EIOPA

# FINANCIAL STABILITY REPORT

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European Insurance and
Occupational Pensions Authority

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# FOREWORD

During 2025 the European economy remained vulnerable, with modest growth driven by trade-related tensions, still low productivity and limited fiscal space due to high debt. Inflation was relatively stable, around the target level.

Corporate defaults have sparked concerns about credit risk and, it is unclear whether these are one-off cases or they are of a more systemic nature. Despite each case has its own circumstances, many supervisors and investors are concerned and are casting doubts on the risks hidden behind the complexity and the valuation uncertainty of private credit exposures.

Market prices seem driven by overly optimistic expectations and the AI boom's similarity to the dot-com bubble is raising doubts about the AI actual economic impact on productivity.

In the IORPs sector, the shift from defined benefit to defined contribution schemes could potentially generate significant impacts on the markets. As defined contribution schemes do not require matching long-term guaranteed benefits, the demand for long duration, high quality bonds might decrease, potentially impacting yields, credit spreads and liquidity. Ensuring a well-paced and orchestrated transition helps to smooth unintended effects.

The Savings and Investments Union (SIU) initiative will be central to support the European economy to restore growth and competitiveness in the coming years. Yet, its success rests on trust in resilient, well-supervised and independent financial systems.

In the context of the Solvency II review, EIOPA acknowledges the Commission’s decision to introduce capital easing measures. Although the sector is well capitalised and proved resilience, the changes introduced may increase risks for individual companies, potentially undermining sector-wide resilience. The supervisory community stands ready to work within this new framework and welcomes the mandate to monitor insurers’ investment flows to assess whether the capital released will be used to fuel our economy. Transparency is also critical. Where significant capital relief is introduced, enhancing disclosure of firm-level stress-test outcomes – as it is already standard practice in other sectors– can strengthen market discipline, governance, and public trust.

Moreover, it is crucial to manage failures effectively to ensure that policyholders are protected and financial stability is safeguarded. To this end, EIOPA is currently implementing the Insurance Recovery and Resolution Directive (IRRD), which will increase resilience through better preparation of insurers and authorities, as well as more efficient interventions, especially in cross-border contexts. Ideally, a minimum set of harmonised rules on Insurance Guarantee Schemes would complement this framework, pursuing the same objectives.

Nevertheless, to remain competitive, it is essential to make the regulatory framework nimbler. While actions have already been taken at EIOPA, further steps could be taken fostering cooperation among supervisors, for example by making data sharing among supervisors easier and fit for purpose, and contributing to orchestrated system wide stress test initiatives.

Finally, to ensure the EU's stability, EIOPA must remain prepared to assess risks. These can stem from structural shifts in the insurance industry, increasing exposures to alternative assets and private credit, or can be exogenous systemic shocks such as credit defaults, potential AI bubble(s), and swift changes in the geopolitical scene. Continuous work on scenario analysis, stress testing, and crisis simulations, in close cooperation with national authorities, would help strengthening Europe’s resilience.

# KEY DEVELOPMENTS AND RISKS

**The European macroeconomic context in 2025 is marked by fragility and subdued growth, largely due to ongoing trade-political tensions and elevated debt levels (Figure 1).** Although the EU-US trade deal reduced uncertainty, the imposition of steep tariffs (15% on many EU goods) has heightened tensions and further hindered a sluggish growth. In this context, the primary concern is not the final level of tariffs, which is historically high, but rather their macroeconomic and real economy implications. The resulting fragmentation could further dampen economic growth prospects, trigger a retreat from international cooperation, and threaten global resilience. Growth forecasts in EU have been downgraded, with the European Commission projecting 1.1% GDP growth in 2025, rising to 1.5% in 2026. Moreover, the effects of fragmentation are not uniformly distributed across regions, with some countries and sectors experiencing more pronounced disruptions. Decoupling of economies may limit opportunities for cross-border investments and insurance business, potentially impacting portfolio diversification.

**Monetary policy is entering a period of stability, but sovereign risk is increasing.** While inflation is hovering around the 2% target (Figure 2), driven primarily by services prices, higher bond yields intensify pressure on government finances. Rising borrowing costs could strain fiscal sustainability. In fact, expenses for defence are increasing, with the "ReArm Europe" plan envisioning up to EUR 800 billion in funding to foster military infrastructure, requiring member states to ease fiscal rules to accommodate this effort.

**The debt-to-GDP ratio remains stable at around 88% for the EEA, but the deficit is increasing in some areas (Figures 3 and 4).** The recent political turmoil in France has resurfaced sovereign spread risk, although without a spillover effect. Additionally, the long dated sovereign yields increased across advanced economies (e.g., JP, UK, FR, DE) due to various factors such as fiscal concerns, bond supply, central banks' quantitative tightening, political instability, and structural shifts in demand for long-term bonds[1].

[1] For example, structural shift might be: 1) a potential rebalancing of international savings and investments may emerge, marked by a decline in savings and a surge in investment demand. This shift could have notable consequences, including a potential increase in the long-term neutral interest rate 2) retiring baby boomers depleting pension pools, rising fiscal spending, boosting safe bond issuance, and growing investment appetite for cutting-edge technologies.

Figure 1: Real GDP growth

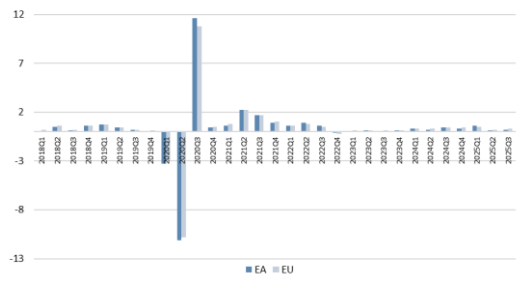



Figure 2: Euro area Inflation, main components

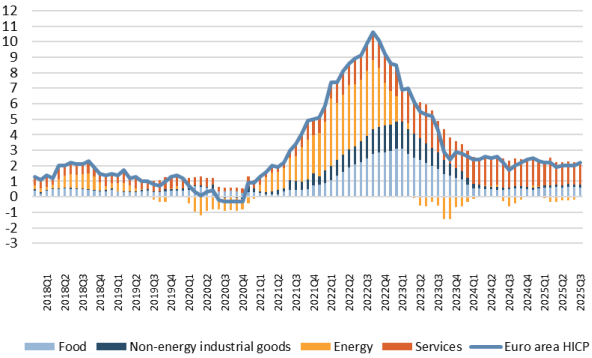
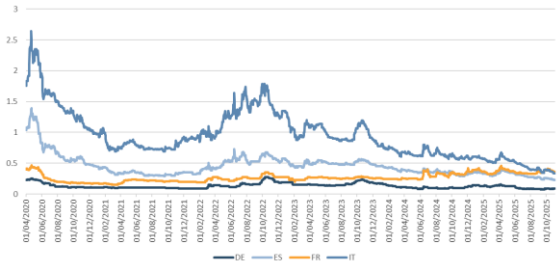



Figure 3: Deficit or surplus on GDP ratio


Figure 4: Sovereign Credit Default Swaps (5y) (in %)




*Source: European Central Bank, Eurostat 2025 and Refinitiv, cut-off date 3.11.2025*

**Following the valuations plunge of April, financial markets have been calm over the summer during the chaotic period of tariff threats. However, market reactions have recently been triggered by the uncertainty on sector and country-specific trade agreements outside Europe and by political/fiscal instability also within Europe. Equity market capitalizations are robust especially for the financial sector (Figure 5).** The Fed's first rate cut in mid-September 2025 also sparked optimism. The weaker dollar supported emerging market valuations, as their purchasing power improved and cheaper imports helped to keep inflation under control. Looking at the 10 year government yields, a slight increase was observed in recent months, particularly in France, as a consequence of the political turmoil and increased deficit (Figure 6).

Figure 5: Equity market performance

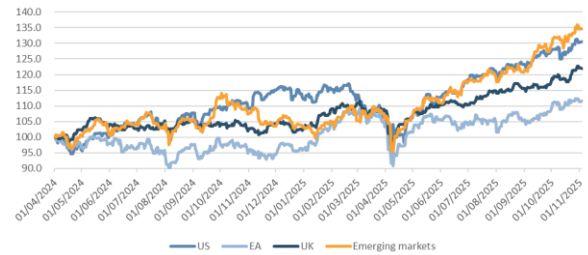
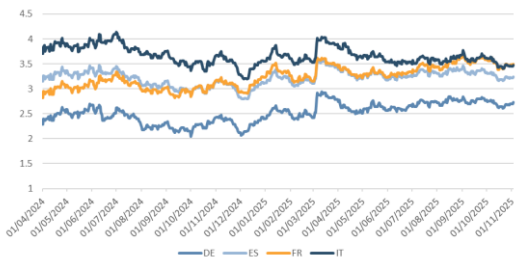



Figure 6: 10-year government bond yields (in %)




*Source: Refinitiv, cut-off date 3.11.2025*

**The Insurance and Institutions for Occupational Retirement Provision (IORPs) sectors have shown resilient capital positions**, despite the fragile economic environment. As of June 2025, the SCR of life, non-life and composite undertakings had distribution levels similar to those measured in June 2024, with the median life SCR being 235% (vs. 239% in Q2 2024), the median non-life SCR

accounting to 214% (unchanged with respect to the level of Q2 2024) and the median composite insurers SCR having a level of 218% (only 2% lower than in Q2 2024). For IORPs, the funding ratio has also shown improved values, above 120% in Q2 2025.

Figure 7: SCR Ratios by type of undertaking

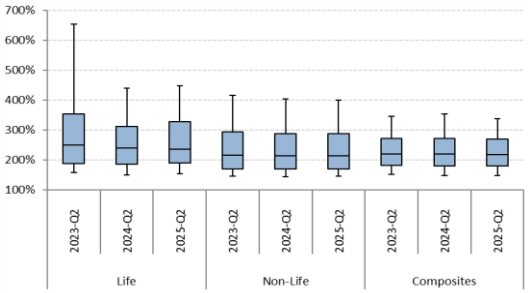
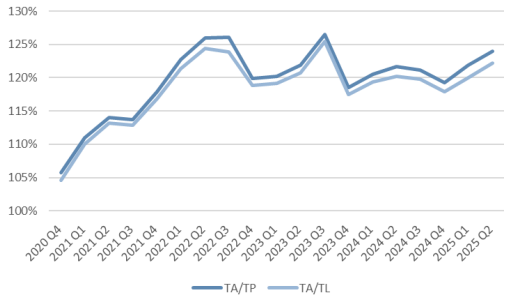



Figure 8: Aggregate Funding Ratio for DB IORPs




*Source: Solvency II Quarterly Reporting Solo and Occupational Pension Statistics, Q2 2025*

**The reinsurance sector also confirmed its sound position,** showing improved median SCR ratio, measured at 239% in Q2 2025 (more than 17 percentage points higher than in the same quarter of last year). The sector's combined ratio improved both for accepted non-proportional reinsurance and for non-life accepted proportional reinsurance. Nevertheless, the increasing frequency of natural catastrophes, rising claims prices, and the threats posed by geopolitical fragmentation to reinsurance entities, which, by their nature, operate with a more global and interconnected business model, necessitate ongoing monitoring.

**In this context, it is relevant to mention the slow burning risk related to climate change, which remains a strategic priority for EIOPA.** The year 2025 was again marked by record climate events with several countries affected by overlapping perils such as drought and wildfires (in the Mediterranean region). Central and western Europe were also hit by convective storms combining hail, winds, and heavy rain, triggering flash floods and landslides.

**Market trends, economic situation and exposures of the European insurers and IORPs identify potential pockets of risks which are explored in the 5 sections of this report.**

**Subdued economic growth, with doubts casted by potential underestimation of the impact of tariffs on the economy and increased level of public debt, might trigger risk premia repricing and cases of defaults on different asset classes, including loans.** The topical focus on private credit investments by insurers and IORPs in EEA and its analysis of illiquid bonds, delves into the trends, advantages and vulnerabilities of this type of exposures.

**Volatility in US dollar exchange rates and equity markets was elevated in 2025. The hectic US political and economic actions, the uncertainty in monetary policy responses, and threats to FED independence triggered price swings.** The topical focus on US dollar depreciation presents, for EEA insurers and IORPs, the extent to which they are vulnerable to fluctuations in the US dollar, the mitigating strategies they have in place, and the potential risks they face.

**European insurers are not only exposed to the US, but they also operate in global markets. Expansion of activities beyond the EEA brings advantages in terms of risk diversification and investment profitability. However, the interconnectedness between EEA and non-EEA countries could amplify risks that are already part of the insurers' risk profiles.** The topical focus on interconnectedness of the European Insurance sector with global markets delves into this, showing the exposure of European insurers' balance sheets and business strategies to global markets.

**The report also examines emerging risks such as cyber risk and the risks associated with the rapid adoption of Artificial Intelligence (AI) in the insurance industry, including its potential systemic implications.** In relation to Cyber risk, the topical focus presented in the report shows how cyber risk has evolved from an IT issue to a macro-financial stability concern, driven by interconnectedness and the potential for widespread losses. Interconnectedness amplifies and enables loss accumulation across the financial system, making it challenging to model simultaneous losses.

**As far as AI is concerned, the last focus topic of the report shows how AI may exacerbate existing vulnerabilities, such as correlated behaviour and third-party concentration, and raises concerns about model opacity and cyber risks.** The industry's unique characteristics, including demutualization, make it particularly susceptible to these risks. Drivers of AI adoption include enhancing efficiency, improving customer experience, and informing decision-making. The EU's AI Act and EIOPA's Opinion on AI governance provide an overarching regulatory framework to ensure that AI systems interacting with natural persons are used responsibly. However, systemic vulnerabilities such as correlated behaviour or concentration risk require additional safeguards through robust governance and sound model risk management. Effective governance and prudent management of AI are therefore essential to ensure that its use contributes to financial stability rather than undermining it.

# TOPICAL FOCUSES

# 1. PRIVATE CREDIT INVESTMENTS BY EEA INSURERS AND IORPS: EXPOSURES, TRENDS AND VULNERABILITIES

*The global private credit market[2] has experienced significant growth in recent years, initially driven by the pursuit of higher yields and diversification in a low-interest-rate environment. Even after risk-free interest rates rose, major long-term institutional investors have continued to allocate their assets to private credit to profit from credit and liquidity spreads. This topical focus delves into the investments in private credit by EEA insurers and IORPs, with a particular emphasis on the current landscape, as well as the recent historical context.*

*As of year-end 2024, private credit exposure of European insurers amounted to EUR 514 billion, representing 5.1% of their total assets. For IORPs, it was EUR 128 billion, representing 4.4% of their total assets[3]. In the past years, both for insurers and IORPs an upward trend has been observed. In terms of composition, mortgages and loans, whether held directly or through funds, accounted for approximately 70% of insurers' private credit exposure and for around 60% in the case of IORPs, followed by unlisted/untraded corporate bonds.*

*The benefits of private credit investments for long-term investors include access to an illiquidity risk premium and regular cash flows, though subject to market and economic conditions, making them especially attractive to life insurers and IORPs seeking to match their long-duration liabilities. Portfolio diversification is also considered among the most common motivation factors, as insurers can balance exposures across various investment types by tilting away from traditional assets such as government bonds or listed corporate bonds. However, this topical focus highlights that from a sectoral perspective, the largest share of private credit is represented by real estate-related investments. Moreover, assets like mortgages, loans and non-listed corporate bonds are predominantly home country investments, with limited cross-border diversification. For all these reasons, regulators and investors must closely monitor insurers' and IORPs' private credit exposure, focusing on sectoral and geographical concentrations, to mitigate the risk of amplified losses in a downturn. A prerequisite for a consistent assessment of the exposures is a clear-cut and commonly acknowledged definition of private credit and of the asset classes therein. As of today, this is still missing.*

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[2] The concept of private credit lacks a universally accepted definition, which can lead to inconsistent categorisations and classifications across different jurisdictions. This ambiguity may result in varying interpretations, such as whether to include real estate mortgages within the definition of private credit or not. Furthermore, the data available on private credit may be incomplete or inaccurate due to existing gaps in reporting. The following are two examples: First, it is not possible to distil loans for mortgages appropriately since the introduction of the new reporting taxonomy in 2023. Second, it is not possible to identify non-listed corporate bonds if these are held via funds; notably debt funds represent a share of 9% of insurers total investments.

[3] Private credit has been already discussed in the EIOPA FINANCIAL STABILITY REPORT JUNE 2024 (Box 5.2), where the definition of private credit was confined only to non-listed corporate bonds and uncollateralised loans, and lower amounts of exposures were therefore documented. The proposed innovations are discussed in detail in the definition in Section 2 below.

# 1. Introduction

In recent years, global insurers have significantly increased their allocations to private credit as part of their investment strategies (IMF, 2024[4]).

**The concept of private credit, also referred to as private debt, is characterised by a lack of a universally accepted definition, resulting in varying categorisations across different jurisdictions.** At its core, private credit involves non-bank financial institutions providing financing to companies or individuals outside of the traditional banking system as well as the public markets. This type of financing can offer investors higher yields compared to traditional fixed-income investments, albeit sometimes with higher credit risk and lower liquidity.

**Private credit assets encompass a diverse range of investment types.** These include direct lending and non-listed corporate bonds, infrastructure debt, as well as real estate and mortgage-related investments, such as infrastructure loans and commercial real estate loans. Also, private credit funds and vehicles as well as securitised or structured products like asset-backed securities and collateralised loan obligations, offer investors a way to access private credit through a more structured and packaged format.

**Institutional investors, like insurers and IORPs, can benefit from investing in private credit.** Private credit has the potential to provide regular cash flows - though subject to market and economic conditions - and offers a low correlation with other asset classes, making it an attractive option for investors seeking to enhance returns by earning an illiquidity premium and diversify their portfolios.

**However, investing in private credit entails a range of risks that need to be carefully managed. A primary concern is credit risk. Additionally, liquidity risk is a significant consideration, as private credit investments can be illiquid and difficult to sell or redeem quickly.** Furthermore, valuation uncertainty can make it difficult to determine the true value of private credit investments, which can lead to over- or undervaluation. This is particularly relevant on exposures that are not traditionally part of the core business of insurers and, as such, risk modelling capabilities can be not as developed as the one used for the standard underwriting. Another risk is hidden leverage, which can amplify losses if not properly managed. Finally, other relevant risks to be considered, include complexity, counterparty risk, operational risk, and regulatory risk, which can all have a significant impact.

**The development of public and private credit markets is a crucial aspect of the current debate on financing and investment in Europe.** In general, public markets refer to the traditional capital markets where companies can raise funds through the issuance of publicly traded debt or equity securities. Private markets, on the other hand, refer to the markets where companies can raise funds through private placements, loans, or other forms of private financing. The private credit

[4] IMF (2024), 'Global Financial Stability Report: The Last Mile: Financial Vulnerabilities and Risks', 2 April, https://doi.org/10.5089/9798400257704.082.

market can complement the corporate bond market by providing an alternative source of funding for smaller companies and by allowing investors to further diversify their portfolios[5]. Public corporate bond markets can be an important source of funding for large European companies. They offer businesses access to alternative (hence more diverse) sources of funding to traditional bank lending. They also offer investment opportunities for European savers. However, the public corporate bond market is not always accessible to smaller companies, which tend to face challenges in issuing debt due to their smaller size, lower credit ratings, or lack of market recognition.

## 2. Definition

The concept of private credit is characterised by a lack of a universally accepted definition. Essentially, private credit involves non-bank financial institutions providing financing to companies or individuals outside of the traditional banking system and public market as well.

**Based on this broad definition, this topical focus proposes a categorisation of private credit, mapping the classification of assets in Solvency II and IORPs reporting, encompassing both direct investments and indirect holdings via funds.** Direct investments in private credit comprise corporate bonds that are non-listed or non-tradable, mortgages and loans, structured notes subject to credit risk, and collateralised securities subject to credit risk. These are categorised under specific CIC codes, such as CIC 21 (corporate bonds), 22 (convertible bonds), 25 (hybrid bonds), 28 (subordinated bonds), and 29 (others) for corporate bonds (that are non-listed [XL] or non-tradable [XT]), CIC 8 for mortgages and loans, CIC 54 for structured notes, and CIC 64 for collateralised securities. Private credit also encompasses indirect holdings via funds, classified under CIC 4, which includes mortgages and loans, as well as private debt or bonds that are illiquid, such as alternative funds CIC 46, private equity funds CIC 47, and infrastructure funds CIC 48.

**The definition of private credit has some key exclusions.** Specifically, lending to banks and intra-group transactions, such as lending to a subsidiary bank or insurance company, are not considered private credit. Basically, even if an investment shares similar characteristics with private credit, such as being a non-listed corporate bond or being a loan, it will not be considered private credit if the counterparty is a bank or an entity within the same group.

Given that private credit involves non-bank financial institutions providing financing to companies or individuals outside of the traditional banking system, also mortgages are included in the definition proposed. **However, the distinction between Commercial Real Estate (CRE) and Residential Real Estate (RRE) can have significant implications in terms of risk.** CRE lending often involves larger loan amounts and more complex loan structures, which can increase the risk of

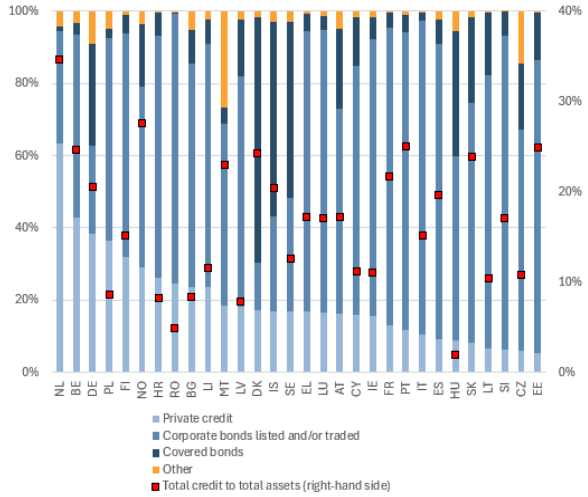
[5] There are ongoing initiatives and discussions in Europe related to promoting private credit markets. Some of these include: i) The European Commission's Capital Markets Union (CMU) initiative aiming at creating a more integrated and efficient capital market in Europe, including the development of private credit markets. ii) The European Securities and Markets Authority (ESMA) guidelines providing guidance on the regulation of private credit markets and the role of regulators in promoting their development. iii) The European Investment Bank (EIB) and European Investment Fund (EIF) initiatives, supporting the development of private credit markets through investments in private debt funds and other initiatives.

default. Additionally, CRE properties are often more sensitive to economic downturns and changes in market conditions, which can impact the cash flow and value of the property. In contrast, RRE lending tends to be less volatile, with more stable cash flows and a lower risk of default. As a result, insurers, IORPs and supervisors must carefully consider these differences when assessing risks associated with private credit investments.

Private credit is one of the components of the total credit exposure by insurers and IORPs. Total credit is referred to as all the debt that is non-government related and it comprises, beyond private credit also listed corporate bonds, covered bonds (highly creditworthy due to the dual recourse) and a residual category made up of investments that are in banks.

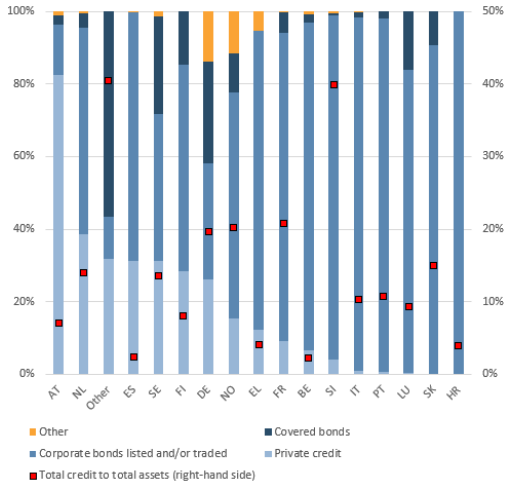
**Private credit represents approximately 25% and 30% of total credit exposure of European insurers and IORPs investments, respectively.** Figure T1.1a and T1.1b show that across the various EEA countries there is a lot of variation in the share of private credit to total credit. Moreover, for some countries, such as Germany, Denmark and Sweden, covered bonds shares are material, while in general it is listed corporate bonds representing the largest share of total credit. The exposures towards private credit must also be considered in the context of total credit exposure relative to total assets, which in some countries is relatively contained.

Figure T1.1a: EEA insurers: Breakdown of total credit by home country.




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q2 2025*

Figure T1.1b: EEA IORPs: Breakdown of total credit by home country.




*Source: EIOPA Annual IORP Individual Reporting[6], 2024. Other includes: BG, DK, LI, LV & PL.*

[6] The look-through information for IORPs is only available for annual reporting individual. All countries except BE, DE, IT, ES, NO and MT report their full market under individual. However, some might not report the list of assets since they are too small for it.

# 3. Trends in EEA insurers' and IORPs' exposure to private credit

**Private credit exposure amounted to EUR 514 billion[7] (5.1% of total assets) for insurers and EUR 128 billion (4.4% of total assets) for IORPs at the end of 2024.** Mortgages and loans, whether held directly or through funds, accounted for roughly 70% and 60% of insurers' and IORPs' private credit exposures, respectively, followed by unlisted/untraded corporate bonds and collateralised securities subject to credit risk.

Table T1.1: Overview of private credit by type of institution

| | Private credit [million EUR] | Private credit to total credit [%] | Private credit to total assets [%] | Non-private credit to total assets [%] |
|---|---|---|---|---|
| **Solo insurers** (Q4 2024) | 514,538 | 25.3% | 5.1% | 15.2% |
| **IORP** (annual 2024 individual) | 128,441 | 30.5% | 4.4% | 10.1% |

**For insurers, private credit exposures grew from 3.9% of total assets in Q4 2016 to 5.8% in Q2 2025, with the most significant growth occurring from 2023 onward (Figure T1.2a).** In absolute terms, insurers' private credit holdings rose by around 80%, from EUR 332 billion in Q4 2016 to EUR 594 billion in Q2 2025, reflecting their growing participation in private credit markets.

