of schemes (DB or DC).

[11] See also Par. 205 and 206 of "Methodological framework for stress-testing Institutions for Occupational Retirement Provision (IORPs)": https://www.eiopa.europa.eu/document/download/d890dd4a-2a74-43b8-a007-87df206079be_en?filename=Methodological%20framework%20for%20stress%20testing%20IORPs.pdf

33. Liquidity implications for IORPs will be triggered by:

- potential liquidity strains stemming from margin and collateral calls (e.g., exposures to derivatives, exposures to LDI funds) and
- the currency risk (for assets valued in a currency different from the currency used for reporting of the IORP).

34. To gain better insights into the potential changes in the cash-flow patterns, levels and timing, the methodological framework for stress-testing IORPs suggests that a cash-flow analysis can show the effects of an adverse economic scenario, which may lead to either extra sponsor support (in member states where this is relevant) or lower contributions from sponsoring undertakings (e.g. in case of bankruptcy). In addition, and to the extent adjustments can actually be made within the 90-day horizon, members or beneficiaries may pay lower contributions as well or the IORP may curtail benefits of the IORPs' members and beneficiaries.

35. Assessing the severity of potentially lowered cash-inflows and the dependence on additional funding can illustrate the impact on the financial stability and risks to the business continuity of an IORP. In that analysis, potentially available pension protection mechanisms and corresponding cash-inflows can be considered.

## 2.4 NARRATIVE

36. The EIOPA 2025 IORP Stress Test framework incorporates two distinct stress scenarios designed to assess the liquidity vulnerabilities of IORPs towards a shift up and a shift down of swap rates and a consistent set of market shocks.

37. The scenarios elaborate on divergent evolution of the markets amid materialisation of the geopolitical and/or macro-financial risks, resulting in balance sheet stress for the private sector, notably for non-financial corporations, a disorderly market correction, possibly amplified by the non-banking financial sector, deteriorating asset quality and funding liquidity risk for the banking sector, a materialisation of vulnerabilities in the real estate sector, particularly in the commercial real estate sector, and higher political fragmentation leading to a re-emergence of sovereign financing and debt sustainability concerns.

38. In the "yield curve up" (YCU) scenario, EU interest rates increase sharply as market participants anticipate economic developments related to the abrupt escalation of geopolitical tensions. These geopolitical tensions cause disruptions in trade and a sharp rise in commodity prices, which leads to a large upward revision in inflation expectations**.** In this context, the vulnerability of the EU to trade restrictions causes a depreciation of the euro.

39. In the "yield curve down" (YCD) scenario, EU interest rates decline sharply as market participants internalise an unexpected prolongation of geopolitical tensions triggering a loss of confidence in financial markets. Expectations of persistent subdued investment and productivity drag down GDP growth and inflation expectations. The unanticipated prolongation of geopolitical tensions and the worsening of the economic outlook are reflected in a decline of global risk-free rates. The expected particularly severe deterioration in the euro area economic outlook also leads to a large depreciation of the euro.

40. Under both scenarios, the deterioration in the economic outlook leads to a loss of confidence in financial markets and to disorderly adjustments in asset prices. This is particularly true for asset markets in which valuations have been stretched, such as equities. This results in higher volatility and a large increase in risk premia across asset markets. Since the macroeconomic deterioration is more prolonged and more persistent in the YDC scenario, the latter is characterised by an overall more significant financial distress with respect to the YCU scenario.

41. Under both scenarios, the worsening economic outlook and the expected increase in defence spending related to the escalation of the geopolitical tensions would also create concerns among investors about countries' fiscal positions. This triggers a sharp sell-off of sovereign bonds and leads to a large increase in corresponding risk premia. The latter effects differ across EU countries, reflecting heterogeneous fiscal positions. The increase in sovereign risk premia is larger in the YCD scenario, where the geopolitical tensions and economic downturn are prolonged. Increasing concerns about the sustainability of corporate debt leads to a widening of corporate credit spreads and a tightening of credit standards.

42. Tighter financial conditions lead to a fall in residential and commercial real estate prices under both scenarios. The fall in commercial real estate prices is stronger due to the tightening of credit standards and structurally lower post-pandemic demand for some commercial real estate assets, such as offices.

43. The overall more severe financial stress in the YCD scenario than in the YCU scenario is also consistent with the larger falls in real estate and equity prices. This aligns with a more intense and prolonged economic downturn, along with stronger sovereign risk shocks.

## 2.5 DATA COLLECTION

44. Results will be collected through the reporting template that contains information to be used for analysis and validation purposes (ref. to section 5). The templates have been specifically developed for this exercise, however– where possible – alignment with the reporting templates used for IORPs' reporting to EIOPA has been sought.

45. The information collected should also cover the pre- and post-stress position. The information for analysis and validation purposes are kept to the minimum.

## 2.6 DISCLOSURE

46. EIOPA expects to publish a report on the stress test as well as its key findings around mid-December 2025. The report will be accompanied by a list of the IORPs participating in the stress test exercise. The report will not contain any data that can be linked to an individual IORP. Consequently, information aggregated at country level may neither be disclosed, if such data reveals information about individual IORPs. This may, for example, be the case when less than three IORPs of a member state participate in the stress test exercise.

47. Notwithstanding the disclosure of information in the EIOPA report, IORPs may choose to publish their individual results on a voluntary basis.

# 3 METHODOLOGY

48. The reference date of the stress test is 31 December 2024. The base case is the financial situation of the participant at the reference date. The post-stress information has to be provided for the same reference date.

49. The prescribed market shocks are to be applied as one-off shocks at the reference date.

50. As in the reporting to EIOPA[12], the values of assets reported by participating IORPs in this exercise have to be determined on a market consistent basis.

51. All financial data (e.g., amounts) and data points like number of schemes etc. shall be reported in single units (not thousands or millions).

