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European Insurance and
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CONTENTS

FOREWORD BY THE CHAIRPERSON

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The world economy is navigating a complex environment, characterised by a trend toward “geoeconomic fragmentation” where shifts in global trade and defence are creating new challenges. Negotiations regarding tariffs are ongoing and not being resolved quickly. Ukraine is still under attacks from Russia that continues its war of aggression. Though efforts are made to end the war, there are significant obstacles to peace and recovery. Tensions in the middle east also impact regional stability and global security, affecting trade, energy markets and international relations.

In this context, the EU's economic growth remains subdued and financial markets are highly volatile. However, the insurance and the Institutions for Occupational Retirement Provision (IORPs) sectors have on aggregate robust capitalisations.

Going ahead, the European insurance and pensions sector can play a pivotal role supporting the Savings and Investments Union (SIU) by providing retail investors with attractive options for investment and retirement. Indeed, the SIU initiative, while deepening the Single Market, will also significantly contribute to advancing the pension agenda, ultimately reducing the pension gap that affects many Europeans.

Given the ambition to move capital from bank accounts to investments, a sound supervisory system will be crucial to build the necessary trust with consumers in the market. A system that, while recognising national specificities, can enforce the values and rules of the Single Market and ensure a stable financial market.

Simplification of regulatory requirements is a key element of the Commissions agenda. EIOPA has already taken steps, such as reducing the frequency of stress testing exercises from 2 to 3 years, and is currently assessing, with its members, ways to further reduce reporting burden. While striving for greater efficiency, simplification shall not compromise EIOPA’s ability to monitor financial stability.

Finally, to maintain the EU safe and credible in uncertain times, it is extremely important to continue enhancing the level of preparedness to deal with future potential external shocks to financial markets, geopolitical risks or cyber attacks. This requires continuous reinforcement of EIOPA’s internal resilience as well as that of the supervisory community – e.g. through improved scenario analysis, stress testing, business continuity planning, and crisis simulations, in close liaison with the NCAs.

EXECUTIVE SUMMARY

In 2025 the European macroeconomic landscape is fragile and characterised by uncertainty. A shift in the global trade and defence paradigm, triggered by the US administration, challenges the long-standing international norms and agreements. The EU's substantial trade surplus in goods (almost EUR 200 bn), makes the EU vulnerable to negative consequences from tariffs and retaliatory measures. The planned increase in fiscal spending to support defence and infrastructure development, has the potential to stimulate growth, but may also lead to budget cuts in other areas or increasing in public borrowing.

The European economy is experiencing slow growth and disinflation, with high services inflation and a tight labour market. Despite this, real wages are rising in most countries, which could boost consumption and demand for certain products. The EU's GDP growth was 0.4% in 2024Q4, driven mainly by household consumption.

Sensitivity to tariff news and the uncertainty surrounding these generates high volatility in the equity market. The strongest impact was on the US equity market, showing the concerns of what the result of the tariff policies on US economy can be. Long-term interest rates remained elevated, with spreads repricing to reflect the impact of tariffs. Following the tariff announcements and the subsequent market reactions, the interest rate curve shifted down, although retaining the high levels for medium to long-term tenors.

Exchange rate volatility is a key factor to monitor. The US dollar appreciated substantially towards the end of 2024, and it was expected to remain such, due to less supply of USD, and increase in interest rate differentials. Nevertheless, the US dollar began to depreciate on March 3rd, coinciding with a sharp increase in European interest rates. This downward trend unexpectedly persisted even after the announcement of tariffs on April 4th and subsequent temporary pause of tariffs. The EUR/USD exchange rate volatility poses liquidity risk to insurers and IORPs that might have to pay variation margins on currency derivatives (such as e.g. FX) hedging US dollar investments.

The insurance, reinsurance and the Institutions for Occupational Retirement Provision (IORPs) sectors had robust capitalisation which helped to weather the market turmoil that emerged in the period March-April of 2025. Nevertheless, the full extent of the direct and indirect impacts of geopolitical risks and global trade fragmentation on the sector remains to be determined and quantified. (Re)insurers liquidity position proved to be robust enough to cope with the market movements observed in 2025 (e.g. margin calls). IORPs liquidity did not create concerns; however, their ability to withstand the shocks is currently being tested in the 2025 IORPs liquidity stress test.

Insurers' equity prices have outperformed the market during the last 9 months, driven by robust earnings and valuations. However, the sector remains vulnerable to tariffs, in particular for internationally operating entities and for the uncertainty in terms of claims frequency and severity. Market volatility can also negatively impact investments, and currency mismatches between assets and liabilities may also exacerbate the effects.

In Europe, losses from natural disasters amounted to USD 31 bn (EUR 29.8 bn), of which USD 14 bn (EUR 13.5 bn) were insured in 2024. Globally, for the same year, the total losses were USD 320 bn

(EUR 308.0 bn).[1] Insured losses increased because of more frequent events and increased replacement costs due to inflation and concentration of asset in catastrophe-prone areas. EIOPA, with the ECB, has proposed EU-wide solutions to tackle the insurance protection gap, which consist of two complementary pillars of an EU public-private reinsurance scheme and an EU fund for public disaster financing.

Cyber risk is material, and it is heightened by geopolitical risk. The insurance sector faces both cyber underwriting risk and resilience challenges. Network interruption and cyber extortion are the most frequent type of cyber attacks, consistent with the type of cyber risk coverages underwritten. Artificial intelligence (AI) is increasingly used in cyber attacks, generating scam emails and malicious scripts. However, in the insurance sector, AI is widely used for process automation to improve efficiency. Its use also introduces risks, amplifying third-party dependency and cyber risks (see Box 1.1). A major development around cyber resilience is the Digital Operational Resilience Act (DORA), applicable since January 2025, which aims at mitigating risks from cyber threats, service failures, and technological vulnerabilities, and includes oversight of critical third-party ICT service providers.

In the context of policy development, EIOPA worked on new and existing technical standards and guidelines on Solvency II, having also provided technical advice to the European Commission for the review of the Delegated Regulation on Solvency II. In relation to sustainability, EIOPA recommended additional capital requirements for fossil fuel-related stocks and bonds on European insurers' balance sheets to reflect the risk profile of these assets. It was also proposed to adjust standard formula risk factors for 24 regions across natural hazards. EIOPA worked on other policy development, for example, in the area of liquidity risk management of IORPs and internationally contributed to the finalisation of the Insurance Capital Standard.

The insurance sector's profitability improved in 2024, with both capital and liquidity positions remaining robust and stable, on aggregate. In terms of premium growth, non-life gross written premiums (GWP) saw a significant increase of 8.2% year-on-year, surpassing the 6.9% growth recorded in 2023, and reaching a total of EUR 769 bn. Meanwhile, life GWP exhibited even more substantial growth, rising by 13.8% to EUR 758 bn, thereby rebounding from the subdued growth rates observed over the past two years.

Life technical cash flows, i.e. premiums net of claims (including surrenders) and expenses rebounded in 2024, recovering from the negative value recorded in the previous year. This turnaround can be attributed to a shift in the balance between premiums and claims. In the period from 2022 to 2023, claims (including surrenders) rose and exceeded premiums, which remained relatively stable. In contrast, 2024 saw a significant uptick in premiums, driven by a resurgence in demand for insurance products, which had been dormant in recent years. This increased demand is likely fuelled by higher saving ratios after interest rates stabilised. Hence, lapse rates, which had been trending upward over the past three years, may have finally peaked.

The downward trend that characterised the unit-linked business since the beginning of 2022 inverted in 2024. Unit-linked GWP as a percentage of total EEA life increased throughout 2024, reaching 35.4% at the end of the year. This shift may be attributed to the perceived benefits of unit-linked products, which hedge better against inflation, and their ability to offer higher returns compared to traditional life insurance products, as investors continue to seek attractive yields in a changing

[1] Climate change is showing its claws: The world is getting hotter, resulting in severe hurricanes, thunderstorms and floods | Munich Re.

economic landscape. However, it remains to be seen whether this upward trend will be sustained going ahead.

The insurance sector's profitability saw a notable improvement, driven by robust investment returns. The median return on assets (ROA) rose to 0.7% in 2024, up from 0.6% in the previous year. Furthermore, the median return on excess assets over liabilities, a proxy for return on equity, increased significantly to 9.3% from 8.0%. While investment returns remain strong, insurers should be cautious about potential market corrections.

Looking ahead, reinsurers, which are characterised by global underwriting exposures and multi-currency assets and liabilities, will need to carefully assess the potential impact of trade barriers on their operations. Nevertheless, EEA reinsurers delivered a strong performance in 2024, driven by high investment returns and underwriting profitability. As a result, their balance sheets strengthened, and solvency positions improved, with the median solvency ratio increasing to 235% from 223%. The reinsurance sector has benefited significantly from the hardening market conditions over the past two years. This enabled reinsurers to increase premiums, tighten terms, and reduce coverage. This trend is reflected in the growth of non-life reinsurance premiums in the EEA, particularly in property and motor-related lines.

The occupational pension sector in the EEA remained resilient, despite navigating a volatile interest rate environment. In 2024, revaluations in IORPs equity positions (+17% with respect to 2023) allowed a faster asset growth than liabilities, slightly enhancing their financial position (+1% year on year). The Netherlands' transition from Defined Benefit (DB) to Defined Contribution (DC) schemes might impact investment strategies and risk management practice, which, despite gradual and well-announced, requires monitoring. The sector's exposure to equity instruments, including those denominated in foreign currencies, makes it vulnerable to market fluctuations. The market turmoil in 2025 Q2 has potential implications for IORPs' funding ratios and liquidity positions, which warrant close monitoring.

A recent survey among national competent authorities (NCAs) has highlighted that geopolitical tensions and global trade uncertainty are driving macroeconomic risks, which remain a top concern for both insurers and IORPs. Due to the nature of tariffs, which are targeting goods, not services, and the high interconnectedness across markets, indirect impacts, rather than direct ones, appear to be a source of vulnerability to the insurance and IORPs sector. Specifically, non-life insurance business is expected to be more heavily impacted than life business, potentially due to higher claims costs for imported goods.

Insurers' portfolios are heavily weighted towards fixed-income assets characterised by low risk, providing a shield against market valuation declines and credit spread increases; therefore, equity and high-yield bond exposures remain vulnerabilities. The composition of insurers' investments remained stable compared to the previous year, due to a very mild year-on-year change of interest rates and relatively stable European equity market during 2024. Fixed-income assets cover a share of 65.0% (government bonds 27.9%, corporate bonds 28.7% [predominantly investment graded], and mortgages 6.4%), followed by equities accounting for 21.7% (16.1% unlisted equity [mainly participations in insurance subsidiaries] and 5.6 listed equity), cash and deposits 4.9% and property 3.4%.

Following the 2022 interest rate hike, which was characterised by weak purchasing activity, the insurance sector has bounced back, with strong government bond buying in 2024. Although the

sector's holdings declined by 2.0% in the year following the 2022 interest rate hike, liquidations have since stabilized. The recent surge in government bond buying can be attributed to the sector's improved financial position, driven by an increase in life premiums and positive technical cash flows, as discussed in Box 5.1.

Life insurers using derivatives to hedge against interest rate declines faced unexpected payments on March 3rd due to a spike in interest rates. Following the announcement in Germany of a major package, worth billions of euro, to boost its defence and infrastructure, the market has been anticipating higher interest rates, despite the central banks having started to reduce interest rates. However, derivatives users showed resilience (See Box 5.2).

Insurers are exposed to currency risk due to their investments in US dollars, particularly if these positions are not hedged. Insurers in 2024 allocated 24.9% of their equity portfolio to US shares, 13.4% of their corporate bond portfolio to US corporate bonds and 4.4% of their government bond portfolio to US government bonds. IORPs in 2023 allocated 52% of their equity portfolio to US shares, 20.8% of their corporate bond portfolio to US corporate bonds and 9% of their government bond portfolio to US government bonds.

During 2024 Q4, the US dollar appreciated against the EUR by approximately 7%, as a result insurers had to pay variation margins on currency derivatives. To manage the risk of foreign investment valuation declines due to exchange rate fluctuations, insurers use currency derivatives such FX or currency swaps. However, when the US dollar appreciated at the end of 2024, these currency derivatives realised mark-to-market losses, which triggered variation margin payments. For a more detailed analysis of the liquidity needs of insurers in this scenario, see Box 5.3.

When insurers and IORPs hedge against both interest rate and currency risk, margin payments may either accumulate or offset each other, depending on how changes in interest rates and exchange rates correlate. Indeed, after March 3rd, when EUR interest rates increased unexpectedly and sharply, the EUR appreciated against the US dollar (i.e. US dollar depreciated). As a result, entities that use derivatives to hedge both interest rate risk on their long liabilities and currency risk on their foreign investments have experienced a partial offset of their liquidity needs. Specifically, the liquidity absorbed by interest rate derivatives (which required variation margin payments) may have been partially offset by the liquidity generated by currency derivatives (which received variation margin payments).

The insurance and IORPs sectors maintain a strong link with the banking sector through its investment portfolio. As of year-end 2024, EEA insurers and IORPs had invested 12.7% and 6.0% of the total investments, respectively, in banks in line with previous years. However, there exists significant variation across countries in this regard. Bonds represent for insurers and IORPs the largest share of their exposures to banks. The proportion of low risk covered bonds (secured bonds) held by insurers has decreased from 43.6% in 2022 to 39.4% in 2024. Insurers with significant holdings of subordinated bank bonds may be more vulnerable to negative effects if the banking sector experiences distress. On average for the sector, 6.0% of bank bonds are subordinated.

As interest rates stabilised, evidence revealed a continued trend[2] of increased investment in alternative assets[3] by EEA insurers. As of 2024 Q4, insurers demonstrate still a significant allocation to alternative assets (17.5% of their investments). Among these alternative assets, the real estate exposure (6.9%) stands out as a prominent allocation, particularly through investments funds (2.3%), mortgages (1.9%) and equity of real estate related corporations (1.5%), as well as other types of investments (4.0%), with a notable emphasis on structured notes (2.2%). Exposure to private equity remains contained at 2.4%. Over the past year, the decline in property valuations on insurers' balance sheets continued, although at a slower pace than in 2023.

The continued trend of increased investment in alternative assets suggests that insurers' investment strategies are influenced by other factors beyond just the interest rate. Alternative investments offer insurers several attractive benefits such as: potential for higher long-term returns, diversification benefits to reduce portfolio risk, a hedge against inflation, access to niche investment opportunities and a shield from market volatility. However, the illiquid nature of alternative assets poses challenges, especially in severe stress scenarios where insurers may seek to liquidate these holdings.

[2] In response to a prolonged low interest-rate environment, many life insurers sought higher-yielding investments, leading to a greater allocation towards assets exhibiting higher illiquidity and more complex structures; Financial Stability Report December 2023 - European Union (europa.eu).

[3] Termed as "alternative assets" or "alternative investments", these assets lack a globally recognized definition[3] but generally serve as alternatives to traditional investments like stocks, bonds and equity. The International Association of Insurance Supervisors (IAIS) proposed defining alternative assets based on risk-based characteristics, emphasising substance over form. These characteristics include illiquidity, difficulty in valuation, and complex structures. Accordingly, asset categories such as private equity, private debt, real estate, and infrastructure investments could be classified as alternative investments in Solvency II balance sheets, as outlined in the Solvency CIC mapping of categories and subcategories. Global-Insurance-Market-Report-2023.pdf (iaisweb.org) at page 25.

1 KEY DEVELOPMENTS AND RISKS

In 2025 the European macroeconomic landscape is fragile and characterised by high uncertainty.

Key highlights include:

- *A new paradigm for trade and defence is quickly taking shape as the US administration challenges key aspects of the global order that have been in place for decades.*
- *With a trade surplus, the EU is particularly susceptible to the adverse effects of trade tensions, including tariffs and retaliatory actions.*
- *The announced expansion in fiscal budget to support defence and infrastructure can spur growth but might challenge debt sustainability and compete with other priorities, causing budget cuts elsewhere.*
- *High volatility characterises the equity market, being sensitive to tariff news and the uncertainty surrounding these unpredictable shocks.*
- *Following tariff announcements, the interest rate curve has steepened, driven by lower short-term rates resulting from eased monetary policy, and higher long-term rates that reflect an increase in bond supply and risk in relation to debt sustainability.*
- *Credit and liquidity spreads repricing reflects the impact of tariffs and their consequences to economic growth.*
- *During 2024, losses from natural disaster kept growing to USD 320 bn (EUR 308.0 bn) worldwide, while in Europe they accounted to USD 31 bn (EUR 29.8 bn), of which USD 14 bn (EUR 13.5 bn) were insured. To address the protection gap, EIOPA with the ECB has proposed an EU public-private reinsurance scheme and an EU fund for public disaster.*
- *The threat of cyber attacks has increased, exacerbated by geopolitical tensions.*
- *AI, which is widely used by insurers to improve efficiency, increases third party dependency and cyber risks. DORA, applicable as of January 2025, mitigates cyber risks, service failures, and technological vulnerabilities.*

1.1 MACRO AND MARKET RISKS

New reality for trade and defence. The temporary pauses of tariffs built up optimism but do not remove the uncertainty of what will follow. The US administration challenges key aspects of the global order that have been in place for decades. The conflicting announcements on tariffs enforcement, suspensions, and postponements generated exceptional uncertainty, disrupting trade, challenging growth, putting pressures on prices and elevating the uncertainty for consumers and businesses. Part of the initial negative market impact has been removed, supported by the pause in EU and China tariffs. Regarding defence, the need for Europe to increase spending becomes more evident, and measures have been announced both at EU and national level.

The EU has strong ties with the US in goods trade.[4] With around 20% of extra-EU exports, the US is the largest partner for EU exports of goods and the second largest partner for EU imports of goods, accounting for 14% for extra-EU imports. Across countries the trade links are heterogeneous; for example, the Netherlands has the largest deficit in goods trade with US, and Germany the largest surplus. At EU level the trade surplus in goods is almost EUR 200 bn.[5] This suggests that a series of tariffs and retaliations will have negative implications for the European (as well as global) economy. It also raises the uncertainty on inflation, with various dynamics in play. For example, depreciated EUR or tariffs on imports from the US push prices higher, while weak demand or excess supply of re-directed exports (e.g. from China) pushes prices lower.

More spending on defence can be positive, but not necessarily a game changer. Increased spending requires fiscal space, otherwise it may necessitate budget cuts or markets could reprice sovereign risk. Alternatively, economic growth can create space, but this is a longer-term solution. In fact, when, and how the defence funds will be spent is critical. For example, spending on imports or rushing to increase military capacity, e.g. without sustained R&D spending, can only have a short-lived positive effect for the economy. For insurers the higher supply of (safe) bonds suggests interest rates can move higher (all else being equal), making existing insurance contracts unattractive to policyholders with respect to alternative saving options, leading them to potentially terminate their contracts (posing lapse risk) unless contracts are promptly adjusted to market rates. Finally, more broadly, higher interest rates also increase borrowing costs and widen spreads, posing challenges for heavily indebted countries or firms.

These developments find a European economy into a disinflationary process and with sluggish growth. However, services inflation remains still high enough, and base effects resulted in a volatile headline rate recently (Fig. 1.1). A tight labour market (Fig. 1.2) and higher real wages (either directed to consumption or savings) are positive developments and arguably provide buffers in case of shocks, although their effect on growth depends on whether they are consumed or saved. In fact, higher real incomes can increase the demand for certain insurance products. The real quarterly growth for 2024 Q4 for EU GDP was 0.4%, only slightly elevated compared to first half of the year and equal to that of 2024 Q3 (Fig. 1.3). The household consumption has the biggest impact, contributing +0.3 percentage points (Fig. 1.4).

[4] For a comprehensive assessment please refer to EUROSTAT here.

[5] Please refer to EUROSTAT here.

Figure 1.1: HICP main components (annual, in %)

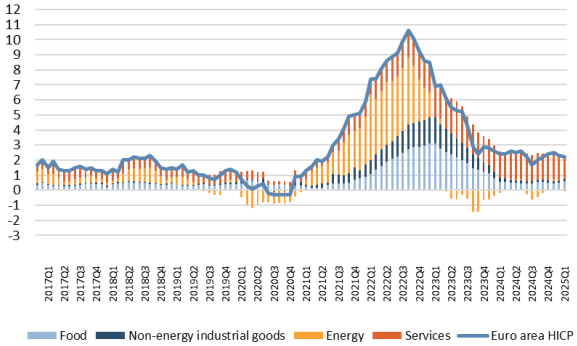


Figure 1.2: Unemployment rates

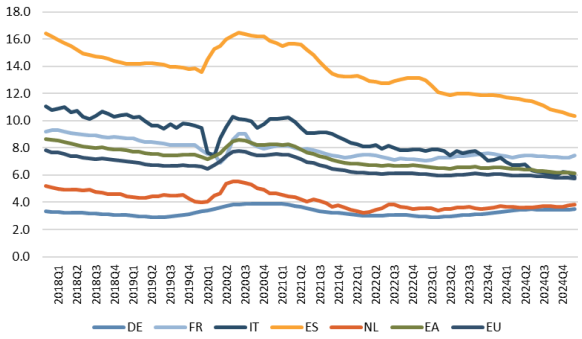


Figure 1.3: Real GDP growth

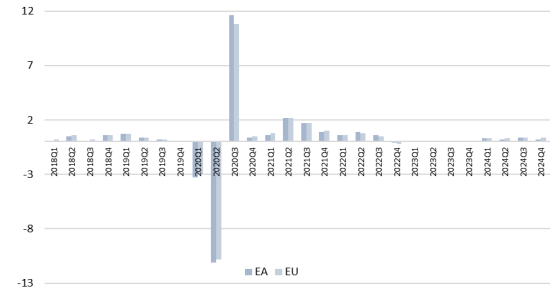
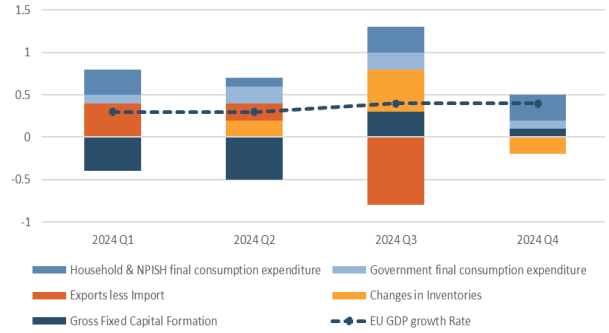


Figure 1.4: Contribution to GDP growth



Source: Eurostat, ECB.

Long-term interest rates remain high, spreads and equity markets repriced risk in expectation of the impact from tariffs, before almost recovering with the temporary pause in tariffs, supporting optimism for de-escalatory pathways. Markets have been highly volatile to tariff news, showing the unprecedented nature of the shock. The economic boost and the expected higher net supply of (safe) bonds related to defence and infrastructure contributed to the higher interest rate curve as of 2025 Q1, relative to 2024 Q4. The levels are not unseen compared to the past, but the curve steepened, with short tenors more linked to ECB cutting cycle. Besides the positive overall effect e.g. on making new insurance coverages more attractive, the change in the slope results in long-term products becoming more competitive versus other short-term alternatives. However, following the tariff announcements and the subsequent market reactions, the curve shifted down, although retaining the high levels for medium to long-term tenors. Spread risk was repriced during the market turmoil, e.g. corporate CDS spreads increased, with the increase more pronounced for high-yields, and equity markets have been significantly volatile. The higher impact on US equity markets indicates the concerns of what the result of the tariff policies on the US economy can be. Another way to see these concerns is the USD depreciation, coupled with upwards pressures on Treasuries, as observed during the market turmoil.

Figure 1.5: Swap curve (in %)

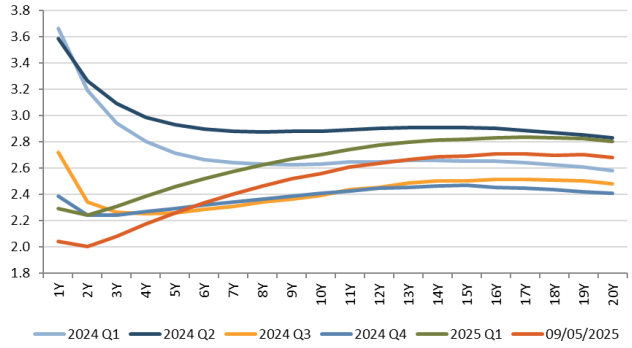


Figure 1.6: 10y government bond yields (in %)

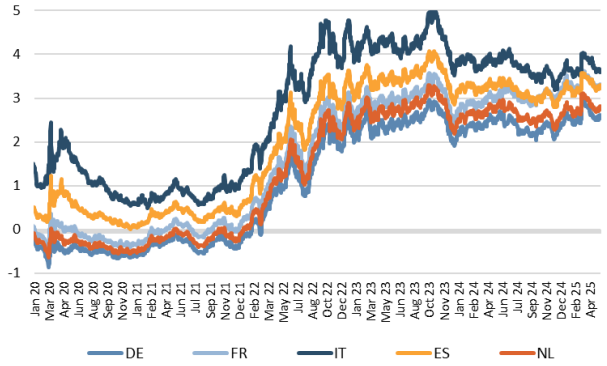


Figure 1.7: Sovereign Credit Default Swaps (5Y) (in %)

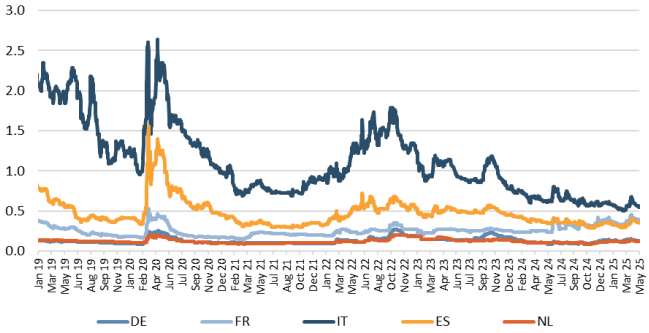
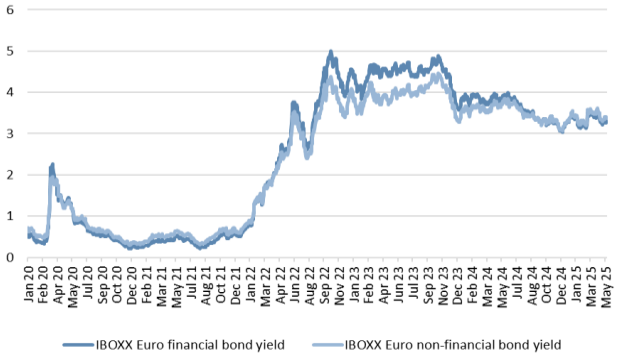


Figure 1.8: Corporate bond yields (in %)



Source: For all graphs Refinitiv. Last observation: 09/05/2025.

Table 1.1: Government bond yields for different maturities (in %)

		1Y	2Y	5Y	10Y	15Y	20Y
EU- euro area	Austria	1.83	1.93	2.40	3.07	3.41	3.51
	Belgium	1.94	1.95	2.41	3.14	3.61	3.90
	France	1.86	1.96	2.53	3.31	3.73	3.90
	Germany	1.76	1.76	2.08	2.62	2.96	3.03
	Ireland	1.83	1.88	2.32	2.97	3.32	3.46
	Italy	1.93	1.99	2.70	3.65	4.19	4.41
	Netherlands	1.89	1.88	2.23	2.81	3.11	3.22
	Portugal	1.92	1.87	2.25	3.13	3.69	3.97
	Spain	1.90	1.94	2.48	3.29	3.81	4.02
EEA/ EU-non euro area	Bulgaria	3.21	3.07	3.32	4.47	-	-
	Czech Republic	3.31	3.30	3.58	4.13	4.51	4.77
	Denmark	1.57	1.57	1.92	2.46	2.83	2.96
	Hungary	6.26	6.27	6.44	6.89	7.23	-
	Norway	3.98	3.77	3.70	3.95	-	-
Others	United States	4.09	3.92	4.07	4.48	4.88	5.14
	United Kingdom	3.65	3.73	3.98	4.69	5.22	5.50
	Switzerland	-0.09	-0.12	0.01	0.26	0.40	0.46
	Japan	0.52	0.63	0.88	1.42	2.07	2.49

Source: Refinitiv. Last observation: 09/05/2025.

Insurers' equity prices outperformed the market during the tariff market turmoil. The stock prices of insurers started outpacing the market since 2024 Q3, and they continued following the market turmoil. This reflects robust earnings and valuations. Also, high for longer interest rates and a steepening curve might benefit insurance products versus shorter term alternatives, supporting new business, as noted above.

However, insurers might not be entirely immune to tariffs, especially for the lines of business that are internationally operating or linked to trade insurance. In fact, uncertainty in terms of claims frequency and severity, together with operational aspects, e.g. conflict of law, would result in adding complexities. Business written abroad may realise unexpected claims, depending on how higher import costs translate into unforeseen claims.[6] This remains relevant for the European business, in case of retaliatory tariffs on imports or EUR depreciation. On the other hand, premium volume growth can be easier for some lines due to consumers' higher risk aversion, potential new opportunities, or the repricing of premiums.

From an investment perspective, market volatility can have a negative impact. In fact, the impact on investments can vary depending on industry and country exposures of insurers' investments, reflecting the heterogeneous specificities to trade flows across Europe. In addition, currency mismatches between assets and liabilities can be another important channel of impact, given the significant volatility of USD. In relation to this, FX derivatives can result in unexpected margin calls.

It should be noted that a scenario of geopolitical risks has been assessed comprehensively in the EIOPA 2025 stress test, with many of the shocks envisaged in the scenario resembling dynamics observed during the tariffs market turmoil.

Figure 1.9: Equity market performance

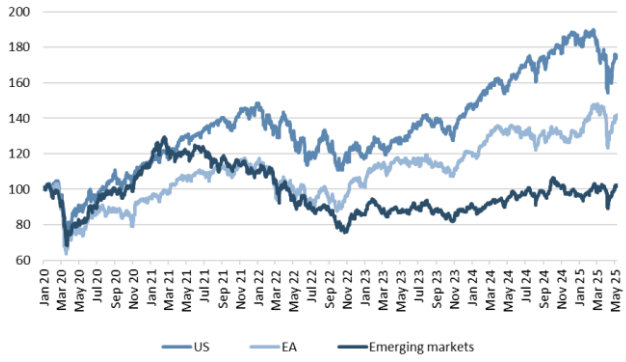


Figure 1.10: Market volatilities

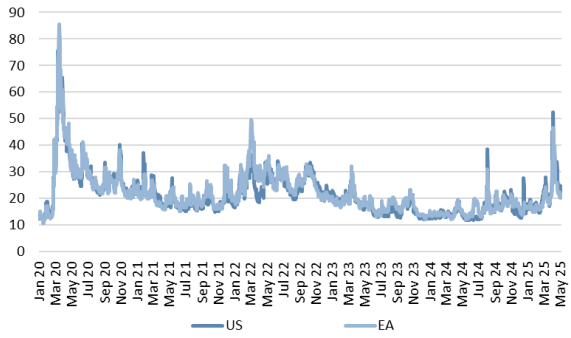


Figure 1.11: Equity performance of insurers vs. the market

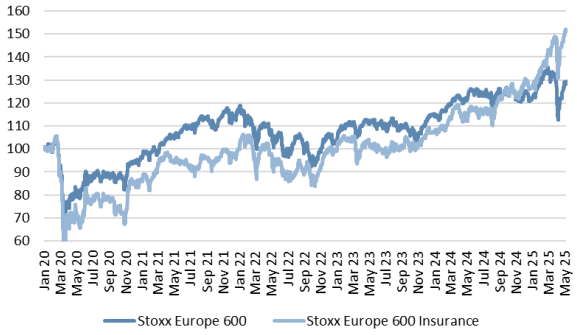
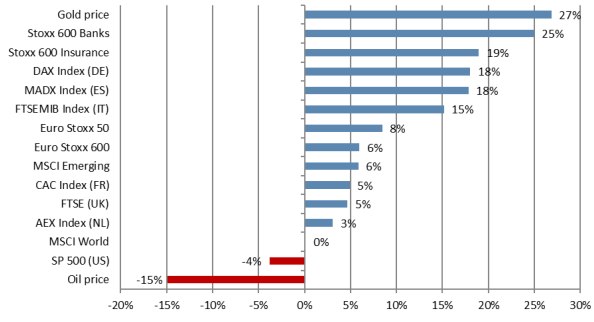


Figure 1.12: Selected market performances (year to date)



Source: For all graphs Refinitiv. Last observation: 09/05/2025.

[6] For example, please refer here.

1.2 CLIMATE RISK, SUSTAINABLE FINANCE AND NATURAL CATASTROPHE EVENTS

During 2024, global insured losses from natural catastrophes reached an estimated USD 140 bn (EUR 134.8 bn), while overall economic losses from natural catastrophes amounted to USD 320 bn (EUR 308.0 bn).[7] The two largest individual loss events of the year were Hurricanes Milton and Helene, which were responsible for almost a third of the insured losses. Increased event frequency coupled with economic factors, such as the accumulation of asset values in catastrophe-prone areas, as well as increased replacement costs due to higher construction costs and inflation, have recently put insured losses from natural catastrophes on an upwards trend. Despite the substantial losses, the European reinsurers remained resilient with strong balance sheets and high levels of solvency ratio. The losses from LA wildfires, which occurred in January 2025, have been estimated at up to USD 131 bn[8] (EUR 126.1 bn), with the insured share being USD 45 bn (EUR 43.3 bn). While the full impact on reinsurance markets will play out over time, none of the major European reinsurers have so far reported a reduction in their profit targets for 2025, suggesting that the impact may be within their risk appetite.

In 2024 insured losses in Europe were driven by multiple severe flood events following prolific rainfalls, headlined by the flash flood in Spain near Valencia. Total damages from natural catastrophes in Europe in 2024 amounted to USD 31 bn (EUR 29.8 bn) out of which USD 14 bn (EUR 13.5 bn) were insured. The three major flood events – southern Germany in June, Central Eastern Europe in September and Valencia in October – accounted for approximately half of these total insured losses. Each of these flood events was exacerbated by stationary weather patterns, which are expected to become more common due to climate change, especially as Europe is the currently fastest-warming continent globally. Going forward, such stationary weather patterns drawing excess atmospheric moisture from the warmer waters of the Mediterranean could favour the more frequent occurrence of severe flood events, highlighting the need for adaptation and addressing the prevailing protection gap.

Against the backdrop of the increasing intensity and frequency of natural catastrophes, EIOPA and the ECB worked on developing proposals for EU-wide solutions to tackle the insurance protection gap and contribute to a resilient society.[9] The proposed solution comprises two complementary pillars of an EU public-private reinsurance scheme and an EU fund for public disaster financing. Public-private (re)insurance schemes already exist in several member states, such as in Spain, where the Consorcio de Compensación de Seguros (CCS) absorbed most of the insured losses related to the Valencia flash flood. An EU-level reinsurance scheme could exploit economies of scale and diversify the coverage of high risks at the European level. To reinforce public disaster risk management in Member States, an EU fund could help to rebuild public infrastructure following natural disasters, subject to Member States having implemented agreed risk mitigation measures prior to the event to

[7] Climate change is showing its claws: The world is getting hotter, resulting in severe hurricanes, thunderstorms and floods | Munich Re

[8] Economic Impact of the Los Angeles Wildfires | UCLA Anderson School of Management

[9] EIOPA and ECB joint paper: Towards a European system for natural catastrophe risk management - EIOPA

minimise moral hazard. Moreover, having schemes in place to deal with these damages not only results in better uptake of insurance, but also in more adaptation and mitigation of risks. Adaptation and prevention measures are key elements of policy action and have already mitigated more severe impacts during the Valencia flash flood or the flood in Central Eastern Europe, while also highlighting that risks prevail outside the main metropolitan areas.[10] Another way to tackle the insurance protection gap is to increase citizens' awareness about natural hazards and climate risks.[11]

With the green transition underway, EIOPA, together with the other ESAs and the ECB, found in a coordinated one-off scenario analysis that transition risks alone are unlikely to threaten financial stability.[12] The one-off Fit for 55 climate risk scenario analysis aimed at assessing the resilience of the financial sector in line with the Fit for 55 package and gaining insights into the capacity of the financial system to support the transition to a lower carbon economy under conditions of stress. Assessing the impact of three scenarios, including potential contagion and amplification effects across the financial system, the ESAs and the ECB found, within the limitation of the model and the implied assumptions, that transition risks, only when combined with adverse macroeconomic shocks, could lead to disruptions.

