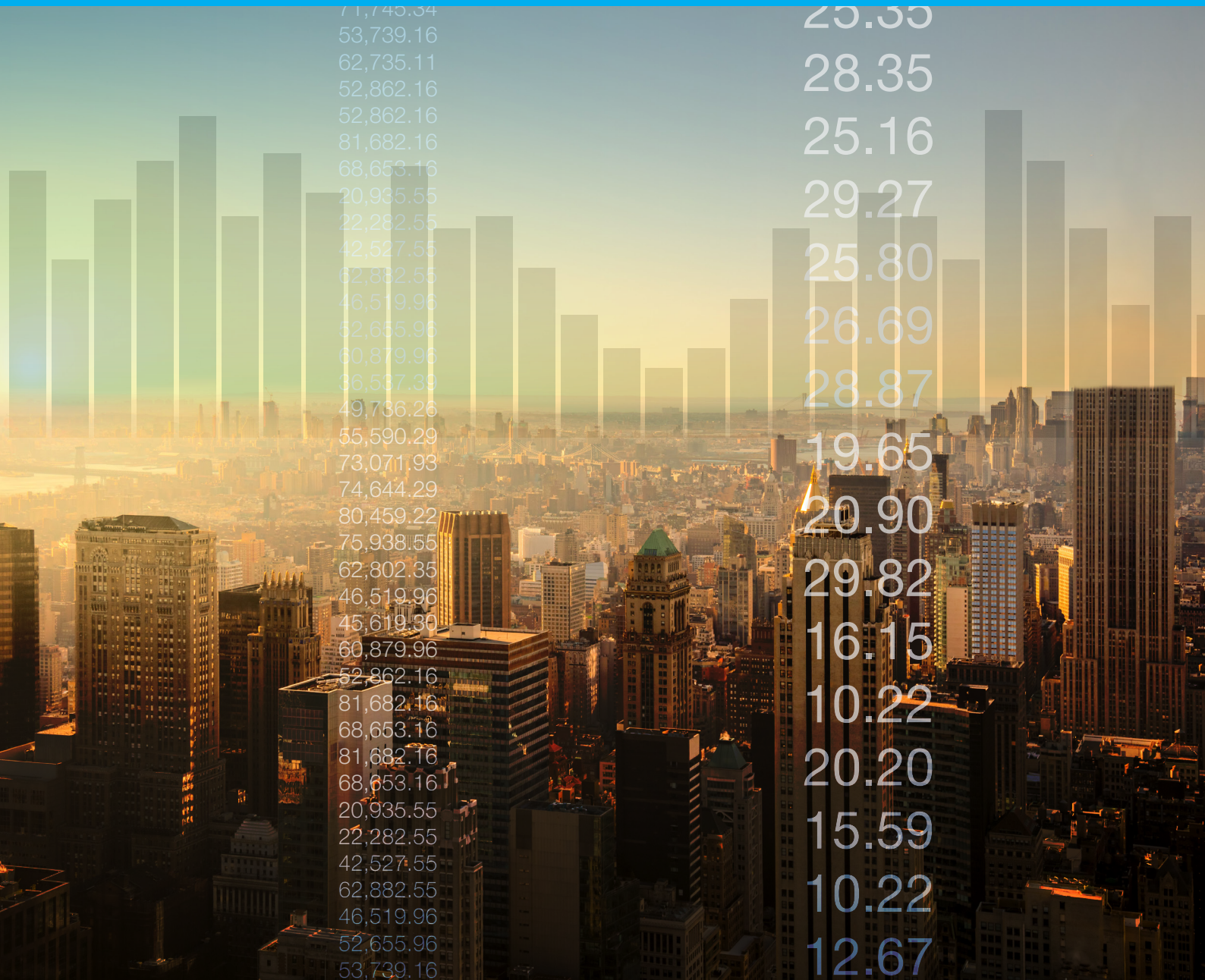


# Global Insurance Market Report (GIMAR)

December 2024



## About the IAIS

The International Association of Insurance Supervisors (IAIS) is a voluntary membership organisation of insurance supervisors and regulators from more than 200 jurisdictions. The mission of the IAIS is to promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders and to contribute to global financial stability.

Established in 1994, the IAIS is the international standard-setting body responsible for developing principles, standards and other supporting material for the supervision of the insurance sector and assisting in their implementation. The IAIS also provides a forum for Members to share their experiences and understanding of insurance supervision and insurance markets.

The IAIS coordinates its work with other international financial policymakers and associations of supervisors or regulators, and assists in shaping financial systems globally. In particular, the IAIS is a member of the Financial Stability Board (FSB), member of the Standards Advisory Council of the International Accounting Standards Board (IASB) and partner in the Access to Insurance Initiative (A2ii). In recognition of its collective expertise, the IAIS also is routinely called upon by the G20 leaders and other international standard-setting bodies for input on insurance issues as well as on issues related to the regulation and supervision of the global financial sector.

For more information, please visit [www.iaisweb.org](http://www.iaisweb.org) and follow us on LinkedIn: [IAIS – International Association of Insurance Supervisors](#).

## About the GIMAR

This is the twelfth issue of the Global Insurance Market Report (GIMAR). The GIMAR reports on the outcomes of the IAIS' Global Monitoring Exercise (GME). The GME is the IAIS' framework for monitoring risks and trends in the global insurance sector and assessing the possible build-up of systemic risk.

This document is available on the IAIS website ([www.iaisweb.org](http://www.iaisweb.org)).

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# Acronyms and abbreviations

AAL	Average annual loss
AE	Advanced economy
AI	Artificial intelligence
ALM	Asset-liability management
BCBS	Basel Committee on Banking Supervision
CDO	Collateralised debt obligation
CLO	Collateralised loan obligation
CPRS	Climate policy relevant sector
CRE	Commercial real estate
CSA	Cross-sectoral analysis
DL	Deep learning
EMDE	Emerging market and developing economy
EU	European Union
FSB	Financial Stability Board
GA	General account
GDP	Gross domestic product
GenAI	Generative artificial intelligence
GIMAR	Global Insurance Market Report
GME	Global Monitoring Exercise
GNA	Gross notional amount
GRMS	Global Reinsurance Market Survey
GWP	Gross written premiums
IAIS	International Association of Insurance Supervisors
IFRS	International Financial Reporting Standards
IIM	Individual insurer monitoring
ILR	Insurance liquidity ratio
IG	Investment grade
ML	Machine learning
NatCat	Natural catastrophe
ORSA	Own risk and solvency assessment
OTC	Over-the-counter
RCP	Representative Concentration Pathway
ROA	Return on assets
SWM	Sector-wide monitoring
UK	United Kingdom
US	United States
YoY	Year-on-year

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# Executive summary

The 2024 Global Insurance Market Report (GIMAR) shares the outcomes of the 2024 Global Monitoring Exercise (GME), the International Association of Insurance Supervisors' (IAIS') risk assessment framework to monitor key risks and trends and detect the potential build-up of systemic risk in the global insurance sector.

**Section 1** introduces the GME and its data collections. The GME builds on individual insurer monitoring (IIM) data collected from 59 of the largest international insurance groups, as well as aggregate data from sector-wide monitoring of supervisors across the globe, covering over 90% of global written premiums. The analysis covers data to the end of 2023, updated with more recent financial market data where available.

**Section 2** provides an overview of global macro-financial trends and key developments in the insurance sector, focusing on assets, liabilities, solvency, liquidity and profitability. Global economic growth remained steady since 2023, although many economies continue to grapple with high inflation. Insurers experienced an increase in total assets, buoyed by favourable financial market conditions, while liabilities grew mainly as a result of premium growth. Solvency and profitability remained stable, supported by a strong underwriting performance and robust investment returns. Liquidity positions improved slightly, with liquid investments and premium income being the primary sources of liquidity. Key liquidity demands included surrender values, claims, expenses and

funding needs related to repos and securities lending. Supervisory requirements for insurers to address these risks include the maintenance of adequate liquidity buffers (assessed through, for example, stress testing) and contingency funding planning.

The outlook for the insurance sector in 2025 remains stable, albeit amid an uncertain macroeconomic and geopolitical landscape. Life insurers are expected to maintain or improve solvency ratios through strong capital reserves and effective risk management, despite challenges including interest rate volatility and longevity risk. Non-life insurers are expected to sustain stable solvency ratios, supported by robust underwriting and investment income. Proactive asset-liability management (ALM) and stress testing aim to keep liquidity risk within acceptable limits despite market volatility. Profitability is expected to remain stable or improve, supported by investment returns. Insurers are focusing on growth through underwriting new business, making strategic acquisitions, repositioning assets and leveraging digital tools and artificial intelligence (AI)-driven analytics to improve efficiency and customer engagement.

**Section 3** outlines two macroprudential themes identified through the 2024 GME that remain a priority for supervisors: (1) key risks in the current macroeconomic environment and (2) structural shifts in the life insurance sector, focusing on asset allocation to alternative investments and cross-border asset-intensive reinsurance.

The first theme focuses on how the insurance sector is managing the complexities of fluctuating interest rates, ensuring adequate liquidity to meet obligations and managing credit risks. Key areas of insurer and supervisory attention relate to surrender risk, debt sustainability of fixed-income assets, risks related to commercial real estate (CRE) exposures, the impact of derivatives and margin calls, the impact of AI/digitalisation and transmission channels from geopolitical risk.

**Fixed-income investments** continued to dominate insurers' portfolios, with a focus on high credit quality assets. Interest rate changes introduce volatility and inverted yield curves pose challenges, particularly for life insurers with long-term liabilities, highlighting the importance of effective ALM.

**CRE exposures** are modest at the aggregate level, with most sectors and regions keeping investments below 5% of total investments. Some insurers have increased their allocation to CRE, which poses direct risks (defaults, impairments) and indirect risks (a downturn in the CRE market can destabilise broader economic sectors, such as banking, which are closely connected to the insurance sector). Supervisors are conducting stress tests and thematic reviews to manage these exposures.

Higher interest rates may lead to increased **surrender rates** on life insurance policies, offering investment guarantees, as policyholders may seek better returns elsewhere. Supervisors have increased the monitoring of surrenders and liquidity risk through both off-site and on-site supervision, incorporating sensitivity analysis and liquidity assessments. Insurers are enhancing liquidity management practices, adjusting life insurance policy rates and developing customer retention strategies to mitigate this risk.

Insurers use **derivatives** mostly to hedge risks. Interest rate derivatives are the most commonly employed type of derivatives used by insurers, followed by foreign exchange and equity-linked derivatives. Related margin calls can, however, trigger liquidity risk, especially during periods of market volatility. Supervisors are monitoring derivatives exposures, potential margin calls and collateral requirements to ensure risks are managed effectively by insurers.

**Geopolitical risk** is marked by increasing uncertainty and the potential for escalation. This subsection examines the transmission channels of geopolitical risks within the insurance sector. Geopolitical events can (1) cause market volatility, impacting investment returns, liquidity and the solvency of insurers; (2) lead to cyber threats and operational disruptions, hindering business continuity and customer service; (3) result in higher claims, particularly for non-life insurers, due to inflation and other factors, leading to higher underwriting risks and adjusted pricing strategies; and (4) reduce policyholders' disposable income, increase lapse rates and lower demand for insurance products. Supervisory measures being implemented focus on lower demand for monitoring geopolitical risks and their transmission channels, including through stress testing and requiring insurers to develop contingency funding plans.

**Digitalisation and AI systems** offer potential benefits for insurers (eg streamline processes, reduce costs and improve customer experience). Areas of supervisory concern include increased liquidity risks from potential easier policy surrenders and risks linked with AI underwriting, investment and cyber risks. Supervisory responses focused on increased engagements with insurers to assess governance frameworks, conduct risk surveys, develop compliance requirements for AI and machine learning, and create guidelines to ensure alignment with policyholder rights and to ensure good consumer outcomes. Supervisory responses have tended to focus on areas such as non-life insurance where AI implementation is more advanced.

The second theme focuses on **structural shifts in the life insurance sector**, covering both: (1) increased investment allocations by insurers towards so-called “alternative assets” such as private credit, private equity and securitisations, and (2) the increased use of cross-border asset-intensive reinsurance.

The trend towards higher investment in **alternative assets** has persisted despite the higher interest rate environment, indicating that interest rates are not the sole factor driving these developments. Although the overall insurance sector exposure to alternative assets remains limited, some insurers have significantly higher allocations in pursuit of higher yields. These assets provide diversification benefits and may enhance the matching of these alternative assets to long-term illiquid liabilities. Key supervisory concerns include discretionary valuation, liquidity risks, hidden leverage and credit risks. In reaction, supervisors are conducting stress testing, performing thematic reviews, implementing guidelines for macroprudential supervision and assessing valuation methodologies.

The use of **cross-border asset-intensive reinsurance** agreements is also increasing. These agreements transfer both investment and biometric risks associated with long-term life liabilities. Asset-intensive reinsurance transactions are expected to grow, driven by potential factors such as interest rates, credit spreads, pension reforms and demographic changes. Supervisory concerns for some regulators include whether these transactions are potentially driven by regulatory differences, potential concentration risks at the jurisdictional and reinsurer level, the increasing complexity of these types of reinsurance agreements and conflicts of interest. The potential procyclicality of recapture triggers<sup>1</sup> and potentially high levels of risk concentration in a few reinsurers and jurisdictions are being monitored.

Supervisory measures vary across jurisdictions, for example, with some supervisors of insurers ceding insurance cross border requiring supervisory pre-approval for these transactions, while others do not. Similarly, some supervisors of reinsurers assuming cross-border business discuss with, and seek consent of the ceding insurer's supervisor before approving a transaction.

The IAIS has been assessing the key risks and supervisory measures relating to these structural shifts since 2020. Highlights of this work have been laid out in the [2021–2023 GIMARs](#) and reported to the Financial Stability Board. The IAIS is developing an **Issues Paper** that will provide an in-depth assessment of the key supervisory issues and practices in response to these structural shifts. This Issues Paper will inform enhancements to the IAIS supervisory and supporting material, where necessary, to ensure a globally coordinated supervisory response. Public consultation is scheduled for March 2025.

<sup>1</sup> Recapture means the reinsurance agreement is terminated, and the cedent must recapture the risk, partially or fully, along with the assets.

**Section 4** outlines aggregate results from the 2024 IIM. The Insurer Pool's systemic risk score rose by 5.3% at the end of 2023 compared to 2022, mainly due to a significant increase in level 3 assets, partially offset by decreases in intra-financial liabilities and short-term funding. This rise in level 3 assets is largely driven by accounting changes from International Financial Reporting Standards 9 and 17, which led to reclassification of certain assets, especially mortgages, from valuation at amortised cost to fair value. Following these changes, the IAIS is considering updating the level 3 assets indicator in the 2025 triennial assessment review and is developing an ancillary indicator to enhance risk assessment of mark-to-model assets. Overall, insurers' systemic risk scores remain significantly lower than that of banks, indicating that the insurance sector has a lower systemic risk footprint.

**Section 5** addresses climate-related risks to the insurance sector, highlighting regional variations in climate-related assets, which make up 22% to 45% of general account assets, influenced by data availability on

sectoral splits. Despite these variations, the combined shares of climate-related assets, equities, corporate bonds, and loans with no sectoral data are consistent across regions, ranging from 47% to 59%. Advanced economies have 60% of assets in these categories, while emerging market and developing economies (EMDEs) have 30%. Data availability issues, particularly in EMDEs and North America, complicate transition risk monitoring.

The increasing frequency and severity of natural catastrophes (NatCat) due to climate change pose significant challenges to insurers. Supervisors need better tools and data to assess NatCat risks and coverage costs. The IAIS, in collaboration with CLIMADA Technologies, has developed a tool to assess potential regional impacts under long-term climate scenarios. While scenario analyses are being adopted, data reliability and transition planning remain challenging. Many insurers (68%) use scenario analysis for strategy, but improved tools are needed to address uncertainties. In 2025, the IAIS will publish a GIMAR report on the financial stability implications of NatCat protection gaps.

Finally, **Section 6** focuses on the global reinsurance market, using comprehensive data reported to the IAIS by supervisors from key reinsurance jurisdictions worldwide. The global reinsurance market is expanding, with reported gross reinsurance premiums reaching \$900 billion by the end of 2023. Reinsurance usage is on the rise, evidenced by declining retention ratios in the global insurance market. Reinsurers maintained strong solvency positions at the end of 2023. On an aggregate level, reinsurers predominantly invest in corporate debt and equities, with limited investments in loans, mortgages and real estate. In terms of profitability, the non-life reinsurance market's combined ratio improved to 95% in 2023, recovering from a sharp increase in 2022, which had marked its highest value since 2005.

# Introduction

This report is based on the outcome of the 2024 Global Monitoring Exercise (GME), which is the International Association of Insurance Supervisors' (IAIS') framework for monitoring key risks and trends in the insurance sector and assessing the build-up of any potential systemic risk in the global insurance sector.

## 1.1 DATA COLLECTION

The 2024 GME consists of two confidential data collections covering the period to year-end 2023:

- **Individual insurer monitoring (IIM)** applies to insurance groups meeting the Insurer Pool criteria,<sup>2</sup> consisting of 59 of the largest international insurance groups from 19 jurisdictions; and
- **Sector-wide monitoring (SWM)** covers aggregate insurance market data collected from IAIS members.

Data submissions were received from 26 jurisdictions that meet the criteria<sup>3</sup> outlined in the [GME document](#), comprising more than 90% of global gross written premiums (GWP). In addition, 27 jurisdictions not meeting the criteria volunteered to participate in the SWM data collection.

In total, 53 jurisdictions participated in at least one of the components of the SWM 2024 data collection.<sup>4</sup> They are highlighted in blue on Map 1.<sup>5</sup>

<sup>2</sup> The Insurer Pool criteria, as outlined in the GME document that was updated in June 2023, are: Total assets of more than \$65 billion and a ratio of premiums from jurisdictions outside the home jurisdiction to total premiums of 5% or more, or total assets of more than \$215 billion and a ratio of premiums from jurisdictions outside the home jurisdiction to total premiums greater than 0%, or applying jurisdictional discretion.

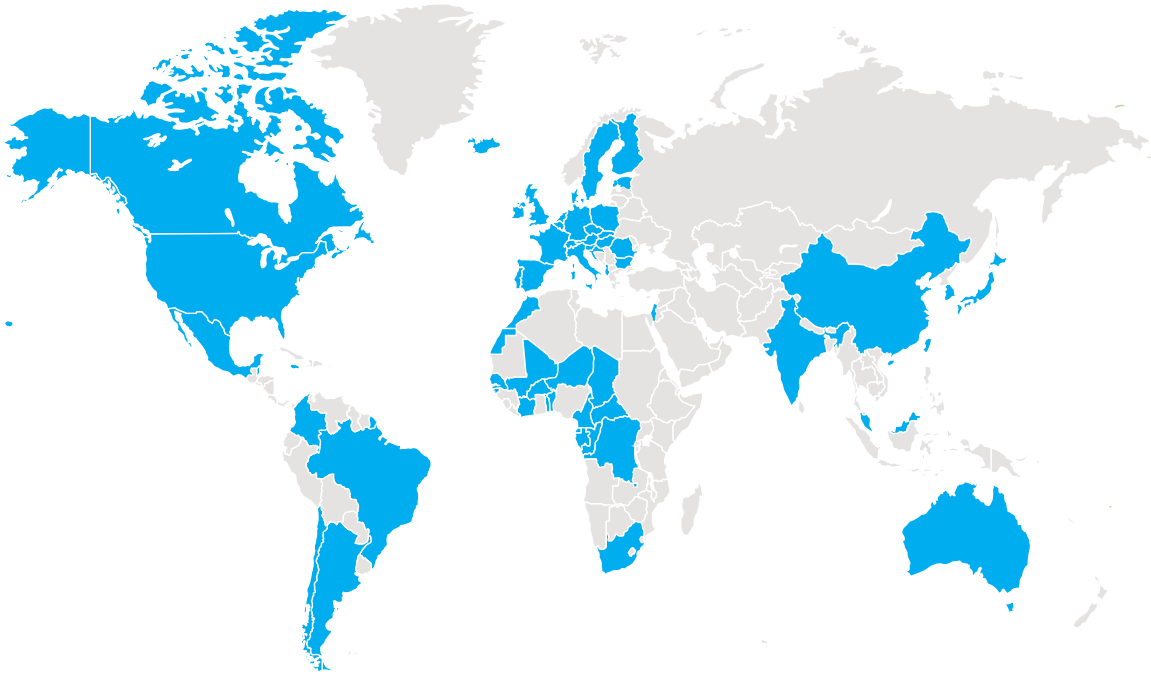
<sup>3</sup> The following criteria allow for broad coverage in terms of global participation in the SWM: (1) the jurisdiction is a member of the Financial Stability Board; or (2) the jurisdiction is a home jurisdiction of at least one internationally active insurance group and/or of an Insurer Pool participating insurer.

<sup>4</sup> The SWM 2024 data collection consisted of qualitative, quantitative, climate and reinsurance components, and the Global Reinsurance Market Survey.

<sup>5</sup> SWM 2024 participating jurisdictions are: Albania; Argentina; Australia; Austria; Barbados; Belgium; Belize; Bermuda; Brazil; Bulgaria; Canada; Cayman Islands; Chile; China; China, Hong Kong; Chinese Taipei; Colombia; Croatia; Czech Republic; Democratic Republic of the Congo; Denmark; Estonia; Finland; France; Germany; Hungary; Iceland; India; Ireland; Israel; Italy; Jamaica; Japan; Korea; Luxembourg; Malaysia; Malta; Mexico; Morocco; Netherlands; Poland; Portugal; Romania; Singapore; Slovak Republic; Slovenia; South Africa; Spain; Sweden; Switzerland; UK; and US. In addition, Conférence Inter-africaine des Marchés d'Assurances provided a single SWM qualitative component aggregated data submission for its member states: Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea-Bissau, Mali, Niger, Senegal, and Togo.



MAP 1: JURISDICTIONS THAT PARTICIPATED IN THE SWM 2024 DATA COLLECTION (IN BLUE)



Source: IAIS SWM 2024

The 2024 GME consists  
of two confidential  
data collections  
covering more than

**90%**

of global gross  
written premiums.

# Global insurance market developments

This section outlines global macro-financial developments and key global insurance market developments, covering assets and liabilities, solvency, liquidity and profitability.

## Highlights:

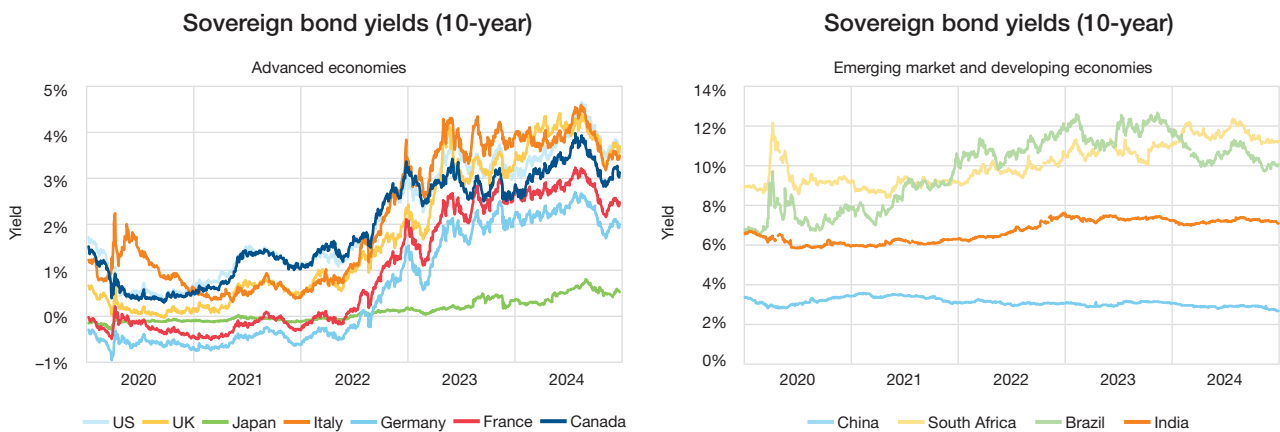
- Global economic growth has remained steady in 2024. However, several economies are still contending with high inflation.
- The total assets of insurers increased by 2.7% to \$40 trillion, primarily driven by positive financial market conditions. Total liabilities grew by 2.4% to \$34 trillion at year-end 2023, largely driven by premium growth.
- Insurers' solvency and profitability positions remained stable, supported by strong underwriting performance and robust investment income.
- Liquidity positions increased slightly in 2023, with primary liquidity sources being liquid investments and premium income. Key liquidity needs include surrender values for retail and institutional business, claims, expenses and funding needs related to repos and securities lending.

## 2.1 GLOBAL MACRO-FINANCIAL DEVELOPMENTS

Global economic growth remained steady in 2024. However, several economies still face high inflation, posing potential risks to overall economic growth. Persistently high interest rates could further increase borrowing costs and threaten financial stability if fiscal improvements do not offset higher real rates during a period of lower potential growth. Furthermore, elections and ongoing geopolitical tensions introduce uncertainty and the potential for significant shifts in economic policies. These factors could worsen debt dynamics and increase protectionism, resulting in negative cross-border spillovers. In its October 2024 World Economic Outlook,<sup>6</sup> the International Monetary Fund reported that global gross domestic product (GDP) growth increased by 3.3% in 2023 compared to 2022. Looking ahead, the global economy is forecast to grow by 3.2% in both 2024 and 2025.

Headline inflation is expected to continue moderating in 2024 and beyond, though the rate of moderation will vary across countries, with some still experiencing rising inflation. Inflation expectations and bond yields are crucial for pricing long-term insurance products. The recent normalisation of bond yield curves in some regions, following a prolonged period of yield curve inversion over the past two years, carries positive implications for the insurance sector, including enhanced investment returns, together with changes in product pricing, asset-liability management (ALM) and capital positions.

FIGURE 1



Source: Bloomberg

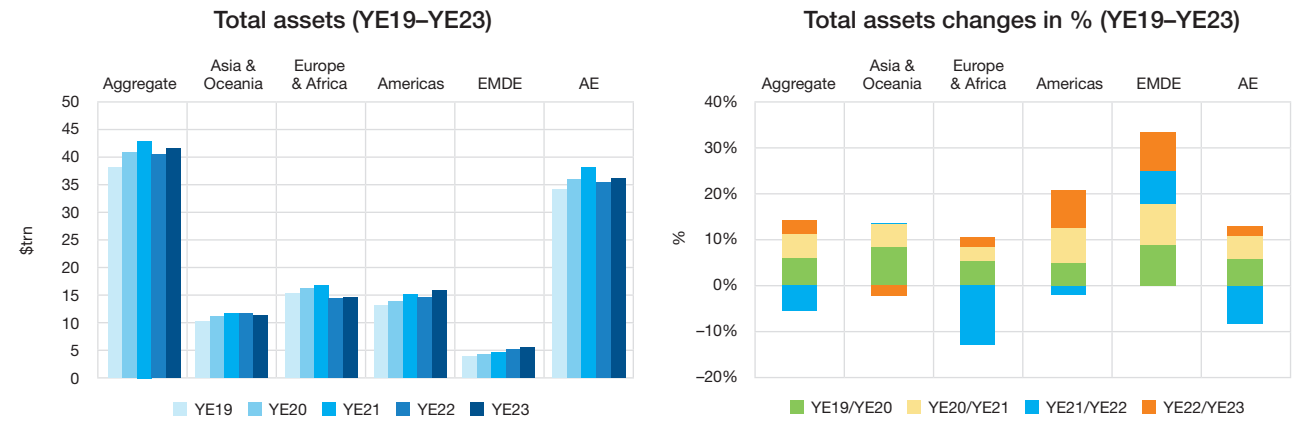
<sup>6</sup> International Monetary Fund, World Economic Outlook, October 2024.

## 2.2 ASSETS AND LIABILITIES

Figures 2 and 3 show that total assets as reported in the SWM increased by 2.8% to \$42 trillion and total liabilities increased by 2.5% to \$36 trillion at year-end 2023. The increases were driven by strong premium growth, effective ALM and favourable conditions in financial markets, particularly increasing equity and bond prices, alongside strategic acquisitions and growth opportunities.

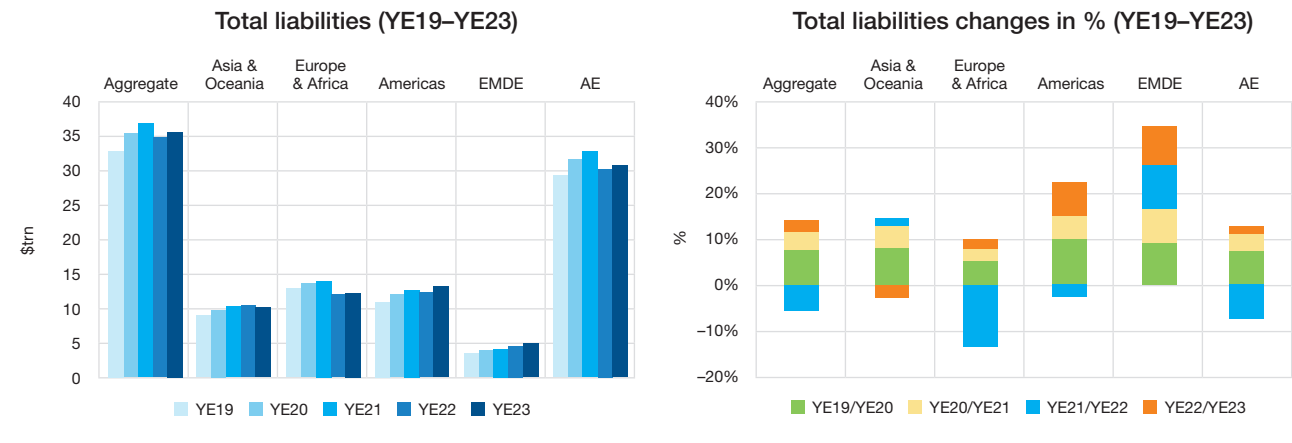
Figure 2 compares, among others, the developments between emerging markets and developing economies (EMDEs) and advanced economies (AEs). EMDEs have experienced several consecutive years of growth in total assets, including a notable increase of 8.1% from year-end 2022 to year-end 2023. In contrast, AEs saw a 2.1% rise in total assets over the past year, following a decline in 2022. A similar trend can be observed in the growth of total liabilities (Figure 3).