52. The look-through approach should be applied when calculating the impact of the scenarios on the market consistent values of assets (i.e., for Collective Investment Undertakings). Any residual CIUs (i.e., those for which look-through is not feasible) should be shocked according to the asset shock most closely resembling the Collective Investment Undertakings.

53. The stress test examines the liquidity position of IORPs, not of vehicles for indirect investments of an IORP (like Collective Investment Undertakings). In case a scenario affects only the liquidity position of an indirect investment vehicle, this will therefore not be reported in the stress test. It is possible, though, that those effects on the indirect investment vehicle will (partly or completely) spill-over to the IORP. If so, the amount of spillover will have to be reported in the stress test. This might be the case, if the IORP is legally or contractually obliged to provide the vehicle with sufficient liquidity or if the IORP has vital reasons to provide liquidity to the vehicle on a voluntary basis.

54. The methodology applied for the 2025 IORP stress test considers EIOPA's Methodological framework for stress-testing IORPs[13] and also builds on the experience gained during the 2021 and 2024 insurance stress test exercises. Because of its clear focus on liquidity risk and in line with the Methodological framework for stress-testing IORPs[14], the stress test will not use balance sheet tools like the national balance sheet or common balance sheet for its assessments.

55. All types of IORPs and schemes, simplified to DB and DC schemes, are within the scope of the stress test. IORPs should apply the same definition for DB and DC as for the reporting to EIOPA according to the BoS decision[15]. Participating IORPs are requested to report the data for DB and DC schemes separately in the respective columns in the reporting templates. This will allow to analyse

[12] https://www.eiopa.europa.eu/system/files/2023-02/EIOPA-BoS-23%20-%20Decision%20on%20IORPs%20reporting.pdf.pdf

[13] https://www.eiopa.europa.eu/publications/methodological-framework-stress-testing-iorps_en

[14] See table 3.1. on page 26 of the Methodological framework.

[15] https://www.eiopa.europa.eu/system/files/2023-02/EIOPA-BoS-23%20-%20Decision%20on%20IORPs%20reporting.pdf.pdf

whether the different characteristics of those schemes are also linked to different extents of liquidity risk.

56. 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 will account for the full stack of the liquidity sources and compared to the liquidity needs stemming from cash outflows. The liquidity position is shocked in the adverse scenarios through the reduction of the market consistent values of the assets against the prescribed market shocks and potential corresponding changes of cash flows.

57. Liquid assets will be estimated both in the baseline and in the post-stress position via liquidity haircuts automatically applied to the different asset classes considered as potential sources of liquidity in this stress test, as presented in Figure 1. Therefore, the amounts of the assets should be reported in each scenario without application of haircuts.

**Figure 1 - Classification of liquid assets (both for DB and DC) and related liquidity weights**

| | Liquid assets | Weights |
|---|---|---|
| ***S.1*** | **Cash & Bank Deposits & Bank Commercial Paper/Certificates of Deposits** | 1.00 |
| *S.1.1* | of which stemming from repo agreements | |
| ***S.2*** | **Government-Related Securities (Central governments & affiliates)** | |
| *S.2.1* | issued/guaranteed by EU member states (all CQSs) and issued by highly rated non-EU countries (CQS0/1) | 0.95 |
| *S.2.1* | Issued or guaranteed by highly rated non-EU countries (CQS2/3) | 0.75 |
| ***S.3*** | **Exposures to ECB, Central banks, multilateral development banks & international organisations** | |
| *S.3.1* | issued or guaranteed by ECB, EU central banks, supranational institutions (BIS, IMF, EC,..) or Multilateral Development Banks | 0.95 |
| *S.3.2* | issued or guaranteed by central banks of non-EU countries (CQS0/1) | 0.85 |
| ***S.4*** | **High Quality Covered bonds** | |
| *S.4.1* | Extremely high quality covered bonds - CQS0/1 | 0.65 |
| *S.4.2* | High quality covered bonds - CQS2 | 0.60 |
| ***S.5*** | **Corporate bonds not issued by a financial institution or its affiliate** | |
| *S.5.1* | Corporate debt securities (CQS0/1) | 0.65 |
| *S.5.2* | Corporate debt securities (CQS2/3) | 0.60 |
| ***S.6*** | **Corporate bonds issued by a financial institution or its affiliate** | |
| *S.6.1* | Corporate debt securities (CQS0/1) | 0.55 |
| *S.6.2* | Corporate debt securities (CQS2/3) | 0.50 |
| ***S.7*** | **Listed Equity not issued by a financial institution or its affiliate** | 0.40 |
| ***S.8*** | **Listed Equity issued by a financial institution or its affiliate** | 0.30 |
| ***S.9*** | **Collateralised securities (CQS0/1)** | 0.55 |
| ***S.10*** | **Collective Investment Undertakings** | |
| *S.10.1* | Bonds | 0.45 |
| *S.10.2* | Equity | 0.45 |
| *S.10.3* | Mixed | 0.45 |
| *S.10.4* | Real estate | 0.20 |
| *S.10.5* | Alternative funds | 0.20 |
| *S.10.6* | Other investment funds/shares | 0.20 |
| ***S.11*** | **Total Liquid assets** | |

58. Liquidity haircuts, reflected in the "weights" presented in Figure 1, will be kept constant under baseline and stressed scenario and will be applied on the baseline and post stress reported exposure. The calibration of the haircuts is based on the most recent standards defined at international level (e.g., IAIS[16]). Only unencumbered assets should be considered as liquid assets.

[16] IAIS (2022) Liquidity metrics as an ancillary indicator – Level 2 document. Available at: Level-2-document-Liquidity-Metrics-as-an-ancillary-indicator.pdf (iaisweb.org). Haircuts not defined in the IAIS methodology (e.g., CIUs) are in principle calibrated using the haircuts assigned to direct investments and the aggregated exposures of European insurers.