Figure T1.2a: Insurers' private credit exposure to total assets

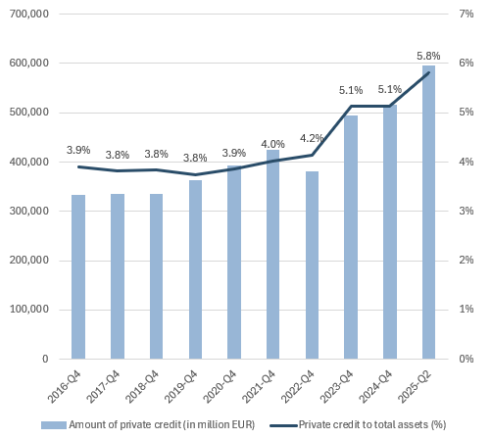
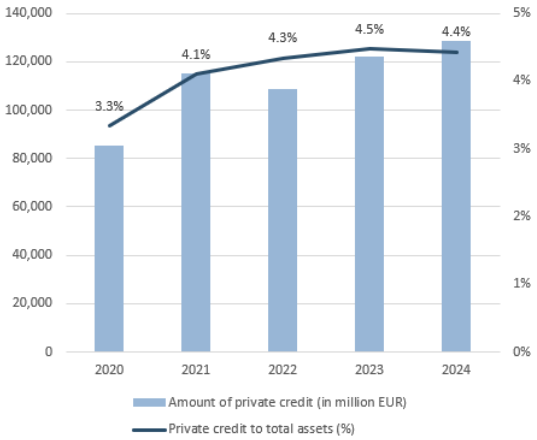



Figure T1.2b: IORPs' private credit exposure to total assets



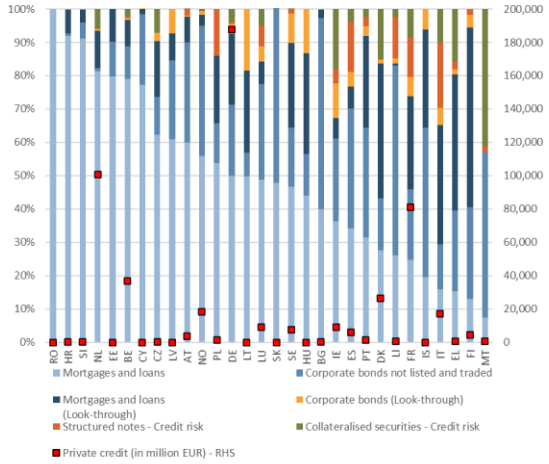

[7] When including intra-group transactions, private credit increases to EUR 593 billion, representing 28% of total credit and 5.9% of total assets.

*Source: EIOPA Quarterly Solvency II Reporting Solo* *Source: EIOPA Annual IORP Individual Reporting*

**IORPs' private credit exposure rose from 3.3% of total assets in 2020 to a peak of 4.5% in 2023, before contracting slightly to 4.4% in 2024 (Figure T1.2b).** Nominal values, instead, kept increasing from EUR 85 billion in 2020 to EUR 122 billion in 2023 to EUR 128 billion in 2024.

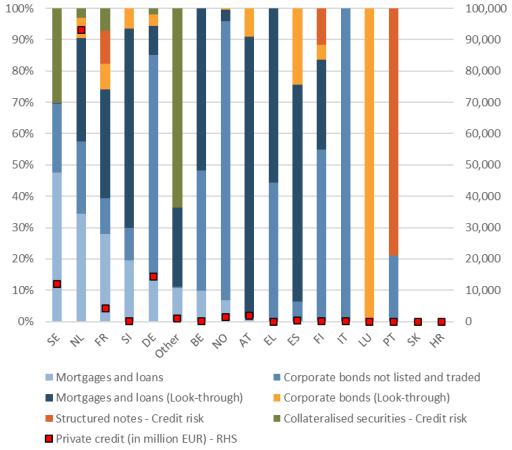
**Private credit market is dominated by a few jurisdictions, with 72% of insurers' exposure located in Germany, the Netherlands and France.** Insurers in these three countries held together around EUR 370 billion in private credit. A similar pattern is seen among IORPs, with roughly 73% of private credit exposure located in the Netherlands, followed by Germany (11%) and Sweden (9%).

Figure T.1.3a: Insurers' private credit exposure by home country




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024*

Figure T.1.3b: IORPs' private credit exposure by home country




*Source: EIOPA Annual IORP Individual Reporting, 2024. Other includes: BG, DK, LI, LV & PL.*

**While mortgages and loans (held directly or via funds) tend to constitute the largest component of insurers' private credit exposures in most jurisdictions, some cross-country differences exist.** For example, Romanian insurers' private credit exposure is entirely in mortgages and loans, whereas Maltese insurers exhibit a markedly different structure, with unlisted/untraded corporate bonds accounting for nearly half and collateralised securities subject to credit risk for 41% of their exposure.

**Cross-country heterogeneity in the composition of private credit is even more pronounced among IORPs.** Indeed, while IORPs in Austria and Spain maintain a significant concentration in mortgages and loans, unlisted/untraded corporate bonds prevail in the private credit holdings of Italian and Norwegian IORPs.

**Life insurers hold the largest amount of private credit exposure among insurers, accounting for over half of the total (Figure T1.4a).** However, reinsurers tend to have higher private credit shares relative to their total assets, with one in five ranking among the top 10% of all insurers in terms of private credit to total assets.

Figure T1.4a: Amount of private credit by type of assets

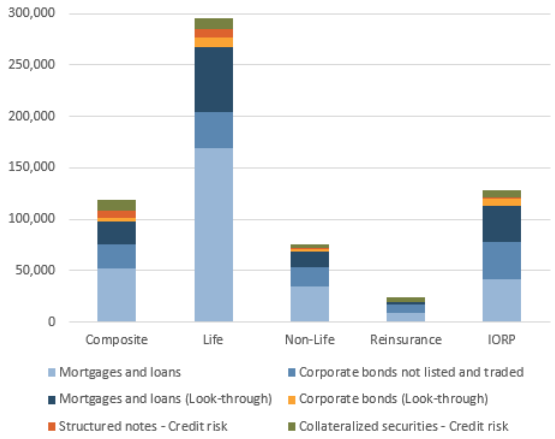
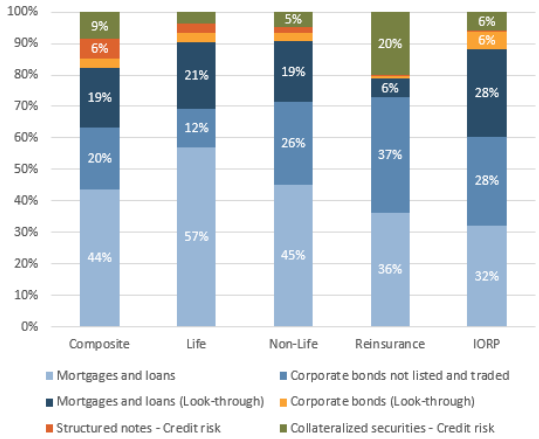



Figure T1.4b: Private credit exposure by type of assets




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024 and EIOPA Annual IORP Individual Reporting, 2024*

**Mortgages and loans – whether held directly or through funds – dominate private credit exposure across all undertaking types, except reinsurers (Figure T1.4b).** Reinsurers' exposure is more diversified and split among mortgages and loans (36% direct holdings and 6% through funds), unlisted/untraded corporate bonds (37%) and collateralised securities subject to credit risk (20%).

**Within direct holdings of mortgages and loans, life insurers hold mainly loans to other natural persons (CIC 88), while composite and reinsurance undertakings lean toward uncollateralised loans (CIC 81) and those collateralised with securities (CIC 82).** Non-life insurers have a more balanced distribution, with 37% in loans to other natural persons, 31% in uncollateralised and securities-collateralised loans, and 22% in mortgages and loans.

### Box T1.1: EUROPEAN INSURERS' EXPOSURE TO ILLIQUID AND NON-LISTED/TRADABLE CORPORATE BONDS

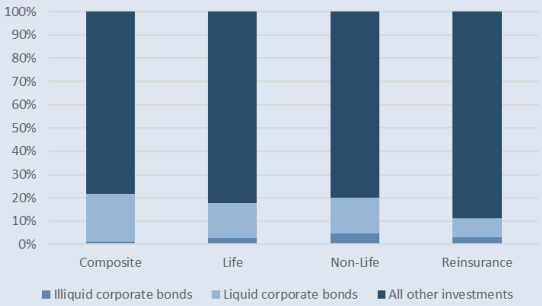
This box focuses on European insurers' investments in a specific subcategory of private credit, namely illiquid and non-listed/tradable corporate bonds (CB). For the purpose of this analysis, covered bonds, commercial papers, and money market instruments are excluded[8]. In general, corporate bonds that are non-listed or non-tradable (XL or XT) or that have outstanding amounts below EUR 500,000, are considered to be less liquid with respect to those listed on one or more exchanges.

In Q4 2024, insurers held approximately EUR 1.2 trillion of corporate bonds, out of which only EUR 152 billion are illiquid or non listed/tradable, representing a share of around 13% (excluding index-linked or unit-linked investments). As shown in Figure B1.1, the non-life segment is characterised

[8] Specifically, we consider bonds in CIC Category 2, CIC Subcategories: 1 (Corporate Bonds), 2 (Convertible Bonds), 5 (Hybrid bonds), 8 (Subordinated Bonds), 9 (Other).

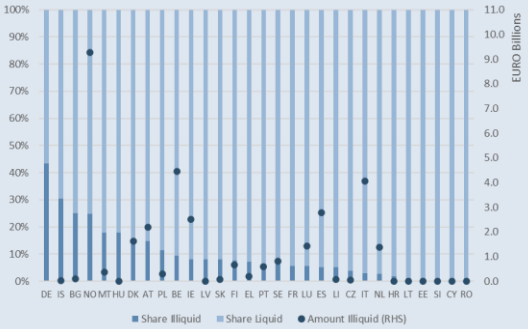
by the highest share of illiquid and non-listed/tradable bonds, i.e., at 5% of total investments of non-unit linked portfolios. Figure B1.2 shows the share of illiquid and non-listed/tradable CB together with its relative amount by country. DE and FR hold the largest amounts, however in the case of DE the share of illiquid and non-listed/tradable CB is materially higher. For DE, the high share of illiquid and non-listed/tradable corporate bonds is due to the high share of unlisted in CIC Subcategory 1 (EUR 73 billion).

Figure B1.1: Share of illiquid and non-listed/tradable CB by undertaking type




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024.*
*Note: Shares relative to total investments of non-UL portfolios.*

Figure B1.2: Share of liquid and illiquid and non-listed/tradable CB and total amount of illiquid CB

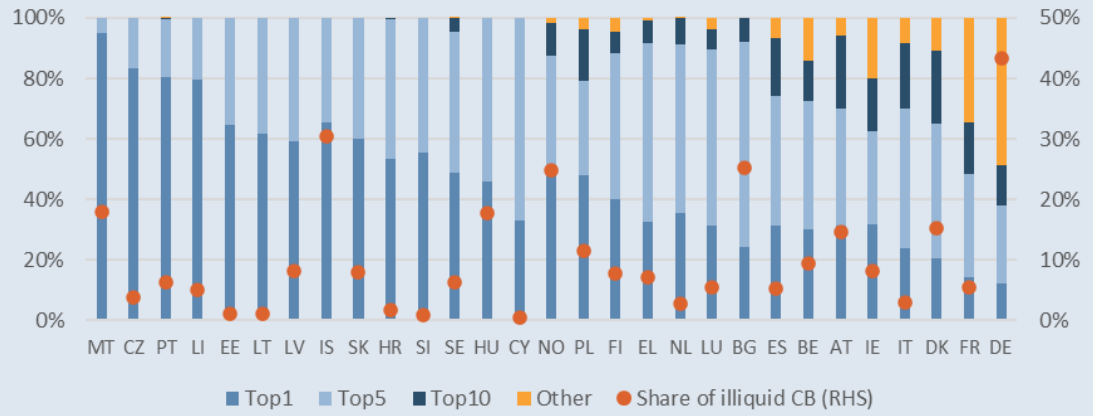



*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024.*
*Note: Shares relative to total investments of non-UL portfolios. Amount of illiquid and non-listed/tradable CB for DE is 91.8 Bn and for FR 27.7 Bn.*

A key financial stability concern relates to the concentration of insurers' investments, particularly in less liquid assets. In the event of a market downturn, such assets may experience sharp devaluations when insurers attempt to liquidate them, potentially resulting in substantial losses in their balance sheets.

To assess this concentration, Figure B1.3 illustrates the exposure of the top 1, top 5, and top 10 insurers to illiquid CB, alongside the overall share of illiquid and non-listed/tradable CB held within each country. For MT, CZ, PT and LI the most exposed insurers account for more than 75% of the country illiquid CB. By contrast, DE and FR—although characterized by large volumes of such bonds—display a high degree of diversification across multiple investing insurers.

Figure B1.3: Investment concentration in illiquid and non-listed/tradable CB by NCA by top insurers




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024.*

Complementing this analysis, Table B.1 reports the Herfindahl–Hirschman index (HHI) by country and for the EU average. The HHI[9], calculated on insurers' investments in illiquid and non-listed/tradable CB, provides an additional measure of holdings concentration. Consistent with the top N exposure results, MT, CZ, and PT exhibit the highest concentration levels, while DE and FR record the lowest HHI values. The reciprocal of the HHI offers a complementary perspective, indicating the approximate number of insurers investing in illiquid CB. For DE and FR, this figure is the highest in the EU, 24 and 16 respectively, underscoring the greater dispersion of investments in these markets.

Table B.1: Concentration of insurers' illiquid and non-listed/tradable corporate bond holdings (HHI and 1/HHI)

| Country | AT | BE | BG | CY | CZ | DE | DK | EE | EL | ES |
|---|---|---|---|---|---|---|---|---|---|---|
| HHI | 0.150 | 0.159 | 0.189 | 0.298 | 0.707 | 0.042 | 0.107 | 0.543 | 0.224 | 0.178 |
| 1/HHI | 6.678 | 6.286 | 5.296 | 3.352 | 1.414 | 23.918 | 9.311 | 1.841 | 4.474 | 5.62 |
| Country | FI | FR | HR | HU | IE | IS | IT | LI | LT | LU |
| HHI | 0.224 | 0.062 | 0.388 | 0.309 | 0.136 | 0.493 | 0.125 | 0.652 | 0.528 | 0.219 |
| 1/HHI | 4.469 | 16.067 | 2.577 | 3.241 | 7.327 | 2.03 | 8.016 | 1.533 | 1.895 | 4.572 |
| Country | LV | MT | NL | NO | PL | PT | SE | SI | SK | EU Average |
| HHI | 0.517 | 0.905 | 0.221 | 0.289 | 0.26 | 0.662 | 0.321 | 0.378 | 0.418 | 0.335 |
| 1/HHI | 1.936 | 1.105 | 4.518 | 3.459 | 3.842 | 1.512 | 3.12 | 2.648 | 2.392 | 4.981 |

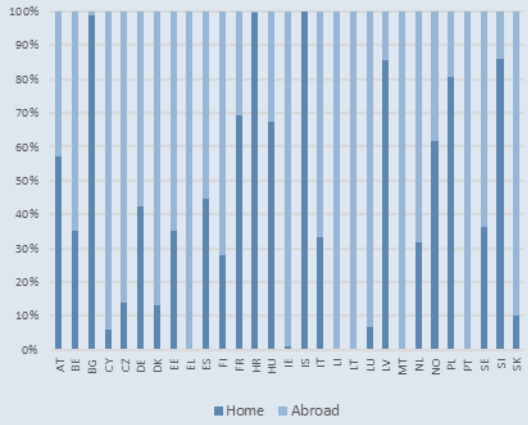
*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024.*

[9] The HHI index measures the concentration of insurers' investments in illiquid corporate bonds. It is calculated as the sum of the squared shares of each insurer's exposure within the country's total illiquid bond portfolio. Higher HHI values indicate stronger concentration. The inverse (1/HHI) estimates the effective number of insurers holding illiquid bonds — for example, an inverse HHI close to 1 implies that the market is effectively dominated by a single insurer.

Building on the analysis of concentration, Figures B1.4a and B1.4b examine the geographical allocation of insurers' corporate bond portfolios, distinguishing between illiquid and non-listed/tradable and liquid holdings. When breaking down the shares of bonds invested in the home country and the complement invested cross-border, the charts highlight a pronounced home bias in investments in illiquid and non-listed/tradable CB: insurers tend to hold a larger share of these assets issued by domestic entities. On average across the EU 39% of illiquid and non-listed/tradable corporate bonds are held domestically, compared with 22% for liquid bonds.

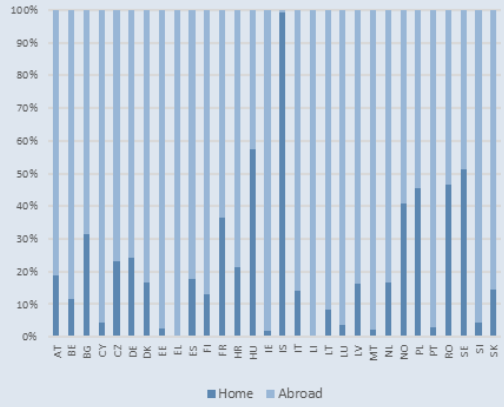
This result suggests that holdings of bonds that are categorised in private credit tend to be more geographically concentrated in the home country as opposed to publicly traded bonds.

Figure B1.4a: Share at home and abroad of illiquid and non-listed/tradable CB (non-UL portfolio investments)




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024.*

Figure B1.4b: Share at home and abroad of liquid and non-listed/tradable CB (non-UL portfolio investments)




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024.*

## 4. Considerations on risks and vulnerabilities: sectoral and geographical concentrations

**The benefits of private credit investments for long-term investors include access to an illiquidity risk premium, and stable long-term cash flows under certain market conditions, making them especially attractive for life insurers seeking to match their long-duration liabilities.** Portfolio diversification is also considered among the most common drivers. Indeed, insurers can balance exposures across various investment types by tilting away from traditional assets such as government bonds or listed corporate bonds.

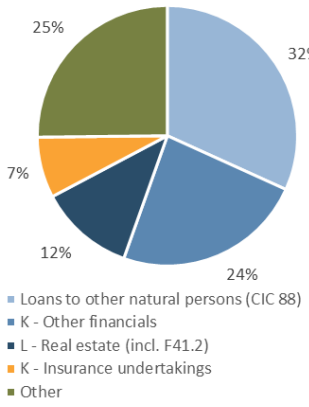
**However, from a sectoral perspective, the largest share of EEA insurers' and IORPs' private credit exposure is represented by real estate-related investments.** Indeed, as shown in Figure T1.5,

mortgages and loans, loans to natural persons and real estate account for 39% and 34% of insurers' and IORPs' direct private credit investments[10], respectively.

Overall, the largest shares of insurers' and IORPs' investments are in government and highly creditworthy corporate bonds. Government bonds are considered safe, and concentrations are not penalised in term of capital requirements in Solvency II. Instead, in the case of corporate bonds or loans, issuer level concentration is penalised in terms of capital requirements in Solvency II, e.g., if the exposure towards an issuer is >3% (for high credit quality) or 1.5% for lower credit quality.

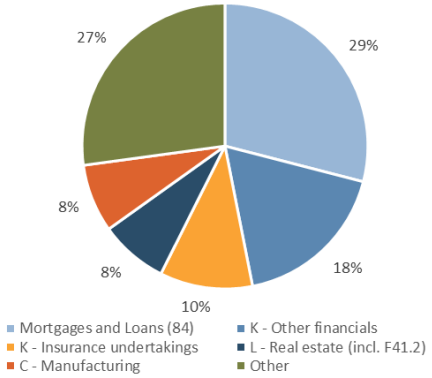
**Private credit investments are characterised, among other things, for relatively higher risk in which case the aspect of concentration (or lack of diversification) becomes even more relevant**. Indeed, EEA insurers' and IORPs' exposure to private credit appears to be concentrated both from a sectoral perspective and a geographical perspective.

Figure T1.5a: Insurers – direct private credit only, by sector (NACE code)




*Source: EIOPA Quarterly Solvency II Reporting Solo, Q4 2024*

Figure T1.5b: IORPs – direct private credit only, by sector (NACE code)




*Source: EIOPA Annual IORP Individual Reporting, 2024*

**Moreover, assets like mortgages, loans and non-listed corporate bonds (as discussed in the Box T1.1) are predominantly home investments, with no cross-border diversified exposure.**

**Concentration of private credit holdings can be examined from another perspective: are the holdings dispersed across multiple insurers or dominated by a few large players?** As illustrated in Table T1.2, the distribution of private credit holdings (measured by the "Share of Top 10 in private credit (%)") is generally more concentrated than the market share of total assets (as shown in the last two columns). However, there are some notable exceptions: in the non-life segment, private credit holdings are more evenly distributed among insurers, resulting in a relatively lower Herfindahl-Hirschman Index (HHI). In contrast, reinsurers exhibit the highest concentration of private credit holdings, which is however consistent with the concentration of total assets in the

[10] This sectoral breakdown with the NACE is not possible for investments within funds.

reinsurance segment. Interestingly, private credit is held by insurers of all sizes, including small, medium, and large entities, although this is not shown in the table.

Table T1.2: Private credit holdings concentration – by insurer type

| Undertaking type | Standardized HHI | Number of insurers holding (effective) | Share of Top 10 in private credit (%) | Share of Top 10 private credit holders in total assets (%) | Share of Top 10 in total assets (%) |
|---|---|---|---|---|---|
| **Composite** | 0.0359 | 25.3 | 53.74 | 27.5 | 48.06 |
| **Life** | 0.0498 | 19 | 60.31 | 24.83 | 27.92 |
| **Non-Life** | 0.0240 | 40 | 43.84 | 19.03 | 21.57 |
| **Reinsurance** | 0.0765 | 11.9 | 71.84 | 51.11 | 70.85 |
| **All undertakings** | 0.0196 | 49.5 | 35.85 | 13.11 | 20.73 |

*EIOPA Quarterly Solvency II reporting solo, Q2 2025. List-of-assets. Note: The HHI depends on the number of undertakings, N. The standardised version HHI* = (HHI – (1 / N)) / (1 – (1 / N)) rescales it to [0, 1]; 0 = perfect equality, 1 = monopoly. "N effective" is the effective number of undertakings, defined as 1 / HHI. It equals the number of equal-sized undertakings that would produce the same HHI; higher "N effective" implies lower concentration.*

## 5. Conclusion

This topical focus explored the investments in private credit made by EEA insurers and IORPs, presenting key aggregated figures and cross-country insights. However, it is essential to note that the concept of private credit is not uniformly defined, which can lead to inconsistencies in categorisation and classification across different jurisdictions. As a result, interpretations may vary, including whether real estate mortgages should be included in the definition of private credit. Additionally, data on private credit may be incomplete or inaccurate due to gaps in reporting, such as, for instance, when bonds are held through funds. Notably, "debt funds" account for 9% of insurers' total investments. These limitations should be considered when reviewing the findings.

Some market observers note that the growth of European insurers' allocation to private credit could be expected to continue, driven by the potential for higher yields and diversification benefits.

**However, it is unclear whether this trend will materialise, and the outlook for private credit allocations remains uncertain.** Macroeconomic uncertainty, including elevated public bond yields and economic volatility, is currently a concerning aspect. In this light, several factors may contain

the pace of growth, including insurers' and IORPs' regulatory considerations, such as the Prudent Person Principle of investing, risk management standards, and conservative investment policies.

**It is important to monitor the development of European insurers' and IORPs' allocations to private credit.** Regulators and investors should be vigilant about potential concentration, in home investments and in specific sectors or geographies, which could amplify losses in a downturn. To mitigate these risks, insurers should maintain a diversified portfolio and regulators should track metrics such as the share of private credit investments held by insurers with a special focus on their distribution across sectors and geographies to spot potential pockets of risks. It must be ensured that the growth of private credit allocations is sustainable and does not pose a threat to the stability of the financial system.

**Monitoring whether private credit holdings become excessively concentrated within the insurance and occupational pensions sector is also crucial to prevent potential systemic risks.** This can be achieved by tracking the share of private credit investments held by insurers and IORPs compared to other investors, allowing for early identification of potential issues and prompt action to mitigate risks.

## Annex: summary of NCAs' responses on private credit investments

The European insurance and IORPs sectors have been assessed for their exposure to private credit investments, with responses from 23 country supervisors providing valuable insights into the risks and challenges associated with this type of investment. Overall, the results indicate that private credit investments are not a significant concern for most European countries, with limited exposure and relatively low risks.

**Insurance**

**Exposures tend to be limited in most countries.** Many countries, including the Czech Republic, Liechtenstein, Bulgaria, and Slovenia, have reported limited exposure to private credit investments, with some having no exposure at all. In these countries, private credit investments represent a small percentage of the total balance sheet, ranging from 0.9% in Slovenia to 1% in the Czech Republic.

**The main risks associated with private credit investments vary across countries, but liquidity risk, credit risk, and valuation risk are commonly cited as key concerns.** Several countries including Austria, Belgium, and Germany have identified these risks as significant, while others have emphasised liquidity and credit risk as particularly important.

**Some countries have provided more detailed insights into their private credit investments.** For example, Germany has seen an increase in private debt investments in recent years, primarily through investment funds. In contrast, Hungary has reported that private credit is not relevant in the Hungarian insurance sector. Italy has noted that exposure to private credit is limited, while Lithuania has reported a higher concentration of risk within groups. In the Netherlands, it is

notable that investments in private credit are concentrated among a relatively small group of institutional investors. Insurers owned by private equity companies invest substantially more in illiquid assets, such as private credit, around the world than the average insurer (IMF, 2024[11]). Slovakia has indicated conflicts of interest in private credit investments as a risk to be taken into account.

Many countries are actively monitoring and supervising private credit investments, with some, such as Belgium and Germany, having established task forces or specialised teams to oversee these investments. Others, such as Sweden and Portugal, are closely monitoring the situation and assessing the potential risks and challenges associated with private credit investments.

**IORPs**

**Based on the survey, the following countries have limitations on investments in private credit.**

Bulgaria: Direct investments in private credit are not permitted for IORPs, and exposure is only possible indirectly through Alternative Investment Funds, limited to 2% of total assets. Croatia: IORPs are not allowed to invest in private credit, including loans and mortgages to private companies. Italy: Investment regulation imposes quantitative limits on illiquid and alternative investments, including private credit. Latvia: Although IORPs can invest in private credit through AIFs, the AIF market in Latvia is primarily focused on real estate and private equity, and the local ecosystem of private credit funds is only beginning to emerge. Additionally, there are quantitative limits on AIF exposures. Poland: IORPs invest their assets exclusively in financial instruments listed on regulated markets and do not invest in private loans, derivatives, or other instruments not listed on regulated markets. Portugal: Limitations include that not traded securities on a regulated market and non-UCITS investment funds can be maximum 15% and 10%, respectively. The fact that the current circumstances and public bond markets are offering more attractive yields compared to prior recent years reduces the incentive to pursue higher-risk alternatives such as private debt. Romania: Romanian pension funds are not allowed to invest in private credit.

These countries have restrictions or limitations on investments in private credit, either through regulatory requirements, investment guidelines, or market conditions.

As the European insurance and IORPs sectors continues to evolve, it is likely that private credit investments will remain a topic of interest and scrutiny for regulators and supervisors.

[11] IMF The rise and the risks of private credit (2024).