**FIGURE 2**



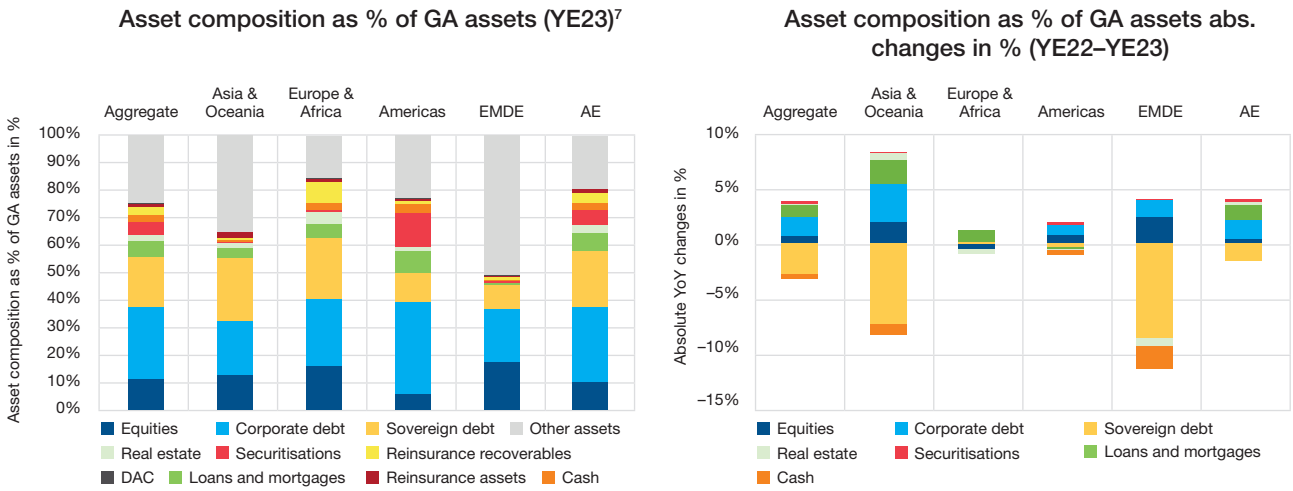
Source: IAIS SWM 2024

**FIGURE 3**



Source: IAIS SWM 2024

FIGURE 4



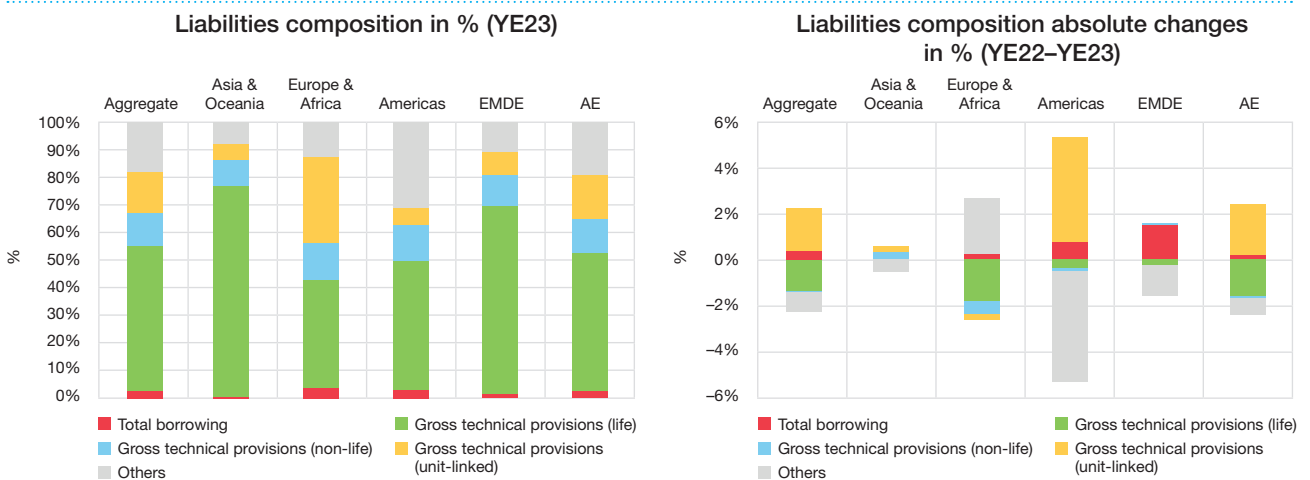
Source: IAIS SWM 2024

Figure 4 shows that fixed-income investments continue to dominate the Insurer Pool investments, accounting for more than 50% of total investments. This includes corporate debt at 24%, sovereign debt at 18.1%, and loans and mortgages at 9.6%. Equities represent the second-largest asset class, comprising 12.3% of the total. In the Americas, there is more diversified asset composition, while EMDEs have the smallest proportion of sovereign debt. Between 2022 and 2023, the biggest changes in general account (GA) assets were increases in corporate debt across

most regions while equities and cash rose moderately (right-hand chart). Sovereign debt exposures declined sharply in EMDEs and Asia and Oceania.

Looking at the composition of liabilities, Figure 5 shows that on aggregate, gross technical provisions for life insurance dominate, constituting 52% of the total, followed by unit-linked provisions at 15% and non-life provisions at 12%. Borrowing accounts for a modest 3%, while other liabilities comprise 18%. In Asia and Oceania, life provisions are particularly

FIGURE 5



Source: IAIS SWM 2024

<sup>7</sup> "Other assets" represents the difference between the reported amount for total assets and the reported amounts for the main asset classes displayed in Figure 4.



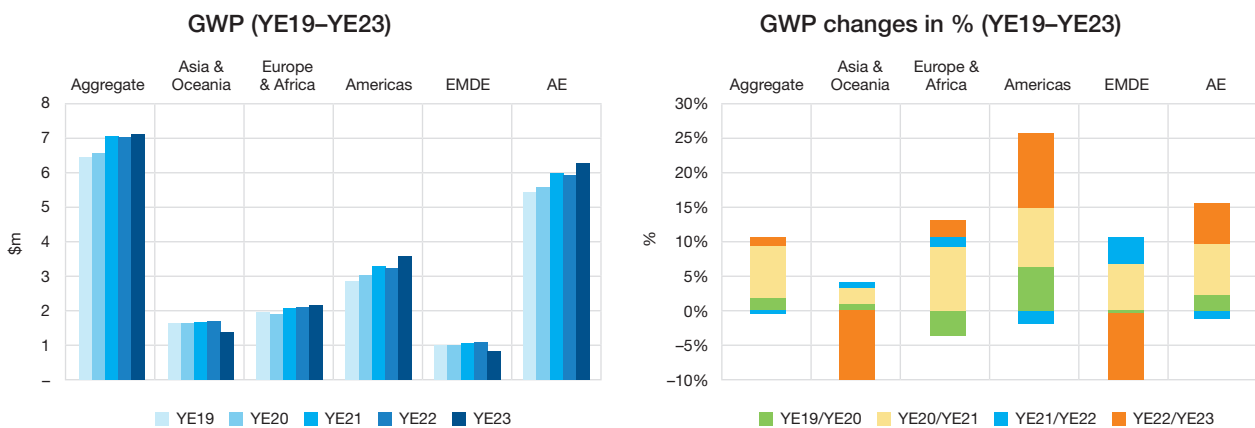
predominant, with unit-linked and non-life provisions having a limited presence and borrowing being almost negligible. Europe and Africa display a more diversified mix of unit-linked, life and non-life provisions, with low levels of borrowing. In the Americas, life provisions are the leading component, followed by other liabilities. EMDEs feature a large share of life provisions and minimal borrowing, whereas AEs exhibit a somewhat more diversified distribution of liabilities.

Year-on-year changes indicate that borrowing increased modestly (Figure 5) but remained relatively low across regions. Unit-linked provisions recorded the largest growth in the Americas at 5%. Non-life provisions rose modestly in Asia and Oceania, and EMDEs but declined in three other regions. “Other liabilities”<sup>8</sup> increased by

more than 2% in Europe and Africa, whereas a larger decline was observed in the Americas and smaller reductions in EMDEs, AEs, and Asia and Oceania.

On aggregate, total GWP grew consistently over the past five years, indicating steady growth in the insurance sector globally (Figure 6). AEs show a similar upward trajectory, with GWP generally rising. The Americas recorded the most pronounced growth, with GWP spiking by 10.1% from year-end 2022 to year-end 2023. EMDEs and Asia and Oceania witnessed steep declines while Europe and Africa recorded moderate increases in GWP. Overall, GWP developments indicate regional differences in the insurance market dynamics.

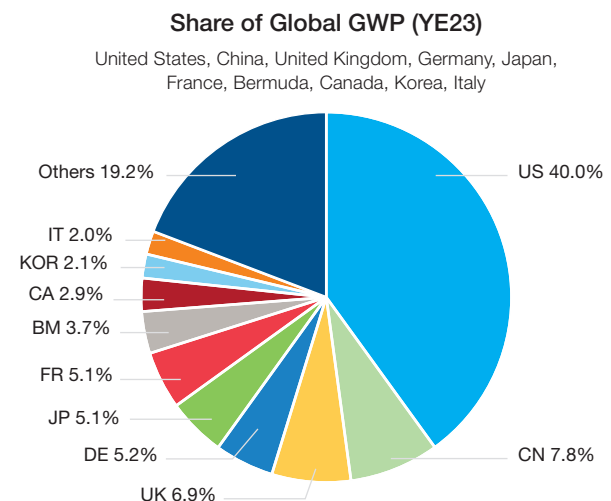
FIGURE 6



Source: IAIS SWM 2024

Figure 7 illustrates the global distribution of GWP in 2023. The United States (US) accounts for 40%, followed by China at 7.8%, and the United Kingdom (UK) at 6.9%. Germany, Japan and France each contribute just over 5%, while Bermuda accounts for 3.7%. Canada, South Korea and Italy each represent 2–3% of the total GWP. The remaining countries collectively make up 19.2%.

FIGURE 7



Source: IAIS SWM 2024

<sup>8</sup> “Other liabilities” represents the difference between reported total liabilities and what is reported for the other items displayed in Figure 5.

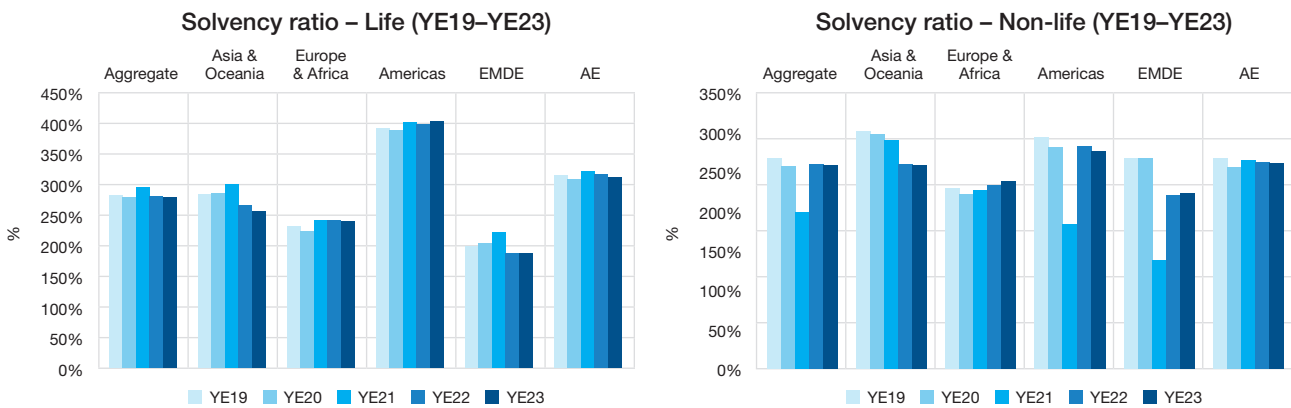
## 2.3 SOLVENCY

### 2.3.1 Developments

On aggregate, the solvency ratios of life insurers remain stable (Figure 8). In Asia and Oceania life insurance solvency ratios declined slightly, while there were marginal variations in Europe and Africa as well as EMDEs. Conversely, the Americas saw a modest increase in the ratio. Life insurers in AEs experienced a modest decline in their solvency ratios but continued their overall stable trend. Positive influences on life insurers' solvency ratios included strong capital reserves, effective risk management and favourable global financial market conditions, while negative factors were interest rate fluctuations in some regions, longevity risk and challenges in ALM.

For non-life insurers, the aggregate solvency ratio also remained stable from the previous year. Asia and Oceania, the Americas and AEs recorded marginal declines, while Europe and Africa, and EMDEs saw modest increases. Positive factors affecting the solvency ratios of non-life insurers included strong underwriting performance and robust investment income. Conversely, adverse claims in some segments, significant catastrophe events and unfavourable reinsurance arrangements (high premiums paid to the reinsurer, and low coverage by the reinsurer) were negative drivers.

**FIGURE 8**

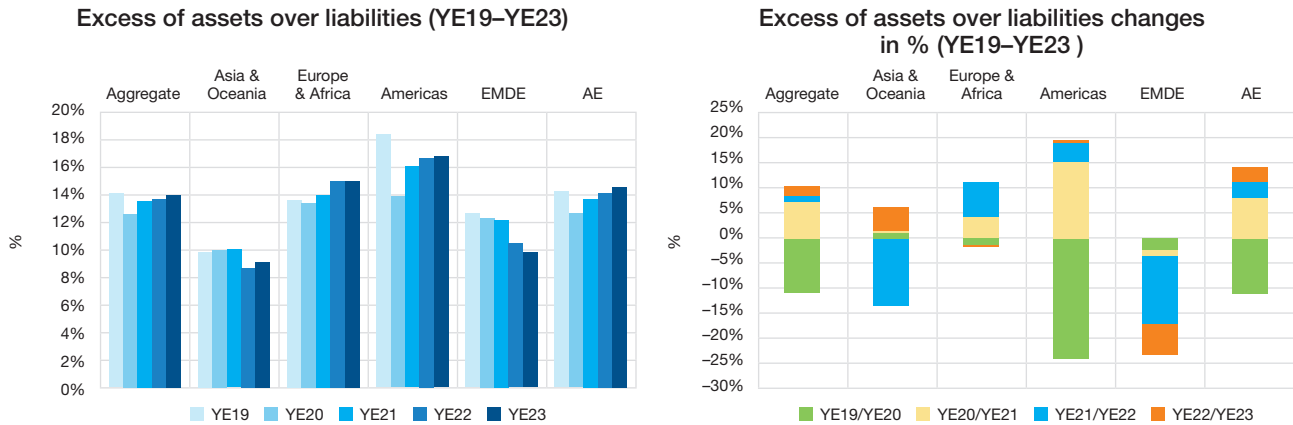


Source: IAIS SWM 2024

Figure 9 shows a steady increase in the excess of assets over liabilities on aggregate. The excess of assets over liabilities increased steadily in the Americas, AEs, and Asia and Oceania, driven by strong asset performance after a strong decline during the Covid-19 pandemic. Europe and Africa display a similar but less pronounced trend. The excess of assets over liabilities in EMDEs has been declining since 2019.

On a year-on-year basis, in 2023, the Americas saw slower growth but continued to hold a strong financial position. Asia and Oceania experienced a notable recovery in 2023, with a 4.8% increase in excess assets after the sharp decline in 2022. EMDEs faced a significant decline of 6.4% in 2023, highlighting ongoing financial pressures, while AEs showed steady growth.

FIGURE 9



Source: IAIS SWM 2024

### 2.3.2 Measures taken by supervisors

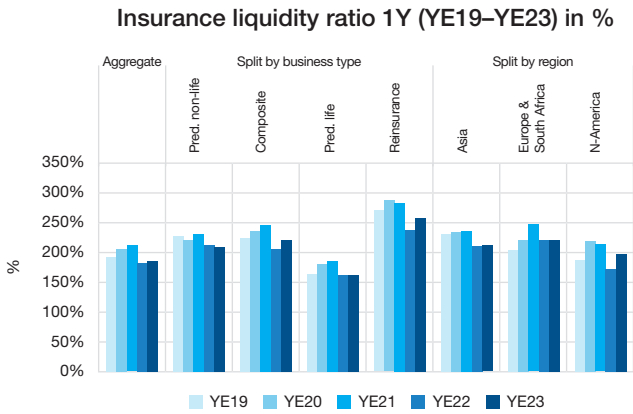
In 2023, supervisory measures required insurers to manage solvency capital requirements in line with business growth opportunities such as increased number of policies, expansion of product lines and acquisition of product lines, particularly in the non-life and capital-light life sectors. Supervisors closely monitored solvency ratios, market risks and anticipated growth in underwriting risk. To ensure ongoing financial stability, they implemented enhanced monitoring frameworks and conducted rigorous stress-testing exercises. Additionally, restrictions on dividend payments were imposed when solvency concerns emerged.

### 2.3.3 Outlook

Insurers expect a stable outlook for life and non-life insurance over 2024-2025. Life insurers are expected to maintain or improve their solvency ratios through strong capital reserves, strategic asset allocation, effective risk management and strategic growth initiatives as they navigate interest rate volatility, longevity risk and other challenges. Non-life insurers are also expected to maintain stable solvency ratios, supported by strong underwriting performance and robust investment income, while remaining vigilant about adverse claims experience and market volatility.

To maintain financial stability, supervisors enhanced risk assessment frameworks and conducted comprehensive stress-testing exercises.

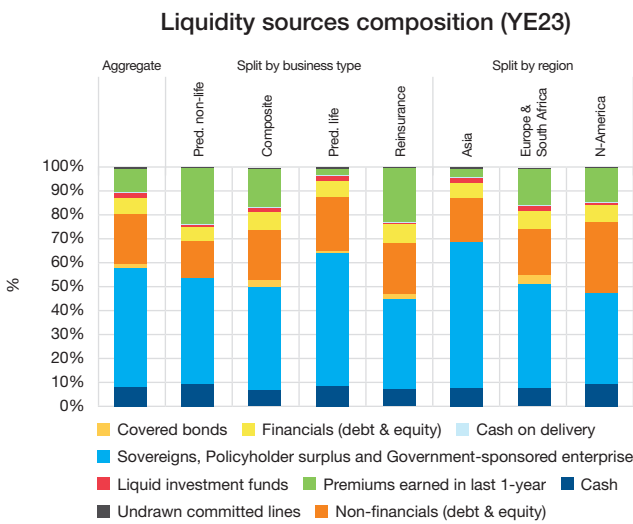
**FIGURE 10**



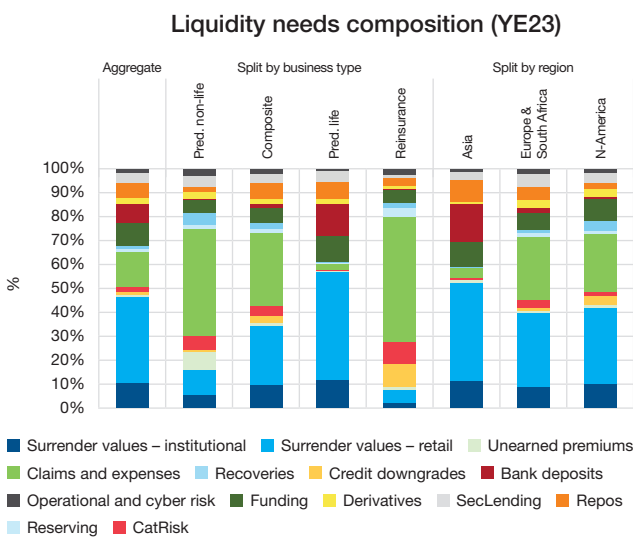
## 2.4 LIQUIDITY

### 2.4.1 Developments

As shown in Figure 10, the one-year insurance liquidity ratio (ILR) increased slightly from year-end 2022 to year-end 2023 across most regions and business models, remaining well above 100%. The movement in ILRs varied across insurers. Some insurers experienced increases in liquidity due to factors such as higher dividend upstreams, completion of asset sales and better alignment of liquidity sources to liquidity needs. Conversely, others experienced declines because of increased cash outflows or changes in their investment portfolio composition.



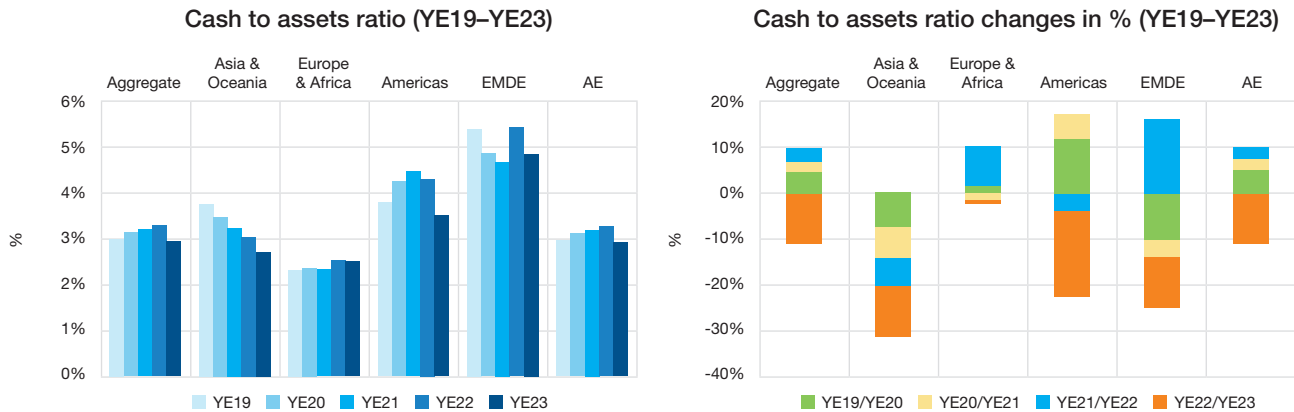
Primary liquidity sources include liquid investments such as sovereign and non-financial corporate debt, and premium income. Key liquidity needs are composed of surrender values for retail and institutional business, followed by claims, expenses and funding needs linked to repos, securities lending.



Liquidity positions increased slightly from year-end 2022 to year-end 2023 across most regions and business models, remaining well above 100%.

Source: IAIS IIM 2024

FIGURE 11



Source: IAIS SWM 2024

Figure 11 shows an overall decline in the cash-to-assets ratio across most regions in 2023, suggesting a shift towards other asset classes, except in Europe and Africa, which showed a modest increase. The Americas had the steepest drop at -18.4%, followed by substantial reductions in Asia and Oceania (-10.9%), EMDEs (-10.8%), and AEs (-10.7%).

#### 2.4.2 Measures taken by supervisors

Supervisors have instituted key initiatives that encompass regularly monitoring liquidity, conducting stress tests and requesting to maintain high-quality liquid assets to withstand stress events. Supervisory measures have focused on managing liquidity risk effectively, imposing dividend payment restrictions during periods of liquidity concerns and elevating liquidity standards. Supervisors have also increased the frequency of liquidity monitoring, particularly given market volatility and rising interest rates. Additional measures taken include establishing dedicated

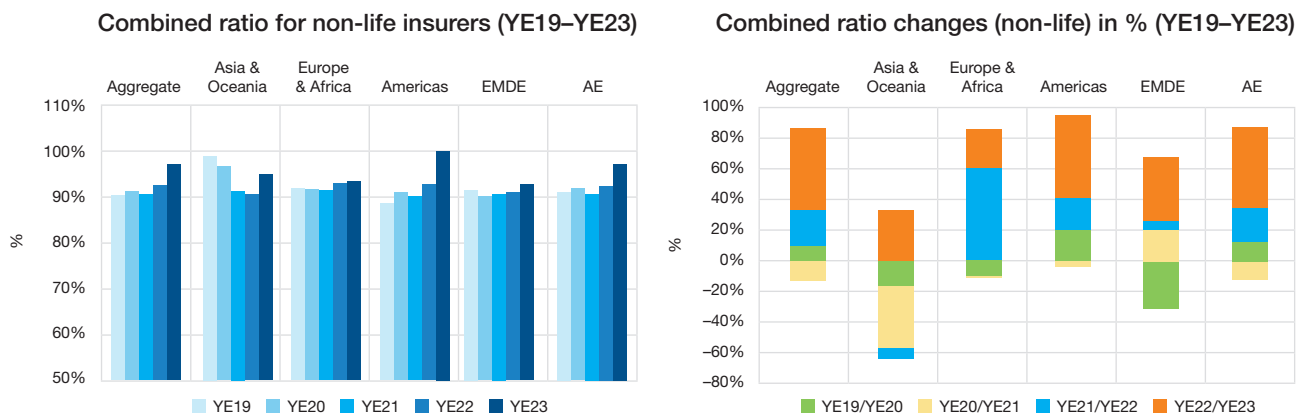
investment oversight teams, extending approval of revolving credit facilities and issuing perpetual subordinated debt to strengthen liquidity further.

#### 2.4.3 Outlook

Insurers expect a stable outlook for liquidity positions. Enhanced cash positions at group level are anticipated through strategic loan repayments and the upstreaming of dividends from subsidiaries. While a few insurers foresee a slight decrease in liquidity ratios due to conservative liquidity risk strategies, others plan to bolster their liquidity through global rebalancing of asset portfolios and increased allocations to liquid assets. Despite potential challenges from market volatility and regulatory changes such as stricter capital and liquidity ratios and enhanced risk management practices, more proactive management (eg through rigorous stress-testing requirements) is expected to keep liquidity within acceptable limits.



FIGURE 12



Source: IAIS SWM 2024

## 2.5 PROFITABILITY

### 2.5.1 Developments

On aggregate, the non-life combined ratio<sup>9</sup> increased notably from 2022 to 2023 (Figure 12), to just below 100%.<sup>10</sup> This strong increase has been particularly evident in the Americas, Asia and Oceania, and AEs, likely reflecting increased claims or operational adjustments. AEs continue their steady ascent while EMDEs showed slower growth. Collectively, these trends suggest a year of increased activity for insurers, as rising combined ratios indicate evolving pressures and potential market adjustments.

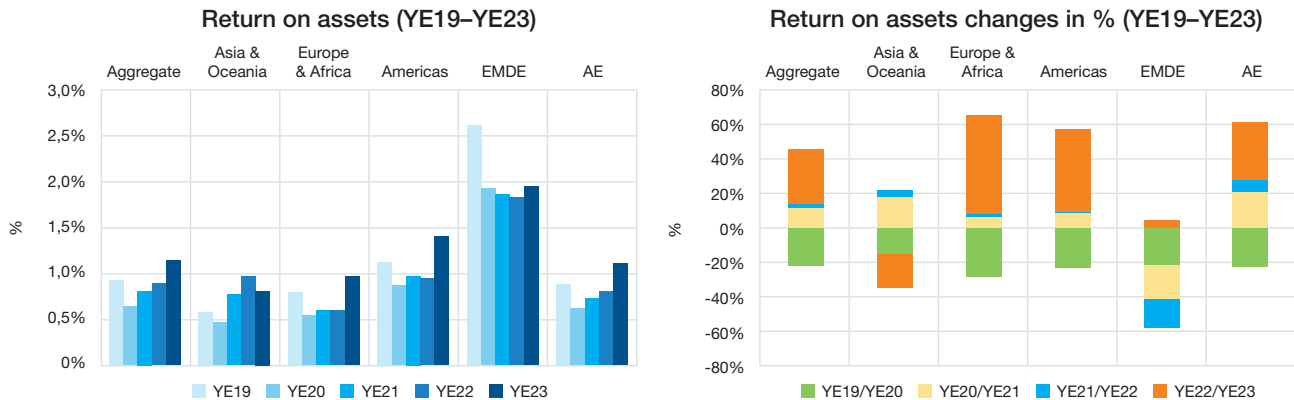
**Insurers' profitability positions were supported by strong capital generation and favourable financial market conditions.**

On aggregate, return on assets (ROA) increased to 1.2% in 2023 (Figure 13). Many insurers experienced improved profitability due to strong capital generation, favourable market conditions and strategic acquisitions. Positive factors included increased revenue from existing business activities, particularly in the non-life sector, and favourable investment variances due to reduced interest rates. However, other insurers faced challenges, such as negative currency impacts, higher borrowing costs and unfavourable underwriting results due to higher mortality and lapse experience. The transition to International Financial Reporting Standards (IFRS) 9 and 17 also led to changes in earnings patterns, with some insurers reporting lower net operating results due to one-off adjustments. Market volatility and economic downturn pressures also affected profitability, with some insurers experiencing declines in net earnings and increased sensitivity to market fluctuations.

<sup>9</sup> The combined ratio is a financial metric used by insurers to assess profitability and operational performance. It is calculated by adding the loss ratio (losses incurred relative to premiums earned) and the expense ratio (underwriting expenses against earned premiums).

<sup>10</sup> A combined ratio below 100% indicates an underwriting profit. A ratio above 100% indicates an underwriting loss.

FIGURE 13



Source: IAIS SWM 2024

### 2.5.2 Measures taken by supervisors

Supervisory measures included ensuring adherence to new IFRS 9 and 17 standards (where applicable), and other local accounting and regulatory regimes. Emphasis was placed on maintaining strong capital reserves, managing dividend policies and monitoring debt redemptions and issuances to align with profitability requirements. Strategies were implemented to address interest rate and market volatility risks through effective ALM. Underwriting performance and claims experience were closely supervised to help mitigate negative effects on profitability. Additionally, there was a focus on the impact of market conditions, interest rate movements and strategic acquisitions on overall financial stability. Supervisors enhanced their monitoring frameworks and conducted stress-testing exercises to ensure ongoing financial stability.

### 2.5.3 Outlook

Looking ahead to 2024–2025, insurers expect profitability to remain stable or improve. This outlook is driven by continued capital generation, sound strategic asset allocation and compliance with evolving regulatory frameworks. Insurers are focusing on growth

through new business development, particularly in non-life sectors and capital-light life products. Strategic acquisitions and asset repositioning are expected to support profitability, although initial impacts may vary. Enhanced digital tools including artificial intelligence (AI)-driven analytics are anticipated to improve operational efficiency and customer engagement. However, insurers remain cautious about potential challenges, including interest rate fluctuations, geopolitical uncertainties and the impact of regulatory changes.

# Macroprudential themes

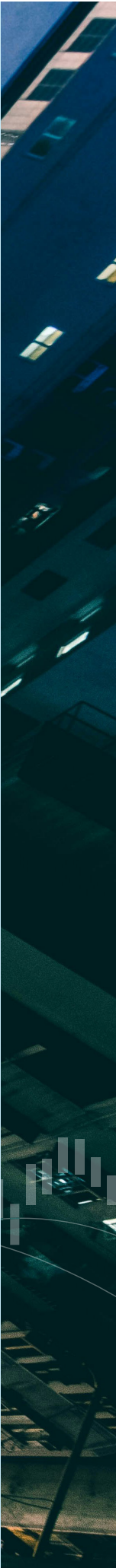
The IAIS has continued to focus on two macroprudential themes, based on supervisory priorities identified through the annual GME: (1) key risks in the current macroeconomic environment; and (2) structural shifts in the life insurance sector, with a focus on asset allocation to alternative assets and cross-border asset-intensive reinsurance.