59. The credit quality steps (CQS) reported in Figure 1 are based on the ratings provided by external credit assessment institutions (rating agencies). Rating agencies present their ratings using different rating scales. A conversion table from rating scales and CQS is available in Annex 1.

60. Net cash flows should be computed over a time horizon of 90 days starting from the reference date 31 December 2024 with all the shocks applied instantaneously at the reference date. This means that the baseline net cash flow position should be based on the actual in- and out-flows registered in the first quarter of 2025. The stressed net cash flow should be estimated via the reassessment of cash in- and out-flows against the prescribed market shocks according to the provisions in section 4. Additional specifications are also provided in the reporting template in the *Instructions* sheet.

**Figure 2 - Cash Flows to be reported (both for DB and DC)**

| | | DB | DC |
|---|---|---|---|
| | | **In 90 days** Volume | **In 90 days** Volume |
| | **Contributions** | | |
| *C.1.1* | Total gross contributions receivable | - | - |
| *C.1.1.1* | Contributions by members | - | - |
| *C.1.1.2* | Contributions by the sponsor | - | - |
| *C.1.2* | Reinsurance contributions ceded | - | - |
| ***C.1*** | **Total net contributions receivable** | - | - |
| | **Benefit Payments** | | |
| *C.2.1* | Total gross benefits payable | - | - |
| *C.2.1.1* | of which for retirement | - | - |
| *C.2.1.2* | of which other benefit payments | - | - |
| *C.2.2* | Reinsurance benefits received | - | - |
| ***C.2*** | **Total net benefits payable** | - | - |
| | **Transfers** | | |
| *C.3.1* | transfers-in | - | - |
| *C.3.2* | transfers-out | - | - |
| ***C.3*** | **Total net transfers** | - | - |

| | | DB | DC |
|---|---|---|---|
| | | **In 90 days** Volume | **In 90 days** Volume |
| | **Investments** | | |
| *C.4.1* | Investment related income (e.g. coupons, dividends, fees) | - | - |
| *C.4.2* | Investment related expenses (e.g. service fees, coupons paid, dividends paid) | - | - |
| *C.4.3* | Maturing fixed income assets | - | - |
| *C.4.4* | Purchase of assets | - | - |
| *C.4.5* | Sales of assets | - | - |
| *C.4.6* | Margin / collateral calls inflows | - | - |
| *C.4.6.1* | of which are linked to interest rate derivatives | - | - |
| *C.4.6.2* | of which are linked to FX rate derivatives | - | - |
| *C.4.6.3* | of which are linked to equity derivatives | - | - |
| *C.4.6.4* | of which are linked to other derivatives | - | - |
| *C.4.6.5* | of which are linked to repo agreements | - | - |
| *C.4.7* | Margin / collateral calls outflows | - | - |
| *C.4.7.1* | of which are linked to interest rate derivatives | - | - |
| *C.4.7.2* | of which are linked to FX rate derivatives | - | - |
| *C.4.7.3* | of which are linked to equity derivatives | - | - |
| *C.4.7.4* | of which are linked to other derivatives | - | - |
| *C.4.7.5* | of which are linked to repo agreements | - | - |
| ***C.4*** | **Net cash flows** | - | - |
| | **Other** | | |
| *C.5.1* | Operational expenses (e.g. wages/salaries, rents, service providers) | - | - |
| *C.5.2* | Operational income (e.g. income from provision of services) | - | - |
| *C.5.3* | Other expected cash in-flows not elsewhere reported | - | - |
| *C.5.4* | Other expected cash out-flows not elsewhere reported | - | - |
| ***C.5*** | **Net Cash Flows** | - | - |
| | | | |
| ***C.6*** | **Net cashflow at the end of the period** | **-** | **-** |

61. The flow analysis is not based on detailed cash flows, but on the aggregated relevant flows registered over the 90 days' time horizon.

62. In principle, the assessment of the liquidity flows could be based on the present (discounted) value of the cash in- and out-flows over the prescribed time horizon. But, given the short time horizon (90 days), a simple sum of undiscounted cash in- and out-flows is requested.

63. Participants are also requested to report the market value of the assets traded in the 90-day time horizon under the baseline and adverse scenario with and without the effects of management actions according to the granularity provided in Figure 3.