# 2. US DOLLAR DEPRECIATION: RISKS AND MITIGANTS FOR EEA INSURERS AND IORPS

*The recent geopolitical context, coupled with a range of interconnected factors, has resulted in a notable decline in the value of the US dollar throughout 2025 and a potential further decline could be on the horizon. Against this backdrop, this topical focus examines how insurers and IORPs are exposed to the US dollar and explores the associated risks and mitigating factors at play.*

*IORPs typically have liabilities denominated in their local currency but invest globally to enhance returns and diversification. As a result, they hold assets in US dollars, particularly equities. A decline in the value of the US dollar can reduce the value of these assets, resulting in potential losses. IORPs employ derivatives to hedge against currency risks in their fixed-income portfolios. While equity positions are often only partially hedged, a market implicit hedging effect can occur in situations in which the US dollar and the US stock market move in opposite directions, when the US dollar depreciates. This can help offset losses, although deviations from this pattern may occur.*

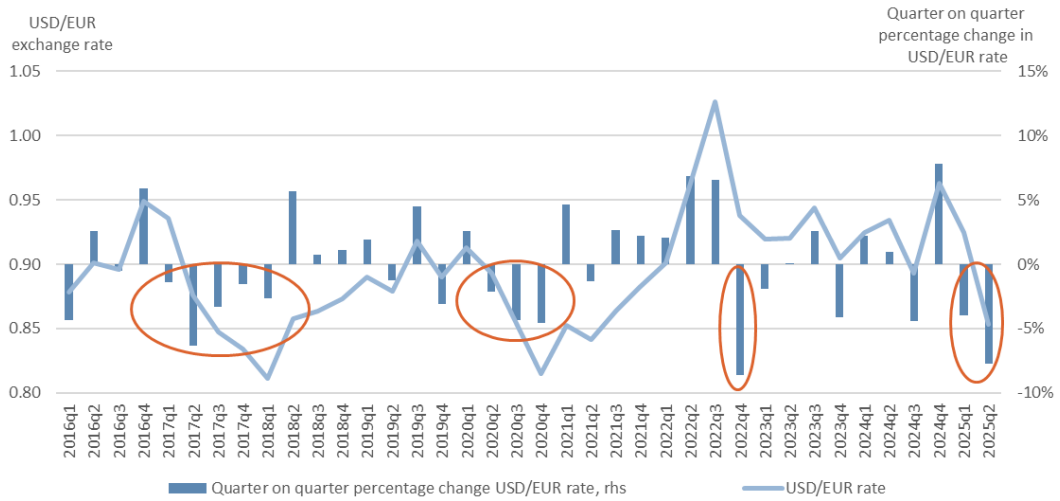
*Compared to IORPs, insurers face a multi-layered set of challenges when the US dollar depreciates. A weaker US dollar can impact not only their investments, but also their liabilities and profitability. This is especially true for large insurance groups with US subsidiaries, as well as reinsurers and non-life insurers with significant international business, often underwriting in US dollars. Insurers use various strategies to manage currency risk. Life insurers pass on some risks to policyholders through discretionary benefits and unit-linked business and can use hedging strategies with derivatives for the residual risk. Non-life insurers, besides matching assets and liabilities to eliminate "currency gaps", partially cede the risk underwritten in US dollars to reinsurers. Participations in US insurance subsidiaries of large European groups are shield from exchange rates fluctuations through asset and liability matching in local currency. Moreover, when the US dollar depreciates, losses on US participations tend to be offset by a decrease in solvency capital requirements when consolidating capital in euros. Finally, due to material underwriting and investing in US dollars, reinsurers tend to be the most exposed to foreign currency fluctuations, which is reflected in higher capital requirements for currency risk relatively to other insurers.*

## 1. INTRODUCTION

**The recent geopolitical context and related changes in market sentiments and US growth expectations have led to significant volatility and decline in the US dollar value in the first half of 2025.** The exchange rate between the US dollar and the euro is influenced by several key factors, including shifts in risk appetite, economic fundamentals as well as monetary, fiscal and trade policies. Higher interest rates in the US and a stronger US economy attract investors and

strengthen the US dollar. A relevant role is also played by global shocks, such as trade tensions, conflicts, and sanctions, introducing volatility and uncertainty, as well as by the monetary policies of the US Federal Reserve and the European Central Bank, including quantitative easing and interest rate decisions.

Figure T2.1: USD/EUR exchange rate time-series dynamics




*Source: European Central Bank*

**There were several episodes in recent years, marked by notable fluctuations of the exchange rate between the US dollar and the euro.** Figure T2.1 shows that throughout 2017 and in the first quarter of 2018, the US dollar weakened, due to concerns about the US trade deficit and the impact of the US tax reform on the economy. However, in the second quarter of 2018, the US dollar began to regain some of its strength, driven by the US Federal Reserve's decision to raise interest rates and the expectation of further rate hikes.

**During the COVID-19 pandemic in 2020 the euro gained strength against the US dollar.** However, in 2021 and 2022, the US dollar strongly rebounded, driven by the US economic recovery. The exchange rate has remained volatile in 2022, with the US dollar strengthening against the euro due to the Russian-Ukraine conflict, the US monetary policy tightening, and the European energy crisis. Then it materially weakened in 2022 Q4 on the back of expected slower pace of tightening of US monetary policy.

**In the first half of 2025, the US dollar has experienced a significant decline in value, falling by approximately 11%.** This marked downturn, albeit not unprecedented, represents the largest drop in several years, effectively interrupting the positive cycle that began in 2008. The delayed effects of tariffs on economic growth and unemployment, combined with policy uncertainties, are likely to keep exerting downward pressure on the currency. Furthermore, foreign investors have been increasingly hedging their exposure to US assets. As a result, the US dollar's value could be expected to remain under pressure.

**EEA insurers and IORPs have significant investments in US dollar assets, totalling EUR 1.8 tn as of end-2024[12]. Broken down, EEA insurers have invested EUR 1,092 bn, while IORPs have invested EUR 720 bn.** Not all the currency risk on these investments is borne by insurers and IORPs as in the case of unit-linked and defined contributions portfolios the risks are fully passed on to beneficiaries.

**Insurers' investments in US equity are mainly in unit-linked portfolios.** As of 2025 Q2, insurers' general accounts investments amount to EUR 6,859 bn, of which EUR 397 bn are invested in US dollars. More specifically, EUR 55 bn are invested in US government bonds, EUR 122 bn in US corporate bonds and EUR 166 bn are invested in US equities. These amounts correspond to shares of 3%, 6% and 11% of the respective asset classes. In unit-linked portfolios, which are smaller in size, out of the total EUR 2,520 bn invested at end-2025 Q2, EUR 625 bn are invested in US dollars. More specifically, EUR 27 bn, EUR 49 bn and EUR 504 bn are invested respectively in US government, corporate bonds and equity which corresponds to shares of 11%, 12% and 42% of the respective asset classes.

Figure T2.2a: EEA Insurers' general accounts investments across main asset classes: breakdown by currency

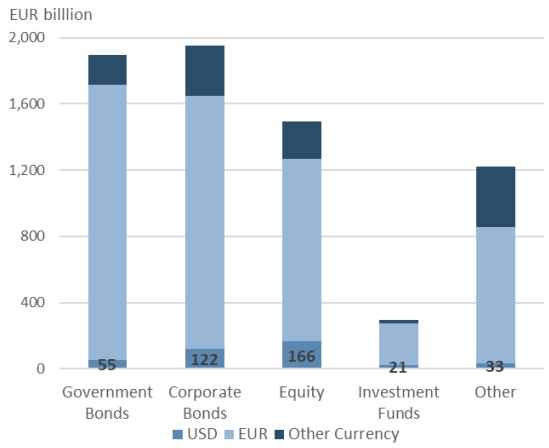
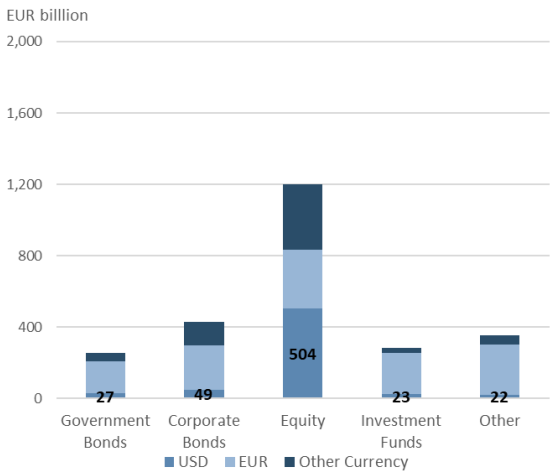



Figure T2.2b: EEA Insurers' unit-linked investments across main asset classes: breakdown by currency




*Source: Solvency II Solo Quarterly data, 2025 Q2, look-through applied*

**In both IORPs' defined contributions and defined benefit portfolios the largest amount of US dollar investments is in equity.** At end-2024 IORPs defined benefit portfolios amounted to EUR 2,093 bn, of which EUR 573 bn were invested in US dollars. More specifically, EUR 63 bn, EUR 76 bn and EUR 344 bn were invested respectively in US government, corporate bonds and equity which corresponds to shares of 12%, 23% and 53% of the respective asset classes. The sum of all other portfolios, including defined contribution schemes, are substantially smaller and amounted

[12] Look-through to the extent possible applied to funds data. Look-through data for insurers is available quarterly, while for IORPs it is only reported annually. Therefore, when figures for both insurers and IORPs are presented together, they refer to 2024 Q4 - the most recent period with data available for both. To the contrary, where developments are discussed for insurers only, the latest available data (2025 Q2) is used. Throughout the special focus analysis, the numbers cited in the text and included in the charts exclude those insurance undertakings, for which the reporting currency is US dollar (i.e., around 70 undertakings with a total market share of 0.5%). There is no IORP, for which the reporting currency is the USD.

to EUR 642 bn as of end-2024, of which EUR 147 bn were invested in US dollars. More specifically, EUR 26 bn, EUR 15 bn and EUR 75 bn were invested respectively in US government, corporate bonds and equity which corresponds to shares of 15%, 13% and 39% of the respective asset classes.

Figure T2.3a: EEA IORPs defined benefits investments across main asset classes: breakdown by currency

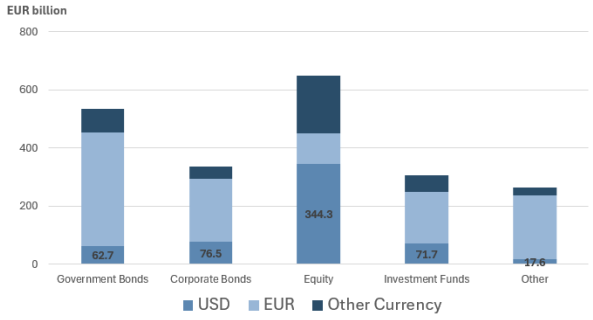
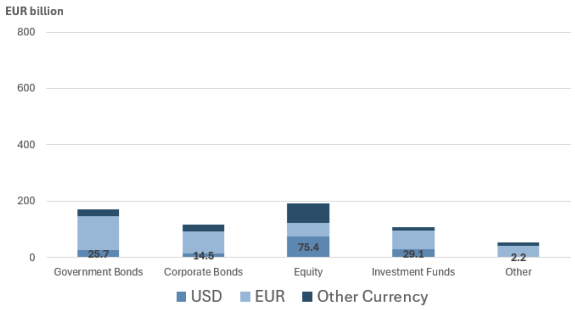


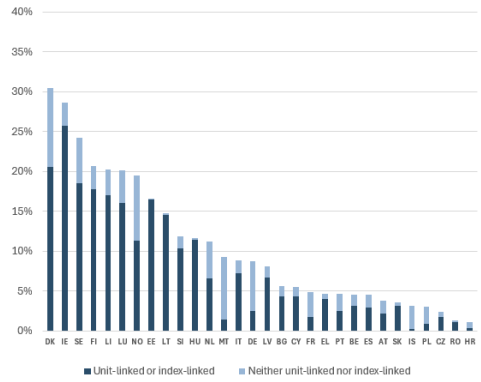

Figure T2.3b: EEA IORPs Defined Contributions and other portfolios investments across main asset classes: breakdown by currency




*Source: IORP annual data for 2024 with look-through applied*

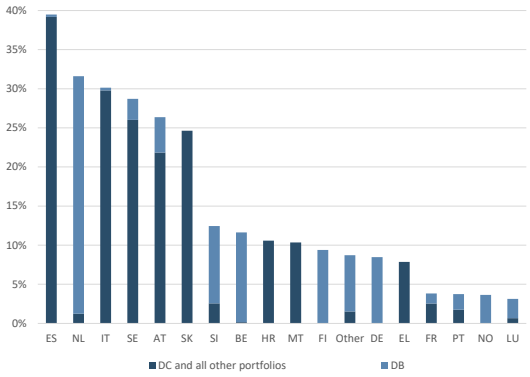
**In general, across the various European countries the shares of investments in US dollars are relatively contained.** In terms of absolute USD exposures, the Scandinavian countries outside the euro area jointly account for 31% of all US dollar investments in the EEA insurance market (as of 2025 Q2). From a single country perspective, German insurers hold the highest absolute value of US dollar investments (EUR 192 bn, equal to 19% of all EEA US dollar investments). Other euro area countries, such as France, Ireland, Italy and Luxemburg also have material holdings of US assets, all exceeding EUR 50 bn. Relative USD exposure (share of dollar investments in total investments per country) is highest for insurers in Denmark, Ireland and Sweden (Figure T2.4a). Insurers' general accounts exposures to US dollar are highest in Denmark, Norway, Malta and Germany, but in all cases do not exceed 10% of total investments per country. Zooming in on pension funds, the Dutch IORPs alone hold 77% of EEA-wide US dollar investments. Together with Sweden and Italy, the top 3 countries with highest dollar exposure in absolute terms account for 92% of EEA-wide US dollar investments. When it comes to relative US dollar exposure as a share of total NCA investments (Figure T2.4b), some relatively smaller markets, for example Spain and Austria, also stand out, while in absolute terms their dollar holdings remain relatively contained.

Figure T2.4a: EEA insurers exposures to US dollar by country: breakdown by general accounts and unit-linked portfolios, 2025 Q2




*Source: Solvency II Solo Quarterly data, 2025 Q2, look-through applied*

Figure T2.4b: EEA IORPs exposures to US dollar by country: breakdown by defined benefits and defined contributions and other portfolios, 2024




*Source: IORP annual data, 2024, look-through applied. Other includes: BG, DK, LI , LV ,PL.*

## 2. IORPS RISKS AND MITIGATING FACTORS

**IORPs typically have liabilities denominated in their local currency but invest globally to enhance returns and diversify their portfolios.** As a result, they are exposed to currency risks associated with fluctuations in exchange rates between their domestic currency and the foreign currencies of their investments. The most material non-EEA investments are in US dollars, particularly in equities. A depreciation of the US dollar can lead to losses on these investments, as the value of their US dollar denominated assets decreases.

**IORPs mitigate foreign exchange risk through hedging using FX derivatives.** IORPs reporting data shows that FX contracts by IORPs tend to have short maturities of approximately 3 months on average. A currency hedge leads de facto to a conversion of an investment in a foreign currency into an investment in domestic currency and thus reduces the exposure to exchange rate fluctuations. However, if the maturity of the asset is longer than the hedging position, some currency risk remains.

**The level of hedging depends on the undertaking's specific risk appetite and can be therefore highly individual.** An inspection of the annual reports of the largest European IORPs reveals that hedging ratios are often defined at asset class level, on portfolio level or a on a combination thereof. In cases where hedging ratios are defined on asset class level, reports indicate that investments in fixed income are often fully hedged. This is primarily because not hedging these positions would add disproportionate risk in relation to the relatively contained expected returns. Instead, when hedging ratios are defined at the equity level, they indicate only partially hedging

as they typically range between 25% and 80% of their position in foreign currency. In cases where hedging is defined at portfolio level, observed hedging ratios vary between 40% and 90%.[13]

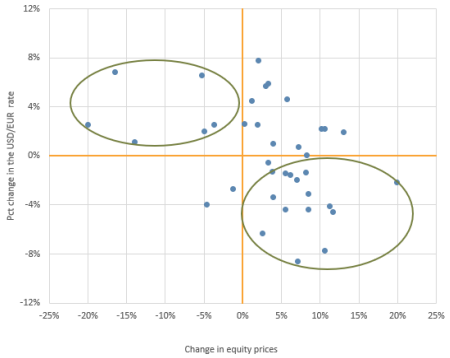
**To complement the partial hedge on equity positions, a market implicit hedging effect[14] helped smoothing the impact because the US stock market has often performed well when the US dollar depreciated.** While equity positions are often only partially hedged via derivatives, the market implicit hedging effect due to the inverse relationship, ocurred during the considered period between the US dollar and the US stock market, helped mitigating the losses. However, it is essential to note that this relationship is not always consistent and may be subject to temporary deviations (as e.g., in 2025 Q1), or the relationship could change in the future, in which case it may be necessary for long-term investors to revisit their hedging decisions. For this reason insurers and IORPs should be careful and prepared if a structural break would happen.

Figures T2.5a and T2.5b illustrate that during the analysis period (2016 Q1 – 2025 Q2), an inverse relationship between the US dollar and US equity prices was observed in 23 out of 38 quarters. Specifically, the data show that the US dollar depreciated against the euro while US equity prices rose in 17 quarters (bottom right quadrant of Figure T2.5a), and the US dollar appreciated amid declining equity prices in 6 quarters (top left quadrant of Figure T2.5a) While stock indices increases were often coupled with an appreciation of the exchange rate between the US dollar and the euro (in 14 quarters), during the period of interest there were only two quarters when the dollar depreciated, and equity prices fell at the same time. Notably, one of these episodes was very recent, in 2025 Q1. However, when the focus is on the four quarters since 2016, during which a more significant depreciation of the dollar has occurred (i.e., decline by more than 5% in one or more consecutive quarters), there is suggestive evidence, although not conclusive, that this implicit hedging effect may have been at play.

[13] IORPs data on derivatives have become mandatory to be reported only since 2025 Q1. Due to the nature of FX contracts but also data quality of the first quarter of mandatory reporting it is not possible to calculate hedging ratios. IORPs tend to hedge currency risk by mean of short-term FX contracts which often mature within quarters and are then rolled over. For this reason, it is not possible to track valuation developments of contracts that expire within the quarter.

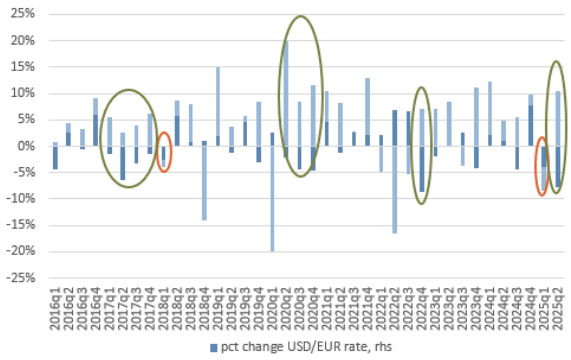
[14] This aspect is discussed in a focus (link) by DNB “Weaker US dollar hits pension funds harder than falling stock prices”.

Figure T2.5a: USD/EUR exchange and US S&P stock index performance




*Source: European Central Bank, Refinitiv*

Figure T2.5b: USD/EUR exchange and US S&P stock index performance




*Source: European Central Bank , Refinitiv*

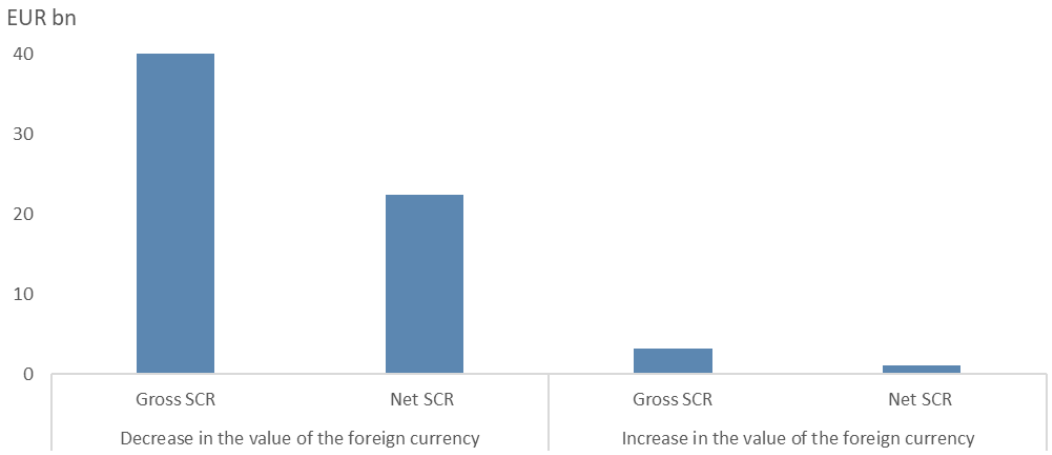
## 3. INSURERS RISK AND MITIGATING FACTORS

In comparison to IORPs, insurers face a more nuanced and complex array of challenges in the event of US dollar depreciation, including impacts not only on investments, but also on liabilities, and underwriting profitability.

**A mitigating factor of currency risk on foreign investments is that life insurers pass on some risks to policyholders through discretionary benefits and, as anticipated, risks in unit-linked portfolios are generally fully pass-through to policyholders, when not hedged.** However, also in the case of traditional life policies, insurers do not always fully retain market risk exposures. In Solvency II reporting, insurers using the standard formula[15], are required to report the amount of capital both gross and net in the two cases of the shock down and up of foreign currency value (Figure T2.6). Currency risk captures all currencies however the US dollar is the main foreign currency. Figure T2.7 shows that more capital is required (hence, life insurers are more exposed) to depreciation of the foreign currency (shock-down). Most importantly, the exposure to shock-down is mitigated by the loss-absorbing capacity of technical provisions, due to insurers' possibility of passing through some losses on to policy holders, which reduces the net Solvency capital requirement.

[15] The coverage of Standard Formula users is limited to a share of the total market: as of end-2024 these undertaking hold 69% of total assets, moreover usually these undertakings are less complex and therefore might be less incline to invest cross-border.

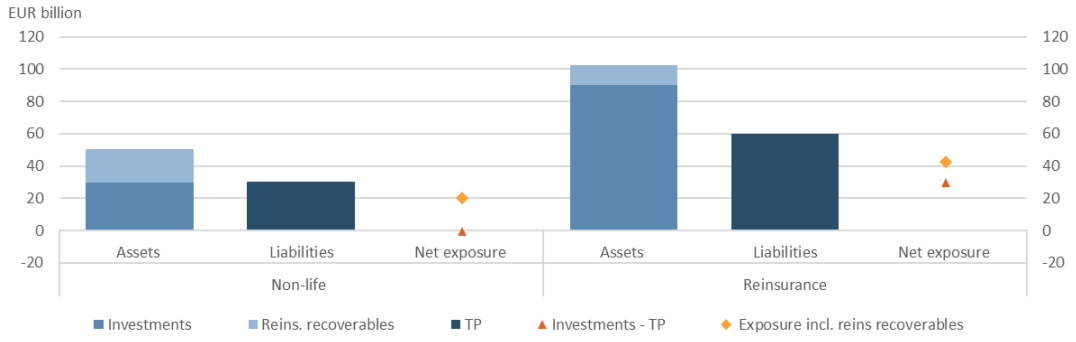
Figure T2.6: Gross versus net Solvency capital requirements, foreign currency shock down and currency shock up, for standard formula users, EURO billion.




*Source: Solvency II solo quarterly data, 2025 Q2*

**Non-life insurers, on the other hand, besides matching assets and liabilities in foreign currencies to eliminate "currency gaps", may transfer the risk of the business underwritten in US dollars to reinsurers.** Non-life insurers[16] invest EUR 29.5 bn in US dollar, which is slightly below the volume of underwriting in US dollars (EUR 30.2 bn). However, a material share of technical provisions underwritten in US dollars are ceded to reinsurers also in US dollars, resulting in an overall net positive exposure.

Figure T2.7: Investments, TPs and ceded TPs in US dollars



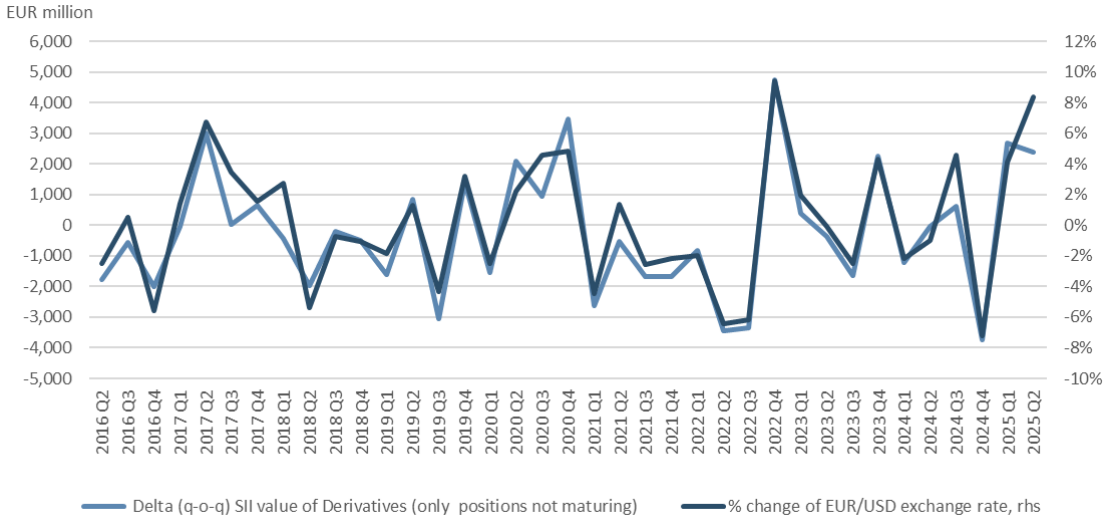

*Source: Solvency II solo annual data, 2024*

**To mitigate currency risk on investments in US dollar, insurers employ also hedging strategies using FX and currency swaps derivatives.** Figure T2.8 shows that the variation of Solvency values

[16] This paragraph is based on a subsample of approx. 350 insurers, which have reported material exposure in other currencies rather than their reporting currencies in 2024. They represent approx. 25% of the market. Out of these undertakings there are respectively 102 and 42 non-life and reinsurance undertakings which reported non zero US dollar technical provisions in 2024.

(i.e., market values) of FX and currency swaps correlate strongly with the exchange rate dynamics between the US dollar and the euro. This implies that the US dollar, also potentially indirectly via typically non-material exposures to other currencies, comoving with the dollar (e.g., the Canadian dollar, Australian dollar, Mexican peso), is the main driver of the EEA insurers currency derivatives positions. These undertakings could be both euro or Scandinavian (DK pegged to EUR, SEK and NOK) which for various reasons (geographical proximity, trade relations, monetary policy and commodity/oil prices) are more strongly linked to the EUR.

Figure T2.8: Quarter on quarter variation of Solvency II value of currency derivatives and EUR/USD exchange rate




*Source: Solvency II solo quarter data, from 2016 Q2 to 2025 Q2*

**It is noteworthy that currency derivatives variations (e.g., in EUR amounts) are negligible with respect to the total US dollar investments by EEA insurers.** This is due to several compounding reasons. Long-term investors tend to hedge fixed income, and these are only a share of all investments in US dollars. For exposures on stocks there is potentially an implicit hedge due frequently observed negative correlation with US dollar valuations, which can help smoothing the impact. Moreover, as in life products with profit participation the portfolios allocations tend to include credit and equity exposures, for equity and credit exposures risk sharing with policyholders can be a relevant mitigating factor. Especially non-life insurers and reinsurers have also matching liabilities in US dollars and do reinsure underwriting in US dollars. Not least, total insurers' investments in US dollars also include participations and these do not necessarily generate risk as discussed next.

