



Technical Note on

Insurance Stress Test 2024

Technical specifications and results summary

A close-up photograph of several light-colored wooden blocks stacked together. The top block is slightly offset to the right, revealing the word 'INSURANCE' printed in a bold, black, sans-serif font on its side. Two hands are visible at the top of the frame, with fingers resting on the top surfaces of the blocks, suggesting they are being held or arranged. The background is a dark, solid color, likely blue or black.

A hand is shown in the upper right corner, placing a wooden block with the word "INSURANCE" printed on it onto a stack of other wooden blocks. The background is dark and out of focus.

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1 | General overview

Executive summary

The EIOPA's 2024 stress test exercise focuses on economic consequences of a re-intensification or prolongation of geopolitical tensions. It evaluates the impact of such a scenario on the capital and liquidity position of European insurers

Context	Objectives	Scope of the sample
<ul style="list-style-type: none">EIOPA carries out regular insurance stress tests to assess how well the European insurance industry is able to cope with severe adverse developments of financial and economic conditions. In April 2024, EIOPA launched its 2024 stress test exercise focused on economic consequences of a re-intensification or prolongation of geopolitical tensions. In this context, EIOPA has published the report on the results of this stress test for insurers on December 17, 2024.	<ul style="list-style-type: none">Assess the resilience of individual insurers to severe adverse scenarios, such as escalating geopolitical tensions. The results will allow EIOPA to identify vulnerabilities in the sector and make recommendations to the industry and supervisors to discuss with insurers the corrective actions needed to improve their resilience, both at the European and national levels. Estimate potential spillover effects from the insurance sector to other parts of the financial system triggered by reactions to prescribed shocks.	<p>48 undertakings registered in 20 European jurisdictions, covering 75% of the EU-wide market based on Solvency II total assets.</p>

About the exercise

Methodological approach	Adverse scenario	Reporting templates	Results
<ul style="list-style-type: none">The exercise assesses the resilience from a capital and a liquidity assessment perspective.Insurance undertakings participating are requested to estimate their position under two assumptions: i) fixed Balance Sheet (BS), where only embedded management actions are allowed; and ii) constrained BS, where a set of identified reactive management actions are allowed.	<ul style="list-style-type: none">The scenario reflects the ESRB's assessment of prevailing sources of systemic risks identified for the EU financial system as of March 2024.The adverse scenario describes shocks to key financial variables in a hypothetical situation triggered by the materialisation of risks to which the EU insurance sector is exposed. The scenario horizon is one year.	<ul style="list-style-type: none">Participants use spreadsheet templates for capital and liquidity reporting, filling out embedded qualitative questionnaires. They provide qualitative explanations for indicators. Reporting is required under three scenarios, and each entity must submit one capital template (group data) and one liquidity template per relevant solo entity for the liquidity assessment.	<ul style="list-style-type: none">The exercise shows that insurers in the EEA are overall well-capitalized and able to meet the Solvency II requirements even under severe but plausible shocks. However, significant vulnerabilities were identified: the aggregate solvency ratio dropped by 98.5 percentage points to 123.3%, and liquidity positions showed a €40.9 billion deficit, improving with reactive management actions in this adverse scenario.

2 | Methodological approach

Capital and liquidity component



The exercises rely on the Solvency II framework as a common ground for assessing the resilience of the insurance industry against adverse developments. The reference date is Dec. 31, 2023, and the base case is the financial situation of the participant at that date



Capital component

- The Solvency II framework is used to assess the resilience of the insurance industry against adverse scenarios. The **shocks** are applied to the entire in-force business at the reference date, using the same model and approach as the regular Solvency II valuation.
- The results for the group balance sheet post-stress should be **consistent with the baseline situation**, and the shocks should be applied to the whole perimeter of the group. The **look-through approach** should be applied when calculating the impact of the scenarios on the assets and liabilities.
- **Simplifications** in the approach to the calculation of the post-stress position and on the perimeter of application of the shocks can be applied upon discussion with the NCAs.
- The **Long-Term Guarantees (LTG) and Transitional measures** are included in the analysis of the stress test, and their impact on the post-stress technical provisions, own funds and Solvency Capital Requirement (SCR) has to be calculated. The calibration of the LTG measures should be unchanged to the baseline, unless the shocks trigger a material change.
- The consistency with the Solvency II framework will be granted also in the calibration of **the Ultimate Forward Rate (UFR)** and the **symmetric adjustment mechanism** for the equity risk charge under the stressed scenario. The UFR will be the value to be used in 2024 for the calculation of the regular Solvency II position.