## Figure 3- Purchase and sales of assets

| | | DB | | DC | |
|---|---|---|---|---|---|
| | Assets | Purchase of assets | Sales of assets | Purchase of assets | Sales of assets |
| ***C.7*** | **Government-Related Securities (Central governments & affiliates)** | - | - | - | - |
| *C.7.1.* | issued/guaranteed by EU member states (all CQSs) and issued by highly rated non-EU countries (CQS0/1) | - | - | - | - |
| *C.7.2.* | Issued or guaranteed by highly rated non-EU countries (CQS2/3) | - | - | - | - |
| *C.7.3.* | Other Government-Related securities | - | - | - | - |
| ***C.8*** | **Exposures to ECB, Central banks, multilateral development banks & international organisations** | - | - | - | - |
| *C.8.1* | issued or guaranteed by ECB, EU central banks, supranational institutions (BIS, IMF, EC,..) or Multilateral Development Banks | - | - | - | - |
| *C.8.2* | issued or guaranteed by central banks of non-EU countries (CQS0/1) | - | - | - | - |
| ***C.9.*** | **High Quality Covered bonds** | - | - | - | - |
| *C.9.1.* | Extremely high quality covered bonds - CQS0/1 | - | - | - | - |
| *C.9.2.* | High quality covered bonds - CQS2 | - | - | - | - |
| ***C.10*** | **Other Covered bonds - CQS3/4/5** | - | - | - | - |
| ***C.11*** | **Corporate bonds not issued by a financial institution or its affiliate** | - | - | - | - |
| *C.11.1* | Corporate debt securities (CQS0/1) | - | - | - | - |
| *C.11.22* | Corporate debt securities (CQS2/3) | - | - | - | - |
| *C.11.3* | Other Corporate debt securities (CQS4/5) | - | - | - | - |
| ***C.12*** | **Corporate bonds issued by a financial institution or its affiliate** | - | - | - | - |
| *C.12.1* | Corporate debt securities (CQS0/1) | - | - | - | - |
| *C.12.2* | Corporate debt securities (CQS2/3) | - | - | - | - |
| *C.12.3* | Other Corporate debt securities (CQS4/5) | - | - | - | - |
| ***C.13*** | **Equity** | - | - | - | - |
| *C.13.1* | Listed Equity not issued by a financial institution or its affiliate | - | - | - | - |
| *C.13.2* | Listed Equity issued by a financial institution or its affiliate | - | - | - | - |
| *C.13.3* | Unlisted Equity | - | - | - | - |
| ***C.14*** | **Collateralised securities (CQS0/1)** | - | - | - | - |
| ***C.15*** | **Collateralised securities (CQS2/3/4/5)** | - | - | - | - |
| ***C.16*** | **Collective Investment Undertakings** | - | - | - | - |
| *C.16.1* | Bonds | - | - | - | - |
| *C.16.2* | Equity | - | - | - | - |
| *C.16.3* | Mixed | - | - | - | - |
| *C.16.4* | Real estate | - | - | - | - |
| *C.16.5* | Alternative funds | - | - | - | - |
| *C.16.6* | Other investment funds/shares | - | - | - | - |
| ***C.17*** | **Other investments** | - | - | - | - |
| ***C.18*** | **Collateralized assets** | - | - | - | - |
| ***C.19*** | **Total Cash Flows** | - | - | - | - |

64. The calculation of the post-stress liquidity position should be performed with and without considering the effects of management actions.

65. In the case of purchases and sales of assets that have been executed in the first quarter of 2025 and reported in the "Baseline", the value to be reported in the columns “stressed” of the template should correspond to the value reported in the baseline shocked according to the related market shocks in case of purchase and market shocks plus haircuts in case of sales. Please note, that this case does not include reduction/increase in the quantity of these assets.

66. In the case management actions are applied (columns “stressed with management actions” in the reporting template), purchases and sales of assets can differ in terms of quantity / type from the assets of the actual flows executed in "Baseline". The amount should reflect the price as of 2024-year-end shocked according to the related market shocks in case of purchase and market shocks

plus haircuts in case of sales. If an asset is issued after 2024 year-end, the 2024 year-end price of a comparable asset shall be used.[17]

67. When re-estimating the price of fixed income assets, participants are allowed to apply simplified approaches such as duration-based approach or a scaling approach. The approach taken should be reported in section "simplification" of the qualitative information included in the reporting template.

68. When computing the post stress liquidity position, IORPs shall not consider potential mitigation effects stemming from local micro- or macro-prudential regulatory regime, like temporary suspension of the IORP's payment obligations.

## 3.1 SIMPLIFICATIONS AND APPROXIMATIONS

69. In principle, shocks in this stress test should be applied to the entire business in force, subject to its different scope and other specificities. Simplifications and approximations are allowed within the limits and the provisions described in this section.

70. IORPs may use simplifications and approximations as long as they are proportionate and provide for a fair approximation of the exact results[18]. Questions regarding simplifications and approximations are included in the qualitative questionnaire of the reporting template.

71. Participating IORPs should be able, upon request of their NCA, to clearly identify all simplifications and approximations used and to provide detailed information (i.e., why is this simplification needed? What is the exact simplification and how is it applied?). Participants should also be able to give a quantitative indication if possible - and at least a qualitative indication - of the materiality of the deviations created when using the simplifications and approximations. This information should allow the NCA, in case it considers that it is necessary to do so, to judge the suitability of each of the simplifications and approximations.

[17] Example on equity:
Baseline: purchase of 100 EUR of stock X and sale of 150 of stock Y (both within the 90 days). Let's assume, for the purpose of the example, an equity shock of -40%, which should be applied to the value of the stocks X and Y.
Case 1: The value of the stock X becomes 100*(1-40%) = 60 EUR and of the stock Y 150*(1-40%) = 90 EUR. To this latter amount (i.e. 90), the corresponding haircuts (weights) should be applied (assuming the weight corresponding to S.7 -Listed Equity not issued by a financial institution or its affiliate of 0.4 then the final amount should be 90*0.4=36 EUR) .
Case 2:

- If additional shares of stock X need to be purchased/sold:

In order to determine the purchase/selling price, the price of stock X as of the 2024-year end should be used, say 95 EUR. Then, the value shall be shocked based on the provided shock to equity (e.g. -40% for the sake of the example), resulting in (1-40%)*95 = 57 EUR. This resulting value shall be used as purchase price. In case of selling, the corresponding haircuts (weights) should be applied to that price (see example above for the above for the additional adjustment by the corresponding haircut (weight) to the selling amount (haircuts (weights) should only be applied to selling amounts. Assuming a weight of 0.30 the resulting selling price is 57*0.4=22.8 EUR. This resulting value shall be used as purchase/selling price.

- If a different stock Z needs to be purchased:

Starting from the price of stock Z as of 2024 year-end, say 80 EUR, then, the provided shock to equity (e.g. -40%) shall be applied resulting in (1-40%)*80 = 48 EUR. This resulting value shall be used as purchase price. In case of selling, the corresponding haircuts (weights) should be applied to that price (see example above on the application of haircut (weight) for selling price). This resulting value shall be used as purchase/selling price.
To the final amount, the corresponding haircuts (weights) should be applied in case of selling.