**Participations in US insurance subsidiaries of large European groups are shield from exchange rates fluctuations through asset and liability matching in local currency.** Indeed, the US subsidiaries owned by large European cross-border groups have both investments and liabilities predominantly denominated in local currency. When consolidating capital requirements, in

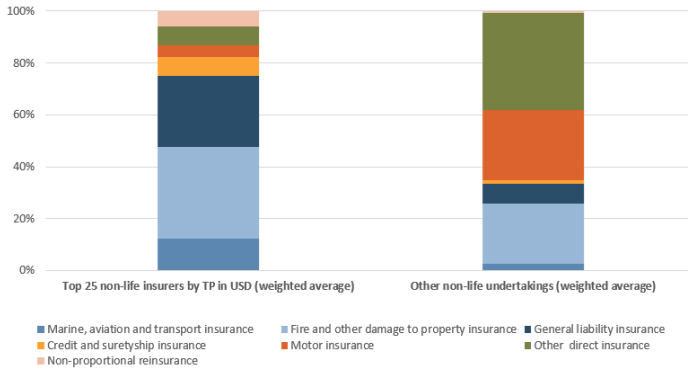
situations in which the US dollar depreciates, losses on participations (which contribute to the group's Own Funds) are often offset by the decline in the value of the Solvency capital requirement (SCR) in euros. Hence, large groups with US subsidiaries, do not necessarily need to use derivative for hedging their participations.

For all these reasons, actual currency exposures should be calculated at the undertaking level and factoring in all the effects of all mitigating actions taken to understand how much of the residual risk is effectively hedged by derivatives (i.e., hedge ratios).

A weaker US dollar can impact not only insurers' investments and liabilities valuations but also their profitability.

**US dollar depreciation also impacts negatively on the profitability of reinsurers and non-life insurers with significant international business lines, which are often underwritten in US dollars.** For insurers with international business in US dollar, such as non-life undertakings or reinsurers, a weaker US dollar translates into lower underwriting profitability. In fact, fees collected on premiums are lower when converted to EUR. For example, both premiums and claims reduce, hence the combined ratios remain constant but the margin in EUR amount declines proportionally to the currency depreciation. The materiality of the impact depends on how relevant these lines of business are with respect to the total business volume of the undertaking (Figure T2.9).

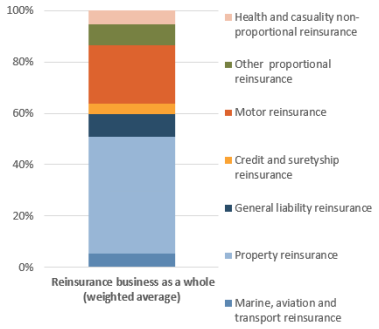
Figure T2.9a: Non-life: breakdown by lines of business for the top 25 undertakings by dollar TP and the other non-life insurers




*Source: Solvency II solo annual data, 2024*

*Notes: Direct business and proportional reinsurance reported jointly in the first 6 categories. Other insurance includes all remaining lines of business, of which the highest weight have medical expenses, income protection health and miscellaneous financial loss insurance. Non-proportional reinsurance includes marine, property, health and casualty.*

Figure T2.9b: Reinsurance: breakdown by line of business




*Source: Solvency II solo annual data, 2024*

*Notes: Marine and property proportional and non-proportional reinsurance reported jointly. Other reinsurance includes all remaining lines of business of proportional reinsurance, of which the highest weight have medical expenses, and miscellaneous financial loss insurance.*

Insurers with material liabilities in US dollars are characterizes by relatively more underwriting in international lines of business such as Marine, aviation and transport insurance, general liabilities

and credit and suretyship insurance, while other insurers tend to underwrite traditional lines of business such as motor insurance in in local currency.

In Solvency II reporting, insurers using the standard formula are required to report the amount of capital both in the case of the shock down and up of foreign currency value. The Solvency capital requirement reflects the actual exposure after factoring in all mitigating actions (i.e., residual risk).

**Among the standard formula users, all types of insurers users are exposed mostly to depreciation of the foreign currencies relative to their local currency.** The net capital requirement in euro amounts is higher in all cases for shock down. This is the result that combines initial exposures, e.g., via investments, after all the mitigating aspects such as derivatives, risk pass through via discretionary benefits (i.e. loss absorbing capacity of technical provisions) and use of reinsurance are factored in.

**Among the standard formula users, reinsurers have the highest exposure to currency risk.** In Solvency II reporting, insurers are required to break down their capital requirements into various market risk categories: interest rate risk, spread risk, equity risk, currency risk, property risk and market risk concentrations showing also the diversification benefits within the market risk module. For life and composites, non-life insurers and reinsurers currency risk represents respectively shares of 3.28%, 7.66% and 14.89% of the total net capital requirement.

# 4. CONCLUSION

**This topical focus starts by providing evidence on insurers' and IORPs investments in US dollars.** A distinction is made between, on one side, insurers' general accounts and IORPs defined benefits portfolios where the risk is borne and managed primarily by the undertakings and, on the other side, insurers' unit-linked and IORPs defined contributions portfolios where risk is borne by the policyholders/beneficiaries.

**The analysis then explores the effects of a weakening US dollar on insurers and IORPs in the EEA, as well as the strategies they employ to mitigate these impacts.** To manage currency risk on foreign investments, IORPs typically use derivatives to hedge their fixed-income portfolios, while only partially hedging their equity portfolios. However, in equity portfolios they can often rbenefit from a market implicit hedging effect, which helps offseting losses when the US dollar depreciates. In contrast, insurers face a more complex set of challenges when the US dollar weakens, as it affects not only their investments, but also their liabilities and profitability. This is particularly true for large insurance groups with US subsidiaries, reinsurers, and non-life insurers with international business. To mitigate currency risk, insurers use a range of strategies, hedging, asset-liability matching, and reinsuring. A mitigating factor in the case of life saving policies is also the risk-sharing aspect with policyholders. Finally, reinsurers have the most material exposure to foreign currency risk due to their significant US dollar underwriting and investing activities and therefore require higher capital reserves to manage this risk.

**No de-risking on US dollar investments is observed in the first half of 2025.** A preliminary review of the latest available Solvency II and IORPs reporting data indicates no material liquidations of US dollar fixed income assets. On the contrary, for both insurers and IORPs data points toward an increase in US dollar equity positions in 2025 Q2. Insurers and IORPs could in principle reduce US dollar risk exposures also by increasing hedging via derivatives. Given the current market volatility and the potential for a further decline of the US dollar, it is important to monitor these developments and undertakings hedging practices for at least two additional reasons than inward market risk and risk management.

**First, while hedging with derivatives can protect against market risk, it can also introduce liquidity risk[17].** For instance, when foreign investments gain value due to a strengthening foreign currency, the hedging derivatives can incur mark-to-market losses, triggering a need for liquidity to cover variation margin payments.

**Furthermore, hedging activities by global foreign investors can have a significant impact on the value of the US dollar.** As highlighted in a recent BIS report[18], currency hedging by non-US investors holding US dollar securities, mostly Asian investors, contributed to the dollar's weakness in April and May 2025. It could be therefore relevant to monitor the development of hedging practices by European insurers and IORPs who invest in US dollars for approximately EUR 1.8 tn, especially in the case of small non euro European economies.

**It is important to monitor the hedging practices of individual European insurers and IORPs.** Regulators and investors should remain vigilant in addressing FX risk, as its effective management is critical to safeguarding financial stability in an environment of heightened market volatility and geopolitical fragmentation.

[17] Relevant previous work by EIOPA on the liquidity risks associated with derivatives can be found for insurers and IORPs in, respectively, the December 2022 and December 2023 Financial stability Reports. In addition to the above work on interest rate derivatives, the June 2025 Financial stability Report focusses on currency derivatives. (Reference: EIOPA (2022) Financial Stability Report, EIOPA (2023) Financial Stability Report, EIOPA (2025) Financial Stability Report. Available at: EIOPA FINANCIAL STABILITY REPORT (europa.eu))

[18] US dollar's slide in April 2025: the role of FX hedging US dollar's slide in April 2025: the role of FX hedging

# 3. INTERCONNECTEDNESS OF THE EUROPEAN INSURANCE SECTOR WITH GLOBAL MARKETS

*Exposures to global markets are important for the balance sheet and business strategies of European insurers. Insurers invest outside the European Economic Area either directly or through Collective Investment Undertakings. This represents a source for diversification and return on investments. In addition to investments, ceded risk, in the form of reinsurance recoverables and receivables, can be channelled outside Europe. On the liabilities side, EEA insurers assume risks outside Europe either via direct underwriting or indirectly entering into inward reinsurance treaties. The aim of this article is to provide an overview of the exposure of the European insurance industry to non-EEA countries in terms of assets, liabilities and underwriting, to explore the significance of such exposures and to identify any potential risks from a financial stability perspective.*

## 1. INTRODUCTION

**The European (re)insurance sector plays a relevant role in global financial markets contributing to the functioning of the European economy**. Insurance undertakings, while deeply rooted in domestic European economies, operate within a highly interconnected international environment. In this context, non-EEA exposures are fully embedded in their business models and strategies. Whether through investment allocations, liability structures, premium inflows, or reinsurance transfers, European insurers are consistently engaging with global markets.

**These international exposures offer potential benefits.** From an investment perspective, global allocations can support portfolio differentiation and improve returns. In terms of risk-taking, international activities enhance diversification, while in underwriting they enable access to new and broader markets. In reinsurance, cross-border operations can contribute to both capital and operational efficiency.

**However, global exposures also have implications for insurers' risk profiles. Non-EEA exposures, while not adding additional risks, modify the exposures to the already included risk categories. They can increase market, counterparty, and concentration risks, as well as underwriting vulnerabilities such as claims inflation.** These effects become particularly relevant during periods of heightened geopolitical and geoeconomic tensions, when correlations across markets may increase and risk transmission channels may intensify. On the asset side, the current analysis investigates both direct investments and exposures through Collective Investment Undertakings (CIUs). On the liability side, both direct and assumed business, alongside ceded reinsurance, are considered. Finally, inflows from premiums and other recoverable from ceded business were assessed, as they are considered additional layers of exposure.

**Analysis of currency exposures is also relevant for the assessment of non-EEA exposures.** However, for the purpose of the current analysis it was excluded, as it is developed in the topical focus 2

# 2. ANALYSIS

The analysis is performed based on annual Solo Quantitative Reporting Template (QRT) data for all undertakings and third country branches, reporting data under Solvency II. The reference year for data extraction is 2024, covering the period from January to December. Details on the QRT templates used and on the embedded limitations/ approximations are provided in Annex 1.

In analysing the non-domestic exposures the general reference used is the country of issuance of securities, the domicile of the fund manager or of the reinsurers, the location of the underwriting or of the assumed risk. It should be noted that the geographical location of the exposures does not necessarily correspond to their currency denomination.

## 2.1 Investments by regions and asset class

The analysis that follows sheds light on the investments of EEA insurers by providing a breakdown by region and assets class.

**Almost 44% of the investments of the European insurers are outside the home country. Slightly more than 13% of direct investments of EEA insurers are allocated to non-EEA issued instruments (Figure T3.1)**. The distribution of these exposures reveals important geographic patterns. As shown in Figure T3.2 almost 46% of non-EEA assets are linked to the United States, reflecting the depth, liquidity, and profitability of American capital markets. The United Kingdom follows with 22%, continuing to represent a strong destination for European capital despite Brexit. The remaining 32% is distributed across a diverse set of countries, including Switzerland, Canada, and various emerging markets.

**Such allocation offers several potential benefits for insurers**. United States and United Kingdom markets, in particular, provide access to deep corporate bond and equity markets, which are attractive given their liquidity and potential returns. Moreover, global diversification helps insurers to balance risks associated with domestic economic cycles, enhancing the stability of their overall portfolios. However, these benefits are accompanied by increased exposure to foreign markets, credit, and currency risks, which need to be carefully managed.

Figure T3.1: Insurers investments exposure by region, EUR Trillion

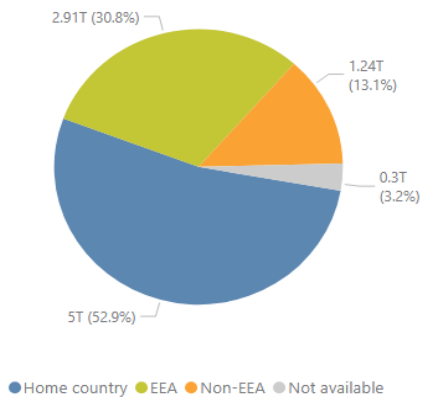
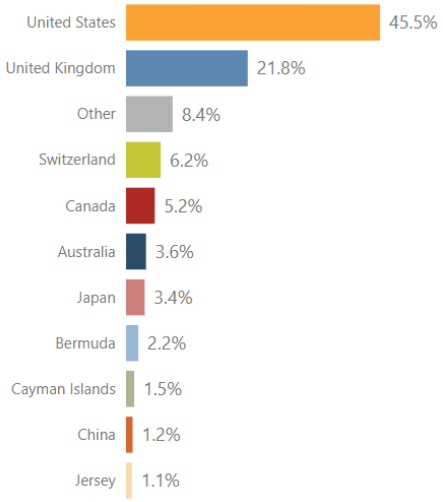



Figure T3.1: Non-EEA exposures by country




*Source: Solvency II annual reporting solo, 2024*

**Looking at the Top 10 EU countries, the analysis reveals heterogeneity with non-EEA investments varying from 37% to 7% of total investments in the respective markets**. However, the pattern with United States and United Kingdom being the top two non-EEA countries where investments from EEA insurers are made, remains consistent across all regions. The ranking based on the absolute exposures (Figure T3.3a) is mainly driven by the size of the national insurance markets, with France and Germany at the top. The picture changes when looking at the relative exposures (Figure T3.3b), where the ranking can be explained by the business model of the insurers operating in the national markets. Insurers based in Ireland and Luxembourg are typically life undertakings with portfolios tilted to investment products where the return on investments is a key element.

Figure T3.3a: Top 10 EU countries by non-EEA investments

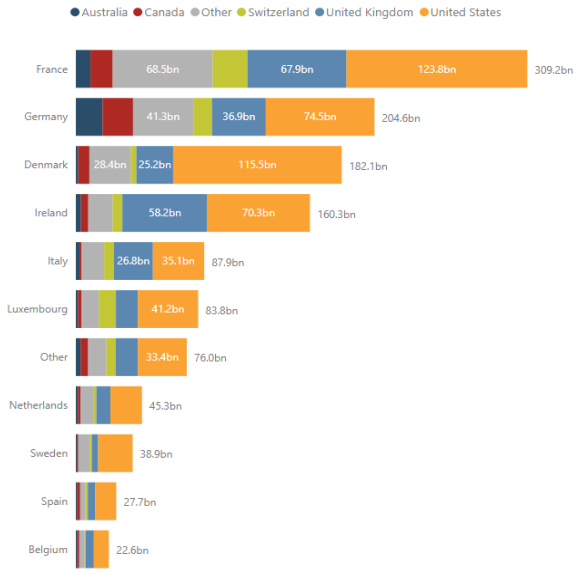
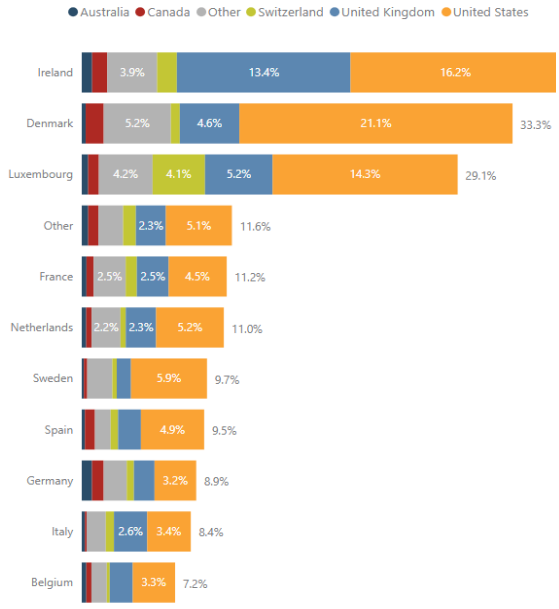



Figure T3. 3b: Top 10 EU countries by non-EEA investments (% of the national market)

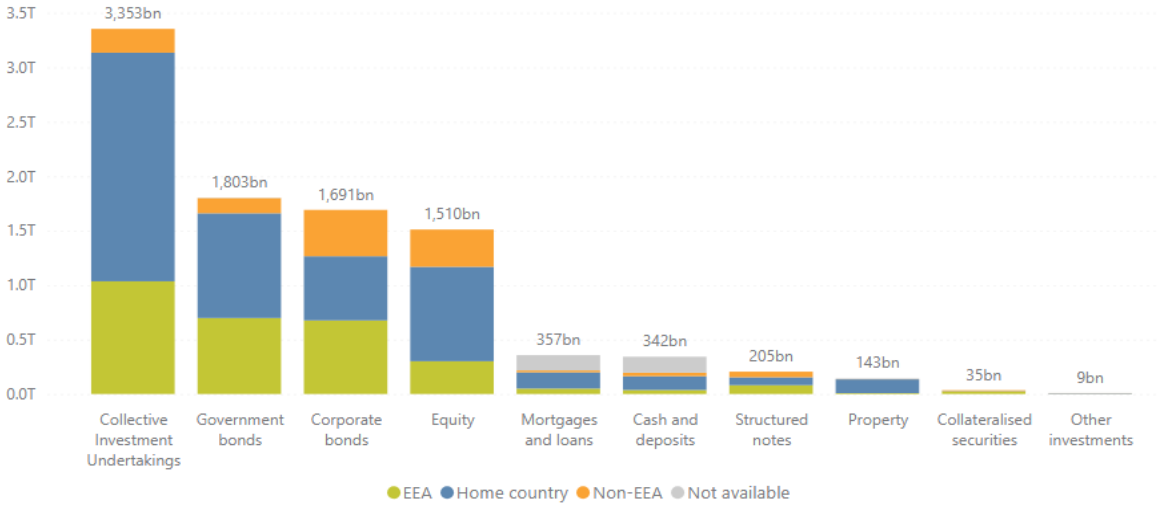



*Source: Solvency II annual reporting solo, 2024*

*Note: Top 10 breakdown of Other for Non-EEA investments distribution (% of Grand Total of the exposure EUR): Japan (3.35%), Bermuda (2.23%), Cayman Islands (1.48%), China (1.20%), Jersey (1.07%), Taiwan (0.79%), Singapore (0.68%), Mexico (0.64%), Chile (0.51%), India (0.51%).*

**Looking at the details of these investments by asset class, the analysis confirms previous conclusions on home bias, at least for CIUs and government bond investments**. Most of non-EEA investments are concentrated in corporate bonds (EUR 426 bn), equities (EUR 342 bn), and CIUs[19] (EUR 219 bn), while United States dominance is evident across the board (Figure T3.4). Corporate bonds and equities in particular account for the largest shares, with United States issuers representing half or more of the non-EEA exposure.

Figure T3.4: Exposures by asset class (EUR)

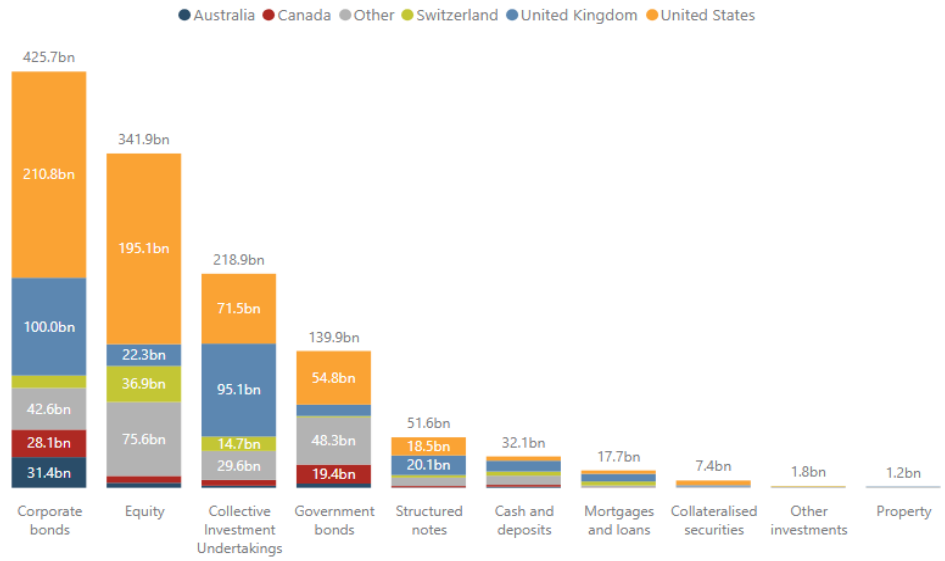



*Source: Solvency II annual reporting solo, 2024*

**The United States remains significant, especially in the corporate bonds and equities segment, while Swiss equities and Canadian government bonds also feature as notable components**. This pattern reflects global financial realities. The United States offers significant depth in corporate debt and equity markets, while countries like Switzerland and Canada are attractive for their economic stability and strong sovereign credit profiles. This emerges looking at both the absolute (Figure T3.5a) and relative (Figure T3.5b) distribution of asset classes across non-EEA countries The equities asset class has the largest geographical heterogeneity, where investments in equities issued in other countries reaches EUR 75.6 bn, with over 90 non-EEA issuers. Non-EEA issued CIUs amount to EUR 219 bn and are mainly issued in the United Kingdom (EUR 95.1 bn), followed by the United States (EUR 71.5 bn).

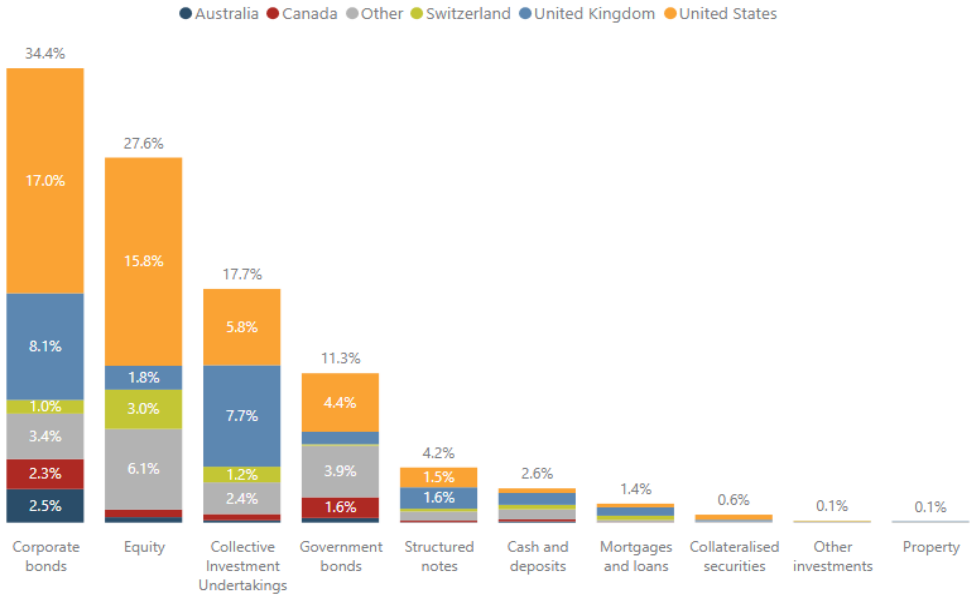
[19] For the purpose of this view, the CIU data is treated at fund level, and the exposure country is the fund management origin.

Figure T3.5a: Non-EEA investments distribution by Top 5 non-EEA issuers (EUR)




*Source: Solvency II annual reporting solo, 2024*

Figure T3. 5b: Non-EEA investments distribution by Top 5 non-EEA issuers (% of total)

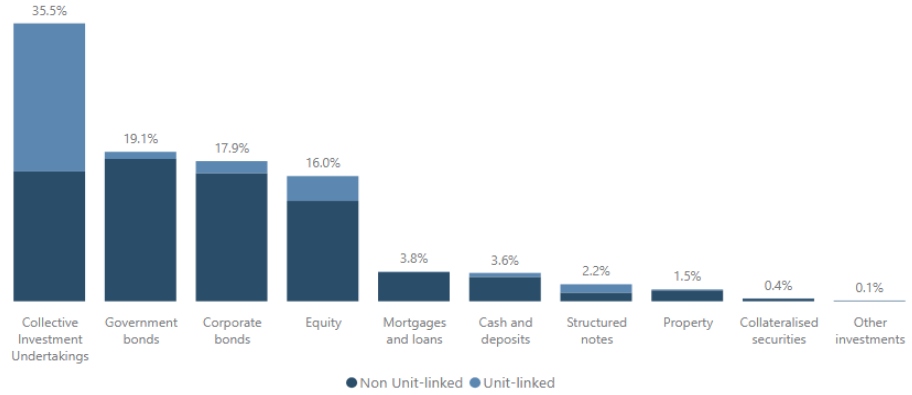



*Source: Solvency II annual reporting solo, 2024*

**The analysis of the investments backing different portfolios of liabilities (Figures T3.6 and T3.7) shows similar allocaton within and outside EEA by asset classes with the exception of the allocation to equity.** Exposures to CIUs is almost equal split to unit-linked and non unit-linked products both for the full portfolio of investments and for the non-EEA ones. Consistency between full investments and unit-linked investments can be also observed in the exposures to government bonds and corporate bonds, where the allocation is tilted towards non unit-linked portfolios. The same does not apply to the exposures to equity wherethe share of unit-linked ones is significantly increased and reaches half of the equities asset class in case of non-EEA investments. The

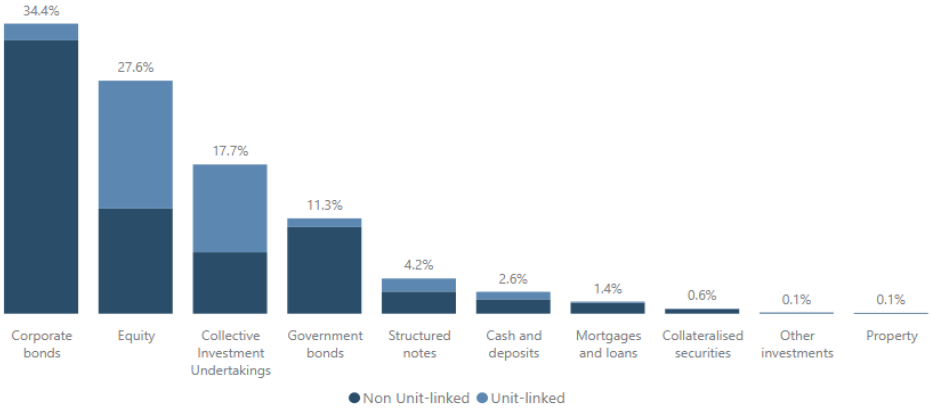
percentage of unit-linked products even not the prevailing ones, they are still significant in the assets invested in the United States and United Kingdom.