Liquidity component

- The **methodology** is based on a hybrid stocks / flows assessment of the liquidity sources and liquidity needs. The calculation of the liquidity position will account for the full stack of the liquidity sources and of the liquidity needs.
- **Liquid assets** are estimated in the baseline and post-stress position via liquidity haircuts applied to different asset classes. Liquidity haircuts will be kept constant under baseline and stressed scenarios and will be applied on the baseline and post-stress reported exposure.
- **Net-flows** should be computed over a 90-day time horizon starting 31 December 2023. The baseline net-flow position should be based on the actual in- and out-flows registered in Q1.24. The stressed net flow should be estimated via the reassessment of cashflows against market and insurance-specific shocks.
- Calculation of post-stress positions is performed under **fixed balance sheet and constraint balance sheet assumptions**.
- Participants must report the number of **securities traded** in the 90-day time horizon under baseline and adverse scenarios and under fixed and constrained balance sheet approach.
- The assessment of the **liquidity of the liabilities** is based on the classification according to a criterion based on the economic penalties to lapse. Specific liquidity weights are automatically applied to each bucket; and should be reported in each scenario without the application of liquidity weights.



The exercise is based on the Solvency II framework and a full balance sheet approach.
Participants can apply simplifications and approximations for the post-stress calculations



Simplifications and approximations

- Based on the Solvency II framework and a full BS approach. Simplifications and proxies are allowed for the post-stress calculations after discussing with supervisors.
- **Exclusions of part of the business or some entities from the shocks** based on relevance and materiality criteria, using a scaling approach or keeping the baseline position for the excluded parts. The exclusions should not affect the pre-stress value of the group own funds and SCR.
- **Same consolidation method** as the regular Solvency II reporting, but participants can use a combination of full solo reassessment and group consolidated-based approaches, with some possible simplifications.
- The **post-stress SCR must be recalculated** following the same approach as the baseline, but participants can exclude some risk factors or subsidiaries that are not material or relevant for the shocks. They can also apply simplifications for the loss absorbing capacity of deferred taxes.
- Calculation of the post-stress position under fixed and **constrained assumptions**, taking into account the **embedded and reactive management** actions respectively. The management actions should be consistent with the governance framework of the participants.



Management actions

The 2024 exercise requires participants to **calculate their post-stress capital and liquidity position under two assumptions:**

- Under **Fixed balance sheet assumption**, only embedded management actions should be considered, and reactive post-stress management actions should not be applied.
- Under **Constrained balance sheet assumption**, reactive management actions should be taken into account within specific boundaries. The applied reactive actions should be part of the governance framework adopted by the participating entity and should be appropriate, plausible, and realistic. The estimation of the post-stress position should be in line with the Solvency II approach.



SCR recalculation

- Participants are expected to recalculate their Loss Absorbing Capacity of Deferred Taxes (**LACDT**) position according to the standard procedure, but they can use an approach based on average tax rates or set the post-stress LACDT to zero or to the net Deferred tax Liabilities (DTL) if they cannot do a full recalculation.