As major long-term investors, insurers can play a significant role in putting the EU economies on a more sustainable track and in supporting the transition towards a low-carbon economy. Figure 1.13 shows that the median investments in green bonds across individual insurers as a share of the total corporate bond portfolio has steadily increased over the past years and amounted to about 7.2% of their corporate bond investments at the end of 2024. Aside from investments in green bonds, investments in assets eligible or aligned with the EU Sustainable Finance Taxonomy can give another indication. The Taxonomy broadly follows the NACE classification of economic sectors, listing economic activities that could be considered sustainable and thus Taxonomy-eligible. Taxonomy-aligned activities constitute a subset of the Taxonomy-eligible activities that must meet a set of technical screening criteria. Currently, only a small fraction of the eligible NACE sectors is estimated to be already sustainable, i.e. aligned with the Taxonomy.[13] A recent analysis for insurers found that currently 10.7% of direct non-financial EEA-issued corporate bond and equity holdings could be considered Taxonomy-aligned, while another 49.5% were Taxonomy-eligible. For IORPs, Taxonomy-aligned assets were 8.0%, with another 43.9% Taxonomy-eligible (Figure 1.14).

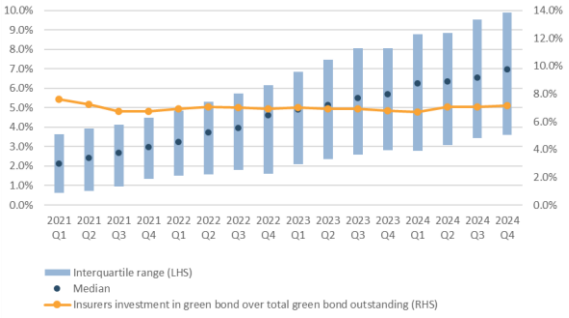
[10] Natural Catastrophe and Climate Report: 2025

[11] EIOPA recently consulted on the development of an awareness tool that can be used by all Europeans to better understand the potential impacts of climate change on their properties and based on the feedback received will work on developing such an awareness tool. Consultation on a blueprint for an awareness tool for natural catastrophe risks and prevention measures - EIOPA

[12] Stress test: one-off Fit-for-55 climate risk scenario analysis - EIOPA

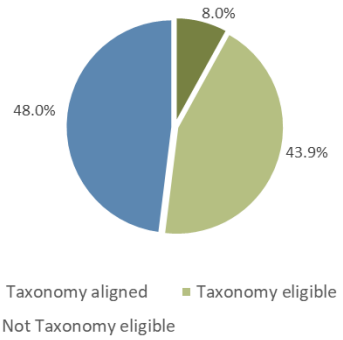
[13] For more detail on the estimation of alignment of economic activities see: Alessi and Battiston (2022). *Two sides of the same coin: Green Taxonomy Alignment versus transition risk in financial portfolios*.

Figure 1.13: Share of investments by insurers in green bonds relative to all corporate bonds



Source: EIOPA Risk Dashboard. Refinitiv and own calculations based on SII QRT S.06.02. Note: As of 2024 Q4. LHS axis shows the distribution across insurers' investments in green bonds over their total corporate bond investments. RHS axis shows the share of insurers' aggregate investment in green bonds over total green bonds outstanding.

Figure 1.14: EU Taxonomy-alignment and eligibility of equity and corporate bond holdings for IORPs



Source: Own calculations based on IORPs PF.06.02 and Alessi and Battiston (2022). *Note: As of 2024 Q4. Data only concerns EEA-issued non-financial securities.*

1.3 CYBER RISK AND THE INSURANCE SECTOR

According to the April 2025 EIOPA Risk Dashboard,[14] digitalisation and cyber risks are at a medium level, with the forward-looking assessments pointing to an increase in risk level over the next year. Supervisors consider this risk currently significant and expect it to further increase as cyber security and geopolitical conflict are emerging as a primary concern. However, the frequency of cyber incidents impacting all sectors of activity, decreased compared to the same quarter of last year. Cyber negative sentiment indicates a decreasing trend, that converges to a medium risk as well.

Geopolitical risk is a major driver of cyber threats, with state-backed cyber campaigns and disinformation efforts continuing to grow, particularly in response to global events and elections. At the same time the decreased global cooperation hinders collective action to jointly fight cybersecurity threats. For Europe this is further exacerbated as increased foreign cyber attacks could be diverted from the US to the EU, as Europe decouples from US dynamics. Supply chain attacks on open-source software also became more concerning, highlighting new risks in software security.

The financial stability implications for the insurance sector could be considered in terms of cyber underwriting risk and cyber resilience. The former concerns the undertakings' ability to manage losses from their cyber insurance portfolio and the latter is about the financial impact of an adverse cyber-event on their own operations. From 2023 onwards, information on cyber underwriting risks may be monitored using the annual Solvency II reporting data, which includes information on products covering cyber risks.[15] Preliminary data indicates that cyber risks accounted for EUR 5.9 bn in earned premiums by EEA (re)insurers in 2024; accepted reinsurance accounted for around 37% share. Around

[14] Insurance Risk Dashboard - EIOPA

[15] The data concerns the affirmative exposure type only (as opposed to non-affirmative type which includes policies that neither include nor exclude cyber in their wording).

80% of the premiums correspond to the standalone type of coverage. (Re)insurers based in Belgium, France, Germany, Ireland, Italy and Luxembourg collectively account for 95% of the premiums.

The types of cyber risks underwritten appear to be consistent with types of reported cyber attacks in the EU. For example, network interruption that leads to business interruption is among the most frequently appearing risk type across all reported coverage. It can include network interruptions such as DDoS[16] attacks and malware that causes system to fail. Cyber extortion risk type, which can also include DDoS attacks, also appears high on the list. Likewise, ENISA's Threat Landscape[17] identifies DDoS and ransomware as the most reported forms of attacks in the EU. The report further highlights the growing role of AI and stealth tactics in cyber attacks, with criminals using tools based on AI to generate scam emails and malicious scripts. Box 1.1 deals with the impact of AI on insurers and reinsurers with a focus on its risks.

Box 1.1: Impact of artificial intelligence (AI) on the insurance sector

AI is transforming the operational and service landscape of financial services. The growing adoption of AI is accompanied by a range of opportunities and challenges from different angles: cybersecurity, consumer protection, and financial stability. For example, while it offers improvements in process automation, efficiency, cost savings and decision-making, it also introduces risks through malicious use, misinformation, misalignment, and its market structure, i.e. the organisation and characteristics of the market in which these systems are developed, distributed, and utilized.

In the insurance sector, AI systems are being extensively tested and utilised in key areas of the insurance value chain, including distribution and customer support via chatbots, claims management, detection of patterns to prevent fraud, and, in some cases, risk assessment. The use of AI can indeed facilitate cost optimisation and enhance efficiency in numerous processes across the insurance value chain. However, insurance supervisors have reported that AI systems are not yet being used to make decisions. Instead, they are primarily used to support data analysis and provide preliminary findings.

The risks currently at play are primarily operational in nature. According to the EIOPA Spring 2025 Bottom-Up survey, insurance supervisors across various regions reported that the primary applications of AI are in claims management, sales and distribution of insurance products, and fraud detection. In contrast, AI is not yet widely utilised by supervisors for supervisory purposes (commonly known as "Suptech"). Notably, only the authorities of MT and DE have begun using AI, albeit to a limited extent, while IT, FR, and LV are currently testing its application. Several other European supervisors have expressed interest in developing AI-based solutions and have already planned for their implementation. As a result, a growing trend of AI adoption is observed, and its application is expected to become increasingly strategic.

Focusing on financial stability, even if the current use in the insurance sector does not raise financial stability concerns, it is worth monitoring that the use of AI can generate or amplify systemic risk. Specific areas of financial stability risks are:[18]

1) Third-party dependencies and service provider concentration: due to the complexity of AI models, insurance companies often rely on external providers, as they have limited capacity to develop such models

[16] Distributed Denial of Service (DDoS) targets system and data availability.

[17] Based on ENISA Threat Landscape 2024 [link]

[18] The Financial Stability Implications of Artificial Intelligence

in-house. This reliance creates dependencies on third-party providers, which remain relatively few due to operational challenges, e.g. high costs and technology know-how needed to develop LLMs underlying generative AI systems.

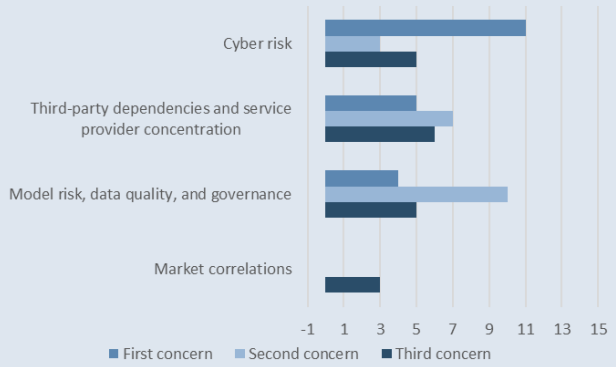
2) Market correlations: given the similarities in AI models used across the industry, often outsourced from a reduced number of service providers, market shocks are likely to propagate in a similar manner, increasing systemic risk.

3) Cyber risk: the increased use of AI leads to greater reliance on IT systems, thereby amplifying cyber risks. This also poses a financial stability concern due to the interdependence of third-party cloud service providers.

4) Model risk, data quality, and governance: due to their complexity, these models are difficult to tailor to specific use cases. Additionally, their governance and the identification and correction of potential bugs can be particularly challenging.

Looking at the most relevant concerns in this area, supervisors named Cyber risk and Model risk, data quality, and governance as the first and second most relevant risks (Figure B.1.1).

Figure B.1.1: Ranking of financial stability risks posed by AI according to EEA insurance supervisors



Source: EIOPA Insurance Spring Bottom-Up Survey, 2025

As a key development on the cyber resilience front, the Digital Operational Resilience Act (DORA) became fully applicable on 17 January 2025.[19] By introducing harmonized rules for 20 different types of financial entities and third-party ICT service providers, DORA ensures that the financial sector can withstand severe operational disruptions and mitigate risks arising from cyber threats, service failures, and technological vulnerabilities. As part of its implementation, European supervisors have been advancing the designation and oversight of critical third-party ICT service providers (CTTPs). The process included collecting the Registers of Information (RoI) by 30 April 2025, followed by criticality assessments to be completed by the end of July. The European Central Bank (ECB) has published an updated version of TIBER-EU, a European framework[20] for threat intelligence-based ethical red-teaming, to ensure alignment with the regulatory technical standards (RTS) of DORA on threat-led penetration testing (TLPT). Accordingly, (re)insurer undertakings that complete a test under national

[19] Digital Operational Resilience Act (DORA) - EIOPA

[20] TIBER-EU Framework

or European level implementation of the TIBER-EU framework will be DORA TPLT-compliant, if they fulfil the testing requirements set by the competent authorities.

EIOPA will continue implementing its digital finance strategy, as outlined in its Annual Work Programme (AWP) 2025,[21] with a focus on consumer protection, market resilience, and supervisory innovation. EIOPA will enhance cyber risk assessment by integrating cyber risk considerations into its insurance risk dashboard framework. Additional supervisory data will contribute to a deeper understanding of the European cyber insurance market, supporting more effective oversight and risk mitigation strategies. Moreover, EIOPA will evaluate the European Commission's legislative proposal on FIDA (Financial Data Access), particularly from a consumer protection and ethical data use perspective. Once adopted, this may lead to new policy initiatives aimed at ensuring fair and responsible data practices.

1.4 REGULATORY DEVELOPMENTS

EIOPA started work on new and existing technical standards and guidelines on Solvency II. The amendments to the Solvency II Directive include mandates for EIOPA to draft new technical standards and issue new guidelines. EIOPA publicly consulted on proposals for several of these instruments. EIOPA also started reviewing the existing technical standards and guidelines to ensure in particular that they are aligned with the changes to the legal framework.

EIOPA provided technical advice to the European Commission for the review of the Delegated Regulation on Solvency II. In response to a request from the European Commission for technical advice from April 2024, EIOPA provided technical advice on the implementation of the proportionality framework, on standard formula capital requirements for direct exposures to qualifying central counterparties, and on standard formula capital requirements for investments in crypto assets.

EIOPA published its report on the prudential treatment of sustainability risks in the Solvency II framework.[22] In its report, EIOPA assessed the potential for a dedicated prudential treatment of assets or activities associated substantially with environmental or social objectives, or harm to such objectives, as well as the impact of proposed amendments on insurance and reinsurance undertakings in the European Union. Based on a risk-based analysis of data and evidence, EIOPA recommended additional capital requirements for fossil fuel-related stocks and bonds on European insurers' balance sheets to accurately reflect the higher risks of these assets.

EIOPA submitted its Opinion on the (Re)assessment of the Solvency II Natural Catastrophe in the Solvency II Standard Formula. Following a comprehensive reassessment exercise conducted in 2023 and 2024, building on new scientific insights, recent climate data and advanced risk modelling, EIOPA proposed adjusting standard formula risk factors for 24 regions across natural hazards like floods, windstorms, hail, earthquakes and subsidence. EIOPA is also closely monitoring emerging perils for a potential inclusion in the standard formula.

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[21] Final Single Programming Document 2025-2027

[22] Final Report on the Prudential Treatment of Sustainability Risks for Insurers - EIOPA

EIOPA is also progressing its work on other sustainable finance initiatives. It publicly consulted on three topics until the end of February. In its work on Regulatory Technical Standards on management of sustainability risks including sustainability risk plans, EIOPA aims to specify the minimum standards and reference methodologies for the identification, measurement, management, and monitoring of sustainability risks, the elements to be covered in the plans, the supervision and disclosure of relevant elements of the plans, while limiting the burden on undertakings and establishing a coherent and proportionate approach to sustainability risk management. In its report on biodiversity risk management by insurers, EIOPA looks at how insurers identify, measure and manage biodiversity risks, and assesses undertakings' own risk and solvency (ORSA) practices, with the aim to engage supervisors and the insurance sector to adequately identify and address biodiversity loss risks. Finally, in its work on a blueprint for an awareness tool for natural catastrophe risks and prevention measures, EIOPA is proposing the development of an awareness tool that can be used by all Europeans to better understand the potential impacts of climate change on their properties.

EIOPA published a draft Opinion on the supervision of liquidity risk management of IORPs, as a follow-up to EIOPA's technical advice on the review of the IORP II Directive. Its objective is to enhance the protection of members and beneficiaries and the stability of IORPs and the wider financial system, especially where IORPs are exposed to margin and collateral calls on derivative hedging positions. The public consultation closed in 2024, and the final Opinion is expected to be published in the 2nd or 3rd quarter of 2025.

Internationally, EIOPA contributed heavily towards the finalisation of the Insurance Capital Standard (ICS). The ICS was formally approved by the IAIS in late 2024, marking a significant milestone towards achieving global consistency in the regulation and supervision of Internationally Active Insurance Groups (IAIGs). Consequently, EIOPA is already contributing to the work related to the future ICS implementation assessment. In parallel, EIOPA was actively involved in the conclusion of the thorough assessment made to compare the ICS with the US-led Aggregation Method (AM). In finalising the comparability assessment, the IAIS concluded that a US AM provides a basis for implementation of the ICS to produce comparable outcomes. However, the comparability assessment of the provisional AM highlighted some areas where work as part of the implementation of the final AM will help ensure convergence.

EIOPA held during 2024 supervisory dialogues with key stakeholders such as the UK, Switzerland, or Bermuda, and participated in the European Commission-led regulatory dialogues. In addition, EIOPA held an Eastern Cooperation Conference, with strong participation of non-EEA European jurisdictions with interest in EU insurance regulation.

EIOPA acknowledges the need to simplify regulation and reduce administrative burden as a priority.[23] EIOPA already took concrete steps to simplify regulatory reporting for industry and overall reduce burden, for example, by permanently reducing the frequency of the stress testing exercises to a three-year cycle. EIOPA is currently undergoing a critical assessment, together with its Members, on ways to reduce the reporting burden. Maximising the impact of our regulatory and supervisory work through greater efficiency is necessary, and EIOPA is committed to it. In doing that, it is of utmost

[23] Bolder, Simpler, Faster: EIOPA's views for better regulation and supervision

importance to strike the right balance between simplification and maintaining the soundness and convergence of our supervisory system, policyholder protection, and financial stability. In other words, simplification shall not come at the expense of the resilience of our financial sector.

2 THE EUROPEAN INSURANCE SECTOR

As of year-end 2024, the European insurance sector demonstrates overall resilience.
Notable aspects are:

- *The sector's capital and liquidity positions remain strong and stable.*
- *Life premiums have resumed growth after a period of stagnation, with technical cash flows from operations also rebounding.*
- *Lapse rates, which increased over the past three years, may have peaked now that interest rates have stabilized.*
- *Unit-linked business experienced a turnaround, reversing the decline that began in 2022.*
- *Profitability has improved, driven by strong investment returns.*

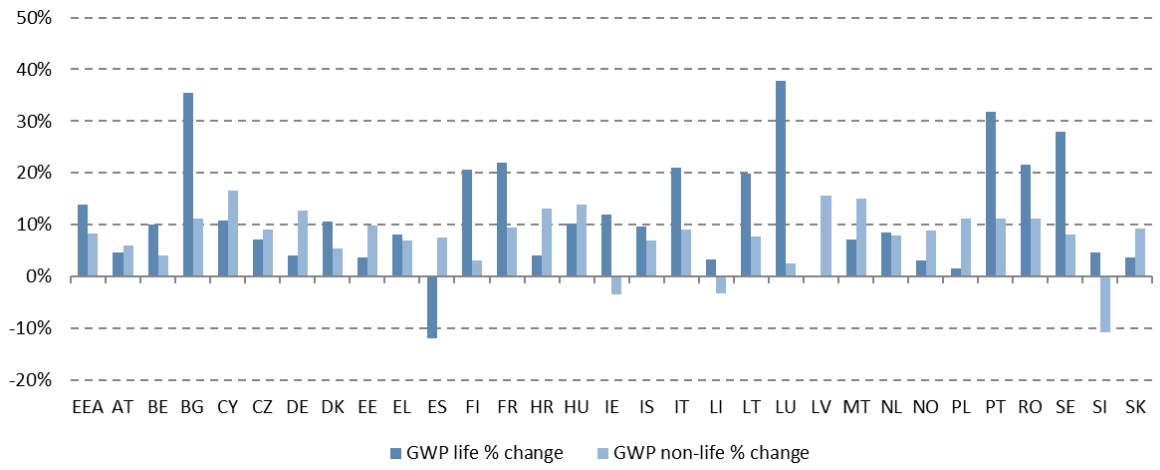
The industry, due to its adequate capitalization, is well equipped to withstand market turmoil materialised in the second quarter of 2025. Though, the direct and indirect impacts of geopolitical risk and global trade fragmentation on the sector remain still to be quantified.

2.1 MARKET SHARE AND GROWTH

In 2024, both life and non-life gross written premiums (GWP) continued growing. Non-life GWP increased by 8.3% year-on-year (6.9% in 2023), reaching EUR 769 bn. The trend is widely observed across Member States except for Slovenia (-10.9%), Ireland (-3.6%), and Lithuania (-3.2%). EEA life GWP increased even more strongly by 13.8% to EUR 758 bn, recovering from the low growth observed in the last two years (Fig. 2.1). Countries with high growth rates are Luxembourg (+37.8%), Bulgaria (+35.4%) and Portugal (+31.9%), but also notably large markets such as France (+22.1%) and Italy (+21.0%). On the other hand, Spain (-12.0%) and Latvia (-0.2%) experienced a contraction. [24]

[24] The decrease in life premium in Spain follows a remarkable growth during 2023 (above 30%), mainly driven by the notable growth in the interest rate that favoured the underwriting of saving insurance. Overall, the Spanish life market experienced a growth above 20% from 2022.

Figure 2.1: Total Life and Non-Life GWP growth from 2023 to 2024 (in %, year-on-year)

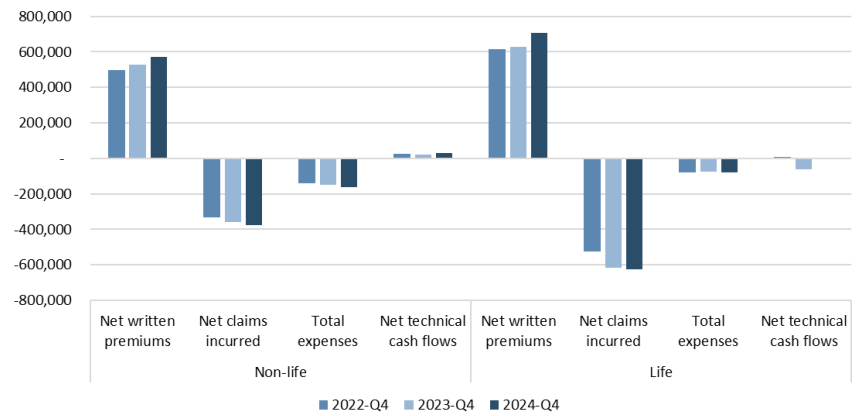


Source: EIOPA Quarterly Reporting Solo. Note: EEA weighted average. Growth rates are computed by weighting the GWP per reporting currencies. Year-on-year *change computed on undertakings reporting in both reference dates.*

In 2024, non-life technical cashflows (i.e., GWP minus claims and expenses) remained positive like in the previous two years. Insurers managed adjusting their premiums accordingly to the escalating cost of claims and expenses driven by inflation, in particular for non-life and health insurers. Claims continued to increase during 2024, however their growth was more moderate compared to previous years due to inflation developments (Figure 2.2).

In 2024, life technical cashflows recovered from the negative value observed in the previous year. Indeed, from 2022 to 2023 claims (including surrenders) increased and surpassed premiums which remained stable. Whereas, in 2024 premiums rebounded and experienced a notable growth that could be attributed to a resurgence in demand for insurance products, which had been stagnant in recent years, heightened by higher saving ratios[25]. During the period of rising interest rates in 2022-23, the credited rate on life insurers' guaranteed savings products, based on historical asset portfolios, became less competitive compared to prevailing market rates. However, with the stabilization of interest rates in 2024 and bonuses on credited rates granted by life insurers, insurance investment products regain their attractiveness.

Figure 2.2: Premiums, claims and expenses (in mil. EUR) split by life and non-life business (mil. EUR)

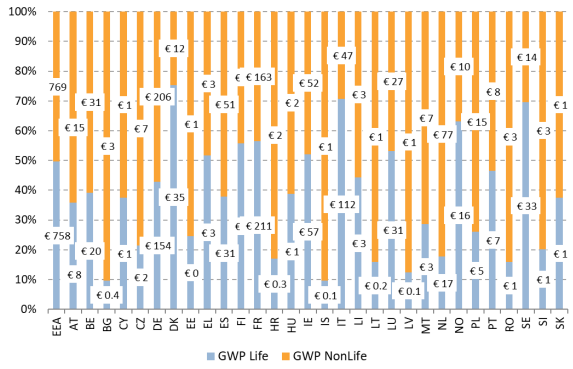


Source: EIOPA Quarterly Reporting Solo.

[25] See December 2024 EIOPA Financial Stability Report.

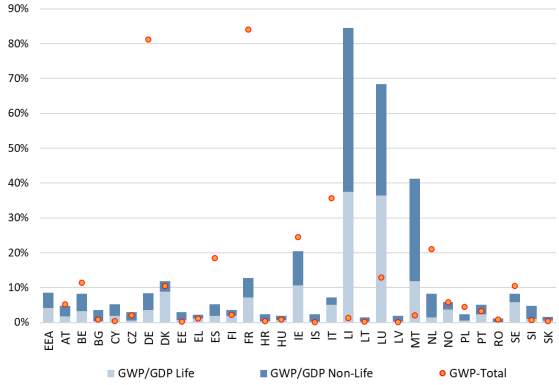
EEA GWP as a percentage of total GDP remained stable at 8.5% in 2024. This was driven by a 10.9% growth in GWP partially compensated by the 5.9% increase in nominal GDP. The composition of non-life and life GWP at EEA level is balanced at 50%, but that there is considerable variation across countries (Fig. 2.3). Fig. 2.4 shows the non-life and life GWP shares to GDP per countries; Germany and France are the largest countries by GWP, while Ireland, Lichtenstein, Luxembourg and Malta stand out in terms of insurance premiums relative to the GDP, which highlights their role as financial centres.

Figure 2.3: GWP Non-life as a share of total GWP (in %) and GWP Life as a share of total GWP (in %), and in EUR bn. in 2024



Source: EIOPA Quarterly Reporting Solo.

Figure: 2.4: GWP life and non-life as a share of GDP (in %) (LHS) and total GWP (in EUR bill.) (RHS) by country in Q4 2024

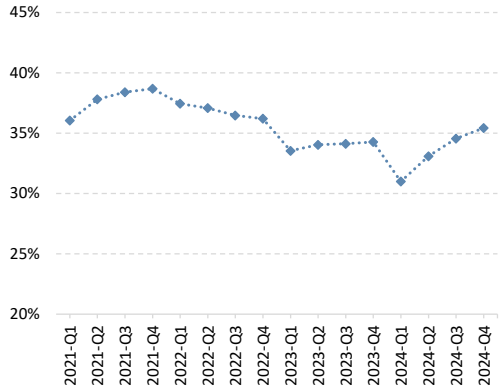


Source: EIOPA Quarterly Reporting Solo and Eurostat.
Note: Figure for EEA weighted average.

In 2024, the downward trend that characterised the unit-linked business since the beginning of 2022 inverted. EEA unit-linked GWP as a percentage of total EEA life increased throughout 2024, reaching 35.4% at the end of the year (Fig. 2.5). This EEA aggregate figure was driven by a few large undertakings with high share of unit-linked products (Fig. 2.7). Indeed, the median share of unit-linked premiums in GWP for life business remained stable at 33.7% at the end of 2024 (Fig. 2.6). This development could be driven by the potential inflation hedge and higher returns offered by these types of products compared to traditional insurance businesses. It remains to be seen whether the upward trend will persist, or reverse given the concerns about the real returns of these products due to costs, and their impact on consumer confidence and protection. [26]

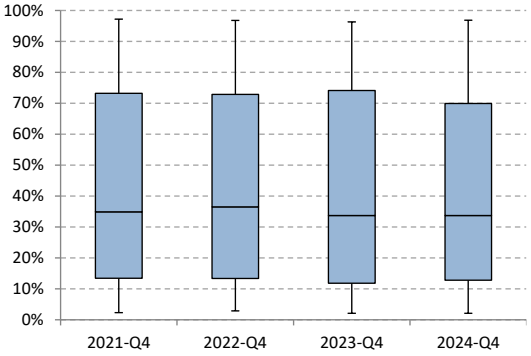
[26] See EIOPA Consumer Trends Report 2024 at: https://www.eiopa.europa.eu/publications/consumer-trends-report-2024_en

Figure 2.5: GWP-Life business: Unit-linked share development over time (% UL in GWP life)



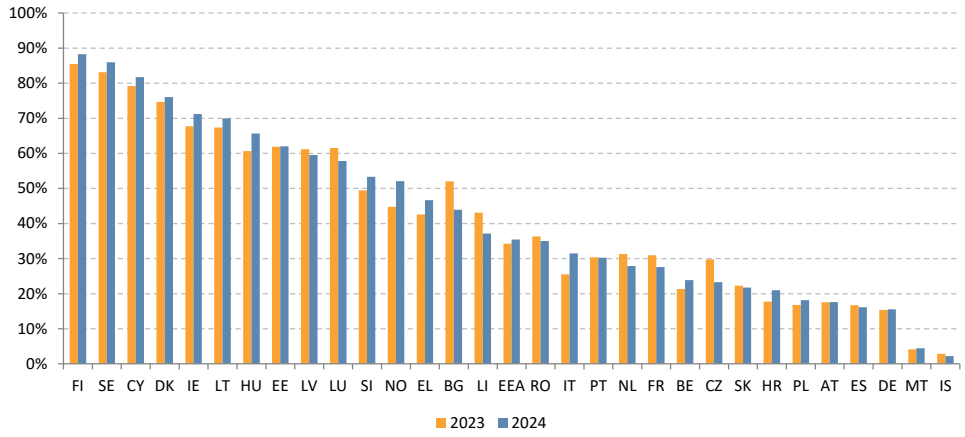
Source: EIOPA Quarterly Reporting Solo.

Figure 2.6: Unit-linked as a share of GWP-Life business (in %; median, interquartile range and 10th and 90th percentile)



Source: EIOPA Quarterly Reporting Solo. Note: The sample includes only insurance companies which have reported unit-linked business (life and life part of composite insurance companies).

Figure 2.7: Unit-linked as share of GWP-Life business across countries (in %)



Source: EIOPA Quarterly Reporting Solo. Note: Please note that undertakings without unit-linked business are excluded

2.2 LIQUIDITY

Insurers' liquid assets ratios remained solid and stable throughout the years but do vary considerably across EEA countries (Fig. 2.8). The weighted median value at the end of 2024 was around 51.3% (Fig. 2.9). For insurers in Iceland, Liechtenstein and Cyprus, the median liquid asset ratio is considerably below the EEA median. In terms of liquidity of the liability portfolios for the mentioned members, while 99% of total Best Estimate Liabilities (BEL) in Liechtenstein are not exposed to lapse risk, the corresponding share in Cyprus is approximately 37%. Meanwhile, exposure to BEL without surrender or cancellation options remains very limited in both countries, at below 3%.[27]

[27] Based on 2019 report: Report on insurers' asset and liability management in relation to the illiquidity of their liabilities. For future analysis, results could be completed with more updated information on the liquidity of the liability portfolios.

Figure 2.8: Liquid assets ratio (in %; median, interquartile range and 10th and 90th percentile)

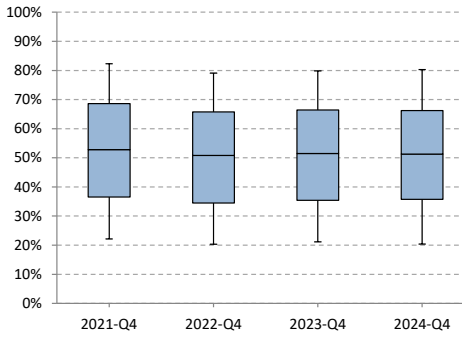
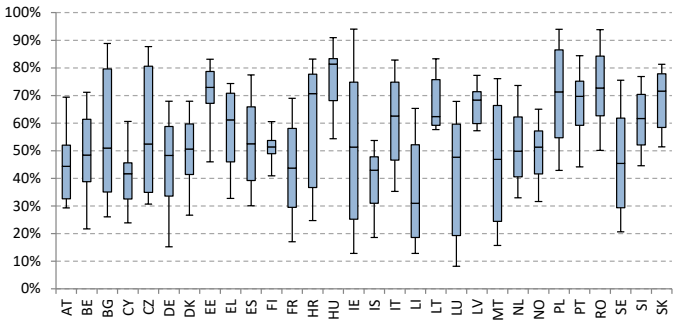


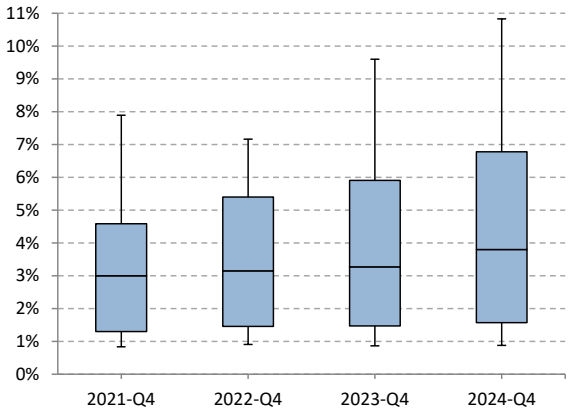
Figure 2.9: Liquid assets ratio by country (in %; median, interquartile range and 10th and 90th percentile)



Source: EIOPA Quarterly Reporting Solo. Note: The liquid assets ratio shows the proportion of liquid assets to total assets (excluding assets held for unit-linked contracts). The ratio is calculated by applying different weights (ranging from 100% for cash to 0% for intangible assets) to different assets according to their liquidity profile. The methodology has been reviewed to align with the enhancement of the liquidity risks category in the latest EIOPA Risk Dashboard (February 2024). Distributions from Figure 2.8 are weighted by total assets.

During the last three years, lapse rates in the life business increased (Fig. 2.10). The median lapse rate increased to 3.8% in 2024 (compared to 3.3% in 2023). But most strikingly, the upper tail of the distribution shifted upwards reaching 10.8% (9.6% in 2023). The increased short-term interest rates intended to curb inflation, may have incentivized policyholders to surrender their insurance savings contracts and switch to other forms of shorter term and more profitable investments offered by the high interest rate environment.

Figure 2.10: Lapse rates (in %)



Source: EIOPA Quarterly Financial Groups.

2.3 PROFITABILITY

Insurers profitability improved throughout 2024 due to the strong returns gained on investment. Insurers' returns increased during 2024 amidst the current macroeconomic environment characterised by higher interest rates. The median return on assets (ROA) moved upwards to 0.7% from 0.6% in the previous year. Also, the median return on excess of assets over liabilities (a proxy for return on equity)

increased to 9.3% from 8.0% (Fig. 2.11 and 2.12). Likewise, the upper tails of the distributions shifted upwards. Investment returns remain strong but looking ahead, market corrections can be generated by the indirect impacts from geopolitical risks and trade fragmentation.

Figure 2.11: Return on Assets (in %; median, interquartile range and 10th and 90th percentile)

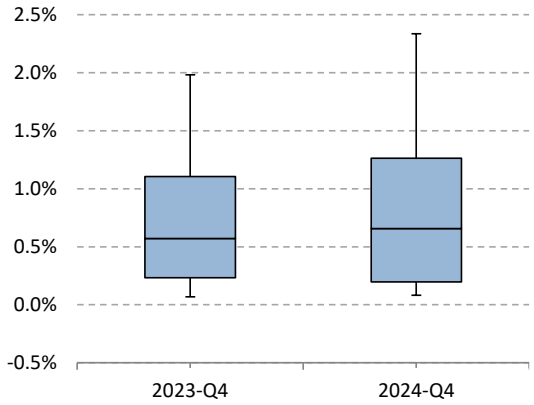
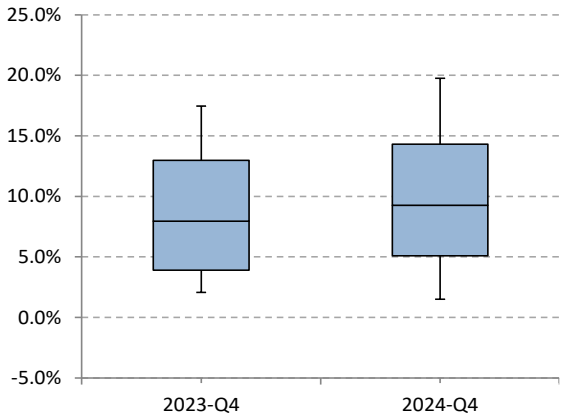


Figure 2.12: Return on Excess of Assets over Liabilities (in %; median, interquartile range and 10th and 90th percentile)



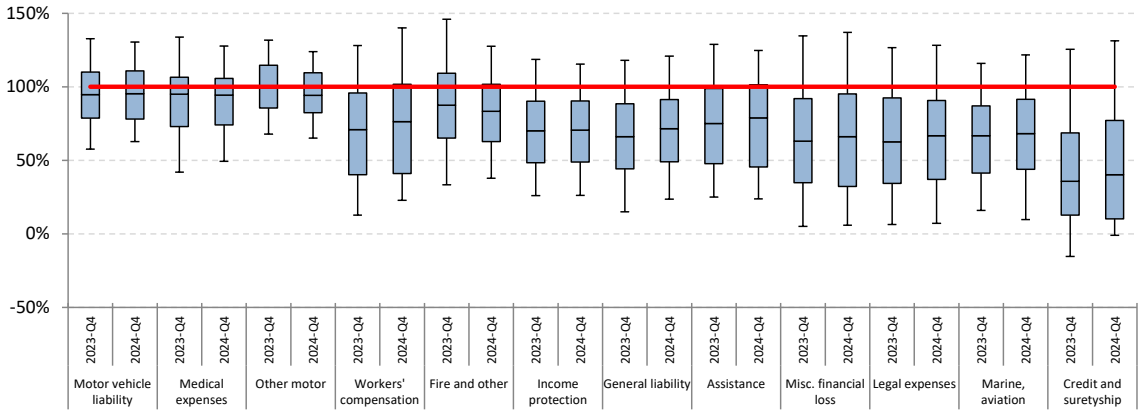
Source: EIOPA Quarterly Financial Groups (Templates S.39.01.11 and S.02.01.02).