[18] Some potential simplifications are mentioned in section 3.1.

72. Without prejudice to par. 69 to 71, the following paragraphs describe a specific simplification for the yield curve down-scenario[19] which can be used under the prescribed conditions.

73. The simplification applies to the calculation of the stressed values of assets in the sheet "Stocks" of the reporting template[20]. It can be used only, if the net cash flows for the yield curve down-scenario are positive both in the baseline and the stressed scenario. This condition applies to DB and DC separately.

74. The simplification should be applied in a way so that the shocks are in any case not underestimated, and not materially overestimated. Where there is room for interpretation of the approaches described below, this will be the guiding principle.

75. For Cash etc. (S.1 of sheet „Stocks"): The value of cash can be kept constant in the stressed scenario.

76. For Bonds (S.2, S.3, S.4, S.5, S.6, S.9, S.12.1-S.12.4, S.12.6): The shock can be calculated for the complete portfolio of bonds or for sub-portfolios for which the necessary data (modified duration) is available by a duration-based approach[21].

77. For Equity (S.7, S.8, S.12.5): The maximum shock for equity provided in the scenario can be applied, where „maximum" can either refer to the maximum of all equity shocks provided or to the maximum of all equity shocks provided for all types/regions in which the IORP actually holds equity.

78. For Property (S.12.7, S.12.8): The maximum shock for property provided in the scenario can be applied, where "maximum" can either refer to the maximum of all property shocks provided or to the maximum of all property shocks provided for all types/regions in which the IORP actually holds property.

79. Derivatives (S.12.9), (Re)insurance Recoverables (S.12.12), (Re)insurance Receivables (S.12.13): Those types of assets can be so individual and specific that a "general simplification" cannot be provided. Also, the calculation of shocked flows may depend specifically on the shocked values of those assets, which is a limitation to allowing simplifications beyond the "general" rules for using simplifications in this exercise.

80. Any other assets (S.10.5, S.10.6, S.12.10, S.12.11, S.12.14): Those can be shocked with the simplified shock to equity, as described above.

81. For Collective Investment Undertakings (S.10.1-S.10.4) - CIU: The shocks can be applied as described for all the asset classes above, considering the composition of the CIU.

82. Where assets are held in currencies different from the reporting currency of the IORP, this should also be considered when applying the simplification.

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[19] It is assumed that additional liquidity needs will appear mainly in the yield curve up scenario, therefore an exact calculation is required in that scenario.

[20] It is assumed that no management actions will be applied, if the conditions for application of the simplification are applied, and therefore, it is not necessary to have a simplification for „stressed with management actions".

[21] For example, Shock = (modified) duration ((sub-)portfolio)) * simplified shock, where „simplified shock" is a single shock derived from the scenario provided by EIOPA, considering the composition of the (sub-)portfolio and therefore providing an appropriate level of shock, compliant with the guiding principle stated in the main text.

## 3.2 MANAGEMENT ACTIONS

83. The exercise requires participants to disclose their post stress liquidity position under two assumptions: without and with considering the impact of post-stress Management Actions (MA).

84. MA represent actions that would be taken by a participating IORP in direct response to the stress scenario and that are not assumed to be applied in the baseline scenario. These actions typically include but are not limited to (additional) sales of assets and the activation of repo lines or credit facilities.

85. Under the first assumption, the liquidity position shall be determined ignoring any MA. This assumption is requested to assess the risk exposure and to ensure that the results after stress reflect the instantaneous nature of the stresses. Participating IORPs should therefore not take into account measures, actions or risk mitigating strategies that rely on taking future management actions after the reference date (e.g., activation of repo lines or credit facilities).

86. Under the second assumption, the liquidity position shall be determined considering the impact and effectiveness of MA.

87. The applied MA should be in principle compliant with the governance framework adopted by the participating IORP (i.e., risk management plans, investment strategies, recovery plans) or, given the novelty of the liquidity assessment, specifically identified for this exercise. Any applied MA compliant with the governance framework adopted by the participating IORP shall be identified and referred as such in the reporting templates.

88. MA applied by the IORPs shall be appropriate, plausible and effective within the horizon analysed (90 days). MA taken would need to be realistic and proportionate and consider the time needed to implement them as well as any expenses arising from their usage. In particular, IORPs should consider that, in the event of a stress scenario on financial markets, it may become significantly more challenging for external sources to provide liquidity. So, assumptions must reflect a realistic level of liquidity available on the market under systemic stress.

89. IORPs should be able to provide explanations on whether and how the MA 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) filling in the specific section of the reporting template - tab “Questionnaire”.

90. Against this:

- any additional external source of funding, even if included in the governance framework of the IORP, is not allowed to be implemented in the stressed scenario(s), unless there is a legal or contractual basis for that source enforced before 01 April 2025;
- any MA that requires approval outside the governing bodies of the participants (e.g., approval from the supervising authorities) shall not be implemented in the stressed scenario(s).

91. The applied MA shall be clearly documented in the reporting templates qualitatively and quantitatively providing information on the size of the actions, the time frame required to be effective and on their marginal impacts to the post stress liquidity position (ref. to section 5).

92. This approach to MA makes sure that the stress test delivers realistic quantitative results while at the same time providing qualitative information about the level of detail of documentation of potential MA in the governance framework of the IORPs.

93. If a participant considers that MA are not necessary, the exercise can be limited to providing data on the post stress liquidity positions without the application of MA. MA are expected to be implemented in case of breach of any metric / level specifically defined in the risk management framework of the participant.

# 4 SCENARIO, SHOCKS AND THEIR APPLICATION

94. The scenarios, developed in cooperation with the ESRB, convert the narrative of divergent evolution of the markets amid materialisation of the geopolitical and/or macro-financial risks (refer to section 2.4) into a consistent set of market shocks.