3

Adverse scenario

Scenario narrative, risks and vulnerabilities



The scenario reflects the ESRB's assessment of prevailing sources of systemic risks identified for the EU financial system as of March 2024

Scenario narrative, risk and vulnerabilities



- The adverse scenario reflects the potential economic consequences of escalated geopolitical tensions. This could lead to supply chain disruptions, lower growth, and higher inflation. The resulting tightening of financing conditions, combined with higher wages and sluggish economic growth, would weigh on corporate profitability and widen credit spreads.
- High government bond yields would tighten financing conditions for public spending, and concerns about sovereign debt sustainability could lead to a further increase in government bond rates. Households would face losses in real income and higher borrowing costs amid higher unemployment, leading to an increase in mortgage defaults and a fall in residential real estate prices.
- The higher cost of debt servicing and the sharp fall in property prices would trigger a sudden repricing of covered bonds and other asset-backed securities. Market reactions could also trigger a sudden revaluation of other financial assets in a high-volatility environment, leading to substantial drops in equity valuations worldwide and losses for hedge funds, real estate investment trusts, and private equity funds. Finally, commodity prices would surge in line with supply chain-driven inflation prospects.

Prevailing sources of systemic risks

Economic Stagnation

A prolonged period of low growth and high inflation increases vulnerabilities for households and firms.

Banking Sector risks

Deteriorating asset quality and profitability prospects pose risks to the banking sector.

Asset price corrections

Disorderly asset price corrections could destabilize financial markets

Financing risks

There is a risk of re-emergence of sovereign and corporate financing risk and debt sustainability concerns.

Real estate risks

Accumulated risks in the real estate sector could materialize, impacting both residential and commercial markets.

3

Adverse scenario

Shocks and their application



The adverse scenario describes shocks to key financial variables in a hypothetical situation triggered by the materialization of risks to which the EU insurance sector is exposed. The scenario horizon is one year



Market shocks

- **Market shocks** are assumed to represent one-off, instantaneous, and simultaneous shifts in asset prices relative to their end-2023 levels. The market stress parameters refer to different risk drivers, such as swap rates, sovereign bond spreads, equity prices, real estate prices, etc.
- **The shocks to swaps** are used to derive the EIOPA RFR curves via the Smith-Wilson model and the SCR interest rate risk.
- **The shocks to spreads** and yields are applied to different types of bonds, depending on their rating, maturity, and issuer. The shocks to equities, real estates, and other assets are applied to the Solvency II value of the equity at the reference date.
- **Specific shocks for different asset classes** are provided, such as government bonds, corporate bonds, covered bonds, RMBS, equities, real estates, loans, etc. It also provides the rules for applying the shocks to assets that are not explicitly covered or have missing information, such as unrated bonds, bonds issued by non-EU institutions, equities in multiple stock exchanges, etc.
- **Assets denominated in a currency other than the currency of the country of issuance** should be first shocked according to the country shock and then converted into the reporting currency by applying the exchange rate registered at the reference date.



Insurance specific shocks

- The marginal impact of the insurance specific shocks to the TP, excess of assets over liabilities and to the OF shall be reported separately.
- Insurance shocks to be applied to specific business lines, such as mass lapse, mortality, disability, and natural catastrophe are defined, and the level of the shocks and the calculation of the post-stress technical provisions and own funds are provided.
- The mass lapse shock applies to the non-mandatory life insurance policies, excluding pension schemes.
- The mortality shock applies to the life and health insurance policies that provide death benefits.
- The disability shock applies to the health insurance policies that provide disability benefits.
- The natural catastrophe shock applies to the non-life insurance policies that cover natural perils.

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Reporting template

Capital and liquidity component

Reporting is required under three scenarios, and each entity submits one capital template (group data) and one liquidity template per relevant solo entity for the liquidity assessment



Capital component

- **Capital component templates** are used to report the results of the stress test under baseline and stressed scenarios, based on the Solvency II QRT reporting and are structured with a baseline and a stress scenario, a stress scenario with reactive management actions and qualitative information.
- **Indicators** are calculated automatically in the templates and provide a comprehensive picture of the major drivers behind the impact of the prescribed scenarios on the BS and on the capital position in the reporting templates.
- **The BS** fully replicates the QRT template for groups/solos. Solvency II figures shall be reported under the baseline, stress scenario with fixed BS and stress scenario with reactive management actions.
- The templates replicate the corresponding Solvency II template and require the application of the step-by-step approach on the impact of **LTG and transitionals**.
- **Information on the OF** is collected under each scenario via the corresponding templates, and **information on capital requirement** shall be provided according to the approach used by the participant in their regular reporting.
- Participants are requested to provide a breakdown of their **asset allocation and liability description** under each scenario, following the granularity and guidance of the technical information file and the Solvency II QRT reporting.
- The full extend of **qualitative information** is included via the dedicated columns for specific reporting lines.