Figure T3.6: Full portfolio investments and their breakdown by asset class and type of product



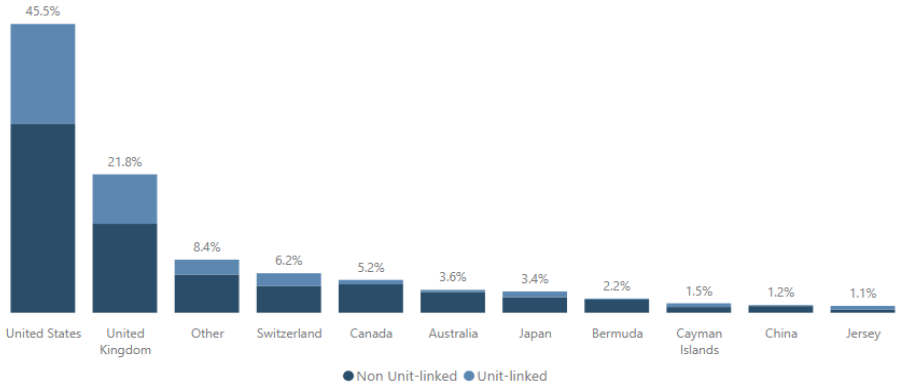

*Source: Solvency II annual reporting solo, 2024*

Figure T3.7: Non-EEA investments and their breakdown by asset class and type of product




*Source: Solvency II annual reporting solo, 2024*

Figure T3.8: Non-EEA investments and their breakdown by country and type of product

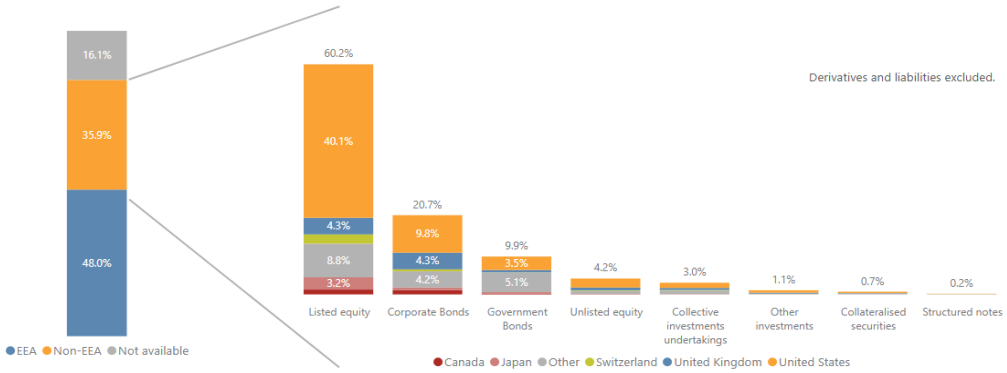



*Source: Solvency II annual reporting solo, 2024*

## 2.2 Non-EEA investments within CIUs

**Roughly one-third of CIU exposures are securities issued in non-EEA countries, with top three asset classes being listed equites (EUR 731 bn), followed by corporate bonds (EUR 245 bn) and government bonds (EUR 117 bn)**. Within the category of CIUs (Figure T3.9), following a look-through approach[20], the picture shifts somehow given that with the look-through approach the analysis captures the country of issuance of the underlying asset (and not the country of the fund management as it was the case in the previous analysis where CIU data was approached at fund level). Listed equities are prevailing, demonstrating EEA insurer's appetite for these types of assets through CIUs, with United States listed equities taking the spotlight.

Figure T3.9: Total CIU investments (%)




*Source: Solvency II annual reporting solo, 2024*

**The prevailing destination of the investments through CIUs remains the United States (EUR 691 bn) for all asset classes and across EEA insurers, followed by the United Kingdom (EUR 130 bn)**. The prominence of United States equities within CIUs mirrors the broader investment picture, underscoring the systemic importance of United States financial markets for EEA insurers.

**Looking at the Top 10 EU countries, the analysis reveals heterogeneity with non-EEA CIU investments varying from 24.5% to 2.3% of total investments in the respective markets both in absolute and relative terms**. However, as shown in Figures T3.10a and T3.10b, the pattern with United States and United Kingdom being the top 2 non-EEA countries where CIU investments from EEA insurers are made, remains consistent across all regions.

20 Exposures with look through are subject to some approximations amid completeness and limitation of the reporting, as for some asset classes within CIUs the issuer country is not reported. For instance, property holdings, cash positions, or alternative assets often lack precise country attribution, resulting in a higher proportion of "not-assigned" data.

Figure T3.10a: Non-EEA CIU investments distribution by top non-EEA issuers, EUR bn

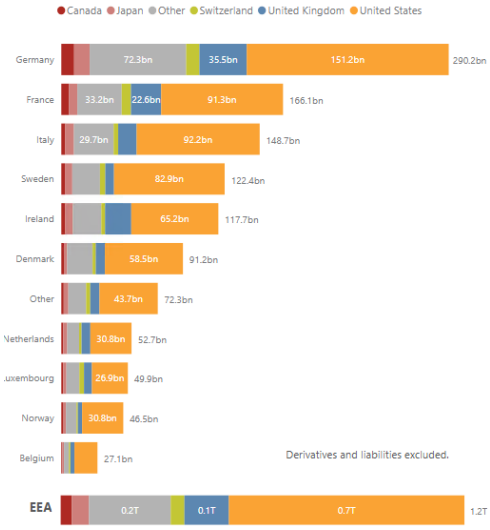
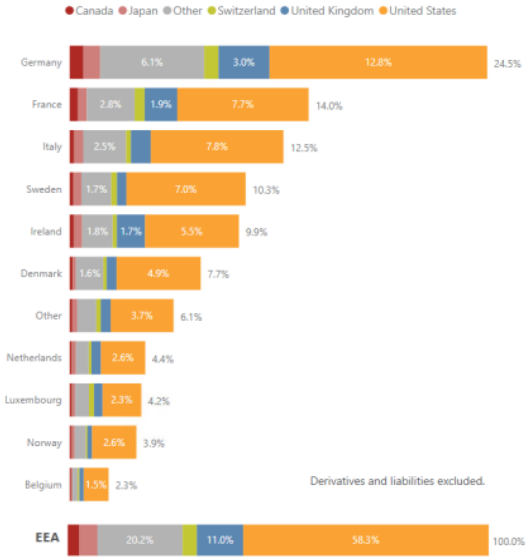



Figure T3. 10b: Non-EEA investments distribution by Top 5 non-EEA issuers (% of total)




*Source: Solvency II annual reporting solo, 2024.*
*Top 10 breakdown of Other for CIU investments distribution (% of Grand Total of the exposure EUR): Australia (1.96%), Taiwan (1.89%), Cayman Islands (1.77%), China (1.65%), India (1.56%), Republic of Korea (0.97%), Mexico (0.93%), Brazil (0.65%), Indonesia (0.63%), Hong Kong (0.62%).*

## 2.3 Technical Provisions

**Assuming risks outside the EEA offer insurers potential upside in expanding their business to markets beyond their domestic ones and to enhance the differentiation of their risk exposures.** However, doing business beyond the EEA also brings additional risks: cross-border underwriting is exposed to regulatory divergence, discriminatory laws, sanctions regimes, and legal uncertainty. Volatility in local political or economic conditions can sharply affect claims inflation, and reduced ability to geographically diversify risks undermines portfolio stability. Moreover, compliance, capital allocation, and operational complexity rise significantly when underwriting in non-aligned or high-risk jurisdictions.

**In sum, entering non-EEA markets can boost opportunity and diversification—but only if insurers build robust intelligence of the economic and political dynamics of the respective markets, granular underwriting frameworks, and flexible capital strategies to manage the associated risks[21].**

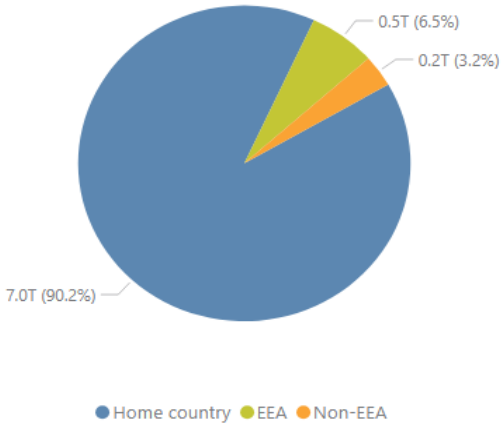
**The analysis of EEA insurers' liability side indicates a significantly smaller presence of non-EEA exposures, accompanied by a pronounced home-country bias, in contrast with their more**

[21] The Geneva Association (2025) Insurance in a Fragmented world economy. Available at: Insurance in a Fragmented World Economy | Summary (January 2025).

**globally diversified asset side.** As shown in Figure T3.11, 90.2% of the technical provisions (TP) reported by European undertakings are from the home country, followed by within-EEA activities (6.5%). Only about 3.2% of technical provisions are reported as non-EEA related (EUR 250bn). These liabilities (Figure T3.13a and T3.12b) are primarily associated with non-life insurance (EUR 159 bn) and unit-linked business, both of which tend to involve greater cross-border activity. When looking at net exposure to non-EEA counterparties, what stands out is that there is a material imbalance between assets and liabilities.

However, it is essential to recognise reporting limitations. Country-by-country information is not reported when technical provisions from the home country represent higher than 90% of the entire company's sum of the technical provisions calculated as a whole and gross best estimate. As a result, the true proportion of non-EEA liabilities could be somewhat understated.

Figure T3.11: Technical provisions (direct and reinsurance assumed)




*Source: Solvency II annual reporting solo, 2024.*

Figure T3.12a: Technical Provisions, direct and reinsurance (regional in EUR)

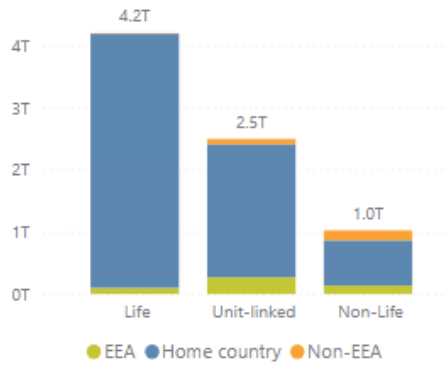
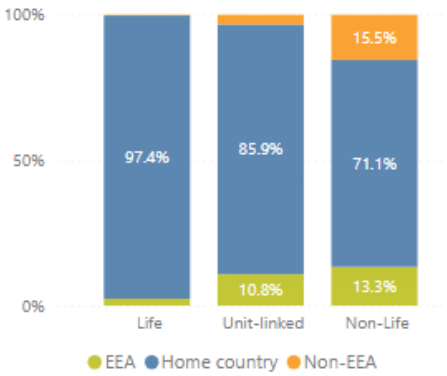



Figure T3. 12b: Technical Provisions, direct and reinsurance (regional share distribution)




*Source: Solvency II annual reporting solo, 2024.*

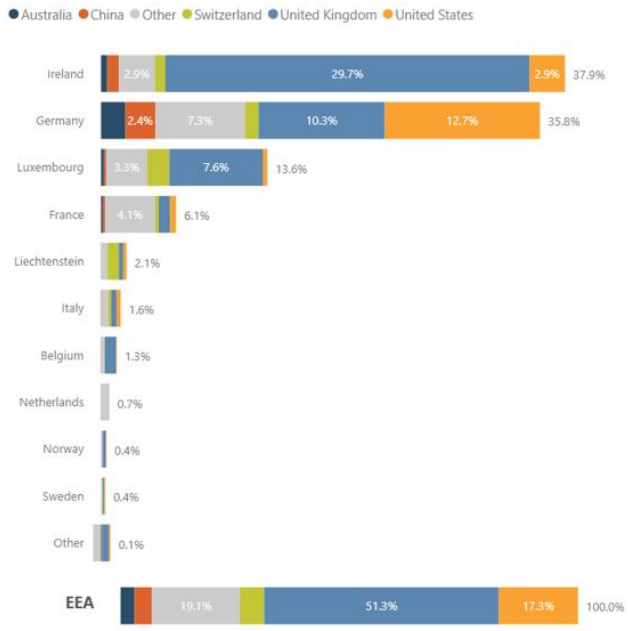
**The material imbalance between assets and liabilities exposures reduces the mitigating effect of natural hedging between assets and liabilities on risks associated with the non-EEA**

**exposures.** Investments in non-EEA assets (EUR 1.2 tn) are almost five times larger than the related technical provisions (EUR 0.2 tn). This means insurers are far more exposed to non-EEA markets through where they invest their assets, rather than through obligations to policyholders outside the EEA.

When the location of risk and the place of underwriting differ, one of the most significant challenges—beyond regulatory and taxation considerations—is ensuring that the insurer has accurately priced the policy. Underwriting from outside the jurisdiction of the risk can lead to gaps in understanding local loss patterns, legal environments, inflation trends, and market dynamics, all of which are crucial to setting an appropriate pricing. Without access to reliable local data or insight into claims behaviour, insurers risk mispricing—either underestimating risks, with potential impact on capital (i.e., underreserving) and profitability, or overpricing and losing competitiveness. Therefore, effective cross-border underwriting, particularly in non-EEA markets, depends on robust risk assessment.

Looking at the Top 10 EU countries (Figure T3.13), the analysis reveals heterogeneity technical provisions linked with underwriting on non-EEA destinations varying from 38% to 0.4% of total technical provisions in the respective markets.

Figure T3.13: EEA countries split by top 5 provision countries (direct and reinsurance assumed)

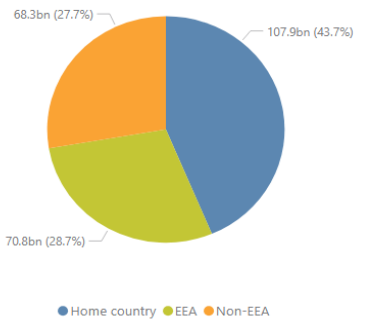



*Source: Solvency II annual reporting solo, 2024.*
*Top 10 breakdown of Other for TP (direct and reinsurance assumed) (% of Grand Total of the Sum of TP EUR): Taiwan (2.62%), Gibraltar (2.15%), India (1.48%), Japan (1.29%), Bermuda (1.19%), Israel (1.11%), Monaco (1.01%), Mexico (0.90%), United Arab Emirates (0.87%), Hong Kong (0.79%).*

## 2.4 Reinsurance ceded

**When examining ceded business, the role of non-EEA counterparties becomes far more significant**. Nearly 28% of risks are transferred outside the EEA, reflecting insurers' reliance on global reinsurance markets for risk sharing and capital management (Figure T3.14).

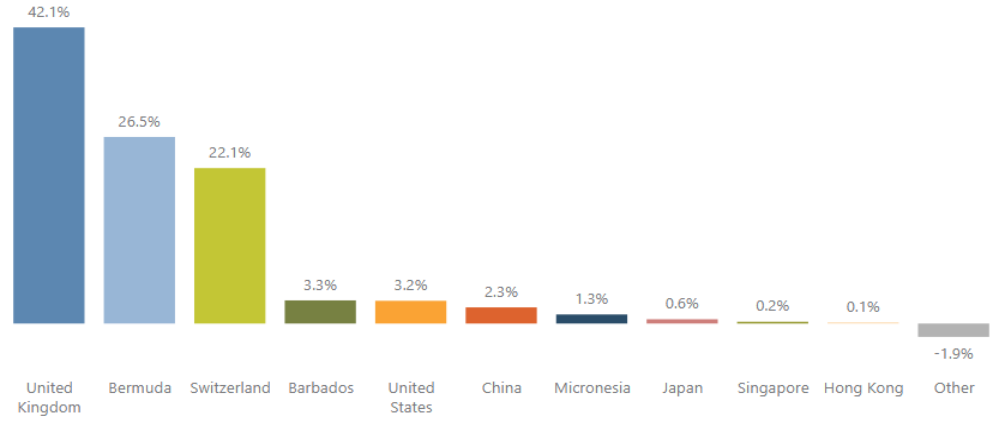
Figure T3.14: Ceded business (TP)




*Source: Solvency II quarterly reporting solo, 2024.*

**Geographically, the United Kingdom accounts for the majority of these transfers (42.1%), consistent with its historical role as a global reinsurance centre.** Bermuda (26.5%) and Switzerland (22.1%) follow, both being major players in the global reinsurance industry. The remainder of non-EEA transfers is spread across a wide array of jurisdictions (e.g., Barbados, United States, China, etc.) but collectively accounts for only about 10% of the amounts ceded (Figure T3.15). What needs to be kept in mind while considering these figures is whether United Kingdom, and similarly for all other non-EEA countries reported, is the ultimate destination or the risk is further transferred to other countries. Such considerations are relevant and already reflected in recent analyses on asset intensive reinsurance and debates on jurisdictional concentrations, as also touched upon from IAIS relevant work in its Issues Paper on structural shifts in life insurance and EIOPA Financial Stability Report published in December 2024. In the latter, Bermuda-based reinsurers are identified as key counterparties in asset-intensive reinsurance arrangements with European cedants. The analysis showed that outgoing life reinsurance to Bermuda (and the United Kingdom) has become more material in 2023 compared to prior years. It further notes that much of the AIR business ceded to Bermuda is concentrated among only a few reinsurers, often executed via intra-group or related Solvency II undertakings. Because of that concentration, and the material size of such ceded positions on the balance sheets of European cedants, Bermuda (re)insurers represent a potential source of vulnerability—notably via counterparty risk, limited transparency, and regulatory arbitrage (e.g., where capital relief may be obtained without commensurate risk transfer).

Figure T3.15: Non-EEA technical provisions by top 10 destinations




*Source: Solvency II annual reporting solo, 2024.*

In absolute values (Figure T3.16a), the amounts of risk ceded within the EEA (including home country) are close for life and non-life business (with about EUR 90 bn each), whereas the amount transferred outside the EEA is more relevant for the life business (EUR 46 bn) than for the non-life (EUR 22 bn). This conclusion, as shown in Figure T3.17 stands true across most of the non-EEA destination countries apart from the United States and Switzerland, where the amounts transferred are more relevant for the non-life business.

Figure T3.16a: Ceded business (TP, EUR)

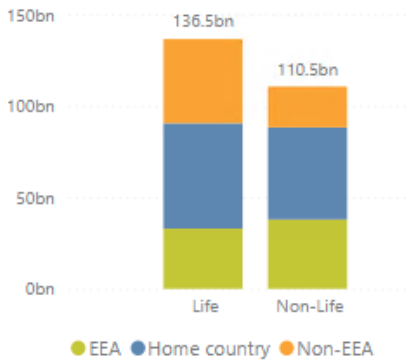
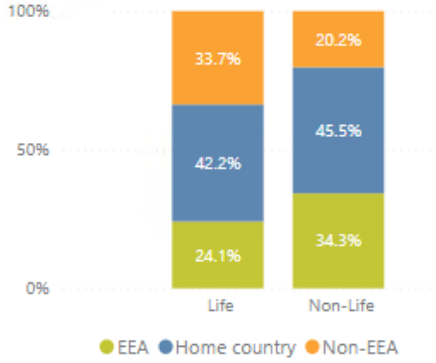
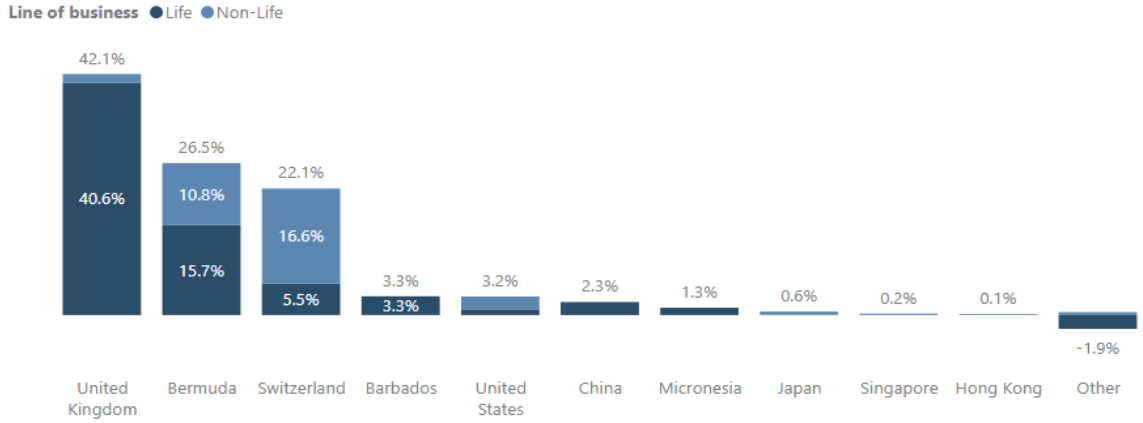



Figure T3. 16b: Ceded business (TP, %)




*Source: Solvency II annual reporting solo, 2024.*

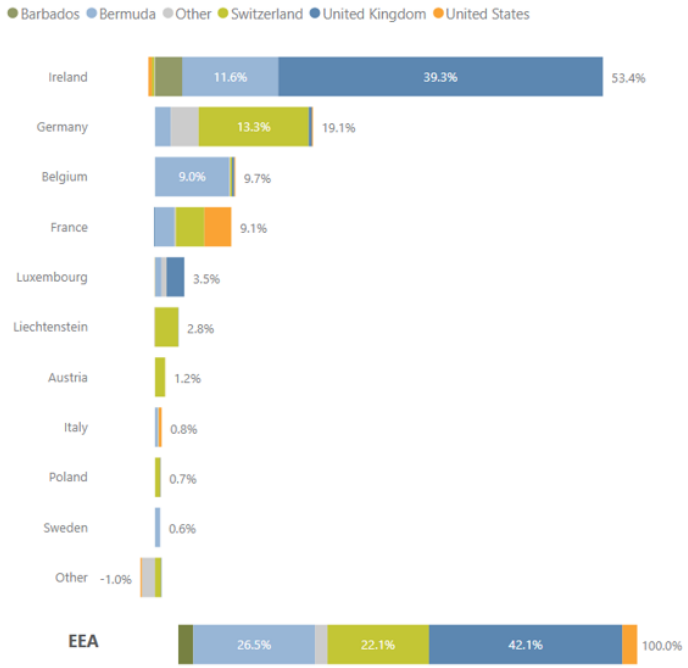
Figure T3.17: Non-EEA technical provisions by top 10 destinations




*Source: Solvency II annual reporting solo, 2024.*

Looking at the Top 10 EU countries by non-EEA reinsurance treaties (Figure T3.18), the analysis shows heterogeneity with reinsurance ceded to non-EEA destinations varying from 53% to 0.6% of total reinsurance ceded in the respective markets.

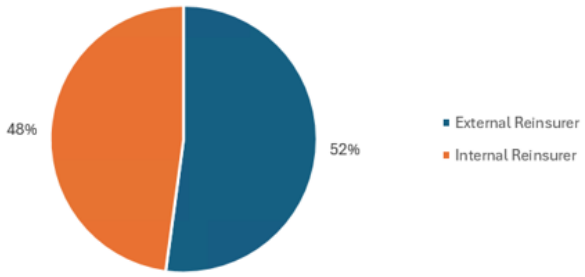
Figure T3.18: EEA countries split by top 5 provision countries (reinsurance ceded)




*Source: Solvency II annual reporting solo, 2024.*

It is important to note that these figures also include intra-group transfers and transactions with special purpose vehicles (SPVs). This means that part of the observed exposure reflects internal group structures rather than third-party reinsurance transactions. Nonetheless, the reliance on non-EEA reinsurance markets remains a defining feature of the industry.

Figure T3.19: Reinsurance recoverable by type of reinsurer

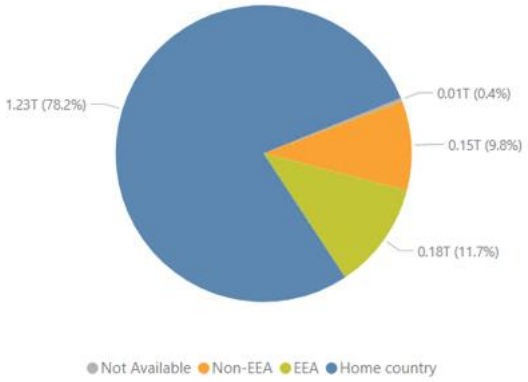



*Source: Solvency II annual reporting solo, 2024.*

## 2.5 Written premia

**European insurers underwrite almost 80% (EUR 1.2 tn) of their total business (EUR 1.6 tn) in their home country**. The cross border written premia are almost equally split between EEA and non-EEA countries, with the latter concurring EUR 153 bn, which is roughly 10% of the total gross written premiums.

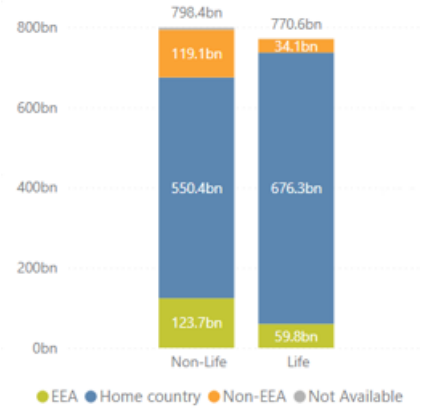
Figure T3.20: Gross written premiums, EUR Trillion




*Source: Solvency II annual reporting solo, 2024.*

There is a strong bias towards non-life cross-border business, with 78% (equal to EUR 119 bn) of the non-EEA written premia being non-life.

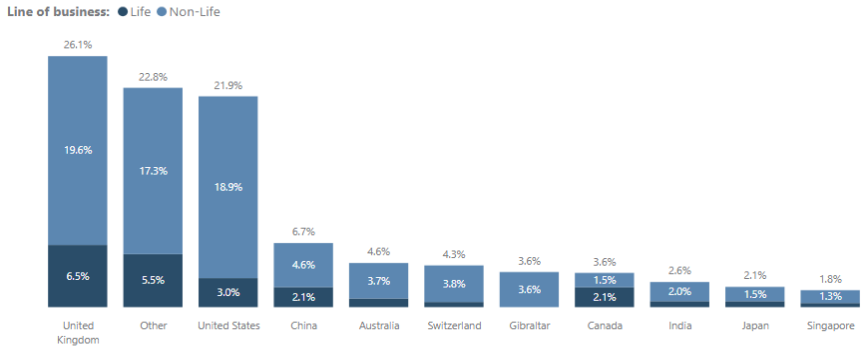
Figure T3.21: Gross written premiums by destination and line of business, EUR billion




*Source: Solvency II annual reporting solo, 2024.*

Non-EEA cross-border premia are underwritten mostly in the United Kingdom (26.1%) and in the United States (21.9%), followed by China (6.7%). Non-life business represents a sizeable part of the total non-EEA cross-border premia in these countries. For example, in the United Kingdom 19.6%, in the United States 17.3% and in China 4.6% of the total non-EEA cross-border premia.

Figure T3.22: Non-EEA gross written premiums by top 10 destinations

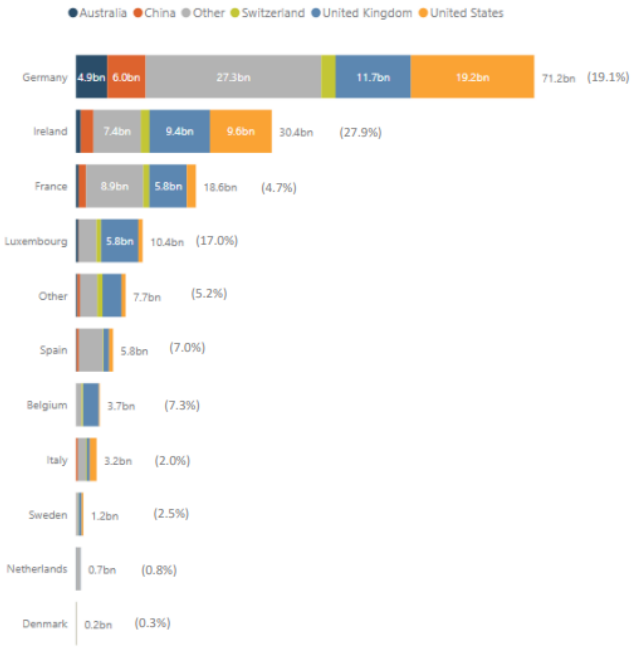



*Source: Solvency II annual reporting solo, 2024.*

It is worth noting that the above numbers combine two different ways of counting: for non-life insurance, premiums are counted based on where the contract is signed, while for life insurance and reinsurance, they are counted based on where the actual risk (the person or asset insured) is located. Therefore, cross-border reporting has its limitations. For example, in non-life insurance, if an EEA insurer's branch sells a policy outside the EEA, it still gets counted as business from the insurer's home country, rather than as foreign business.