95. Each scenario is the outcome of several simulations based on a number of triggers that reflect the main sources of financial stability risks, with a focus on swap rates and the volatility index. Shocks to corporate and government credit spreads, equity, exchange rates and real estate prices in the EU and other advanced economies are derived by conditioning on the triggering events. Simulations cumulate shocks over a one quarter horizon. The shocks obtained under this horizon are assumed to materialise over a five-day horizon, in line with the narrative of the scenarios. This front-loading assumption allows for obtaining swap rate shifts of a magnitude comparable to those observed during episodes such as the Gilt-crisis. While such rapid shifts have not been observed in the euro area, they are considered plausible in the current geopolitical environment. The sample period chosen for the calibration of both scenarios spans from January 2008 to December 2024. The simulation of the "yield curve up" scenario focuses on the 2022 period, with the emphasis on the significant rise in geopolitical tensions that induce inflationary pressures. For the "yield curve down" scenario, the simulation sampling focuses on the period spanning from 2008 to 2011, to highlight the types of financial amplifications observed in that period, e.g. related to the global financial crisis and to debt sustainability concerns in the euro area. A parallel increase (decrease) in the euro swap rate for all tenors and an increase in the VIX volatility index are the events triggering the adverse YCU (YCD) scenario. The applied approach ensures that the scenarios embody the required characteristics of economic consistency and severity/plausibility.[22]

96. The adverse scenarios are calibrated to imitate some key features of the Gilt-crisis episode that occurred in September 2022 and caused liquidity stress in UK pension funds. To this extent, both scenarios feature strong shifts of the swap rate curves and domestic currency depreciation. While rapid unravelling as the ones witnessed in the Gilt-crisis have not been observed in the euro area, they are deemed plausible in the current context. Both scenarios are calibrated to be severe, consistent with a materialisation of tail risks, amid high geopolitical uncertainty stemming from trade disputes and multiple conflicts worldwide. In the YCU scenario, the escalation of geopolitical

[22] The overall probability of materialisation of the scenarios depends on several factors, including the probabilities of the triggering events and their level of correlation. The scenarios have been calibrated based on distributions conditional on the materialisation of triggering events whereby the VIX index and the euro swap rates shocks are assumed to reach given thresholds (100 bps and -100 bps in the "yield curve up" and "yield curve down" scenarios, respectively; 30% for the VIX in both scenarios). Based on the full historical distribution, the marginal cumulative probability of the VIX reaching levels (at least) equal to the threshold assumed in the triggering event is 13.9%. In the "yield curve up" scenario, the corresponding marginal cumulative probabilities for the 1-year swap rate and the 10-year swap rate are 2.4% and 2.9%, respectively. The joint likelihood of the three triggers occurring is 0.2% based on the historical sample distribution. In the "yield curve down" scenario, based on the full historical distribution, the marginal cumulative probability of the triggers is 3.2% for both the 1-year swap rate and the 10-year swap rate. The joint likelihood of the three triggers occurring is 0.1% based on the historical sample distribution. The above probabilities could also be computed by referring to simulated distributions that represent the regularities specific to periods featuring high levels of geopolitical risks, in line with the current risk environment. Based on such simulated distribution, the joint likelihood of the three triggers occurring would be 6.5% and 1.0%, for the "yield curve up" and the "yield curve down" scenario, respectively.

tensions affects the supply side of the economy, resulting in inflationary effects and triggering an upward shift of the swap rates curves. In comparison, in the YCD scenario, geopolitical tensions affect the demand side relatively more, triggering a persistent recessionary and disinflationary environment, hence resulting in a downward shift of the swap rates curves.

97. This section provides detailed information on the shocks and their application for the calculation of the liquidity post stress positions.

## 4.1 APPLICATION OF MARKET SHOCKS

98. Market shocks are assumed to represent one-off, instantaneous, and simultaneous shifts in asset prices relative to their end-2024 levels.

99. A detailed overview of the market stress parameters is contained in the technical information files, which accompanies these specifications.

100. The market stress parameters refer to the following risk drivers:

- swap rates (bps);
- sovereign bond spreads;
- corporate bond and covered bond spreads;
- equity prices;
- real estate prices (residential and office & commercial);
- residential mortgage-backed securities spreads (RMBS);
- exchange rates.

101. Shocks to swap rates (bps) provided in the technical information[23], shall be used as input to:

- Revaluate post stress position of fixed income assets and other interest rate sensitive positions. For example, for fixed income type of assets the technical information files provides the shocks to spreads, in which case, to reach the shock to yields, the interest rate swap (IRS) shock should be taken into account. This is illustrated in more detail in a subsequent paragraph.
- Revaluate other asset classes such as derivatives. The liquidity needs stemming from the net IRS position would have to be estimated based on the prescribed shocks to IRS.

102. This paragraph is relevant for fixed income type of assets (among others) and it provides a way to derive the corresponding changes in the yields, from the information provided in the technical information files (which refers to change in spreads against the baseline). The following example illustrates the process for the example of a bond[24]:

[23] This refers to worksheet "SWAP rates" of the technical information files.