Non-life business underwriting profitability remained overall stable in 2024. The median gross combined ratio for non-life business remained below 100% for all lines of business indicating that most EEA insurers generated positive underwriting results (Fig. 2.13). While premiums, at aggregate level, increased at a higher rate than claims in 2024, developments at the line of business and undertaking level may vary.

A heterogeneous trend on underwriting profitability is observed across different lines of business. The underwriting profitability measured via the combined ratio deteriorated for a number of lines of business: general liability +5.5 p.p., credit and suretyship +4.5 p.p. and legal expenses +4.2 p.p. On the other hand, the underwriting profitability of other motor and fire and other improved with the combined ratio decreasing by -5.1% p.p. and -4.2% p.p., respectively.

The direct impact of negative evolutions in geopolitical landscape and global trade is expected to be higher on non-life and health business. The profitability of these business lines more exposed to price inflation, such as non-life and health might be challenged due to higher than expected claims inflation which cannot be compensated by increase in premiums amid competitive dynamics and past increases. Specific business lines linked to trades such as marine/ aviation/ transport / trade and suretyship might also face challenges.

Figure 2.13: Gross Combined Ratio across lines of business (in %; median, interquartile range and 10th and 90th percentile)

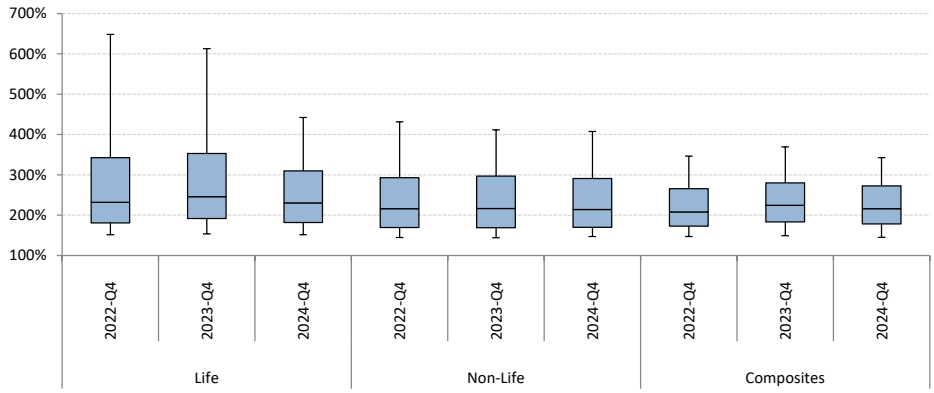


Source: EIOPA Quarterly Reporting Solo

2.4 SOLVENCY

Life, non-life and reinsurance undertakings maintained solid capital buffers in 2024 (Fig. 2.14), despite lower ratios compared to end-2023. The median SCR ratio for life insurers decreased after the upward trend experienced in the last years and it is standing at 230% at year-end 2024 (246% in Q4 2023). This development is mainly driven by a slight decline in interest rates during 2024. The median SCR ratio for composite and non-life undertakings also declined, albeit to a lesser extent, to 216% and 214%, respectively (while it was 225% and 217%, respectively, in the previous year).

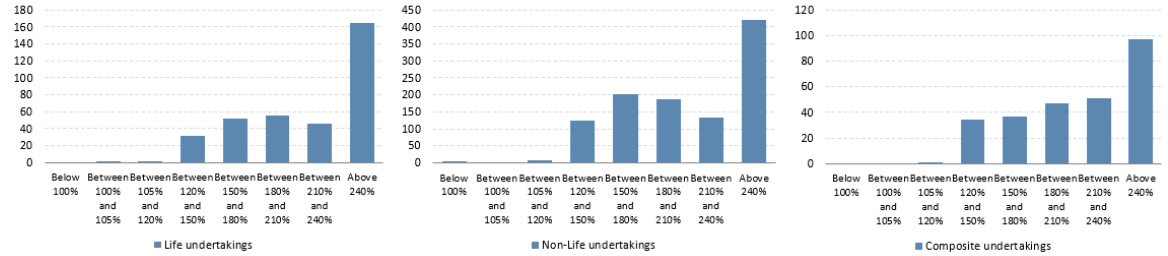
Figure 2.14: SCR ratio (in %; median, interquartile range and 10th and 90th percentile)



Source: EIOPA Quarterly Reporting Solo

In 2024, there is only one non-life undertaking with SCR ratio below 100%, as in 2023. Likewise, the number of life undertakings with SCR ratios between 100% and 105% remained stable at one.

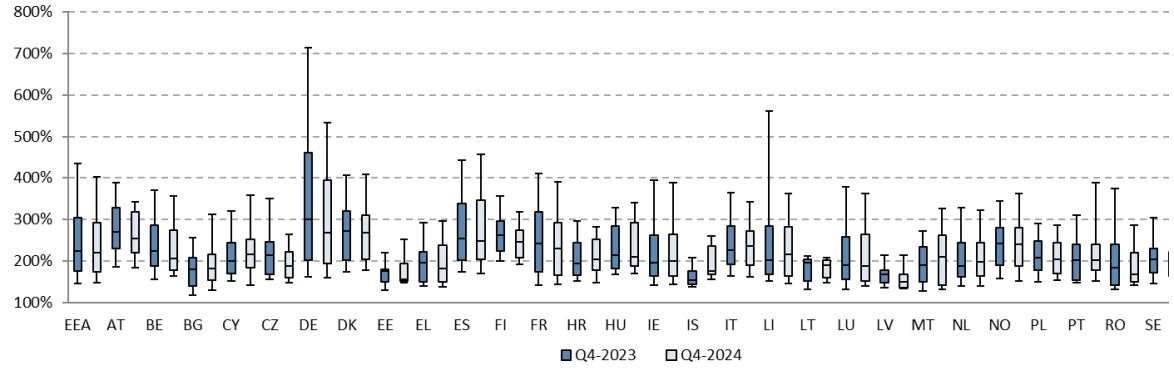
Figure 2.15: Frequencies of SCR ratios for solo undertakings as of end 2024 by type of undertaking



Source: EIOPA Quarterly Reporting Solo

The capitalization of insurers across Member states remained heterogeneous. The median SCR ratio for EEA insurers on aggregate remained solid in 2024 (Fig. 2.16), however, significant differences were observed across Member States, e.g.: Germany (-31.9 pp)[28], Czech Republic (-27.0 pp) and Estonia (-19.4 pp) experienced the largest decreases compared to the previous year.

Figure 2.16: SCR ratio by country (in %; median, interquartile range and 10th and 90th percentile)



Source: EIOPA Quarterly Reporting Solo

[28] The reduction of the SCR ratio in Germany is mainly driven by a recalculation. In the current interest rate environment, the level of the transitional on technical provisions was no longer appropriate. As a result, life insurers in Germany had to recalculate the transitional. The recalculation led to lower SCR ratios. Further information at: https://www.bafin.de/ref/19751826

3 THE EUROPEAN REINSURANCE SECTOR

EEA reinsurers broadly performed well in 2024.

The key messages include:

- *EEA reinsurers' balance sheets were strengthened by high investment returns and underwriting profitability, and the solvency positions improved, with a median solvency ratio increasing from 223% to 235%.*
- *During the last two years, the sector benefited from hardening market conditions[29], a situation where reinsurers have more bargaining power, allowing them to increase premiums, tighten terms or reduce coverage.*
- *Non-life reinsurance premiums in the EEA continued to grow, with a significant increase in property and motor-related lines.*
- *Life and health reinsurance segments also witnessed growth in premiums after declining in 2023.*

Market conditions have softened in January 2025 renewals, with lower pricing and more accommodative terms and conditions for cedants. The impact of the trade barriers should be carefully assessed for reinsurers underwriting globally and with assets and liabilities exposures in multiple currencies.

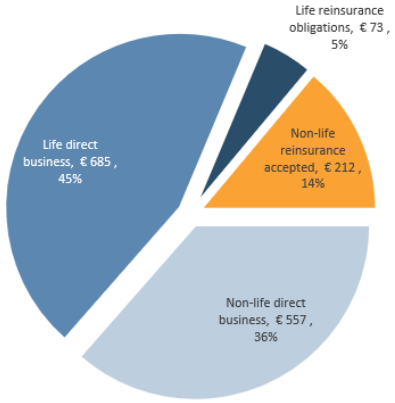
3.1 MARKET SHARE AND GROWTH

Non-life reinsurance premiums in the EEA continued to grow in 2024 (Fig. 3.1 & 3.2). The premiums grew by a higher rate than for the direct business, possibly indicating a growing demand for reinsurance and increasing cost of coverage. Just under half of the increase in reinsurance premiums comes from property-related lines, while motor related lines account for around a third of the increase. For each of these lines of business, the percentage increase was in double digits (Fig. 3.3 & 3.4).

Life and health reinsurance segments witnessed growth in premiums in 2024, after having declined in 2023 (Fig. 3.1 & 3.2). The growth of reinsurance premiums is buoyed by double-digit growth in life direct premiums, indicative of higher demand in the life insurance segment. Large increase in life reinsurance premiums is attributed to at least one material intra-group transaction and is not representative of the trends in the broader market.

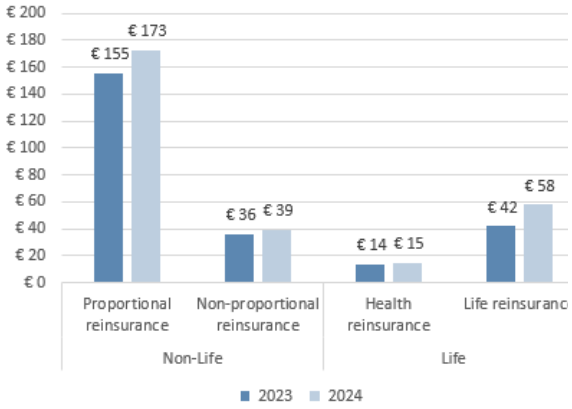
[29] This is often driven by factors such as increased demand for reinsurance, higher claims frequencies or severities, and reduced capacity in the market. As a result, reinsurers can be more selective about the risks they take on and charge higher prices for their coverage.

Figure 3.1: Gross Written Premiums in the EEA in 2024 (in EUR bn and %)



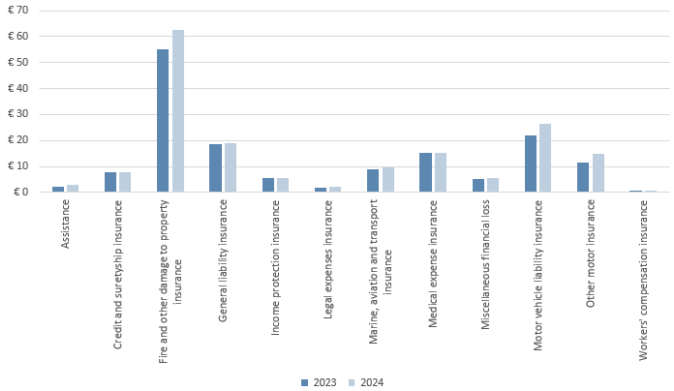
Source: EIOPA Quarterly Solo.
Reference date: Q4 2024.

Figure 3.2: Reinsurance Gross Written Premiums in the EEA in 2023 and 2024 (in EUR bn)



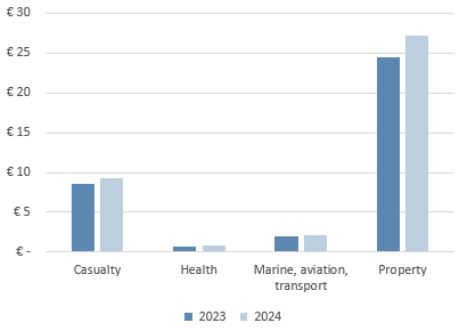
Source: EIOPA Quarterly Solo.
Reference date: Q4 2024.

Figure 3.3: Gross Written Premiums for non-life proportional reinsurance by line of business (in EUR bn.)



Source: EIOPA Quarterly Solo.
Reference date: Q4 2024.

Figure 3.4: Gross Written Premiums for non-life non-proportional reinsurance by line of business (in EUR bn.)



Source: EIOPA Quarterly Solo.
Reference date: Q4 2024.

EEA reinsurers' balance sheets have been strengthened by a combination of high investment returns and underwriting profitability in 2024. The aggregate balance sheet size, as indicated by total assets, increased by around EUR 42 bn (5%). The excess of assets over liabilities grew by nearly EUR 7 bn (1.8%).

Estimates for global reinsurance capital indicate an increase of 5.4% to USD 769 bn (EUR 740.2 bn) in 2024[30]. The increase is likely driven by strong retained earnings. Likewise, strong returns in the cat bonds market and reinsurance sidecars[31] contributed to record levels of alternative capital deployed during the same period. This amounted to USD 114 bn (EUR 109.7 bn). Capital deployed via cat bonds,

[30] Reinsurance Market Report

[31] Reinsurers' sidecars are alternative capital vehicles that allow investors to participate in the risk and returns of reinsurance business. They are used by reinsurers to raise additional capital and to transfer risk to capital markets investors. Sidecars are often used to provide additional capacity for specific types of risks, such as natural disasters, and can help reinsurers to manage their risk exposure and increase their underwriting capacity.

as of year-end 2024, was around USD 47bn (EUR 45.2 bn). Reports on January 2025 renewals suggest that the market conditions have softened (i.e., lower pricing and/or more accommodative terms and conditions for cedants) after hardening over recent years[32].

3.2 PROFITABILITY

The profitability indicators for EEA reinsurers have generally improved in 2024. The distribution of combined ratios for accepted proportional reinsurance did not change significantly since 2023 - the median combined ratio increased marginally from 87.3% to 88.8%, reflecting stable profitability for this part of the business (Fig. 3.5). The ratios at either ends of the distribution (10th and 90th percentiles) have declined.

Table 3.1: Gross Earned Premium and Claims incurred per line of business for EEA reinsurance undertakings

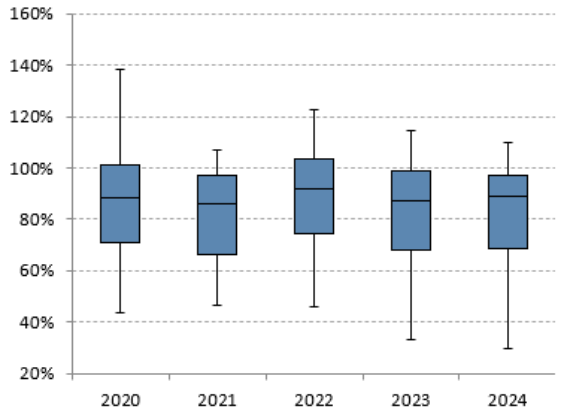
Line of business	2023		2024	
	Gross earned premium	Gross claims incurred	Gross earned premium	Gross claims incurred
	€ bn	*€ bn*	*€ bn*	*€ bn*
Assistance	0.4	0.2	0.4	0.3
Credit and suretyship insurance	5.8	2.8	5.8	2.7
Fire and other damage to property insurance	41.4	27.1	46.4	28.3
General liability insurance	13.9	9.9	13.6	9.5
Income protection insurance	2.5	1.5	2.4	1.1
Legal expenses insurance	0.6	0.3	0.9	0.4
Marine, aviation and transport insurance	5.9	3.9	6.1	4.5
Medical expense insurance	3.8	2.9	3.5	3.3
Miscellaneous financial loss	3.5	1.7	2.8	1.9
Motor vehicle liability insurance	18.5	15.2	21.9	17.0
Other motor insurance	9.8	7.5	12.0	8.8
Workers' compensation insurance	0.5	0.4	0.7	0.5
Proportional Reinsurance - total	**106.6**	**73.5**	**116.5**	**78.3**
Casualty	6.8	5.6	7.4	6.3
Health	0.6	0.2	0.7	0.3
Marine, aviation, transport	1.7	1.0	1.7	1.6
Property	20.1	13.0	22.6	12.4
Non-Proportional Reinsurance - total	**29.1**	**19.8**	**32.4**	**20.6**
Non-Life - total	**135.7**	**93.4**	**148.8**	**98.9**
Health reinsurance	11.5	8.8	12.2	9.6
Life reinsurance	27.4	22.7	29.8	24.7
Life - total	**38.9**	**31.5**	**42.0**	**34.3**
Total	**174.6**	**124.8**	**190.8**	**133.2**

Source: EIOPA Quarterly Solo (reinsurance undertakings)
Reference date: Q4 2023 and Q4 2024.

The declines in combined ratio for non-proportional business are more material. Both median and 90th percentile ratios declined significantly, while the inter-quartile range remained almost the same. Same dispersion around a lower median suggests that the combined ratios for individual undertakings have generally decreased. For non-proportional reinsurance, the median combined ratio declined materially from 79.3% to 69% (Fig. 3.6). The improved profitability in property and motor-related lines is evident in the higher increases in earned premium than those in incurred claims (Table 3.1). As alluded to above, these same lines also drive the lion's share of increase in written premiums. As such, the reinsurers appear to be in a sweet spot with a simultaneous increase in premiums, possibly due to greater demand for such reinsurance, and underwriting profitability.

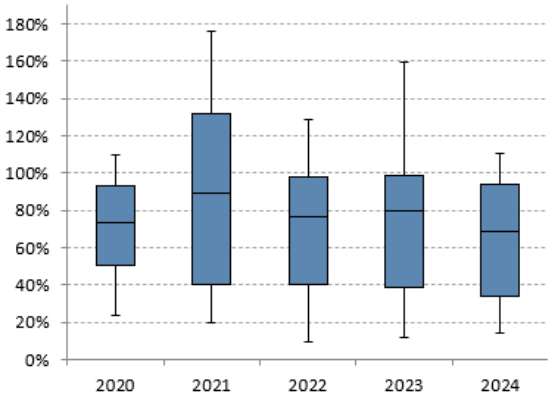
[32] Best's Commentary: Capacity Grows at January 1 Reinsurance Renewals, but Underwriting Discipline Remains

Figure 3.5: Gross Combined Ratio for non-life accepted proportional reinsurance of EEA reinsurance undertakings (in %; median, interquartile range and 10th and 90th percentile)



Source: EIOPA Quarterly Solo.
Reference date: Q4 2024.

Figure 3.6: Gross Combined Ratio for accepted non-proportional reinsurance of EEA reinsurance undertakings (in %; median, interquartile range and 10th and 90th percentile)



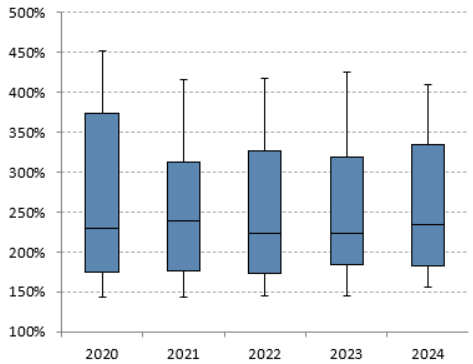
Source: EIOPA Quarterly Solo.
Reference date: Q4 2024.

As for direct insurance undertakings, the profitability of reinsurers active in business lines as Marine aviation and transport, and Credit and suretyship can be challenged by potential trade disruptions.

3.3 SOLVENCY

The solvency positions of EEA reinsurers have improved in 2024 after remaining stable in 2023. The median solvency ratio increased from 223% to 235% at end of 2024 (Fig. 3.7). The distribution suggests that the solvency ratio for most reinsurance undertakings has increased. This is not unexpected due to higher investments values and profitability of reinsurance business in 2024.

Figure 3.7: Solvency ratio of EEA reinsurance undertakings (in %; median, interquartile range and 10th and 90th percentile)



Source: EIOPA Quarterly Solo. Reference date: Q4 2024.

4 THE EUROPEAN OCCUPATIONAL PENSION SECTOR

The EEA European sector for occupational pensions stayed resilient, although experiencing a dynamic interest rate environment. The main developments are:

- *IORPs in the EEA saw a slight improvement in their financial position, with assets increasing at a faster rate than liabilities.*
- *Asset growth was driven by equities and bond revaluations. Liabilities' growth resulted from several shocks and their different impact on DB and DC.*
- *The asset allocation of IORPs was overall stable.*

Looking ahead:

- *The ongoing transition from DB to DC schemes in the Netherlands is expected to have potential implications for investment strategies and risk management approaches, which, despite being gradual and well-announced, require thorough evaluation.*
- *The sector is exposed to equity instruments, also in foreign currencies. The implications of the market turmoil observed in Q2 2025 on the funding ratio and on the liquidity position of IORPs require attention.*
- *The ageing population and longevity risks still threaten the financial sustainability of pension systems, with women more exposed. A strong three-pillar system can reduce pension gaps and support the Capital Markets Union (CMU) by increasing investment through pension savings.*

4.1 FINANCIAL POSITION AND SIGNIFICANCE OF THE PENSION SECTOR[33]

IORPs' total assets grew by EUR 190 bn in 2024. The growth from EUR 2,675 bn to EUR 2,864 bn in Q4 2024 compared to Q4 2023 was mainly driven by the valuation of equities, resulting in a 17% increase in equity amounts. Bonds valuations also increased, with corporate bonds growing by 9% and government bonds by 8% (Fig. 4.1). In terms of shares of total assets, the split by asset categories remained stable.[34]

Liabilities also increased in the 2024 Q4 compared to the previous year, from EUR 2,301 bn to EUR 2,445 bn. For IORPs offering DC pension schemes, the value of their total liabilities increased by roughly 10%. The liabilities of DB IORPs increased even more, by ca. 20%, because of several reasons, e.g.: liabilities' indexation to inflation, interest rates developments to which some markets are more sensitive due to their remarked negative duration, variation in volumes[35] and regulatory changes in some Member States. On the other hand, those DB IORPs valuing their technical provisions using a

[33] Calculated as the ratio of assets over technical provisions.
[34] IORP quarterly reporting includes exemptions and therefore the figures shown might not provide the overview of the full market.
[35] Detailed statistics for IORPs Members will be available with the 2024 Annual Reporting.

fixed interest rate or which value their technical provisions only annually (or less frequently)[36] did not report a significant change in their liabilities (Figure 4.2).

Figure 4.1 Breakdown of total assets (in bn EUR)

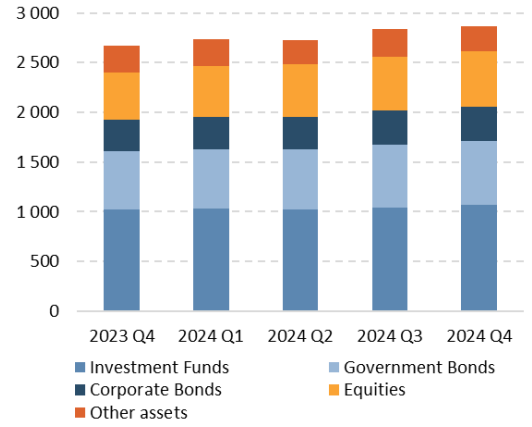
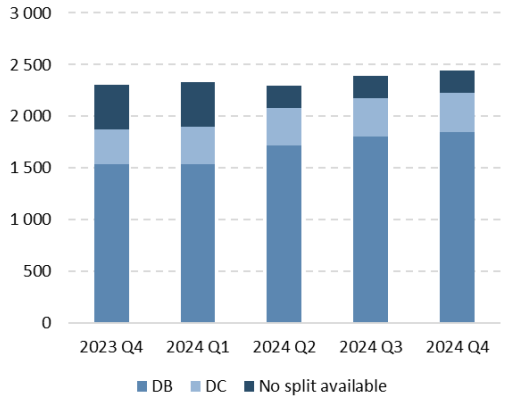


Figure 4.2 Breakdown of total liabilities by type of pension scheme (in bn EUR)[37]



Source: EIOPA Occupational Pensions Statistics – Balance Sheet, quarterly.

The funding ratio of IORPs in the EEA slightly improved with respect to Q4 2023 (Fig. 4.3 and 4.4), moving from 119 % to 120% due to the higher increase in assets with respect to the increase in liabilities at the end of 2024 driven by the reserve components. With the exception Sweden and Finland, Member States hoover around a level of 113% of funding ratio.

Figure 4.3 Regulatory own funds and reserves (in bn EUR).

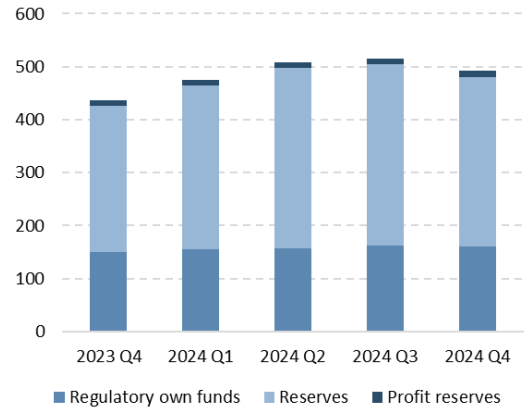
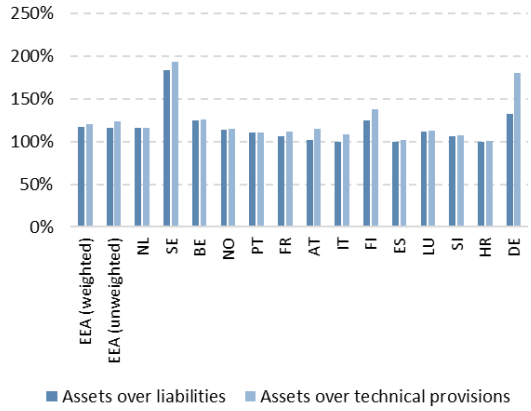


Figure 4.4 Funding ratios by EEA Member State (DB schemes).



Source: EIOPA Occupational Pensions Statistics – Balance Sheet, quarterly. Reference date: Q4 2024.
Note on Figure 4.4: The weighting is based on total assets. In the case of Italy, due to discontinuation of many DB schemes, the data on technical provisions reported to EIOPA are set as equal to the assets held. Please note that the overall share of DB schemes in Italy is only around 1.96% of total assets.

The pensions sector exhibits significant variation across Member States. Although the framework consisting of three Pillars is common to all (with Pillar I is a government-provided old age pension, Pillar II

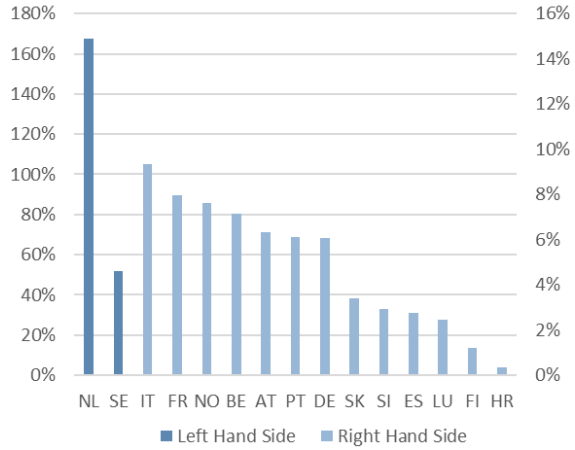
[36] For the latter category, the annual calculation of the technical provisions takes place in the first few months of the year. This means that the reported technical provisions will often be based on calculations from early 2024.

[37] In Q2 2024 there was a recategorization of the statistic "no split available" which explain most of the increase in DB schemes.

an occupational pension, and Pillar III an individual pension), the way these pillars complement each other and the relative importance of each pillar differs from one Member State to another.

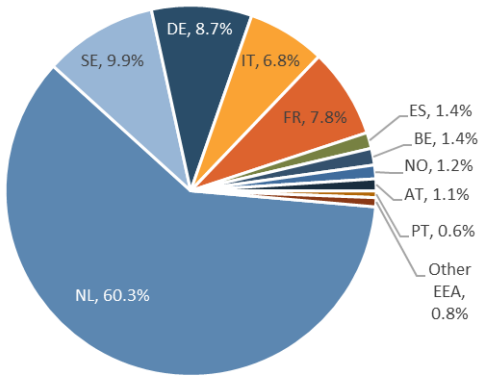
The structure of the European IORPs sector is highly heterogeneous across Member States. Looking at the penetration rate (Fig. 4.5), indicating the importance of IORPs in a Member State, defined as IORPs total assets over the GDP, in the Netherlands it is nearly 167%, while for the other markets, it is much lower (Sweden 51.6%, Italy 9.3%, and Norway 7.6%). Fig. 4.6 shows that more than 60% of all EEA IORP assets are held by Dutch entities, followed by Sweden (9.9%), Germany (8.7%) and Italy (6.8%).

Figure 4.5 Penetration rates by EEA Member State



Source: EIOPA Occupational Pensions Statistics – Balance Sheet, quarterly. Reference date: Q4 2024. Penetration rate is calculated as the ratio between total assets and the country GDP.

Figure 4.6 Relative size of the IORP sector

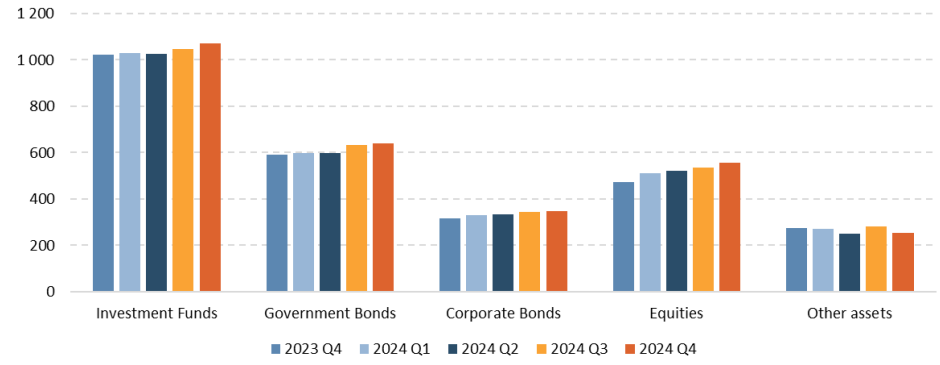


Source: EIOPA Occupational Pensions Statistics – Balance Sheet, quarterly. Reference date: Q4 2024 Relative size is determined as the ratio of total assets in the Member State to EEA total assets.

4.2 ASSET ALLOCATION OF IORPS

The asset allocation of IORPs was stable overall, with minor adjustments. Government bonds allocation increased (from 22.1% to 22.3%), both in absolute and relative terms, possibly due to bond purchases and higher market valuation, driven, among other drivers, also by lower interest rates. On the other hand, the share of investment funds in IORPs portfolios increased in absolute terms exceeding EUR 1 trillion (Fig. 4.7), while its share on total assets mildly decreased from 38.2% at year-end 2023 to 37.4% at the end of 2024 (Fig. 4.8).

Figure 4.7 Allocation to asset categories (in bn euro)



Source: EIOPA Occupational Pensions Statistics – Balance Sheet, quarterly.

The IORPs asset allocation varies across national markets (Fig. 4.8). The allocation at the EEA level is mainly driven by the asset allocation of the Dutch IORP sector given its size. For what concerns the other biggest countries, IORPs in Germany allocate most of their assets via investment funds, whereas equity dominates Swedish IORPs. In nearly all Member States, the share of equities funds held via investment funds is around 30%, except for Germany with 13%, where IORPs mainly invest in debt funds and asset allocation funds within the investment funds category (Fig. 4.9).

Figure 4.8 Asset allocation by EEA Member State[38]

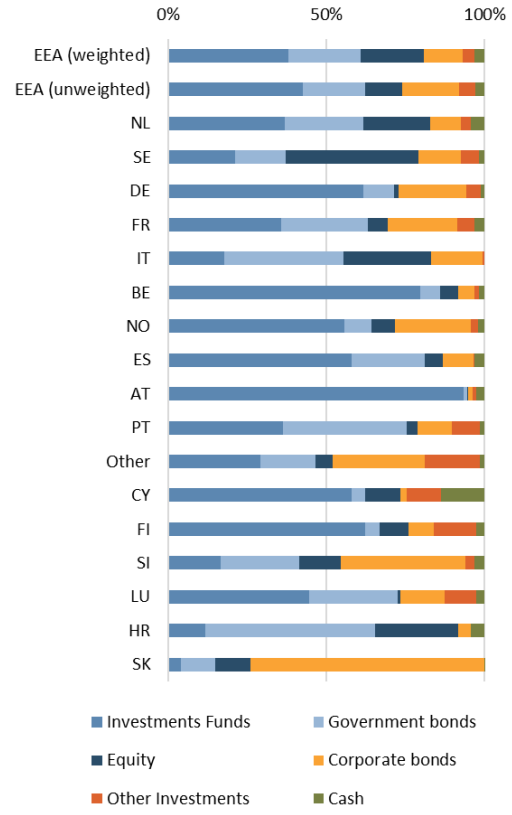
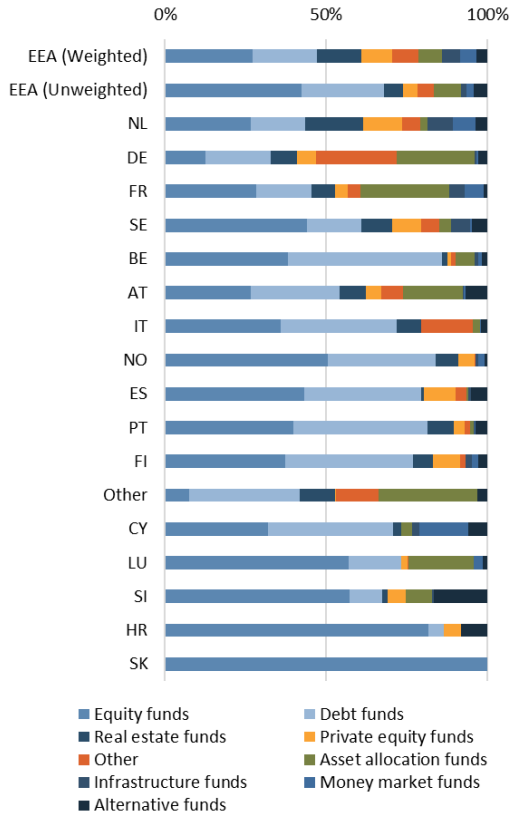


Figure 4.9 Investment funds: breakdown into subcategories by EEA Member State



Source: EIOPA Occupational Pensions Statistics - Asset Exposure, quarterly; Reference date: Q4 2024.

There are differences between the asset allocation of DB and DC IORPs. On a look-through basis bonds account for DB IORPs to 45.7% and for DC IORPs to 52.9%. For equities, the aggregate asset holding is around 32% (Fig. 4.10 and Fig. 4.11).

[38] For Italy, asset allocation refers only to the securities portfolio.