## Highlights:

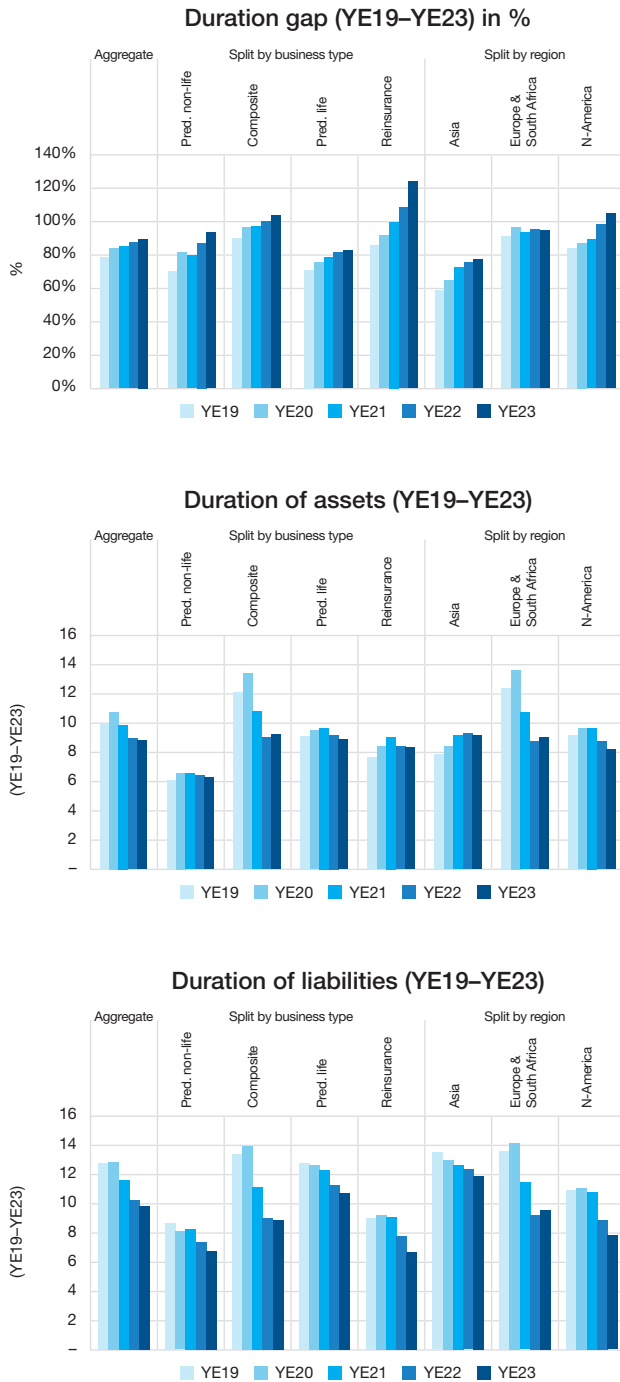
- Global economic growth has remained stable in 2024, but high inflation in some jurisdictions may require prolonged higher interest rates, posing additional risks to the insurance sector.
- The duration gap narrowed in 2023. Surrender rates varied across regions, with aggregate life insurance surrender rates rising for the past four consecutive years. Insurers using debt funding may face liquidity pressures in a high interest rate environment, though larger insurers appear to have better access to funding.

*Cont.*

- Insurers' portfolios primarily consist of fixed-income investments, emphasising high credit quality assets to ensure a balanced approach for managing long-term liabilities. Commercial real estate (CRE) exposures are modest, with North America having higher exposure, while Europe and Africa as well as Asia maintained lower levels. Insurers' use of derivatives increased, with key risks including liquidity risk from margin calls, market risk and counterparty defaults.
- Digitalisation (including the use of AI) has benefits but also poses risks such as increased liquidity risks from potential easier policy surrenders and macroprudential risks linked to AI underwriting, investment and cyber risks.
- Geopolitical risks can impact both life and non-life insurers through various transmission channels that may lead to reduced policyholder income, higher lapse rates, lower demand for life insurance products, reduced investment returns, challenges in business continuity and higher underwriting risks for non-life insurers.
- There has been increased focus on structural shifts in the life insurance sector, covering both: (1) increased investment allocations by insurers towards so-called "alternative assets" such as private credit, private equity and securitisations, and (2) the increased use of cross-border asset-intensive reinsurance. Some insurers are increasing their allocations to alternative assets to seek higher yields and diversification. Key supervisory concerns include discretionary valuation, liquidity risks, hidden leverage and credit risks.
- Asset-intensive reinsurance is set for significant growth, driven by factors such as higher net spreads, pension reforms and demographic changes, with reinsurance providing risk management and capital optimisation tools. Key supervisory concerns include understanding the rationale for these transactions, managing concentration risks at the jurisdictional and reinsurer level, the increasing complexity of these types of agreements and potential conflicts of interest.



**FIGURE 14**



Source: IAIS IIM 2024

### 3.1 KEY RISKS IN THE CURRENT MACROECONOMIC ENVIRONMENT

As outlined in Section 2.1, global economic growth has been relatively stable in 2024. However, some economies are contending with elevated inflation.

#### 3.1.1 Interest rate and liquidity risk

Section 2.4 shows that aggregate ILRs increased slightly in 2023 from year-end 2022, remaining well above 100%.

Asset and liability durations have been declining steadily. Overall, sound ALM has been observed. By year-end 2023, the aggregate duration gap<sup>11</sup> for participating insurers stood at 90%, indicating that assets are less sensitive to linear interest rate increases than liabilities (Figure 14).

The 2024 GME identified four areas of attention with respect to interest rate and liquidity risk: (1) surrender risk; (2) funding risk; (3) derivatives and margin calls; and (4) the impact of AI/digitalisation.

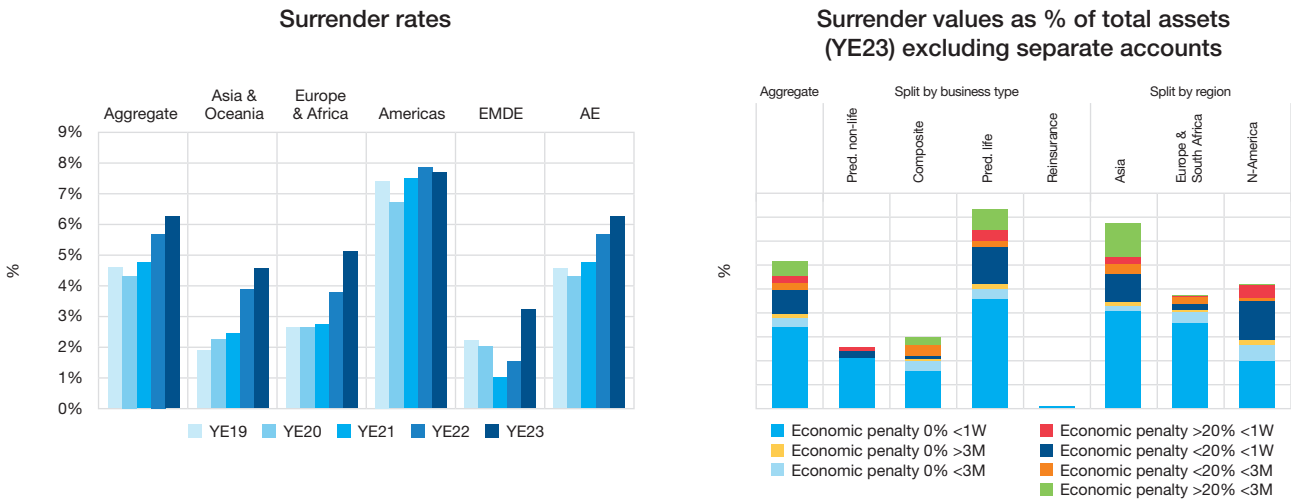
#### 1. Surrender risk

Over the past three years, surrenders have had varying effects on insurers across different regions. In some instances, an increase in surrenders has been observed, driven by factors such as disintermediation risk and shifts in market conditions. SWM data shows an increase in life insurance surrender rates across the 26 jurisdictions that submitted information from year-end 2019 to year-end 2023. Supervisors note that prolonged high interest rates could result in rising surrender rates going forward. In addition, some jurisdictions observed that claims and surrenders have grown at a faster pace than premiums, contributing to cash outflows. Overall, insurers still seem to have sufficient liquid assets to meet their obligations under stress (see ILR in Figure 10).

<sup>11</sup> A duration gap is a measure of the difference between the duration of a financial institution's assets and the duration of its liabilities. It is used to assess the sensitivity of the institution's net worth to changes in interest rates. A positive duration gap indicates that assets are more sensitive to interest rate changes than liabilities, potentially increasing risk if interest rates rise. Conversely, a negative duration gap suggests that liabilities are more sensitive, potentially increasing risk if interest rates fall.



**FIGURE 15**



Source: IAIS SWM 2024

IIM data indicates that surrender values constitute up to 30% of total assets, excluding separate accounts (Figure 15). Half of these surrender values pertain to contracts that carry no economic penalty and are redeemable within one week; however, fiscal disincentives may still apply. From a profitability perspective, certain jurisdictions have identified unit-linked business as the most negatively affected insurance portfolio when hit by surrenders.

## 2. Funding risk

Insurers generally make limited use of debt funding, but in a high interest rate environment, those relying on it may face liquidity pressures during refinancing. Higher interest rates increase borrowing costs, straining insurers' cash flow and liquidity.

Balance sheet funding strategies have seen minimal changes over the past three years. While higher interest rates have posed challenges for some insurers, larger and more established ones, particularly in the non-life sector, have retained easier access to funding due to their stability. Life insurers have increasingly turned to private markets and other capital sources, with reinsurance also serving as a vital funding avenue across regions. Access to capital markets and reinsurers remains important for maintaining financial stability.

Insurers generally make limited use of debt funding, but in a high interest rate environment, those relying on it may face liquidity pressures during refinancing.

Overview of measures to reduce funding risk taken by insurers and supervisors

**Key measures by supervisors:**

- Monitoring insurers’ use of repurchase agreements and setting limits in anticipation of potential increases in short-term interest rates.
- Monitoring risks related to invested assets, particularly in real estate.
- Paying increased attention to insurers most affected by lapses and those using short-term debt.

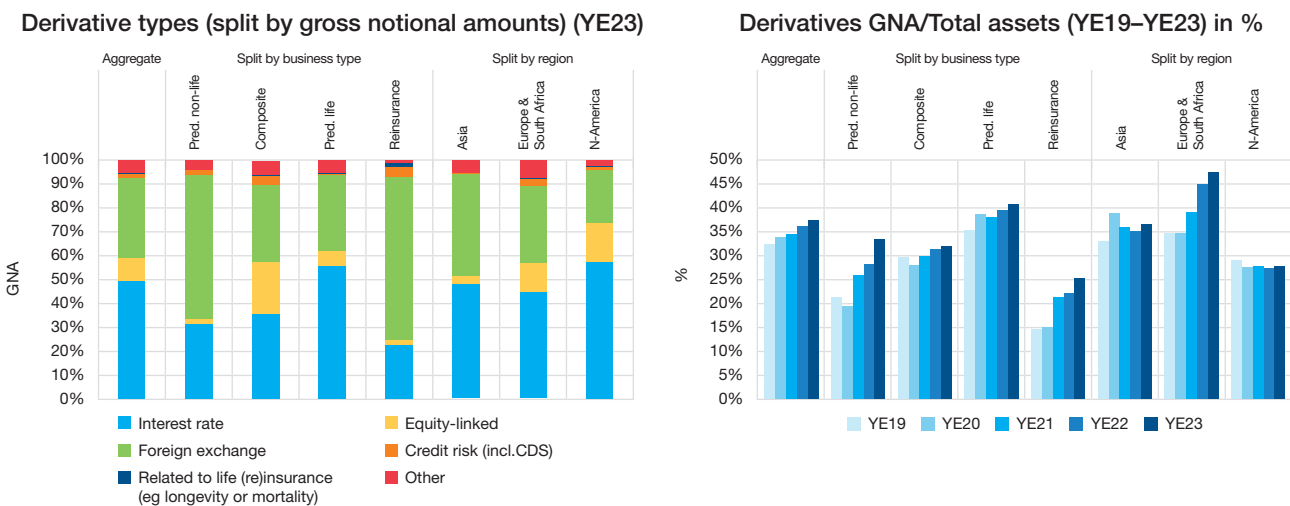
**Key measures by insurers:**

- Leveraging public and private debt capital markets to support new business ventures and acquisitions.
- Diligently monitoring reputational risk and factors that could impair capital sources.
- Effectively managing liquidity and closely monitoring liquidity ratios and the effectiveness of ALM strategies.
- Adapting funding strategies in response to the implementation of accounting rules (eg IFRS 17) and economic-based solvency regimes.

3. Derivatives and margin calls

Derivatives are commonly used by insurers to hedge risks, enhance returns or manage interest rate exposure. IIM data indicated that interest rate derivatives are the most commonly employed, particularly within the life insurance sector (Figure 16). Foreign exchange derivatives follow closely, primarily used by insurers investing in foreign assets, while equity-linked derivatives are used to a lesser extent. More broadly, insurers have employed derivatives, repurchase agreements and securities lending to optimise their investment portfolios.

FIGURE 16



Source: IAIS IIM 2024

As outlined in the 2023 GME, a key risk linked to using derivatives is the related margin calls, which could trigger liquidity risk. Other risks relating to derivatives are market risks, potential failure of over-the-counter (OTC) derivatives counterparties and valuation risk.

### Overview of measures regarding derivatives and margin calls

#### Key measures by supervisors:

- Monitoring derivatives exposures, margin calls and collateral requirements.
- Ensuring derivatives are primarily used as risk management tools (eg to hedge risks).
- Reviewing the effectiveness of liquidity risk management frameworks (including derivatives margin calls and collateral requirements under stress).
- Requiring supervisory approval for certain derivative transactions.
- Emphasising the review of derivatives and liquidity needs in insurers' own risk and solvency assessments (ORSA).

#### Key measures by insurers:

- Conducting stress tests to evaluate the impact of financial market movements (eg interest rate changes) on derivative portfolios, margin calls and collateral requirements.
- Diversifying derivatives' counterparties to mitigate associated (counterparty) risks.
- Leveraging both internal and external expertise to ensure effective risk management.

## 4. Impact of digitalisation on the insurance sector

This section considers the impact of digitalisation, including AI systems on macroprudential aspects in the global insurance sector. Digitalisation and AI systems potentially offer substantial benefits for the insurance sector, but also require careful management to ensure regulatory compliance and the maintenance of financial stability. The increased economy-wide use of AI systems presents what can broadly be described as “external”

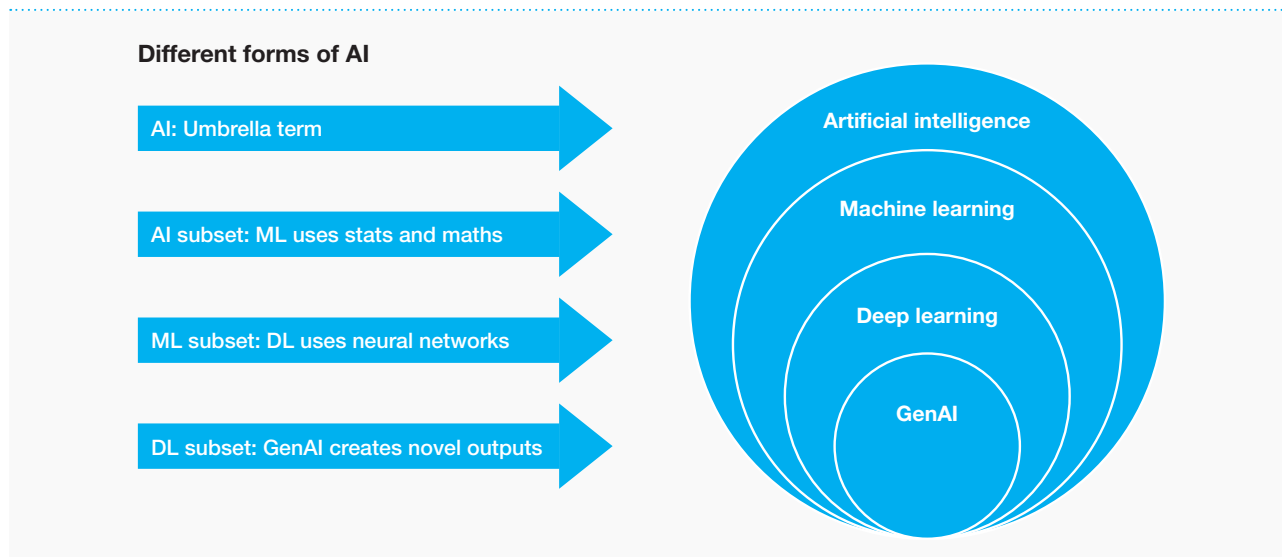
and “internal” risks to insurers. Examples of these risks are set out below, however these will continue to evolve both as the use of AI systems increase and as mitigation measures address these points.

### Internal risks

Insurers have used different forms of AI, such as machine learning, across their businesses for some time. AI is an umbrella term which includes a range of different activities which are expected to lead to significant changes in the way insurer businesses are structured.

**Insurers have typically employed interest rate and foreign exchange derivatives to hedge risks.**

FIGURE 17



Source: IAIS 2024

In line with broader digitalisation trends, AI systems offer cost savings for insurers and benefits for consumers. However, the increasing use of AI, particularly generative AI (GenAI), also presents risks to the insurance sector. The IAIS has been exploring both microprudential and macroprudential risks associated with AI systems. While microprudential and market conduct risks are addressed in the [draft Application Paper on the supervision of artificial intelligence](#), this section complements that paper by focusing more on macroprudential risks which include:

- 1. Operational risk:** As more insurers rely on third-party vendors for AI and cloud services, the macroprudential risks could increase. This could be compounded if a few large third-parties operate in this space. The failure of a third-party, which may be providing services across a number of different insurers, has the potential to spread risk across the insurance sector.
- 2. Legal risk:** Insurers could be exposed to greater legal and/or regulatory risks if they do not effectively manage the risks of bias and discrimination in their implementation and application AI systems. For

instance, if models discriminate directly or indirectly against certain racial groups. This risk could be compounded where a limited number of vendors provide insurers with bias inputs to their AI systems.

Given the speed with which these developments are occurring, microprudential risks such as poor governance of AI risk could have the potential to become a macroprudential risk, where common issues exist across a number of insurers.

### External risks

- 1. Underwriting risks:** AI adoption may increase underwriting risks, such as legal actions for discriminatory practices or new liabilities for policyholders. The economy-wide nature of the changes means it has the potential to impact across all insurer business lines. By seeking to understand these rapidly evolving changes and clearly define the risks they are willing to underwrite, insurers could mitigate their risk. Additionally, trends in AI and quantum computing have the potential to compromise insurer cyber defences because of AI-enabled cyber-attacks. Those insurers that keep pace with these trends will be able to better address their

underwriting exposure. Additionally, developments in generative AI may present increased fraud risks. For instance, by making it easier to create deep fake materials that can be used in fraudulent claims.

**2. Investment risks:** AI's impact on economic activities may affect insurers' asset portfolios and investment strategies, including labour markets, inflation, GDP and market risk. Structural economic changes from AI could also influence investment returns. Equally, the increased use of AI in financial markets could increase the volatility of markets and reduce investment returns.

**3. Operational risks:** Increasing cyber risks could also impact insurers from an operational risk perspective to the extent insurers may need to increase their cyber resilience in the face of growing threats posed by AI-enhanced attacks.

Digitalisation, including the use of AI, offers significant benefits but also introduces risks.

### Overview of measures regarding AI systems

As part of the feedback loop in the GME, supervisors and insurers were asked about the measures being taken to address risks from AI systems. These responses provide an anecdotal assessment of the steps that are being taken.

#### Key measures by supervisors:

- Engaging with insurers to assess the robustness of their governance frameworks.
- Conducting surveys to understand risks and identify the need for additional supervisory measures.
- Developing supervisory concepts and testing compliance requirements for AI systems and machine learning.
- Creating guidelines and regulations to ensure AI development aligns with fundamental rights and safety of policyholders.
- Focusing on supervisory efforts in specific areas, such as non-life insurance, where AI systems implementation is more advanced.

#### Key measures by insurers:

- Establishing robust AI system governance programmes to ensure compliance with laws and regulations.
- Conducting outcomes testing to mitigate potential unfair discrimination and enhance accuracy.
- Integrating AI systems into risk and governance frameworks to effectively manage downside risks.
- Enhancing IT risk management systems to address risks associated with digitalisation.
- Monitoring risks through stress tests and incorporating cybersecurity scenarios in risk assessments.

Further work will be required to assess whether these trends are reflected more broadly across the insurance sector.

## Next steps in artificial intelligence

The FSB recently published an [updated assessment](#) of these financial stability risks. The IAIS will continue to explore these risks within the insurance sector and will look to undertake a more detailed and analytical assessment in the next GIMAR.

## Impact of digitalisation and social media on surrender risk

Digitalisation continues to transform the insurance industry, impacting both life and non-life business models, although business models differ significantly across jurisdictions. As insurers and intermediaries embrace digitalisation, potential benefits include cost savings, improved consumer outcomes and greater access to insurance products. However, the increased ease and speed with which policyholders can access and modify their financial products could also pose liquidity risks, particularly through faster policy surrenders by reducing the friction that is involved in taking these actions. Additionally, social media could exacerbate these risks by influencing consumer behaviour, potentially based on inaccurate information. Information can spread quickly on social media channels and it can often be difficult for companies, including insurers, to both keep pace with rumours and challenge misinformation. It is not clear at this stage how consumer behaviour will change with the greater use of AI and therefore how these existing trends may be impacted by its use.

In insurance markets with significant exposure to products with surrender options for policyholder with limited surrender or tax implications, it is important for insurers and supervisors to monitor and mitigate the possible impact of digitalisation and social media on liquidity risks. As these trends

evolve it will be important for insurers to understand the operational and product implications for their business and to be alert to how the trends evolve.

Mitigation actions could include ensuring a sufficient amount of liquid assets are available to meet the potential liability cash outflows and considering these issues in product design.<sup>12</sup> There are also a number of factors that already can act effective as a deterrent for surrendering products. Surrender charges, penalties and increased tax liabilities on life and certain non-life products typically discourage early surrenders, decreasing liability liquidity. Additionally, insurers can incorporate social media monitoring into their reputational risk frameworks to track real-time sentiment and address potential risks proactively.

### 3.1.2 Credit risk

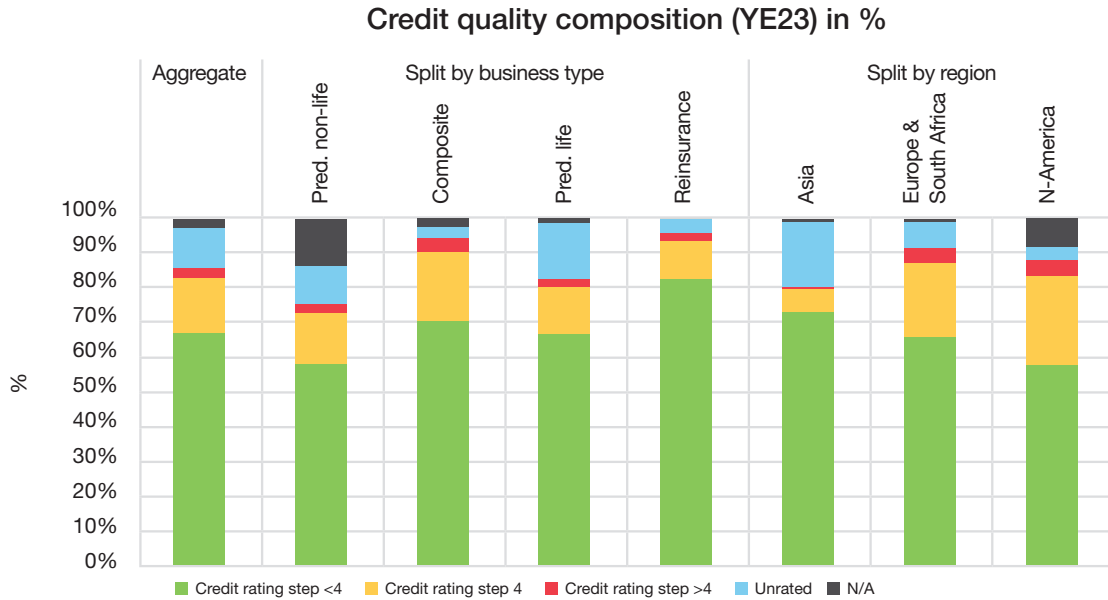
Theme 1 also assessed credit risk in the insurance sector. Two specific areas of attention are the credit quality of insurers' fixed-income investments and CRE exposures.

#### 1. Credit quality of fixed-income investments

Most insurers' fixed-income investments are of high credit quality, with 67.2% rated above investment grade and 15.8% at investment grade (similar to a BBB-rating - credit rating step 4). Unrated assets and below investment grade investments increased at year-end 2023, with unrated investments comprising 14.2% of total investments and below investment grade 2.8%. The overall outlook for insurers remains stable due to the high overall credit quality of their investments. Interest rate changes, however, introduce volatility, which underscores the importance of effective ALM by insurers.

<sup>12</sup> See [Insurance Core Principle 16.8 and 16.9](#) on liquidity risk as part of the enterprise risk management framework of insurers.

**FIGURE 18**

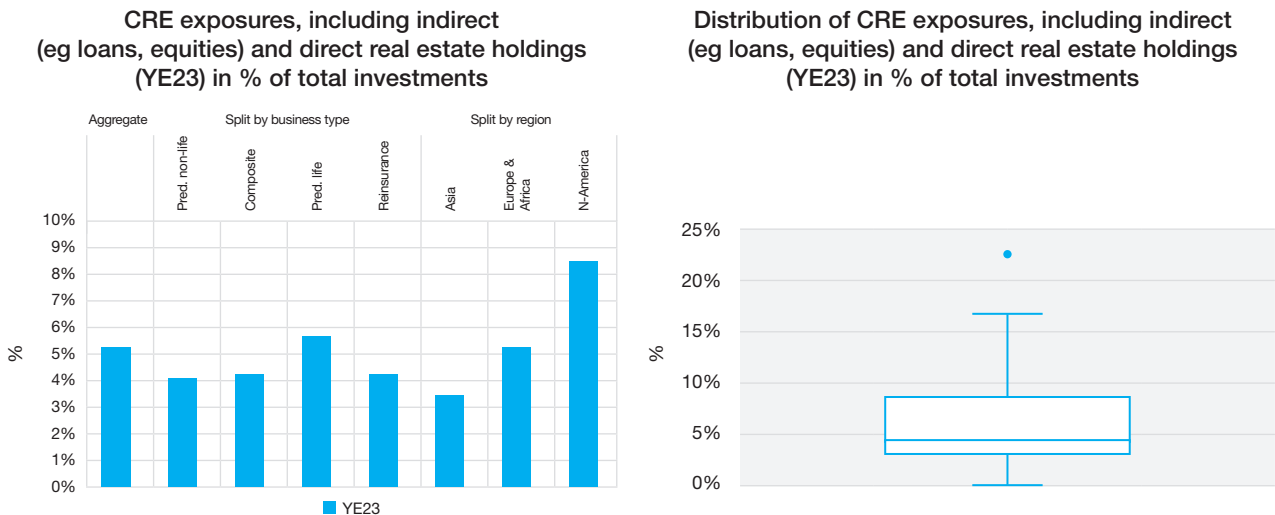


Source: IAIS IIM 2024

## 2. Commercial real estate exposures

The IAIS has been monitoring real estate exposures, with a particular focus on CRE in the 2024 GME. On aggregate, at year-end 2023 CRE exposures accounted for 5.3% of total investments, encompassing both direct and indirect exposures (Figure 19). CRE exposures are fairly evenly distributed across all business types, with a slightly higher exposure for predominantly life insurers. Geographically, North America stood out with a significantly higher share of CRE investments, approaching 9%, while Europe and Africa as well as Asia maintained lower levels. Some insurers have increased their asset allocation to CRE in recent years. A few insurers are outliers and had considerably higher exposure, with some surpassing 10%.

**FIGURE 19**



Source: IAIS IIM 2024



CRE investments are especially important for life insurers, as the long-term nature of these investments is well suited to match long-term life insurance liabilities, possibly enhancing ALM. In terms of direct risks, defaults and impairments in CRE assets can affect insurers' balance sheets, especially amid high interest and low occupancy rates. Indirectly, a downturn in the CRE market can destabilise broader economic sectors, such as banking, which are closely connected to the insurance sector. Additionally, unrated CRE assets require investors to increasingly rely on their own due diligence to assess credit risk.

The lack of standardised valuation methods and credit quality performance metrics of these assets complicates assessing their impact on insurers' balance sheets. Information on the specific types of CRE assets held, such as office buildings, retail spaces or industrial properties, is limited. This distinction is, however, important for identifying potential vulnerabilities and risk concentrations within insurers' portfolios.

Through the 2024 GME, the IAIS has discussed key measures insurers and supervisors are taking to monitor and assess CRE investments by insurers. The key measures are summarised in the box below.

#### Overview of measures regarding commercial real estate

##### Key measures by supervisors:

- Maintaining heightened monitoring, particularly focusing on insurers' high-risk CRE portfolios.
- Conducting reviews on larger life insurers' exposures.
- Requiring reporting of real estate valuation corrections in the ORSA.
- Actively managing liquidity risk for unit-linked property funds.
- Implementing stress tests focusing on CRE.

##### Key measures by insurers:

- Enhancing monitoring of CRE exposures (eg through stress testing), particularly in regions where price declines have occurred.
- Lowering risk in CRE exposures (eg by focusing on debt tranches rather than equity); focusing on low loan-to-value ratios; prioritising higher-rated commercial mortgages; and lowering exposure to higher-risk geographies and CRE types.
- Reducing exposure to office real estate.
- Ensuring diversification of investments and associated risks.

### 3.1.3 Transmission channels from geopolitical risks

Theme 1 also examined the transmission channels of geopolitical risks within the insurance sector. Geopolitical risks encompass a broad spectrum of uncertainties that can profoundly affect both life and non-life insurers, as well as other industries. These risks are transmitted through various channels, including impact on economic growth impact and activities, investment risk, operational disruption and increased claims (Figure 20).

Understanding these transmission channels is important for insurers to effectively manage their risk exposure.

FIGURE 20



The outlook for geopolitical risk among insurers and supervisors from the 2024 GME is marked by increasing uncertainty and the potential for escalation. The primary impacts of geopolitical risks on insurers are most acutely felt within insurers' investment portfolios, particularly for life insurers. Non-life insurers are mostly impacted by secondary impacts on their products and liabilities. Additionally, geopolitical risks can manifest as heightened operational risks for insurers, driven by regulatory changes, cyber security threats, supply chain disruptions and economic sanctions.

Supervisors are taking various measures to manage the potential impact of geopolitical risks, as outlined in the box below.

#### Overview of measures regarding geopolitical risk

- Monitoring geopolitical risks and their transmission channels, including through stress testing, to evaluate the resilience of insurers under various adverse scenarios.
- Requiring insurers to develop contingency funding plans and ensure adequate liquidity for claim payments within ORSAs.
- Facilitating ongoing dialogue between insurers and regulatory bodies to enhance preparedness for potential financial disruptions.

#### 3.1.4 Next steps

The IAIS will continue its comprehensive global risk assessment of the identified risks. Supervisors note that by analysing the GME results, they can identify emerging risks and determine necessary supervisory actions in a timely manner, both at the local level and through cooperation at international level.

The following key areas of attention will continue to be monitored:

- Interest rate and inflation risk;
- Derivatives – eg through the development of ancillary metrics;
- CRE exposures;
- Geopolitical risks transmission channels;
- Digitalisation/AI; and
- Structural shifts in the life insurance sector (see Section 3.2).

## 3.2 STRUCTURAL SHIFTS IN THE LIFE INSURANCE SECTOR

### 3.2.1 Asset allocation to alternative assets

Life insurers have increased their investments in “alternative” or “non-traditional” assets.<sup>13</sup> This was one of the main focus areas of last year’s GIMAR and remains a priority in the 2024 GME.

To recap, in past years, the prolonged low interest rate environment has contributed to driving life insurers to adjust their investment strategies, significantly increasing asset allocations towards so-called “alternative investments”. This trend has continued even in a higher interest rate environment, signalling that interest rates are just one of the factors driving these developments. This shift is also closely connected to life insurers’ increased use of cross-border asset-intensive reinsurance in some regions. Supervisors note that as life insurers continue to increase their investments in alternatives to seek higher yields and asset diversification, understanding the associated risks are crucial.