[24] The example refers to fixed income assets denominated in Euro. For fixed income assets denominated in other currency please also refer to par.115.

a. The stressed level of the EUR swap rates is given by the following equation, assuming the same tenors are considered: $\mathrm{SWAP}_t^{\mathrm{Stress}} = \mathrm{SWAP}_t^{\mathrm{Base}} + \Delta\mathrm{SWAP\_level}_t$;

b. The yield level of a bond generally includes a spread on top of the swap curve. Therefore, the yield of a bond with a specific maturity can be expressed as $\mathrm{Yield\_level}_t = \mathrm{SWAP\_level}_t + \mathrm{Spread\_level}_t$ (where the swap term equals the maturity of the bond);

c. The shock levels for spreads and swaps (i.e., delta) is what is shown in the technical information files. The change in yields can then be derived as follows, with the right hand side implied by the shocks in the technical information files: $\Delta\mathrm{Yield\_level}_t = \Delta\mathrm{SWAP\_level}_t + \Delta\mathrm{Spread\_level}_t$

d. In order to provide an illustrative example for the YCU scenario to reach the yield shock of 10Y Belgian government bond (i.e. $\Delta\mathrm{Yield_level}_{10}$using the notation above), the $\Delta\mathrm{SWAP\_level}_{10}$ can be retrieved directly from the technical information files which amounts to 100.3 bps, and also the $\Delta\mathrm{Spread\_level}_{10}$ for the 10Y which amounts to 72 bps. Finally, the $\Delta\mathrm{Yield\_level}_{10}$ = 172.3 bps.

103. Shocks to sovereign bonds and other securities with a duration for maturities not provided in the technical information files 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.

104. Sovereign bonds issued by countries not explicitly covered shall be treated with shocks to other advanced economies or emerging markets according to the IMF classification. [25]

105. No specific shock to spreads 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 IRS.

106. The technical information files also provide shocks to corporate bonds spreads, split by credit worthiness, financial / non-financial[26] and region (or country)/advanced/emerging markets.

107. Similar structure, but with different granularity, is provided for covered bonds and RMBS.

108. Shocks to corporate bonds[27], covered bonds or RMBS shall be applied as prescribed for the government bonds. Shocks to spreads should be applied homogeneously to all the maturities.

[25] A reference list for "advances economies" and "emerging markets" can be retrieved from the IMF World Economic Outlook, October 2023 - statistical appendix - Report available at: World Economic Outlook, October 2023: Navigating Global Divergences (imf.org)

[26] 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".

[27] Also for private credit.

109. For structured notes the spread shocks to corporate bonds shall be applied.

110. Additional specifications should be followed for bonds wherever applicable:

- Bonds issued by corporations based in non-explicitly covered geographical areas shall be shocked with shocks to other advanced economies or emerging markets according to the IMF classification[28];
- 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 and RMBS with lower ratings than BBB shall be shocked according to the BBB shock

111. The shocks for equities are provided in terms of percentage changes in the stock prices per geographical area and should be applied to the market consistent value of the equity at the reference date. For unlisted equities the same shock application shall be followed.

112. Equities in geographical areas whose shocks are not prescribed shall be shocked according to the average shocks provided for larger geographical areas, e.g. other advanced economies, and emerging markets. This applies to listed equities and unlisted equities.

113. 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).

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

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

116. Shocks to real estate should be also partially applied to the balance-sheet item “property plant & equipment held for own use”. Specifically, commercial properties for own use (including offices) should be treated in line with the office & commercial real estate held for investment purposes and property for own use classified as residential should be treated with the shocks to residential real estate held for investment purpose. Equipment should be kept constant with respect to the baseline.

117. Property other than for own use should be fully shocked according to the shocks provided to the area where they are located.[29]

118. Loans and mortgage portfolios (e.g., collateralised loans or mortgages to individuals and other collateralised loans and mortgages), should be revaluated according to the spread shocks

[28] Please refer to the following publication World Economic Outlook, October 2023: Navigating Global Divergences (imf.org).

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

provided to RMBS.[30] The technical information files provide the relevant shocks for geographical areas and credit ratings. Only in case the rating quality of the (different) portfolio(s) cannot be determined, the following approach can be followed:

a. In case information on the Loan-to-Value (LTV) of the portfolio is available, for portfolios with LTV<80% an A rating quality has to be assumed; for portfolios with LTV>=80% a BBB rating quality has to be assumed

b. In case LTV information is not available, a BBB rating quality has to be assumed for the non-rated portfolios.

119. The post stress value of Collateralised Loan Obligations (CLO), Commercial Mortgage-backed Securities (CMBS) and Asset-backed Securities (ABS) exposures (or other collateralized securities) shall also be determined applying the RMBS shocks.

120. FX derivatives should be shocked in line with the exchange rate shocks provided in the technical files.

121. Other assets classes not specified shall be kept constant in value with respect to the baseline.

121 a) Private equity and investment in infrastructure should be treated in line with the type of underlying asset classes (e.g., stocks: with shocks to equity, debt: with shocks to corporate bonds). Other asset classes shall not be shocked as specified in the Technical Specifications par. 121. Also, if an investment is in another currency, its value should be shocked according to the FX shock provided in the technical information file.

122. In general, assets denominated in a currency other than the currency of the country of issuance should be first shocked according to the shock applicable to the respective asset class and then, the resulting amount shall be transformed into the reporting currency by applying the exchange rate registered at the reference date and the prescribed shocks to FX. Example for bonds: an IORP with the reporting currency EUR holds two bonds: “bond 1” denominated in EUR and “bond 2” denominated in USD. Both bonds shall be treated according to the shock prescribed to the respective type of bond. The bond denominated in USD should then be converted in the reporting currency of the participant (EUR), considering also the shocks to FX. For shocks to swap rates denominated in other currencies that are not reflected in the technical information, the EA shock should be applied.

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

# 5 REPORTING TEMPLATES

123. The reporting templates are designed in spreadsheets. The qualitative questionnaires are embedded in the templates.

124. Participants shall fill the embedded qualitative templates as extensive as possible. Only in the case that residual information is needed for the relevant explanation, e.g., in the form of graphs or tables, the participants can provide this information to NCAs using a Word document. The document shall make explicit reference in case it is related to a specific reporting template or cells.

125. Participants are expected to report under two scenarios: Yield Curve Up (YCU) and Yield Curve Down (YCD).

126. For each scenario, participants shall provide three sets of data: baseline, stress scenario and stress scenario with management actions. In case no management actions are applied, the corresponding template shall still be filled-in by using the stress scenario data.