Almost 80% (EUR 120 bn) of the non-EEA underwriting is concentrated in three countries: DE (EUR 71.2 bn), IE (EUR 30.4 bn) and FR (EUR 18.6 bn). It is worth to note that this is due to the size of the market mostly (DE 19.1%, IE 27.9% and FR 4.7% of the national market), not necessarily due to the intensity of non-EEA activities. Countries grouped together in "Other" make up an important part of the gross written premiums, with Gibraltar (3.65%), Canada (3.56%) and India (2.61%) having the highest percentage of the total sum of the gross written premiums.

Figure T3.23: Non-EEA gross written premiums, in brackets the weights on national markets




*Source: Solvency II annual reporting solo, 2024.*

*Top 10 breakdown of Other for gross written premiums (% of Grand Total of the Sum of GWP EUR): Gibraltar (3.65%), Canada (3.56%), India (2.61%), Japan (2.10%), Singapore (1.76%), United Arab Emirates (1.65%), Bermuda (1.63%), Mexico (1.54%), Republic of Korea (1.31%), Brazil (1.26%).*

The premia coming from non-EEA countries are divided unevenly. Around 18.4% originate from direct insurance contracts, while the remaining 81.6% come from assumed reinsurance business. This indicates that the non-EEA market is primarily accessed through reinsurance, rather than direct underwriting.

# 3. CONCLUSIONS

**Links with global markets bring important advantages to European insurers such as greater portfolio diversification, improved returns, expanded underwriting opportunities, and enhanced capital efficiency.** Though the current analysis confirms that such exposures do not introduce additional risks to the risk profile of EEA insurers, they inevitably modify existing exposures by adding further considerations on market, counterparty, and concentration risks, as well as claims inflation.

**EEA insurers' direct investments in non-EEA instruments are overall contained, with approximately 13% of direct investments being allocated to non-EEA issued instruments,** but display clear geographic patterns: nearly half are linked to the United States, followed by the United Kingdom, both being seen as major destinations for European capital. Such geographical patterns are confirmed when looking at European insurers' investments within the category of CIUs, following a look-through approach, where United States assets—particularly equities—dominate, underscoring the systemic importance of United States markets for EEA insurers.

Looking at the Top 10 EU countries, the analysis reveals heterogeneity with non-EEA CIU investments varying from 24.5% to 2.3% of total investments in the respective markets.

**On the liability side, non-EEA exposures are limited: 90.2% of technical provisions are domestic, 6.5% within the EEA, and only 3.2% non-EEA.** These are mainly linked to non-life and unit-linked business. However, non-EEA counterparties play a much larger role in reinsurance, with 28% of risks ceded outside the EEA—mainly to the United Kingdom (42.1%), Bermuda (26.5%), and Switzerland (22.1%). Some of these transfers reflect intra-group transactions or dealings with special purpose vehicles, meaning that part of the observed exposure relates to internal group structures rather than external risk transfer. About 80% of European insurers' business is underwritten domestically. Cross-border premiums are split roughly evenly between EEA and non-EEA countries, with 78% non-EEA underwriting relating to non-life business. The United Kingdom (26.1%), United States (21.9%), and China (6.7%) account for most of these premiums.

**Overall, despite the moderate underestimation of some exposures due to reporting limitations, EEA insurers' exposures to non-EEA markets appear moderate.** Nevertheless, these linkages warrant ongoing monitoring amid *i*) rising geoeconomic tensions—such as threats to international cooperation and free trade—and broader geopolitical uncertainty related to conflicts and the evolving political and economic situation in destination countries. *ii*) Structural shift in the life insurance business, as highlighted by different institutions, such as Asset Intensive Reinsurance, and ceded risks channelled to a limited number of jurisdictions among others. This is particularly relevant due to limitations in identifying the ultimate destination of reinsurance risks and the growing, though still modest, role of alternative risk transfer structures in Europe add further complexity to assessing insurers' true global risk footprint.

**Continued vigilance is therefore essential to ensure that potential vulnerabilities stemming from cross-border interconnectedness are well understood and effectively managed**.

# 4. ANNEX

## Data extraction - General specifications, exposure values, exposure country and limitations

| | |
|---|---|
| General specifications | Annual Solo QRT data for all undertakings and 3rd country branches reporting data under Solvency II<br>Reference year: 2024 (Jan-Dec) |
| Investments direct exposure data | • QRTs: S.06.02<br>• Exposure value: S.06.02[C0170] Solvency II amount; both unit linked and non-unit linked data considered<br>• Exposure country:<br>  ◦ S.06.02[C0270] Issuer Country or S.06.02[C0110] Country of custody, depending on asset class<br>  ◦ Missing issuer information marked as "Not Available"<br>  ◦ Supranational issuers marked as "Not Available", except for "European Union institutions" marked as EEA |
| Investments indirect CIU exposure data | • QRTs: S.06.02, S.06.03<br>• Exposure value: S.06.03[C0030] underlying asset category split combined with S.06.03[C0060] total amount. Fund underlying exposure percentual share applied to total fund S.06.02[C0170] Solvency II value<br>• Exposure country:<br>  ◦ S.06.03[C0040] Issuer Country<br>  ◦ For Underlying asset categories 7 – Cash and deposits, 8 – Mortgages and loans, 9 – Properties, marked as "Not Available"<br>  ◦ Supranational or aggregated issuers marked as "Not Available", except for "European Union institutions" marked as EEA |
| Technical Provisions | • S.12.01, S.12.02, S.17.01, S.17.03 QRT data<br>• Limitations of reporting: S.12.02/S.17.02 template containing material country information are not due when the home country represents higher than 90 % of the sum of the technical provisions calculated as a whole and gross best estimate.<br>• Exposure value: S.12.01[R0200], S.12.02[R0010], S.12.02[R0040], S.17.01[R0020-R0190], S.17.03[R0010,R0041,R0070], S.17.03[R0100, R0110], S.17.03[R0110] based on business type and limitations on reporting<br>• Exposure country :<br>  ◦ Material country S.12.02[C0010]/S.17.03[C0010]<br>  ◦ Assumption: all technical provisions considered as home country when S.12.02/S.17.03 templates are not reported |
| Premiums | • S.04.04/S.04.05<br>• Limitations of reporting: Country-by-country information reported for at least 95 % of gross written premium. Any residual business over the 95 % threshold may be grouped as 'other countries'<br>• Exposure value: S.04.04/C0010 Business underwritten in the country of establishment, S.04.04/C0030 Business underwritten in the considered country through FPS, S.04.05/C0020 Total by country based on business type life/non-life, as described below in the exposure country<br>• Exposure country:<br>  ◦ Location of underwriting S.04.04.02/R0010 EEA country for life direct FOS business<br>  ◦ Branch location S.04.03.01/C0040 Country of establishment for life direct FOE business<br>  ◦ Location of risk S.04.05.02/R0010 country for non-life direct and life/non-life reinsurance business |

# 4. CYBER RISK: ASSESSMENT OF EXPOSURES, INTERCONNECTEDNESS AND POTENTIAL LOSS ACCUMULATION

*The digital transformation of the global economy has inevitably created an unprecedented and growing vulnerability: cyber risk as a potential systemic threat. This topical focus examines how the topic has fundamentally moved from an IT problem to a macro-financial stability concern, driven by interconnectedness and the potential for loss accumulation. Interconnectedness can indeed be identified as the primary risk amplifier and driver of loss accumulation across the financial system. The topical focus explores the challenge of modelling such widespread, simultaneous losses and the role of qualitative assessments over traditional data. In additon, it presents a first analysis of Solvency II reporting data on cyber underwriting from a financial stability perspective.*

## 1. DIGITALIZATION AND THE EMERGENCE OF SYSTEMIC RISK

**The contemporary global economy is characterized by increasing digitalization and a high degree of interconnectedness.** This transformation has not only fostered economic development and innovation but has also fundamentally altered the risk landscape. It has significantly heightened the exposure of critical sectors, particularly finance, to operational and security risks. The continuously growing reliance on Information and Communications Technology (ICT) has intensified the financial sector's exposure to cyber risks[22], effectively repositioning the topic from an IT specific concern to a matter of strategic risk management and financial stability.

**The financial and non-financial burden associated with cyber related threats is substantial and projected to grow.** Estimates indicate that the global cost of cybercrime is set to rise to nearly USD 24 trillion by 2027, up from close to USD 8.5 trillion in 2022. Concurrently, malicious activity has surged, with the frequency of cyber incidents reported to have almost doubled since before the COVID-19 pandemic. Ransomware remains an acute threat, with recorded payments hitting a record-breaking USD 1.1 billion in 2023[23].

**Attacks are becoming progressively more sophisticated, driven by geopolitical tensions and state-sponsored activities.** Furthermore, the dual use of advanced technologies, such as Generative AI, by malicious actors contributes to the development of more personalized and scalable attack vectors. The criticality of digital infrastructure means that risk exposure arises not

[22] Banco de España. "Cyber risk and its implications for financial stability." Intervenciones Públicas, April 12, 2024
[23] Marsh McLennan. "Closing the cyber risk protection gap." Whitepaper, September 3, 2024

solely from intentional malicious attempts but also from accidental or non-malicious events. This necessity of managing both intentional and unintentional operational disruption underscores the pervasive nature of the systemic vulnerability.

# 1. CYBER RISKS AND FINANCIAL STABILITY: INTERCONNECTEDNESS

**Interconnectedness is one of the three transmission channels[24] through which a major cyber incident could impact the stability of the financial system.** It can take the form of linkages within the financial system – such as those between financial institutions, including the financial market intermediaries. A high level of interconnectedness implies that the effect of a localized incident can propagate rapidly across the financial system and international jurisdictions. The November 2023 cyber-attack on ICBC, a primary dealer of US Treasuries, prevented it from clearing trades, leading to higher volatility and reduced liquidity in the Treasury markets (Cyber Tech Journals, 2025). It also highlights the role of technology interconnectedness, which refers to dependence on common hardware and software, as well as common technology service providers.

**Technology interconnectedness transcends sectoral boundaries.** In the ICBC incident, attackers exploited a vulnerability in a software product used not just by financial institutions but also companies in other industries. As the broader economy becomes more interconnected via technology, the number of ways in which an enterprise can be targeted by cyber-attackers, commonlyreferred to as “attack surface”, grows as well. Higher interdependence also increases the risk that the failure of a single component in a system leads to failure at a larger scale (“single point of failure” or “SPOF”)[25]. For example, malicious actors can target a company indirectly by attacking its cloud service provider.

**Non-malicious incidents can be as disruptive as malicious ones in a highly interconnected economy.** Insurance broker Marsh reported that the share of non-malicious cyber claim notifications in Europe was 28% in 2024, up from 14% of the year before. The faulty software update from Crowdstrike in Jul-2024 affected around millions of devices worldwide (Marsh, 2025[26]).

# 2. CYBER RISKS AND FINANCIAL STABILITY: THE LOSS ACCUMULATION POTENTIAL

**A defining and uniquely challenging feature of cyber risk is the potential for high-severity, simultaneous losses, commonly referred to as loss accumulation[27].** Unlike geographically bounded natural catastrophes, a single cyber event—such as a flaw in embedded software, an attack on a shared cloud service, or the exploitation of a common vulnerability—can

[24] Other channels identified are loss of confidence and lack of substitutability.
[25] Financial Stability Oversight Council (FSOC) Annual Report 2024
[26] European cyber claims report | Marsh
[27] The Geneva Association. "Cyber Risk Accumulation: Fully tackling the insurability challenge." Report, November 19, 2023

simultaneously impact many people and businesses around the world, causing catastrophic economic losses and a high accumulation of insured losses[28]. The accurate modelling and quantification of this accumulation risk presents an inherent challenge for cyber risk management. Key factors behind this include[29]:

1. **Dynamic Threat Landscape:** The risk is non-stationary, meaning that attack methodologies and breach targets continuously evolve, and the bad actors continue to adapt and multiply[30]. This limits the reliability of historical loss data, which forms the basis for traditional actuarial modelling.

2. **Centralization and Technology Drivers:** The potential for accumulation is magnified by the concentration of data in cloud-based data warehouses and the widespread adoption of highly similar technologies across industries. An attack targeting a specific embedded software vulnerability or a centralized service can affect thousands of entities concurrently.

3. **The Qualitative Component:** Consequently, while cyber risk models often draw upon methodologies from catastrophe event (Nat Cat) modelling, they must also recognize the limits of quantitative data. The analysis states that, given the young nature of cyber risks relative to established knowledge, the qualitative component still retains a high relevance in the context of risk estimation. This requires reliance on expert judgment, scenario analysis, and proactive defence initiatives.

**An interconnected digital ecosystem has both negative and positive consequences for cyber underwriters.** Quantitative modelling of cyber risks remains challenging due to high loss accumulation potential. At the same time, it allows for defining security standards and cross-border coordination frameworks necessary to mitigate the impact of cyber incidents. The insurance sector could play a constructive role on both fronts by advancing risk modelling capabilities as well as promoting good practices for risk mitigation and enhancing cyber resilience.

## 3. THE CYBER INSURANCE MARKET

**Although the EEA market for cyber underwriting is not big for now, it is important to monitor related developments from a financial stability perspective.** As of 2024 year-end, the EEA cyber insurance market accounts for less than one percent of the total non-life business – both in terms of premiums and technical provisions. As such, currently it has limited direct impact on the financial stability of the insurance sector. However, close observation of the evolution of this business line is essential due to several reasons. First, this is a growing market and is expected to continue growing in the coming years. Insurance broker Howden reported that the global cyber premiums grew at approximately 30% annually between 2012-2022.[31] A BaFin survey of 200 insurance undertakings revealed that direct cyber insurance business doubled between 2020 and

[28] The Geneva Association. "Cyber Risk Accumulation: Fully tackling the insurability challenge." Report, November 19, 2023
[29] Financial Stability Oversight Council (FSOC) Annual Report 2024
[30] American Academy of Actuaries. "Cyber Risk Accumulation." Paper, 2024
[31] Howden Group (2024) Cyber insurance Risk, resilience and relevance. Available at: howden-2024-cyber-report.pdf

2022.[32] Second, cyber risks are difficult to model and have high loss accumulation potential. Third, underwriting losses from cyber risks can manifest via non-cyber specific policies that do not explicitly cover or exclude cyber risks (silent or non-affirmative cyber risks). Lastly, availability of cyber insurance contributes to the cyber resilience of corporates across various sectors of the broader economy (i.e. beyond financial sector).

**Cyber premiums aggregated by country and coverage type provide a big-picture view of the EEA cyber underwriting market.** The total earned premiums for cyber underwriting in EEA amounted to EUR 6 bn at the end of 2024, down by about two percent from a year ago. Direct business accounted for 60% or EUR 3.6bn. At 40%, the share of inward reinsurance is a significant component of the overall cyber premiums. For reference, it is also much higher than the 27% share for all non-life insurance. Cyber underwriting continues to remain concentrated among undertakings in few member states (figure T4.1). Almost 80% of the coverage is of the standalone type, up from 73% in 2023 (figure T3.2). Lastly, corporate clients account for the overwhelming share of the coverage. Therefore, a typical cyber insurance policy in the EEA likely offers standalone coverage to a corporate client via an undertaking based in one of the five member states.

Figure T4.1: Cyber premiums by country, EUR billion

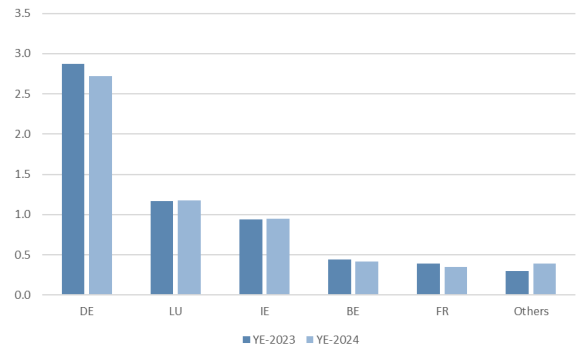
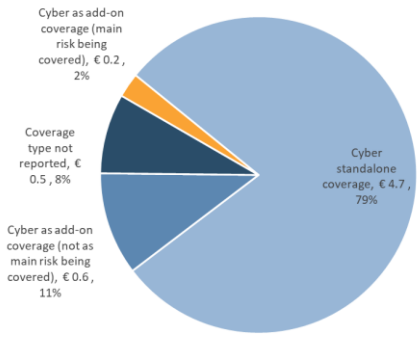



Figure T4.2: Cyber premiums by coverage type, EUR billion



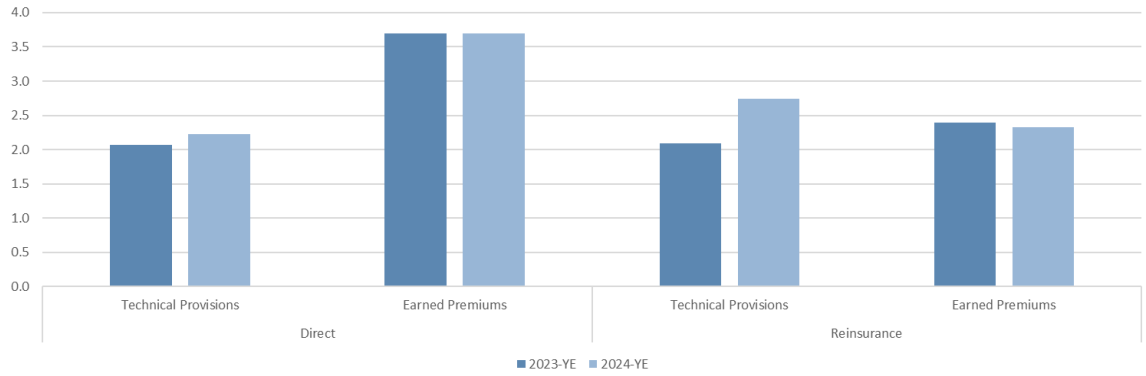

*Source: Solvency II annual reporting solo, 2024, 2023*

**The growth in cyber insurance market has slowed down likely due to pressure on profitability.** Estimates suggest that the growth of global cyber insurance market has moderated in the last two years. As noted above, the EEA premiums have declined by almost two percent in 2024 even though the global market grew rapidly until 2022. The fast growth has naturally attracted ample capacity from both new entrants as well as established underwriters. Meanwhile, the cyber risks have also continued to evolve, making it more challenging to model and price them. This has likely negatively affected profitability and nudged some underwriters to be more cautious about writing more business. Most recent SFCRs of major cyber underwriters point to a prudent stance taken by some insurers after a high loss experience. Furthermore, technical provisions related to cyber

[32] BaFin (2024) Cyber insurance: strong demand – but what about the risks? Available at: BaFin - Current topics - Cyber insurance: strong demand – but what about the risks?

coverage have grown faster than the corresponding premiums (Figure T4.3), potentially indicating pressure on pricing and higher risk exposures. Howden's global cyber insurance pricing index was down 15% in 2024 from its peak in 2022. Overall, a combination of increased competition and a dynamic risk landscape appears to have contributed to lower premiums in 2024.

Figure T4.3: Technical provision and earned premium values in 2023 and 2024 for cyber insurance line of business, EUR billion




*Source: Solvency II annual reporting solo, 2024 and 2023*

**The data on outward reinsurance reflects softening market conditions.** Within proportional reinsurance, the number of quota-share treaties where the underlying risk is cyber related has increased in 2024, likely indicating favourable conditions for the buyers of reinsurance. Likewise, the cedants appear to have been successful in securing higher limits on non-proportional reinsurance, including cyber catastrophe bonds (cat bonds) with limits ranging from EUR 0.8 - 1.2 bn as well as an industry loss warranty with an attachment point of USD 9 bn.

**Data on risk types reported in the Solvency II cyber template can offer insights into the cyber threat landscape.** Each record in the reporting template[33] provides information that is specific to a given product type, which in turn is characterised by a line of business and the types of risks covered. There are 23 distinct risk types and an "Other" category to capture any risk that may not match any of the specified types. One product can cover several risk types. The count of the number of times each risk type appears across all records (i.e., all undertakings that report this template) gives a rough impression of its perceived significance. Table T4.1 shows the top few most frequently reported risk types based on 2024 data. Data restoration, network interruption and cyber extortion are among the most frequently appearing risk types across all reported coverage for 2024 and 2023. Both network interruption and cyber extortion may cover risks from, but not limited to, DDoS attacks[34]. Incidentally, ENISA's threat landscape report of 2024 identifies DDoS attacks as the most reported form of cyber-attacks in the EU (Figure T4.4). Ransomware accounted for the second most reported attack type, followed by data breaches. Information on specific types of cyber-attacks forms a crucial part of the threat landscape assessment because it

[33] S.14.03.01 – cyber underwriting risk

[34] Distributed Denial of Service attack refers to a malicious attempt to disrupt the normal traffic of a targeted server, service or network by overwhelming the target or its surrounding infrastructure with a flood of Internet traffic from multiple sources.[link]

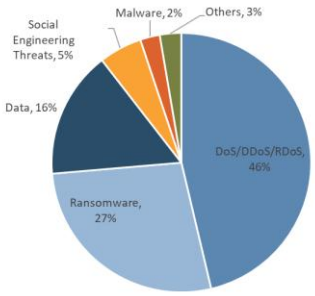
can help reveal, inter alia, the purpose of threat actors (e.g., disruption or financial gain etc.). By and large, the risk types covered by insurers appear to correspond to the types of cyber-attacks, at least for the largest categories. This should not be surprising because the buyers of cyber insurance would naturally want coverage of risks from commonly occurring cyber-attacks. Furthermore, changes in the relative ranking of risk types over time could also be indicative of underlying trends. For example, network interruption was the most frequently reported risk type in 2023 but was surpassed by data restoration in 2024 (which climbed two ranks to occupy first spot). This could suggest that the data-related incidents have become more prominent in 2024.

Table T4.1: Risk types that appear most frequently in the cyber underwriting data reported in the Solvency II quantitative reporting template "S.14.03.01"

| Risk types | Description |
|---|---|
| Data Restoration | Return lost, stolen or damaged data to its original condition or move data to a new location |
| Network Interruption (Business Interruption) | May include DDoS attack or a hacker accessing network and deleting critical files, or adding malicious code |
| Cyber Extortion | May include DDoS or other attacks by malicious actors who demand money in return for promising to stop the attacks. |
| Electronic Data Incident | Unauthorized access and/or disclosure of sensitive, confidential or otherwise protected data. |
| Data Protection and Cyber Liability | Includes GDPR implications regarding third party data protection |
| Network Interruption: system failure | May include an 'unintentional or unplanned outage' on the network, possibly due to human error, system error or both. |

*Source: Solvency II annual reporting solo, 2024*

Figure T4.4: Breakdown of cyber threat types in EU




*Source: ENISA Threat Landscape 2024*

# 4. CONCLUSIONS

**Cyber risk is a permanent feature of the digital economy, and its growing importance warrants a concerted response.** As the global economy becomes more interconnected technologically, its vulnerability to cybersecurity risks increases – both from malicious and non-malicious incidents. Such incidents can cascade rapidly and negatively impact the stability of the financial system. The insurance sector could play a constructive role in developing societal resilience by offering suitable

insurance products and fostering risk mitigation practices. While the global cyber insurance market has grown rapidly in the recent years, insurers are confronted with the challenges of accurately modelling the cyber risks in an evolving threat landscape. Greater collaboration is necessary to enhance data collection and improve the modelling of accumulation risk.

**The cyber risk insurance market in the EEA continues to evolve and show signs of maturity.** The market shrank marginally in 2024 on the backdrop of rapidly increasing supply of capacity in the preceding years putting downward pressures on pricing. Some insurers chose to take a more prudent stance on underwriting cyber risk by moderating their exposure to account for modelling uncertainty and loss experience. Much of the available coverage is of the affirmative type. This could be likely due to insurers trying to minimise or avoid silent cyber risks. Lastly, the use of reinsurance to cover tail risks can be observed in the outward reinsurance data. Overall, Solvency II reporting on cyber underwriting offers a tool for ongoing monitoring of exposures. It allows for a baseline assessment for further engagement with the national competent authorities or potentially with the industry. This becomes important as the financial stability implications of cyber risks continue to grow.

# 5. IMPACT OF ARTIFICIAL INTELLIGENCE ON THE INSURANCE INDUSTRY AND POTENTIAL IMPLICATIONS FOR FINANCIAL STABILITY

*AI may act as an amplifier of existing risks, underscoring the need for vigilant governance, supervisory convergence, and capacity-building to ensure that AI adoption enhances rather than undermines financial stability. This topical focus examines the growing use of AI in the insurance sector and its potential implications for financial stability. While current applications are primarily operational, future use cases in underwriting, investment, and risk management could amplify systemic vulnerabilities. Key channels include correlated behaviour through common models, increasing third-party dependencies, demutualisation pressures from granular risk segmentation, and the emergence of AI-risk insurance markets. This topical focus also reviews the evolving regulatory and supervisory response, including the EU AI Act, EIOPA's Opinion on AI governance and risk management, and the IAIS Application Paper on AI supervision.*

## 1. INTRODUCTION

**The rapid evolution of AI and its increasing adoption in the financial sector, including the insurance industry, raises important questions about its implications for financial stability.** Not surprisingly, the business world is in a competitive race for a fast adoption of the latest technology seeking improvements in their products, efficiency gains and even the development of new business models. The Finance industry, insurers and insurance intermediaries are no exception to this trend.[35]

### Box 5.1: DEFINING ARTIFICIAL INTELLIGENCE

The definition of AI has evolved considerably over time. In research up to 2020, Collins et al. (2021) identify more than 28 distinct definitions of AI. With the rapid emergence of generative AI and new paradigms since 2020, that number has likely grown further.

In this report, we adopted the regulatory and supervisory framing of AI — grounded in the EU Artificial Intelligence Act — to ensure internal consistency with European policy and supervisory expectations.

#### Regulatory Definitions used as reference: EU Artificial Intelligence Act (Article 3)

An "AI system" is defined as: "a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit

[35] Stanford's AI Index Report reports an increase from 33% in 2023 to 71% in 2024 in the number of organisations using GenAI in at least one business function (Maslej et al., 2025).

objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments."

Key elements in this definition include:

- Machine-based system (i.e. non-biological, engineered)
- Varying levels of autonomy (systems may range from fully human-guided to partially or fully autonomous)
- Adaptiveness after deployment (i.e. learning or evolving behaviour)
- Inferring outputs from inputs toward objectives (explicit or implicit)
- Influencing physical or virtual environments (i.e. decisions, content, recommendations, predictions)

The AI Act's Recital 12 further clarifies that "adaptiveness" is not strictly required in all cases, and that the definition is not meant to capture systems that operate solely by executing fixed rules given by humans (i.e. no autonomy).