In the absence of a globally recognised definition of “alternative” assets, the IAIS is developing a definition of alternative assets for the Issues Paper planned in 2025 using risk-based principles to help insurance supervisors classify these according to their different characteristics and to align supervisory practices in this area. This definition will build on three key principles: valuation uncertainty, illiquidity and complexity. In addition to displaying various degrees of these principles, each principle has several dimensions, which need to be considered in more detail. This nuanced understanding has proved crucial for the IAIS’ analysis.

While the definition of alternative assets varies across supervisors and insurers, common examples of alternative assets include private credit, private equity, securitisations, infrastructure investments and hedge funds. Global supervisors provided feedback through the GME on which asset classes they characterised as alternative. This data indicates that, overall, allocations to alternative asset classes vary significantly across jurisdictions and insurers. While the average allocation by IIM participants remains low, some individual insurers have significantly higher allocations. Jurisdictional differences on asset allocations reflect diverse market conditions and regulatory environments.

GME data has enabled the IAIS to further quantify some of the concerns around alternative assets such as valuation uncertainty, illiquidity, assets originated by related parties and assets held under asset-intensive reinsurance agreements. Over the past few years, there has been a substantial increase in assets that are valued and based on models and unobservable input, commonly referred to as “level 3 assets”. Data related to level 3 assets has been collected in the GME for several years. During the last few years, the GME has been extended to monitor similar assets that are not held at fair value (ie amortised cost or similar). These

assets display similar issues concerning complexity and subjectivity in valuation. Asset liquidity is another area of concern, with jurisdictional and business-type differences observed in the IIM data. Some assets are estimated to be less liquid, posing potential risks during periods of market stress. Additionally, assets originated by related parties or held under asset-intensive reinsurance arrangements represent a small average proportion in the Insurer Pool. However, some individual insurers have a significantly higher proportion of these assets, which could amplify liquidity risks. These findings are outlined in more detail in the section below, “trends in alternative assets”.

The shift towards alternative assets presents both opportunities and challenges for life insurers. These assets can offer numerous benefits, including the potential for higher asset yields, diversification benefits and improved duration matching for insurers. However, they may also introduce significant risks related to valuation uncertainty, liquidity and complexity. The principles-based approach adopted by the IAIS provides a flexible framework for assessing these risks, but ongoing monitoring and the development of specific macroprudential guidelines remain essential.

The IAIS is developing a definition of alternative assets for the Issues Paper planned in 2025, using risk-based principles.

<sup>13</sup> Supervisors referred to these types of assets as “alternative” or “non-traditional”.

**Trends in alternative assets**

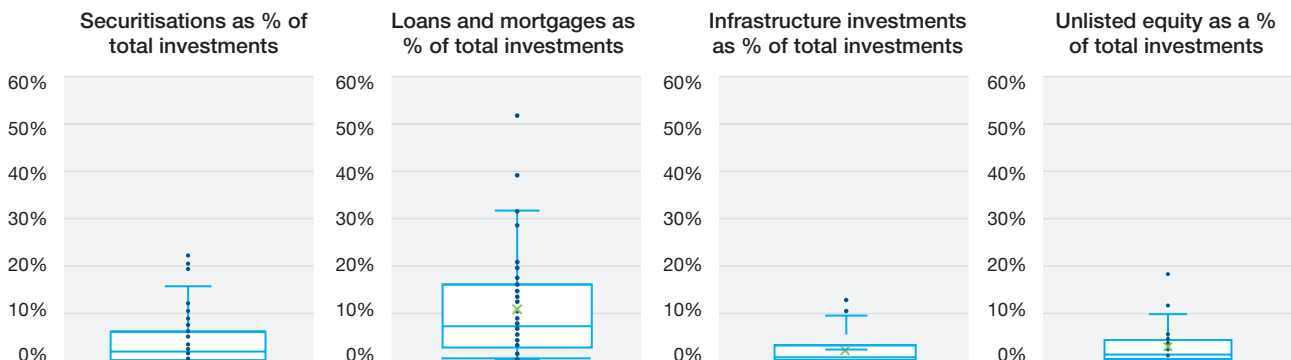
Several supervisors identified private credit, private equity, securitisations, loans and mortgages (L&M), infrastructure investments and hedge funds as alternative asset classes. According to GME data, the aggregated asset allocation to these classes was generally low, with median allocations of 2% for securitisations, 7% for L&M, 1% for infrastructure and 1% for unlisted equities. However, certain individual insurers exhibited significantly higher allocations, aligning with previous findings in the 2023 GIMAR, suggesting that this trend is driven by a smaller subset of insurers. As illustrated in Figure 21, the upper quartile is at 7% for securitisations, 14% for L&M, 3% for infrastructure and 5% for unlisted equity investments. The data

also revealed several outliers for asset allocations, potentially reflecting a stronger pursuit of higher yields or diversification by a subset of insurers in the pool.

There are notable regional differences, particularly in securitisations (Figure 22), potentially reflecting different capital markets and differences in regulatory frameworks. The median allocation to securitisations was 1% in Asia, 2% in Europe and Africa, and 9% in North America.

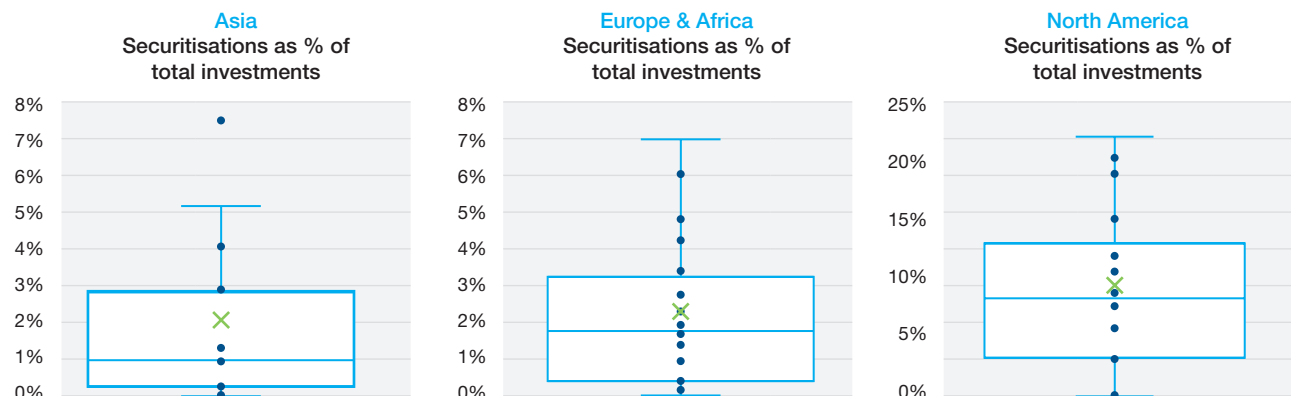
These regional differences may reflect tailored diversification and risk management strategies. Understanding these local market dynamics and regulatory environments is important for making informed decisions, particularly for new entrants to more sophisticated markets.

**FIGURE 21**



Source: IAIS IIM 2024

**FIGURE 22**



Source: IAIS IIM 2024

In terms of valuation uncertainty, there is a notable increase in the proportion of level 3 assets (Figure 23). It is, however, important to note that level 3 assets only capture assets held at fair value and therefore provide only a partial view of potential valuation uncertainty within insurers' investment portfolios. There are also assets with valuation uncertainty that are held at cost. The data for these assets held at cost has only been available in the GME for the past two years, which limits the ability to comprehensively track long-term trends.

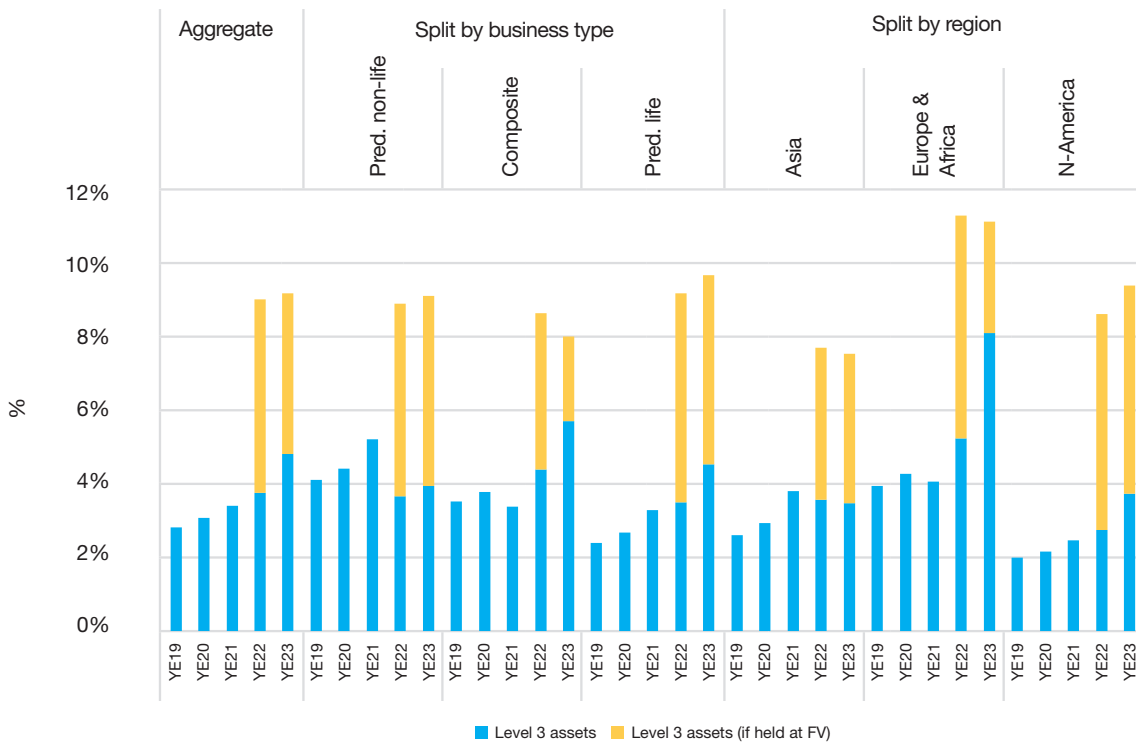
Both fair value and assets held at cost provides a more holistic view of potential valuation uncertainty within insurers' investments. When combined, the total amount of assets with valuation uncertainty is almost double the size of the level 3 assets alone.<sup>14</sup>

This indicates that a substantial portion of the Insurer Pool's assets extending beyond those classified strictly as level 3 assets are subject to valuation uncertainty.

According to the GME, loans and mortgages, securitisations and real estate are the most illiquid assets that insurers hold (Figure 24). These assets are typically harder to sell quickly without incurring significant losses, indicating that insurers investing in these areas may be prioritising long-term stability, income generation and ALM over short-term liquidity. In order to approximate the overall allocation to illiquid assets, the IAIS has included assets such as reinsurance assets, below investment grade bonds (sovereign and corporate), unlisted equities, reinsurance recoverable, and intangibles and goodwill.

**FIGURE 23**

**Level 3 assets and assets which would be level 3 if held at FV as % of total assets**

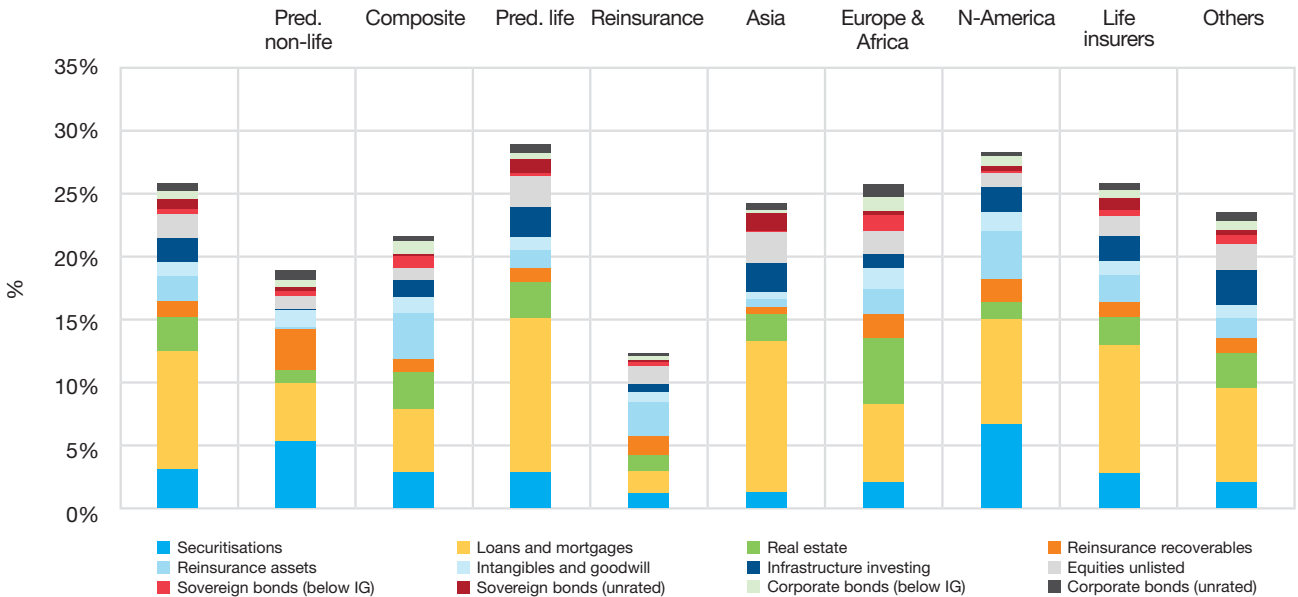


Source: IAIS IIM 2024

<sup>14</sup> Level 3 assets and assets that would have been level 3 if held at fair value.

FIGURE 24

Asset composition – Illiquid assets (YE23) in %



Source: IAIS IIM 2024

FIGURE 25



Source: IAIS IIM 2024

When considering business types, the life insurance sector has the highest exposure to illiquid assets, particularly loans and mortgages. Life insurers often deal with long-term liabilities, making them well suited to hold long-term, illiquid assets that can provide consistent returns over extended periods, subject to sound ALM.

As highlighted in the 2023 GIMAR, investing in assets originated by related parties could give rise to conflicts of interest. While the overall insurance pool average for allocations to these assets remains relatively low, there is a subset of insurers with significantly higher allocations (Figure 25). This distribution mirrors the patterns observed in alternative asset holdings, where a concentrated group of insurers maintain substantial exposures. This is also similar to the distribution of reinsurance assets, which measures the level of assets ceded through reinsurance agreements in some jurisdictions.



## Supervisory risk assessment

The overall risk of an asset is influenced by the degree to which it demonstrates various risk characteristics, some of which are outlined below (Figure 26). Supervisors identified discretionary valuation, liquidity risks and hidden leverage as primary risks associated with alternative assets.

### Discretionary valuation risk

Discretionary valuation is of particular concern, ranked high on average. Valuation methodologies for alternative assets could fail to accurately reflect market conditions and can be highly subjective, leading to potential model risk and time lags in valuations. This subjectivity poses challenges for accurate financial reporting and risk assessment.

### Liquidity risks

Liquidity risks are also ranked high, as alternative assets often lack well-established secondary markets, making the conversion into cash challenging. This issue is exacerbated during

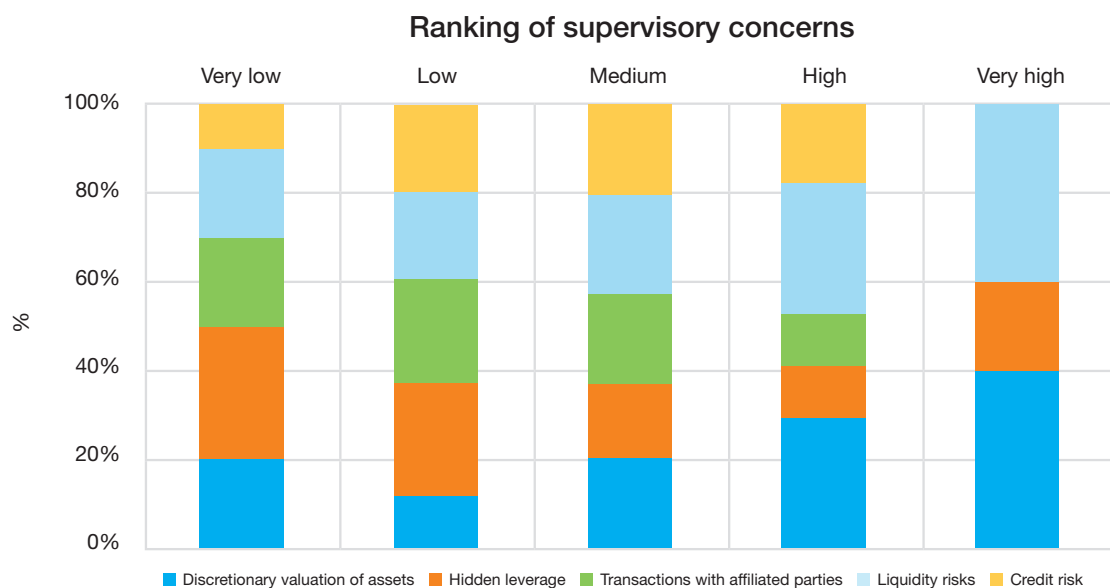
periods of market stress, potentially heightening financial instability. Supervisors stress the need for insurers to implement robust liquidity management frameworks to mitigate these risks effectively.

Supervisors have identified significant liquidity challenges with assets such as private equity, unlisted property and infrastructure. The lack of well-established secondary markets makes converting these assets into cash without significant value loss difficult. In contrast, asset-backed securities, emerging market debt and mortgage-backed securities are noted for their higher liquidity, benefiting from more active secondary markets that facilitate easier access to cash.

### Hidden leverage

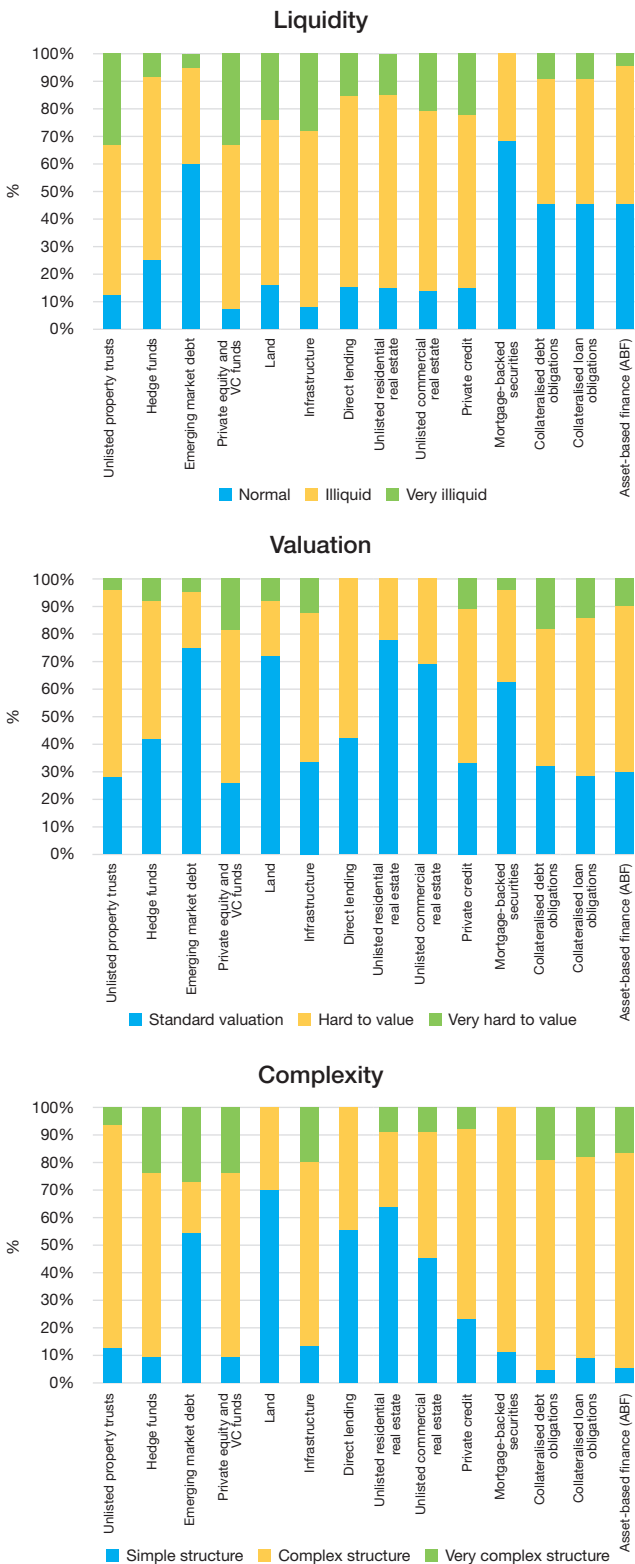
Ranking of hidden leverage was mixed across different risk levels, with the majority of responses concentrated in either the “very low” or “very high” categories. This suggests that undisclosed leverage in funds or structured products could present greater risks than are currently captured by conventional risk and capital management frameworks. Like discretionary asset valuation and

FIGURE 26



Source: IAIS SWM 2024

**FIGURE 27: Supervisory risk assessment – liquidity, valuation and complexity**



liquidity risks, hidden leverage demands continuous and careful monitoring to ensure transparency and to manage leverage exposure effectively.

**Transactions with affiliated parties**

Transactions with affiliated parties are of lesser concern, although they remain a supervisory issue. While deemed less significant compared to other risks, supervisors emphasise the importance of governance structures, especially for insurers heavily engaged in related-party transactions. Ensuring robust governance and oversight mechanisms is crucial to mitigate potential conflicts of interest and maintain the integrity of financial practices.

**Valuation uncertainty**

Valuation uncertainty is another critical concern. It is particularly difficult to determine the value of private equity, collateralised debt obligations (CDOs), and collateralised loan obligations (CLOs) because of their intricate nature and the scarcity of transparent market data. On the other hand, assets like unlisted debt, emerging market debt, and unlisted equity are deemed easier to appraise due to more readily available market information and simpler valuation technique.

**Complexity**

Private equity, hedge funds and CDOs are seen as highly complex due to their intricate structures and diverse strategies. In comparison, unlisted residential real estate, direct lending and land are deemed much less complex, involving more straightforward investment structures and clearer valuation processes.

Source: IAIS SWM 2024

### Data gaps in alternative assets

The life insurance industry faces notable challenges related to data and information in alternative asset investments. A key issue is asset valuation, particularly within market value-based regimes. Variations in methods could lead to inconsistencies in financial reporting and solvency assessments. Additionally, the increasing complexity of certain structured fund investments emphasises the importance of a comprehensive understanding of valuation techniques to ensure consistency.

Investments in alternative investment funds add complexity, particularly with the emergence of different pathways for gaining exposure to alternative assets, including various structures used to access the underlying assets. Given the variations in assessment methodologies by different rating agencies, further assessment of credit rating frameworks is crucial for understanding how different agencies evaluate these assets, helping insurers make informed investment decisions. Understanding the materiality of alternative investment exposure for selected geographies and sectors is essential for assessing associated risks and opportunities.

Gaining further insights into asset-related risks to insurers is another priority. Historical data analysis and stakeholder engagement can help pinpoint common factors leading to failures, enabling the development of risk mitigation strategies. Additionally, scrutinising how credit rating agencies incorporate asset-related risks into their criteria, including capital charges and liquidity stress tests, is essential. The treatment of assets not rated by traditional rating agencies and the use of insurers' internal credit scores also require further exploration for comprehensive risk management.

By addressing these data gaps through continuous stakeholder engagement, the insurance industry can enhance its stability and resilience, better navigating the complexities of asset valuation, capital requirements and alternative investments. The IAIS will continue to initiate discussions with stakeholders to gather comprehensive data and insights on alternative asset investments, ensuring a holistic approach to the analysis.

**The life insurance sector faces notable challenges related to data and information in alternative asset investments, posing key risks to asset valuation.**

## Overview of concerns, drivers and benefits associated with alternative assets

### Concerns

- Discretionary valuation: Subjective methodologies may not reflect fundamentals or current macroeconomic conditions.
- Liquidity risks: Lack of established secondary markets reduces liquidity, especially during market stress.
- Hidden leverage: Unaccounted leverage within funds or structured products poses greater risks.
- Credit risk: Less transparent than publicly traded assets, making performance prediction during downturns challenging.
- Transactions with affiliated parties: Compromises independence and weakens corporate governance through conflicts of interest.

### Drivers

- Low interest rates: Insurers seek higher yields and enhanced returns.
- Regulatory considerations: The design of regulatory frameworks could incentivise diversification into alternative assets.
- Evolving regulatory environment: Regulations increasingly favour alternative investments.
- Increased market sophistication: Advanced analytics and specialised vehicles make managing alternative assets easier.

### Benefits

- Enhanced diversification: Access to a broader range of investments reduces portfolio risk.
- The potential for higher returns due to the low correlation with traditional assets (and possible illiquid nature) providing unique sources of returns, combined with enhanced yield and income from private debt and other alternative assets, improves overall portfolio return.
- Long-term investment horizon: Better aligns with insurers' long-term liabilities.
- Inflation hedge: Assets like real estate and infrastructure may offer protection against inflation.
- Risk mitigation: Low correlation with traditional assets mitigates market volatility.
- Long-term liability matching: Provides stable income streams for better matching long-term liabilities.
- Pricing benefits: Additional yield compensation for risks taken potentially allows competitive pricing.
- Capital efficiency: Optimises capital allocation under frameworks like Solvency II.
- Access to niche opportunities: Investments in emerging industries offer unique growth potential.
- Real economy benefits: Long-term funding supports economic growth and development.

## Financial stability implications

The impact of transmission channel effects on market or financial stability hinges on (1) the share of alternative assets within insurers' investment portfolios (inward risk) and (2) the share of the alternatives investments universe that is held by insurers (versus other financial market players such as banks) (outward risk).

For example, if a negligible amount of an insurer's or jurisdiction's total invested assets is in alternative investments, substantial losses may not significantly affect the solvency of insurers on aggregate (inward risk), so the financial stability risk would be limited. Exposures appear to be concentrated among a few insurers. Nonetheless, most insurers maintain cautious allocations to securitisations, loans and mortgages, infrastructure and unlisted equities due to risks like valuation uncertainty, illiquidity and complexity, which reduces the risk to financial stability.

Fire sales are another potential risk to financial stability. Liquidity risk is a concern for life insurers due to the illiquidity of alternative assets like private equity and infrastructure. If insurers face liquidity pressures and are forced to liquidate these assets at a loss, it jeopardises their financial health (inward risk). Large-scale sell-offs can trigger a significant decline in market prices, creating contagion and market instability (outward risk). However, some of this risk may be mitigated by the longer investment horizon of life insurers and, reflecting the longer duration of liabilities, subject to sound asset-liability matching.

Life insurers often invest in alternative assets through private equity and hedge funds, which are interconnected with various financial institutions. This interconnectedness can diversify risk but also exposes insurers to the vulnerabilities of other financial entities. The default or significant losses incurred by a private equity fund or a hedge fund could spread through the financial system depending on the interconnectedness of fund assets, use of leverage and use of derivatives by the fund. If one private equity firm or hedge fund defaults or incurs significant losses, the resulting financial stress could spread across multiple financial entities, magnifying systemic risk.

Valuation of alternative assets can be challenging due to the absence of regular market prices. Inaccurate assessments can lead to potential mispricing, undermining market confidence in the insurance sector. Sector-wide revaluation could negatively impact capital adequacy and solvency, causing panic among investors and exacerbating financial instability.

From a macroeconomic perspective, a reduction in funding from insurers could pose significant risks to the real economy. Insurers are crucial investors in long-term assets, such as infrastructure, real estate and corporate bonds, which drive economic growth. Reduced investment activities may lead to higher borrowing costs for businesses, constraining their capacity to expand, innovate or sustain operations, and potentially slowing economic activity.

**Potential financial stability risks are contingent upon the proportion of alternative assets within insurers' investment portfolios and the degree to which insurers dominate the alternative investments universe.**

Procyclicality describes financial institutions' tendency to reinforce economic trends. During economic expansion, life insurers may increase exposure to alternative assets, while during economic stress, they may reduce exposure to meet regulatory requirements (eg capital or liquidity ratios). A cyclical reduction in investment in alternative assets and the real economy by insurers could have macroprudential consequences, amplifying market volatility and deepening economic downturns.

Considering the low aggregated levels of investments in alternative assets, as indicated by the GME, the current risk to financial stability from insurers' participation in this asset class remains minimal. However, given the potential financial stability implications highlighted earlier, the IAIS will continue to monitor trends in this domain.

Regulating the risks associated with alternative asset investments is challenging. Current microprudential regulations may not fully capture risks such as illiquidity or valuation difficulties. Insufficient regulation can lead to systemic vulnerabilities, encouraging excessive risk-taking by life insurers and increasing the likelihood of significant losses, which could escalate into a broader financial crisis.

### Supervisory measures

Most jurisdictions lack specific regulations for alternative assets but enforce robust disclosure and management requirements. Supervision is guided by a principles-based approach, focusing on risks like illiquidity, with additional scrutiny for certain asset classes. Regulatory frameworks incorporate risk management principles, such as the prudent person principle, and use risk-based capital requirements to encourage prudent investment practices. Regular reporting supports ongoing risk monitoring and supervisory action when necessary. Enhanced measures are applied to insurers with significant allocations in

alternative assets. While new regulations are not widely considered, some jurisdictions are exploring improved oversight strategies, including asset composition analysis and potential capital adjustments.

Supervisors highlight the importance of understanding the interplay between asset and liability valuations for accurate financial planning, especially for complex or illiquid assets. Data from various sectors and regions informs risk assessments, aiding regulators in developing strategies to mitigate risks associated with growing exposure to alternative investments. Enhanced risk management, including closer scrutiny of valuation models and assumptions, is vital as these assets gain prominence.

Frameworks vary regionally. In the Americas, the focus is on risk management and transparency, with risk-based capital requirements and enhanced disclosure obligations. Asia and Oceania emphasise liquidity management, while Europe and Africa focus on governance and the Solvency II framework. Across all regions, the prudent person principle is key to ensuring sound investment practices.

**Supervisors emphasised the importance of understanding the interplay between asset and liability valuations for accurate financial planning, especially for complex or illiquid assets.**

Most supervisors lack specific macroprudential measures for alternative assets but have implemented proactive measures like macroprudential surveillance and risk dashboards to monitor exposures. These tools help supervisors track the evolving landscape of alternative asset investments and their potential impact on financial stability. Several jurisdictions are developing supervisory guidelines, conducting reviews and analysing the insurance industry's vulnerability to alternative asset exposures. Future macroprudential guidelines are expected to apply broadly to all investments.

Some supervisors are actively developing specific macroprudential guidelines for, conducting thematic reviews of and conducting vulnerability assessments concerning alternative asset exposures. This proactive approach aims to identify potential risks and ensure insurers are prepared to manage the complexities associated with alternative assets.

Supervisors generally monitor insurers' valuation methodologies for alternative assets through off-site analysis, on-site visits and third-party auditors. This multifaceted approach ensures valuation methodologies are robust and reflect market conditions. While some supervisors do not monitor valuation methodologies, there are plans to enhance efforts, indicating a commitment to improving oversight in this area.