Liquidity component

- **Liquidity component templates** are used to report the results of the liquidity stress test under baseline and stressed scenarios, based on the second methodological paper and the EIOPA liquidity monitoring exercise. Participating entities should collect and submit to the NCA one liquidity template for each of the identified relevant solos. The reporting templates are structured as follows:

Flows template

Collects information on the net cash position of the undertakings over 90-day time horizon, focusing on the inflows and outflows stemming from different types of business and investments.

Stock template

Contains detailed information on the asset allocation and the breakdown of the life best estimate for different types of business. Participants are required to report the post-stress values from the capital component without applying haircuts.

Questionnaire

Collects information on the management of the liquidity position is collected with specific reference to other sources of liquidity, the reactive management actions, the cash management, the liquidity governance, and the simplifications. It is also required information on the existence and description of a liquidity risk management plan and a contingency funding plan, and the inclusion of liquidity stress test in the ORSA report.

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Results of the exercise

Main findings

Significant vulnerabilities were identified in the exercise. The aggregate solvency ratio dropped by 98.5 percentage points from 221,8% to 123,3% due to changes in capital and requirements. Additionally, liquidity positions showed a €40.9 billion deficit, which improved with reactive management actions

Main findings on capital component

- The **aggregate solvency ratio decreases by 98.5 percentage points**, from 221.8% to 123.3% post-stress, rising to 139.9% after reactive management actions. The aggregate reduction in EOF by 40.3% (EUR 276.5 billion) is attributed to changes in the excess of assets over liabilities, with residual effects arising from variations in available own funds' items, the tiering effect, and the consolidation of other entities.
- The **main impacts on non-UL/IL assets stem from CIUs, followed by bonds, while the reduction of life technical provisions provides the largest mitigation effect**. The 7.4% increase in the aggregate post-stress capital requirement (SCR) reflects a balance between lower gross SCR due to market shocks and reduced benefits from the loss-absorbing capacity of technical provisions and deferred taxes.
- Excluding transitional measures, the **aggregate solvency ratio declines from 209.3% in the baseline to 108.7%** with a fixed balance sheet. As expected, removing the LTG measures further amplifies the impact, consistent with their nature and role within the Solvency II framework.

Main findings on liquidity component

- The **adverse scenario** generated **material liquidity strains**, requiring participants to take actions through adjustments in their investment strategy. However, the ample source of available liquid assets allowed insurers to cover the negative net flows generated by the shocks. The **overall liquidity position** of the participants turned to a **negative value under the stressed scenario**, resulting in a shortfall of EUR – 40.9 bn in the FBS from a starting amount of EUR 106.8 bn.
- The **mass lapse shock**, under the assumption of full pay-out of the surrenders within the 3-month time horizon, is the main stress driver of the liquidity outflows for most insurers (especially within life business).
- The **need of cash** forced insurers to move from net-buyers to net sellers of assets.
- In terms of **stocks**, the availability of sufficient liquid assets and the reduced liquid liabilities helped sustaining the liquidity positions of the participants even after the application of the shocks.
- **Investment flow** shows that participants moved from being net buyers of assets in the baseline to net sellers in the stressed scenario to compensate for the losses.

Reactive management actions and potential externalities

- Key risk management actions (RMAs) to mitigate the **impact on the capital component** included **investment strategy** (e.g. de-risking), dividend retention, internal capital raising, expense management, and reinsurance. These actions improved solvency ratios by increasing own funds or reducing capital requirements. However, de-risking may impact long-term profitability and sustainability, while reducing future expenses can enhance current financial metrics but potentially affect business operations over time.
- As per the **liquidity component**, the most applied reactive management action was, by large, the **sale of assets**, followed by the use of pre-committed/funded credit lines and repo agreements, and cuts to dividends and variable remuneration.