Figure 4.10: DB schemes: Asset allocation for investment funds by EEA Member State

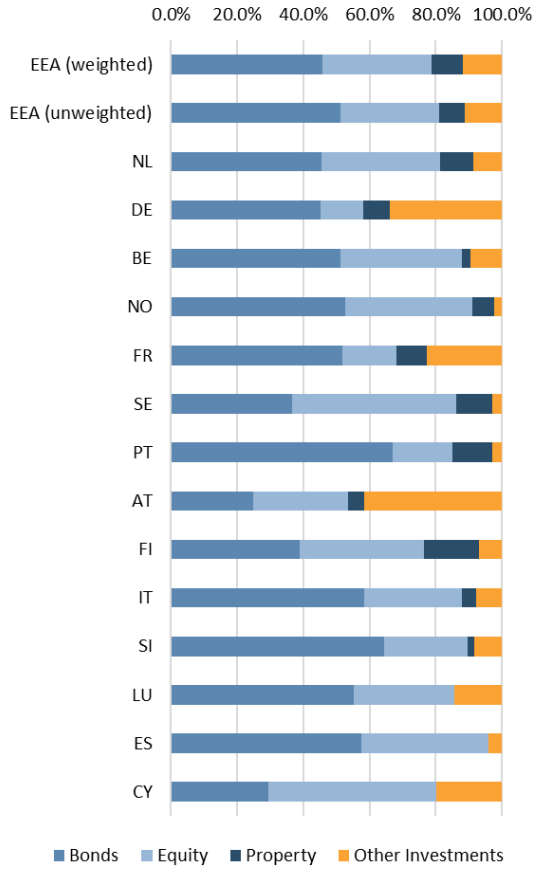


Figure 4.11: DC schemes: Asset allocation for investments by EEA Member State

Source: EIOPA Occupational Pensions Statistics - Asset Exposure, quarterly. Reference date: Q4 2024
Note: Bonds consist of government bonds, corporate bonds, mortgages and loans, debt funds and money market funds. Equity consists of direct equity, equity funds and private equity funds. Property consists of direct property, real estate funds and infrastructure funds and 'other' investments consists of direct other investments, asset allocation funds, alternative funds and other funds. The weighted data display figures relative to the Members State Total Asset allocation, while the unweighted line provides the plain figure per Member State.

4.3 MEMBERS AND BENEFICIARIES

At the end of 2023 IORPs in the EEA had nearly 35 million active members (i.e., persons currently accruing rights) as shown in Fig. 4.12. DB pension schemes accounted in the overall figure for slightly more than 9 million, while DC pension schemes represented 20 mil (no split is discernible for the remaining 6 million).

The number of deferred members (i.e., persons who had left service with an entitlement to future benefits) was more than 25 million (both split almost equally with 10 million each for DB pension schemes and DC schemes)[39]. The Netherlands, Italy, France, Germany, and Sweden are the top five EEA Member States in terms of active members and represent together roughly more than 80% of all active members in the EEA (Figure 4.13).

[39]In these figures double counting can occur. For example, a person can be registered as an active member at one IORP and a deferred member at another. Similarly, one person can be registered as a beneficiary at multiple IORPs.

Figure 4.12: Breakdown of IORP Members by pension scheme

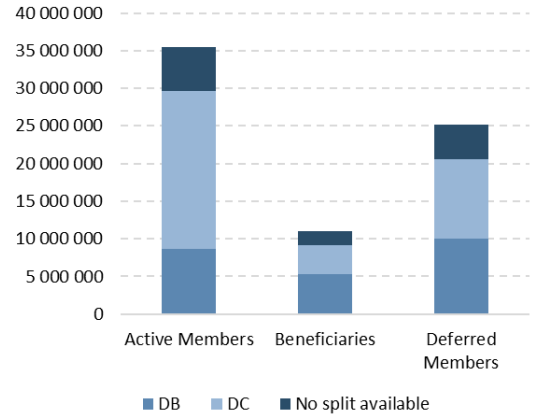
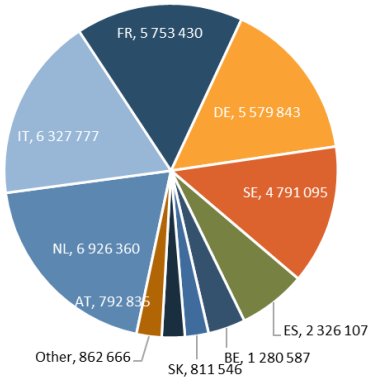


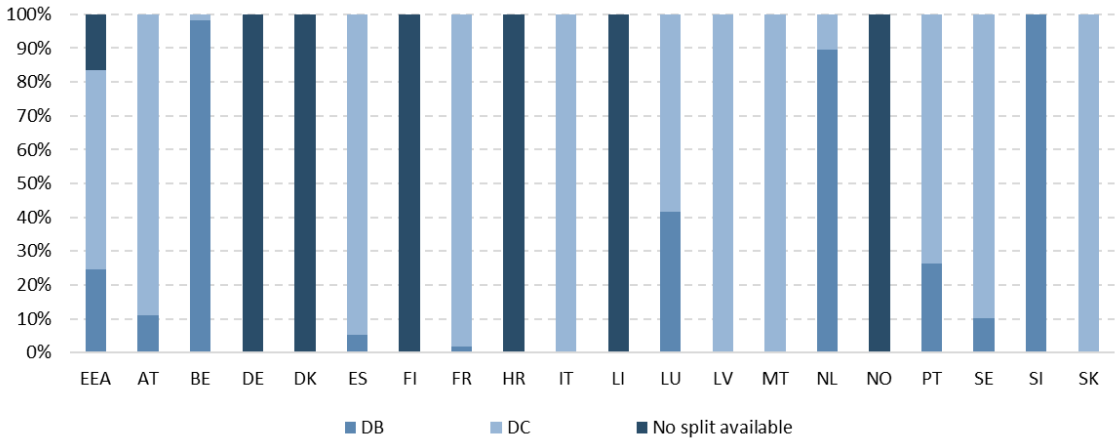
Figure 4.13: Active members



Source: EIOPA Occupational Pensions Statistics - Members.
Reference date: 2023.

The relative importance of DB and DC pension schemes varies widely across Member States. Whereas for example most active members of the Dutch IORPs are contributing to DB schemes, nearly all active members of the Italian IORPs are enrolled in DC pension schemes (Fig. 4.14).

Figure 4.14: Active IORP members by Member State, broken down by type of pension scheme



Source: EIOPA Occupational Pensions Statistics - Members. Reference date: 2023

5 RISK ASSESSMENT

The key highlights on risks and vulnerabilities for the European insurance and IORPs sectors are:

- *Geopolitical tensions and global trade uncertainty are driving macroeconomic risks, which remain a top concern for both insurers and IORPs, as highlighted in a recent survey of national competent authorities.*
- *Due to the nature of discussed tariffs (targeting goods not services) and the high interconnectedness across markets, indirect impact, more than direct ones, are a source of vulnerability to insurance and IORPs sector. Higher impact on non-life than life business is expected, possibly driven by higher cost of claims on imported goods.*
- *Insurers' portfolios are heavily weighted towards fixed-income assets, providing a shield against market valuation declines and credit spread increases, therefore equity and high-yield bond exposures remain vulnerabilities.*
- *Insurers face currency risk due to their material investments in corporate bonds and equities issued in the US, particularly if these positions are not hedged. Specifically, 13% of their corporate bond holdings and 25% of their equity holdings are issued by US companies.*
- *Hedging against interest rate and currency risk can lead to margin payments, which may either accumulate or offset each other, depending on how changes in interest rates and exchange rates correlate.*
- *The insurance and IORPs sectors have strong ties to banks through investments. The banking sector appears resilient, posing no major concerns so far.*
- *Exposures to real estate and alternative assets are being closely monitored for their liquidity in volatile markets.*

Data show that following the 2022 interest rate hike, which was characterised by weak trading activity, the sector has bounced back, with strong government bond buying in 2024.

5.1 RESULTS OF THE SPRING SURVEY AMONG NATIONAL COMPETENT AUTHORITIES

Macroeconomic risks remained the main concern for both insurers and IORPs (Fig. 5.1 and Fig. 5.2) according to the results of the spring qualitative survey of national supervisors. The main drivers of macro risks for both insurers and IORPs (47.2% and 23.5%, respectively) are rising geopolitical tensions and global trade uncertainty, which have heightened economic instability and introduced greater uncertainty around the outlook for economic growth (Fig. 5.3). The introduction of tariffs may lead to retaliatory actions, disrupt supply chains, and hence amplify inflationary pressures. Consequently, already high oil and gas prices, along with rising costs of essential goods, could further erode consumer purchasing power and in turn potentially reduce demand for insurance products.

Figure 5.1: Materiality of risks for the insurance sector

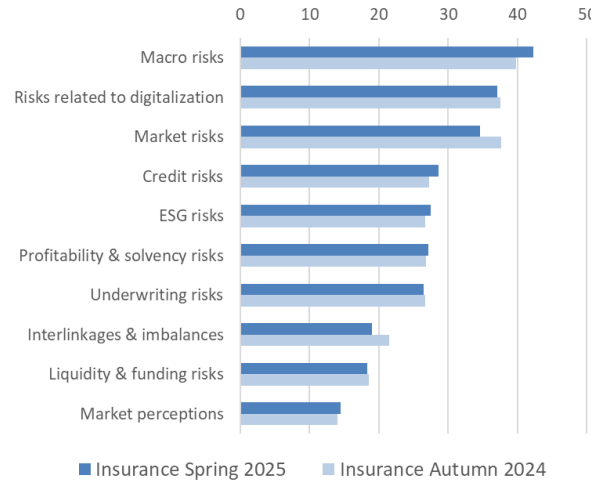
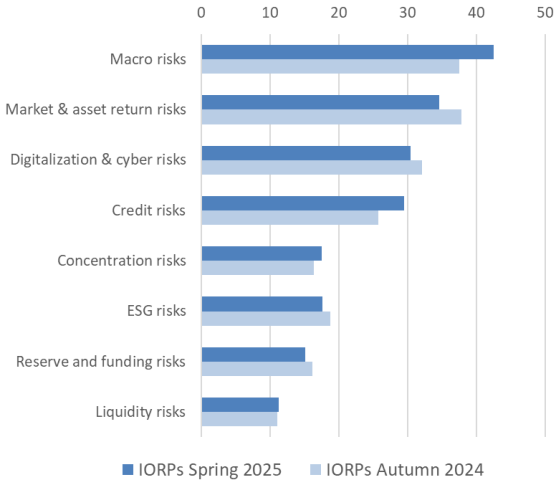


Figure 5.2: Materiality of risks for the IORP sector



Source: EIOPA Insurance and IORPs Bottom-Up Surveys Spring 2025 compared to Bottom-Up Surveys Autumn 2024. 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 probability times impact) of the average scores assigned to each risk. The results were subsequently normalised on a scale from 0 to 100. For Figure 5.2, "Interlinkages" and "Risk related to digitalization" have been replaced by "Concentration risks" and "Digitalization & cyber risks", respectively. "Market & asset return risks" combines past risk categories "Market risks" and "Profitability/portfolio performance" in line with the new EIOPA's IORP Risk Dashboard. The materiality of the new category for Autumn 2023 was computed as a simple average of the two above-mentioned risk categories.

Going forward, macro risks are expected to remain a key challenge for both insurers and IORPs (Fig. 5.6 and Fig. 5.7), with their extent depending on the evolution of the geopolitical tensions, on potential tariffs and the impact on financial markets and the European economy.

Risk related to digitalization shifted one place up becoming the 2nd key risk for insurers, ahead of market risks. Since 2022, the growing reliance on digitalization has heightened the sector's exposure to cyber threats. Recent geopolitical developments have further amplified these risks, particularly in the context of hybrid geopolitical conflicts. On the other hand, the implementation of DORA[40] is expected to strengthen resilience to cyber risks, although cyber incidents cannot be completely dismissed. As indicated by national supervisors, insurers are adapting their business to the digital environment with new technologies in the fields of underwriting, claims and operational management.

Market risks continue to rank among the key concerns for the insurance and IORP sectors. High valuation levels, especially in the US, and heightened market uncertainty are making equities and other riskier assets more vulnerable. For insurers and IORPs, equity risk was identified in the survey as the main driver of market risks (32.4% and 53.8% of the respondents, respectively). Additionally, interest rate risk continued to be a significant concern (29.4% and 23.1% of the respondents, respectively) due to interest rate volatility and the high exposure to fixed-income assets. According to respondents, some insurance undertakings have adjusted their investment strategies to reduce their exposure to financial market fluctuations.

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

Figure 5.3: Main drivers of macro risks for the insurance sector

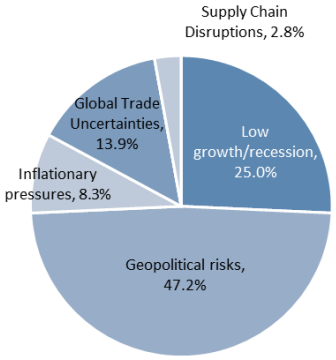


Figure 5.4: Main drivers of market risks for the insurance sector

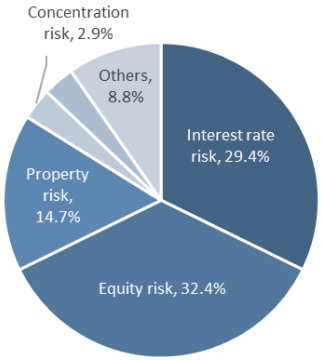
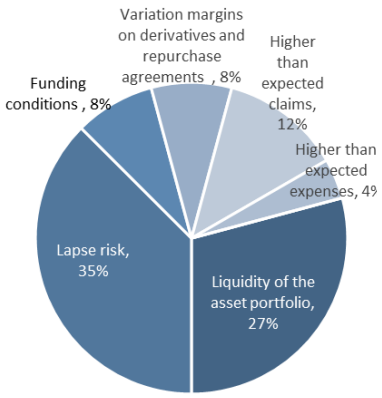


Figure 5.5: Main drivers of liquidity and funding risks for the insurance sector



Source: EIOPA Insurance Bottom-Up Surveys Spring 2025.
Note: Based on the responses received.

According to national supervisors, lapse rates remain the key concern of European insurers for liquidity and fundings risks (Fig. 5.5). Given the switch to the new macroeconomic regime, some insurers in the EEA have experienced an increase in lapse rates. However, as indicated by supervisors, insurers' liquidity positions remained strong and adequate to withstand the impact of additional surrenders.

Figure 5.6: Risks with the highest expected increase in their materiality over the next 12 months for the insurance sector

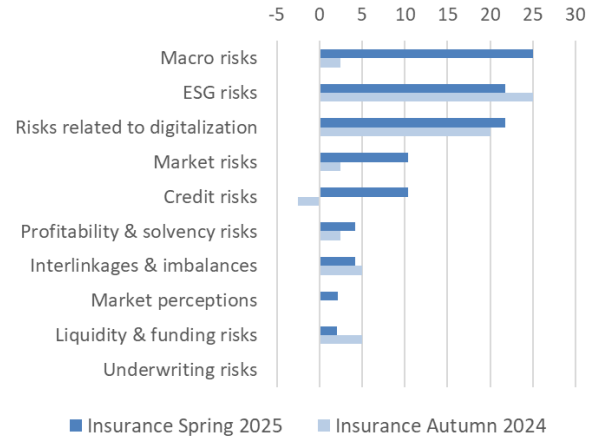
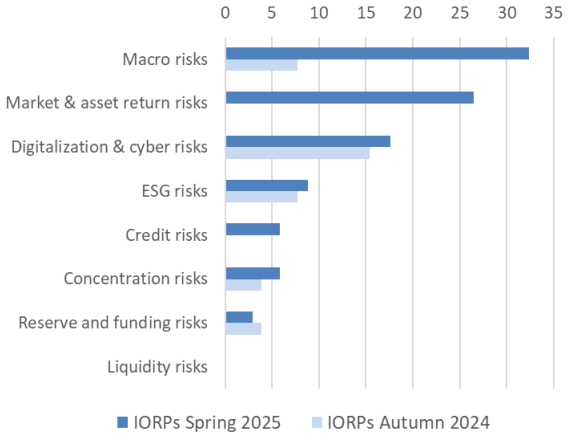


Figure 5.7: Risks with the highest expected increase in their materiality over the next 12 months for the IORP sector



Source: EIOPA Insurance and IORPs Bottom-Up Surveys Spring 2025 compared to Bottom-Up Surveys Autumn 2024.
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 were subsequently normalised on a scale from -100 to 100. "IORPs Autumn 2024" results from figure 5.7 have been revised according to latest resubmissions.

Going forward, environmental, social, and governance (ESG) risks remain a key concern for the insurance sector. ESG risks were ranked first in terms of expected change of materiality over the next 12 months for insurers. The increasing frequency and severity of climate-related catastrophes pose growing challenges for insurers, potentially driving up reinsurance costs, impacting insurer

profitability, and influencing overall demand for insurance. Insurers must adapt by integrating sustainability into their business models. Effective supervisory dialogue will be crucial to ensuring a smooth transition, supporting compliance, and fostering the sector's contribution to a low-carbon economy.

5.2 QUANTITATIVE RISK ASSESSMENT FOR THE EUROPEAN INSURANCE AND IORPS SECTORS

5.2.1 INVESTMENT BEHAVIOR

5.2.1.1 Assets allocation

Total assets increased both for the insurance and IORP sector. At the end of 2024, the total investment of EEA insurers reached a market value of approximately EUR 6.8 trillion[41] (excluding unit-linked assets), 2.2% higher than in the previous year.

Figure 5.8: Insurance sector - Split of investments (excl. unit-linked)

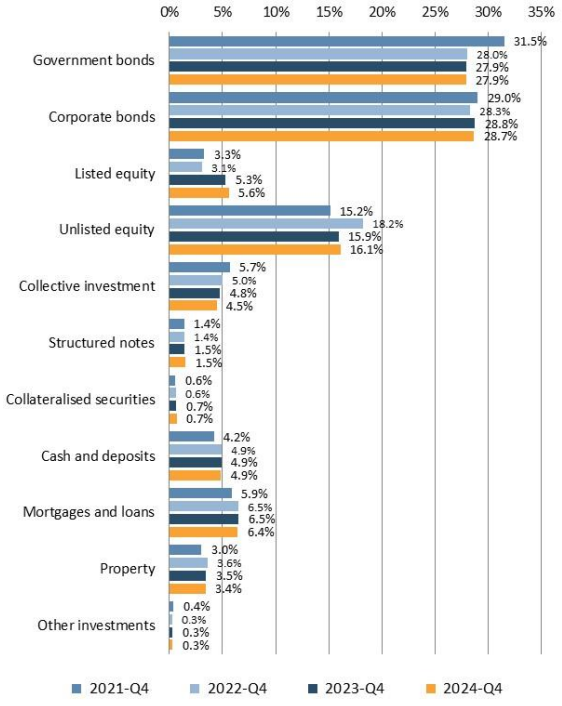
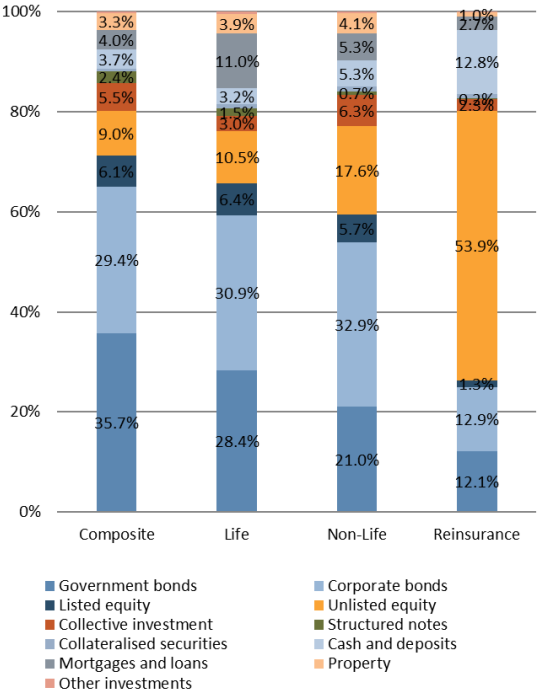


Figure 5.9: Insurance sector - Split of investments (excl. unit-linked) by type of insurer, year-end 2024



Source: EIOPA Quarterly Reporting Solo. Reference period: Q4 2021-2024.
Note: Calculations based on look-through within funds. Assets held for unit-linked business are excluded. Equities include holdings in related undertakings.

The composition of insurers' investments remained stable compared to the previous year. This is primarily due to a very mild year-on-year change of interest rates and relatively stable European equity market during 2024 (Fig. 5.8). Overall, insurers' portfolios remain heavily skewed towards fixed-income assets with a share of 63.0% (government bonds 27.9%, corporate bonds 28.7% and mortgages 6.4), followed by equities accounting for 21.7% (16.1% unlisted equity and 5.6 listed equity), cash and

[41] These figures can be found in EIOPA public statistics (Template S.06.02 list of investments).

deposits 4.9% and collective investment 4.5%. Across years, the portfolio allocation is the result of not only valuation changes but also active trading of different asset classes, which is discussed in detail in section 5.2.1.3.

There are notable differences in investment portfolios between different types of insurers (Fig. 5.9). Composite and life insurers tend to favour government bonds, which make up a large proportion of their portfolios. Non-life insurers, on the other hand, have higher exposures to corporate bonds and unlisted equities, particularly participations. Reinsurers, which in many cases are holding companies, have a distinct investment profile, with a substantial portion of their assets invested in unlisted equities (mainly participations in other related insurance subsidiaries or in funds which are then invested in other types of assets) and significant cash and deposit reserves.

European insurers' bond holdings are predominantly investment grade (Fig. 5.10). The distribution of these bonds across different credit quality categories is relatively even: CQS 0 (AAA) 18.1%, CQS 1 (AA) 26.0%, CQS 2 (A) 24,0%, CQS 3 (BBB): 23.7%. The segment of BBB-rated bonds, which carry a higher risk of being downgraded to non-investment grade, warrants monitoring. Indeed, a massive rating downgrade could significantly impact the market value of bond portfolios and increase the solvency capital requirement for spread risk. March and April 2025 market events impacted, among others, credit risk as shown by the increase in high yield bonds' spreads and Credit Default Swaps premia (CDS) pointing to sharp risk repricing in particular for lower quality grades and ultimately resulting into a potential increase of defaults.

There is significant variation in the level of insurers' exposure to lower rated bonds across the EEA (Fig. 5.11). In some countries, more than 50% of bonds are highly rated (CQS 0, AAA or CQS 1, AA) while in others the share of high-rated bonds is lower, with less than 10% falling into this category. The main driver of these differences is the credit rating of the home country's sovereign debt, which also influences the rating of local corporate bonds. Insurers tend to favour highly rated corporate bonds. Instead, when investing in government bonds, insurers in some countries often opt for domestic bonds (home bias is explored in more detail in the next subsection) which are exempt from capital charges but may still carry credit risk.

Figure 5.10: Insurance sector - Credit quality of bond portfolios

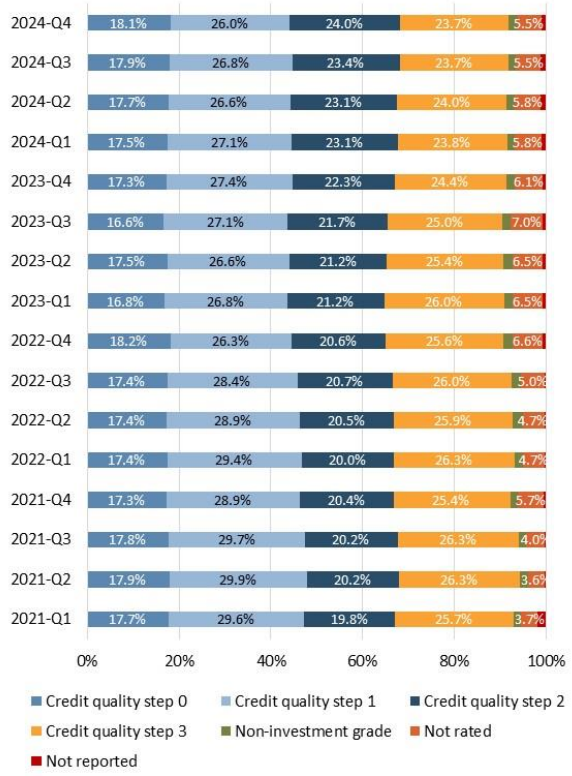
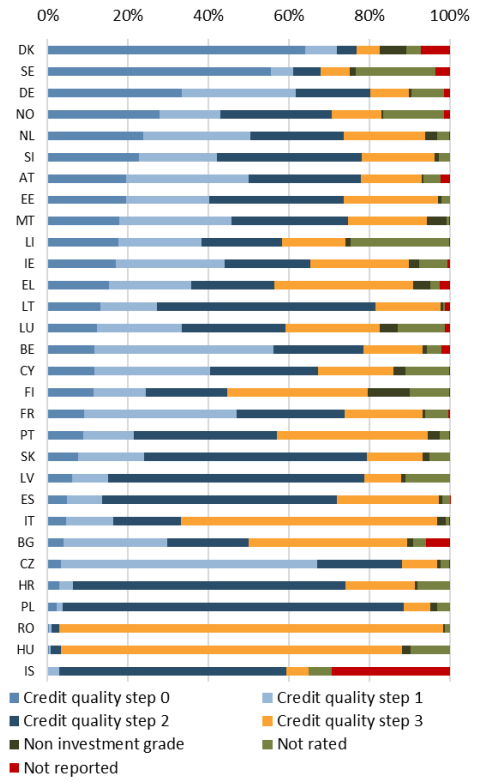


Figure 5.11: Insurance sector - Credit quality of bond portfolios, by country



Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024
Note: Government and corporate bond portfolios combined. Assets held for unit-linked contracts are included.

5.2.1.2 Home bias

Insurers' holdings of government bonds vary significantly across EEA countries (Fig. 5.12). While in some countries, insurers have a portfolio with a large proportion of foreign government bonds, in other countries insurers exhibit a home bias, with their government bond holdings largely consisting of domestic bonds.

Insurers that hold a large proportion of bonds from their home country may be exposed to concentration risks. In many countries, over half of the government bonds held by insurers are issued by their own government. This is a phenomenon affecting not only large countries with well-developed bond markets, but also smaller countries with more limited markets.

EEA insurers hold predominantly government bonds from EEA countries (Fig. 5.13). These account for 81.7% of the portfolios, which represents a slight decrease from previous years. The shares of bonds from EU institutions and supranational issuers have increased slightly, to 3.2% and 3.1%, respectively. While the proportion of bonds from emerging markets and other advanced economies remains stable at 5.1%. Among non-EEA bonds, US government bonds make up the largest share, of 4.4%, slightly higher than in 2023.

Figure 5.12: Insurance sector - Holdings of government bonds, by NCA broken down by issuer country

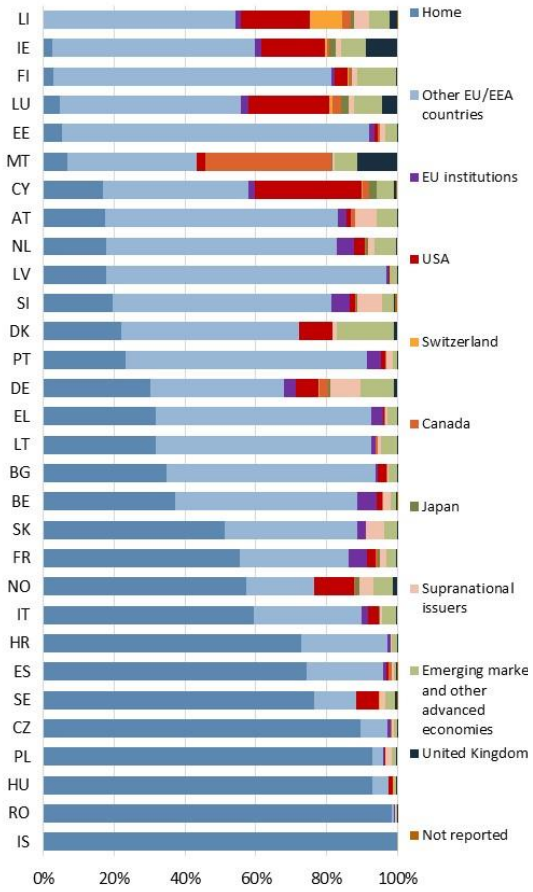
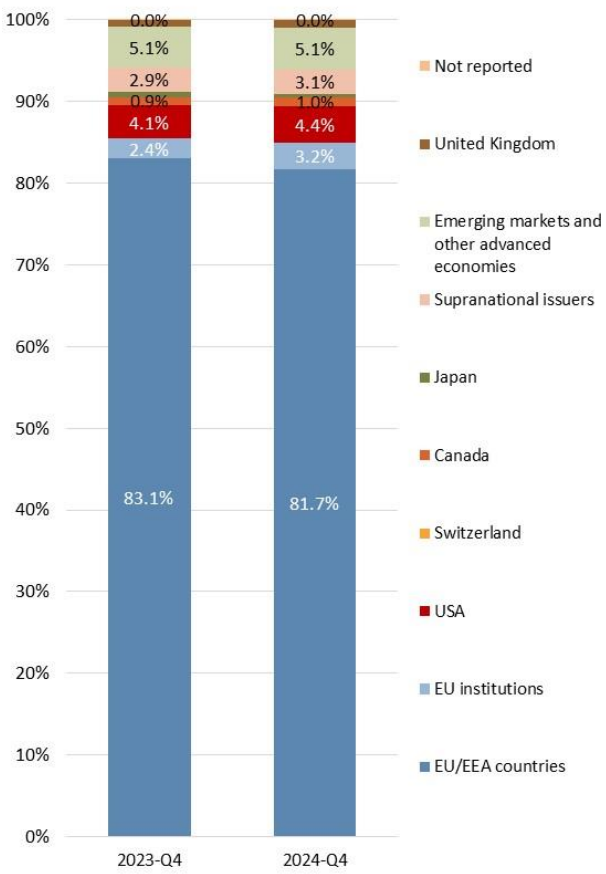


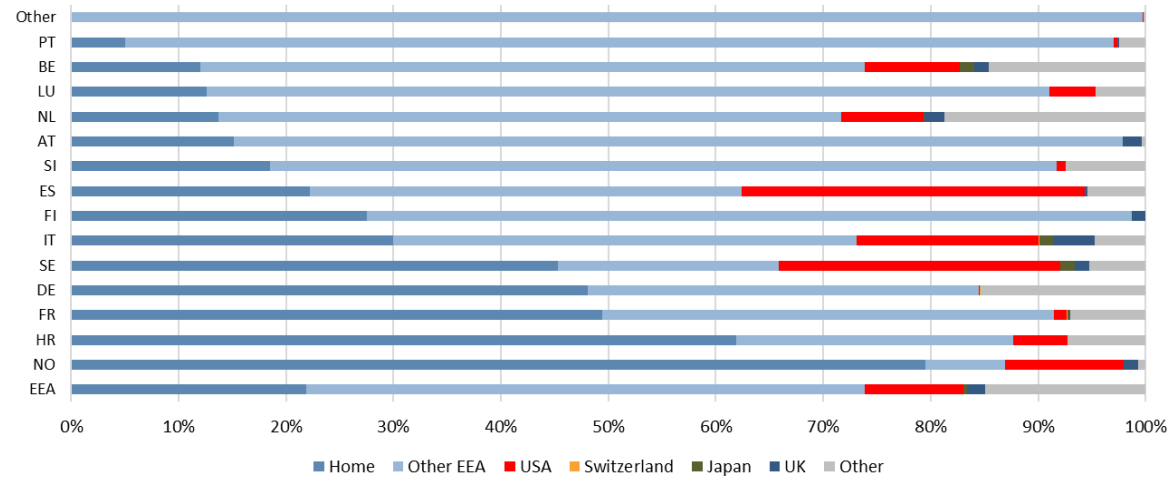
Figure 5.13: Insurance sector - Holdings of government bonds, by NCA, year-end 2024 versus 2023



Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024.
Note: Calculations based on look-through within funds. Assets held for unit-linked business are included.

More than 70% of IORPs government bonds portfolios are invested in EEA (Figure 5.14). Concerning holdings of home government bonds there is large variation amongst the EEA countries. The highest home bias is in Norway (79%) and Croatia (62%) and the lowest home bias is in Portugal and Slovakia (in around 5% and 7%, respectively). Approximately 9% of the overall government bond portfolio consists of US government bonds. IORPs in Spain (32%), Sweden (26%) and Italy (17%) have material shares of their government bonds portfolios invested in US bonds.

Figure 5.14: IORP sector - Holdings of government bonds by issuer country



Source: EIOPA IORPs reporting. Reference date: Q4 2024. Note: Look-through approach is not applied.

Insurers' holdings of corporate bonds vary significantly across EEA countries (Fig. 5.15). The home bias on corporate bonds holdings is with a few exceptions generally lower than for government bonds.

EEA insurers' corporate bond portfolios are more diversified than their government bond portfolios (Fig. 5.16) with a greater emphasis on investments in the US, UK, and other emerging markets. The breakdown of their aggregate corporate bond portfolio is as follows: 71.7% invested in EEA countries, 13.4% invested in the US, the world's largest and most liquid corporate bond market, 6.1% invested in UK corporations, 5.2% invested in other emerging markets and advanced economies. The share of US corporate bonds has remained stable compared to the previous year and is significantly higher than the corresponding share of US government bonds. Similarly, the shares of UK and other emerging market corporate bonds have also remained stable.

Figure 5.15: Insurance sector - Holdings of corporate bonds, by country, broken down by issuer country

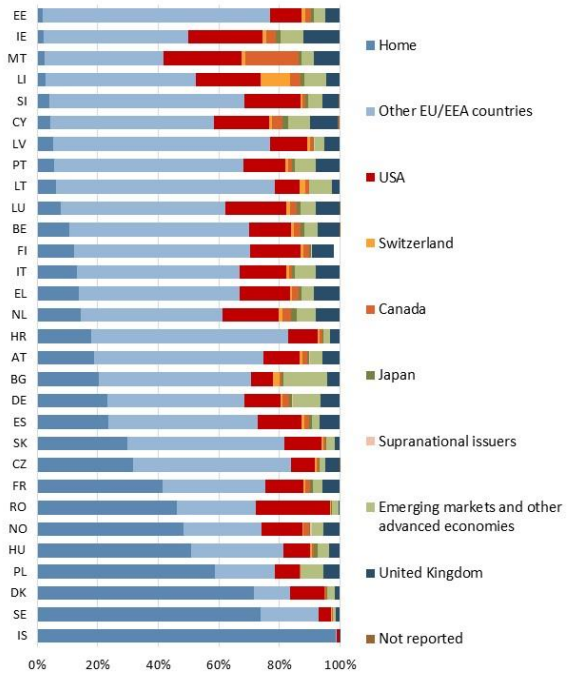
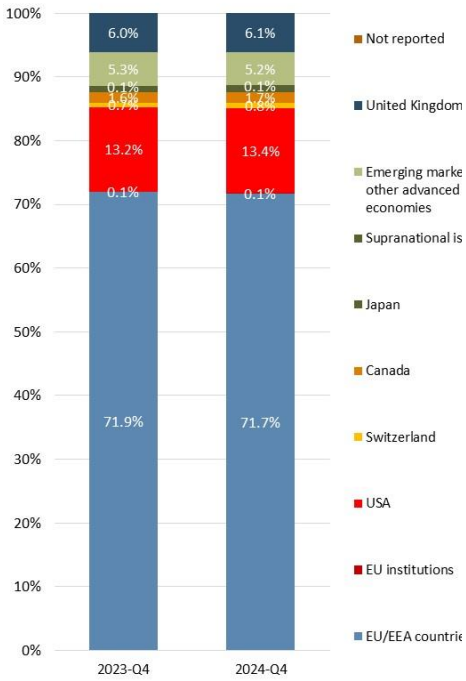


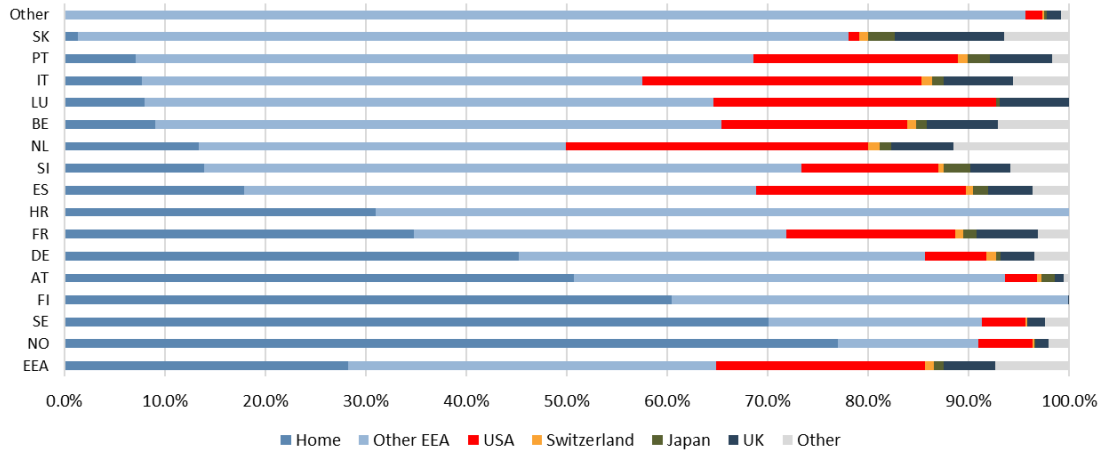
Figure 5.16: Insurance sector - Holdings of corporate bonds, year-end 2024 versus 2023



Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024.
Note: Calculations based on look-through within funds. Assets held for unit-linked business are included.