### 3.2.2 Cross-border asset-intensive reinsurance

#### Background

Asset-intensive reinsurance involves transferring investment and biometric risks related to a block of insurance liabilities from a primary insurer to a reinsurer, focusing on long-term life policies such as deferred annuities and universal life. These agreements are usually backed by collateral to manage counterparty risk, with the reinsurer managing the assets. Key components of these contracts include collateral and investment agreements, collateral valuation and termination clauses. Pricing depends on reserve valuations, capital requirements and investment returns, with flexibility in investments and policyholder behaviour assumptions playing a crucial role in determining pricing.

The cedent will receive a reinsurance credit due to risk transfer, which will lower reserves and capital requirements. The reinsurer benefits from managing the assets backing up the liabilities, potentially earning higher spreads by leveraging their internal asset management capabilities. Investment flexibility is vital in asset-intensive reinsurance as the discount rate for calculating reserves is often tied to the expected returns on assets,<sup>15</sup> linking assets and liabilities closely. Therefore, the asset mix supporting ceded liabilities plays a key role in these agreements. Alternative assets, like private credit and infrastructure, can provide higher returns but can also introduce higher liquidity, complexity or other risks, making strong safeguards essential for effective risk management.

<sup>15</sup> Subject to regulatory guardrails where applicable.



The information in this section is sourced from quantitative and qualitative information submitted through the IIM, the SWM, the feedback loop process and stakeholder engagement, including IAIS roundtables. In some of the analysis, a distinction is made between ceding and assuming jurisdictions. Ceding (assuming) jurisdictions are defined as those for which 75% of the reinsurance transaction volume is due to the cession (assumption) of liabilities.

## Data

Asset-intensive insurance activity continues to expand. The US accounts for \$2.3 trillion in ceded reserves, with 43% ceded cross-border and total assets in the life insurance sector of \$8.8 trillion. In the UK, liabilities in the bulk purchase annuity market are valued at over £200 billion<sup>16</sup> and are expected to grow to between £400 billion and £600 billion over the next decade. This growth is likely to come from the £1.5 trillion in defined benefit pension liabilities.<sup>17</sup> Bermuda holds \$1 trillion in life liabilities<sup>18</sup> assumed from or written in jurisdictions like the US (60%), Hong Kong (20%),<sup>19</sup> the UK (5%), Japan (<5%) and the European Union (EU, <5%). This includes liabilities associated with asset-intensive products to varying degrees. Additionally, there are markets that have shown limited activity but significant interest in such agreements, with untapped growth potential. For example, the EU has life technical provisions of €4.3 trillion,<sup>20</sup> while Japan holds ¥343 trillion in life insurance reserves.<sup>21</sup>

## Outlook

Insurers in the IIM sample reported that asset-intensive insurance products are poised for growth. This growth is driven by factors such as interest rates, demographics, pension reforms and the need for efficient risk management and capital optimisation tools. In the US, insurers reported a positive outlook for individual annuities, while in Europe, some noted a shrinking risk appetite for back book transactions due to narrowing spreads and implementation complexities. An increase in demand for universal and whole life insurance is anticipated in high net worth segments and in Asia. Bulk purchase annuity and pension risk transfer volumes are expected to continue growing in the US, the UK and some European markets. Insurers believe that asset-intensive reinsurance will play a crucial role in the evolution of business strategies, facilitating the growth and transformation of these markets.

## Supervisory issues

During the 2023 GME, supervisors identified issues stemming from the increased use of asset-intensive reinsurance. These concerns are summarised below. For more detail, refer to the 2023 GIMAR.

<sup>16</sup> Lane Clark & Peacock LLP (lcp.uk.com).

<sup>17</sup> LCP report on future demand and supply in the buy-in and buy-out market.

<sup>18</sup> Bermuda Long-term Insurance Market Analysis and Stress Testing Report, BMA, 2024.

<sup>19</sup> This includes direct business from insurers domiciled in Bermuda that operate as branches in Hong Kong. Out of the 20%, 19% is direct business and 1% is reinsurance business, which is not asset-intensive reinsurance.

<sup>20</sup> SFCR filings year-end 2023.

<sup>21</sup> Statistics 2023, The Life Insurance Association of Japan.

## Overview of concerns, drivers and benefits associated with asset-intensive reinsurance

### Concerns

- Motivation for asset-intensive reinsurance: Cross-border asset-intensive reinsurance can be employed for capital, risk and financial management. However, it can also be used to benefit from regulatory differences.
- Concentration risks: Concerns arise due to a limited number of reinsurers and jurisdictions dominating the transaction volumes. While concentration risks are not exclusive to asset-intensive reinsurance, they may require attention from insurers and supervisors to ensure stability and mitigate potential systemic risks.
- Knowledge gaps: Lack of understanding of (changing) prudential frameworks in different jurisdictions may hinder effective supervision, requiring proactive efforts to bridge informational divides.
- Information exchange obstacles: Limited information hampers a holistic understanding of risks. Collaborative efforts and enhanced mechanisms are crucial to address this challenge.
- Interplay of profitability goals: In corporate structures where the asset manager and reinsurer are part of the same group, the asset manager's profitability goals may influence the reinsurer's risk appetite. This dynamic can lead to instructions for the reinsurer to take on additional risk, potentially creating conflicts of interest and requiring careful risk management and supervision.
- Increasing complexity: The complexity of these agreements, involving elements like retrocession and special purpose vehicles, demands significant attention from insurers and supervisors to ensure transparency and understanding of the associated risks.
- Compliance with accounting standards: With respect to reserving, the question arises as to the methods and the frequency with which insurers and supervisors must review the adequacy of compliance with the accounting standards.
- Recapture risk:<sup>22</sup> While recapture risk in certain forms of asset-intensive reinsurance is limited, handling recaptures may present challenges for insurers and supervisors due to lack of precedent and potential complexities of illiquid or complex assets. Costly portfolio rebalancing and specialised skills may be required.
- Distinguishing retained assets: Differentiating between assets supporting ceded and retained liabilities in financial statements can be challenging. This issue is compounded by the lack of reporting requirements in most jurisdictions, necessitating clarity and transparency in financial reporting.

### Benefits

- Risk and capital management tool: Asset-intensive reinsurance may be used as a tool to manage risk and capital in the life insurance sector. It allows for sharing risks and consolidating blocks of business, which can help insurers manage their overall risk exposure.
- Additional sources of capital: Asset-intensive reinsurance agreements have the potential to bring new sources of capital to the insurance sector. By attracting capital from (new) reinsurers and their investors, these agreements can enhance the overall capital base of insurers, providing them with increased stability and capacity to underwrite risks.
- Managing investment risk: Asset-intensive reinsurance can offer an effective approach to managing investment risk. By transferring risk to reinsurers with asset management expertise and asset origination platforms, insurers can access a wider range of investment opportunities that better match their liabilities and that increase financial income, due to increased investment flexibility.

<sup>22</sup> Recapture means the reinsurance agreement is terminated and the cedent must recapture the risk, partially or fully, along with the assets.

During the 2024 GME, supervisors were asked to score how important these issues were and to indicate whether there were any notable changes in the supervisory risk assessment between 2023 and 2024. No large changes to the supervisory risk assessments during this period were observed. In terms of the scoring of the issues, the responses were dependent on whether jurisdictions mostly see insurers ceding or assuming the risk. As such, the results of this survey are presented below by type of jurisdiction.

### Overview of supervisory measures regarding cross-border asset-intensive reinsurance

Supervisory measures vary across jurisdictions. For instance, some supervisors require pre-approval for insurers ceding business cross-border, while others do not. Similarly, some supervisors of reinsurers assuming cross-border business engage with and seek consent from the ceding insurer's supervisor before approving a transaction. As these transactions increase, certain jurisdictions are enhancing their capacity to manage these risks effectively. Supervisors are adapting their tools and practices to account for key factors in these agreements, such as collateral requirements, investment agreements, collateral valuation, and termination events (including recapture provisions). While most supervisors do not directly oversee collateral arrangements, many establish clear expectations to minimise counterparty risk.

### Ranking of supervisory concerns

The risk assessments for ceding and assuming jurisdictions reveal significant differences in their areas of concern. Supervisors were asked through the feedback loop process to rank each of the identified risks and to indicate how that risk assessment had changed from the prior year. Table 1 presents the results of the risk ranking from the 2024 GME, where a score of 5 indicates a very high risk, a score of 1 indicates a very low risk, and scores in between represent increasing levels of risk. Supervisors from ceding jurisdictions ranked *motivation for asset-intensive activities and the increasing complexity of these agreements* as the largest risks. On the other hand, assuming jurisdictions ranked the *interplay of profitability goals*, which can lead to conflicts of interest, and the challenges posed by *increasing complexity* as the most pressing risks. Additionally, ceding jurisdictions expressed concerns about the impact of *concentration* on systemic risk, whereas assuming jurisdictions believed that concentration risks could be managed effectively through supervision. The most significant differences in risk assessments between these groups were observed in their views on the *motivation for asset-intensive reinsurance* and the perception of *concentration risks*.

**Key supervisory concerns with asset-intensive reinsurance include potential concentration risks, increasing complexity and potential conflicts of interest.**

TABLE 1: RESULTS OF SUPERVISORY RANKING OF RISKS

	Cedent jurisdictions	Mixed jurisdictions	Assuming jurisdiction
Knowledge Gaps	2.92	2.67	2.00
Information exchange obstacles	2.54	2.40	2.00
Motivation for asset-intensive reinsurance	4.30	2.47	2.00
Interplay of profitability goals	2.67	2.67	3.00
Concentration risks	3.15	2.60	1.00
Increasing complexity	3.38	2.80	3.00
Recapture risk	3.08	2.67	2.00
Distinguishing retained asset	2.62	2.43	2.00

Source: IAIS 2024

Regarding the capital impact of asset-intensive reinsurance activity in 2023, jurisdictions with large life insurance sectors and high levels of asset-intensive reinsurance activity reported that it freed up capital, although some noted that higher interest rates might have dampened growth. In contrast, jurisdictions with large life insurance sectors but small volumes of asset-intensive reinsurance reported increased interest in such agreements, particularly in Asia. Most jurisdictions with asset-intensive reinsurance activity reported that they are closely monitoring this segment.

**In cross-border asset-intensive reinsurance transactions within groups, understanding the methodologies for valuing liabilities and assets across jurisdictions is crucial.**

### Supervisory guidelines for valuation of asset and technical provisions

In the context of cross-border asset-intensive reinsurance transactions within groups, it is crucial to understand the methodologies used to value liabilities and assets across different jurisdictions. These differences can have an impact on how they are consolidated at the group level for solvency and accounting purposes. Understanding how these differences impact group consolidation is essential for effective supervision of cross-border asset-intensive reinsurance.

In the 2024 GME, insurers were asked about the supervisory guidelines they employ for the valuation of assets transferred, held in a trust or held under a modified coinsurance agreement as part of asset-intensive reinsurance transactions. Most insurers indicated that they follow the regulations of their local jurisdiction for valuation. Some insurers, particularly those with operations in multiple jurisdictions, apply different guidelines depending on the specific reinsurance agreement and the jurisdiction involved. Notably, some insurers specifically mentioned that for

group consolidated reporting, they eliminate internal, intra-group reinsurance transactions and apply group-level valuation principles to ensure consistency across the organisation. A small number of insurers highlighted the use of internal guidelines or a combination of local and group-level regulations to ensure compliance with both local and consolidated reporting standards.

Similarly, most insurers indicated that for their subsidiaries, the valuation of regulatory reporting values for technical provisions in asset-intensive reinsurance transactions is guided by local jurisdiction regulations such as Solvency II or BMA's economic balance sheet (EBS). On a group basis, insurers consolidate this information by applying specific valuation principles and eliminating internal, intra-group reinsurance transactions.

#### Impact of concentration on systemic risk

While reinsurance is concentrated by nature, the concentration of risk in a small number of reinsurers and jurisdictions has prompted questions regarding the potential impact on systemic risk and the associated potential threats to financial stability. As mentioned before, there are differences in how cedent and assuming jurisdictions view the potential systemic risk of asset-intensive reinsurance transactions being concentrated in a few reinsurers or jurisdictions. Some ceding jurisdictions expressed concerns about the impact of concentration at the jurisdictional or reinsurer level on systemic risk and call for international cooperation and regulatory changes to manage this risk. Relatedly, some supervisors of reinsurers assuming business cross-border discuss with, and seek the consent of, the ceding insurer supervisor before approving a transaction. On the other hand, some jurisdictions do not view this as a major concern due to the low prevalence of asset-intensive reinsurance in their markets.

Certain jurisdictions call attention to the potential risks and emphasise the need for continued monitoring and prudent risk management. Jurisdictions experiencing low volumes of asset-intensive reinsurance transactions underscore the need to monitor the space and the impact on systemic risks, while recognising that the risks may not be substantial. One jurisdiction points out that while reinsurance can be a diversification tool, investment risk is not fully diversifiable, so the concentration risk associated with various types of asset strategies is a primary concern. On the other hand, assuming jurisdictions indicated that concentration risk should be managed through effective risk management and supervision. Furthermore, they stated that insurers typically manage concentration risk by setting limits to specific counterparties, sectors or geographies. They also noted that most transactions have significant contractual guardrails including collateralisation of reinsurance agreements, which not only helps mitigate counterparty risk but also financial stability risk.

**Concentration of risk in a small number of reinsurers and jurisdictions has prompted questions regarding the potential impact on systemic risk.**

## Risk management

### Counterparty and recapture risk

In terms of insurers' risk management, the main focus of the GME 2024 was to understand how counterparty and recapture risks<sup>23</sup> are mitigated.

Several approaches are used by insurers. In particular, those most engaged in asset-intensive reinsurance reported they employ several strategies to mitigate counterparty and recapture risk tailored to the specific needs and circumstances of each insurer. Some commonly used mechanisms included holding assets in trust, over-collateralisation and strict investment guidelines. A few insurers detailed more complex arrangements, such as pledges over assets, custodianship in the cedent's jurisdiction and rebalancing requirements. Some insurers employ a combination of strategies, including ongoing monitoring, financial impairment clauses, and limitations or restrictions on subsequent retrocession. A few insurers indicated that they operate clauses that set collateral at 100% of reinsurance assets and expand the proportion of high-quality assets in case of a fall in the credit rating of reinsurers. Another mechanism mentioned was subjecting collateral structures to risk haircuts.

To manage risk, insurers noted that they assess counterparty credit risk prior to entering the transaction and regularly thereafter. They also mentioned using robust review and approval processes, and annually reviewing internal credit risk limits. Overall, the responses seem to show reliance on credit ratings of the reinsurer as a common denominator.

However, work is still ongoing to evaluate the implementation and effectiveness of these risk mitigation strategies or their macroprudential impact (eg triggers in contracts activated at the same time or in a procyclical manner reinforcing shocks). Work is also ongoing to assess any overreliance on reinsurers' credit ratings for monitoring counterparty risk.

## Supervisory response

The analysis also delved into the supervision of recapture risk, collateral arrangements, investment strategies and reinsurance agreements and their impact on policyholder protection.

### Recapturing

The policy response to recapturing focuses on understanding recapture triggers.

In some ceding jurisdictions, during the review of the treaty, supervisors verify that there are provisions for asset recapture that do not jeopardise the solvency and liquidity of the ceding insurers. Other ceding jurisdictions set expectations for treaty termination clauses. Certain supervisors monitor legal risks associated with the country of origin of the counterparty, while others are more focused on the insurers' understanding of the recapture risks (limits on maximum losses and exposure to a single counterparty, stress-test scenario) and monitoring insurers' risk management.

Assuming jurisdictions stated that while they have experienced a few cases associated with recapture of assets, they take proactive steps to understand recapture triggers as part of the reinsurance transaction approval process. They also engage with (re)insurers to anticipate the implications of any recapture event, requiring the (re)insurer to maintain adequate solvency and liquidity buffers at all times. In the event of a recapture, assuming jurisdictions reported that they use their existing memoranda of understanding with various regulators to exchange information about the recapture and its financial implications. Furthermore, they indicated that this collaborative approach aids the cedent's regulator in understanding the assets supporting the recaptured business, the circumstances leading to the recapture and any potential conditions that may be imposed to protect policyholders, including the impact of implicit costs such as penalties.

<sup>22</sup> See previous footnote for the definition.

### Oversight of collateral arrangements

Most ceding jurisdictions reported that they do not supervise collateral arrangements but set clear expectations for collateral management by the cedent. One jurisdiction reported that their supervision of collateral arrangements focuses on criteria such as adequacy, ALM, credit quality and liquidity risk management. Most jurisdictions require some level of collateralisation for reinsurance agreements with non-licensed reinsurers. Some do not have general legal requirements for collateral but can impose additional requirements under certain circumstances.

Overseeing collateral arrangements in asset-intensive reinsurance contracts also involves voluntary information sharing and ad hoc reviews during the normal course of supervisory activities. Some have noted a slow deterioration in the quality of collateral. One jurisdiction has introduced new expectations on cedents, requiring them to (1) set out a collateral policy document, (2) set exposure limits to particular counterparties based on the riskiness of the underlying transactions, (3) calculate potential recapture losses, taking into consideration the specific assets in the collateral portfolio, to inform their investment limits, and (4) model how the assets held in the portfolio would deteriorate in a stressed scenario. Assuming jurisdictions indicated that they scrutinise collateral backing reinsurance agreements as part of the approval of reinsurance transactions.

### Oversight of assets

Regarding the oversight of assets backing ceded liabilities, some ceding jurisdictions have detailed data (for instance, reporting from the collateral agent) of investments, which they use to monitor the level and quality of the assets. Other ceding jurisdictions evaluate whether the assets supporting liabilities comply with the prudent person principle and are suitable from an ALM perspective. One ceding jurisdiction carries out firm-level monitoring, internal stress tests and an industry-wide stress test. Other ceding jurisdictions review arrangements at the outset with no ongoing monitoring. Some monitor through communication with insurers. Lastly, one jurisdiction is developing a requirement that material ceded blocks perform asset adequacy testing using a cash flow testing methodology. Assuming jurisdictions reported that insurers and reinsurers are required to submit detailed asset portfolio information and conduct stress tests. They may also impose enhanced reporting based on assessed asset risks and will require prior approval for certain asset classes to prevent concentrated asset exposures.

**Most jurisdictions require some level of collateralisation for reinsurance agreements with non-licensed reinsurers.**



## Policyholder protection

Concerning regulatory requirements aimed at ensuring that assets backing insurance liabilities are invested in the interest of policyholders, many ceding jurisdictions referred to the “prudent person principle” or similar concepts, which require insurers to make prudent investments. The adherence to these principles is continuously monitored through various means, including the analysis of investment reports. Some jurisdictions indicated a more proactive approach, such as initiating dialogue with insurers intending to use such contracts and monitoring ongoing international work on the topic. Similarly, assuming jurisdictions require insurers to follow the prudent person principle, meaning they should only undertake investment risks they can effectively manage. Insurers must have comprehensive policies approved by their Board of Directors and hold a significant part of their portfolio in high-grade fixed-income investments.

## Conclusions

Asset-intensive reinsurance is poised for growth, driven by factors such as higher net spreads from alternative assets classes, pension reforms and demographic changes. Asset-intensive reinsurance is expected to facilitate this growth, providing possible risk management and capital optimisation tools for (re)insurers.

Ceding and assuming jurisdictions exhibit marked differences in their assessments of concentration and systemic risk, as well as motivations for engaging in asset-intensive reinsurance. These differences highlight the need for a nuanced understanding of the underlying reasons why (re)insurers participate in asset-intensive reinsurance transactions and underscore the need for international standards and cooperation.

It is crucial for insurers and supervisors to adapt their risk management and supervision practices to the unique characteristics of asset-intensive reinsurance contracts. This adaptation should consider key economic factors such as collateral agreements, investment agreements, collateral valuation and termination events, ensuring that supervisory practices remain relevant and effective. The supervision and monitoring of these risks vary significantly across jurisdictions, correlating with the level of asset-intensive reinsurance activity. As these transactions grow in volume and complexity, some jurisdictions aim to enhance their supervisory capabilities to manage these risks effectively, ensuring financial stability and robust oversight.

Regulatory reporting must be tailored to account for the unique characteristics of asset-intensive reinsurance transactions. Accurate and comprehensive data is essential for effective supervision and risk management, enabling insurers and supervisors to make informed decisions and maintain financial stability. The information collected through the GME suggests a bimodal distribution of asset-intensive reinsurance activity among insurers and jurisdictions. While some entities do not engage in asset-intensive reinsurance at all, others are heavily involved. This disparity underscores the need for tailored risk management and supervisory approaches that reflect the varying levels of engagement in asset-intensive reinsurance.

Despite insurers’ compliance with local standards for valuing assets and liabilities, the process of consolidation at the group level introduces additional complexity on a broader level. This complexity requires a careful and coordinated approach to risk management and supervision across all levels of the (re)insurer.

## Next steps

The IAIS is drafting an Issues Paper on these structural shifts in the life insurance sector. The Issues Paper will focus on the increased allocation to alternative assets and the adoption of asset-intensive reinsurance agreements. This paper will be published for consultation in March 2025.

Insurers with high exposures to alternative assets will be examined in greater depth. This analysis aims to understand the motivations behind these investments, the valuation methods employed and how they relate to product design and strategies. It will also identify any outliers and explore connections to asset-intensive reinsurance transactions.

Additionally, the risk assessment of alternative assets will be closely linked with the development of ancillary indicators for mark-to-model, alternative and level 3 assets. Leveraging ongoing work on level 3 assets is crucial, as there are significant overlaps. This integrated approach will ensure a comprehensive assessment of the risks associated with alternative assets.

The asset-intensive reinsurance section of the Issues Paper will analyse economic drivers for asset-intensive reinsurance transactions, including potential differences in jurisdictional approaches to reserving, capital requirements and investment flexibility. It will also provide a summary of risk assessments across different jurisdictions and the supervisory responses to these risks. Furthermore, this section will examine the potential macroprudential implications of this trend expressed by some supervisors, considering scenarios such as the potential procyclicality of recapture triggers and the potential systemic risk implications of high levels of risk concentration in a few reinsurers and jurisdictions.

Finally, the Issues Paper will include a gap analysis of IAIS Insurance Core Principles to determine if these structural shifts in the life insurance sector are adequately addressed in the IAIS supervisory material.

**The IAIS is drafting an Issues Paper on these structural shifts in the life insurance sector, scheduled for public consultation in March 2025.**

# Individual insurer monitoring 2024

This chapter covers the outcome of the 2024 individual insurer monitoring (IIM).

## Highlights:

- For the Insurer Pool, the aggregate systemic risk score increased by 5.3% from year-end 2022 to year-end 2023. The key driver for this change is the large increase in the level 3 assets indicator, partially offset by decreases in intra-financial liabilities and short-term funding.
- This increase in level 3 assets is mainly driven by accounting changes – in particular, the implementation of IFRS 9 and 17, which has led to the reclassification of certain assets (especially mortgages) from amortised cost valuation to a valuation based on fair value principles.
- To take into account the recent change in the impact and importance of the level 3 assets indicator, the IAIS will consider updating the level 3 assets indicator as part of the 2025 triennial assessment methodology review and is developing an ancillary indicator to enhance the risk assessment of mark-to-model assets.
- On a cross-sectoral basis, comparing aggregate systemic risk scores of insurers to those of banks,<sup>24</sup> the Insurer Pool systemic risk score remains significantly below the banking pool score.

<sup>24</sup> Using a cross-sectoral analysis methodology developed in 2018 by the IAIS-BCBS Task Force for Banking and Insurance. Note, the end-2023 data to calculate the cross-sectoral scores for banks is not yet available, so this will be calculated later in 2024.

In addition to the monitoring of potential systemic risks arising from sector-wide trends related to specific activities and exposures, the GME includes an assessment of the possible concentration of systemic risks at an individual insurer level through the IIM.

The IIM is applicable to insurance groups meeting the Insurer Pool criteria, consisting of 59 of the largest international insurance groups from 19 jurisdictions.

### 4.1 INTRODUCTION

This chapter covers the outcomes of the 2024 IIM, as outlined in paragraphs 109–111 of the [GME document](#). These include an analysis of aggregate trends in the Insurer Pool (Section 4.2) and the aggregate totals for each indicator (Section 4.3). Section 4.4 outlines the impact of the implementation of IFRS on the 2024 IIM.

The IIM technical details, data template and technical specifications can be found in the annexes to this report:

- **Annex 1:** Aggregate totals (denominators) for each IIM methodology indicator;
- **Annex 2:** Formulae used to calculate IIM indicator scores;
- **Annex 3:** The absolute reference values used for the indicators and monitoring them;

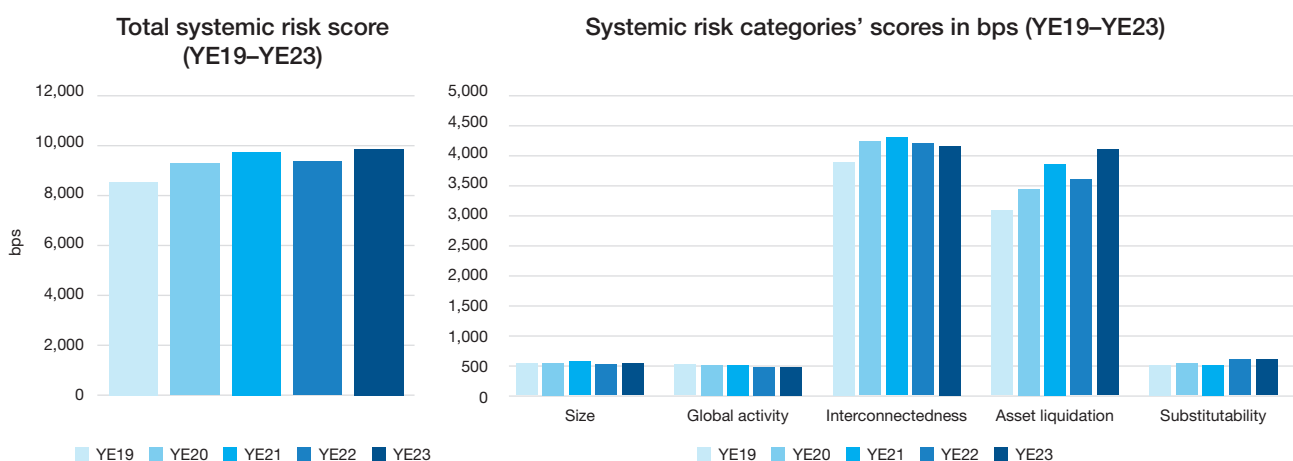
- **Annex 4:** IIM 2024 data template; and
- **Annex 5:** IIM 2024 technical specifications.

### 4.2 ANALYSIS OF AGGREGATE TRENDS IN THE INSURER POOL

As in previous years, the IAIS conducted a trend analysis of data from the Insurer Pool to assess the possible concentration and evolution of systemic risk at the individual insurer level. This analysis includes examining developments in denominators for each quantitative indicator used in the current IIM methodology, identifying the drivers of these developments and pinpointing to outliers and data issues. It also considers the impact of foreign exchange rates and sample fluctuations. Additionally, the trend analysis compares individual insurers against Insurer Pool developments.

Figure 28 shows that the aggregate systemic risk score for the Insurer Pool increased by 5.3% from year-end 2022 to year-end 2023. Sample controls are applied to ensure the sample remains stable over time. The primary drivers of this increase were two systemic risk categories: size (+2.2%) and asset liquidation (+14.3%). Conversely, substitutability and interconnectedness declined by 0.8% year-on-year.

**FIGURE 28**



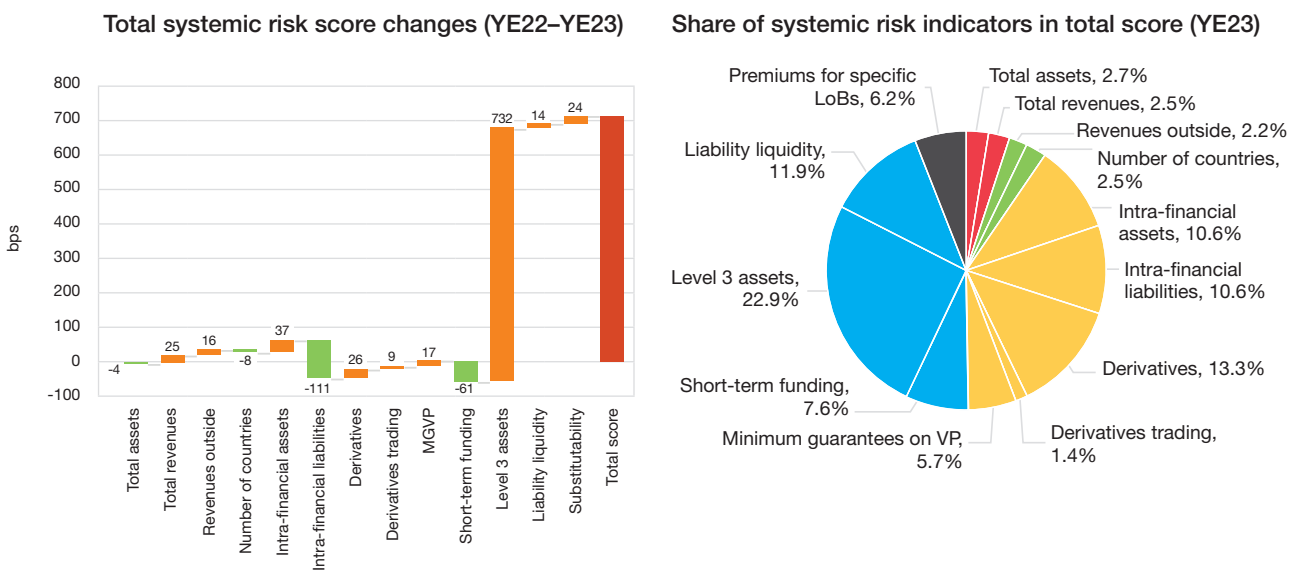
Source: IAIS IIM 2024

From year-end 2022 to year-end 2023, the total systemic risk score increased by 714 basis points, driven primarily by significant increases in level 3 assets (732 basis points), intra-financial assets (37 basis points) and derivatives (26 basis points) indicators. The uptick in the total risk score was partially offset by declines in both intra-financial liabilities (111 basis points) and short-term funding (61 basis points). This increase in level 3 assets is mainly driven by accounting changes – in particular, the implementation of IFRS 9 and 17, which has led to the reclassification of certain assets

(especially mortgages) from amortised cost valuation to a valuation based on fair value principles (Section 4.3).

On aggregate, the most material contributors to systemic risk remain the level 3 assets indicator, representing 22.9% of the total risk score, followed by the derivatives indicator at 13.3%. The liability liquidity indicator accounts for 11.9% of the score. The intra-financial liabilities indicator and the intra-financial assets indicator each account for 10.6%.