**The adoption of AI in the insurance industry has been gaining momentum in recent years.** Already back in 2023, 50% of respondents in non-life insurance and 24% in life insurance reported the use of AI in their operations in a survey conducted by EIOPA.[36] Preliminary results from the recently[37] conducted survey on Generative AI (publication expected in early 2026) suggest that irrespective of business line, 65% of undertakings have already adopted generative AI with another 23% intending the adoption in the next three years. Based on the same survey, the main drivers of the AI adoption are i) improving efficiency and cutting costs, ii) enhancing customer experience and iii) improving decision-making.

**The modern application of artificial intelligence in the insurance industry marks a significant departure from traditional analytical approaches.** The insurance industry has always been fundamentally data-driven and analytical, relying on large datasets, statistical models, and predictive analytics across pricing, underwriting, and claims. Traditional forms of machine learning have, therefore, long been present in industry.[38] What is new about the modern application of artificial intelligence is the opacity of AI models, a certain degree of autonomy in the decision-making process, as well as the speed of innovation and adoption which includes the global availability of newest technologies on the same day. What also appears novel to a certain extent is the centralisation of knowledge around such models with big tech firms gaining a significant advantage in this field and investing billions into a talent war around AI engineers.[39] The scale of AI investment is striking: in 2024, corporate AI spending hit US $252 billion (with US $33.9 billion in generative AI alone) (Maslej et al., 2025). While many firms still report modest gains, early adopters are achieving measurable revenue uplifts and operational payback (McKinsey & Company, 2025).

[36] EIOPA's Report on the digitalisation of the European insurance sector

[37] Survey was conducted between May and July 2025.

[38] Refer to Daengdej et al., 1999; Dugas et al., 2003 for two early papers on the application of statistical learning models in vehicle insurance.

[39] CNBC news article: AI Talent War

**With the expansive use of AI in the financial sector and insurance industry, a pressing question arises around its implications for the financial stability of these ecosystems.** While the insurance sector is generally considered less systemically relevant than the banking sector, insurers' activities can nevertheless generate or amplify risks under certain conditions. The International Association of Insurance Supervisors (IAIS, 2019) highlights a set of key exposures that might lead to a systemic impact:

- **Liquidity risk** – Insurers may face difficulties meeting obligations if they rely on illiquid assets, securities lending, or derivative exposures. In periods of stress, forced asset sales could amplify market turmoil.
- **Interconnectedness** – Both macroeconomic exposures (e.g. correlated investments across insurers) and direct counterparty links (e.g. reinsurance, derivatives) create channels for contagion within the financial system.
- **Limited substitutability** – In certain niche or critical lines of business, the failure of a large or specialised insurer could disrupt the provision of essential services if alternatives are lacking.
- **Other risks** – New or evolving threats, such as climate change, cyber risk, or under-reserving, may also carry systemic implications as they materialise.

These vulnerabilities propagate through three main channels: large-scale asset liquidations (fire sales), contagion via direct and indirect exposures, and disruptions to critical functions. The systemic relevance of an insurer is further amplified by its size and global activity, which can magnify the impact of shocks.

# 2. DOES ARTIFICIAL INTELLIGENCE AMPLIFY SYSTEMIC RISKS?

## 2.1 AI and Systemic Implications

**A growing body of literature highlights that AI adoption in financial services can act as an amplifier of systemic risk rather than a standalone new category of risk.** Across banking, asset management, and market infrastructures, AI is increasingly embedded in core activities such as credit scoring, trading and portfolio management, customer services, and compliance. Supervisors themselves, including EIOPA, are also experimenting with AI-based "SupTech" applications to monitor risk and process large datasets.[40]

**AI may amplify existing vulnerabilities through several channels.** First, reliance on common models and data sources may lead to synchronised behaviour across institutions. The widespread use of similar foundation models, training data, and vendor solutions increases the risk of herding in investment strategies, crowded trades, and correlated errors in risk assessments (European Central Bank, 2024; Financial Stability Board, 2024). Second, there is growing concern around third-party concentration. A small number of technology providers dominate cloud computing,

[40] Refer to Financial Stability Board (2024) for selected supervisory use cases.

semiconductor production, and AI model development. Disruptions at these nodes—whether technical failures, cyber incidents, or governance shortcomings—could propagate rapidly across the financial system (Aldasoro et al., 2024; Financial Stability Board, 2024). Third, the opacity of AI models poses challenges for validation and governance. Issues such as hallucinations, adversarial manipulation, and reliance on the same historical training data may not remain contained at the level of individual institutions but instead generate correlated misjudgements across the system (Kerbl, 2025). Fourth, cyber and fraud risks may be amplified.

**While AI can strengthen defences, it also lowers barriers for attackers** by enabling more sophisticated phishing, deepfakes, or synthetic identities, which could undermine confidence and trigger liquidity stresses (Financial Stability Board, 2024). Also, market-structure effects may arise. As AI adoption favours firms with scale, data advantages, and access to advanced infrastructure, concentration in critical services could increase, reinforcing too-big-to-fail dynamics (Systemic Risk Centre, 2025).

**Policymakers and supervisors have begun to formalize their understanding of the potential risks associated with AI in the financial sector.** The Financial Stability Board (2024) highlights systemic vulnerabilities linked to concentration, herding, and cyber risks, and calls for stronger monitoring of AI uptake and supervisory capacity. The European Central Bank (2024) emphasizes two amplifiers of systemic concern: the penetration of AI into critical functions and the concentration of suppliers; systemic risk is most pronounced when both are high. The BIS (2024) provides a broad mapping of risks and opportunities, noting efficiency gains but also concerns around fairness and privacy. The Systemic Risk Centre (2025) models "AI-driven financial crises," showing how faster information processing and common data can accelerate the onset and severity of crises. Finally, Kerbl (2025) underscores opacity, herding, cyber, and supplier concentration as the most frequently cited risks, while preliminary evidence suggests heterogeneous market reactions to AI-related events among banks.

**In sum, the cross-sector literature converges on the view that AI can magnify existing vulnerabilities.** The main drivers are the breadth of adoption across critical functions and the concentration of third-party providers. Supervisors are encouraged to close data gaps on AI use, strengthen resilience of supply chains, and upgrade their own analytical tools to keep pace with industry developments.

**The emphasis on the vulnerabilities, should not shadow the potential AI-related benefits for financial stability.** By enabling faster and more granular risk detection, AI can improve early-warning systems, support credit risk management, and strengthen compliance monitoring (Aldasoro et al., 2024). Enhanced fraud detection and cyber defense capacities may reduce operational losses, while improved efficiency in trading and settlement processes can increase market resilience. The use of AI in supervisory technology (SupTech) also equips authorities with new tools to identify emerging risks more promptly and to assess systemic exposures in near real time (European Central Bank, 2024; Financial Stability Board, 2024). More broadly, productivity gains from AI adoption could strengthen the financial sector's capacity to absorb shocks, provided that governance, validation, and resilience safeguards keep pace with technological change.

## 2.2 The Insurance Perspective

**Although the current use of AI in insurance remains largely operational, its future expansion into core functions could carry systemic relevance.** The potential risk channels mirror those observed in banking and asset management—such as correlated behaviour and third-party concentration—but also include sector-specific dimensions. These relate in particular to common-model underwriting and pricing, the possible erosion of risk-pooling and demutualisation, AI-driven investment decisions, and the insurability of AI risks themselves. While these developments are still at an early stage, they underline the need for continued monitoring and a forward-looking supervisory approach.

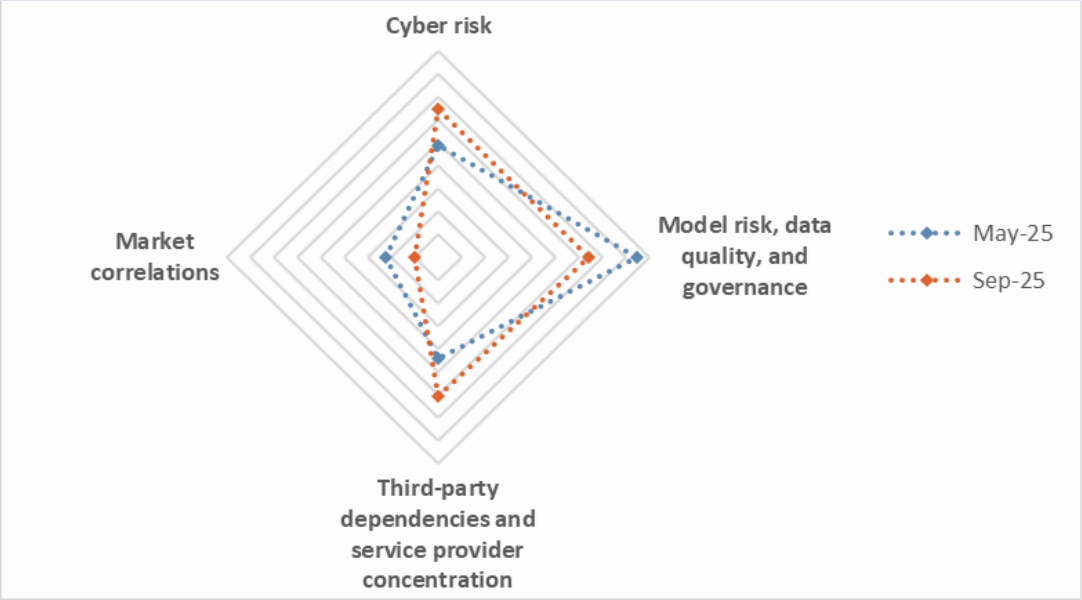
**According to the preliminary results of EIOPA's 2025 GenAI survey, current applications are concentrated in customer service and claims management, while fraud detection is viewed as a top future area of interest.** These existing use cases are primarily operational and consumer-facing, with limited direct implications for financial stability. Moreover, they generally involve significant human oversight at key decision points, which further mitigates systemic concerns at this stage. Human intervention acts as an important safeguard, reducing the likelihood of correlated or self-reinforcing errors across undertakings. However, undertakings are also experimenting with AI in sales, product development, and pricing. As AI becomes embedded in core underwriting, investment, and risk-management functions, the scope for human oversight may narrow, and new channels of systemic risk could emerge.

### Box 5.2: SUPERVISORY FOCUS ON ARTIFICIAL INTELLIGENCE AND SYSTEMIC RISK

In the Spring and Autumn Botton Up Surveys 2025, EIOPA sought the perspective of National Competent Authorities (NCAs) on the potential implications of AI for financial stability. Respondents were asked to provide their views on the relevant focus areas.

Fig. B.5.1 provides an overview of the risk priorities identified by NCAs in the two questionnaires. The results reveal similar patterns: supervisors have concentrated primarily on operational resilience risks from AI, with particular emphasis on third-party dependencies, service provider concentration, cyber threats, and data privacy. This focus likely reflects the ongoing efforts linked to the implementation of the Digital Operational Resilience Act (DORA). By contrast, risks related to market correlations and other AI-driven effects transmitted through insurers' balance sheets are mentioned less frequently as areas of concern.

**Figure B.5.1 – Comparative overview of NCAs' risk concerns**




*Source:* Bottom up survey, Spring and Autumn 2025.
*Note: The figure shows the relative frequency with which NCAs identified each topic as a supervisory focus. Dots positioned closer to the outer edge of the diamond indicate areas receiving greater supervisory attention.*

**The use of AI in underwriting and pricing represents one of the most significant potential sources of systemic risk for insurers.** If insurers widely deploy similar AI-based models, their decisions may become correlated. This could lead to synchronized pricing cycles, lapse and renewal patterns, or common biases in claims assessment, raising the likelihood of sector-wide stresses. A related, longer-term development is the possibility of demutualisation. By enabling increasingly granular risk segmentation, the combination of big data, digitalisation, and AI allows insurers to offer more tailored and potentially fairer pricing that better reflects individual risk profiles. While such differentiation can enhance efficiency and consumer value, it may reduce the scope of risk-pooling across policyholders. Insurance has traditionally acted as a stabiliser of financial stability by absorbing and redistributing shocks across broad risk pools. Demutualisation could weaken this stabilising role, potentially leaving large groups of households or firms without adequate protection and increasing the system's vulnerability to shocks. Reflecting the growing complexity at the intersection of data gathering, data proliferation, and new analytical tools, and the risk that these developments may accelerate demutualisation, EIOPA has established a consultative expert group on data use with external stakeholders, with a report expected in 2026.

**AI adoption on the asset side of insurers introduces a different set of risks.** As large institutional investors, insurers may increasingly rely on AI-driven decision-making for portfolio optimisation and asset allocation. Common models trained on similar datasets can result in simultaneous portfolio shifts, amplifying fire-sale dynamics and spillovers to other market participants (Aldasoro et al., 2024).

**The growing integration of AI into insurers' operational processes also creates new third-party dependencies and concentration risks.** Reliance on external AI services for claims handling or distribution platforms creates operational risks. Outages or targeted attacks against these providers could affect multiple insurers simultaneously (Financial Stability Board, 2024). Moreover, model governance and explainability pose specific prudential and conduct challenges. Errors or biases in opaque pricing and reserving models may propagate widely, potentially affecting solvency and consumer trust. In parallel, fraud and cyber risks are evolving. While AI strengthens detection of fraudulent claims, it also enables new forms of attack, including deepfake-supported fraud or automated cyber intrusions. Finally, market-structure shifts may favour large incumbents and BigTech partners with superior data and infrastructure, raising barriers to entry and increasing concentration risks in the insurance sector (Systemic Risk Centre, 2025).

**A more novel question relates to the insurance of AI risks themselves.** As AI becomes embedded in critical processes across the economy, firms may seek coverage against AI-related failures. Such insurance could be direct, where policies explicitly cover AI-related risks, or silent, where AI risks are not excluded but embedded within broader policies. Both raise supervisory questions: whether risk is being adequately priced, whether potential exposures are understood by insurers, and whether correlated losses from systemic AI failures could materialise. If AI risks become widespread and poorly diversified, they could introduce a systemic component to the insurance of AI itself. Although direct underwriting of AI risks is still limited in the EU, EIOPA aims to closely follow market developments and place particular emphasis on improving the understanding of silent exposures.

**Overall, while many systemic mechanisms mirror those in banking and asset management, the most relevant risks for the insurance industry lie in correlated underwriting, synchronized investment strategies, demutualisation pressures, reliance on external service providers, and the emerging market for insuring AI risks.** However, these risks are not equally pronounced at the current stage of AI adoption. Given that most insurers currently use AI for operational purposes—such as customer service, and claims management—reliance on external service providers represents the most immediate area of concern. By contrast, risks related to pricing, underwriting, and investment decisions remain more prospective but may gain importance as AI becomes more deeply integrated into core business functions. These channels highlight the need for both prudential and conduct oversight to ensure that AI adoption enhances efficiency without undermining financial stability.

# 3. REGULATORY AND SUPERVISORY APPROACHES TO AI

## 3.1 Background: AI Act and EIOPA's Opinion on AI governance and risk management

**The regulatory landscape for artificial intelligence in Europe is rapidly evolving, with the European Union establishing a dedicated framework to ensure the technology's responsible use across sectors.** To promote the responsible use of AI in the EU, the European legislator has developed the Artificial Intelligence Act (AI Act), the first horizontal regulatory framework for AI globally. The Act introduces a risk-based classification system that distinguishes between unacceptable, high-risk, limited-risk, and minimal-risk AI applications. Unacceptable uses—such as certain manipulative or discriminatory applications—are prohibited outright. High-risk obligations apply only to specific insurance-related use cases, namely AI systems used for risk assessment and pricing in life and health insurance for natural persons. These requirements do not extend to other lines of insurance or to underwriting of legal entities, and the scope of the term "risk assessment and pricing" remains subject to interpretative discussion. By setting uniform requirements, the Act aims to safeguard fundamental rights while fostering innovation.

**While the AI Act provides a cross-sectoral framework, the insurance industry is already subject to a well-developed set of prudential and conduct rules designed to protect policyholders.** Solvency II establishes comprehensive risk-management and governance framework, while the Insurance Distribution Directive (IDD) ensures that consumers' interests are safeguarded throughout the product lifecycle. The requirements in the AI Act can to a large extent, be integrated into or satisfied by compliance with existing obligations, for instance in relation to governance and risk management. Compliance with such existing obligations already means that the specific governance and risk management challenges raised by AI should be addressed. The practical implications of the AI Act will depend on forthcoming guidance from the European Commission. Policymakers and supervisors will therefore need to carefully monitor potential overlaps or differences between the AI Act and financial-sector legislation to ensure coherent and proportionate implementation and avoid unnecessary duplications.

**Complementing this horizontal framework, EIOPA's Opinion on AI Governance and Risk Management in insurance provides a sector-specific interpretation tailored to the unique characteristics of the insurance industry.** The Opinion seeks to promote supervisory convergence across the EU by clarifying expectations for NCAs and for the industry. It follows a risk-based and proportionate approach, recognising the diversity of business models and uses of AI across insurance. The guidance covers governance structures, accountability frameworks, data quality, explainability, and human oversight. By aligning with both the AI Act and existing Solvency II

requirements, the Opinion provides practical support to undertakings on how to embed responsible AI use into their governance and risk management processes.[41]

## 3.2 Supervisory Practices

**Supervisors already possess a comprehensive set of tools that can be applied to AI-related risks, and international guidance confirms that most challenges can be addressed within existing frameworks**. The IAIS Application Paper on the Supervision of AI (2025) stresses that most AI-related risks can be addressed within existing supervisory frameworks, provided practices are adapted to the new technological environment. Tools include traditional off-site analysis, on-site inspections, governance reviews, and thematic assessments. Importantly, the paper highlights the need for proportionality, cross-sectoral coordination, and ongoing dialogue between supervisors and industry.

**As set out in the IAIS Application Paper, existing supervisory principles remain appropriate, and this applies in the European context as well.** Under Solvency II, supervisors already have tools to capture systemic aspects of market correlations through the review of internal models, where diversification assumptions and dependencies must be justified and validated. Similarly, cyber and operational resilience risks, which may be amplified by the concentration of AI providers, are addressed within the EU framework through the Digital Operational Resilience Act (DORA) and the forthcoming EU Cybersecurity and Information Security Control Framework (EU-SCICF). The challenge for supervisors is therefore not to create new instruments, but to ensure that these existing frameworks are applied rigorously and adapted to the AI context.

**Supervisory capacity itself must also evolve alongside technological progress.** The IAIS Application Paper also emphasises the importance of supervisory awareness and capacity-building in the context of AI. As technology evolves, it will be important for supervisors to remain informed about new developments to understand emerging risks and maintain an effective dialogue with the industry. The paper highlights that AI can equally offer opportunities for supervisors, for example through enhanced data analysis and early detection of market trends. Strengthening internal understanding and experience with AI can therefore support more data-driven oversight.

**In summary, supervisory authorities can rely on established regulatory frameworks to address AI-related risks, but adaptation and capability-building are essential.** EIOPA supports a proactive approach: applying established supervisory practices to the context of AI, strengthening operational resilience through existing regulations, and ensuring supervisors themselves acquire the skills and tools to promote the responsible use of AI.

[41] EIOPA Opinions are non-binding instruments under the EIOPA Regulation. They do not introduce new legal requirements but set out considerations and good practices that NCAs are invited to take into account within their supervisory approach.

# 4. CONCLUSION

**AI is transforming financial services, and its broader integration into business processes calls for a careful balance between innovation and stability.** The topical focus shows that while AI offers clear efficiency gains and opportunities for innovation, it also can introduce new vulnerabilities and amplify existing ones. Across banking, asset management, and market infrastructures, the literature highlights common channels of systemic concern: correlated behaviour through common models, third-party concentration, model opacity, and evolving cyber threats. For insurers, AI adds sector-specific dimensions, such as the risk of demutualisation through highly granular risk segmentation and the systemic implications of insuring AI risks themselves.

**Policy frameworks and supervisory responses are beginning to take shape.** The EU's AI Act establishes a horizontal framework for the governance of AI across all sectors, while legislation such as Solvency II and the IDD already covers governance and risk management in the insurance sector. In this sense, many AI-related obligations can be integrated into or addressed through existing sectoral requirements. Close coordination between horizontal and sectoral regulators will be essential to prevent overlap and ensure consistent, proportionate supervision. At the same time, EIOPA's Opinion on AI Governance and Risk Management provides tailored guidance for insurers and supervisors, bridging the two perspectives. Internationally, the IAIS Application Paper confirms that most AI-related risks can be addressed within existing supervisory frameworks, provided they are adapted to the new technological environment. Supervisors are therefore encouraged to strengthen operational resilience through instruments such as DORA, enhance model governance, and invest in their own AI capabilities.

**The key lesson is that AI amplifies existing vulnerabilities rather than creating entirely new ones, requiring vigilance and adaptation from supervisors.** AI does constitute a fundamentally new category of risk but can act as an amplifier of systemic vulnerabilities, magnifying interconnections and dependencies within the financial system. Effective governance, supervisory convergence, and capability-building are essential to ensure that the benefits of AI adoption are realised without undermining financial stability. Achieving this balance requires both vigilance—to monitor the speed and breadth of AI diffusion across financial markets—and adaptation, to ensure supervisory practices and skills evolve in step with technological change.

**If managed prudently, AI can become a source of strength for Europe's financial and insurance sectors.** When embedded within robust governance frameworks and supported by informed, technologically capable supervision, AI can enhance analytical capacity, operational efficiency, and resilience. Under these conditions, AI can ultimately contribute to strengthening rather than weakening the stability of Europe's financial and insurance sectors.

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# A.1. RESULTS OF THE QUESTIONNAIRE TO NATIONAL COMPETENT AUTHORITIES

**In order to assess the key risks and vulnerabilities for the insurance and IORP sectors, EIOPA conducted its regular Autumn qualitative survey among National Competent Authorities (NCAs).**

**Macroeconomic risks remained the primary concern for both insurers and IORPs in Autumn 2025** (Fig. A.1.1 and Fig. A.1.2), according to the results of the Autumn qualitative survey of national supervisors. Economic stability in the EU continues to face heightened pressure from a combination of geopolitical tensions (Fig. A.1.3), heightened by global trade uncertainty, persistent inflationary pressures and high public debt levels. Growth prospects remain weak, with several Member States highlighting only modest expansion.

**While expansionary monetary policy has somewhat alleviated inflationary pressures, rising geopolitical tensions,** identified by the main drivers of macro risks for both insurers and IORPs (52.9% and 66.7%, respectively), **have intensified economic instability and increased uncertainty around the outlook for growth and inflation.** Respondents highlighted the risk of stagflation in particular in economies where inflation remains above the EU average, with inflationary pressures expected to persist despite subdued growth.

Figure A.1.1: Materiality of risks for the insurance sector.

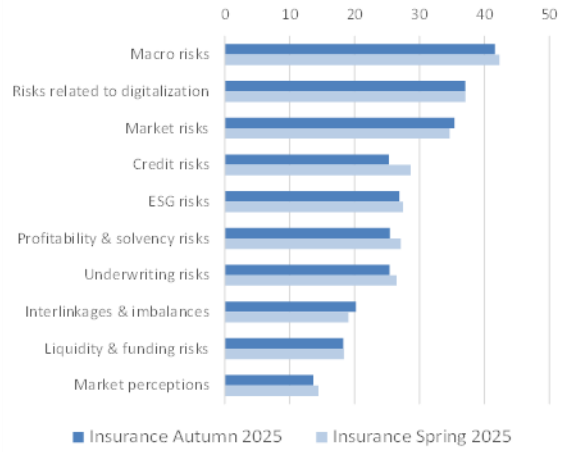
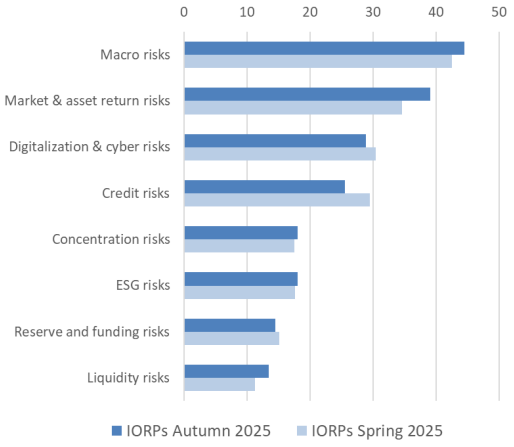



Figure A.1.2: Materiality of risks for the IORP sector.




*Source: EIOPA Insurance and IORPs Bottom-Up Surveys Autumn 2025 compared to Bottom-Up Surveys Spring 2025. Note: The ranking is based on the responses received. Risks are ranked according to the probability of their materialisation (from 1 indicating low probability to 4 indicating high probability) and their impact (1 indicating low impact and 4 indicating high impact). The figures show the aggregation (i.e., the product of the probability and the impact) of the average scores assigned to each risk. The results are normalised on a scale from 0 to 100.*

**Market risks continue to rank among the key concerns for the insurance and IORP sectors,** shaped by volatile capital markets, evolving interest rate dynamics, and ongoing geopolitical tensions. Elevated equity valuations, particularly in the United States, combined with an uncertain monetary policy outlook, are contributing to global uncertainty and could spill over into EU

markets through increased equity and bond price volatility. For insurers and IORPs, equity risk continued being identified in the survey as the main driver of market risks (32.3% and 58.8% of the respondents, respectively). Additionally, interest rate risk continued to be a significant concern (32.3% and 17.6% of the respondents, respectively) due to interest rate volatility and the high exposure to fixed-income assets (Fig. A.1.3, Fig. A.1.4 and Fig. A.1.5). According to respondents, some insurance undertakings have adjusted their investment strategies to limit their sensitivity to financial market fluctuations.

**There are growing concerns over inflated asset valuations in recent years,** noting that geopolitical tensions and weakening macroeconomic prospects are increasingly reflected in market prices, as highlighted by the survey respondents. In recent years, these factors have increased the likelihood of prolonged market volatility, which could have systemic effects given the high concentration of portfolios in government and corporate bonds and significant exposures to real estate and collective investment undertakings for EEA insurers and IORPs.

**Risks related to digitalization remain among the top risks for insurers and IORPs, ahead of market risks in the case of insurers.** Evolving geopolitical developments have further heightened the sectors' exposure to cyber threats, particularly in the context of hybrid conflicts. These threats create significant operational, financial, and reputational risks for insurers, as digitalization both enhances efficiency and expands vulnerabilities. Strengthening cyber resilience through risk assessments, advanced cybersecurity, continuous monitoring, and compliance with frameworks like DORA[42] is essential for effective risk management.