For IORPs, 64.8% of the corporate bonds' portfolio is made up by EEA issuers, of which 28.1% is invested in their own country (Fig. 5.17). The percentages are lower than in the insurance sector, meaning that the IORP's portfolio of corporate bond is geographically more diversified. The share of US corporate bonds is 20.8% while UK corporate bonds represent 5.1% for the aggregated EEA portfolio. Similarly to government bonds, the home bias is relatively high for IORPs from the non-euro countries such as Norway and Sweden.

Figure 5.17: IORPs sector: Holdings of corporate bonds by issuer country



Source: EIOPA IORPs reporting. Reference date: Q4 2024. Note: Look-through approach is not applied.

Figure 5.18: Insurance sector - Holdings of equity, by country, broken down by issuer country

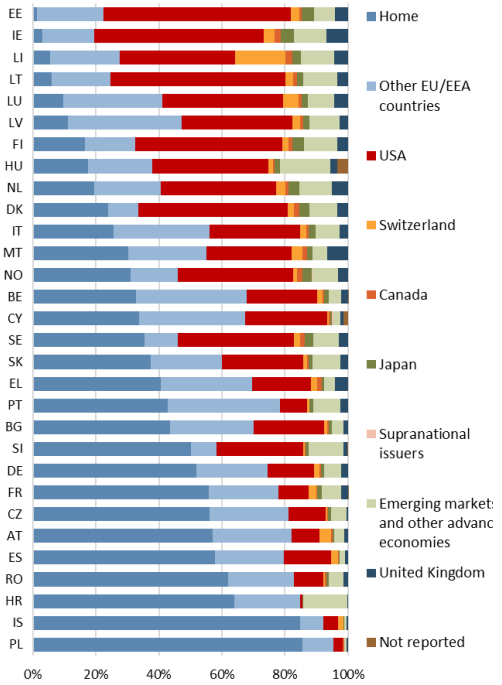
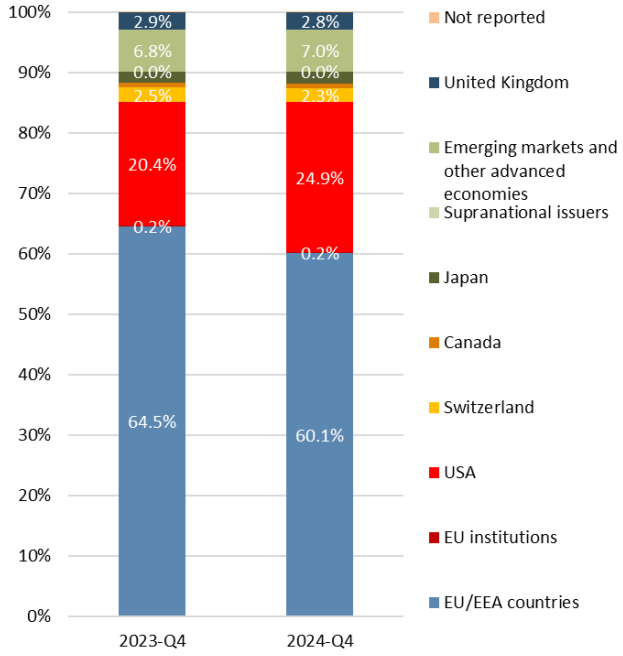


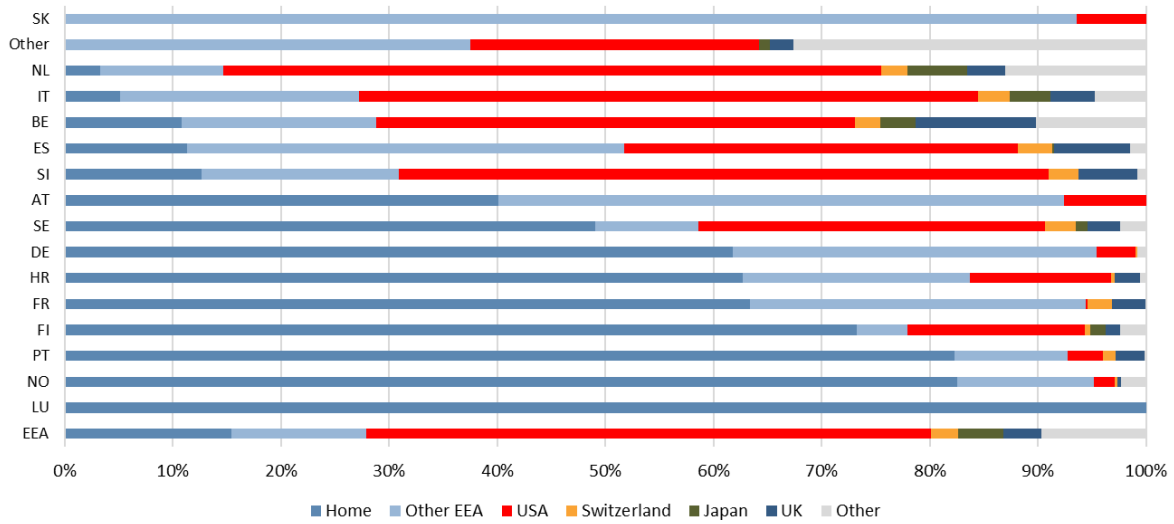
Figure 5.19: Insurance sector - Holdings of equity, by country, year-end 2024 versus 2023



Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024.
Note Calculations based on look-through within funds. Assets held for unit-linked business are included.

The proportion of home equity holdings varies significantly across EEA countries (Fig. 5.18). Insurers tend to hold a larger share of domestic equities compared to corporate bonds. In 2024, the share of equity exposures to the US increased slightly to 24.9% (Fig. 5.19), driven by strong stock market performance. Overall, insurers' equity portfolios are well-diversified internationally. However, it's worth noting that the aggregated EEA exposure to US equities is largely driven by investments from Scandinavian countries.

Figure 5.20: IORPs sector - Holdings of equities by issuer country



Source: EIOPA IORPs reporting. Reference date: Q4 2024. Note: Look-through approach is not applied.

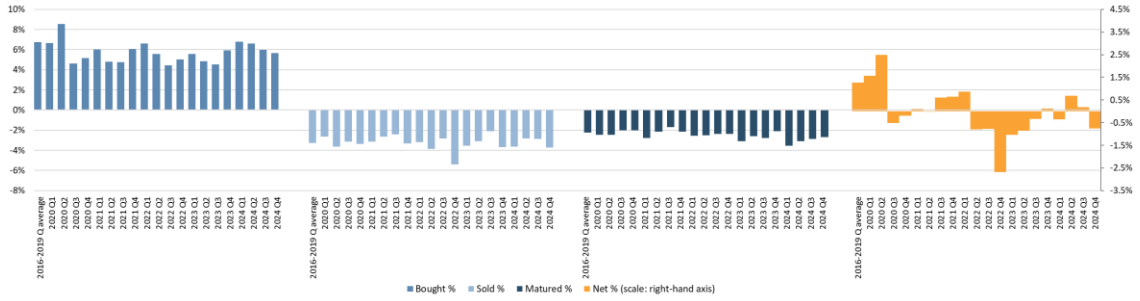
IORPs allocate around 52% of their equity portfolio to US shares (Fig. 5.20). Allocation of investments to US-related equity is very diverse across Member States, with Slovenia, Italy and the Netherlands showing the highest percentages. The allocation to the home country as well as to EEA is either very low (countries displayed on top of Fig. 5.20) or very high (countries on the bottom).

5.2.1.3 Trading activity of EEA insurers

In 2024, the insurance sector slightly decreased non-bank corporate bond holdings (Fig. 5.21). The amount of new bonds purchased during the year was not enough to offset the bonds that were sold or reached maturity. As a result, the sector's overall holdings of these bonds declined by 0.2% over the course of the year.

However, the situation has stabilized compared to previous years. After a significant increase in interest rates in 2022, the annual reduction in holdings peaked at -3.4% and then -2.1% in the following year. This decline was due to two main factors: investment liquidations resulting from policy surrenders in some EEA countries (discussed in detail in Box 5.1), and margin payments on interest rate derivatives used by insurers to hedge against liability duration in some other countries (documented in previous EIOPA FSR Dec 2022).

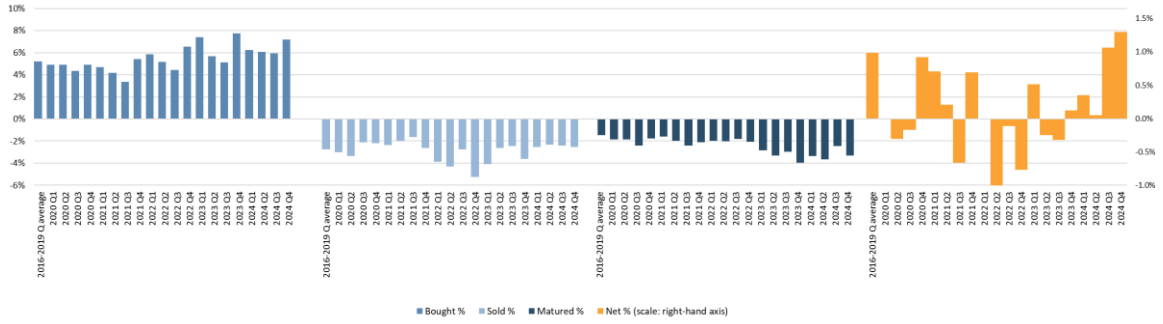
Figure 5.21: Break down of quarterly changes in the positions (% to initial position) of insurers in corporate non-bank bonds



Source: EIOPA Quarterly Solo and EIOPA calculations. Reference period: 2016 to Q4 2023. Note: Buy, sell, matured and net figures are in % with respect to the initial quarter Solvency II market value of the positions.

In 2024, the insurance sector increased government bond holdings (Fig. 5.22). The sector purchased more government bonds during the year than it sold or allowed to mature, resulting in a net increase of +2.8% over the four quarters. This represents a higher-than-average increase in government bond holdings, indicating a notable shift in the sector's investment strategy.

Figure 5.22: Break down of quarterly changes in the positions (% to initial position) of insurers in government bonds



Source: EIOPA Quarterly Solo and EIOPA calculations. Reference period: 2016 to Q4 2023. Note: Buy, sell, matured and net figures are in % with respect to the initial quarter Solvency II market value of the positions.

The insurance sector's strong purchases of government bonds are a sign of its good health. Although the sector experienced a significant reduction in holdings of -2.0% in the year following the sharp interest rate increase in 2022, liquidations have since stabilized and it is now showing signs of recovery. In fact, after adjusting for the impact of the interest rate hike, the sector's overall position is strong, thanks in part to an increase in life premiums and the positive technical cashflows, as discussed in the following Box 5.1.

Box 5.1: EEA insurers' technical cashflows and investments liquidations

This box examines situations where insurers liquidate investments due to a shortfall in funds. This might occur when benefit payments and expenses exceed the premiums they receive[42].

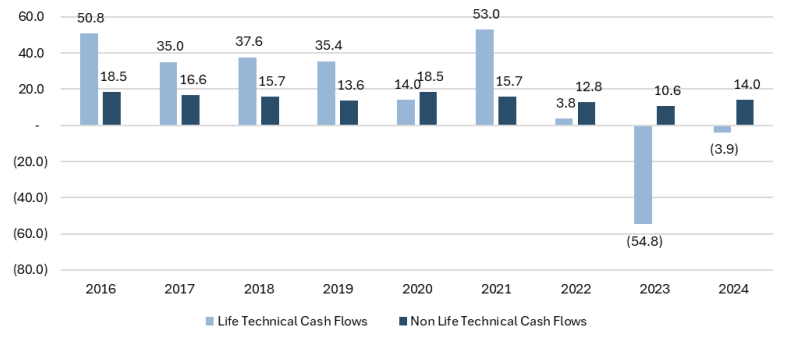
The difference between these three components is known as Technical Cashflows (TCs) from insurers' operations. This metric serves as a gauge of an insurer's financial health. For instance, if the TCs are negative, it indicates liquidity shortages, which may necessitate the sale of investments, in particular, when the regular cash inflows from investments, such as coupons, dividends, and rent, are insufficient to maintain a balance.

Notably, investment income and expenses tend to be relatively stable and predictable over time. As a result, unexpected liquidity needs are often driven by two main factors: sudden declines in premium income or unexpected increases in benefit payments, typically resulting from a surge in policy surrenders.

To begin, we need to answer two key questions: Have technical cashflows been negative, and which groups of insurers have been affected? To get to the bottom of this, we'll explore several factors. Firstly, we'll examine whether certain types of insurers, such as life, non-life, or reinsurers, have been impacted. We'll also investigate whether insurers operating in specific countries have been affected. Additionally, we'll analyse whether TCs were negative during specific time periods, such as the COVID-19 pandemic in 2020 and the period of interest rate increases in 2022.

Analysing the technical cashflows for life and non-life insurers (Fig. B.5.1) reveals an interesting trend: a) Non-life and reinsurance technical cashflows remained relatively stable over time b) life technical cashflows, on the other hand, were highly volatile, with weak results in 2022 and 2024 and negative results in 2023.

Figure B.5.1: EEA Life and non-life Technical Cashflows.



Source: EIOPA Quarterly Reporting Solo

Premiums and claims are the volatile components of the life technical cashflows, while expenses and investment income are rather predictable and stable (Fig. B.5.2). The reduction of life technical cashflows in 2020 were primarily caused by a decline in premiums, which decreased by 6.3% from the previous year (Fig. B.5.3). In

[42] More specifically: 1) Net Written Premium (NWP): the total premiums collected by insurers netted by the reinsurers' share. 2) Claims and Surrenders: the amount paid out by insurers for claims and benefits, including policy surrenders. 3) Expenses: amount of all expenses the operational costs incurred by insurers; Technical expenses include administrative expenses, investment management expenses, claims management expenses, acquisition expenses, overhead expenses.

contrast, in 2023, life technical cashflows were negatively impacted by a significant increase in claims (surrenders), which rose by 17.5% compared to the previous year.

Figure B.5.2: EEA Life Technical Cashflows components and investment income

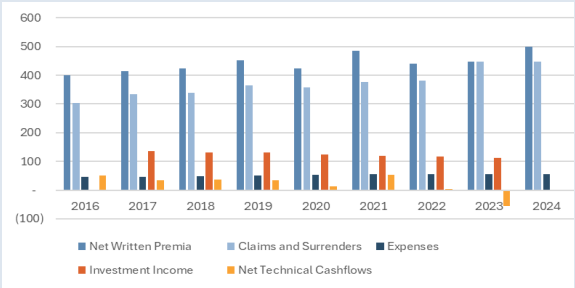
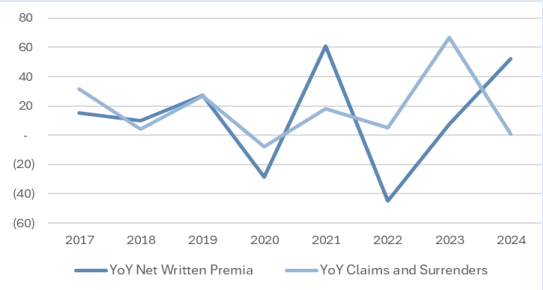


Figure B.5.3: YoY % change Net Written Premiums and YoY % change Claims and Surrenders



Source: Solvency II, Quarterly Reporting Solo. 2024-Q4 annual cumulative figures.

Heterogeneous trends can be observed across countries when looking at the number of entities with negative technical cashflows and total EUR amount broken down by life and non-life. However, few countries are characterised by remarkably similar patterns of negative technical cashflows in the life segment (life and composite insurers) in certain time periods.

Figure B.5.4: Life and composite insurers quarterly technical cashflows (TCs) and investment (government and corporate bonds and equity) liquidations. TCs are measured both as number of insurers (share within country) with negative TCs (right axis) and total EUR amount of TCs (left axis). Liquidations (left axis) are calculated on directly held government and corporate bonds and equity (excl. Unit-linked).

Source: Solvency II, Quarterly Reporting Solo. Quarterly aggregations.

It stands out markedly (Figure B.5.4) that negative TCs correlate across quarters significantly with investment liquidations. In particular:

[Italy] The proportion of entities reporting negative TCs increased sharply from an average of 27% (between 2017 and 2022) to 70% in 2023 and rebounded to 50% in year-end 2024. Consistently, negative TCs and investment liquidation materialised jointly in 2023, after interest rates increased in 2022. During 2024, TCs stabilised and Italian life insurers restarted to actively purchase bonds.

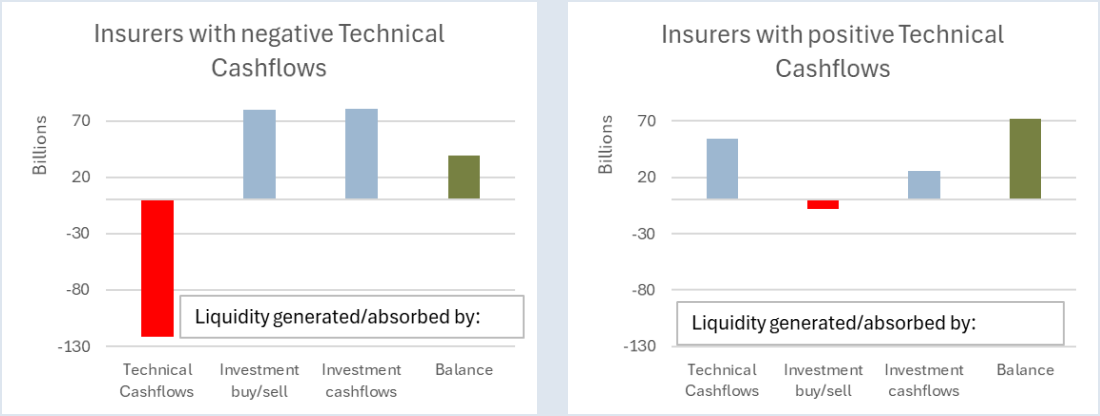
[France] The share of entities reporting negative TCs increased from 50% (years 2017-2019) to more than 60% with the Covid outbreak to then 70% in Q4 2023. Indeed, negative TCs were recorded already during Covid (2020), with a further negative peak later in 2023. Consistently, investment liquidation materialised jointly both in 2020 and in 2022-23 and stabilised then in 2024.

[Germany] The number of undertakings reporting negative TCs increased since the end of 2022, with a peak in Q4 2024, where they accounted for around 70% of the total sample. Consistently, negative TCs and investment liquidation materialised jointly in 2022-2023.

[Austria] TCs were reported negative across all quarters, with an increasing trend in the number of entities experiencing negative TCs, from 40% up to 90%. Negative TCs and investment liquidation materialised jointly especially during Covid and more so after the increase in interest rates in 2022.

Let us take an overall perspective on the liquidity balance by taking into account all things that generate liquidity (written premiums, investments liquidations and regular investments income [coupons, dividends, rents]) or absorb liquidity (claims/surrenders and expenses and asset purchases). With a focus on 2023, which has been the worst year in terms of TCs (Figure B.5.5), it is shown that even if several insurers experienced large negative TCs, investments income, combined with the liquidity generated by asset liquidations kept insurers' overall liquidity on balance to the positive side[43]. However, it remains true that abnormally high, hence most likely unexpected, increases in surrenders are found to be linked with investments liquidation as already documented. On the other hand, insurers exhibiting positive technical cashflows used part of the available liquidity for assets purchases.

Figure B.5.5: EEA Life and Composite insurers liquidity generated/absorbed by technical cashflows, by investment (bonds, equity and property) liquidations and by investment income (coupons, dividends and rents). Year 2023.



Source: EIOPA Annual Reporting Solo

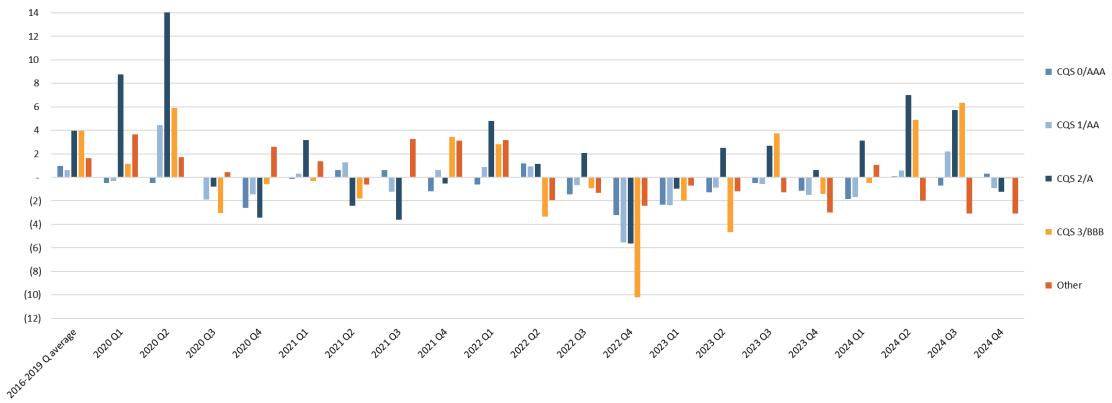
In summary, this box sheds some light to gain a better understanding of the patterns and motives surrounding common investment liquidations in the insurance sector.

[43] As expected, an analysis on individual insurers data shows a significant correlation between technical cashflows and investments liquidation of 60% for insurers with negative technical cash flows, while no correlation is found for insurers with positive technical cashflows.

This analysis could be used as a base to create a quarterly monitoring tool of insurers' liquidity position which can be achieved by incorporating a comprehensive range of factors that either generate or absorb liquidity. These factors include: a) Positive or negative technical cash flows, b) Regular cash inflows from investments, such as coupon payments, dividends, and rents, as well as from bonds reaching maturity, c) purchases or sales of bonds, equity, and other highly liquid assets, such as money market funds, as well as illiquid assets like property, d) margins received or paid on derivative positions, e) repurchase agreements activities. By considering these factors, a more accurate and comprehensive monitoring tool can be developed.

In 2024, the increase of non-bank corporate bond holdings was primarily driven by investments in A and BBB rated bonds. The year's activity followed a mixed trend, with declines in holdings in the first and fourth quarters but increases in the second and third quarters.

Figure 5.23: Break down of quarterly changes in the position of insurers in non-bank corporate bonds by rating (bn. EUR)

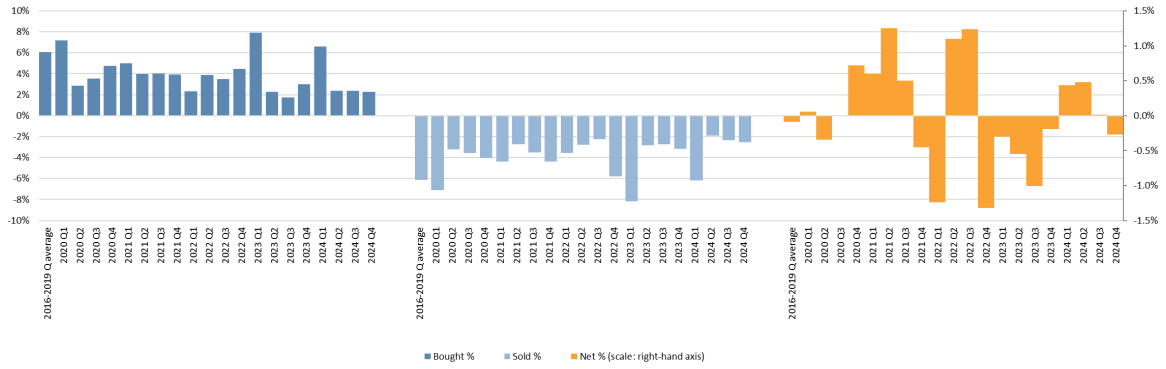


Source: EIOPA Quarterly Solo and EIOPA calculations. Reference period: 2016 to Q4 2024.

In 2024, the insurance sector slightly decreased its equity holdings (Fig. 5.24). Although the sector bought and sold equities throughout the year, the net result was a slight decrease in holdings of -0.7% over the four quarters.

In previous years, insurers have been strong sellers of equities. In 2023 insurers reduced holdings of equity on a yearly basis (cumulated across the four quarters) by -2.0% most likely to realise gains when equity markets were exceptionally strong, with valuations on the rise. Equity holdings reduction occurred after insurers have been net buyers of listed and non-listed equities for years.

Figure 5.24: Break down of quarterly changes in the positions (% to initial position) of insurers in equities



Source: EIOPA Quarterly Solo and EIOPA calculations. Reference period: 2016 to Q4 2024. Buy, sell, matured and net figures are in % with respect to the initial quarter Solvency II market value of the positions.

5.2.2 EXPOSURES TOWARDS THE BANKING SECTOR

The insurance sector maintains a strong link with the banking sector through its investment portfolio (Fig. 5.25). At year-end 2024, EEA insurers' investments in banks comprised 12.7% of the total investments, mirroring the figures from recent years. However, there exists significant variation across countries in this regard, where in some cases the share is higher than 20%.

The exposure towards banks presents a potential conduit for the transmission of risk across the two sectors. Insurers could wield a stabilizing influence on the banking sector and, consequently, on financial markets overall, due to their nature of being long-term investors, exhibiting less propensity to trade in response to short-term market fluctuations compared to other investor types.

Figure 5.25: Insurance sector - Exposures towards banks as a percentage of total investments (excl. unit-linked), by country

	Exposure to banks
AT	14.3%
BE	7.7%
BG	12.7%
CY	17.4%
CZ	16.5%
DE	12.6%
DK	25.0%
EE	40.8%
EL	11.0%
ES	11.5%
FI	14.5%
FR	11.9%
HR	12.5%
HU	6.5%
IE	16.3%
IS	22.0%
IT	8.9%
LI	25.8%
LT	13.4%
LU	17.4%
LV	13.1%
MT	26.3%
NL	9.9%
NO	18.6%
PL	13.1%
PT	12.3%
RO	11.2%
SE	22.0%
SI	9.2%
SK	20.2%
EEA	12.7%

Figure 5.26: Exposures towards banks as a percentage of total investments at country level for the IORPs sector

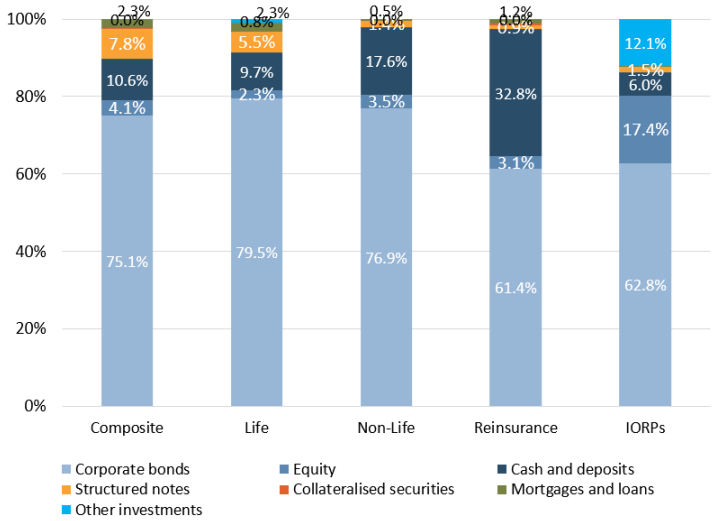
Country	% Exposure to banks
EEA (w)	**6%**
EEA (un-w)	**10%**
AT	3%
BE	2%
CY	11%
DE	14%
DK	32%
ES	9%
FI	13%
FR	8%
HR	8%
IT	6%
LI	2%
LU	4%
LV	9%
NL	5%
NO	15%
PL	17%
PT	5%
SE	12%
SI	17%
SK	16%

Source: EIOPA Quarterly Reporting Solo and IORPs. Reference date: Q4 2024.
Note: "(w)" means weighted and "(un-w)" means non-weighted. Exposures to banks correspond to assets with issuer NACE code equal to K64.1.9. Exposures to banks include the following assets: equity, corporate bonds, cash and deposits, structured notes, collateralized securities, mortgages and loans and other investments. As it is only possible to identify exposures to banks for direct investments, indirect exposures via investments funds are not included (i.e., look-through approach cannot be applied). Assets held for unit-linked business are excluded.

The exposure of the IORP sector to the banking sector is also material. At the end of 2024 exposures to banks represented 6% of total investments at the EEA level (Table 5.26). Also in this case there are large differences across countries.

Corporate bonds represent for insurers and IORPs the largest share of their exposures to banks (Fig. 5.27). For insurers, cash and deposits rank second while bank equity represents only a small share. For IORPS, Corporate Bonds cover more than 60% of exposure to banks, followed by equity around 17% and Cash and Deposits around 6%.

Figure 5.27: Insurance sector and IORPs - Exposures towards banks, by type of assets



Source: EIOPA Quarterly Reporting Solo and IORPS reporting. Reference date (insurance): Q4 2024.

The risk associated with different types of bank bonds varies significantly (Fig. 5.28). The proportion of low risk covered bonds (secured bonds) held by insurers has decreased from 43.6% in 2022 to 39.4% in 2024. As a result, covered bonds are no longer the largest portion of bank bonds held by insurers, and have been surpassed by senior unsecured bonds, which now account for approximately 46.3%. Junior bonds, such as subordinated bonds, hybrid bonds, and convertible bonds, are more sensitive to credit risk changes and are the first to suffer losses in the event of bankruptcy. These junior bonds represent 8.1% of the bank bonds held by insurers.

Insurers with significant holdings of subordinated bank bonds may be more vulnerable to negative effects if the banking sector experiences distress (Fig. 5.29). The proportion of subordinated bonds in insurers' bond portfolios varies by country, with some countries having a substantial allocation to these bonds. This concentration of risk could potentially amplify the impact of banking sector stress on insurers, creating a risk transmission channel.

Figure 5.28: Insurance sector - Exposures towards bank corporate bonds, by sub-category

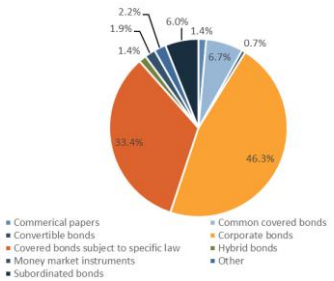
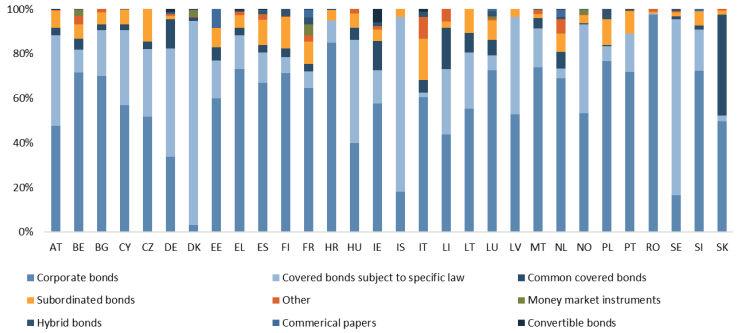


Figure 5.29: Insurance sector - Exposures towards bank corporate bonds, by country, broken down by sub-category

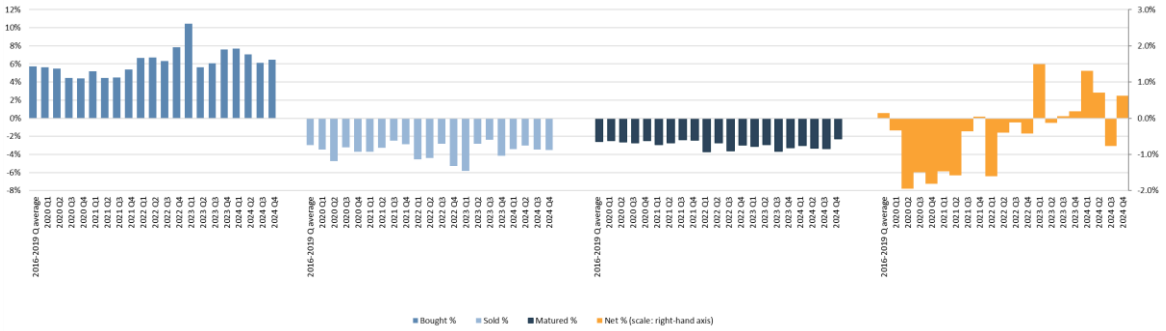


Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024. Note:
The subcategory corporate bonds, i.e., CIC 21, includes both preferred and non-preferred senior unsecured bonds as the Solvency II reporting does not allow to distinguish them.

In 2024, insurers continued to increase their holdings of bank bonds, following a similar trend to 2023 (Fig. 5.30). Holdings grew by 1.6% in 2023 and 1.9% in 2024, indicating a strong demand for bank bonds.

This trend marks a reversal of the previous decline in insurers holdings of bank bond, which occurred from 2020 to 2022. During that period, holdings decreased by -5.6%, -3.4%, and -2.5% on a yearly basis, respectively. This reduction may have been driven by insurers' de-risking efforts, as well as fluctuations in bank bond issuance[44], as discussed in previous EIOPA Financial Stability Reports.

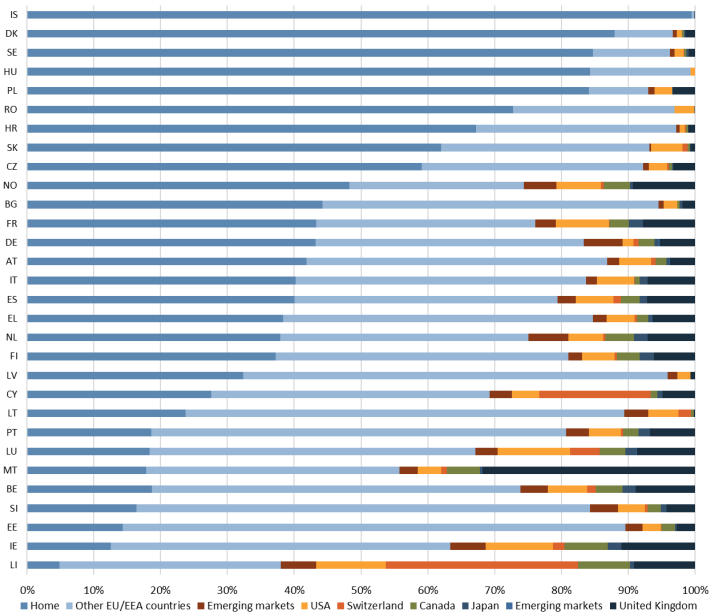
Figure 5.30: Break down of quarterly changes in the positions (% to initial Q position) of insurers in bonds issued by banks



Source: EIOPA Quarterly Solo and EIOPA calculations
Reference period: 2016 to Q4 2024. Note: Buy, sell, matured and net figures are in % with respect to the initial quarter Solvency II market value of the positions.