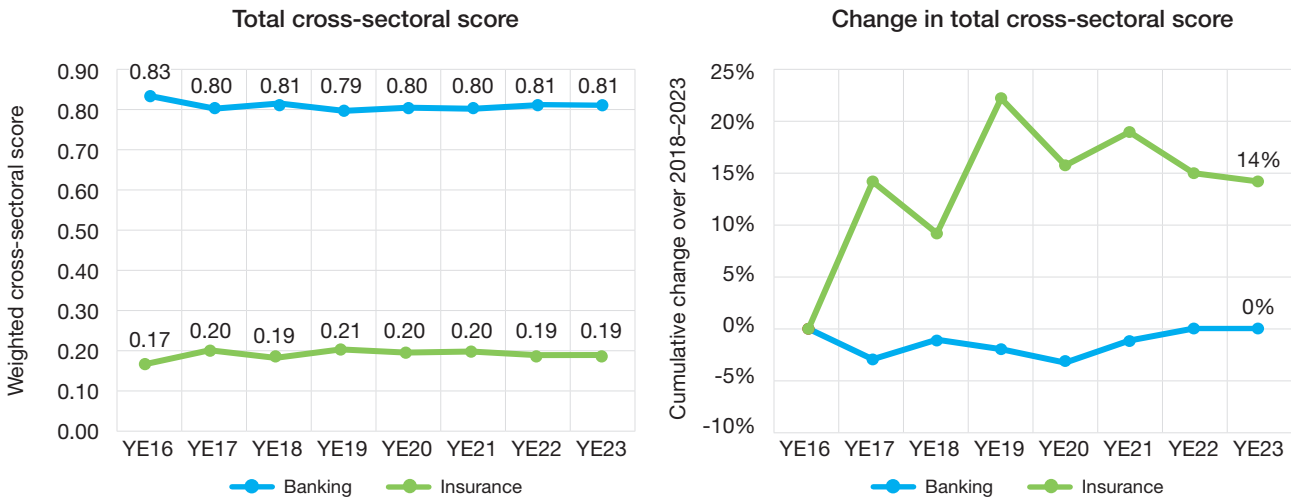
**FIGURE 29**



Source: IAIS IIM 2024

On aggregate, the most material contributors to systemic risk in the insurance sector are the level 3 assets at 22.9% of the total risk score, followed by the derivatives indicator at 13.3%, the liability liquidity indicator at 11.9% and the intra-financial assets indicator at 10.6%.

FIGURE 30



Source: IAIS IIM 2024, BCBS

#### 4.2.1 Cross-sectoral analysis

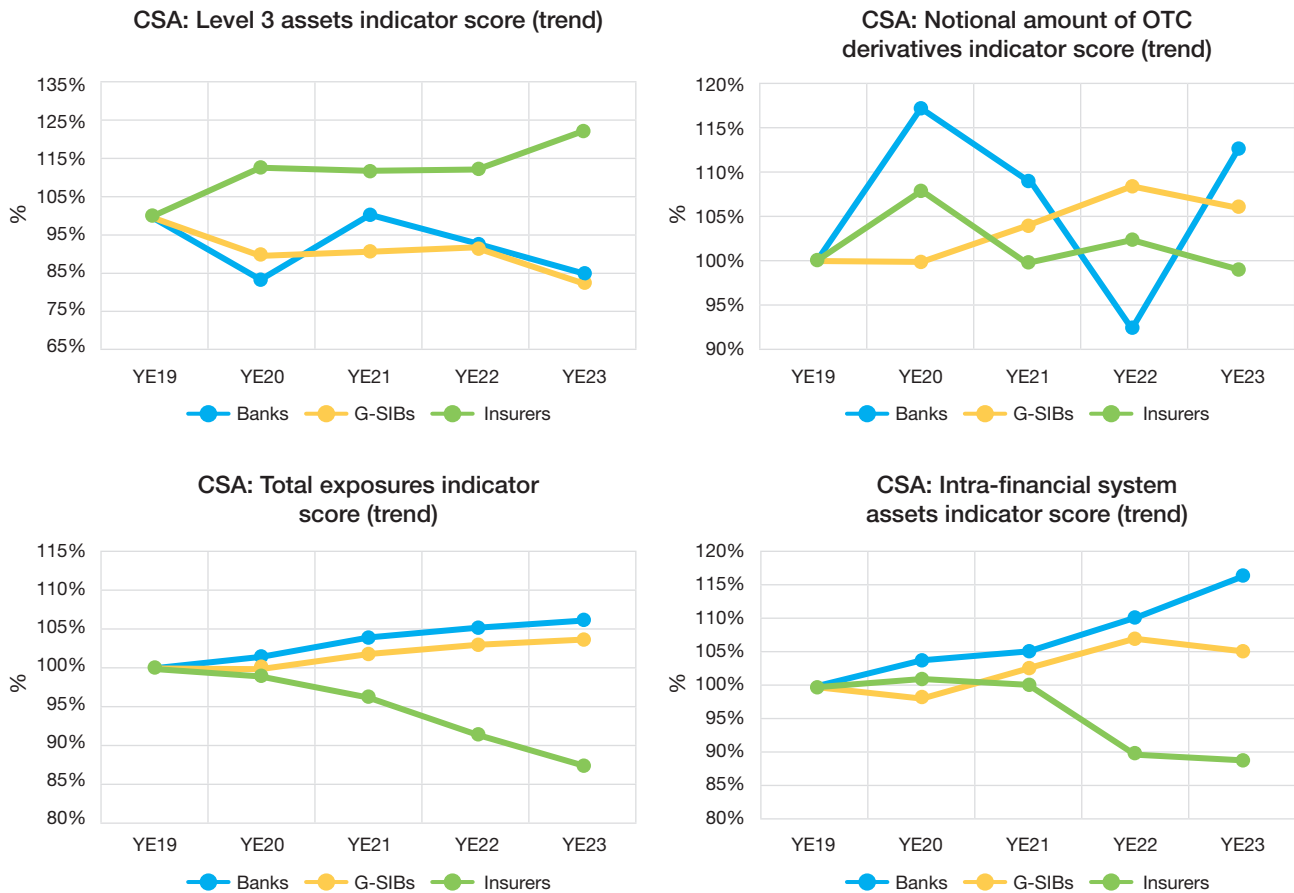
Cross-sectoral analysis (CSA) compares the systemic footprint of insurers and banks using a risk scoring methodology that incorporates indicators common to both the Basel Committee on Banking Supervision's (BCBS) Global Systemically Important Bank framework and the IAIS' IIM. This cross-sectoral methodology was developed by the joint IAIS-BCBS Task Force on Banks and Insurers in 2018.

The results in Figure 30 demonstrate that when keeping the pool of banks and insurers stable over time, the total cross-sectoral scores for banks remain substantially higher than those for insurers, highlighting the lower systemic footprint of the insurance sector.

Figure 30 highlights an increasing systemic risk score for insurers compared to banks, particularly from year-end 2016 to year-end 2019. The level 3 assets indicator is the main driver of the increase for insurers (Figure 31). By year-end 2023, five out of six CSA indicators declined for insurers from the previous year, including the notional amount of OTC derivatives, intra-financial system liabilities, intra-financial system assets, size and securities outstanding. The only rising insurance CSA indicator is the level 3 assets indicator. As noted before, the increase in the level 3 assets indicator is driven by accounting changes, in particular the implementation of IFRS (see Section 4.3). The IAIS is analysing the difference in trends for insurers and banks. This may be related to banks holding a higher relative share of their assets (notably loans and mortgages) at cost compared to insurers.

**The total cross-sectoral scores for insurers remain substantially lower than those for banks, highlighting the lower systemic footprint of the insurance sector.**

FIGURE 31



Source: IAIS IIM 2024, BCBS 2024

## 4.3 IMPACT OF IMPLEMENTATION OF IFRS 9 AND 17 ON THE 2024 IIM

### 4.3.1 Introduction

Several insurers in the Insurer Pool are active in jurisdictions that have implemented the IFRS accounting standard, or an accounting standard that is based on IFRS. **IFRS 9** specifies how an insurer should classify and measure financial assets, financial liabilities and some contracts to buy or sell non-financial items. **IFRS 17** replaces IFRS 4 and sets out principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of IFRS 17.

In 2023, IFRS 17 was introduced in numerous jurisdictions as a new standard for the valuation of insurance contracts. While IFRS 9 came into effect in 2018, several jurisdictions deferred its adoption until IFRS 17 was implemented, enabling insurers to update the accounting of both assets and liabilities simultaneously.

The adoption of IFRS 9 and 17 has impacted the figures reported in the 2024 GME data collection for those insurers and jurisdictions that have implemented these standards and that report the GME data based on IFRS. The effect on the SWM remains limited, as only



13% of participating jurisdictions report data using IFRS, while others rely on local Generally Accepted Accounting Principles or solvency reporting. In contrast, the impact on the IIM is more substantial, as the majority of insurers in the Insurer Pool report based on IFRS and had implemented both IFRS 9 and 17 by 2023.

### 4.3.2 Impact on accounting numbers

Under IFRS 17, insurance contracts are accounted for at fulfilment values, which are often considered equivalent to fair value. In contrast, the previous IFRS 4 standard did not provide specific guidance on how to measure insurance contracts, allowing insurers to adopt a wide range of accounting practices for a key aspect of their business.

The introduction of IFRS 17’s new measurement principles encourages insurers to apply fair valuation to assets to prevent mismatches between the valuation of assets and liabilities. As a result, many insurers have made the accounting choice, or have been required, to adopt fair value measurement for assets previously held at amortised cost. This shift in accounting practices is particularly evident for mortgage loans, which are now frequently measured at fair value and classified as level 3 assets within the fair value hierarchy.

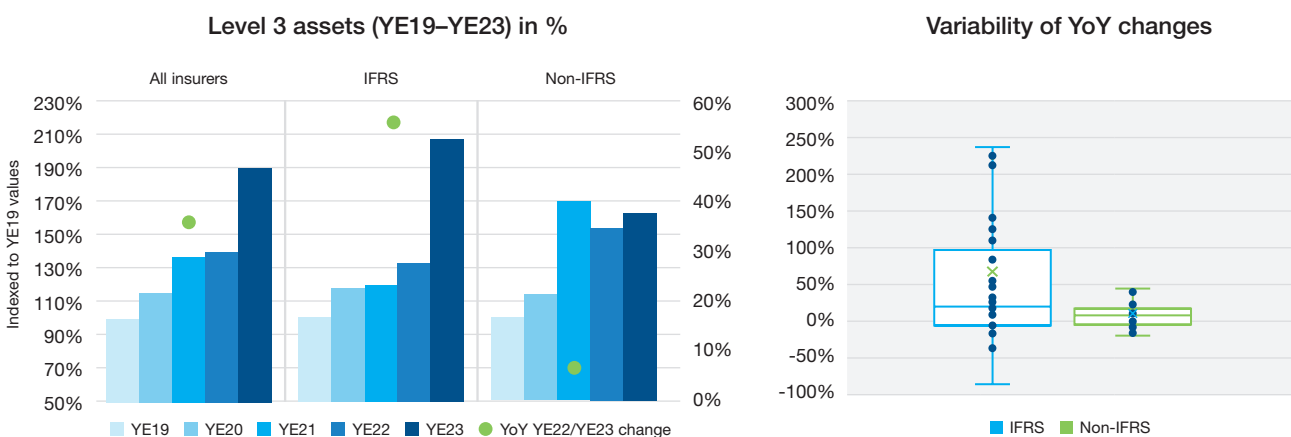
### 4.3.3 Effect on IIM methodology

The change in valuation of level 3 assets had a notable impact on the level 3 assets indicator in the IIM methodology (Figure 32). In many instances, insurers applying IFRS accounting have the option to hold certain assets either at amortised cost or at fair value. Consequently, the change in the level 3 assets indicator exhibited greater variability for insurers applying IFRS, with some experiencing a decrease in their level 3 assets indicator.

Insurers reporting under IFRS saw an average score increase of 8%, compared to just 1.5% for those using non-IFRS standards, driven largely by the increase in the level 3 assets indicator. The year-on-year changes in total scores for insurers were highly variable, with some insurers experiencing significantly larger changes than in previous years.

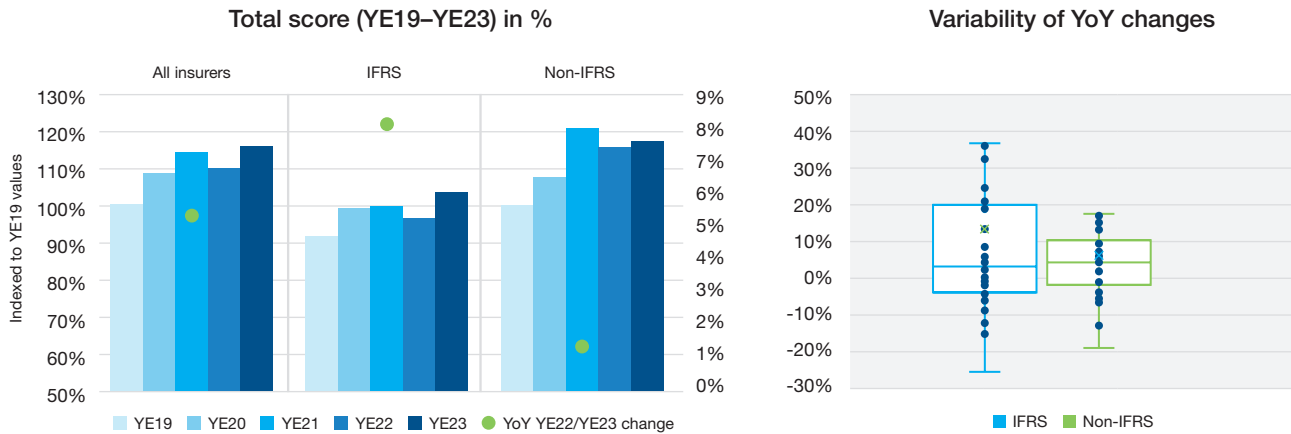
The change in valuation of level 3 assets had a notable impact on the level 3 assets indicator in the IIM methodology.

**FIGURE 32**



Source: IAIS IIM 2024

FIGURE 33



Source: IAIS IIM 2024

Other impacts of the changes in IFRS accounting were also evident in the IIM data collection. For example, the reporting of GWP is no longer explicitly required under IFRS, and the new IFRS 17 profit and loss statement does not include an overall “total revenues” figure. Instead, it separates revenues into categories such as insurance, investment and other revenue streams.

Another impact arose from the accounting of unit-linked products under the variable fee approach, which resulted in “separate account” assets and liabilities no longer being presented on the balance sheet or within disclosures. This led insurers to adopt differing approaches when filling out the corresponding rows in the IIM reporting.

#### 4.3.4 Next steps

Looking ahead to 2025, the technical specifications of the GME will be updated where relevant to ensure reporting consistency. As part of the triennial IIM assessment methodology review, the IAIS will consider making changes to the indicators, including the level 3 assets indicator. In 2025, the IAIS will also finalise the development of [ancillary indicators](#) to enhance the risk assessment, which may include enhanced monitoring of mark-to-model assets. Potential changes to cross-sectoral assessment methodology may also be considered, focusing on addressing differences in how certain assets such as mortgages are valued by insurers versus banks.

As part of the triennial IIM assessment methodology review, the IAIS will consider making changes to the indicators, including the level 3 assets indicator.



# Climate-related risks in the insurance sector

Climate change remains an overarching global threat and a source of financial risk. Climate data elements are now a regular feature of the GME, providing a global baseline of climate risk data for the insurance sector.

## Highlights:

- The shares of climate-related assets differ across regions and economic development categories. However, these differences are also influenced by the availability of data on sectoral splits.
- To help supervisors assess the potential materiality of natural catastrophe (NatCat) risks and how climate change may impact them, the IAIS has commissioned CLIMADA Technologies to develop a tool based on CLIMADA, an open source global NatCat model covering the key climate-related insurance NatCat perils. Data from the tool highlights the high variability in the estimated impact of climate change on NatCat damages.
- Supervisors need to do more work to identify, design and implement appropriate and relevant data collections that can support climate-related risk assessments. This is important for assessing potential risk exposures of individual insurers and may enhance industry-wide risk identification and assessment activities.
- Most insurers indicated that they assess both the impact of climate-related risks on their risk profile and financial position as well as the impact their organisation has on climate change through its operations, investments and other business activities.
- Similarly, the majority of insurers indicated that they already have transition plans in place or are developing them.

The latest United Nations Emissions Gap Report 2024<sup>25</sup> states that greenhouse gas emissions continue to increase and set a new record of 57.1 gigatons of carbon dioxide equivalent emissions in 2023, a 1.3% increase from 2022 levels. The report warns that a continuation of the current policies is estimated to lead to global warming of 3.1°C (range: 1.9–3.8) over the course of the century, significantly above the target of 1.5°C. In contrast, if action in line with the 2°C or 1.5°C pathways were to start in 2024, then global emissions would need to be reduced by an average of 4% and 7.5% every year until 2035, respectively. Given this challenging situation, there is a likelihood of a delayed and divergent transition and/or global warming well beyond the current target. Either will likely have a considerable impact on the insurance sector by increasing physical, transition, liability and reputational risks to the insurance sector.

Therefore, climate change as a cause of an overarching global threat and a source of financial risk is increasing. It is increasingly critical for insurance supervisors to strengthen their understanding of the type and magnitude of climate-related risks and exposures of the insurance sector to effectively identify, monitor and reflect climate change risks in their supervisory responsibilities. The IAIS contributes to enhancing this understanding through an annual data collection exercise and analysis, among other actions. Climate data elements are now a regular feature of the GME, providing a global baseline of climate risk data for the insurance sector.

## 5.1 DATA COLLECTION

The IAIS collected quantitative and qualitative information from jurisdictions as part of the regular GME process in the SWM 2024 data collection and included data collected from insurers in the IIM 2024 Insurer Pool. The data is based on year-end 2023.<sup>26</sup> As in previous years, analysis of insurers' investments (Section 5.2) focuses on the insurance sector's investments in the GA.

A total of 40 jurisdictions, representing about 91% of the global insurance market, provided climate data in the SWM 2024. Thirty-seven jurisdictions also shared asset splits for equities, corporate bonds, and loans and mortgages. Participation in the data collection is broadly in line with last year. A majority of insurers participating in the IIM 2024 also provided data on climate-related risks. Individual insurers provided sectoral splits for equities, corporate debt instruments and premiums, NatCat losses, a qualitative assessment of the climate-related risks and the initiatives taken to address these risks.

## 5.2 CLIMATE-RELATED RISKS TO INSURERS' INVESTMENTS

### 5.2.1 Investment-related exposures

This section provides an update on the proportions of different types of climate-related assets held by the insurance sector.<sup>27</sup> The exposures presented in this section are based on SWM and IIM 2024 data, complemented when necessary by other data or assumptions, as specified in the corresponding subsections. The analysis performed aligns with the approach and methodologies applied in previous GIMARs to ensure consistency.

<sup>25</sup> <https://www.unep.org/resources/emissions-gap-report-2024>.

<sup>26</sup> With the exception of Japan, which provided data to end-March 2024.

<sup>27</sup> Climate-related assets are those assets that are exposed to the risks from climate change.

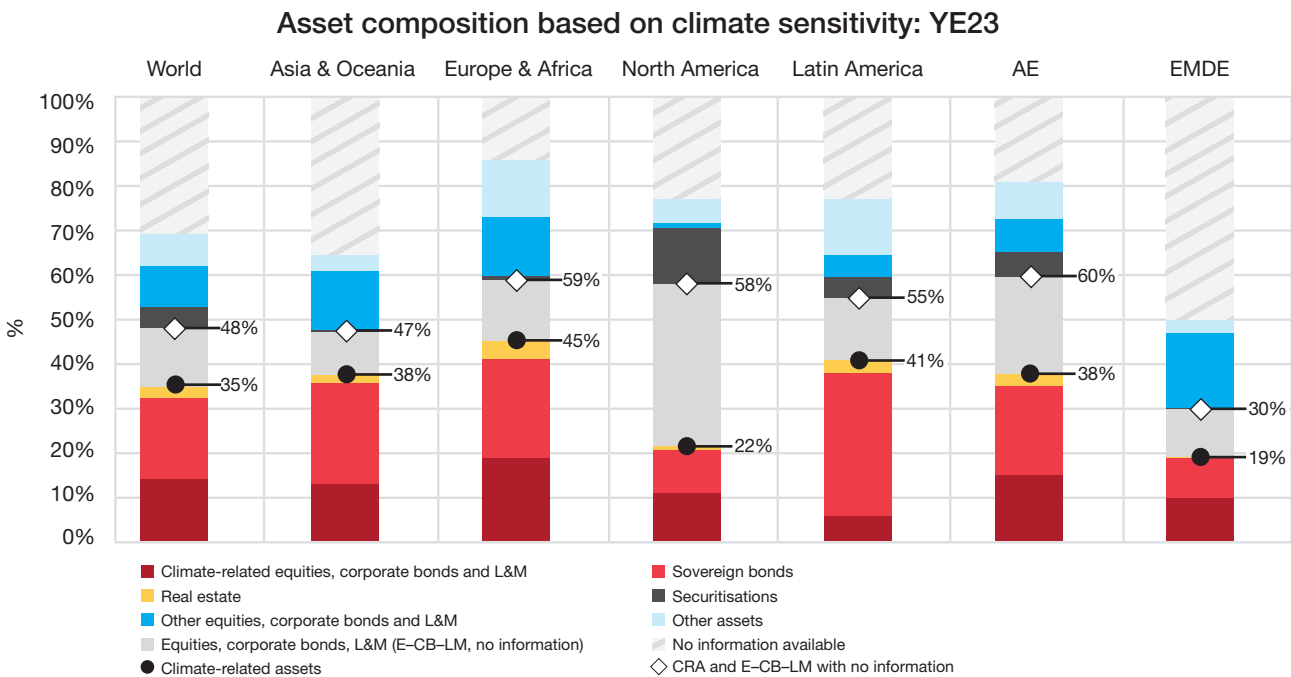
Figure 34 presents the asset mix of climate-related and climate-unrelated assets for the jurisdictions that provided at least some quantitative climate risk information to the IAIS.<sup>28</sup> The overall mix by asset class is complemented by a split of equity, corporate bonds, and loans and mortgages in climate-related sectors,<sup>29</sup> providing a comprehensive overview of the asset mix that can be affected by climate change, by region.

The assets in Figure 34 can be divided into three broad categories:

- Climate-related assets including sovereign debt instruments, real estate and equities, corporate debt instruments, and loans and mortgages belonging to six climate-related sectors: agriculture, energy-intensive, fossil fuels, housing, transport and utilities (shaded in variants of red).

- Other assets including reinsurance recoverables, reinsurance assets, cash and cash equivalents, deferred acquisition costs, equities, corporate debt instruments, and loans and mortgages not belonging to six climate-related sectors (shaded in variants of blue).
- Assets without information regarding their allocation or sectoral split. This category includes equities, corporate debt instruments, and loans and mortgages without any information about their sector, securitisations and assets without information about their asset class (shaded in variants of grey). It is important to note that these assets may still contain climate-related assets.

**FIGURE 34<sup>31</sup>**



Source: IAIS SWM 2024 and IIM 2024

<sup>28</sup> This is the case even if these jurisdictions did not provide any sectoral splits for equities, corporate debt, and loans and mortgages.  
<sup>29</sup> Climate-related sectors are those economic sectors that are most likely to be affected by climate change, notably by transition risks.  
<sup>30</sup> Sovereign debt instruments and real estate are classified as climate-related assets, in line with the 2021 Climate GIMAR. However, they represent heterogeneous asset classes with various levels of climate sensitivity (eg countries are exposed to different levels of physical and transition risks).  
<sup>31</sup> L&M – loans and mortgages; CRA – climate-related assets; E-CB-LM – equities, corporate bonds, loans & mortgages.

The shares of climate-related assets (about 22% to 45% of all general accounts total assets) differ across regions and economic development categories. However, these differences are also influenced by the availability of data on sectoral splits. The combined shares of climate-related assets and that of equities, corporate bonds, and loans and mortgages with no sectoral information are comparable across all regions, ranging from approximately 47% to 59% of total GA assets. However, there is a significant difference between AEs, which stand at 60%, and EMDEs, which are at 30%. Limited data availability is particularly an issue in EMDEs and North America. Half of the assets for EMDEs have no information on the allocation which is reported to the IAIS. In North America, reported lower holdings of climate-related assets (about 22%) are accompanied by higher shares of assets without sectoral information (about 36%) and a further 23% of assets without information about their asset class allocation. The lack of asset class allocation is also evident in other regions, with data availability remaining a key challenge in the monitoring of transition risk.

In comparison to the 2023 GIMAR, no material changes were found in the regional shares of climate-related assets.

### **Equity, corporate bonds, and loans and mortgages**

For equities, corporate debt, and loans and mortgages, the choice of climate-related sectors is based on climate policy relevant sectors (CPRS), a classification of economic activities to assess transition risk, which was developed in Battiston et al. (2017)<sup>32</sup> and refined over the years. The CPRS classification was also used in previous editions of the GIMAR. It provides

a standardised and actionable classification of activities where revenues could be negatively affected in a disorderly low-carbon transition scenario. As in the analysis in previous years, the IAIS applied two important adjustments to the CPRS classification.

**Treatment of the utility sector:** The utility sector includes all electricity generation activities, regardless of the energy source used. This lack of granularity results in renewable energy assets being unduly considered climate-related. In line with last year's analysis, a haircut was therefore applied to all amounts reported in the utility sector on a jurisdictional basis. The size of the haircut was determined with reference to the proportion of renewable power generation in the region of each jurisdiction, as published in the International Renewable Energy Agency regional factsheets.<sup>33</sup>

The combined shares of climate-related assets and that of equities, corporate bonds, and loans and mortgages with no sectoral information, are comparable across all regions.

<sup>32</sup> Battiston, S., et al. 2017. "A climate stress-test of the financial system." *Nature Climate Change* 7: 283–8.

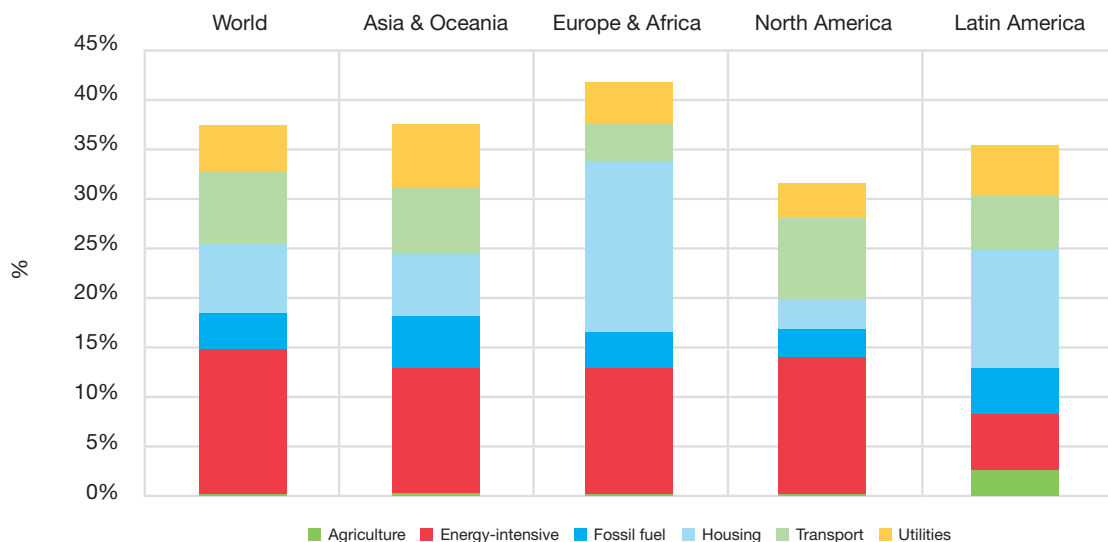
<sup>33</sup> <https://www.irena.org/statistics>.

<sup>34</sup> To approximate the exposures that would result from a look-through approach, it was assumed that entities or funds classified in the financial sector include climate-relevant assets in similar proportion to that of assets held directly by insurers.



FIGURE 35

### Share of equity, corporate bonds and loans and mortgages in climate-relevant sectors: breakdown by region



Source: IAIS SWM 2024 and IIM 2024

**Treatment of the financial sector:** These assets include participations in other insurers or banks, as well as holdings of investment funds (without look-through). These assets are also likely to exhibit some exposure to climate-related risks, depending on the type of the counterparty (bank, insurer, asset manager or other), its direct exposure to climate risk and its financial and operational leverage. In the absence of insight into the actual exposures, the IAIS applied the same data adjustment to approximate a look-through approach as was used in previous years.<sup>34</sup> The impact of this adjustment is an increase in the share of the six climate relevant sectors by 16% on a global level. The biggest impact is related to the Europe and Africa regions (+28%) due to a high regional share of exposures to the financial sector (with no look-through feasible) on insurers' asset holdings (47% of all GA total assets).

Figure 35 presents, for each region, the share of equity, corporate bonds, and loans and mortgages in the six climate-relevant sectors.<sup>35</sup> The remaining portions either pertain to assets unrelated to climate or lack available information.

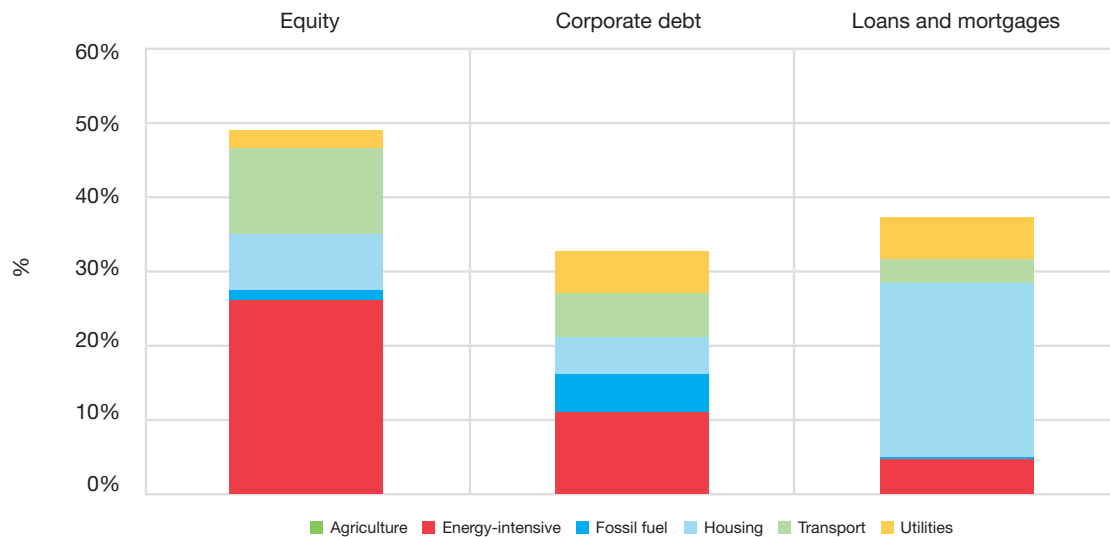
Depending on the region, climate-related sectors represent between 32% (North America) and 42% (Europe and Africa) of these asset classes. Changes compared to last year's results can be attributed to differences in data coverage of the IAIS climate data collections.

<sup>35</sup> The figure only includes asset classes for which jurisdictions provided sectoral splits.