127. The sheet “Instructions” of the reporting template provides relevant definitions and further guidance for filling in the reporting templates.

## 5.1 QUANTITATIVE INFORMATION

128. The set of templates to be used to report the results under baseline and stressed scenarios are to a degree based on the Occupational Pensions Regulatory Reporting.

129. Participating entities shall fill in the quantitative reporting templates in the provided spreadsheets. The quantitative reporting templates are structured as follow:

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

b. Stocks template (Template [Stocks], baseline and stressed scenarios results);

c. Geographical breakdown (Template [Geographical breakdown], split of government bonds and equity according to the granularity of shocks, baseline and stressed scenarios results);

d. Breakdown by rating (Template [Breakdown by ratings], split of corporate bonds, covered bonds and RMBS according to the granularity of shocks, baseline and stressed scenarios results);

130. The set of templates contains detailed breakdowns based on the type of scheme, such as DB or DC schemes.

131. The flows template collects a set of information on the net cash position of the IORPs over a 90-day time horizon starting from QRT PF.51.01 focusing on the inflows and outflows stemming from:

- Contributions

- Benefit Payments
- Transfers-in/out;
- investments;
- other flows.

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

133. The stocks template contains detailed information on the asset allocation for DB and DC schemes (based on regular reporting PF.06.02). The amounts of assets should be reported in each scenario without application of haircuts.

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

## 5.2 QUALITATIVE INFORMATION

135. Quantitative information is collected via the spreadsheet “Questionnaire” embedded in the reporting template.

136. For the purpose of having a sound understanding of the stress test results and to allow for a proper data quality assurance process, participating IORPs are requested to provide sufficient and relevant information (as part of the qualitative information) in line with the approach followed to run the calculations as explained in the previous chapters.

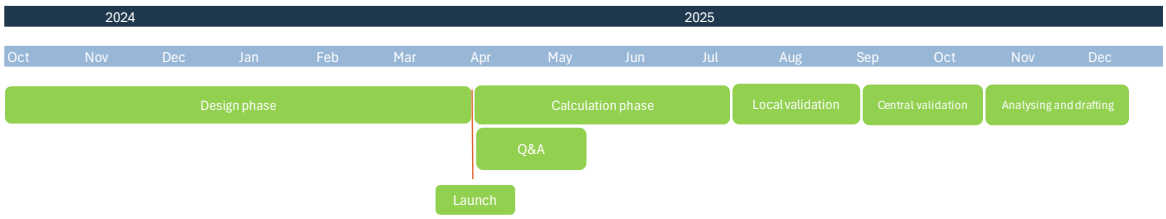
137. The aim of the questionnaire is to collect information on figures provided in the quantitative reporting templates.

- other sources of liquidity;
- potential management actions taken against the prescribed shocks to liquidity;
- cash management;
- liquidity governance;
- simplifications.

# 6 TIMELINE

138. The timeline for the 2025 IORP stress test is as follows:

**Figure 4 – Timeline**




139. Beginning of April to mid-July - Calculation phase: the launch of the exercise is planned for **7 April 2025.** During the calculation phase, participants are requested to calculate the results according to the prescribed scenarios. Participants are requested to submit the filled in templates to NCAs by **11 July 2025.**

140. End of April to End of May - Question & Answer (Q&A) process: the process will take place from 21 April 2024 for five weeks. This timeline is deemed appropriate and strikes the right balance between the need to have enough time to request potential clarifications and the need to have a stable stress test framework (e.g., technical specifications, templates and scenarios) as soon as possible in the process. Participating IORPs can send questions to the EIOPA Q&A workstream via the NCAs at any time during the Q&A process. The deadline for the submission of questions is **19 May 2025.**

141. Interaction between NCAs and participants during the calculation phase: In case of doubt, 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, this should be bilaterally discussed and resolved between participants and NCAs before the submission of results to NCAs.

142. Mid-July 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 NCAs and participants allows a thorough analysis of the submissions. The central level process will focus on consistency at a European level. 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-July and end-October 2025. Therefore, participating IORPs should stand ready to react to NCAs requests during this period.

143. Mid-October to mid-December - Drafting: The two-month time window will be devoted to drafting the stress test report and to the approval process. The aim is allowing the publication of the IORP stress test report before the end of the year.

## 6.1 CONSULTATION PROCESS

Relevant stakeholders have been consulted during the preparation of the stress test package through interactions at technical level. 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 liquidity position post stress, relevant elements of the technical specifications and reporting templates.

# ANNEX 1 CREDIT QUALITY STEPS

Different external credit assessment institutions (rating agencies) present their ratings using different rating scales. IORPs may use ratings produced by different rating agencies. Therefore it is necessary to describe how these ratings should be mapped to the "credit quality steps" referred to in these technical specifications. The following table presents such a mapping. This table is only to be used for application in IORP stress test exercises.

| CQS level | Credit Quality Description | Moody's Rating | S&P Rating | Fitch Rating |
|---|---|---|---|---|
| CQS 0 | Highest Quality (Low Risk) | Aaa | AAA | AAA |
| CQS 1 | Very high Quality (Low Risk) | Aa1 to Aa3 | AA+ to AA- | AA+ to AA- |
| CQS 2 | High Quality (Moderate Risk) | A1 to A3 | A+ to A- | A+ to A- |
| CQS 3 | Investment Grade (Medium Risk) | Baa1 to Baa3 | BBB+ to BBB- | BBB+ to BBB- |
| CQS 4 | Non-Investment Grade (High Yield) | Ba1 to Ba3 | BB+ to BB- | BB+ to BB- |
| CQS 5 | Speculative (Higher Risk) | B1 to B3 | B+ to B- | B+ to B- |
| CQS 6 | Very High Risk / Default | Caa1 & below | CCC+ & below | CCC+ & below |