Insurers tend to have meaningful investments in their domestic banking sector. The share of the exposure towards domestic banking sector differs considerably across countries (Fig. 5.31).

Figure 5.31: Insurance sector - Exposure towards the banking sector, by country, broken down by issuer country (home vs. cross-border)

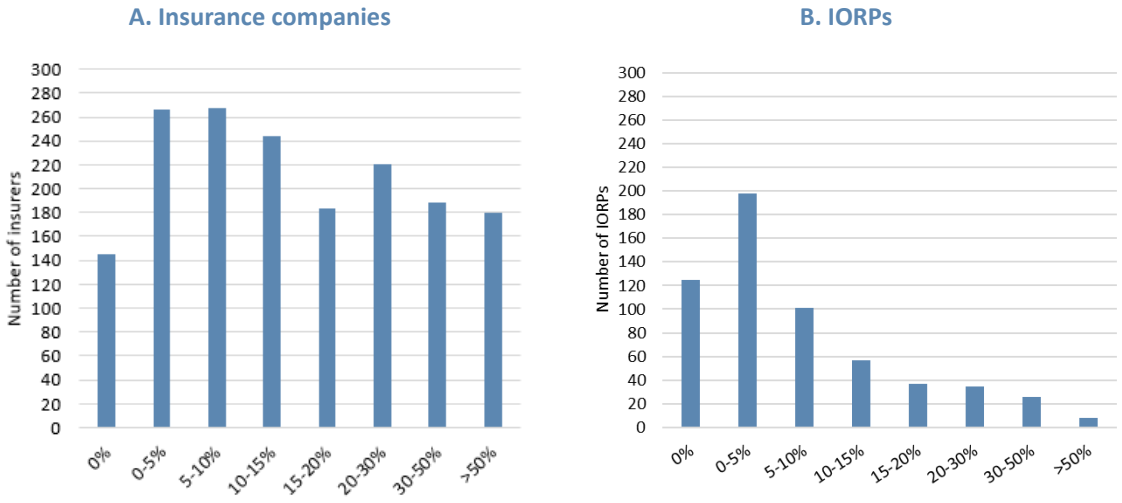


Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024. Note: See methodological explanations for Figures 5.25 and 5.26.

[44] The supply side might drive insurers investments allocations, in the sense that bonds might be purchased at issuance and hence only when or if issued. There were record issuances of non-financial corporate bonds in 2021 while there was no comparable surge for bank bonds. ECB Statistical Data Warehouse, Net issues of debt securities by euro area non-financial corporations vs. Net issues of debt securities by euro area MFIs.

Fig. 5.32 shows how the proportion of investments in the banking sector to total assets is distributed across insurers and IORPs. While several insurers have no exposure to the banking sector, there are also more than 180 undertakings where it exceeds 50% of their assets. These are small non-life undertakings which hold as part of their business model a large share of their investments in cash. Approximately 125 IORPs report no exposure to banks, while less than 10 IORPs are heavily exposed to the banking sector with a ratio of bank exposures to total assets higher than 50%. Most of the distribution of exposures towards banks for IORPs is between 0 and 5%.

Figure. 5.32: Number of entities by share of exposures (on total assets) towards banks



Source: EIOPA Quarterly Reporting Solo (Reference date: Q4 2024) and IORP Q4 data.
Note: See explanations for Figures 5.25 and 5.26. Due to reporting rules applicable to IORPs (see 1.15 of the "Decision of the board of supervisors on EIOPA's regular information requests regarding provision of occupational pensions information"), IORPs excluded by their NCAs from quarterly reporting are not captured in the figures. The IORPs charts cover only individual data for which the granular exposure is reported.

5.2.3 VULNERABILITIES FROM REAL ESTATE INVESTMENTS

The real estate market is important for financial stability[45] as insurance companies and IORPs hold investments in real estate assets as part of their investment portfolios. [46] These investments can include commercial properties, residential developments and real estate investment funds. Fluctuations in the real estate market can directly impact the value of these investments, influencing the financial health and solvency of insurance companies.

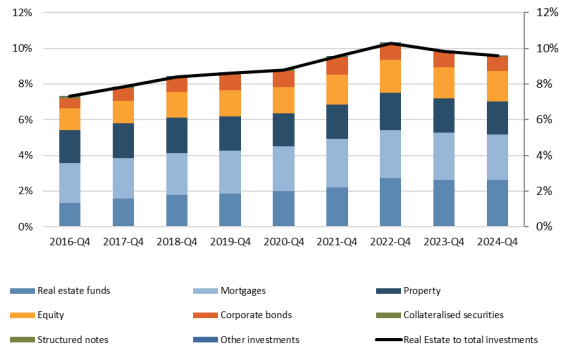
[45] The interconnectedness between the real estate market and the broader financial system underscores the importance of its stability. Real estate market downturns can trigger broader economic crises, impacting financial markets, credit availability, and economic growth. Such systemic risks can have cascading effects on insurance companies' investments, liabilities, and overall stability. In the light of these considerations, it is important for regulators to closely monitor the real estate market's developments to assess potential risks to insurers' financial stability and solvency. By proactively identifying and addressing vulnerabilities in real estate investments and related risks, regulators aim to safeguard the stability of the insurance sector and mitigate the potential systemic implications of real estate market fluctuations.

[46] The performance of the real estate market can affect insurance liabilities and risks. For instance, in property insurance, insurers are liable to pay claims for damages or losses incurred by policyholders due to events such as natural disasters or accidents. A downturn in the real estate market can lead to decreased property values, affecting the estimation of insurance liabilities and potentially increasing the financial burden on insurance companies.

Insurers have a significant exposure to real estate markets through their investments.[47] Between the introduction of Solvency II in 2016 and the third quarter of 2023, the proportion of real estate-related investments in their portfolios increased from 7.3% to 10.3% (Fig. 5.33). As of the third quarter of 2023, this represented approximately EUR 660 bn in investments. However, by year end 2024, the real estate exposure had decreased to 9.6% of total investments, primarily due to declines in the valuation of real estate equities and properties.

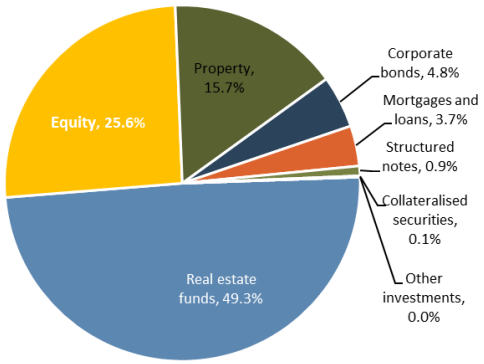
Unit-linked real estate related investments are diversified across various categories (Fig 5.34). Unit-linked (UL) real estate investments accounted for around EUR 74 bn, making up only 12% of total real estate investments at the end of 2024. Within the UL portfolio breakdown, real estate funds dominate at 49.3%, equity is at 25.6%, property at 15.7% and a smaller portion of 9% distributed among other investment categories.

Figure 5.33: Insurance sector - Real estate related assets relative to total investments



Source: EIOPA Quarterly Reporting Solo. Unit-linked excluded.

Figure 5.34: Insurance sector - Real estate related assets unit-linked, by total investments

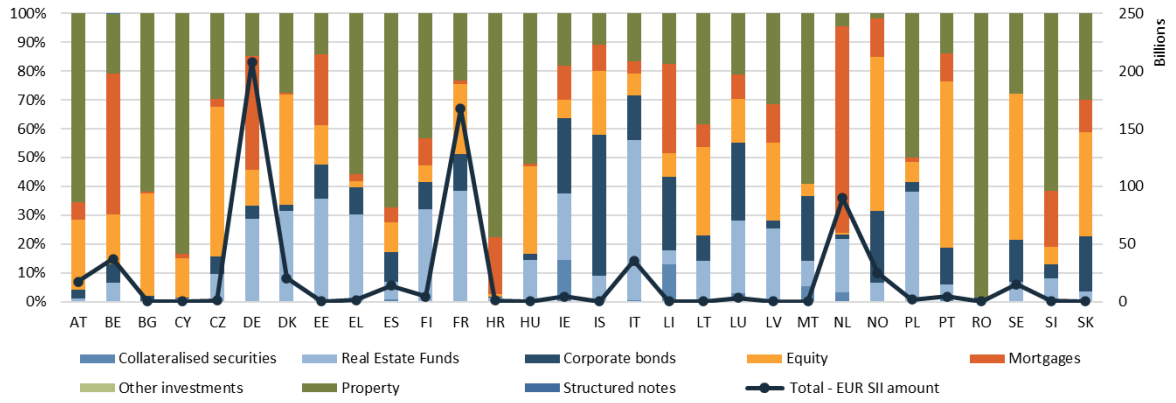


Source: EIOPA Quarterly Reporting Solo 2024 Q4. Unit-linked.

Real estate investments in the insurance sector are concentrated in specific countries, with significant diversity in the asset classes each country favours (see Fig. 5.35). Germany, France, the Netherlands, Italy and Belgium have the largest positions in Europe. In France and Italy insurers are primarily invested in real estate funds, while the Netherlands and Belgium mainly focuses on mortgages.

[47] Please find here the EIOPA technical note where the real estate related investments categorisation is described.

Figure 5.35: Insurance sector - Types of real estate assets, by country



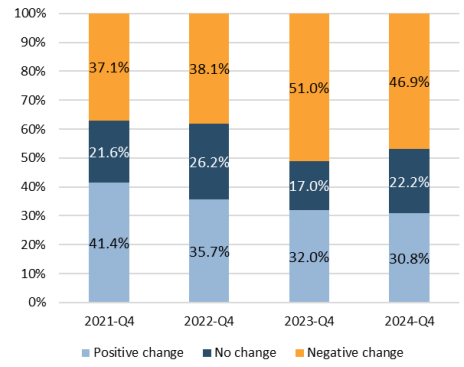
Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024. The identification of the real estate related investments per asset class follows the approach used in the EIOPA public statistics. Details can be retrieved from the technical note at: https://www.eiopa.europa.eu/system/files/2021-09/faq_insurance_statistics.pdf.

Valuing real estate investments accurately is a major challenge, especially in changing market conditions. Valuations are affected by several factors including time lags, subjective judgments, and the potential for model errors. Furthermore, real estate investments are often illiquid, which can make it hard to sell assets quickly, even in stable markets.

Another key concern for real estate investments is the risk associated with interest rates and credit. Changes in interest rates can significantly impact the value of real estate assets, such as properties, mortgages, and bonds. Credit risk is also a major consideration, as it can be challenging to predict how the business and credit cycle will impact the likelihood of mortgage defaults or of real estate corporations. To manage these risks effectively, insurers need to monitor market trends and have a robust risk management strategy.

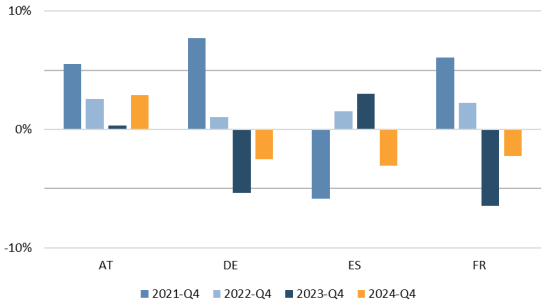
Over the past year, property valuations on insurers' balance sheets continued to decline, although at a slower rate than in 2023 (Fig. 5.36). At the EEA insurance sector level, the percentage of properties with declining valuations reduced to 46.9% in 2024, down from 51.0% in 2023. However, this rate is still higher than in previous years when the real estate market was stable. In 2024, property valuations declined in several countries, including: Spain: -3.1%, Germany: -2.5% and France: -2.2%. These declines were less severe than in the previous year. In contrast, Austria saw an increase in property valuations of 3.3%, maintaining a positive trend (Fig. 5.37).

Figure 5.36: Insurance sector - Share of direct property, by type of revaluation



Source: EIOPA Quarterly Solo, QRT 06.02; Note: Investments covering unit- or index linked contracts excluded; SII valuation based on balanced panel of property items held from Q4 2021 to Q4 2024.

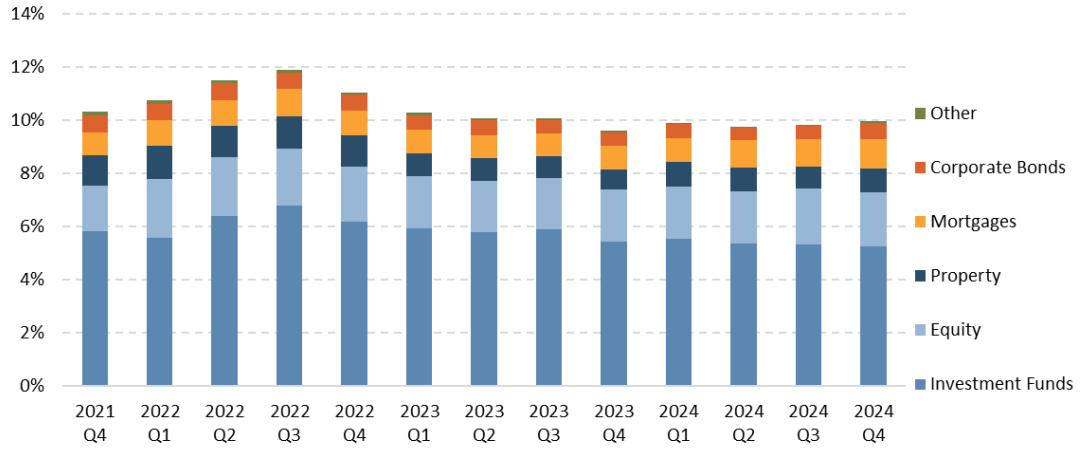
Figure 5.37: Insurance sector - Price changes on property by selected country (in %)



Source: EIOPA Quarterly Solo, QRT 06.02. Note: See note for Figure 5.36.

For IORPs, real estate risk-related investments represent around 10% of total assets allocation. The total value of the investments of IORPs in the EEA in 2024 Q4 is roughly EUR 2.800 bn, with increased valuation observed in comparison to 2023 Q3 where total investments of IORPs were roughly 2.643 bn. Their exposure towards real estate amounts for Q4 2024 to EUR 278 bn, equivalent to 9.9% of their total portfolio.

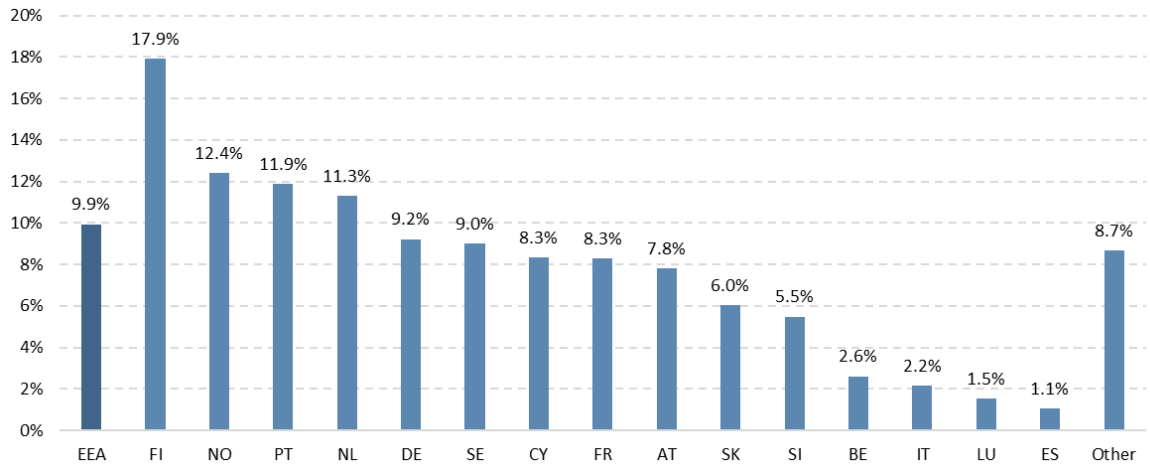
Figure 5.38: IORP sector - Real Estate Exposure



Source: EIOPA IORPs reporting. Reference date: Q4 2024

The majority of real estate risk exposure stems from real estate funds held in collective investments. IORPs direct their investments into real estate across various asset categories. A significant portion (56%) is invested through collective investments (real estate funds). Other asset categories through which IORPs gain real estate exposure include equity (21%), property (8%), mortgages (9%), and corporate bonds (5%).

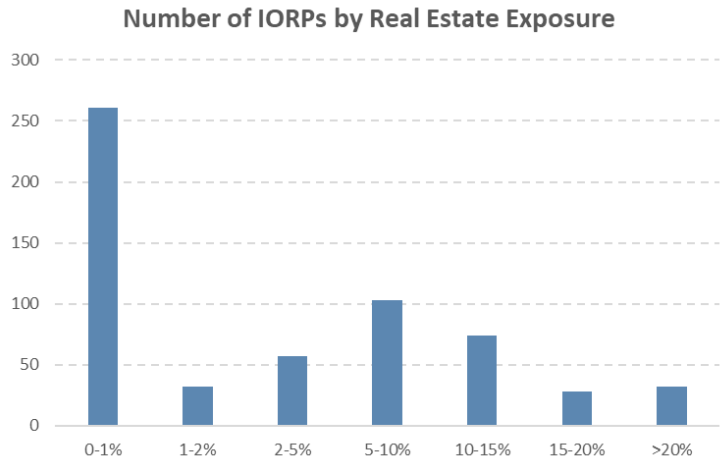
Figure 5.39: IORP sector - Real Estate Exposure per EEA Member State[48]



Source: EIOPA IORPs reporting. Reference date: Q4 2024

The allocation of real estate risk-related investments displays a varied distribution across countries. Real estate exposure differs slightly between EEA Member States. Member states with a larger IORP sector (e.g. NL and SE) tend to have higher exposures compared to countries with a smaller IORP sector.

Figure 5.40: Number of IORPs by Real Estate Exposure Range



Source: IORPs Q4 2024 data. The IORPs chart covers only individual data for which the granular exposure is reported.

Q4 2024 data show that 103 IORPs have a real estate exposure between 5% and 10%. 261 IORPs have a nearly negligible exposure towards real estate (1% at most), while 32 IORPs have an exposure which ranges between 1% and 2% of real estate investments among total investments. On the other end of the distribution, 32 IORPs have an exposure greater than 20%.

[48] For Italy, real estate exposure is calculated as a percentage of total amount of securities portfolio.

It is important to note that the limited liquidity of this asset class can restrict the ability to adjust portfolio allocations, which may create challenges for IORPs, especially in light of their obligation to meet liabilities and the persistent mismatch in duration between assets and liabilities.

5.2.4 ALTERNATIVE ASSETS

In response to a prolonged low interest-rate environment, many life insurers sought higher-yielding investments, characterized by higher illiquidity and more complex structures, which are making up approximately 25% of their portfolio (as of Q4 2024). Termed as "alternative assets[49]" or "alternative investments," these assets lack a globally recognized definition[50] but generally serve as alternatives to traditional investments like stocks, bonds and equity. With different supervisors holding varying perspectives, alternative assets often feature intricate structures and cater to a more limited investor base, resulting in reduced liquidity.

As interest rates stabilized, evidence revealed a continued trend of increased investment in alternative assets[51]. In Q4 2024, insurers demonstrate still a significant allocation to alternative assets, comprising 17.5% of their investments (Figure 5.41). Among these alternative assets, the real estate exposure (6.9%) stands out as a prominent allocation, particularly though investments funds (2.3%), mortgages (1.9%) and equity of real estate related corporations (1.5%), as well as and other types of investments (4.0%), with a notable emphasis on structured notes (2.2%). Private equity remains contained at 2.4%.

This fact suggests that beyond the interest rate environment there are other factors playing a role in influencing investment strategies. Alternative investments offer insurers several desirables such as: Potential for higher returns in the long-term, diversification benefits, a hedge for inflation, access to niche opportunities and most likely also a shield from market volatility.

[49] The term "alternative assets" lacks a universally accepted definition, with jurisdictions often defining them by exclusion—assets not included in traditional listings, such as corporate bonds, sovereigns, or certain mortgages. While some jurisdictions classify equity funds or real estate as non-traditional assets, there is no uniformity across all asset classes. Consequently, specific rules or guidelines for alternative assets are lacking in most jurisdictions, although overall disclosure and management requirements for factors like illiquidity and duration management still apply.

[50] The International Association of Insurance Supervisors (IAIS) proposed defining alternative assets based on risk-based characteristics, emphasizing substance over form. These characteristics include illiquidity, difficulty in valuation, and complex structures. Accordingly, asset categories such as private equity, private debt, real estate, and infrastructure investments could be classified as alternative investments in Solvency II balance sheets, as outlined in the Solvency CIC mapping of categories and subcategories. Global-Insurance-Market-Report-2023.pdf (iaisweb.org) at page 25.

[51] Financial Stability Report December 2023 - European Union (europa.eu)

Figure 5.41: Insurance sector - Traditional versus alternative assets by type of insurer

	Composite Insurer	Life Insurer	Non-Life Insurer	Reinsurer	Unit-Linked	Total
NOT ALTERNATIVE ASSET	81.4%	75.0%	81.2%	91.4%	89.1%	82.5%
Traditional	76.5%	69.9%	66.0%	38.9%	88.8%	73.6%
Equity participations	4.9%	5.1%	15.2%	52.5%	0.3%	8.9%
ALTERNATIVE ASSET	18.6%	25.0%	18.8%	8.6%	11.5%	17.5%
Real estate	**7.1%**	**12.2%**	**7.5%**	**2.0%**	**2.8%**	**6.9%**
Real estate funds	2.4%	3.3%	3.3%	0.3%	1.5%	2.3%
Property	1.7%	1.4%	1.5%	0.3%	0.5%	1.1%
Equity of real estate corps	2.1%	1.8%	1.1%	1.2%	0.8%	1.5%
Mortgages	1.0%	5.7%	1.6%	0.1%	0.1%	1.9%
Collateralised securities - Real estate risk	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%
Structurd notes - Real estate risk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Others	**4.1%**	**3.8%**	**2.1%**	**1.6%**	**5.6%**	**4.0%**
Structured notes	2.4%	1.5%	0.6%	0.2%	4.0%	2.2%
Alternative funds	0.5%	0.8%	0.6%	0.1%	1.3%	0.8%
Collateralised securities	0.3%	0.4%	0.4%	0.7%	0.1%	0.3%
Mortgages and loans other	0.1%	0.5%	0.4%	0.5%	0.1%	0.3%
Loans collateralised securities	0.3%	0.2%	0.1%	0.0%	0.0%	0.2%
Loans policies	0.2%	0.2%	0.0%	0.0%	0.0%	0.1%
Other collateralised loans	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%
Other investments	0.0%	0.3%	0.0%	0.0%	0.1%	0.1%
Private debt	**1.8%**	**3.5%**	**5.0%**	**3.9%**	**0.4%**	**2.4%**
Private corporate debt	0.6%	1.9%	3.2%	2.3%	0.3%	1.3%
Loans	1.3%	1.6%	1.8%	1.6%	0.1%	1.1%
Infrastructure investment	**2.6%**	**2.9%**	**2.0%**	**0.6%**	**0.5%**	**1.9%**
Infrastructure direct investment	1.2%	1.6%	1.2%	0.4%	0.1%	0.9%
Infrastructure funds	1.4%	1.3%	0.8%	0.1%	0.4%	0.9%
Private equity	**3.0%**	**2.7%**	**2.1%**	**0.5%**	**2.2%**	**2.4%**
Private equity funds	1.7%	1.9%	1.2%	0.2%	1.2%	1.4%
Unlisted equity	1.3%	0.8%	0.9%	0.2%	1.0%	0.9%
Total in EUR	**2,520,098,600,354**	**2,288,171,411,009**	**1,241,503,705,627**	**765,768,513,103**	**2,473,699,890,740**	**9,289,242,120,834**

Source: EIOPA Quarterly Reporting Solo. Reference date: Q4 2024.
Note. PRIVATE EQUITY is a) non listed equity [CIC XL3 and XT3 but not participation and not infrastructure] and b) private equity funds [CIC 47 but not infrastructure]; PRIVATE DEBT is a) non-listed or traded corporate debt [CIC XT21, XT28, XL21 and XL28 but not infrastructure] and b) loans [CIC 81 but not infrastructure]; REAL ESTATE is a) Property [CIC 91, 92 and 94 but not infrastructure] b) Mortgages [CIC 84, 87 and 88 but not infrastructure] c) Real estate funds [CIC 45 but not infrastructure] d) Equity of real estate corps [CIC 32 but not infrastructure] e) Structured notes real estate [CIC 55 but not infrastructure] f) Collateralized sec real estate [CIC 65 but not infrastructure]; INFRASTRUCTURE is a) Infrastructure funds [CIC 48] b) Infrastructure-direct-investments (i.e. all CIC excl. CIC48) with flag infrastructure investment]. OTHERS is a) Alternative funds [CIC 46 but not infrastructure] b) Loans collateralized securities [CIC 82 but not infrastructure] c) Other collateralized loans [CIC 85 but not infrastructure] d) Loans on policies [CIC 86 but not infrastructure] e) Collateralized securities [CIC 61-69 but nor CIC 65 real estate but not infrastructure] f) Structured notes [CIC 51-59 but nor CIC 55 real estate but not infrastructure] g) Loans and mortgages others [CIC 89 but not infrastructure] h) Other investments [CIC 0 but not infrastructure].

Life insurers are relatively more exposed to alternative assets compared to other type of businesses. Life insurers, Non-life insurers and re-insurers hold shares of respectively 25.0%, 18.8%, 8.6% of their investment in alternative assets. In particular, life insurers have relatively higher exposure to real estate, especially via mortgages, while non-life insurers have relatively higher exposure towards private debt. Unit-linked portfolios are characterised by holdings of alternative assets as well. This share is of 11.5% and they have a relatively higher exposures on structured notes (4.0%).

The proliferation of alternative assets among insurers has raised potential financial stability concerns. Despite insurers typically adopting a "buy and hold" strategy, the illiquid nature of alternative assets poses challenges, especially in severe stress scenarios where insurers may seek to liquidate these holdings. This difficulty in divestment is compounded by the complexity and opacity of certain alternative instruments, such as for example private credit, making credit risk assessment a daunting task for insurers.

5.3 IMPACT OF GEOECONOMIC FRAGMENTATION ON INSURANCE AND IORPS SECTOR

This section examines the vulnerabilities of European insurers and IORPs to trade tensions, US withdrawal from its role of defence guarantor, global policy uncertainty and other geopolitical risks which are adding uncertainty to the macroeconomic outlook.

BROAD PERSPECTIVE

The long-standing role of US as supporter for free trade and guarantor of security is questioned by the actions taken by the US administration. Trends towards fragmentation, including supply chain disruptions and financial restrictions such as tariffs, are hindering efficiency in the global value chain, bearing in mind the closed ties of the EU economy with the US.

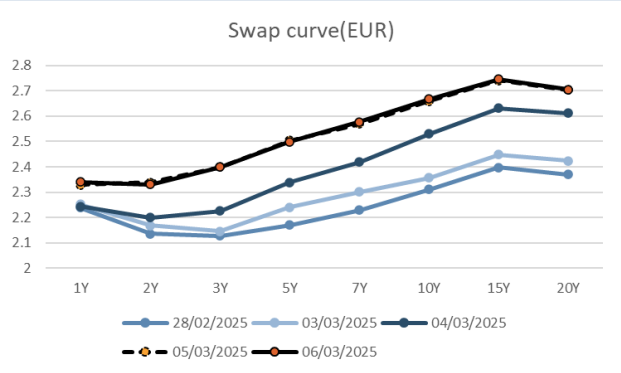
In the short term, this can lead to negative impacts, including high volatility and increased liquidity risk, inflationary pressures, and increased borrowing costs, weakening productivity and reducing net exports. The uncertainty can also deteriorate financial conditions and lower investment and consumer confidence. Competition issues for EU manufacturing are heightened by global supply shocks, such as less efficient re-routing of trade-flows, less efficient allocation of resources and efforts to promote "near shoring". This might be coupled with China diverting its business to Europe, also using dumping strategies. In the medium term, the impact may be milder as countries establish new trade relationships outside the US.

US pulling back from its role of security guarantee means more domestic spending for defence efforts and less for other priorities. Overall, the packages, including the funds Germany proposes for infrastructure, education etc. suggest a boost of supply for bonds. The packages are expected to be pro-growth but also pro-inflation. The combination of these aspects suggests higher interest rates despite the ongoing expansionary monetary policies deployed by central banks. Box 5.2 discusses liquidity needs to pay margins on derivatives when the 10 years German government bond yield and the euro swap rates increased sharply on 4th March 2025.

Box 5.2: A sudden and significant surge in interest rates and insurers' liquidity needs on derivatives

The European insurance sector has recently been facing liquidity challenges to cover margin calls on interest rate derivatives. This was due to the interest rate shock on March 3rd, which saw a significant increase in the 10-year German Bund – referred to as the European risk-free benchmark - and the 10-year euro swap rate. Over the course of just 1-2 days, rates rose by 30-40 basis points, highlighting potential vulnerability to rapid market fluctuations.

Figure B.5.6 - Shift of the (EUR) Swap curve – 6 months Euribor.



Source: Refinitiv

Broadly speaking, sharp changes in interest rates can have significant implications for insurers, including a decline in the value of both liabilities and fixed-income investments, however the ultimate impact on capitalisation levels depends on the duration gap. Indeed, for life insurers, typically characterised by negative duration gaps (relatively longer duration of liabilities), capitalisation levels tend to improve when rates increase and deteriorate when rates decline. For this reason, several insurers make use of derivatives to match liabilities long durations and hedge towards interest rates declines.

However, there's a catch: insurers who use derivatives to manage liabilities' interest rate risk, may face unexpected liquidity demands. This is because when rates increase, they may need to make margin payments to central clearinghouses, which can suddenly require a significant amount of cash.

Some of the large EEA insurers are users of derivatives, with interest rate swaps (IRS) being the most relevant type. Under EMIR, IRSs are subject to mandatory central clearing and variation margins are settled on a daily basis.

Insurers target dynamically the desired interest risk exposure by opening IRS positions (either as fixed-rate receivers and floating-rate payers or vice versa) and later on opening new positions either to augment or to offset existing ones. As a result, at each point in time it is the net overall position that matters and for insurers this is typically stable across quarters.

Specifically, as of the end of 2024, 64 insurers had taken on fixed-rate receiver net positions to match their liabilities and hedge against declines in interest rates. However, this also means they would realise mark-to-market losses and would have to pay margins on IRSs when interest rates increase. On the other hand, 41 insurers had taken on fixed-rate payer net positions to hedge their fixed income portfolios. This would make them margins receivers if interest rates rose.

In a sensitivity analysis on Solvency II reporting[52] data, when interest rates increase by 30 basis points, it's estimated that the total margin payments being made by insurers that are realizing on a net basis mark-to-

[52] Under Solvency II, insurers do not report margins paid on derivatives (detailed information is reported in EMIR). The methodology applied in EIOPA calculations is an approximation of IRSs market value changes (=variation margins). The data used are from Solvency II item-by-item list of derivatives (type of derivative CATEGORY (Swaps) subcategory (Interest rate) IRS, fixed rate payer (FX-FL) or fixed rate receiver (FL-FX), notional amount of each contract, Time to maturity of each contract and currency of each contract. Because EIOPA does not now the rate of the floater (i.e., short-leg) in the IRS, the derivative cannot be priced exactly. For each insurer, based on end of quarter (e.g. 2024-Q4) information, every IRS contract FL-FX and FX-FL is shocked based on its duration (maturity) and then the change in market value of all positions, for each individual insurers, is obtained by summing and netting across all contracts. When the shock is applied, a parallel shift of the swap curve is assumed. With a "rates-up shock" for some insurers the IRS mkt-to-mkt change is positive (those that hedge fixed-income portfolios) for other it is negative (those that hedge duration of liabilities), and in this second case insurers would have to pay margins.

market losses on IRS would be approximately €9 bn. In contrast, the total margin payments received by insurers, realizing on a net basis mark-to-market profits, would be substantially lower, at around €1.9 bn.

Results on individual insurers show that for the top 20 insurers (by EUR amount of variation margins paid) the variation margins triggered by 30 bps interest rate shock corresponds to 1% to 4% of investments (excluding Unit-linked). In some cases, the available cash does not suffice to cover the liquidity needs. However, insurers are rich of highly liquid safe government bonds and may use repo facilities to raise cash to meet margin payments. In this respect, many insurers have repo facilities[53] in place as an effective liquidity management tool.

There are a couple of additional potentially relevant aspects that should be taken into account. First, beyond IRSs, insurers use other types of interest rate derivatives such as swaption and bond options; aggregated figures are not notable, but for some individual insurers there might be materiality. Second, several EEA insurers are sellers of bonds in repurchase agreements (repos), which allows them to borrow cash using safe bonds as collateral. However, when the value of these safe bonds declines, insurers may be required to pay margins (i.e., adjusting haircuts), potentially leading to additional liquidity needs. The question is whether this impact is material, and whether the insurers exposed to margin payments on repos are the same ones that are also exposed to margin payments on derivatives.

One final point to consider is that positions on derivatives linked to other risk factors might potentially act as a mitigating factor by generating liquidity exactly when liquidity is needed on interest rate derivatives. It is indeed the case that after the interest rate shock on March 3rd the EUR appreciated against the USD and as a result, several EEA insurers have become margin receivers on currency derivatives. [54] Further considerations on the currency hedging are presented in Box 5.3.

The expansion of domestic budgets to finance investment in defence may compete with other European priorities, such a as addressing population aging and facilitating a green transition. Meanwhile, decreased global cooperation hampers collective action on climate change, cybersecurity threats, and health risks, leaving EU insurers and other financial institutions increasingly vulnerable to risks stemming from extreme weather events, pandemics, or cyberattacks on critical infrastructure.

Operational and cyber risks are also heightened. The EU's dependence on US-based cloud systems may cause operational challenges as the EU decouples from US dynamics. Moreover, cyber risk is also a growing concern because EU countries may become a target for state-sponsored cyber attacks.

While the insurance and IORP sectors are not directly affected by tariffs which target goods, not service, they can be indirectly impacted. Main transmission channels are market (and currency) volatility, unexpected claims' inflation, investment exposure to tariff-sensitive sectors, increased operational risks and premia re-pricing. The sectors may also see increased business in areas dealing with trade risks but may face difficulties in doing business and growing organically.

Supervisors of the insurance sector have identified the reduction in underwriting due to decreased disposable income available for purchasing insurance policies as the most prominent risk. The

[53] Based on the work previously done together with national supervisors for those insurers using derivatives (e.g. Netherlands and Denmark) have in place repo facilities. See Impact of inflation on the insurance sector (5.2.4).

[54] For example, many European insurers (over 200) use foreign exchange (FX) derivatives to hedge their investments in foreign currencies, such as the US dollar. These hedging positions are such that investment valuation declines would be offset (completely or partially) by mark-to-market profits on derivatives (and vice versa), meaning that insurers would be receivers of variation margins when foreign currencies depreciate.

second most significant risk, as identified by supervisors, is twofold: disruptions in the reinsurance business, which may manifest as increased reinsurance premiums or a contraction in supply, and heightened exposure to physical and transition risks. While macroeconomic uncertainty, characterized by inflationary pressures and asset volatility, is a concern widely acknowledged by supervisors, some smaller markets that are not directly tied to US business are also worried about the potential negative impact on their European business partners, who are more directly affected (see Fig. 5.42 for further information of insurance and reinsurance interconnectedness among EEA).