FIGURE 36

## Share in climate-relevant sectors: breakdown by asset type



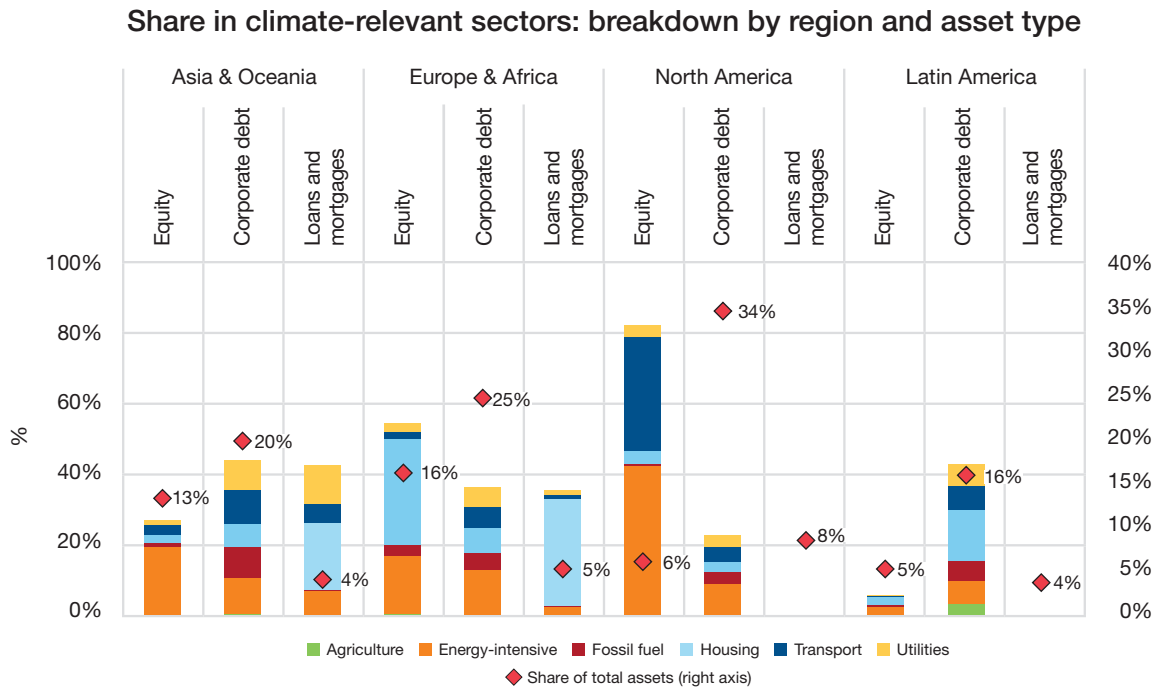
Source: IAIS SWM 2024 and IIM 2024

Figure 36 presents the shares of the six climate-related sectors for each of the three monitored asset classes: equity, corporate bonds, and loans and mortgages. Insurers' equity holdings include 49% of investments to the six climate-related sectors, increasing by 9% compared to last year. The total share for loans and mortgages slightly increased to 37%, while the results for corporate debt are broadly unchanged.

Similar to last year's analysis, the energy-intensive sector, which is quite broad and encompasses most of the manufacturing industry, remains globally dominant among climate-related equities, while the picture is more balanced for corporate bonds. Climate-related loans and mortgages are primarily associated with the housing sector.

The energy-intensive sector, which encompasses much of the manufacturing industry, remains globally dominant among climate-related equities, while the landscape for corporate bonds is more balanced.

FIGURE 37



Source: IAIS SWM 2024 and IIM 2024

Figure 37 shows a breakdown by region and by type of asset class. It also provides information about the percentage shares of the three monitored asset classes to total assets (red diamond, right axis). Data availability remains a challenge, with a large share of data gaps for the climate-related split across all regions.

Data availability remains a challenge, with significant data gaps for climate-related information across all regions.

## 5.3 ANALYSIS RELATED TO NATURAL CATASTROPHES

### 5.3.1 Importance of analysing exposure to natural catastrophes

One of the main effects of climate change on insurers is through the expected increase in NatCat-related claims. To assess the potential risks associated with this trend, as a first step, supervisors need to have the data and tools to understand and monitor insurers' current exposure to NatCat. As a second step, supervisors need to consider how climate change, in conjunction with other relevant developments (such as an increase in exposure in high-risk areas and possible adaptation actions), may impact the cost of NatCat coverage in the medium to long-term.

Estimates of the magnitude of the impact could help supervisors determine the likely changes in the materiality of NatCat risks relative to the other risks insurers face. As this risk becomes material, it will require strengthening insurers' NatCat risk capabilities to ensure they have the necessary frameworks and tools in place for adequate pricing, underwriting and risk management. The NatCat quantification can help establish the degree to which climate change could cause earnings, liquidity or solvency strain to insurers, especially those with significant exposure to NatCat.

Furthermore, it can help supervisors understand whether there could be any systemic impact to the sector or a significant part of the insurance sector.

To help supervisors assess the potential materiality of NatCat risks and how climate change may impact them, the IAIS has commissioned CLIMADA Technologies to develop a tool based on CLIMADA, an open source global NatCat model covering the key climate-related insurance NatCat perils.<sup>36</sup> This tool provides IAIS members with estimates of the NatCat damages at different return periods at a country and US state level (both referred to as "territories" below), as well as average annual loss (AAL) across more than 250 individual territories using the LitPop global high-resolution asset exposure dataset.<sup>37</sup> In addition, the tool provides estimates about how climate change may impact the above metrics by 2030, 2050 and 2080 under Representative Concentration Pathways (RCP) 8.5<sup>38</sup> (the pathway with the highest assumed greenhouse gas emissions) and based on unchanged exposure. The estimates provided by this tool could be particularly useful for those countries where commercial NatCat models are not available. While this tool provides useful estimates for these metrics, the modelling uncertainty inherent in any NatCat model needs to be considered when the results are used by members.

**The IAIS has commissioned CLIMADA Technologies to develop an open-source tool using the CLIMADA model to help supervisors assess the materiality of NatCat risks and the impact of climate change.**

<sup>36</sup> The tool covers riverine floods, coastal floods, wind storms and tropical cyclones. See [link](#) for a detailed description of the CLIMADA Technologies tool.

<sup>37</sup> [LitPop: Global Exposure Data for Disaster Risk Assessment – Research Collection \(ethz.ch\)](#).

<sup>38</sup> Representative Concentration Pathways (RCP) are climate change scenarios to project future greenhouse gas concentrations.

### 5.3.2 Spillover effect of NatCat damages to other financial sectors

The impact of climate change on the frequency and severity of NatCat events can also create spillover effects beyond the insurance sector. As the costs of claims increase, insurers are likely to increase premiums accordingly, affecting the affordability of insurance. Furthermore, as climate change makes some types of events more recurrent, this will challenge insurers' capacity to pool these losses and could lead to insurers withdrawing from offering coverage. Output from NatCat models that incorporate climate change impact can help supervisors understand possible trends in the likely response by insurers affecting availability and affordability of insurance.

If damages are not covered by insurance, the impact will also be felt by governments (ie as the costs of reconstruction can fall to governments to provide financial support, with budgetary implications) and the broader financial system (ie the banking sector if uninsured households or business are unable to pay back loans or mortgages due to financial pressure from a disaster). The potential financial stability implications of NatCat protection gaps are a topic that the IAIS will focus on in its GIMAR special topic for 2025.

**The impact of climate change on the frequency and severity of NatCat events can also create spillover effects beyond the insurance sector.**

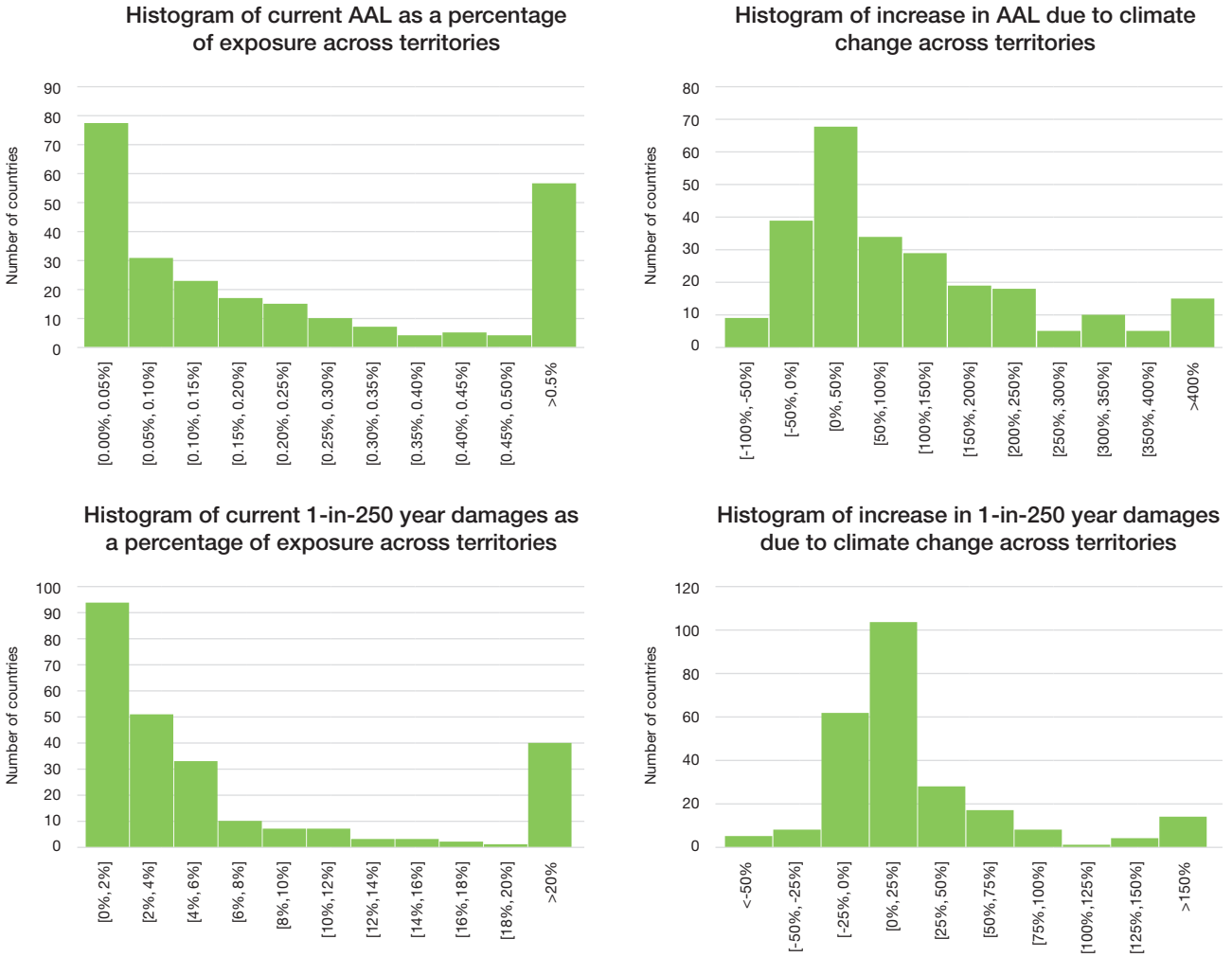
### 5.3.3 High variability in estimated impact of climate change on NatCat damages

NatCat exposure across countries is highly diverse, as illustrated by the estimates produced by the CLIMADA Technologies tool (Figure 38). The majority of territories show low exposures: around 80 territories with AAL as a percentage of exposure lower than 0.05% and around 90 territories with 1-in-250 years damages as a percentage of exposure lower than 2%. Some territories have substantially higher exposure: around 60 territories with AAL as a percentage of exposure greater than 0.5% and around 40 territories with 1-in-250 years damages as a percentage of exposure greater than 20%.

At the same time, the variability of the impact of climate change on NatCat across countries and perils may be underestimated (see Figure 38). While in general it is expected that climate change will increase the frequency and severity of NatCat events, the estimates from the CLIMADA Technologies tool show quite a diverse picture: in more than 20% of the territories, AAL is modelled to more than double, whereas almost 20% of the territories may actually experience a reduction in the cost of NatCat events in aggregate across the modelled perils by 2080 under RCP 8.5 (based on constant exposure). There is no clear correlation between the relative current exposure and estimated impact due to climate change, so both the reduction and the high increase in NatCat have been estimated for territories with very different relative levels of current NatCat exposures.

The high variability of the impact of climate change underscores the importance of improving the understanding and modelling of its impacts. At the same time, it needs to be recognised that despite all the improvements in this area, significant challenges will remain in these quantifications. Both supervisors and insurers will need to take appropriate allowance of the inherent uncertainties of such estimates when they use the result of these models to make decisions.

**FIGURE 38**



Source: CLIMADA and IAIS calculations, climate change impact estimates as at 2080 under RCP 8.5.

## 5.4 INITIATIVES TO ADDRESS CLIMATE-RELATED RISKS

In addition to the quantitative data collected through the SWM and IIM data collection process, the IAIS collects qualitative information on supervisors' and insurers' views on various aspects of climate-related risks. As this qualitative information is completed voluntarily, the total responses received on different questions may vary and will be indicated as such.

### 5.4.1 Climate risk data collection

To effectively assess and monitor climate-related risks, supervisors would need to leverage sufficiently detailed and accurate data sources, which may be a combination of data collected from supervised institutions and other external sources. These data sources may contain exposure data (eg geolocations of assets or liabilities), sector data, climate-specific data (eg flooding locations/patterns) or any other relevant data that may inform supervisory activities. When asked whether these types of data are currently collected by IAIS members, a significant number of members (11 out of 26) indicated that none of these data types are collected. For those that collect this data, it is mostly in relation to exposure data (14 out of 15) and sector data (8 out of 15), while very few (4 out of 15) collect climate-specific data.

It is apparent from the responses that more work needs to be done by supervisors to identify, design and implement appropriate and relevant data collections that can support climate-related risk assessments. It is important for assessing potential risk exposures of individual insurers and may enhance industry-wide risk identification and assessment activities. To aid supervisors in these efforts, in 2025 the IAIS will develop more detailed supporting materials on metrics and indicators that can be used for supervisory reporting (and public disclosures) related to climate risk.

### 5.4.2 Climate risk assessment considerations

Assessing, managing and mitigating climate-related risks may involve various types of activities such as undertaking scenario analysis, enhancing risk assessment processes (which may include the analysis of climate risk indicators), developing regulatory or supervisory instruments and guidelines, and collaborating with key stakeholders. Responses on questions asked about these activities undertaken by supervisors and insurers are provided below.

#### Supervisors

The majority (20 out of 26) of IAIS members indicated that they have taken supervisory measures to address climate-related risks such as raising awareness, developing regulatory instruments (eg guidance on risk management and disclosures), undertaking scenario analysis and analysing insurance protection gaps and NatCat risk. Some IAIS members (4 out of 26) have identified potential firm-level concentration of transition risk exposure in their jurisdictions and another 4 indicated plans to conduct this assessment in the near future.

**In support of supervisors, the IAIS will develop more detailed materials on metrics and indicators for supervisory reporting and public disclosures related to climate risk by 2025.**

Although supervisory measures have been taken by many IAIS members, only 11 members indicated that this includes assessing climate-related risks within supervisory risk assessments to inform supervisory risk scoring of insurers. A further 8 members indicated that they have plans to do so in the near future.

Scenario analysis is a key tool to assess the risks relating to climate change. The majority of respondents (19 out of 26) indicated that they either have conducted or have plans to conduct such analysis. A large portion (42%) of these analyses included elements of both physical and transition risks, which also aim to assess their interdependence. A further 32% considered both these types of risks without specifically considering their interdependence while the rest either focused on physical or transition risk alone.

### Insurers

More than 50% of insurers in the IIM 2024 Insurer Pool assessed that the impact of transition risk, physical risk and legal/liability risk remain stable in their current evaluations. However, for the majority of insurers, forward-looking assessments have worsened.

The majority of insurers (68%) indicated that they use climate scenario analysis to inform their strategy, and a further 10% indicated that they plan to do so in the near future. However, 14% of insurers indicated that they do not use climate scenario analysis, and a further 12% of insurers did not provide information. Insurers who perform scenario analysis reported that

this includes qualitative and/or quantitative elements, and in some cases, these analyses are integrated into insurers' ORSAs. In addition to informing strategy, these analyses are used to assess the impact on share prices, corporate bond values, corporate credit ratings and the insurer's business model and financial position (considering underwriting and investment portfolios).

Insurers were also asked whether they currently use or track any climate-related indicators. The vast majority (76%) indicated that they currently use such indicators and a further 12% indicated that they plan to do so in the near future, with only 3% indicating no plans as yet. Examples of these indicators include greenhouse gas emissions (scope 1, 2 and to a varying degree scope 3),<sup>39</sup> economic emission intensity, revenue emission intensity, percentage of listed assets exposed to high transition-sensitive sectors, exposure to top 10 highest emitting companies, green and sustainable investments, and electricity usage.

Insurers were asked whether their climate risk assessments include both the impact of climate-related risks on their risk profile and financial position as well as the impact their organisation has on climate change through its operations, investments and other business activities. Most respondents (58%) indicated that they do assess both perspectives, while a further 24% indicated that they plan to do so in the near future. A few insurers (7%) indicated that they are not tracking either of these perspectives and do not plan to do so in the near future.

<sup>39</sup> <https://ghgprotocol.org/corporate-standard>



### 5.4.3 Transition plans/planning

The FSB highlighted in its 2023 Progress Report<sup>40</sup> that there is growing interest in the role of transition plans in enabling an orderly transition as well as informing micro- and macroprudential financial risk assessments. Supervisors were asked whether insurers in their jurisdictions have any transition planning strategies for the various climate-sensitive sectors. A significant number of members (23 out of 25) indicated that insurers either have these strategies in place (13) or are planning to develop these strategies in the near future (10).

Insurers were asked whether they have a transition plan in place that was approved by their Board. A large portion (58%) indicated that they already have such a plan in place or have it in development, while a further 5% indicated an intention to develop such plans in the near future. 22% of insurers in the Pool indicated that they do not have these plans in place and do not plan to develop these in the near future, and 15% did not provide information on this question.

<sup>40</sup> FSB Roadmap for Addressing Financial Risks from Climate Change Progress Report (13 July 2023).

There is still uncertainty about the role of supervisors in transition plans and planning. Based on the responses above, supervisors would need to understand what these strategies and forward-looking plans mean in the context of micro- and macroprudential risk assessments. In addition, important characteristics of such plans may need to be explored, especially where these plans are disclosed to enhance transparency and consistency.

### 5.4.4 Most significant challenges highlighted by insurers

Insurers indicated that data availability, granularity and reliability remain a challenge, especially in the case of third-party asset managers. Challenges remain around model uncertainties, including extensive judgement and assumptions being used and a lack of tools and methodologies for climate risk assessments. Stakeholder expertise and understanding was also highlighted as a key challenge, especially when interpreting climate-related disclosures. The absence of clear guidelines and standards as well as a lack of consistency in sustainability legislation was also highlighted.

**There is still uncertainty about the role of supervisors in transition plans and planning relating to climate risk.**

# Global reinsurance market

This chapter provides an overview of the global reinsurance market, using sector-wide reinsurance data (consisting of the SWM reinsurance component and the Global Reinsurance Market Survey) reported to the IAIS by supervisors from the major reinsurance market jurisdictions worldwide.

## Highlights:

- The reported size of the global reinsurance market is growing, reaching \$900 billion gross reinsurance premiums at year-end 2023, with the Americas remaining the region with the largest reinsurance market.
- Reinsurance usage is increasing, as retention ratios for the global insurance market continue to decline.
- The solvency positions of reinsurers remained strong at year-end 2023.
- At the aggregate level, reinsurers invest mainly in equities (25%) and corporate debt (24%), while they maintain limited investments in loans, mortgages and real estate.
- The non-life reinsurance market's combined ratio improved to 95% in 2023, following a sharp increase in 2022 to reach its highest value since 2005.

## 6.1 IAIS REINSURANCE DATA COLLECTION

The IAIS collects reinsurance data through two data collections reported by supervisors from the major reinsurance market jurisdictions worldwide: the SWM reinsurance component and the Global Reinsurance Market Survey (GRMS).<sup>41</sup> The SWM reinsurance component provides data on the total reinsurance business in a jurisdiction (total reinsurance premiums) conducted by both reinsurers and insurers, while the GRMS aggregates data from a pool of reinsurers that meet the following criteria:

- Gross unaffiliated reinsurance premiums assumed of at least \$800 million (\$20 million for monolines<sup>42</sup>); or
- Gross unaffiliated technical reserves of at least \$2 billion (not applied to monolines); or
- Aggregate gross notional amount in (re) insurance-related derivatives of at least \$500 million (eg in longevity or mortality swaps).

The reinsurance business captured through the GRMS data collection is designed to be a subset of the scope of reinsurance business captured through the SWM reinsurance component. Both data collections encompass life and non-life reinsurance data.<sup>43</sup>

In the 2024 GRMS, data was collected from 29 jurisdictions in the following regions:<sup>44</sup>

- **Americas:** Barbados; Bermuda; Brazil; Canada; Cayman Islands; Colombia; Mexico and US.
- **Asia and Oceania:** China, Hong Kong; Japan and Singapore.
- **Europe and Africa:** Albania; Austria; Belgium; Bulgaria; Croatia; Czechia; Denmark; France; Germany; Ireland; Luxembourg; Malta; Netherlands; Poland; Slovenia; Spain; Sweden and Switzerland.

The number of jurisdictions participating in the GMRS is unchanged from 2023.

In the 2024 SWM reinsurance component, data was collected from 36 jurisdictions in the following regions:

- **Americas:** Argentina; Barbados; Bermuda; Brazil; Canada; Cayman Islands; Colombia; Mexico and US.
- **Asia and Oceania:** Australia; China; China, Hong Kong; Chinese Taipei; Israel; Japan; Malaysia; and Singapore.
- **Europe and Africa:** Albania; Austria; Belgium; Bulgaria; Croatia; Czechia; France; Germany; Ireland; Luxembourg; Malta; Netherlands; Poland; Portugal; Slovenia; Spain; Sweden; Switzerland and UK.

<sup>41</sup> In 2023, the IAIS revived the GRMS, which collects aggregate information from individual reinsurers to supplement the SWM reinsurance data collection, which began in 2020. The GRMS was previously conducted annually from 2003 to 2019. The GRMS previously covered about 50 reinsurers based in nine jurisdictions: Bermuda, France, Germany, Japan, Luxembourg, Spain, Switzerland, the UK and the US. The GRMS collected data from reinsurers with gross unaffiliated reinsurance premiums of more than \$800 million or unaffiliated gross technical provisions of more than \$2 billion. The pool of participating reinsurers remained largely the same throughout this period. The GRMS was discontinued with the adoption of the Holistic Framework in 2019, including the launch of the GME. Reinsurance data was then collected as part of the SWM (as the SWM reinsurance component). This has the benefit of improving both the regional balance and the completeness of reinsurance data collection. One downside of collecting this data through the SWM is that it reduced the granularity of data, as it was based on reinsurance data already collected in the supervisory frameworks. As a result, in 2023, the IAIS decided to revive the GRMS as a more granular complement to the SWM reinsurance component.

<sup>42</sup> Monolines are reinsurers that specialise in providing reinsurance for a single type of insurance risk.

<sup>43</sup> For jurisdictions that participate in the GMRS but not the SWM, the jurisdiction's GRMS data is used as a substitute for that jurisdiction's SWM data.

<sup>44</sup> This represents an increase of 20 jurisdictions compared to the 2019 GRMS. Of the nine original GRMS participants, all except the UK provided data in the 2023 GRMS. The UK instead provided the SWM reinsurance component.

This represents a net increase by one jurisdiction<sup>45</sup> from the 2023 SWM reinsurance component.

The reinsurance data in this chapter consists of a combination of sector-wide reinsurance data reported through the SWM reinsurance component by some jurisdictions and a sample of reinsurers' data reported through the GRMS by other jurisdictions. Hence, the data should not be interpreted as representing the entire reinsurance market in each of the reporting jurisdictions.

The two reinsurance data collections provide useful information that helps describe different elements of the global reinsurance market. Analysis focusing on premiums and retention ratios benefits from the wider SWM coverage. Specifically, the SWM reinsurance component provides greater insight into the significant amount of reinsurance premiums assumed by composite insurers that also underwrite direct (primary) insurance. On the other hand, more in-depth exploration of, for example, the profitability and capital resources of reinsurers relied on the more granular GRMS data collection.

For jurisdictions that have changed the completeness of the reported reinsurance data over time, historical data was also provided to ensure that trends are not affected by changes in the sample over time. Additionally, sample controls were applied to trends – in other words, data was accepted from only those jurisdictions that provided consistent data across all years.

The nine jurisdictions that originally participated in the GRMS and the original scope of insurers in these jurisdictions are labelled in this chapter as “original GRMS scope”.<sup>46</sup>

## 6.2 SIZE OF THE REINSURANCE MARKET

This section provides an overview of the reported size of the reinsurance market by focusing on gross and net reinsurance premiums. Gross reinsurance premiums refer to the premiums assumed (both ceded and retroceded premiums from other insurers). Net reinsurance premiums are the gross reinsurance premiums minus the premiums ceded to other reinsurers. Essentially, gross premiums provide a measure of the total volume of reinsurance business assumed, while net premiums provide a measure of the actual risk retained.

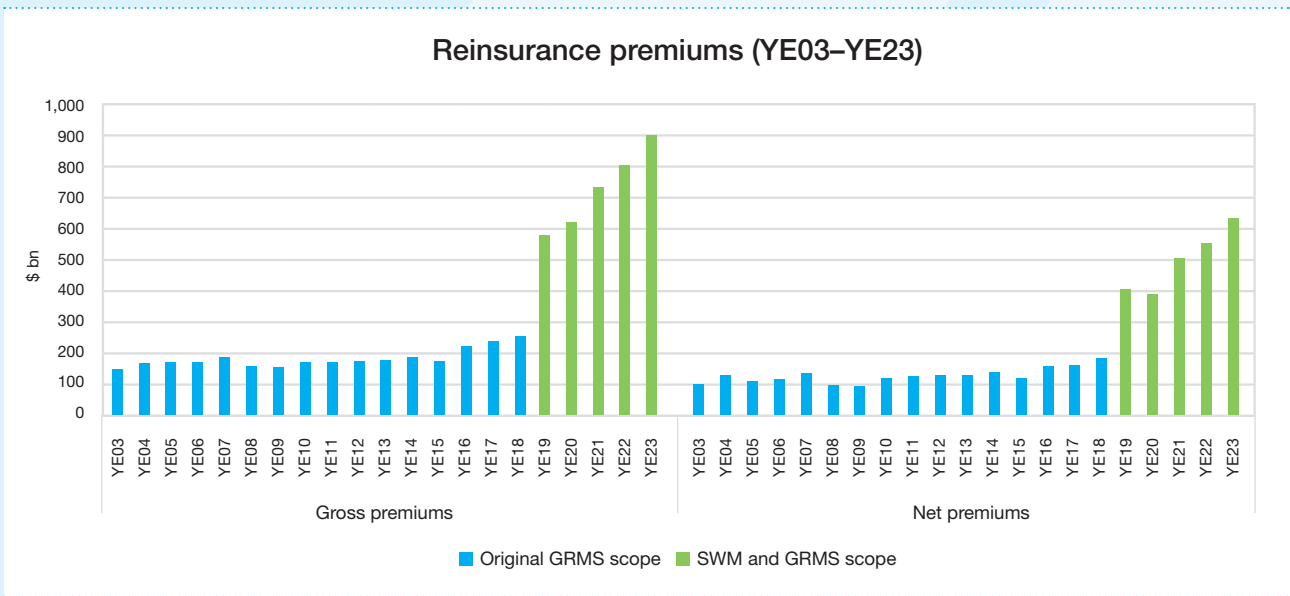
Figure 39 displays the evolution of gross and net reinsurance premiums from 2003 to 2023, showing data for the original reduced GRMS scope up to 2018 (in blue), and SWM reinsurance component data from 2019 onwards (in green, with the latest GRMS scope as a backup)<sup>47</sup>. The large increase in premiums between 2018 and 2019 is therefore explained by the expanded sample covered by the SWM reinsurance component, rather than a large increase in premiums of the reinsurers in the original GRMS scope. In 2023, reported gross reinsurance premiums followed the trend of recent years, reaching almost \$900 billion, with an increase of around 12% (which represents approximately 13% of total global gross premiums written). In terms of net premiums, the reinsurance market covered by the sample grew by 14% in 2023 on a year-on-year basis, reaching over \$630 billion.

<sup>45</sup> This is a result of 8 new or returning participating jurisdictions (Albania, Barbados, Israel, Luxembourg, Malta, Mexico, Poland, US) and 7 jurisdictions that no longer reported data (Finland, Hungary, Iceland, Italy, Morocco, Romania, Slovak Republic).

<sup>46</sup> With simulated results for the scope of reinsurers in the GRMS for the UK from 2019 to 2023.

<sup>47</sup> GRMS data were used for jurisdictions that did not report the SWM reinsurance component

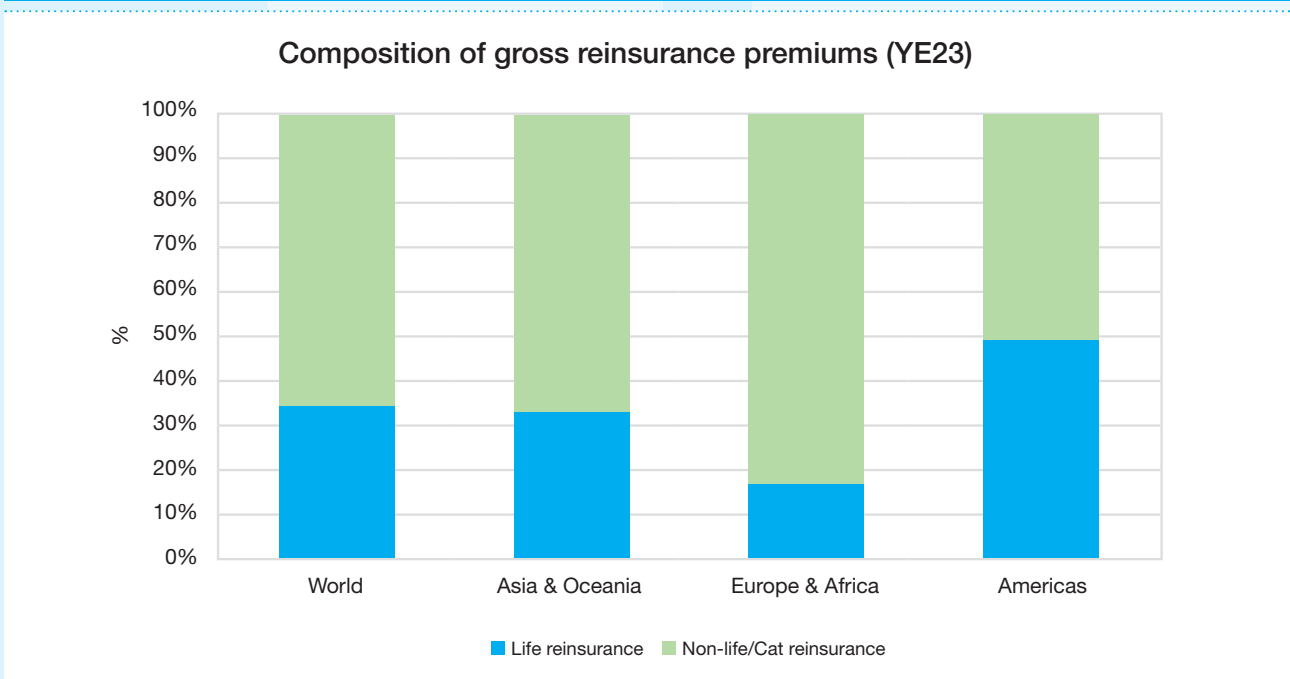
FIGURE 39



Source: IAIS SWM 2024 (reinsurance component and GRMS)

Figure 40 shows the regional composition of reported gross reinsurance premiums, split by life and non-life reinsurance. On aggregate, around 35% of reinsurance premiums comprise life business, while the remaining 65% refers to the non-life/catastrophe (Cat) reinsurance business. Regional differences emerge, with the split being more pronounced in Europe and Africa (17% life, 83% non-life), while equally distributed in the Americas (49% life, 51% non-life).