5

Why Management Solutions?

Management Solutions has more than 10 years of experience supporting entities in the development of regulatory stress test exercises

- 1 Extensive participation in the various stress test exercises carried out in the financial industry since 2012 (capital, liquidity, climate risk, etc.).
- 2 Qualified and approved provider of capital models by the main European supervisors. 6 framework agreements with the ECB (internal models, stress testing, AQR, PMO, OSI / IMI and support to on-site missions), being the highest rated consultancy in the capital area.
- 3 Extensive experience in the field of capital, ICAAPL and stress testing in more than 60 financial institutions, both for G-SIBs and local entities worldwide.
- 4 Team of more than 300 experts in capital, liquidity and stress testing (modelling, regulatory, impacts, information and systems, ...) based on a multidisciplinary team with quantitative, functional and technical profiles and solid regulatory knowledge.
- 5 "One Firm": global alliance, present in more than 50 countries through its 48 offices.
- 6 Independent firm, with a clear service vocation and a proven track record of successful projects.

A

Annex I: List of entities (1/2)



AT Vienna Insurance Group AG Weiner Versicherung Gruppe



BE Ageas SA/NV



DE Allianz SE

Münchener Rückversicherungs-Gesellschaft AG

HDI Group

R+V Versicherung AG

Debeka Lebensversicherungsverein a. G.

Versicherungskammer Bayern Versicherungsanstalt des öffentlichen Rechts

Viridium Group GmbH & Co KG



DK Danica Pensión, Livsforsikringsaktieselskab

PFA_HOLDING_AS



EE Swedbank Life Insurance SE



EL Ethniki Holdings S.à.r.l



ES Vida-Caixa, Sociedad anónima de seguros y reaseguros

Mapfre, S.A.



FI OP Ryhmä



FR AXA SA

CNP Assurances

CAA

BNP Paribas Cardif

SOGECAP Group

Groupe des assurances du credit Mutel

Covéa

BPCE Assurances

Groupama Assurances Mutuelles

SGAMAG2R La Mondiale



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Annex I: List of entities (2/2)



HR Croatia osiguranje d.d.



IE Irish Life Group Limited



IS Sjóvá-Almennar tryggingar hf.

VIS Vátryggingafélag Íslands hf.

TM tryggingar hf.



IT Assicurazioni Generali S.p.A.

Gruppo Intesa Sanpaolo Vita

Poste Vita Group

UNIPOL Gruppo SPA



LU Lombard International Assurance Holdings S.à r.l.



NL NN Groop N.V.

Achmea B.V.

ASR Nederland N.V.

Athora Netherlands NV



NO Kommunal Landspensjonskasse

Storebrand ASA



PL Powszechny Zaklad Ubezpieczen



PT LongRun Portugal, SGPS



SE Skandia Försäkringsgrupp

Nordea Life Holding AB Group

If SkadeförsäkringAB (publ)

Skupina Triglav



A

Annex II: Abbreviations


BS	Balance Sheet
CBS	Constrained Balance Sheet
CIU	Collective Investment Undertaking
DTL	Deferred Tax Liabilities
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
EOF	Eligible Own Funds
ESRB	European Systemic Risk Board
FBS	Fixed Balance Sheet
LACDT	Loss Absorbing Capacity of Deferred Taxes
LTG	Long-Term Guarantees
NCA	National Competent Authorities
OF	Own Funds
ORSA	Own Risk and Solvency Assessment
QRT	Quantitative Reporting Templates
RMA	Reactive Management Actions


RMBS	Residential Mortgage-Backed Security
SCR	Solvency Capital Requirement
TP	Technical Provisions
UFR	Ultimate Forward Rate




International
One Firm


Multiscope
Team


Best practice
know-how


Proven
Experience


Maximum
Commitment

INSURANC

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