For IORPs, inflationary pressures pose a risk to inflation-linked benefit schemes, although these schemes are relatively rare and may have mechanisms in place to mitigate the effects of inflation (e.g. in Ireland). Supervisors also recognize the risks associated with market volatility and uncertainty, which can lead to increased credit spreads, reduced investment diversification, and lower returns, ultimately affecting IORPs' funding ratios.

Changes in trade agreements can also represent an opportunity for the insurance sector. The demand of business lines as credit suretyship and income protection insurance may indeed increase amid uncertainties.

UNDERWRITING

Insurance premiums (particularly non-life) are linked to the economic cycle. This implies that demand for (non-mandatory) coverages might shrink, reflecting the weaker economic activity. This effect could be partially mitigated from the higher risk aversion, or other opportunities of less traditional/ more specialty nature. This includes both life and non-life business.

Internationally operating or diversified lines of business can face challenges. International commercial (re)insurers might face challenges to globally diversify their portfolios. For example, marine, aviation and transport insurance, trade and suretyship (C&S) insurance and reinsurance lines of business could fall under this category. Specifically, to the latter, insurers might face heightened defaults, to the degree that contractually disruptions on trade flows are covered.

High interconnectedness across markets within and outside EEA. Looking at the location of risk of premiums written by EEA countries, those more exposed to US are, DE (EUR 19.2 bn) and IE (EUR 8.8 bn), representing more than 80% of the direct European exposures to US. Nevertheless, second round effects might materialize due to the linkages with DE of other EEA countries. In fact, EEA countries have premiums (located by risk) in DE for EUR 26.7 bn.

Figure 5.42: EEA country GWP (rows) by location of risks (columns), data in EUR bn

Location of risks

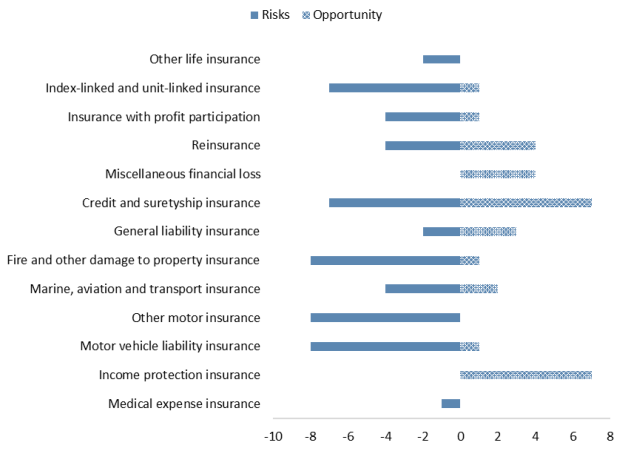
NCA country	Non EEA exposure				EEA																			Other
	US	CN	IN	GB	AT	BE	CZ	DE	DK	ES	FI	FR	GR	HU	IE	IT	LU	NL	NO	PL	PT	SE	SI	
AT	0.0	0.0	0.0	0.0	17.7	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.1	1.0
BE	0.1	0.0	0.0	2.4	0.2	20.0	0.1	1.7	0.2	0.7	0.1	2.1	0.3	0.0	0.7	1.3	0.2	3.4	0.3	0.3	0.5	0.2	0.0	1.7
BG					0.0		0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0		0.0	0.0	0.3			0.0	0.5
CY				0.0	0.0			0.0	0.0		0.0		0.1	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.4
CZ	0.0			0.0	0.2	0.0	7.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0		0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.2
DE	19.2	6.0	2.6	11.7	1.8	1.5	0.4	166.6	0.5	5.1	0.1	7.7	0.2	0.1	2.6	6.3	0.3	3.1	0.3	0.5	0.6	0.8	0.1	35.5
DK	0.0			0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.6	0.0	0.2
EE											(0.0)									0.0				1.2
EL							0.0	0.0		0.0		0.0	2.8	0.0		0.0				0.0			0.0	0.0
ES	0.6	0.4	0.1	0.8	0.0	0.2	0.0	0.8	0.1	32.0	0.0	0.8	0.1	0.0	0.3	0.9	0.0	0.2	0.0	0.1	0.7	0.0	0.0	3.9
FI	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	4.7	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.1		0.0
FR	1.4	1.1	0.5	5.8	0.3	1.2	0.2	2.7	0.2	1.7	0.1	243.4	0.2	0.1	2.0	2.8	0.4	1.1	0.2	0.6	0.6	0.4	0.0	11.1
HR				0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0		0.1		0.0		0.0		0.0	0.0	1.5
HU		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		2.8	0.0	0.0		0.0		0.0		0.0	0.0	0.0
IE	8.8	1.9	0.5	13.1	0.4	0.3	0.2	12.7	0.3	1.8	0.3	6.3	0.2	0.2	22.4	11.5	0.3	1.1	0.2	0.5	0.8	2.3	0.0	10.1
IS									0.0															0.2
IT	1.0	0.3	0.1	0.5	0.2	0.0	0.0	0.4	0.0	0.4	0.0	0.5	0.1	0.0	0.2	94.7	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.0
LI	0.5	0.0		0.2	0.1	0.0	0.0	0.8	0.0	0.1	0.0	0.0	0.0	0.0	1.0	0.2	0.1	0.8	0.0	0.2	0.0	0.1	0.0	1.5
LT							0.0	0.0		0.0		0.0				0.0				0.0				1.0
LU	0.6	0.0	0.0	6.2	0.4	2.8	0.2	4.8	0.8	2.2	0.3	17.7	0.2	0.1	1.0	6.8	3.2	1.8	0.3	0.3	0.8	0.6	0.0	6.5
LV												0.0				0.0				0.0				0.7
MT	0.0	0.3	0.1	2.0	0.0	0.1	0.1	2.1	0.0	0.4	0.0	0.8	0.1	0.0	0.2	0.2	0.0	0.8	0.1	0.1	0.1	0.0	0.0	2.6
NL	0.0	0.0	0.0	0.1	0.0	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	56.0	0.0	0.1	0.0	0.0	0.0	1.0
NO	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.1	1.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.3	0.0	0.0	0.5	0.0	0.3
PL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0	0.0	0.1
PT						0.0				0.1		0.1	0.0			0.1	0.0	0.0			6.5			0.0
RO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
SE	0.3	0.0	0.1	0.4	0.0	0.0	0.0	0.1	0.7	0.0	1.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	2.1	0.2	0.0	12.2	0.0	0.5
SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.2	0.3
SK				0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	(0.0)		0.0	0.0		0.0	0.0		0.0	1.0

Source: EIOPA Annual reporting Solo Solvency II Q4 2024. Table based on QRT S.04.05 R0020 Premium Written (Gross), value displayed is C0200 total by country.

Higher impact on non-life than life business is expected, possibly driven by higher claims, specifically for those claims that rely on imported goods. There might be also secondary impacts of generalised (claims) inflation.

NCAs identified motor vehicle liability insurance, other motor insurance and fire and other damages to properties as the three most negatively exposed lines of business, due to claims inflation driven by the rising cost of imported goods. On the other hand, income protection insurance is considered as the single line of business exposed to new opportunities. In relation to credit and suretyship insurance and reinsurance lines of business, supervisors identified both opportunities and threats.

Figure 5.43: number of NCAs identifying the presented lines of business as a risk or opportunity



Source: EIOPA Bottom up survey, Spring 2025

In terms of liability portfolios, the exposures are limited but vulnerabilities linked to swift repricing in the swap curves. Only 3.2% of EEA TP are cross border from outside EEA countries. Specifically for US liability exposures, they come as second largest non-EEA exposure, being 17.3% of the total non-EEA. Overall, 325 entities are holding non-EEA provisions of which 141 with TP from US. Nevertheless, volatility in the yields and sudden changes to the swap curves, as materialised on March 3rd on the 10 years government bond (Box 5.2), causes swift repricing in the value of the Technical Provision as their valuation is sensitive to the dynamics of the swap curve.

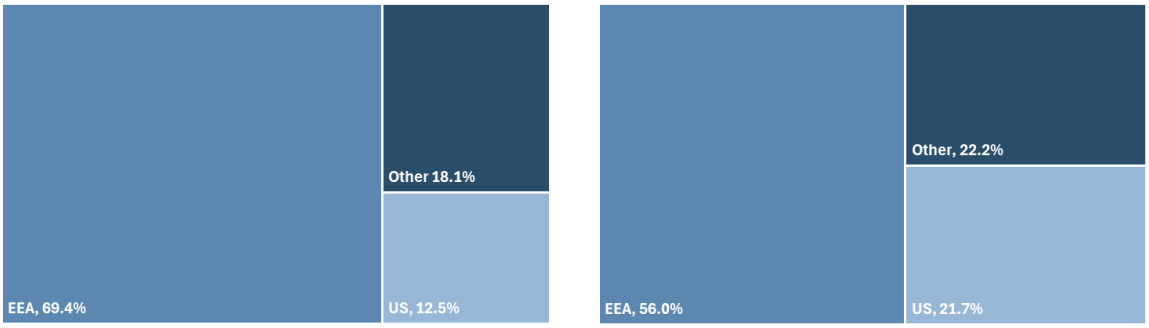
ASSET EXPOSURE

Mixed effect on insurers and IORPs assets. Higher volatility is expected to have a tangible negative impact on global markets in case of intensified trade war and fragmentation. Fluctuation in the exchange rates, notably USD movements against EUR might exacerbate or alleviate the impacts of price drops according to the exposure of insurers to USD denominated assets. In practice, insurers' investment sectors affected by tariffs, e.g. via holdings of corporate bonds or equity, might face losses. However, this also depends on the country of the asset's issuer. For example, for a given sector, different countries can have different reliance on their exports to US, hence different impact.

For IORPs, supervisors do not clearly expect a reduction of assets exposures towards USD denominated assets and assets issued by US domiciled entities amid geoeconomic fragmentation. Nevertheless, the risk of assets devaluation is commonly acknowledged.

From an investment perspective both life and non-life segments will be impacted. In 2024, around 30% of total investments are issued outside EEA, of which almost 12.5% in US (split in 35.4% bonds, 57.0% equity, 7.6% others). For IORPs the exposure in 2023 was higher: 44.0% outside EEA of which 22% in US (split in 27% bonds, 56% equities, 17% others).

Figure 5.44: Insurance asset exposure to non-EEA country and US (LHS) and IORPS (RHS)



Source: EIOPA QRS Solvency II Q4 2024 and IORPs statistics 2023, annual reporting, look through included. Note: The analysis is performed considering the issuer country of the assets. Funds are excluded, because the country of issuance of a fund does not inform of the country of issuance of the assets held within the fund.
The analysis on IORPs assets is performed considering together the information on individual submissions (available for AT, BG, DE, DK, FI, FR, HR, LI, LU, LV, NL, NO, PL, PT, SE, SI, SK) with aggregate data (BE, ES, IT, MT). Look-through information is limited on individual submission only. Nevertheless, including aggregate data allows to capture their direct exposure and total asset size.

Currency exposure plays a relevant role given the aggregate investment and liability imbalances. The impact of tariffs on the EUR/USD exchange rate is uncertain, with the USD initially appreciating

significantly. On aggregate the insurance sector is positively exposed to USD currency, benefitting from USD appreciation.

Exchange rate volatility is the key factor to monitor. It is very difficult to gauge the exact direction of impact of the tariffs on the EUR/USD rate. In fact, the USD appreciated substantially towards the end of 2024, and there were good reasons to expect that this new level would have remained or even strengthened e.g. due to less supply of USD, and increase in interest rate differentials. However, what happened so far is that on March 3rd, when European interest rates sharply increased, the USD depreciated. The depreciation continued further after the tariff announcement on 4Th of April.

Box 5.3 shows the impact of the USD appreciation on the insurance sector via their holding in currency derivatives as USD appreciated of almost 7% in 2024 Q4.

Box 5.3 EEA INSURERS' LIQUIDITY NEEDS ON CURRENCY DERIVATIVES

Life insurers have often liabilities in their local currency and then invest across borders to diversify their portfolios. This exposes them to currency risk and to hedge unmatched currency positions they use derivatives like primarily Forward Exchange Rate Agreement (FX). Investing in foreign currency and hedging is a common practice among insurers in euro area and Scandinavian countries (Denmark, Sweden, Norway, and Finland). Indeed, USD is the most material foreign currency in EEA insurers' investments.

During the last decade, exchange rates have experienced some volatility due to the uncertainty from for example the Brexit and COVID-19 pandemic-related economic shocks. More recently, it is trade tensions between the US and EU and monetary policy divergences between the Federal Reserve and the European Central Bank that resulted in a high volatility of USD/EUR exchange rate.

This box examines EEA insurers' liquidity needs to meet variation margin (VM) on currency derivatives during 2024 Q4. Over this quarter, the USD appreciated against the EUR by 6.7%.

For the EEA insurance sector, currency derivatives represent approximately 16 % of the total derivative exposure in terms of gross notional amount and are second in importance only to those used for managing interest rate risk. FX is by far the most used derivative type to manage currency risk covering 80% of the amount, followed by currency swap contracts.

To hedge investments in a foreign currency mark-to-market, profits on derivatives must be realised when investments' valuations decline due to foreign currency depreciation. As a result, in the case of the use of symmetric derivative like FX (i.e., not options), increases in investment valuations are offset by mark-to-market losses on derivatives, which also trigger variation margin payments.

As of the beginning of 2024 Q4, 266 insurers have been using currency derivatives. During the quarter the USD appreciated against the EUR, and 200 insurers realised mark-to-market losses on their currency derivatives positions and have therefore been margin payers, while 66 realised mark-to-market profits and have been margin receivers. Insurers using currency derivatives are located across 24 EEA countries. Most are in DE (86), FR (52), NL (37), DK (35), ES (30), SE (26), BE (21), IT (21), NO (15).

Table B.5.1 – Variation margin to TOT INV, excl. Unit-Linked (EUR mln). The variation margin (cumulatively paid within the quarter) corresponds to the actual Q-o-Q change of the SII value of each individual positions [calculated only on contracts that did not mature within quarter; for this reason, VM are slightly underestimated as VM might have been paid on contracts that expired before the end of the quarter]. Only information regarding the 200 insurers realising losses in the quarter in which the USD appreciated against the EUR by 6.7% are accounted to compile this table.

	SII value beginning Q (EUR mil.)	SII value end Q (EUR mil.)	Variation margin (EUR mil.)	Total investments [excl. Unit Linked] (EUR mil.)	Variation margin to total investments (excl. Unit linked)
Ins 1			-572		-2.0%
Ins 2			-480		-1.8%
Ins 3			-328		-2.1%
Ins 4			-320		-0.5%
Ins 5			-302		-1.4%
Ins 6			-254		-2.0%
Ins 7			-200		-1.0%
Ins 8			-194		-0.6%
Ins 9			-176		-0.2%
Ins 10			-170		-0.4%
Ins 1 to 200	**-493**	**-5,876**	**-5,383**	**2,555,353**	**-0.2%**

Sources: Solvency II data and EIOPA calculations. Prudential solo data for Q3 and Q4 2024.

The total cumulative variation margin paid in 2024 Q4 has been approximately EUR 5.3 Bn corresponding to 0.2% of total investments of insurers using currency derivatives. Among the top 10 margin payers [by EUR amount] three insurers had material liquidity needs such as 2% of their investments.

Insurers use also derivatives to manage other risks so variation margins might add up or net out depending on initial period exposures and the dynamics of the underlying factors within each quarter. However, during 2024 Q4 no material variation took place, for example on interest rates, on a Q-o-Q basis, hence it can be conjectured that the USD/EUR dynamics has been the major driver of insurers' liquidity needs linked to the management of derivatives.

Differently, it is noteworthy that during 2025 Q1 after the 3 March 2025 when euro interest rates increased unexpectedly and sharply the EUR appreciated against the USD (i.e., USD depreciated). This means that for those life insurers using both derivatives to hedge interest rates risk on their liabilities and currency risk on their investments, liquidity absorbed by interest rates derivatives (insurers variation margin payers) have been potentially/partially offset by the liquidity generated by currency derivatives (insurers variation margin receivers).

THEMATIC ARTICLE

Stylised facts on European insurers' investments in corporate bonds

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Abstract

This article examines European Economic Area (EEA) insurers' investments in corporate bonds using granular Solvency II supervisory data. EEA insurers primarily hold investment-grade bonds. The majority of these bonds are issued by companies with credit quality CQS 2 (A) and CQS 3 (BBB). In terms of sector allocation, the largest shares are held in Banking (25.6%) and Manufacturing (14.4%). Another significant share (18.9%) consists of covered bonds issued by banks, which are categorized as CQS 0 (AAA) and 1 (AA), indicating a low-risk profile due to their collateralized nature, backed by underlying assets.

The empirical analysis of individual insurers' corporate bond portfolios delivers the following set of results: First, larger insurance companies typically hold more diversified portfolios, characterized by investments in a higher number of issuers, spanning a broader range of sectors, countries, and currencies. Second, the level of risk is generally contained and is similar for both large and small insurers. However, insurers operating in countries with higher interest rates (10Y benchmark bond), which are often indicative of higher country risk, tend to have riskier corporate bond portfolios. Also, life insurers with relatively longer liabilities' duration invest in corporate bonds with slightly higher yields; these bonds are characterised by similar creditworthiness but longer maturities, aligning insurers' assets duration with their liabilities duration to manage interest rate risk. Third, corporate bond portfolios of large insurers are characterised by a notable similarity in terms of issuers holdings. However, they also are highly diversified. In contrast, portfolios of smaller insurers are relatively more concentrated, but are characterised by low portfolio similarity, meaning each insurer tends to invest in a distinct set of diverse bond issuers. Fourth, the similarity of insurers corporate bond portfolios tends to be higher within country, however in general the low risk and the good degree of diversification of the corporate bond portfolios act as mitigating factors.

JEL classification: G11, G15, G2, G22, G28.

Keywords: Portfolio choice, fixed income, international financial markets, financial institutions and services, insurance companies, government and policy regulation.

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1. Introduction

The European insurance sector is a significant contributor to the continent's economy, providing a wide range of insurance products and services to individuals and businesses. The European insurance market is one of the largest in the world, with total premiums written of over EUR 1.52 trillion and total assets of 10.09 trillion in 2024[55]. The industry is also a significant employer, providing jobs for more than 700 thousand[56] people in the EU. The European insurance sector is regulated by the European Insurance and Occupational Pensions Authority (EIOPA) and the Solvency II framework, which sets out capital requirements and risk management standards for insurers.

The total investments of EEA insurers amount to EUR 9.29 trillion as of 2024 Q4. A significant portion, 26.6%[57], consists of unit-linked products, where policyholders bear the primary risks. Insurers' portfolios are large and diversified, comprising a range of assets, including government and corporate bonds, stocks, real estate, mortgages, infrastructure and other investments. There are notable differences in asset allocation between various types of insurance undertakings. Life insurers, which are characterized by long-term liabilities, tend to hold a larger proportion of government bonds with long durations and mortgages in their portfolios. Non-life insurers, in contrast, which focus on more short-term liquidity management to pay claims, typically hold highly liquid assets such as government bonds with short maturities or liquid deposits, as well as slightly more corporate bonds and unlisted equities. Reinsurers allocate a substantial portion of their investment assets to unlisted equities, that are mostly holdings in related undertakings and maintain significant cash and deposit reserves.

This article begins by presenting novel descriptive statistics on insurers' investments in corporate bonds. It then zooms in on a few key aspects of these investments, including the associated risk, the degree of diversification, and similarity between individual insurers' corporate bond portfolios.

Insurers have various options when investing in corporate bonds, such as seeking high yields or prioritizing safety. They may also choose to diversify their exposures across different issuers, sectors, countries, or currencies, or instead concentrate their investments in specific areas. Ultimately, the portfolios of individual insurers may end up being very similar or distinctly different, depending on their

[55] Source for Gross Written Premium and Total Assets: EIOPA Insurance statistics balance sheet. Total assets include investments, derivatives and other elements such as for example reinsurance recoverable and receivable, deferred taxes, intangible and pension benefit surplus.

[56] There were 744,000 persons employed in insurance activities sector in 2021 in EEA. Source: Eurostat here

[57] Source: EIOPA Insurance statistics asset exposures

investment approaches and priorities. After presenting some empirical facts on risk, diversification and portfolio similarity, this article examines the relationships between these factors and identifies the key drivers that influence them. Furthermore, it discusses the potential implications of these investment allocations, shedding light on potential consequences.

Insurers are important investors in the corporate bond market. Issuers of corporate bonds can be from specific sectors, countries or regions, which can provide diversification benefits but also expose country-specific risks. Corporate bonds can be denominated in different currencies, which can provide additional yield but also entail currency risk. Depending on their investment horizon and liquidity needs, insurers must also consider the liquidity of the bond market, as some corporate bonds may be less liquid than others such as for example non listed corporate bonds, making it more difficult to buy or sell them quickly.

Under Solvency II, insurers must consider spread risk when calculating their solvency capital requirements. Spread risk refers to the potential loss in value of a corporate bond due to changes in the yield spread between the bond and a comparable risk-free interest rate. To mitigate this risk, insurers must hold capital[58] against it, with the required amount determined by the bond's creditworthiness and duration. For example, a 5 and 10-year BBB-rated bond has respectively a 12.5% and 20% risk factor. Additionally, corporate bonds are subject to concentration risk capital requirements (government bonds are exempted) if they exceed certain thresholds[59] (e.g. 1.5% or 3% of total investments), depending on their credit quality.

Summary statistics show that corporate bonds represent a share of 30.9% of total insurers' investments (excluding unit-linked). Granular information is available in the item-by-item list of assets in Solvency II reporting data only for direct holdings. Direct holdings of corporate bonds amount to EUR 1.5 trillion and represent a share of 24.0% of total investments and cover the majority of overall corporate bond holdings, while holdings of corporate bonds via funds instead amount to 6.9% on EEA aggregate; but are more material for some countries such as for example Germany, Denmark and Austria. Corporate bonds held are investment grade rated, mainly CQS2 and CQS3 corresponding to AA and BBB. Bank bonds represent the largest share of 25.6% of total holdings. Corporate bonds have an average remaining maturity of 6.2 years.

The empirical analysis begins by examining the diversification of individual insurers' investment portfolios. The findings indicate that larger insurance

[58] The regulatory requirements for spread risk are outlined in the Solvency II Delegated Regulation and the European Insurance and Occupational Pensions Authority (EIOPA) guidelines. Spread risk on bonds and loans - EIOPA

[59] Delegated regulation - 35/2015 - EN - EUR-Lex Article 185 Relative excess exposures thresholds.

companies tend to have more diversified portfolios, featuring investments in a greater number of issuers across various sectors, countries, and currencies.

The analysis takes a second step by examining the risk levels in insurers' corporate bond portfolios. Notably, the risk levels are similar for both large and small insurers. However, there is a positive correlation between an insurer's portfolio risk and the risk of the country in which it operates. This is measured by the 10-year benchmark bond interest rate, which often reflects a country's overall risk. In simpler terms, insurers operating in countries with higher interest rates, typically indicative of higher country risk, tend to hold riskier corporate bond portfolios. Furthermore, life insurers with longer-term liabilities tend to invest in corporate bonds with slightly higher yields. These bonds have similar creditworthiness, but they have longer maturities, which helps insurers align their asset duration with their liability duration and manage interest rate risk.

As a third step the analysis focuses on analysing the degree of similarity of corporate bond portfolios in terms of holdings of the same bonds by issuer. Corporate bond portfolios of large insurers exhibit notable similarity, however, they also are highly diversified. In contrast, the portfolios of smaller insurers are relatively more concentrated, but are characterised by low portfolio similarity, meaning each insurer tends to invest in a distinct set of diverse issuers.

In the final step, the analysis examines the interplay between diversification, risk, and portfolio similarity in corporate bond investments. The similarity of insurers corporate bond portfolios tends to be higher within country, however in general the low risk and the good degree of diversification act as mitigating factors.

The paper is organized as follows. In section 2, we discuss the literature on insurers investments in corporate bonds. In section 3, we discuss the data used, the sample construction of the main variables and some novel descriptive statistics. In section 4, we present empirical findings on the risk, the degree of diversification and similarity characterising EEA insurers portfolios. In section 5, we conclude.

2. Literature review

This article is related to the paper by Du et. All (2025) which studies the global asset allocation decisions of European insurers and banks to fixed-income securities. Du et. All (2025) documents that the total assets of insurance companies and pension funds (ICPF) far exceed the amount of government bonds outstanding in Europe, and that countries with a large ICPF sector tend to have a large corporate bond market[60].

[60] This relationship is highly robust and holds for both financial and non-financial corporate bonds, even after controlling for proxies of financial market development, such as per capita income, and the size of the banking sector, suggesting the likely role of a large ICPF sector in promoting the development of the corporate bond market, consistent with the thesis proposed by Scharfstein (2018). Also, countries with relatively low government bond yields and sovereign credit risk tend to have large corporate bond markets.

Using SII reporting data on European insurers' and BIS banks' global fixed-income portfolios, Du et. All (2025) documents five novel findings that cannot be explained by traditional international finance portfolio frictions, such as home country and home currency bias. First, there is large cross-country heterogeneity in insurers' and banks' portfolio allocations, in spite of banks and insurers across countries all having access to global capital markets and being regulated under the common pan-European regulations[61]. Second, the composition of domestic fixed income markets, as measured by the share of corporate bonds in outstanding domestic fixed-income instruments, is strongly positively correlated with the fraction of the overall portfolio invested in corporate bonds for both insurers and banks. The third fact documented is that in countries in which insurers and banks have higher corporate bond shares in their domestic fixed income portfolios, their foreign investments tend to resemble their domestic portfolio and feature more corporate bonds. This phenomenon is referred to as the domestic projection bias. Fourth, while the holdings of foreign bonds resemble the domestic portfolio, one might expect that when a multinational insurer operates a subsidiary in another jurisdiction, they use this as an opportunity to form a globally optimal portfolio. In contrast to this hypothesis, the facts point to the opposite, Du et. All (2025) find that local subsidiaries of multinational groups have very similar portfolio allocations as other local insurers in their market. This phenomenon is referred to as the going native bias. Fifth, the paper studies how asset allocation decisions vary between countries with different levels of domestic government bond yields and sovereign credit risk and observe a similar set of facts. An insurer operating in a country with high domestic government yields, which tends to be a country with higher sovereign credit risk or inflation risk, tends to hold a portfolio of foreign bonds that earns a higher yield as well (and is likely to be riskier as well). This is another example of "domestic projection bias." Also, local and multinational insurance companies behave alike, another manifestation of "going native bias." Du et. All (2025) also illustrates how higher corporate bond allocations are absorbed in the insurance sector by showing that in euro-area countries, insurers that hold more corporate bonds have significantly lower leverage and a somewhat higher ability to pass the losses to policy holders, but do not appear to have worse regulatory capital ratios. In contrast, in non-euro areas, insurers adjust along all three margins to absorb higher credit risk associated with higher corporate bond shares. Finally, Du et. All (2025) also shows that the share of corporate bond in insurance companies' investments in corporate bonds varies depending primarily on country factors but also on insurers characteristics. Insurers with higher corporate bond shares tend to have shorter liability duration and lower leverage. Furthermore, a lower share of profit participation products and a higher share of

[61] For example, the share of government bonds in the total portfolio ranges from less than 20 percent for insurers domiciled in Norway to about 90 percent insurers domiciled Hungary.

loss absorbing capacity in technical provision tend to be associated with higher corporate bond shares.

This article is also related to the paper by Girardi et. All (2021) which investigates US insurers portfolio similarity, its determinants and implications. The paper makes use of 2002-2014 security-level data from the National Association of Insurance Commissioners (NAIC) to measure the portfolio similarity between a pair of US insurers as the cosine similarity of their holdings. It examines the measure's association with common selling and finds that pairs of insurers that have greater portfolio similarity have larger subsequent common sales regardless the size of the insurers and also that it is the portion of high-risk portfolio similarity which contributes most to common sales. The paper examines whether forced selling either due to a shock to the asset or liability side of insurers' balance sheets affects asset prices by exploiting two events: the bankruptcy of Lehman and the landfall of hurricanes Katrina and Rita and shows that in response to these shocks, insurers with large exposures to the bank debt, AIG, or hurricane-affected states have even greater common sales when they have greater portfolio similarity.

Chaderina et. All (2025) show that during fire sales, liquid assets experience greater price impacts than less liquid assets. Empirically, they examine Property and Casualty insurance companies during major natural catastrophes and observe that these companies primarily sell previously liquid bonds, attempting to avoid common bonds but only to a limited extent. This behaviour results in substantially larger price impacts on liquid bonds compared to typically less-liquid bonds. Chaderina et. All (2025) suggest that regulatory measures of systemic risk should consider the portfolio overlap in liquid bonds, as it exacerbates fire-sale losses.

3. Data

3.1 Data

Since 2016, the Solvency II regulation has standardized supervisory reporting requirements for European insurance and reinsurance companies[62]. The European Insurance and Occupational Pensions Authority (EIOPA) is responsible for collecting this data, which includes quantitative reporting templates (QRTs) [63] from all solo and group entities subject to Solvency II. These reports are submitted through national supervisors in the European Economic Area (EEA) on a regular

[62] Information about Solvency II can be found at https://www.eiopa.europa.eu/browse/regulation-and-policy/solvency-ii_en

[63] Reporting requirements under the Solvency II Directive can be found at EUR-Lex - 02015R2450-20200607 - EN - EUR-Lex and the Solvency II QRTs can be found at https://dev.eiopa.europa.eu/Taxonomy/Full/2.8.2/S2/EIOPA_Solvency_II_DPM_Annotated_Templates_2.8.2.xlsx

basis. The frequency of reporting varies, with some QRTs submitted quarterly and others, which provide more detailed information, submitted annually.

This article analyses the 2024 year-end data of individual insurers, focusing on detailed portfolio holdings that include every single position and instrument attribute. Additionally, it utilizes insurer-level information, such as Total Assets, Own Funds (OF), and Solvency Capital Requirements (SCR), which are sourced from Solvency II reporting templates. Please note that the data submitted to the European Insurance and Occupational Pensions Authority (EIOPA) is confidential and not publicly available. Corporate bond yields (yield-to-maturity) are from the Centralised Securities Database (CSDB). As a result, the findings are presented at a high level of aggregation to ensure that individual companies remain anonymous and cannot be identified.

3.2 Summary statistics and analysis sample

This section documents the main data facts on insurers' corporate bond holdings and guides through the construction of the sample used in the empirical analysis.

European Economic Area (EEA) insurers' investments in corporate bonds can be broken down into two categories: direct holdings and indirect holdings through funds. Direct holdings of corporate bonds account for 24.0% of total investments, excluding unit-linked investments. In contrast, indirect holdings of corporate bonds within funds make up 6.9% of total investments. It's worth noting that only direct investment holdings are reported at a granular level, with detailed information on individual securities and positions. Unfortunately, this level of detail is not available for indirect holdings through Collective Investment Funds (CIUs), which limits the analysis of these investments.

In the context of Solvency II reporting, the term "corporate bonds" (CIC 21) encompasses a broad range of investment types. However, this category also includes subcategories that are not the primary focus of this article, such as "Money Market Funds" and "Commercial Papers". The types of corporate bonds relevant to this discussion are: 1) Senior corporate bonds (CIC 21) and 2) Junior corporate bonds, which include convertible bonds (CIC 22), hybrid bonds (CIC 25), and subordinated bonds (CIC 28).

Covered bonds, as defined in CIC 26-27, differ from traditional corporate bonds and are therefore only discussed in this paragraph but not included in the empirical analysis. Indeed, Solvency II capital requirements do not penalize concentration on issuer in the case of covered bonds, unless the exposure exceeds 15% of total investments. Unlike corporate bonds, covered bonds are typically issued by banks. What sets them apart is their dual-recourse feature, which provides a claim on both the issuing bank and a separate pool of high-quality collateral. This collateral

pool, known as the cover pool, must be maintained by the issuer in accordance with specific covered bond legislation.

Table 1 shows that the sample includes 1246 solos insurers holding corporate bonds and how these are distributed by type and country. There are 516 life and composite insurers, 669 non-life and 61 reinsurers. DE, FR are the countries where more insurers hold corporate bonds 242 and 149 respectively.

Figure 1 illustrates the creditworthiness of corporate bonds held by EEA insurers, categorized by Credit Quality Steps (CQS) with a breakdown by type. The majority of these bonds are investment graded, with most falling into the CQS 0 (AAA) group, indicating a low-risk investment. Breaking it down further, we see that senior bonds are primarily rated CQS 1 (AA), CQS 2 (A), or CQS 3 (BBB). Junior bonds are mostly rated CQS 2 (AA) or CQS 3 (BBB). Insurers tend to favour safe investments, with only a small portion of their portfolio allocated to below-investment-grade or non-rated bonds.

Figure 2 breaks down EEA insurers' corporate bond holdings by sector of the issuer. The distribution is as follows: Banking 25.6%, Manufacturing 14.4%, Other financial 8.9%, Energy 6.2%, Insurance 6.0%, Information and communication: 5.1%, Transport 4.0%, Real estate 3.6% and Others. Covered bonds, which account for 18.9% of holdings, are issued by banks but are not reflective of bank risk.

Figure 3 illustrates the geographic distribution of EEA insurers' corporate bond holdings by issuer country. The most prominent countries of issuance are: France (FR), United States (US), Germany (DE), Netherlands (NL) and United Kingdom (UK). It's worth noting that a significant portion of bonds issued by corporations in France, Germany, Denmark (DK), and Sweden (SE) are covered bonds, which are a distinct type of bond with unique characteristics.

Figure 4 illustrates the distribution of EEA insurers' corporate bond holdings by remaining maturity, broken down by bond type. The results show that most senior bonds have maturities of less than 9 years, with an average weighted maturity of approximately 6.1 years. In contrast, subordinated and covered bonds have longer maturities, with average weighted maturities of 7.7 years and 8.3 years, respectively. Notably, covered bonds are characterized by their high safety profile and longer maturities, making them more similar to government bonds. As a result, the primary risk associated with covered bonds is interest rate risk (duration), rather than credit risk.

In summary, this analysis concentrates on two types of corporate bonds: Directly held senior corporate bonds (CIC 21) and directly held junior corporate bonds (CIC 22, 25, and 28), which include convertible, hybrid, and subordinated bonds. Together, these bonds total EUR 1.1 trillion and account for 17.7% of EEA insurers' total investments, excluding unit-linked investments.

4. Empirical Analysis

4.1 Size and diversification

This section analyses the degree of individual corporate bond portfolios diversification and cross-border investments and the link with insurers' size.

The metric used to measure the diversification of a portfolio is the Herfindahl-Hirschman Index (HHI). The HHI is a statistical measure that calculates the concentration of a portfolio by squaring the share of each investment in a portfolio and summing them up. The resulting value is a number between 0 and 1, where lower values (closer to 0) indicate a highly diversified portfolio with minimal concentration, while higher values (closer to 1) indicate a highly concentrated portfolio with significant exposure to a few investments.

Table 2 shows that larger insurance companies tend to have more diversified corporate bond portfolios meaning they invest in a higher number of issuers, across more sectors, countries and currencies. Smaller insurers tend to have more concentrated portfolios and invest relatively more locally (i.e., in the home country). When investments are primarily in the home jurisdiction diversification possibilities (across bond issuers) can be limited by the relative size of the local bond market. However, home investments are generally not very high (e.g. for non-life insurers 34.1%), most likely due to the fact that there are only few large bond markets where insurers can invest in (e.g. in EU Germany and France, while outside EU there are the US and UK corporate bond market).

For life, composites and reinsurers, the degree of diversification and the share of cross-border investments (1 - share of corporates at home) tends to be higher than for non-life insurers across all types of breakdowns, being issuer, sector, country or currency. Reinsurers are highly diversified due to their natural global nature. Risk diversification on the liabilities side takes place by underwriting across geographies and investments are global for prudent risk management.