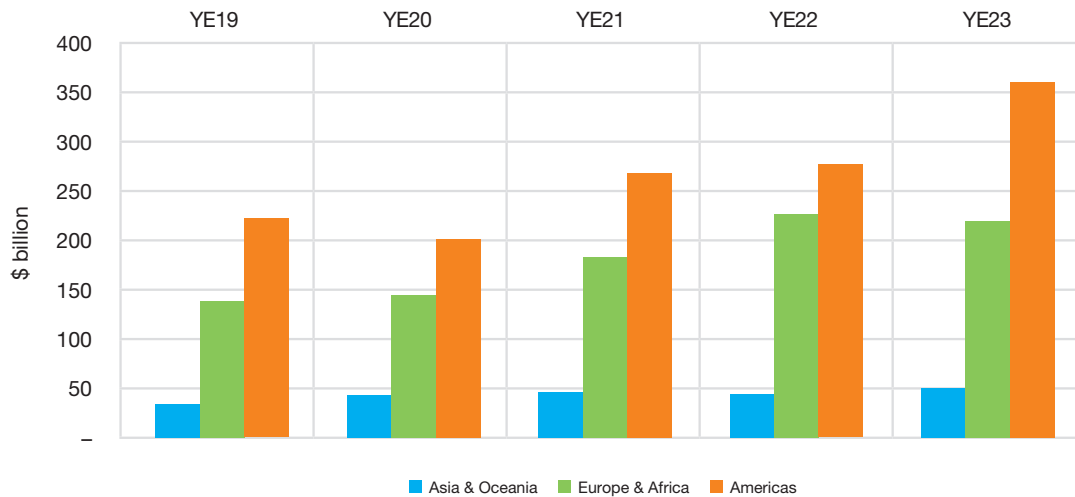
FIGURE 40



Source: IAIS SWM 2024 (reinsurance component and GRMS)

FIGURE 41

## Regional view on net reinsurance premiums (YE19–YE23)



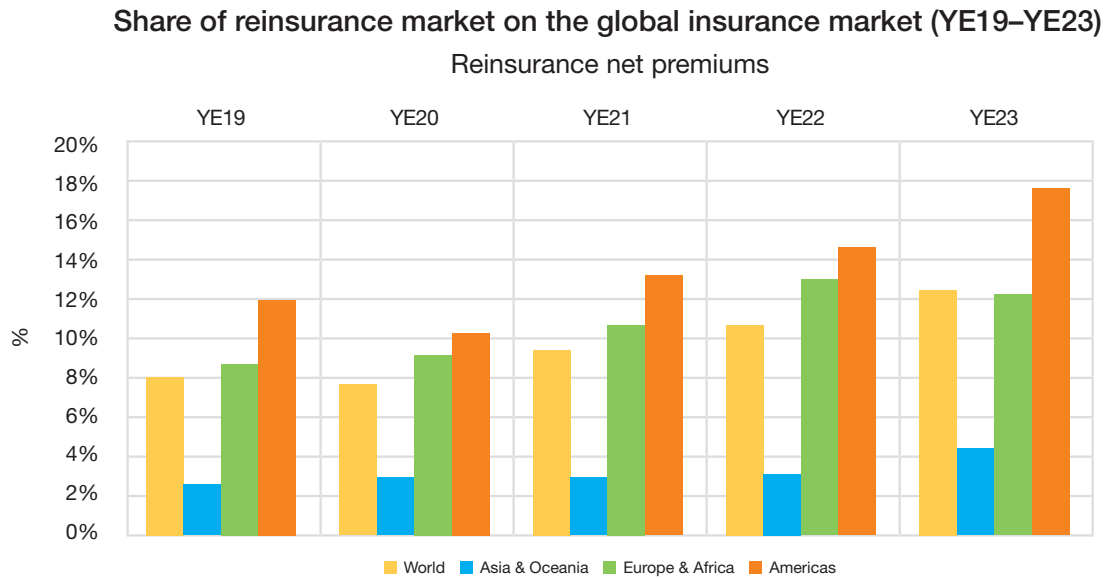
Source: IAIS SWM 2024 (reinsurance component and GRMS)

Figure 41 reflects regional developments in net reinsurance premiums. The increase in net reinsurance premiums between 2022 and 2023 was driven mainly by the Americas, which increased by around \$80 billion.

The IAIS monitors the size of the global insurance and reinsurance market, in particular the share of reinsurance in the global insurance market. The global insurance market estimate covers both direct insurance and reinsurance premiums, whereas the reinsurance market estimate covers reinsurance premiums only.

On aggregate, around 35% of reinsurance premiums comprise life business, while the remaining 65% refers to the non-life/Cat reinsurance business.

FIGURE 42



Source: IAIS SWM 2024 (reinsurance component, GRMS, quantitative component)

Figure 42 displays aggregate and regional shares of the reinsurance market in terms of net premiums. The global net insurance market covered by the SWM was approximately \$5.1 trillion in 2023. The size of the global net reinsurance market covered by the SWM was approximately \$630 billion. In total, reinsurance accounted for about 12.5% of all global net insurance premiums covered by the SWM at year-end 2023, with the Americas being the major driver for the increase.

The usage of reinsurance differs across regions, with the lowest levels reported in Asia and Oceania (4.1% of net insurance premiums in 2023) and the highest levels reported in the Americas (17.5% of net insurance premiums in 2023).

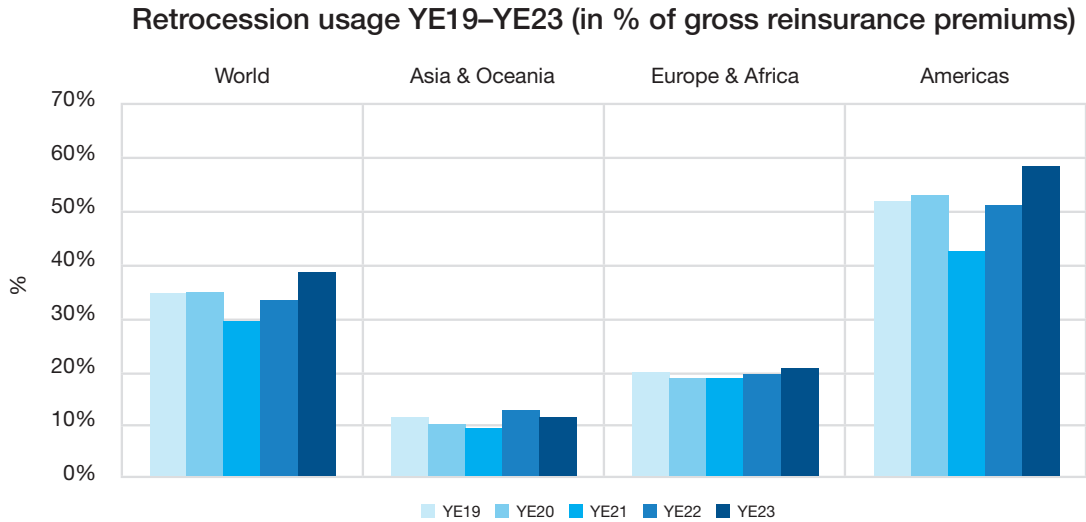
### 6.3 RETROCESSION AND RETENTION

The IAIS also monitors the amount of retrocession in the global reinsurance market. Retrocession is a contract between a retrocession provider (the reinsurer) and an original reinsurer (the reinsured) that assumed premiums in a contract with a primary insurer (the insured).

Retrocession is placed to provide additional capacity to the original reinsurer or to reduce the original reinsurer's risk of loss. At year-end 2023, about 39% of all reinsurance gross premiums originate from retrocession contracts. There are material differences in the use of retrocession across regions, with the Americas being the driver of the increasing aggregate (Figure 43).



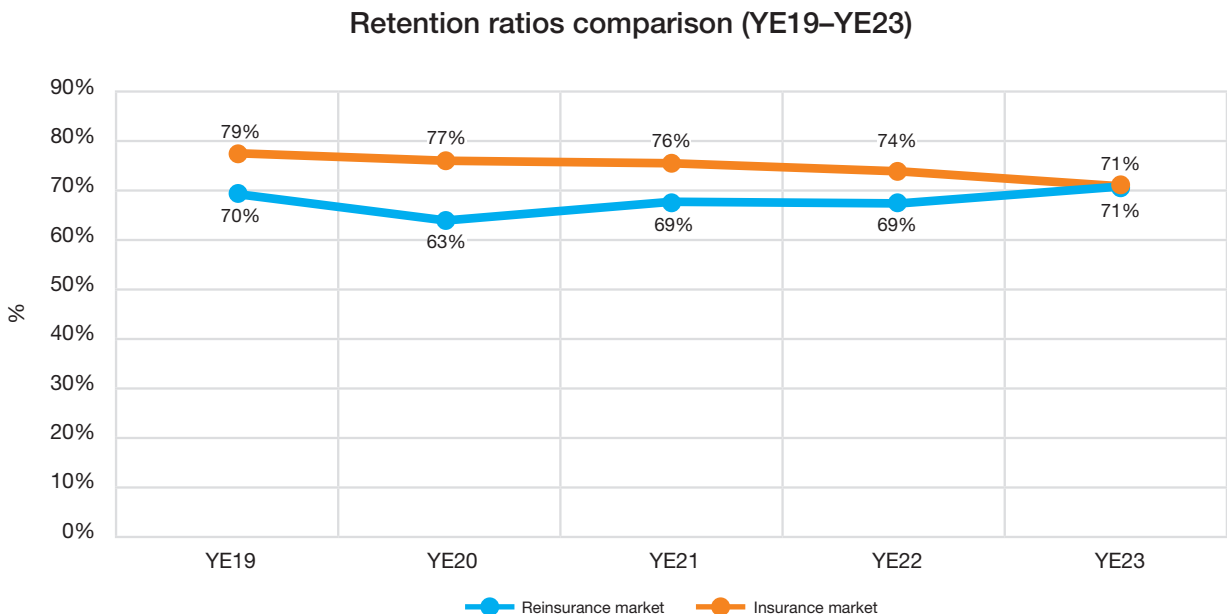
FIGURE 43



Source: IAIS SWM 2024 (reinsurance component and GRMS)

The retention ratio indicates the percentage of gross premiums that are not reinsured or retroceded, and it is calculated as the ratio of net premiums to gross premiums. Reinsurance retention ratios indicate the extent to which reinsurers retain risks rather than buying insurance. In 2023, for the SWM sample, retention ratios were comparable for the reinsurance market and the overall insurance market which includes primary insurance business conducted by insurers and reinsurers (71% for both). Figure 44 shows that the retention ratios for the overall insurance market are decreasing, while the reinsurance market remained broadly stable at around 70% in recent years, except for 2020.

FIGURE 44



Source: IAIS SWM 2024 (blue line: reinsurance component and GRMS; orange line: quantitative component)

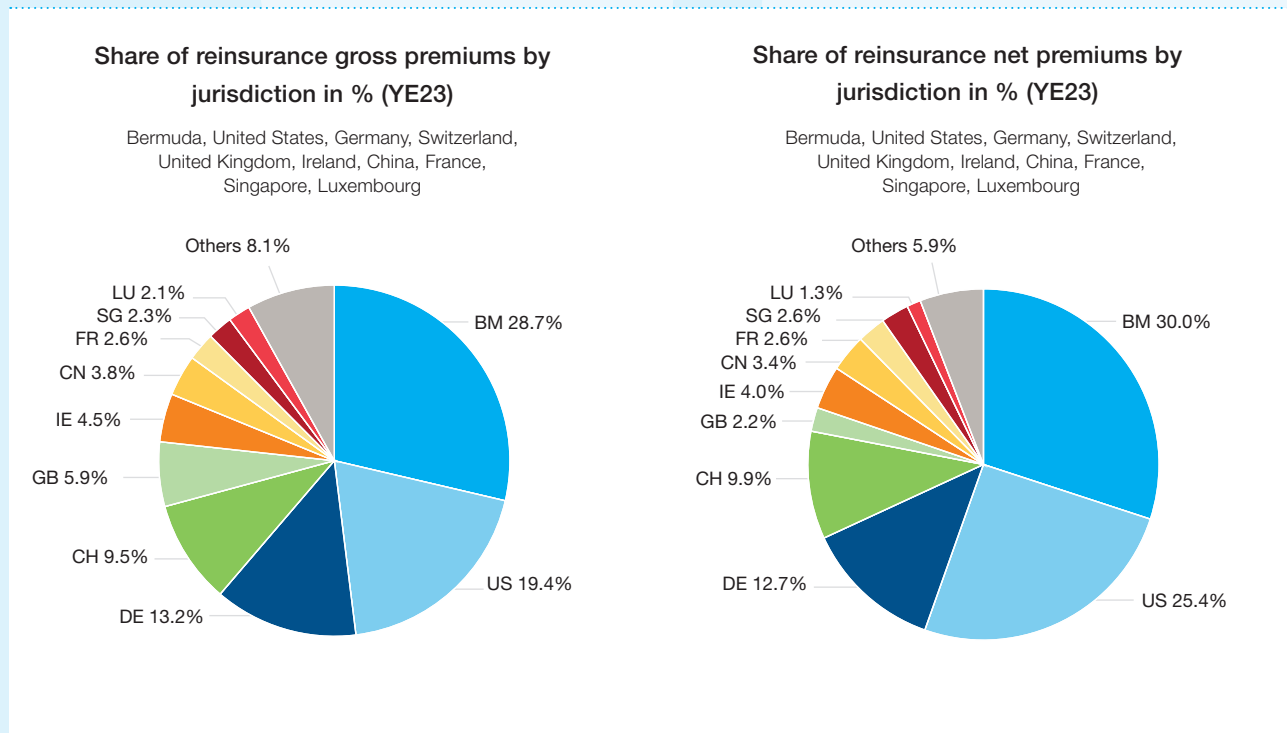
### 6.4 REGIONAL DISTRIBUTION OF THE REINSURANCE MARKET

Figure 45 illustrates the regional distribution of gross and net reinsurance premiums in 2023. Based on the data received, the five largest reinsurance markets are Bermuda, the US, Germany, Switzerland and the UK. However, these results are influenced by different reporting scopes applied across jurisdictions, with some jurisdictions not reporting all reinsurance market activities to the IAIS. The top 10 jurisdictions ranked by reported net reinsurance premiums are largely similar to those ranked by gross reinsurance premiums, with some variations observed in the United Kingdom and the United States. The data received suggests that Bermuda and the United States dominate the reinsurance landscape, accounting for over 50% of all reported global net reinsurance premiums. However, since the total size of the US reinsurance market is underrepresented in the survey, caution should be used in interpreting the results.

### 6.5 REINSURANCE ASSET ALLOCATION

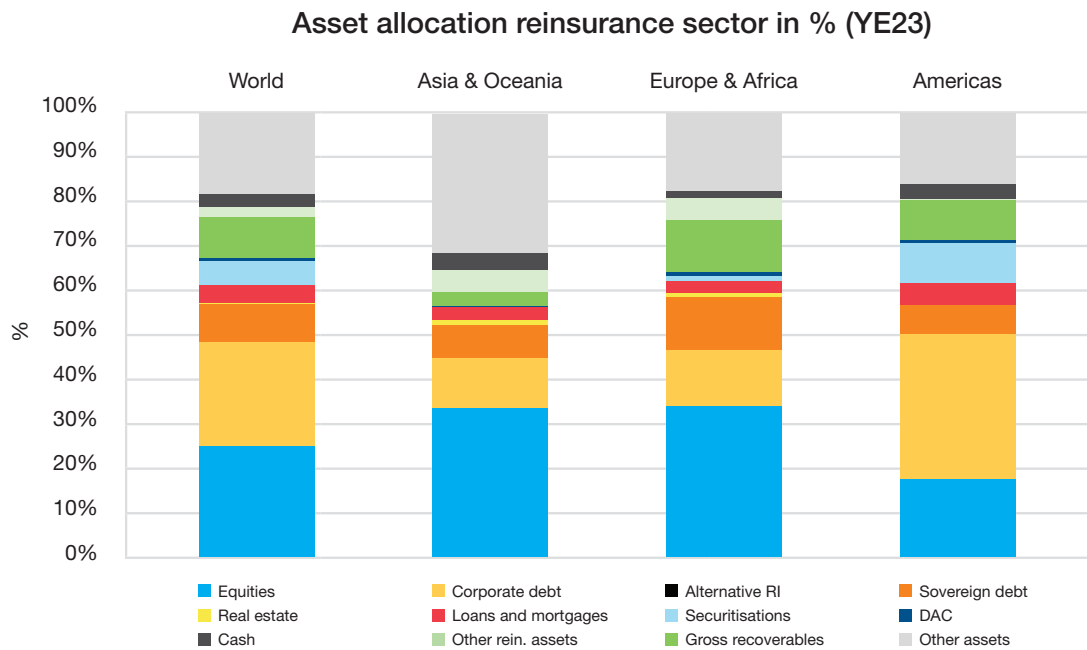
Figure 46 shows the regional distribution of reinsurance asset allocations, as derived from the IAIS reinsurance data collections. At the aggregate level, the principal asset classes are corporate debt (24%) and equities (25%). The Europe and Africa regions exhibit the largest relative shares of asset allocations to sovereign debt securities. In contrast, reinsurers in the Americas have significant investment exposures to securitisations, a trend not mirrored in other regions. Overall, reinsurers maintain limited investments in loans, mortgages and real estate. These regional disparities can also be attributed to the varying mix of life and non-life business, with the Americas holding a larger proportion of life reinsurance business compared to other regions.

FIGURE 45



Source: IAIS SWM 2024 (reinsurance component and GRMS)

FIGURE 46



Source: IAIS SWM 2024 (reinsurance component and GRMS)

In comparison to the insurance market, the following main differences at year-end 2023 were identified:

- Higher shares of equities (25% of reinsurers' total assets, compared to 12% of insurers' total assets);
- Lower shares of sovereign debt (8% compared with 18%);
- Lower shares of loans and mortgages (4% compared with 10%); and
- Lower shares of real estate assets (0.5% compared with 3%).

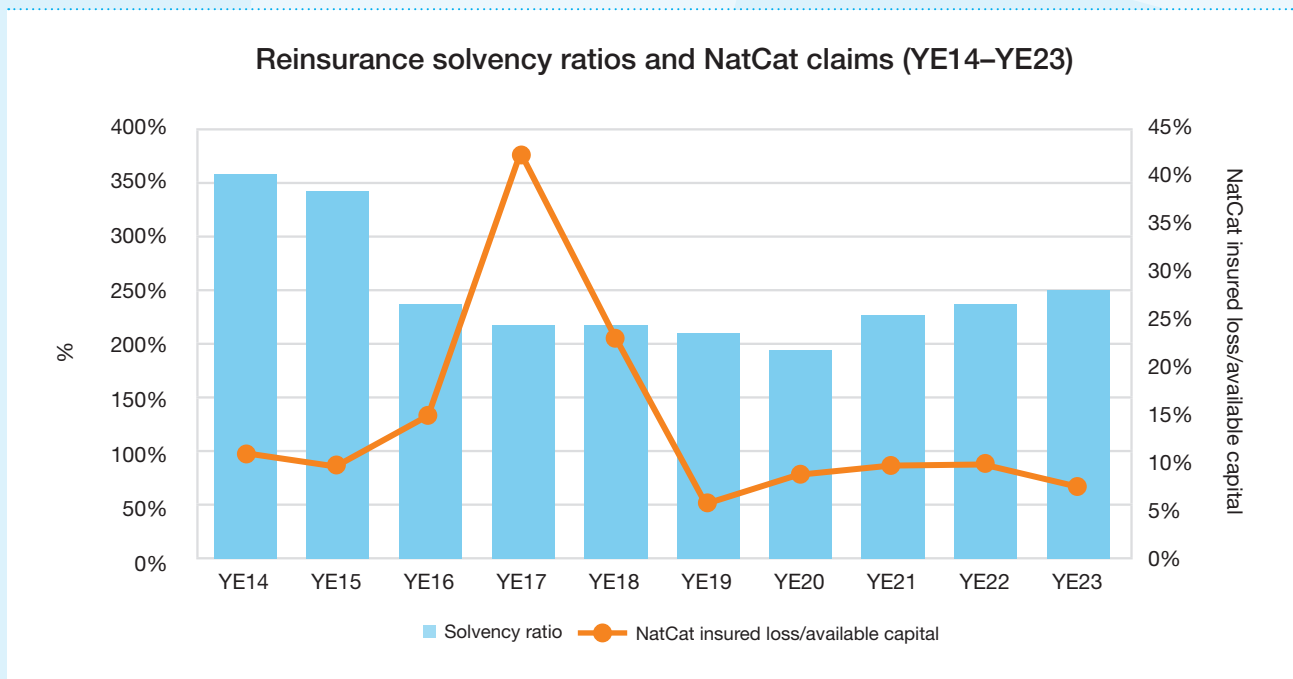
Comparing year-end data from 2023 with that of 2022, the global aggregate asset allocations of reinsurers revealed a higher proportion of equities, which increased by 5 percentage points, and a reduced share of other reinsurance assets and other assets, both of which decreased by 3 percentage points. These global shifts in asset allocation were primarily influenced by changes in Asia and Oceania, and Europe and Africa, while the asset composition of the Americas remained largely stable.

## 6.6 REINSURANCE SOLVENCY AND CAPITAL

Figure 47 shows the aggregate solvency ratios for the reinsurers included in the IAIS reinsurance data collection over time. Following a decline from 2014 to 2020, solvency ratios in the global reinsurance sector have been on a steady upward trajectory since 2021. The recent trend of reinsurers' solvency ratios does not match the trend of the overall insurance sector solvency ratios, which are broadly stable at higher levels in recent years.

For NatCat developments, data on insured losses from the Swiss Re Institute were used.<sup>48</sup> The measure of available capital was based on SWM data. The comparison shows that even in 2017, which saw the highest amounts of NatCat claims (due to three major F4/F5<sup>49</sup> category hurricanes – Harvey, Maria and Irma), the claims reached a maximum of 42% of the total amount of available capital. In 2023, the ratio of NatCat insured losses to available capital decreased to 7%.

FIGURE 47



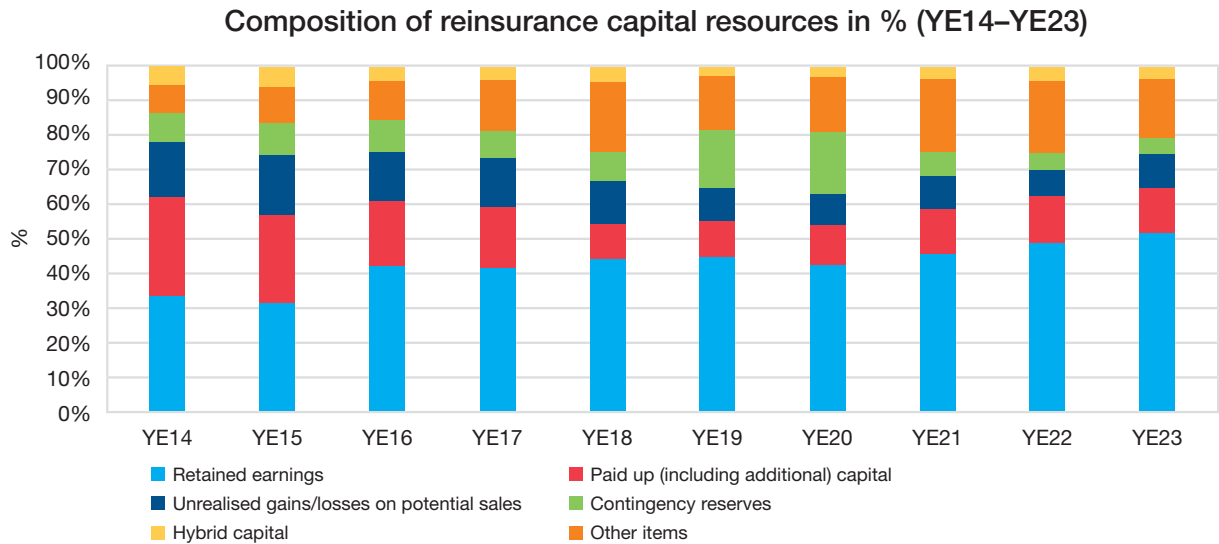
Sources: IAIS SWM 2024 (reinsurance component and GRMS); Swiss Re Institute

Solvency ratios in the global reinsurance sector have been on a steady upward trajectory since 2021.

<sup>48</sup> See <https://www.sigma-explorer.com/> and <https://www.swissre.com/institute/research/sigma-research/sigma-2024-01.html>.

<sup>49</sup> Based on the Saffir-Simpson hurricane wind scale, which classifies hurricanes that exceed the intensities of tropical depressions and tropical storms into five categories distinguished by the intensities of their sustained winds.

FIGURE 48

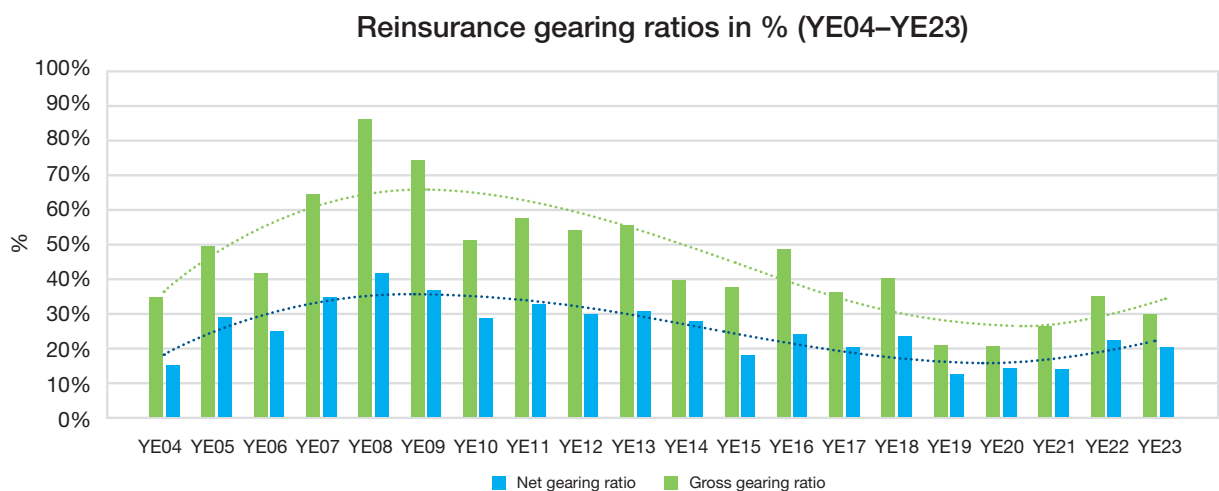


Source: IAIS SWM 2024 (GRMS)<sup>50</sup>

Figure 48 shows stability in the composition of reinsurers’ capital resources since 2016. Year-end 2023 was marked by small increases in the shares of retained earnings and unrealised gains.

Figure 49 illustrates declining gearing ratios<sup>51</sup> between 2008 and 2019, meaning that capital resources were growing more rapidly than recoverables from retrocession. Reported gross gearing ratios decreased in 2023, after increasing in the previous two years. The decrease in 2023 was due to a relatively large increase in available capital resources compared to recoverables, among various jurisdictions. The spread between gross and net gearing ratios declined until 2017, indicating an increased use of collateral for retrocession. In recent years, this spread has remained relatively stable.

FIGURE 49



Source: IAIS SWM 2024 (reinsurance component and GRMS)

<sup>50</sup> From 2019 to 2021, this data was collected through the SWM reinsurance component.

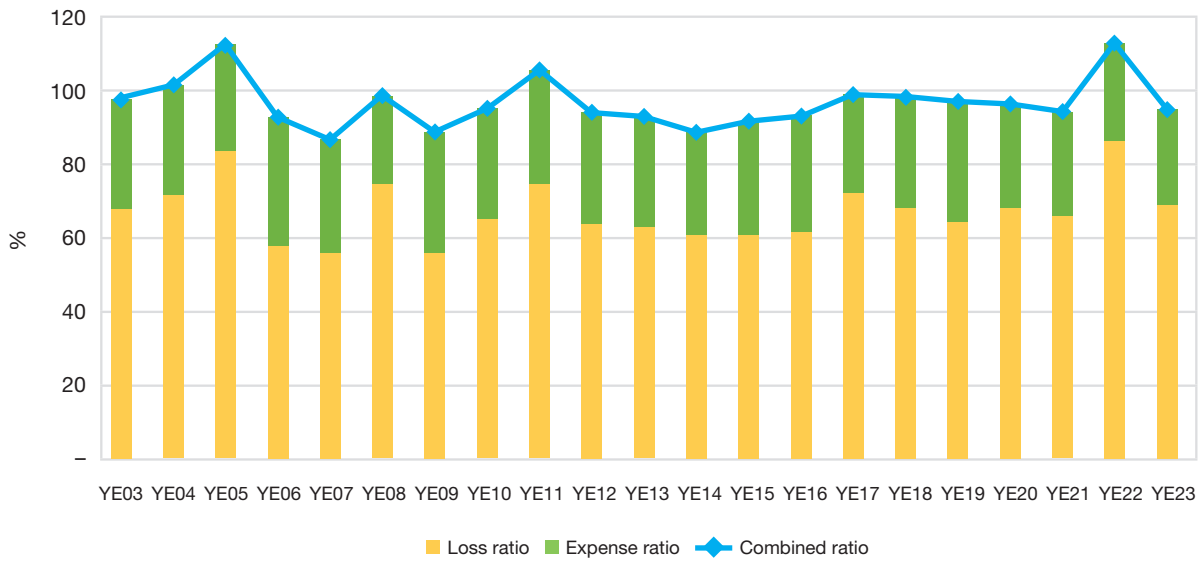
<sup>51</sup> The gross gearing ratio is defined as the ratio of gross recoverables from reinsurance and retrocession divided by total capital resources. The net gearing ratio is the ratio between net recoverables from reinsurance and retrocessions divided by total capital resources. “Net” recoverables refers to net of collateral and offsetting items.

## 6.7 REINSURANCE PROFITABILITY

Reinsurers’ profitability is monitored for both life and non-life reinsurance. Figure 50 shows developments in the average combined ratio of the global non-life reinsurance market covered by the SWM data collection. The combined ratio recovered to 95% in 2023, after a sharp increase in 2022, which marked the highest value since 2005.<sup>52</sup>

FIGURE 50

Non-life reinsurance combined ratios in % (2003–2023)



Source: IAIS SWM 2024 (GRMS)<sup>53</sup>

<sup>52</sup> The 2005 combined ratio was driven by Hurricane Katrina in the US, which caused losses of \$82 billion. The high combined ratio in 2011 was driven by the severe tsunami in Japan and flooding in Thailand. The increase in 2022 was driven by high insured losses from NatCat events (Swiss Re: <https://www.swissre.com/institute/research/sigma-research/sigma-2023-01.html>).

<sup>53</sup> From 2019 to 2021, this data was collected through the SWM reinsurance component.



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