**Figure A.1.3: Main drivers of macro risks for the insurance sector**

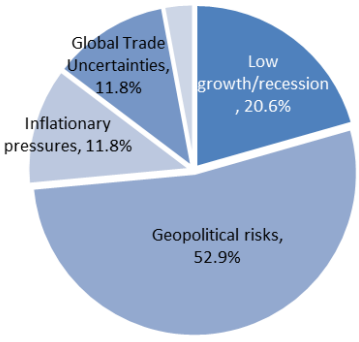



**Figure A.1.4: Main drivers of market risks for the IORP sector**

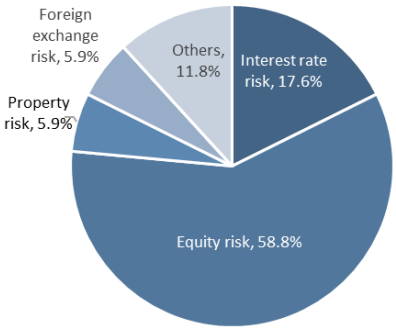
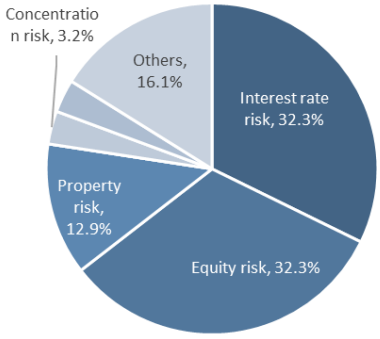



**Figure A.1.5: Main drivers of market risks for the insurance sector**




*Source: EIOPA Insurance and IORPs Bottom-Up Surveys Autumn 2025.*
*Note: Based on the responses received.*

**Going forward, the risk outlook for the insurance and IORP sectors is expected to moderate compared with the Spring assessment** (Fig. A.1.6 and Fig. A.1.7), according to the results of the 2025 Autumn qualitative survey of national supervisors, reflecting resilience in the insurance and IORP sectors. Nevertheless, continued monitoring of macroeconomic and geopolitical developments remains essential to ensure preparedness for adverse scenarios and safeguard

[42] See EIOA: Digital Operational Resilience Act (DORA) at: https://www.eiopa.europa.eu/digital-operational-resilience-act-dora_en

sector stability, as ongoing challenges such as geopolitical tensions, market volatility, and emerging cyber risks persist.

**Figure A.1.6: Risks with the highest expected increase in their materiality over the next 12 months for the insurance sector**

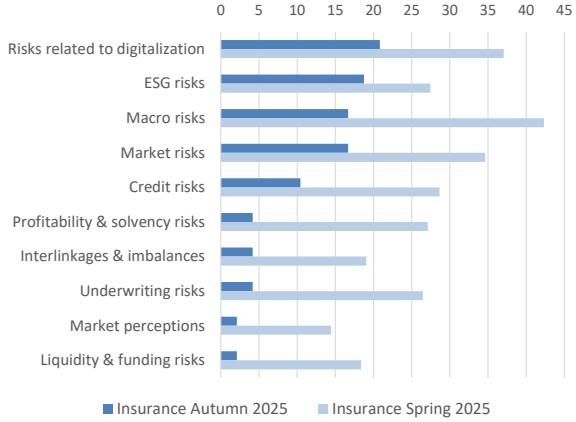
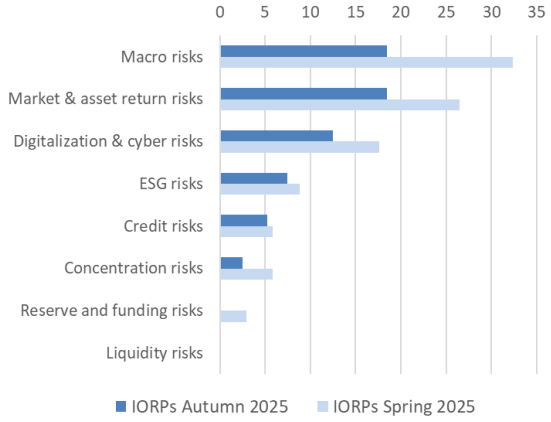



**Figure A.1.7: Risks with the highest expected increase in their materiality over the next 12 months for the IORP sector**

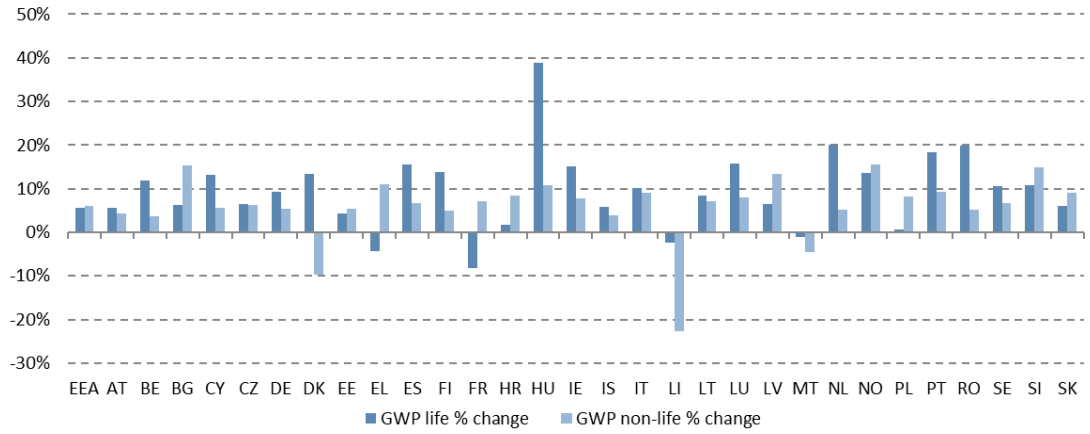



*Source: EIOPA Insurance and IORPs Bottom-Up Surveys Autumn 2025 compared to Bottom-Up Surveys Spring 2025.*
*Note: Ranking based on the responses received. Risks are ranked according to the expectation for the future change in their materiality (from -2 indicating strongly decrease to +2 indicating strongly increase). The figures show the aggregation of the average scores assigned to each risk. The results are normalised on a scale from -100 to 100.*

# A.2. STATISTICAL ANNEX

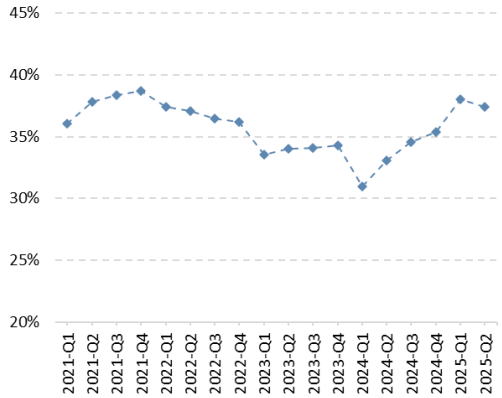
## Insurance sector

Figure A.2.1: Total Life and Non-Life GWP growth from Q2 2024 to Q2 2025 (in %, year-on-year).



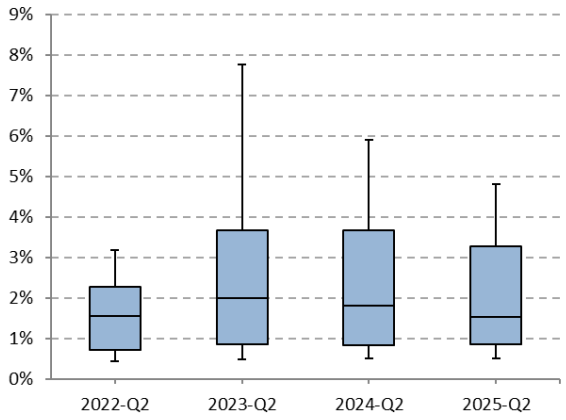

*Source: EIOPA Quarterly Reporting Solo.*
*Note: EEA weighted average. Growth rates are computed by weighting the GWP per reporting currencies. Year-on-year change computed on undertakings reporting in both reference dates.*

Figure A.2.2: GWP-Life business: Unit-linked share development over time (% UL in GWP life).



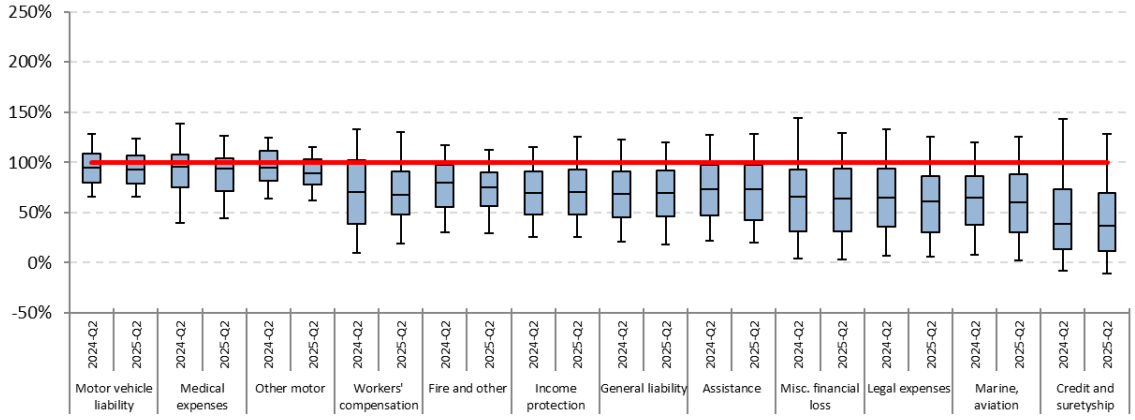

*Source: EIOPA Quarterly Solo. Reference date: Q2 2025.*

Figure A.2.3: Lapse rates (in %; median, interquartile range and 10th and 90th percentile).




*Source: EIOPA Financial Stability Quarterly Group. Reference date: Q2 2025*

Figure A.2.4: Gross Combined Ratio across lines of business (in %; median, interquartile range and 10th and 90th percentile).




*Source: EIOPA Quarterly Solo*

Figure A.2.5: Investment split in Q2 2025 compared to Q2 2024, Q2 2023 and Q2 2022.

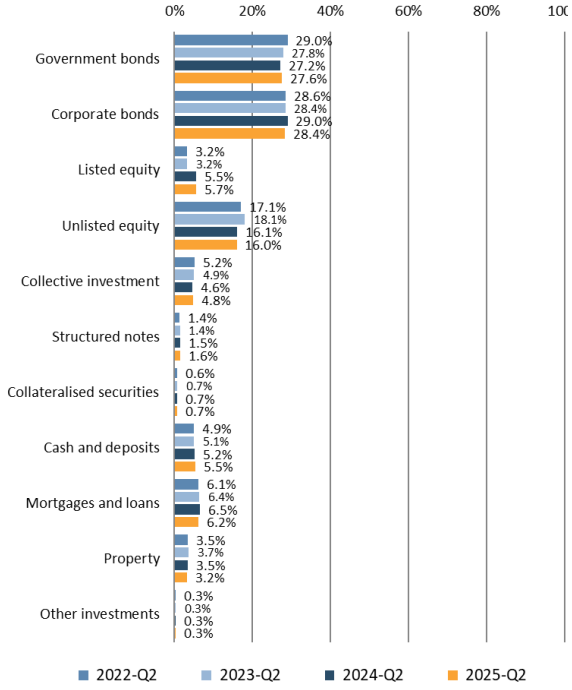
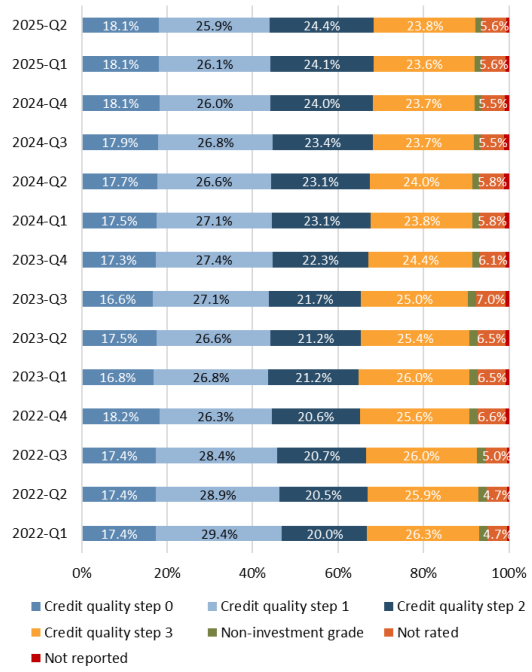



Figure A.2.6: Development in credit quality of bond portfolios for the insurance sector.




*Source: EIOPA Quarterly Reporting Solo.*

*Note: For figure A.2.5 calculations are based on look-through within funds. Assets held for unit-linked business are excluded. Equities include holdings in related undertakings. For figure A.2.6 government and corporate bond portfolios are combined and assets held for unit-linked contracts are included.*

Figure A.2.7: Holdings of government bonds by issuer country for the insurance sector.

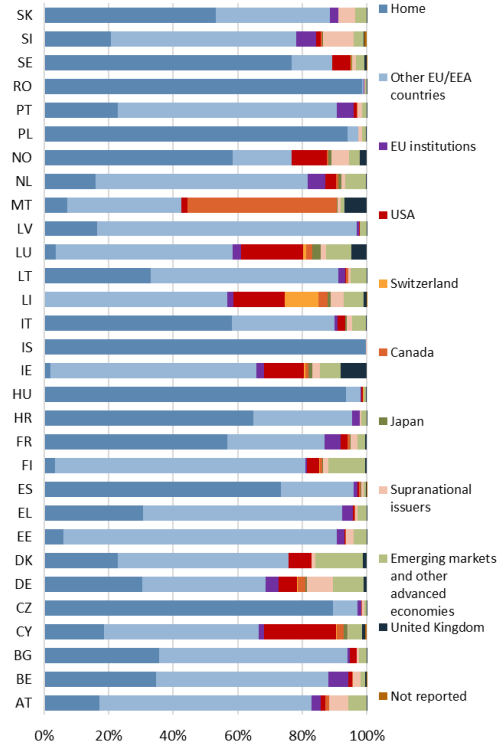
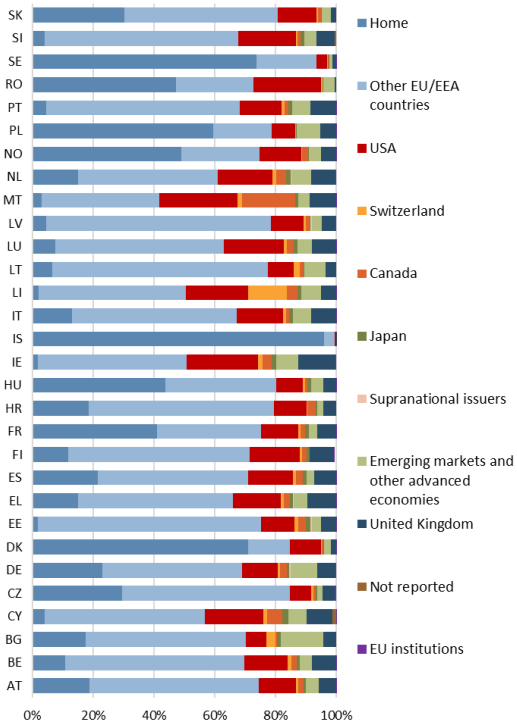



Figure A.2.8: Holdings of corporate bonds by issuer country for the insurance sector.




*Source: EIOPA Quarterly Reporting Solo. Reference date: Q2 2025.*

*Note: Calculations based on look-through within funds. Assets held for unit-linked business are included.*

## Reinsurance sector

Figure A.2.9: Gross Written Premiums in the EEA (in EUR bn and %) in Q2 2025.

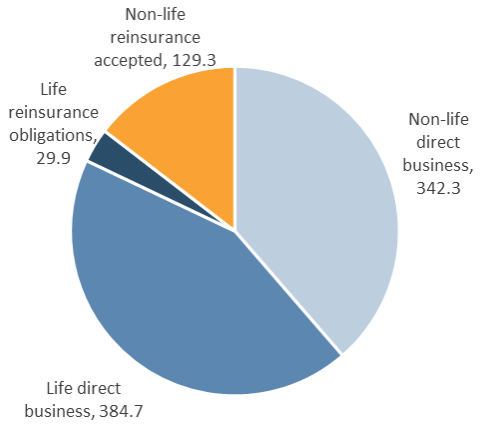
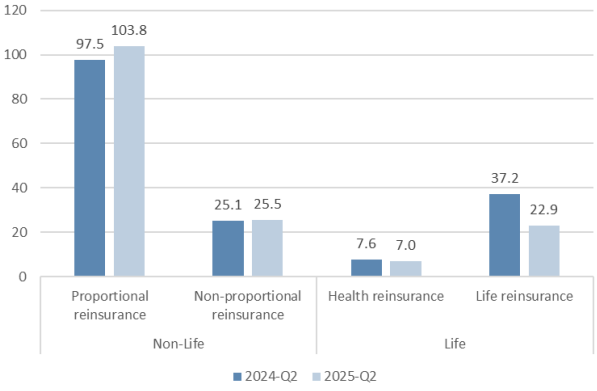
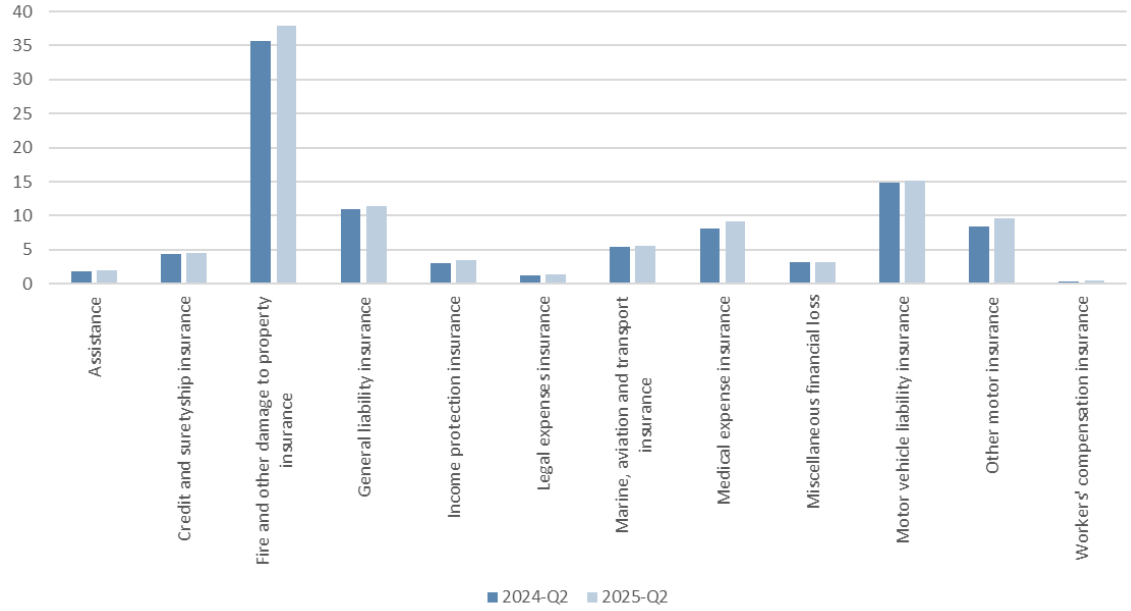



Figure A.2.10: Reinsurance Gross Written Premiums in the EEA (in EUR bn) in Q2 2025.




*Source: EIOPA Quarterly Solo. Reference date: Q2 2025.*

Figure A.2.11: Gross Written Premiums for non-life proportional reinsurance by line of business (EUR bn).




*Source: EIOPA Quarterly Solo.*

Figure A.2.12: Gross Written Premiums for non-life non-proportional reinsurance by line of business (EUR bn).

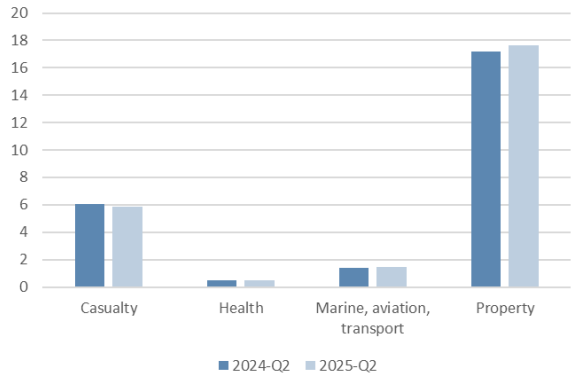
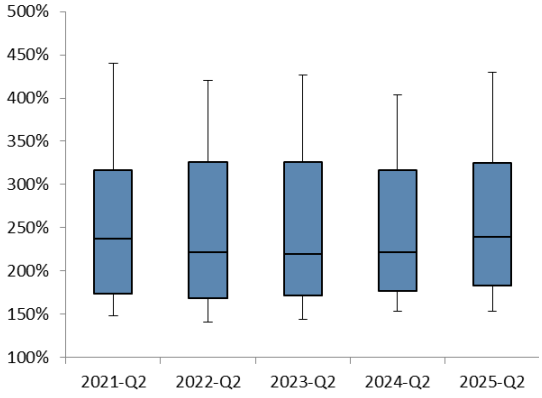



Figure A.2.13: Solvency ratio of EEA reinsurance undertakings (in %; median, interquartile range and 10th and 90th percentile).




*Source: EIOPA Quarterly Solo*

## IORP sector[43]

Figure A.2.14: Total Assets (EUR bn)

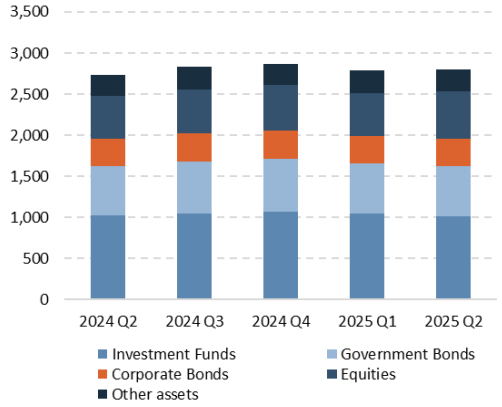
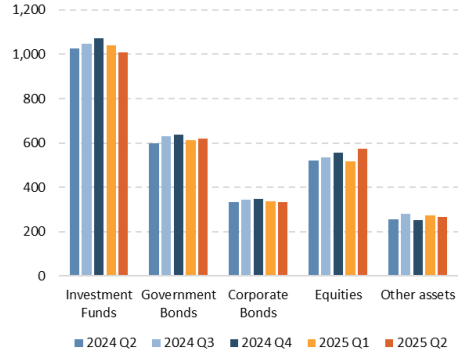



Figure A.2.15: Assets by category (EUR bn).




*Source: EIOPA Occupational Pension Statistics.*

Figure A.2.16: Excess of Assets over Liabilities (EUR bn).

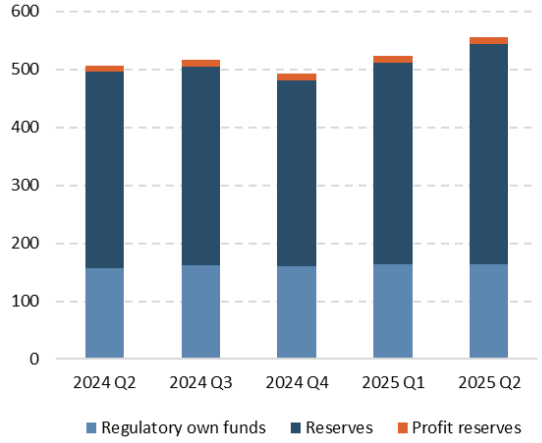
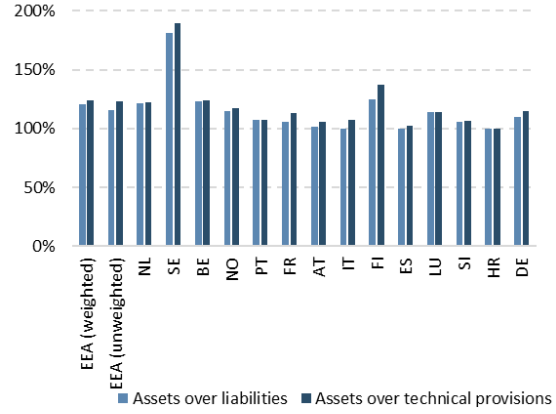


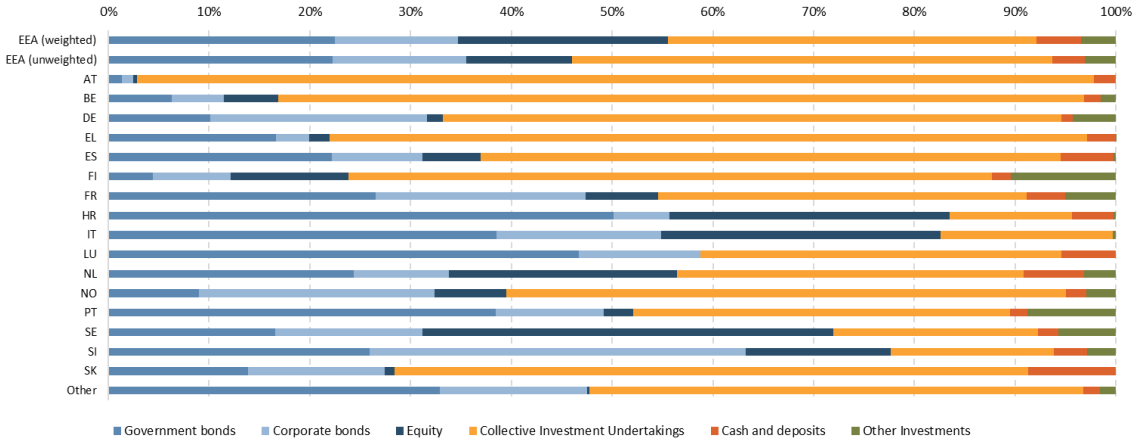

Figure A.2.17: Funding Ratios (DB schemes) by EEA Member State (Q2 2025).




*Source: EIOPA IORPs statistics. Regarding Figure A.2.17, in the case of Italy, due to the discontinuation of many DB schemes, the data on technical provisions that are reported to EIOPA are set as equal to the net assets availble for retirement purposes. Notice that the overall share of DB schemes in Italy is only around 1.9 %. of total assets.*

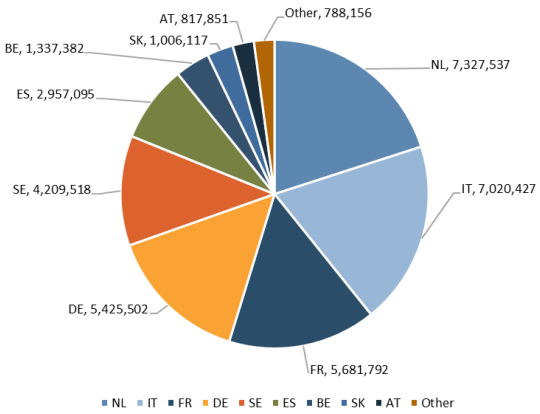
[43]. Information on small IORPs, which are exempted from the full reporting requirements, are excluded, so that for some Member States data may not represent 100% of the total national IORPs sector. In addition, data for LU is incomplete for 2025 Q2 and data for CY is not available for 2025 Q2.

Figure A.2.18: Asset allocation without look-through (in %).




*Source: EIOPA Occupational Pension Statistics. Date: Q2 2025.*
*Note: Equity consists of direct equity, equity funds and private equity funds. 'Other' investments consist of direct other investments, asset allocation funds, alternative funds and other funds. For Italy, asset allocation refers only to the securities portfolio. Other includes: LI, DK, LV and BG.*

Figure A.2.19: Active members (2024)




*Source: EIOPA Occupational Pension Statistics.*

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