The facts that large investors tend to diversify more than smaller investors has been documented in several previous studies and is not surprising. Diversification is a key aspect when investing that involves spreading investments across different asset classes, sectors, geographic regions and currencies to minimize risk and maximize returns. Large investors have a distinct advantage when it comes to managing their investments. Large institutional investors such as insurers, pension funds, endowments, and sovereign wealth funds and high-net-worth individuals, often have more resources and expertise to devote to diversification. They often have in-house teams or hire external experts to oversee their portfolios, allowing them to implement complex investment strategies and make adjustments. Additionally, their scale enables them to negotiate lower fees (economies of scale) with investment managers, reducing costs per unit of

investment. Also, large institutions can invest in a broader range of assets, including private equity, hedge funds, and real assets, which may be inaccessible to smaller investors.

4.2 Size and portfolio similarity

This section analyses the degree of insurers' portfolio similarity and what is the link with the size of an insurance company.

The metric used to analyse individual insurers' portfolio similarity is the "cosine similarity" which is a widely used metric to measure the similarity between two vectors. To apply cosine similarity to investment portfolios, each portfolio is represented as a vector where the elements are the shares of each corporate bond "issuer" in which the portfolio is invested (i.e., market value of investment in an issuer to total corporate bonds held). The cosine similarity is calculated for each pair of insurers and averaged within defined groups such as for example size buckets, types of insurers or country of the insurers (i.e., NCA country). The cosine similarity ranges from 0 to 1 where pair of portfolios with higher values are more similar.

A trend emerges from Table 3, which shows that European insurers with large corporate bond portfolios exhibit a high degree of similarity in their investments. Specifically, 22.2% of issuers overlap among these insurers, indicating a notable fact. In contrast, smaller insurers display a much weaker similarity, with only 7.8% of issuers in common. Furthermore, the data suggests that life, composite, and reinsurers tend to have more similar investment portfolios than non-life insurers. One possible explanation for the high similarity among large insurers is that they often adopt a "broad market portfolio" approach, investing across borders and diversifying their holdings by holding small fractions of bonds with large outstanding amounts (issued by large corporations).

In general portfolios at the EEA level are characterized by low similarity, but it could be expected that corporate bonds portfolios might be characterised by a high degree of similarity for insurers in the same country (i.e. within country similarity). Indeed, Table 4 shows that both for the top 100 insurers by size and all other insurers the degree of similarity within country tends to be higher than the degree of similarity at the EEA level. It is also confirmed that large insurers are characterised by a higher degree of similarity within country, reaching high values such as 43.7% for AT and 40.0% for FR.

4.3 Risk in corporate bonds portfolios

This section analyses the level of risk in insurance corporate bonds portfolios and explores the main determinants.

The yield to maturity (YTM) is a measure of the total return an investor can expect to earn from a bond, assuming it is held to maturity. While YTM is not a direct measure of risk, it can provide some insight into the bond's risk profile[64].

The risk of a corporate bond is a combination of the creditworthiness of the issuer and of the maturity of the bond. This is also recognized in Solvency II capital charges on spread risk where e.g. the charge is equal, meaning 10%, for a 4Y BBB rating (CQS3) and a 9-year A rating (CQS2).

It could be expected that large insurers may be less risk-averse due to their bigger size and more resources and hence opt for high-risk investments and diversify. Or instead, they might opt for high-risk investments and concentrate their investments to fully exposure the higher yields. Small insurers may be characterised by a more risk-averse profile due to their limited resources. As a result, they may be less likely to diversify their investments, opting instead for more conservative, low-risk investments.

Regression results in Table 5 show that the **country factor** is the main determinant of the variation of the level of risk in corporate bonds portfolios; it explains 21% and 38% of the variation for life and non-life respectively, meaning that for non-life insurers the risk tends to be more strongly linked to the home country risk. We also investigate the level of risk of individual insurers' corporate bond portfolios across countries. Figure 4 shows that YTM distribution varies notably across countries and that the level of the yields tend to be similar within countries. This cross-country variation is determined to a large extent by the level of the country risk, indeed Figure 5 shows positive correlation between overall bond portfolio risk and country level of interest rates. The facts that the overall corporate bond portfolio yield is strongly correlated with domestic interest rates or credit risk across countries has been already documented in the paper "International portfolio frictions" by Du et al (2025), which also shows that this holds both for the home share and for the foreign share of the corporate portfolio.

In the regression in Table 5, after controlling for country fixed effect, no link is found between the level of risk and the **size of the insurer** as captured by total assets (we also tested the size of the corporate bond portfolio or total assets in conjunction with the share of the corporate bond portfolio to total investments and

[64] Higher YTM is linked to higher risk, indeed, generally, bonds with higher YTMs are considered riskier, as investors demand higher returns to compensate for the increased risk of default or other credit-related issues. The credit spread is the difference between the YTM of a corporate bond and a comparable government bond (risk-free benchmark). A wider credit spread indicates a higher perceived risk of default, as investors require a higher return to compensate for the increased credit risk. YTM is also affected by interest rate risk, as changes in interest rates can impact the bond's value. A higher YTM may indicate a longer duration, which increases the bond's sensitivity to interest rate changes. YTM can also reflect liquidity risk, as bonds with lower liquidity may have higher YTMs to compensate investors for the potential difficulty in selling the bond quickly.

no link is found). All types of insurers tend to invest in investment grade corporate bonds, however reinsurers are found to have slightly riskier portfolios (as captured by the "dummy" reinsurer); for reinsurers the country fixed effects do not play any role as these are concentrated in few countries. Further investigation shows that the creditworthiness and maturity of the corporate bonds held by reinsurers does not differ materially from other type of insurers, however reinsurer tilt more strongly towards corporate bonds by US issuers, i.e. approximately 23% instead of approximately 15% that is found for life and non-life insurers; this is consistent with reinsurers' need to match liabilities underwritten in US dollars.

Interestingly, for life insurers the **investment horizon** as proxied by the duration of the liabilities correlates positively with the level of risk of the corporate bond portfolios. Further investigations shows that life insurers with long and short liability durations onboard bonds with similar levels of creditworthiness, but the former tend to invest in bonds with longer maturities (approximately 7.4 years as opposed to 4.8 years), consistently with the need for asset and liabilities duration matching.

4.4. Portfolio similarity and diversification: an EEA overall insurance and country level perspective

This section discusses the interplay between diversification, risk and portfolio similarity and situations in which portfolio similarity might be a problem.

From a macroprudential perspective, high similarity between investment portfolios can pose a significant risk. If a shock were to occur, it could force insurers to liquidate their investments simultaneously, leading to a surge in fire-sales of the same assets. This, in turn, could have a substantial impact on the market.

As previously mentioned, the corporate bond portfolios of large European insurers exhibit a notable similarity. However, they also are highly diversified. In contrast, the portfolios of smaller insurers are relatively concentrated, but are characterised by low portfolio similarity, meaning each insurer tends to invest in a distinct set of diverse issuers. Basically, the large insurers segment is diversified due to the individual diversification effort of each insurer. In contrast, the small insurers segment is diversified because of the low similarity between portfolios, despite small insurers being relatively more concentrated (i.e., less diversified) on an individual basis.

To confirm this observation let us have a look at the diversification of the insurance sector level. As shown in Table 6 at the EEA insurance sector appears to be well diversified with a very low HHI of 0.0034 which indicates that the sector invests material amounts across 294 issuers. The total number of issuers in insurers portfolios is approximately 7000. With few exceptions, also country level insurance sectors tend to be characterized by a good degree of diversification.

In summary, the risk level in insurers' corporate bond portfolios is relatively contained. While large insurers have similar portfolios, they are also highly diversified, which helps to mitigate risk. One possible explanation for this similarity is that the size of an insurer's portfolio drives its investment decisions. Specifically, large insurers can only hold a small fraction of each issuer's outstanding bonds, which means they tend to invest in bonds with large issuances, by large corporations. These bonds, in turn, are often held by other large insurers, creating a cycle of similarity among their portfolios.

Figure 6 shows for each bond issuer (horizontal axis capped at 1000 issuers) the number of insurers investing in it (vertical axis). There are approximately 200 bonds (issuers) held across 100 insurers, and the most held bond is held by approximately 600 insurers. A further investigation reveals that these top 200 bonds held by insurers do reflect sector and country of issuers in line with the aggregate holdings discussed in the data section.

There are three key questions to consider when examining corporate bond investments. Firstly, what is the relationship between the level of risk and the degree of diversification? In theory, diversification should allow investors to take on more risk, as spreading exposures can reduce overall vulnerability. Conversely, investors focused on safe assets are less penalised by concentration. Secondly, how do risk and similarity intersect? A high-risk portfolio that is very similar to others could raise concerns. Thirdly, what is the connection between similarity and diversification?

The main concern arises when portfolios are not only very similar but also lack diversification or exhibit high risk. To illustrate the relationship between these factors, Figure 7 presents a three-dimensional plot of the empirical links between risk, diversification, and portfolio similarity for each country. The results reveal distinct patterns between Euro Area and non-Euro Area countries. In Euro Area countries, risk levels are generally contained, and portfolios are highly diversified. Notable similarities in portfolios are only observed in a few countries. In contrast, non-Euro Area countries tend to have higher risk levels and more concentrated portfolios, yet similarities in portfolios are still only evident in a limited number of countries.

5. Final remarks

Results show that insurers tend to hold relatively safe and well diversified portfolios of corporate bonds, however very large European insurers or insurers in some countries hold portfolios that are notably similar to each other.

From a macroprudential perspective, high similarity between investment portfolios can pose a significant risk. If a shock were to occur that would force insurers to liquidate their investments simultaneously, this could be leading to a surge in fire-

sales of the same asset, which in turn, could have a substantial impact on the market.

Common liquidations could take place when insurers are forced to sell similar assets and this is more likely not only when portfolios are highly similar but when they are at the same time also concentrated. If portfolios were to be similar but highly diversified insurers could anytime opt for selling different bonds minimising market impact and losses.

Overall results show that large European insurers are highly diversified in their corporate bond holdings. However, future analysis is needed to explore whether it is the case that the bonds held in the distinct segments of insurers' portfolio are highly illiquid, while the bonds held in the similar segment are liquid and "marketable". If this is the case, commonality of selling under stress could be stronger than what would be implied by the overall similarity in portfolio holdings alone, because insurers could have the tendency to oversell the liquid bonds.

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Annex: Table and charts

Table 1. Number of insurers by country and by type. This table shows the sample of EEA insurers subject to SII reporting that are holding corporate bonds.

	Life & Composite	Non-Life	Reinsurers	All
AT	20	8	0	28
BE	20	23	2	45
BG	6	7	1	14
CY	7	7	1	15
CZ	9	5	1	15
DE	63	160	19	242
DK	25	32	0	57
EE	2	7	0	9
EL	15	11	0	26
ES	55	63	2	120
FI	7	31	0	38
FR	75	67	7	149
HR	10	4	0	14
HU	10	7	0	17
IE	16	31	15	62
IS	3	4	0	7
IT	39	33	1	73
LI	11	5	0	16
LT	3	3	0	6
LU	24	27	7	58
LV	2	3	0	5
MT	6	15	1	22
NL	10	37	2	49
NO	9	9	0	18
PL	13	17	0	30
PT	16	16	0	32
RO	7	2	0	9
SE	16	34	0	50
SI	9	1	2	12
SK	8	0	0	8
Total	516	669	61	1246

Table 2. HHI of EEA insurers corporate bonds portfolios by type of insurer and size. This table shows the average HHI by issuer, sector, country and currency and share of corporate bonds invested in the home country. Size buckets for life and composites are based on Total Assets, while for non-life on Gross Written Premia.

Life and Composite (Nr. 501)	HHI Issuer	HHI Sector	HHI Country	HHI Currency	Share corps home
Top quartile (by TA)	0.085	0.279	0.262	0.897	0.272
Second quartile	0.083	0.298	0.263	0.950	0.248
Third quartile	0.104	0.352	0.300	0.926	0.252
Fourth quartile	0.162	0.395	0.378	0.957	0.327
All life and composite	0.109	0.331	0.301	0.933	0.275

Non-life (Nr. 574)	HHI Issuer	HHI Sector	HHI Country	HHI Currency	Share corps home
Top quartile (by GWP)	0.062	0.294	0.268	0.879	0.280
Second quartile	0.112	0.332	0.337	0.941	0.272
Third quartile	0.175	0.405	0.393	0.957	0.369
Fourth quartile	0.193	0.438	0.451	0.960	0.356
All non-life	0.159	0.383	0.382	0.933	0.341

Reinsurer (Nr. 61)	HHI Issuer	HHI Sector	HHI Country	HHI Currency	Share corps home
All reinsurer	0.109	0.327	0.335	0.788	0.200

All insurers (Nr.1136)	HHI Issuer	HHI Sector	HHI Country	HHI Currency	Share corps home
Top 100 insurers (by TA)	0.061	0.263	0.243	0.863	0.309
All other insurers	0.142	0.367	0.355	0.931	0.273

Table 3. Cosine similarity of EEA insurers' corporate bonds portfolios by type of insurer and size. This table shows the cosine similarity by issuer. The cosine similarity is calculated for pairs of insurers and averaged within size buckets for different types of insurers.

Life and Composite (Nr. 501)	Cosine similarity by ISSUER
Top quartile (by TA)	0.160
Second quartile	0.133
Third quartile	0.096
Fourth quartile	0.054
All life and composite	0.104

Non-life (Nr. 574)	Cosine similarity by ISSUER
Top quartile (by GWP)	0.122
Second quartile	0.095
Third quartile	0.064
Fourth quartile	0.032
All non-life	0.071

Reinsurer (Nr. 61)	Cosine similarity by ISSUER
All reinsurer	0.101

All insurers (Nr.1136)	Cosine similarity by ISSUER
Top 100 insurers (by TA)	0.163
Top 100 insurers (by corporate EUR holdings)	0.222
All other insurers	0.078

Table 4. EEA insurers' corporate bonds portfolios cosine similarity by country: Top 100 versus all other insurers. This table shows the cosine similarity by issuer. The cosine similarity is calculated per pair of insurers and figures represent averages by group (Top 100 and all others) and by country of the insurers.

	Cosine similarity by ISSUER		
	Top 100 insurers (by TA)	All others	**All insurers**
AT	0.437	0.079	**0.092**
BE	0.372	0.123	**0.138**
BG		0.092	**0.092**
CY		0.078	**0.078**
CZ		0.145	**0.145**
DE	0.120	0.093	**0.093**
DK	0.081	0.076	**0.072**
EE		0.138	**0.138**
EL		0.138	**0.138**
ES		0.152	**0.153**
FI		0.360	**0.360**
FR	0.400	0.235	**0.257**
HR		0.167	**0.167**
HU		0.088	**0.088**
IE	0.103	0.148	**0.146**
IS		0.322	**0.322**
IT	0.332	0.214	**0.230**
LI		0.063	**0.063**
LT		0.142	**0.142**
LU		0.169	**0.169**
LV		0.085	**0.085**
MT		0.108	**0.108**
NL	0.299	0.178	**0.188**
NO	0.364	0.352	**0.338**
PL		0.175	**0.175**
PT		0.141	**0.141**
RO		0.471	**0.471**
SE	0.275	0.070	**0.086**
SI		0.150	**0.150**
SK		0.158	**0.158**
EEA	0.163	0.078	**0.084**

Table 5. The determinants of the risk level in EEA insurers corporate bonds portfolios. This table shows the results of a cross-sectional regression of individual insurers corporate bonds portfolios: as of 2023 Q4. The level of risk is approximated by the yield-to-maturity of the corporate bond portfolio of each individual insurer. The size by the log of each insurer total Assets. The dummy "Reinsurers" captures reinsurers. The investment horizon is approximated by each insurer liabilities duration (now available only for 2023 year-end). Specifications (A) and (B) are for all insurers (Life, composites, non-life and reinsurers) while specification (C-D) and (E-F) are respectively for life and non-life insurers only.

	Yield to maturity	Yield to maturity	Yield to maturity	Yield to maturity	Yield to maturity	Yield to maturity
	All insurers	All insurers	Life	Life	Non-Life	Non-Life
	(A)	(B)	(C)	(D)	(E)	(F)
Size	-0.120*** (0.000)	-0.022 (0.142)	-0.119*** (0.005)	-0.028 (0.551)	-0.121*** (0.000)	-0.0001 (0.993)
Dummy reinsurer	0.365** (0.026)	0.303** (0.028)				
Investment Horizon	0.019*** (0.000)	0.009** (0.047)	0.045*** (0.000)	0.040*** (0.001)	0.008 (0.362)	.001** (-0.012)
Country FE	No	Yes	No	Yes	No	Yes
Adj R2	0.042	0.381	0.066	0.264	0.049	0.423
N. of observations	1,167	1,167	241	241	625	625

Table 6. EEA insurance sector aggregated bond portfolio: Herfindahl–Hirschman index (HHI) by ISSUER. This table shows HHI by ISSUER at the insurance sector level for the entire EEA and by country.

	Overall insurance sector HHI
AT	0.0046
BE	0.0034
BG	0.0247
CY	0.0111
CZ	0.0194
DE	0.0038
DK	0.0039
EE	0.0095
EL	0.0067
ES	0.0048
FI	0.0066
FR	0.0057
HR	0.0293
HU	0.0663
IE	0.0029
IS	0.0630
IT	0.0037
LI	0.0042
LT	0.0147
LU	0.0039
LV	0.0221
MT	0.0046
NL	0.0041
NO	0.0080
PL	0.0166
PT	0.0052
RO	0.0958
SE	0.0104
SI	0.0044
SK	0.0135
EEA	0.0034

Figure 1. EEA insurers' corporate bond holdings by Credit Quality Steps (CQS), broken down type of bond. In the context of Solvency II reporting, the term "corporate bonds" (CIC 21) encompasses a broad range of investment types. However, this category also includes subcategories that are not the primary focus of this article, such as "Money Market Funds" and "Commercial Papers". The types of corporate bonds relevant to this discussion are: 1) Senior corporate bonds (CIC 21) and 2) Junior corporate bonds, which include convertible bonds (CIC 22), hybrid bonds (CIC 25), and subordinated bonds (CIC 28).

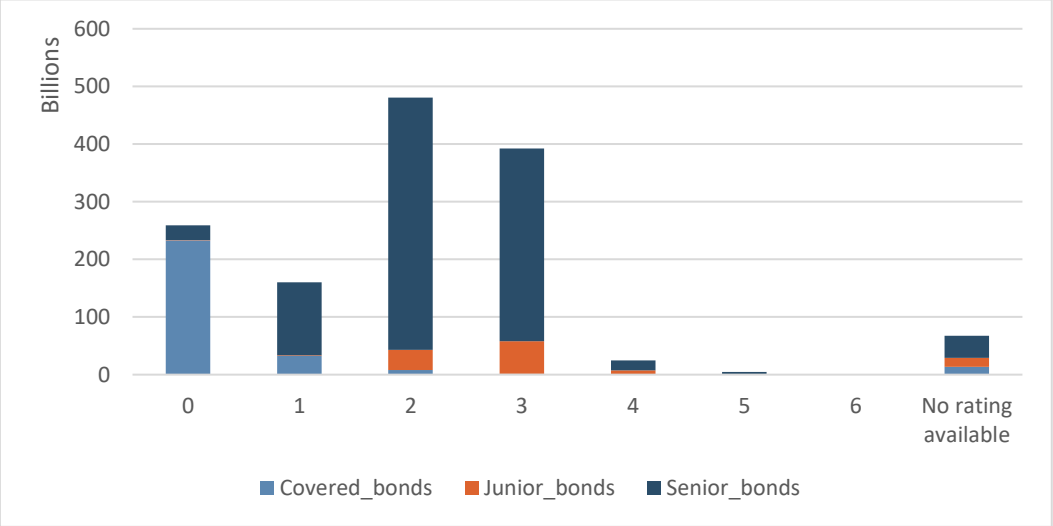


Figure 2. EEA insurers' corporate bond holdings by issuer sector. The sector of the issuer of the bond held by insurers is based on the NACE code.

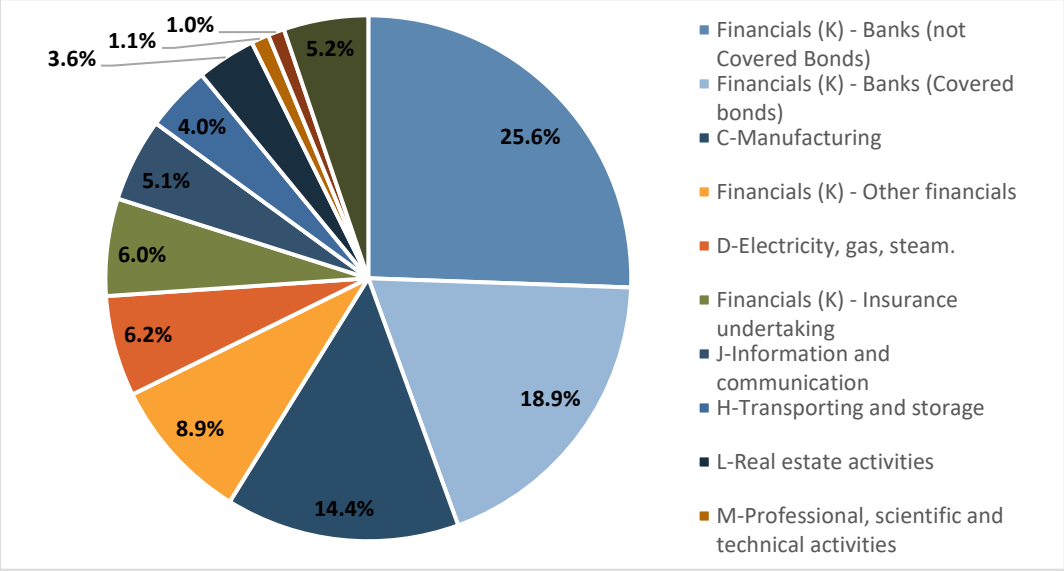


Figure 3. EEA insurers' corporate bond holdings by issuer country and type of bond. EUR amounts by country. The types of corporate bonds are: 1) Senior corporate bonds (CIC 21) and 2) Junior corporate bonds, which include convertible bonds (CIC 22), hybrid bonds (CIC 25), and subordinated bonds (CIC 28) and 3) covered bonds.

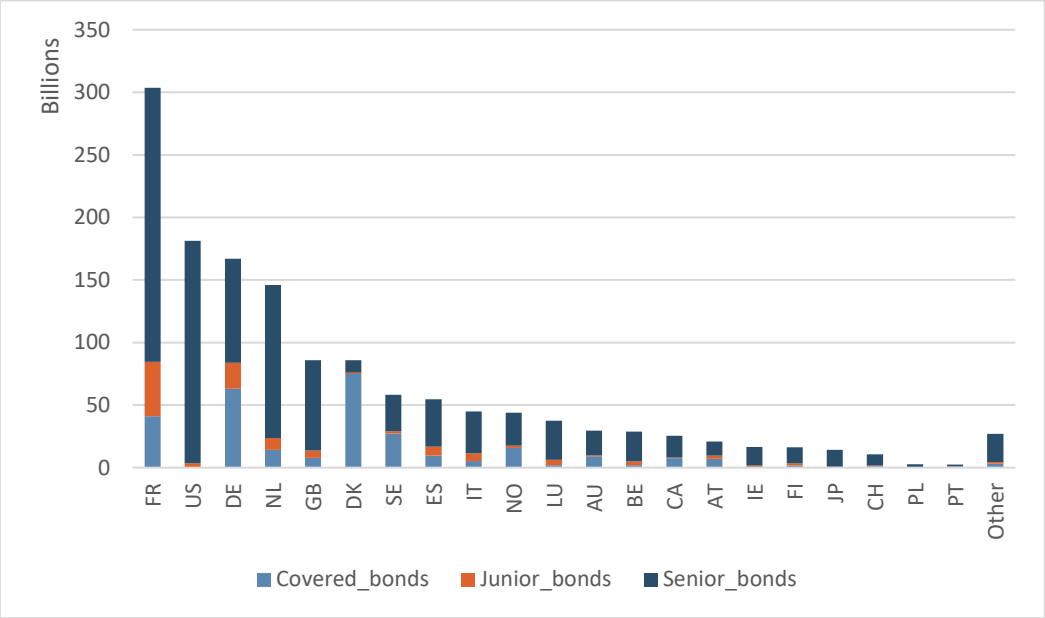


Figure 4. EEA insurers' corporate bond holdings by maturity and type of bond. EUR amounts by maturity buckets. EUR amounts by country. The types of corporate bonds are: 1) Senior corporate bonds (CIC 21) and 2) Junior corporate bonds, which include convertible bonds (CIC 22), hybrid bonds (CIC 25), and subordinated bonds (CIC 28) and 3) covered bonds.

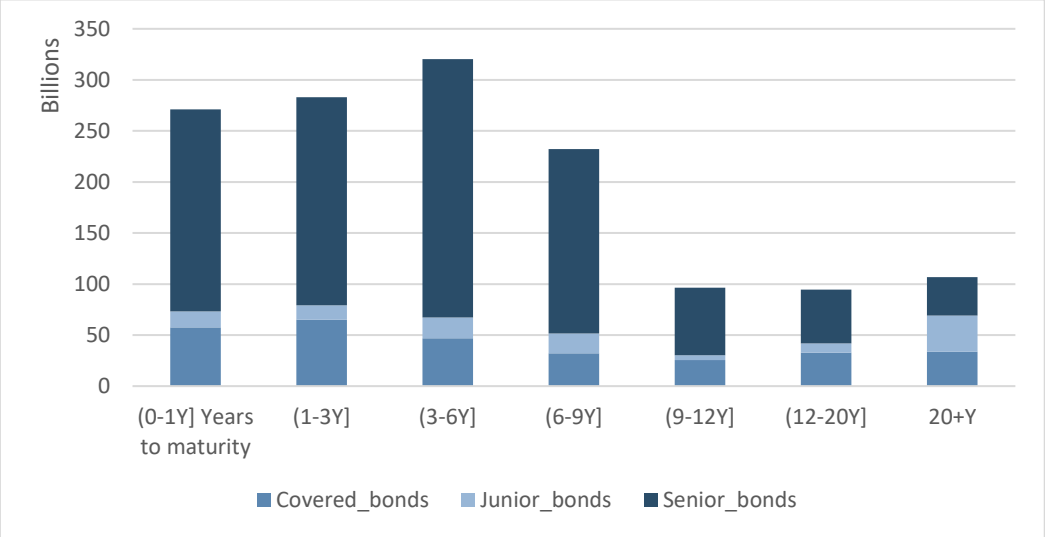


Figure 4. Cross-sectional distribution of the individual corporate bond portfolios level of risk, by country. The level of risk is approximated by the yield-to-maturity of the country corporate bond portfolio of the insurers.

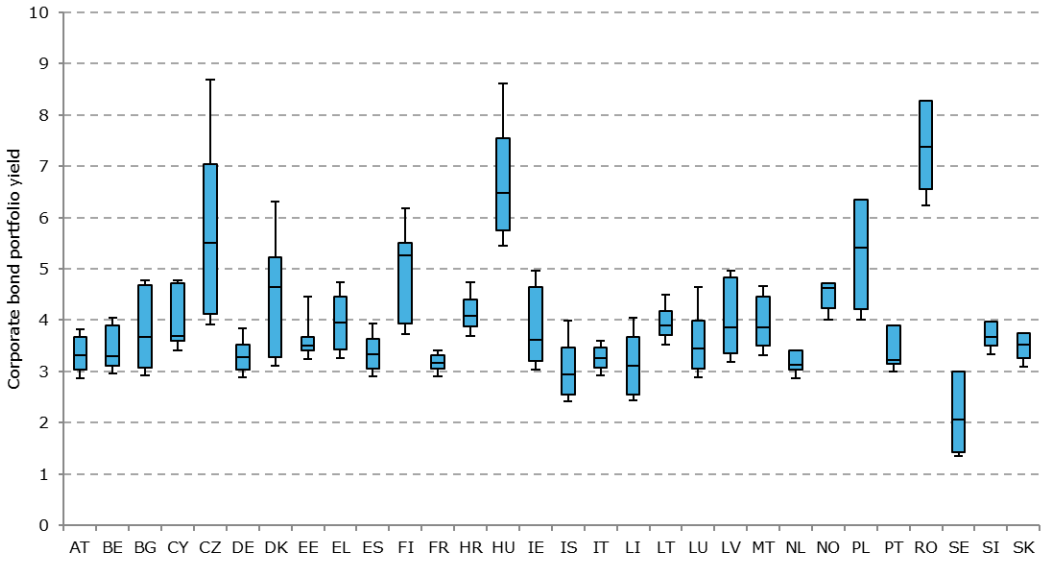


Figure 5. Risk of the corporate bonds portfolios and country level of interest rates. The level of risk is approximated by the yield-to-maturity of the corporate bond portfolio of the insurers. The country level of interest rates is approximated by the 10 Years benchmark bond Yield.

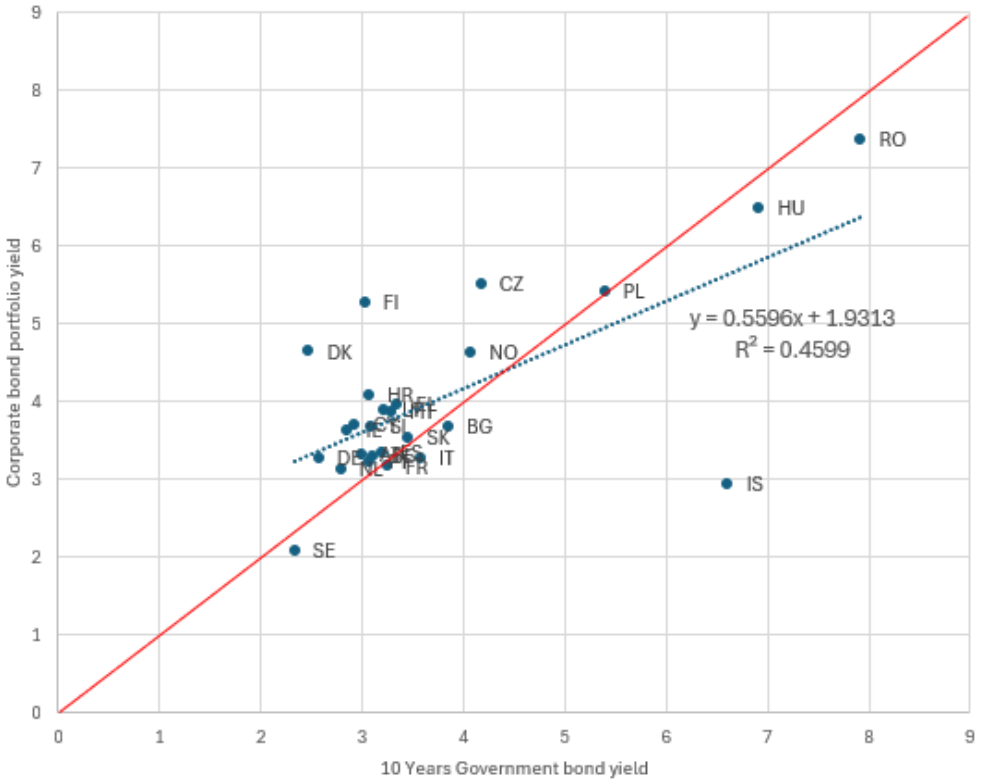


Figure 6. Corporate bond issuers that are more commonly held across insurer. Each individual bond issuer is on the horizontal axis. On the vertical axis the number of insurers holding the bond issuer are reported.

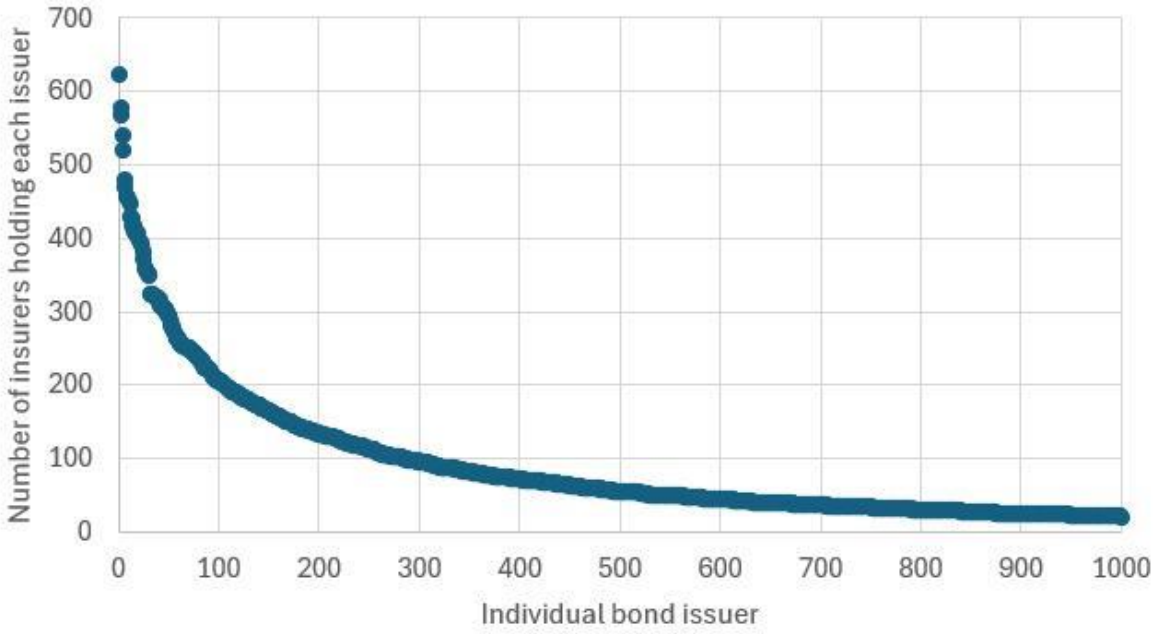
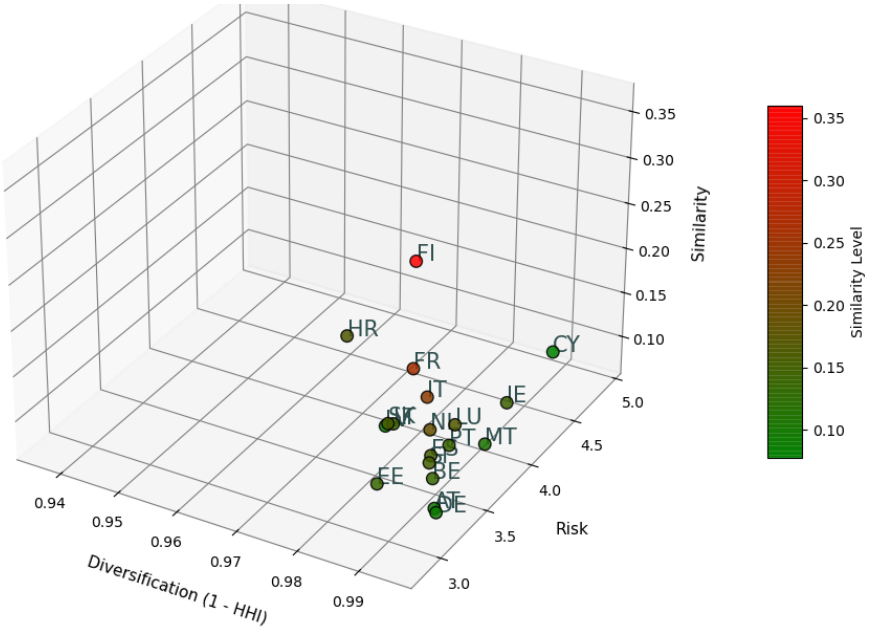


Figure 7. Risk, diversification and similarity: by country. The level of risk is approximated by the yield-to-maturity of the insurers' portfolio within each country, the similarity is measured with cosine similarity of the insurers' portfolios with each country and the diversification as 1-HHI, the Herfindahl–Hirschman index, of the country portfolio.

A. Euro Area countries.



B. Other EEA countries.